



RCA Temporary Traffic Management Assurance System

DRAFT

Executive Summary

The New Zealand Guide to Temporary Traffic Management (NZGTTM) is designed to aid all organisations involved in temporary traffic management (TTM) to meet their legislative obligations. The foundation to success is consultation, collaboration and coordination with all organisations necessary. The NZGTTM sets out our principles and is only a guide. This is deliberate. The NZGTTM does not detail TTM solutions as there are too many variables that mean each site must be assessed individually. This applies for generic activities and unique activities, both planned or reactive. It is ill-advised to assume a generic or pre-supposed approach to TTM will be fit for purpose to most effectively mitigate any or all risks for any site – always ask ‘how can I do this more safely?’.

Auckland Transport is responsible for the AT road network to ensure people and goods can move with ease (network function), with certainty and safely.

The Auckland Transport Road Controlling Authority Temporary Traffic Management Assurance System outlines how Auckland Transport undertake TTM assurance as the RCA in consideration of the NZGTTM. The system identifies and focuses assurance on what is important to AT now whilst also supporting a framework for improvement.

The design and implementation of the System is intended to provide confidence that the objectives of the Auckland Transport Road Corridor Access (AT RCA) (and by extension AT) in managing temporary access to the AT road corridor are achieved, namely that the road network is resilient accessible, efficient and safe despite the presence of the temporary activity and associated impacts and risks.

The system has been developed for use by Auckland Transport Road Corridor Access (AT RCA) staff, specifically those in the RCA involved in the assurance of TTM associated with activities on the AT road network. However, parts or all may also, where applicable, be of use for other RCAs, PCBUs and other organisations. The supporting document, the Risk Based TTM Site Review Technical Guidance, must be consulted specifically with respect to the undertaking of the TTM Site Reviews.

Document Control

Disclaimer

This guidance document has been prepared with all reasonable care and consideration, drawing on the expertise of professionals within the field of temporary traffic management and the wider transport sector. It incorporates relevant legislation, standards, and industry best practices applicable at the time of its development.

While Auckland Transport has made every effort to ensure the accuracy of this guidance, it is intended as a resource to assist in understanding their organisations responsibilities under the New Zealand Guide to Temporary Traffic Management. This document does not override applicable legislation or statutory requirements. Users of this guidance must apply their own professional judgment and consider other relevant resources and advice when implementing its recommendations.

Auckland Transport cannot guarantee that the measures outlined will be suitable for every scenario. It is the responsibility of individuals to determine the appropriateness and adequacy of the guidance for their specific sites and conditions. The responsibility for ensuring safety and compliance with legal obligations remains with those conducting the work.

Nothing in this guidance document should be taken to mean that AT has responsibilities to manage the health and safety of any person affected by the implementation of temporary traffic management. AT does not take responsibility for or control over the implementation of temporary traffic management and nothing in these Guidelines should be read as AT doing so.

This document is intended to be updated from time to time. Users should ensure that they have the latest version.

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AT RCA Guidelines and Systems

AT RCA has published a set of guidelines for different parts of the RCA function. These include:

1. Network Access Coordination (NAC) Guidelines, and
2. Corridor Access Request (CAR) Processing Guidelines

The AT RCA TTM Assurance System forms part of this set.

Using this Document

This document is intended to provide a complete description of the AT RCA TTM Assurance System. It should be read in conjunction with the TTM Site Review Technical Guidance.

This document has been developed to closely align with the simplified process flow chart in Figure 13 – TTM Assurance Overview.

Document structure

The document is broken into key sections which are described in Table 2 below to give more overall context.

Section	Description
Purpose of TTM Assurance	Describes the purpose of TTM Assurance, what is important to AT, and provides a high-level view of the legislation that guides this along with the authority to manage the AT road network and activities on it.
AT TTM Assurance – General	Provides and overview of the TTM Assurance System and describes the guiding principles of the assurance process.
Initial Site Observation	Provides guidance around observing site conditions (either by the TTM Reviewer being on site or remote). It also provides guidance to support the decision regarding the next step which may be any of the following: <ul style="list-style-type: none">• No further action• Advice to STMS and/or PCBU• Redundant TTM• TTM Site Review
Redundant TTM	This section provides guidance around the management of redundant TTM equipment and redundant worksites on the AT road network.



Section	Description
	This section outlines the processes for either getting it removed or escalating to the Site Review
Crashes at TTM Worksites	This section provides guidance around the requirements for reporting of TTM Crashes and managing, reporting and using the information to support and influence improved safety on the AT road network.
Site Reviews	Introduces the (formal) Site Review framework, outlines the principles for behaviour and actions for all TTM Site reviews.
Site Review – Level 1 RCA Authority	<p>The starting point for all TTM Site Reviews – this outlines the first level of the site review determining if the activity has RCA Authority.</p> <p>This can lead to an outcome of either:</p> <ul style="list-style-type: none"> • Concluding the Site Review and taking appropriate actions; or • Undertaking the next level of TTM Assurance
Site Review– Level 2 Network Function	<p>This outlines the second level review of the site determining if the network function is as planned, expected and accepted. Network function considers both the primary controls for each road user and the impact of these more holistically on the different road user travel times.</p> <p>This can lead to an outcome of either:</p> <ul style="list-style-type: none"> • Concluding the Site Review and taking appropriate actions; or • Undertaking the next level of TTM Assurance
Site Review – Level 3 Regulatory	<p>This outlines the third level review of the site determining if the activity has all the necessary regulatory controls, and authorisations for all those controls. Regulatory control assessments include speed limits (including temporary speed limits) and all other regulatory devices (temporary and the obscuring of permanent).</p> <p>This can lead to an outcome of either:</p> <ul style="list-style-type: none"> • Concluding the audit and taking appropriate actions; or • Undertaking the next level of TTM Assurance
Site Review – Level 4 Safety Risk	<p>This outlines the fourth and highest review of the site determining if the activity is operating at the level of safety and risk as planned, expected and accepted.</p> <p>The Site Review Level 4 Safety Risk assessment is the most technically demanding and potentially time-consuming level of the Site Review.</p> <p>There are two parts in the determination of outcomes for the safety risk assessment. These are:</p>



Section	Description
	<ul style="list-style-type: none"> Relative risk (considers whether the level of risk implemented is similar to that authorised) Absolute risk (considers whether the level of risk is acceptable or could be further mitigated)
Site Review – Supplementary Checks	<p>This section covers several supplementary checks that, whilst they might not currently have a formal place in the Site Review historically, they will be checked and can result in intervention actions.</p> <p>The Supplementary Checks include Notifications and WAP contact details.</p>
Intervention Actions on site	<p>This outlines actions to be considered and undertaken in the response to matters identified in the TTM Site review including insufficiently managed significant risk(s) on site and leads to either:</p> <ul style="list-style-type: none"> Being able to resolve the unmanaged significant risks on site; or Issuing a stop works order and shutting down the site
Intervention Actions off site	<p>This section outlines intervention actions that do not involve engagement with the PCBU staff on the site. These can be considered after a Site Review where the result is not a pass.</p>
After the Site Review	<p>This section covers the actions that are undertaken after the Site Review and all immediate post review actions have been taken where the Site Review has a FAIL result in any level of the assessment.</p>
Network and Organisation Performance	<p>This section contains how AT RCA TTM Assurance will support a safe and efficient road network by education, engagement and enforcement of the desired outcomes on an organisational (PCBU) level.</p> <p>This section also outlines the goals and what reporting and sharing of information to the industry and others to help and encourage PCBU improve into the future</p>
TTM Assurance Training	<p>This section outlines and details the training and competency required to undertake the Levels of TTM Site Reviews and the various actions contained in this TTM Assurance System.</p>
Quality Management System	<p>This section outlines the Quality Management System AT operate to ensure the deliverables and outputs meet our quality standards.</p>

Table 2 - Outline of the key sections of this guideline document



Acronyms & Definitions

Word/acronym	Definition
AT	Auckland Transport
CAR	Corridor Access Request
WAP	Work Access Permit
TMP	Traffic Management Plan.
TMD	Traffic Management Diagram: a part of the TMP which outlines the specific TMDs and other mitigations for a particular phase of the operation. There may be multiple TMDs within one TMP
CoPTTM	Code of Practice for Temporary Traffic Management published by NZTA
NZGTTM	New Zealand Guide to Temporary Traffic Management; published by NZTA
PCBU	Person Conducting Business or Undertaking In this context, it will be the parties involved in undertaking the activity or work, or who created the risk.
Applicant	The party submitting a CAR application in MWS
MWS	MyWorkSites; AT system for managing CAR applications, and repository of permitted WAP and authorised TMPs
SD	Service disruptions; responsible for managing impacts on the normal operations of PT, specifically the bus network.
PT	Public transport
TAO	Transport Authority Organisations; currently undertaken by AT Road Corridor Access group.
HSWA 2015	Health and Safety at Work Act 2015
RCA	Road Controlling Authority; role fulfilled by the AT Road Corridor Access group.
TTM	Temporary Traffic Management
Activity	This is not limited to just construction work, and includes any activity on the AT network that requires a CAR application
Risk-based approach	The concept behind the NZGTTM (often used interchangeably with NZGTTM)
3C's	Consult, coordinate, and cooperate
TSL	Temporary Speed Limit
NZTA	New Zealand Transport Agency (or Waka Kotahi)



Word/acronym	Definition
TCD	Traffic control devices
LGA	Local Government Act
ATOC	Auckland Traffic Operation Centre
CAR manager	The person managing the overall processing of (the) CAR applications and TMP process
NAC	Network Access Coordination. This is undertaken prior to and/or as part of the application process to ensure that the network function is not unacceptably impacted by any activity or group of activities and to ensure the appropriate coordination between those activities. More information is provided in the associated AT RCA NAC Guidelines documentation
NAC reviewer	The person responsible for completing network access coordination for the TMP
TTM SME	TTM subject matter expert
Audit	A systematic, evidence-driven review of processes or activities to verify they meet defined standards and identify opportunities for improvement
TTM Site Review; or Site Review	A systematic, evidence-driven review of what TTM (and risks) are present on site to verify the PCBU meet the required or expected standards, identify any opportunities for improvement, and to inform any intervention or actions
TTM Reviewer (aka TTM Advisor & Auditor)	A trained and competent individual who conducts an TTM Site Review, gathers evidence, evaluates compliance, and reports findings
Quality Management System	A system, including formal collection of policies, processes, and procedures, that defines how an organization manages its quality objectives and consistently meets customer requirements
Quality assurance	A systematic process of preventing defects and ensuring products, services, and processes consistently meet predefined quality standards and customer expectations
Quality assurer	A person or team responsible for designing, monitoring, and maintaining the quality assurance framework and verifying its effectiveness
Retrospective Permit (aka Retro)	A retro CAR is submitted (ideally within 2 working days) if the work is completed after a one-day operation as emergency works. Retrospective will only cover the initial "make safe". If the job is going to take longer, it is not retro and should be handled as a normal CAR application at that point.



Word/acronym	Definition
	Not retro if not emergency works - a pre-approved WAP is required. If the excavation is greater than 3 m2 or 6 metres in length and/or multiple excavations are required in the grass berm then a CAR application is required to be lodged. Note: A relevant TMP is still required to be on site. – These can be classified as Retrospectives
Road Corridor	As defined in the Utilities Access Act (2010) Includes Roads as defined above and includes all land from boundary to boundary (including the Berm and Carriageway). The boundary is nominally determined as the fence line, or implied fence line where none exists.
TTM Worksite or Worksite	A site which meets the definition as in-scope for a TTM Site Review (See 3.6.2 In Scope TTM Assurance).
DSI	Death or Serious Injury. In this context, it will generally refer to a crash at a TTM Worksite that has resulted in a death or serious injury to either a road user or road worker.

Table 3 – Acronyms & Word Definitions

Risk Based TTM Site Review Technical Guidance

The Risk Based TTM Site Review Technical Guidance is a companion document to this Assurance system.

The technical guidance for the completion of TTM Site Review, and provides specific information to support the faithful, accurate and consistent completion of TTM Site Reviews the use of the Risk Based Temporary Traffic Management Site Condition Review form.

The core framework for this Risk Based TTM Site Review was developed by Auckland Transport with support from NZTA (Danny Wood) and Fulton Hogan (Paul Tyson).

For those who will or are completing TTM Site Reviews, it is essential that this system and the technical guidance as documented are fully understood.

End of section – Go back Table 1 Table of Contents



1. Purpose of TTM Assurance

1.1 Introduction

This section describes the purpose of TTM Assurance, why it is important to AT, and provides a high-level view of the legislation that guides both TTM Assurance and the wider RCA systems and supports the RCA authority to manage the AT road network and activities on it.

1.2 Why assurance is required

TTM Assurance is required to provide a level of confidence that the objectives of Auckland Transport Road Corridor Access (AT RCA) (and by extension AT) in managing the road corridor, are achieved within an acceptable level of risk. Assurance also incorporates taking corrective and intervention actions where those risk levels are found to be breached to support both current and future objectives.

The AT RCA has a requirement under LGA 1974 section 353 to undertake assurance as part of taking sufficient precautions for the general safety of the public and traffic and workmen employed on or near any road.

TTM Assurance supports the effectiveness of other inter-related RCA guidelines, these being the Network Access Coordination (NAC) Guidelines, and the Corridor Access Request (CAR) Processing Guidelines.

1.3 What is important to AT RCA (& why)

AT is the RCA responsible for the AT road corridor. AT RCA is required to take sufficient precautions for the general safety of the public and traffic and workmen employed on or near any road.

To do so, AT requires assurance to verify that the following key elements are implemented effectively on the road corridor:

1. **Authority:** All activities have the correct and relevant permissions and authority from AT
2. **Network Function:** Ensuring that the road and network can continue operating in a safe, accessible, and efficient manner for all users (including general traffic, public transport, freight, cyclists, pedestrians, and emergency services) during the presence of temporary traffic management (TTM).
3. **Regulatory & Legal:** All regulatory controls required are authorised and implemented.
4. **Safety:** The safety of road users and workers on the road corridor are not unacceptably compromised by the presence of any temporary activity or hazard

Assurance activities and actions must support good quality management principles, and especially continuous improvement. In this context, assurance must encourage and support



on going improvement at all levels including site, personnel, organisation and network (see also 1.6).

1.4 Auckland Transport's obligations & authority

A variety of legislation is applicable or potentially applicable to AT's role as the RCA. The most important of these are included under the following:

- Utilities Access Act (2010)
- Local Government Act (1974)
- Local Government Act (2002)
- Auckland Transport Activities on the Road Corridor Bylaw (2022)

TTM Assurance is a means for AT to satisfy itself that these obligations are being met. Important aspects of each of the legislation is outlined in the following sections.

1.4.1 Utilities Access Act (2010)

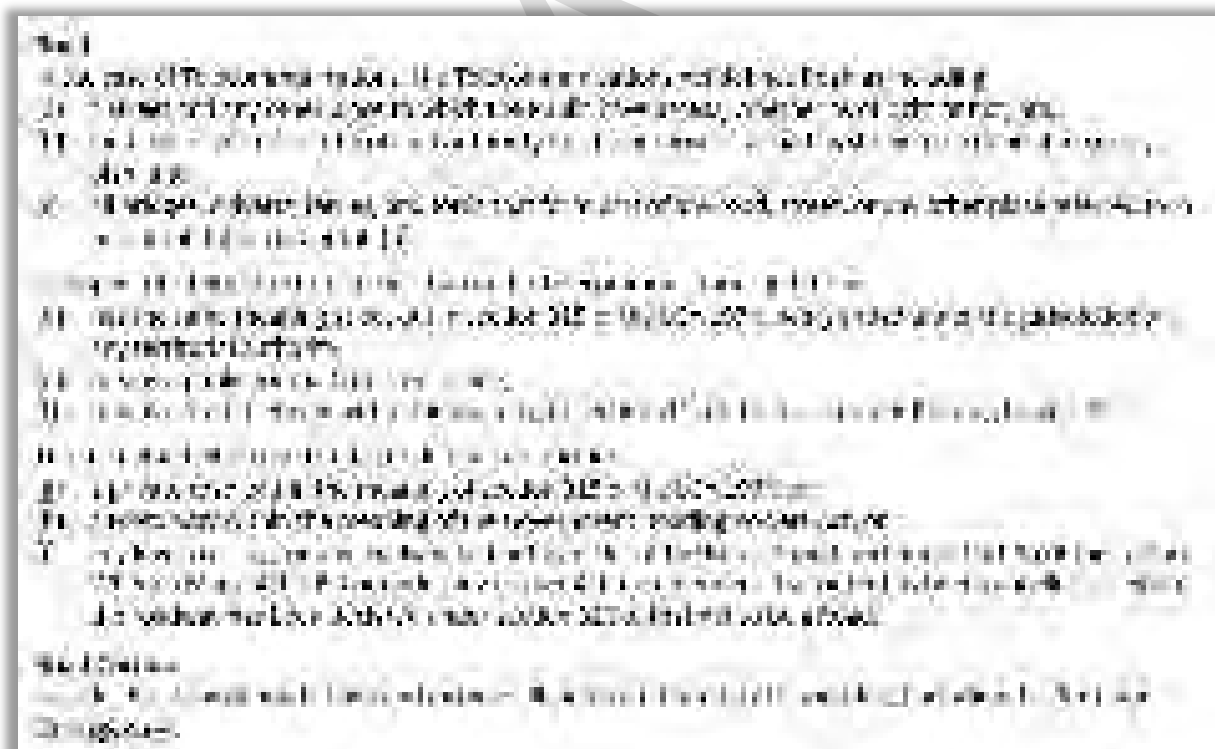


Figure 1 – Utilities Access Act (2010): Definition of a Road and Road Corridor



1.4.3 Local Government Act (2002) (LGA 2002)

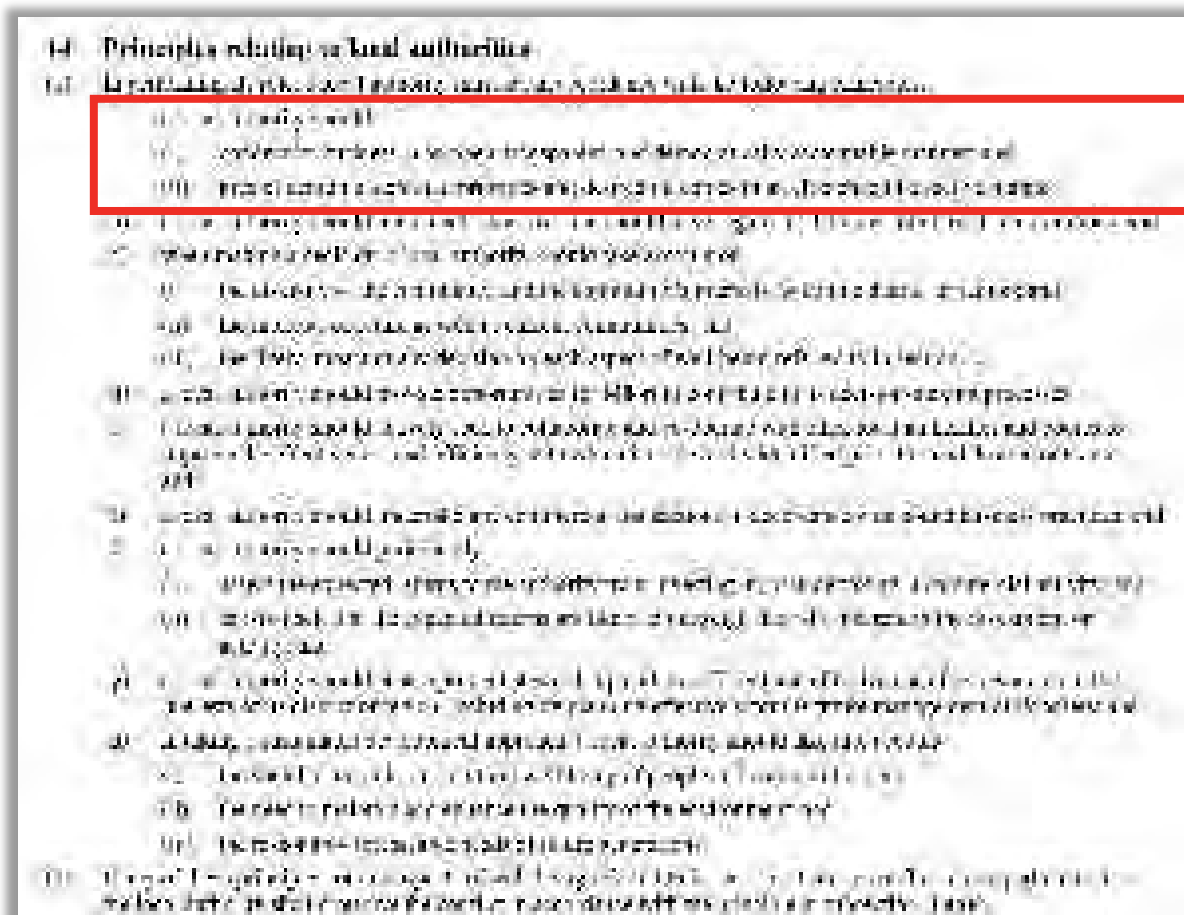


Figure 4 – Local Government Act (2002): Principles

1.4.4 Auckland Transport Activities on the Road Corridor Bylaw (2022)

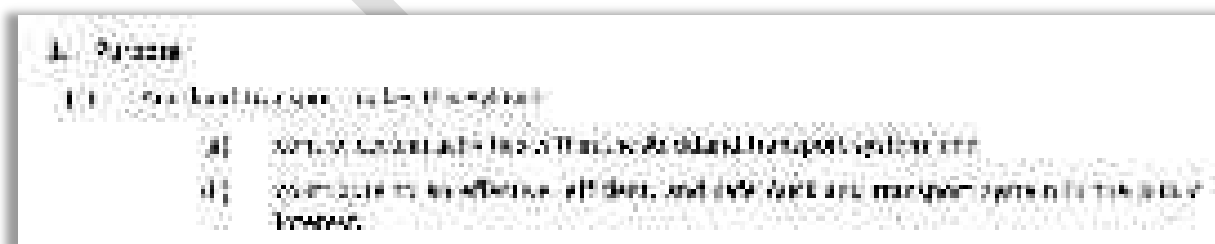


Figure 5 - Reference to the Auckland Transport Activities on the Road Corridor Bylaw (2022)



1.4.5 Traffic Control Devices Rules

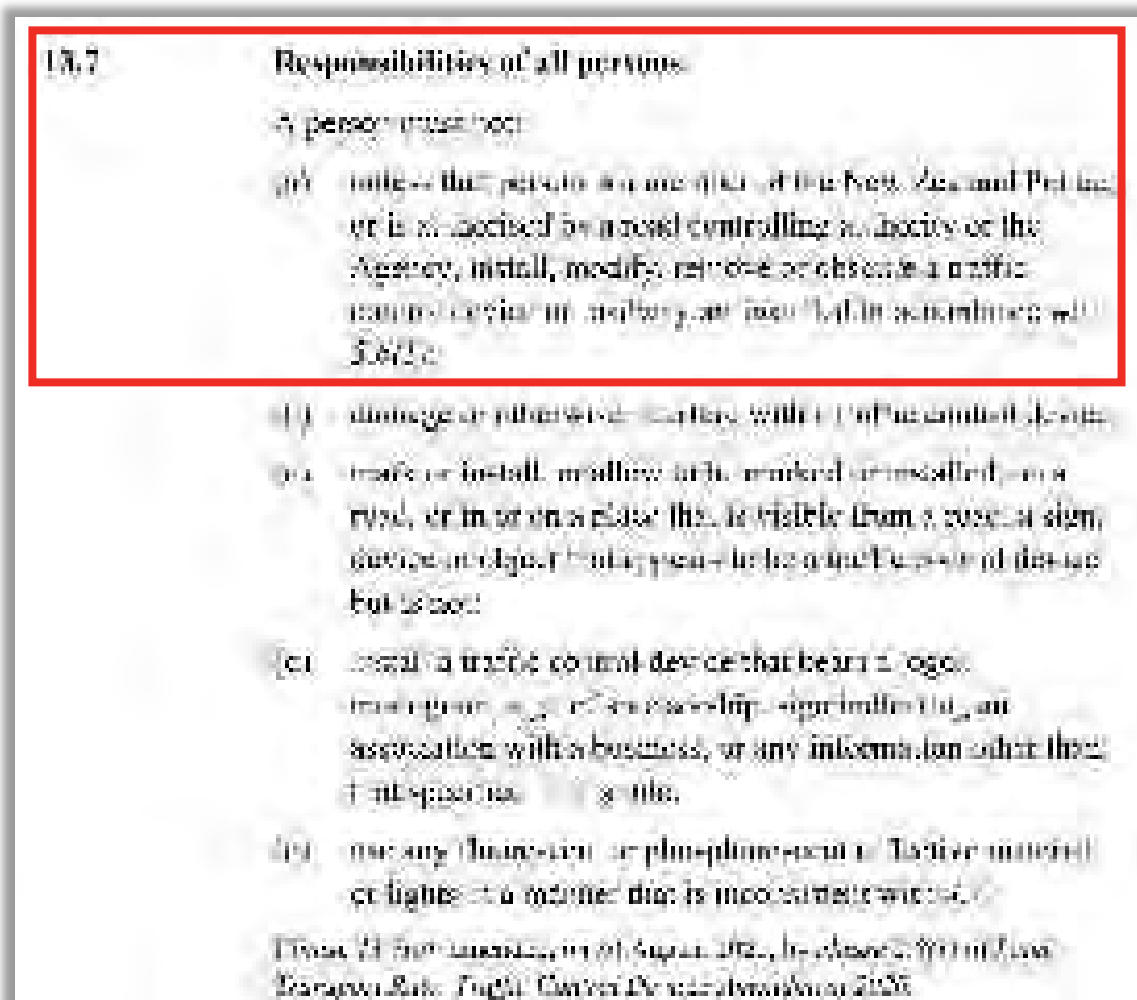


Figure 9 - Reference to the Traffic Control Devices Rules (2004)

1.5 Other Legislation

1.5.1 Acts of Parliament

Other legislation that may apply in certain circumstances (further detail not included – most of the following information has been sourced from the “Toward a New Zealand-centric good practice guide for vulnerable road users in temporary traffic management (TTM) environments: An integrative review” Master’s Dissertation by Dave Tilton 2023 (<https://openrepository.aut.ac.nz/server/api/core/bitstreams/9336cf11-84d2-4fb4-8bad-a6e9d04e76b3/content>) . Not sure if we should have all these here. Some references have been verified but most have not been as at 14/10/25):

- Civil Defence Emergency Management Act 2002:
- Crimes Act 1961:
- Fire and Emergency New Zealand Act 2017:



- Human Rights Act 1993:
- Land Transport Act 1998:
- **Land Transport Management Act 2003 (LTMA)**: TTM is utilised by those who deliver work within the land transport funded umbrella as a mechanism to facilitate safe work and improve the safety of the land transport system in general.
- **Plain Language Act 2022**: (Does not apply to Local Government but principles should be considered)
- Policing Act 2008:
- **Railways Act 2005**: The Railways Act primarily establishes obligations concerning the rail corridor and its operation. However, in all instances where there is road/rail interface, such provisions would have application.
- Summary Offences Act 1981:
- Local Government (Auckland Council) (Transport Governance) Amendment Act (2025) [Awaiting enactment]

1.5.2 Rules, Regulations, and other provisions

Other provisions that may apply in certain circumstances (further detail not included – most of the following information has been sourced from the “Toward a New Zealand-centric good practice guide for vulnerable road users in temporary traffic management (TTM) environments: An integrative review” Master’s Dissertation by Dave Tilton 2023 (<https://openrepository.aut.ac.nz/server/api/core/bitstreams/9336cf11-84d2-4fb4-8bad-a6e9d04e76b3/content>) . Some references have been verified but most have not been as at 14/10/25):

- Health and Safety at Work (General Risk and Workplace Management) Regulations 2015:
- Land Transport (Road User) Rule 2004:
- **Land Transport Rule: Setting of Speed Limits Rule 2022**: Provisioned under the Land Transport Act 1998 (under land transport ordinary rules)
- Land Transport Rule: Traffic Control Devices (TCD) Rule 2004: Part 2 –
- National Code of Practice for Utility Operators’ Access to Transport Corridors:
- Transport (Vehicular Traffic Road Closure) Regulations 1965:



1.6 New Zealand Guide to Temporary Traffic Management (NZGTTM)

1.6.1 HSWA, LGA 1974 and the NZGTTM

One of the purposes of HSWA is to provide a framework for continuous improvement and progressively higher standards of health and safety. NZGTTM enables this through the Plan-Do-Check-Act cycle as shown in Figure 10 below – specifically the ‘check’ component of this cycle which is intended to monitor the control measures in place on site, provide feedback on their effectiveness and to support and encourage improvement.

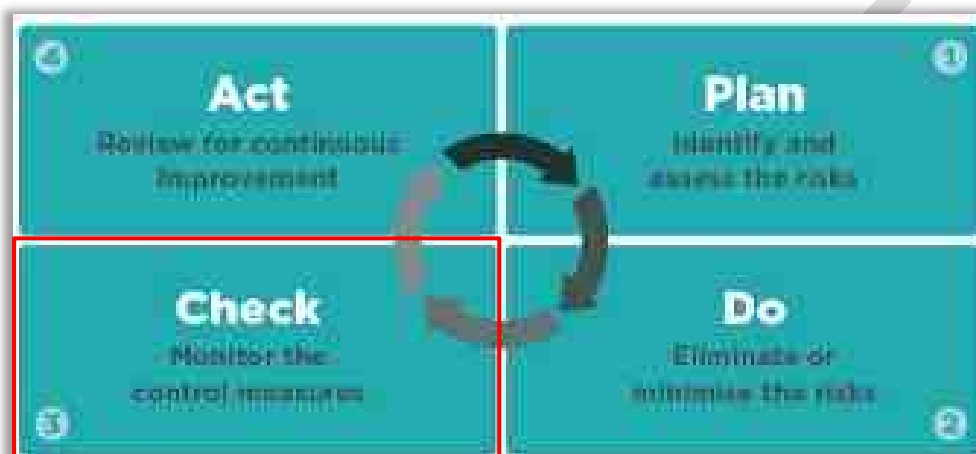


Figure 10 - Plan-do-check-act cycle from the NZGTTM

The AT RCA has a requirement under LGA 1974 section 353 to undertake assurance and monitoring as part of taking sufficient precautions for the general safety of the public and traffic and workmen employed on or near any road.

AT provides quality assurance through monitoring, performance management and reporting on TTM. As the **RCA**, this applies to all activities that occur on the AT network with an emphasis on the general safety of the public and traffic, and on network functionality.

The outcome of the RCA TTM assurance process must be fed back to the relevant stakeholders for incorporating into their continuous improvement process.

1.6.2 Types of assurance

The NZGTTM identifies six distinct types of assurance activities, each with its own strengths and limitations. When used together, they contribute to a more comprehensive and balanced assurance process. These assurance activity types are illustrated in Figure 11 and Figure 12 below for reference.



- The TTM quality, assurance, and control system includes the following six processes:
1. TTP Review (Risk assessment review)
 2. STMS/contractor review
 3. Go check/partial review
 4. Compliance based audit (existing)
 5. Full risk-based review (similar to comprehensive road safety audit)
 6. Systems audit (quality/process assurance)

Figure 11 – NZGTTM: TTM quality, assurance, and control system processes



Figure 12 – NZGTTM: Quality, assurance and control process - TTM timeline

AT TTM Assurance as outlined in this document is primarily focussed in the Detection phase (Figure 12) with a secondary focus on the Review phase. Nonetheless, TTM Assurance actions and activities aim to support improved current and future performance through all the TTM timeline.

It should be noted that the AT TTM Assurance System and the AT RCA Risk Based TTM Site Review Technical Guidance replace many of the NZGTTM Assurance and Monitoring elements section and specifically processes 3 to 5 in Figure 11– NZGTTM: TTM quality, assurance, and control system processes.

End of section – Go back to Table 1 Table of Contents



2. AT TTM Assurance – General

2.1 Introduction

This section provides an overview of the TTM assurance system and the guiding principles for assurance of TTM activities occurring on the AT road network.

2.2 System Overview

The TTM Assurance system seeks to support the purpose of AT and the aspects important to AT (see 1.3).

It is important to understand that the TTM Assurance is not limited to an inspection or observation of a TTM Worksite. It must also consider the TTM Worksite and PCBU involved through time, all interactions and endeavour to assist improved and / or desired performance in the future. This must be achieved despite AT RCA staff and TTM Reviewers not being on every TTM Worksite every hour of the day to 100% assure that all activities are 100% meeting AT expectations.

However, there must also be recognition that many of the risks, and specifically those associated with safety of people, are the responsibility of the PCBUs involved.

Figure 13 below provides an overview of the AT TTM Assurance system and an outline of the elements included. This document provides more details on each of the elements of the system and provides guidance for decision making and escalations or actions if any.

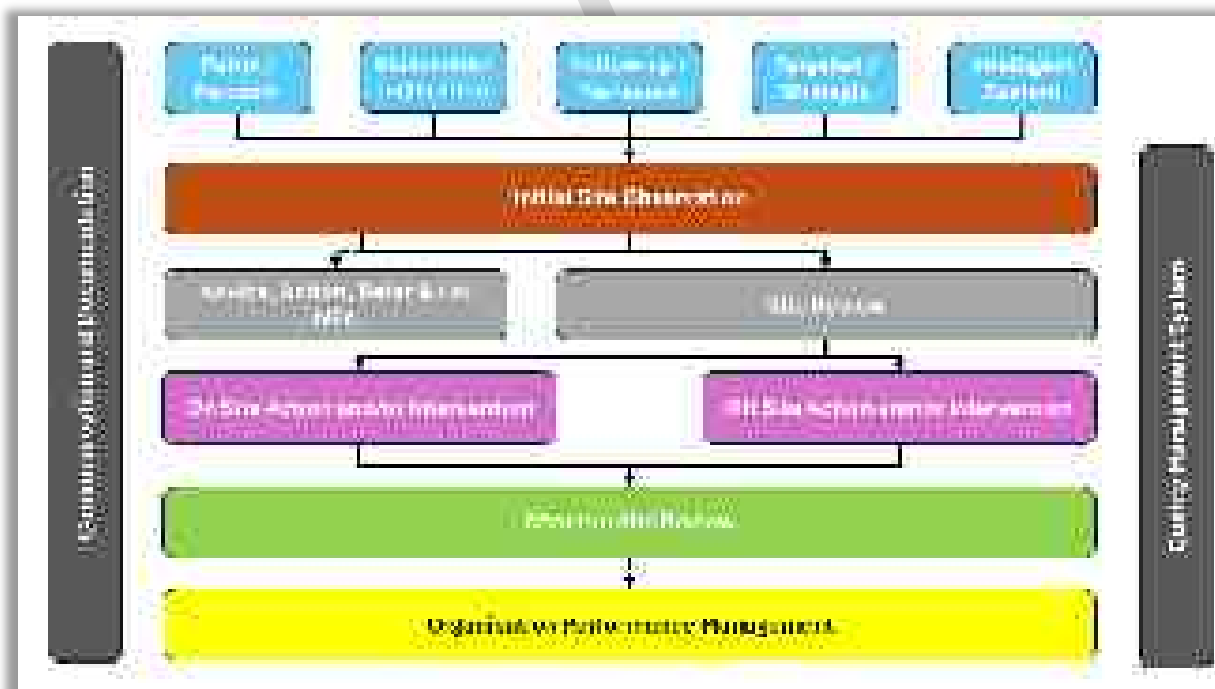


Figure 13 – TTM Assurance Overview



2.3 Ethical conduct in the assurance process

A strong and credible assurance process is built on the conduct and integrity of those who carry out the assurance role. It is essential that TTM Reviewers embody an ethical code of conduct grounded in professionalism, fairness, and recognition of a shared responsibility for safety.

TTM Reviewers act as representatives of AT and should, where applicable, foster a culture of learning, improvement, and mutual accountability. Their presence on site should not be seen as adversarial or punitive but as part of a continuous improvement process that benefits all parties. Site Reviews are opportunities to build trust, share insight, and support the delivery of safer outcomes, not simply to detect non-compliance although the TTM Reviewer will be required to exercise enforcement duties in certain circumstances.

2.3.1 Core principles of ethical conduct

A key factor affecting the effectiveness and consequential outcomes of TTM Assurance is how AT personnel conduct themselves with PCBUs (and their representatives) during all parts of the assurance process. Their presence and engagement, whether face to face or otherwise, should reinforce a culture of learning, improvement, and an understanding of the different and overlapping responsibilities of the parties involved (including AT as the RCA). Table 4 below outlines the core principles that AT will work under when conducting assurance activities.

Principle	Description
TTM Reviewers should approach each engagement with the assumption that each party is equal	Each party in the system has their part to play and will have knowledge that may not be known to others such as TTM Reviewers. Whilst TTM Reviewers must aspire to have a deep knowledge of everything related to TTM, it is important to recognise that there will always be something to learn from every interaction. TTM Reviewers should therefore seek to be unassuming, to not presume and to be humble.
TTM Reviewers should approach each engagement with politeness and respect	Every TTM site is an active work environment where workers face real-time pressures, constraints, and responsibilities. TTM Reviewers must approach each engagement professionally and respectfully, recognising these operational realities. TTM Site Reviews should not be seen as interruptions or enforcement exercises, but as collaborative opportunities to improve safety and support the people delivering the work.
Conduct and outcomes must be grounded in facts and evidence	Any findings must be based on observable facts, supported by photographs, documentation, or direct site conditions. Observations should clearly relate to risk, safety outcomes, or regulatory requirements. While professional judgement is valid, it must be backed by context and rationale to ensure conclusions are fair, consistent, and defensible under scrutiny. Avoid pre-judgement where and when there is limited or incomplete information. Each situation and party are unique.



Principle	Description
A TTM Site Review must be a helpful experience	TTM Reviewers should aim to add value, not just identify shortcomings. The Site Review should offer constructive feedback that helps teams understand what good practice looks like, how risk-based decisions are made, and where improvements could be made to better manage harm and uncertainty. A helpful Site Review fosters openness and continuous improvement.
TTM Site Reviews should be treated as learning opportunities	Assurance is a two-way process. Both the TTM Reviewer and the site team can learn from engaging in open, honest dialogue. TTM practices are evolving, and no one party holds all the answers. By listening, sharing insight, and working collaboratively, TTM Reviewers can support innovation and contribute to a stronger, shared understanding of risk.
The TTM Reviewer must also be thorough and systematic	Effective TTM Site Reviews require more than quick observations. TTM Reviewers should take time to understand the full site context, the reasoning behind the chosen TTM setup, and how those decisions were informed by risk. This includes reviewing documentation, observing behaviour, and asking focused questions, not just about what is in place, but why.
Transparency is essential	TTM Reviewers must be clear about what is being assessed, how judgements are made, and how findings are recorded. The TTM Site Review process and its outcomes should be easily understood by all involved. Where recommendations are made, they should be supported by evidence and, where relevant, include alternative solutions that could achieve better safety outcomes.
Clear communication underpins every other principle	Whether in conversations, reports, or feedback sessions, TTM Reviewers must communicate observations and recommendations in a clear, respectful, and technically accurate manner. Effective communication ensures that TTM Site Review outcomes are not only understood but can be acted on with confidence.

Table 4 - Core ethical principles for assurance activities

2.4 Consultation, cooperation and coordination

The principles of communication, cooperation, and coordination (3Cs) are foundational to both the HSWA and the NZGTTM. These principles are essential to the assurance function, where the goal is to verify that risks are being identified and actively managed, and that both safety and acceptable network functionality outcomes are being delivered.



2.4.1 Assurance and the 3Cs in the NZGTTM context

The NZGTTM operational workflow identifies key processes for a range of PCBU stakeholders performing various functions to support preventative risk management.

The assurance process is also designed to prevent risk events structured around a monitoring and review procedure that supports timely, reactive responses where the potential for harm or network disruption has been elevated or realised. It should support the following risk-based outcomes:

- Risk is identified proactively during the planning phase
- Risk treatments are confirmed as effective and appropriate during implementation and monitoring
- Issues relating to safety or network functionality are escalated and acted upon in a timely manner during and after delivery

2.4.2 3Cs in the assurance role

The 3Cs are not one-time actions, but ongoing behaviours that are embedded across all stages of the assurance process including planning, implementation, monitoring, and review. Table 5 below broadly defines what the 3C's mean in terms of the assurance role and continuous improvement processes.

Principle	What it means in the assurance process	Why it matters
Consultation	<ul style="list-style-type: none"> • Timely and transparent sharing of observations, risk insights, and decisions between the assurance role, and PCBUs (where known) • Early and more extensive notification of high-risk activities in relation to AT road network and safety • Real-time reporting of incidents, emerging risks, and implemented operations • Active management and consultation / request for authorisation of planned major changes to authorised plans • When required, assurance personnel consulted early by NAC reviewers, TMP designers, and contractor PCBUs on upcoming high-impact activities • Contributions are informed by Site Review experience and local knowledge of the transport network to support effective risk identification, assessment, and mitigation 	<ul style="list-style-type: none"> • Supports the full risk management process by enabling early identification of risks • Helps verify that risks are being understood and assessed within the specific site and network context. Allows pre-planned assurance & monitoring. • Ensures actual and proposed treatments are appropriate, proportionate, and fit for purpose • Promotes shared understanding and alignment between all relevant stakeholders • Encourages proactive planning and coordinated responses to potential issues • Reduces the likelihood of unmanaged, delayed, or poorly aligned risk responses • Contributes to continuous improvement by establishing feedback loops across planning, implementation, and review stages of the assurance process



Principle	What it means in the assurance process	Why it matters
Cooperation	<ul style="list-style-type: none"> • A shared approach to resolving assurance concerns and identifying appropriate improvement actions • Collaborative review of risk treatments to ensure they are effective and proportionate • Requires openness to feedback and constructive engagement between all PCBUs involved • Encourages mutual respect, transparency, and shared ownership of assurance outcomes • Requires consideration of the contractor PCBU, AT, and other stakeholders to ensure a balanced and fair resolution • Supports a multi-objective approach that recognises safety, efficiency, stakeholder needs, and delivery obligations 	<ul style="list-style-type: none"> • Enables joint problem-solving by encouraging active involvement from all relevant PCBUs • Promotes trust in the assurance process by ensuring that outcomes are not imposed unilaterally but are agreed upon collaboratively • Reinforces that assurance is a support mechanism—not a policing function—helping to build a culture of shared responsibility • Supports fair and balanced decision-making that respects both operational realities and safety objectives • Encourages buy-in from contractors and stakeholders, increasing the likelihood of follow-through on improvement actions • Ensures that assurance activities strengthen, rather than undermine, project delivery obligations and timelines • Helps resolve tensions between safety, access, network performance, and delivery through open and respectful engagement
Coordination	<ul style="list-style-type: none"> • Aligning review schedules, site visits / observations, and assurance efforts with known high-risk periods, sensitive locations, or key network events • Actively managing overlaps between multiple contractors or PCBUs to reduce cumulative risk • Ensuring TTM Assurance and monitoring activities are strategically timed to provide meaningful insights and interventions • Coordinating response actions when emerging risks, complaints, or incidents occur—ensuring they are addressed by the right parties in a timely manner • Maintaining open communication channels to align priorities, avoid 	<ul style="list-style-type: none"> • Ensures assurance activities are targeted where they will have the most impact—during high-risk or high-disruption windows • Enables faster, more cohesive responses to emerging risks or non-compliance by clarifying who leads and who supports in each situation • Promotes efficient use of assurance resources by avoiding uncoordinated or reactive actions • Enhances visibility and accountability across stakeholders by aligning



Principle	What it means in the assurance process	Why it matters
	duplication of effort, and ensure consistency in approach	activities with shared goals and network conditions <ul style="list-style-type: none">• Supports delivery continuity and reduces delays by ensuring assurance actions complement rather than conflict with planned works

Table 5 - 3C's embedded in the assurance process

2.5 TTM Assurance In-Scope

TTM Assurance In-Scope includes any location that currently has TTM equipment on the road corridor. In-scope also includes locations where there should be TTM equipment on the AT network due to risks associated with a temporary activity or work.

The determination of whether there should be TTM equipment requires the TTM Reviewer to undertake a simple risk assessment of the site and environment. The assessment must determine that:

1. There is evidence of an activity having happened (or is happening) that has changed the road corridor risk environment for any road user from what is normally present.
2. The implementation and presence of TTM (any combination of TTM equipment) is a reasonably practical temporary mitigation to the risks present.

Both must be satisfied; if one cannot be satisfied, then the location is not in-scope.

2.6 TTM Assurance Records

All TTM Assurance records need to be retained in a way that allows efficient and effective access.

The records of the following must be retained:

- Site Observation actions (in scope)
- TTM Site Reviews & associated documentation
- On-site & Off-site actions and / or interventions
- Actions & communications during and after the site review (verbal can be summarised)
- PCBU responses, especially regarding continuous improvement
- Contractor performance management
- Crashes at TTM worksites (In scope TTM Assurance)



2.7 Information Technology and Storage

A robust system is required to support the TTM Assurance System and ensure that it achieves maximum effectiveness.

The elements as outlined in Figure 14 TTM Site Review Framework are interlinked and information from each element can flow and be used in other elements of the system. The better the availability of information and the ability to analyse the information across the various elements and the information generated will allow a more thorough management of the various PCBU working on activities in the road corridor.

As an example:

- Site Review identify performance on site and provides feedback to the site management. Engagement is primarily with on-site crew. Records information regards PCBU.
- The AT TTM Review Panel (refer 14.2 Review Panel) may identify a CAP is required via response to an Improvement Notice and only some of the PCBU are named. This typically involves engagement with the project team and sometimes wider organisation.
- The determination of the conditions applying to any organisations' future access to the network (refer 15 Network and Organisation Performance) needs to use information collected during the Site Review, any Improvement Notices, CAPs and subsequent performance trends combined with intelligent analysis. This information could also feedback to both the CAR application processing, and the Strategy for planned TTM Observations so that extra effort can be applied.

2.8 Fees

2.8.1 Introduction

AT RCA has a schedule of charges for the services it provides. These include Additional Corridor Management charges that may be used to incentivise the desired actions and outcomes, and cover a broad range of aspects.

2.8.2 Fees applicable for TTM Assurance

Table 6 – Corridor Management Charges (Part of RCA Schedule of Fees and Charges) below shows what charges are available for use as part of the TTM Assurance System.

Item #	Fee Description	Cost GST Excl
AUDITING OF WORK SITES IN THE ROAD CORRIDOR		
Minor works / Major works / Emergency works		



4.1.2	Additional inspections (if required due to non-compliance)	\$89.95
Project works		
4.2.6	Additional inspections (if required due to non-compliance)	\$89.95
Non-excavation activities		
4.3.1	Progress inspections (performance based)	\$67.46
Temporary occupation activities		
4.4.1	Progress inspections (performance based)	\$44.97
After hours call-out fee		
4.5.1	After hours call out fee (per hour)	\$142.50
ADDITIONAL CORRIDOR MANAGEMENT FEES		
Level LV and Level 1 roads		
5.1.1	Unapproved works (activities being undertaken without an approved WAP or TMP)	\$683.80
5.1.2	No notification of the commencement of works	\$168.32
5.1.3	Issue of a non-conformance notice (NNC or NCN)	\$315.60
5.1.4	Issue of a stop-work order	\$389.24
5.1.5	Late completion (per day)	\$189.36
5.1.6	No notification of the completion of works	\$168.32
Level 2, Level 2L and Level 3 roads		
5.2.1	Unapproved works (activities being undertaken without an approved WAP or TMP)	\$1,399.16
5.2.2	No notification of the commencement of works	\$315.60
5.2.3	Early establishment or late disestablishment affecting traffic in peak periods (per peak period)	\$631.20
5.2.4	Issue of a non-conformance notice (NNC or NCN)	\$631.20
5.2.5	Issue of a stop-work order	\$599.64
5.2.6	Late completion (per day)	\$473.40
5.2.7	No notification of the completion of works	\$315.60

Table 6 – Corridor Management Charges (Part of RCA Schedule of Fees and Charges)

Notes for this table

- Minor and Major works are works that have a duration of 28 days or less from establishment to final reinstatement.
- Project works are works that have a duration of greater than 28 days from establishment to final reinstatement.
- After hours call out fees will apply between the hours of 5pm and 8am Monday to Friday, and any time on weekends and public holidays and are applied where site specific issues of a dangerous and significant nature are identified, likely in response to a customer complaint.



The original full schedule of AT RCA fees can be found here: [CAR fees and charges](#)

Where applicable, multiple charges may be applied that are associated with the same TTM Site Review.

2.8.3 Application of fees for TTM Assurance

Activity has a WAP

Fees are to be applied for an activity that has a relevant WAP in MyWorksites.

A relevant WAP includes a WAP (not necessarily a TMP) that is any of the following:

- Current for the date and location, and is relevant for the project PCBU billpayer; or
- Expired, or relevant (for the project) for the project PCBU billpayer in the future

Including fees in MyWorksites, fees are processed monthly with all other CAR and other fees in bulk.

Activity does not have a WAP

For any activity that does not have a relevant WAP, invoices must be generated outside of MyWorksites.

In order to do this, full legal entity names, contact names and email addresses must be obtained. This information along with the TTM Reviewer identifying the suite and quantity of fees to be applied are sent to ServiceDeliveryBusinessSupport@at.govt.nz to enable an individual invoice to be created.

All fees are collated through the Site Review, Interventions and issues of any Notices before being sent as one invoice request to Service Delivery Business Support.

End of section – Go back to Table 1 Table of Contents



3. Initial Site Observation

3.1 Introduction

This section provides guidance around the TTM observation (assurance) strategy, triggers for and undertaking an observation of site conditions (either by the TTM Reviewer being on site or remote). It also provides guidance to support the decision regarding the next step which may be any of the following:

- TTM Site Review
- In scope / no TTM Site Review
- Out of scope (Action required)
- No further action

3.2 Triggers for undertaking Site Observation

There are multiple triggers for undertaking a site observation. These include:

1. **Random / Patrol:** This trigger includes where a TTM SME identifies situations which are likely to be *TTM Assurance In Scope*. Refer section in AT TTM Assurance – General for further information.
2. **Stakeholder highlighted:** This trigger includes any information from any stakeholder (such as a road user, customer, resident, AT group representative, eg ATOC or PT, or PCBU) that may, based on the information provided, be *TTM Assurance In Scope*. Information is preferred to flow through via the CRM system but could be received via any of email, phone call, text message or any other communication medium. Some may include footage which provides more certainty as to determining whether *TTM Assurance In Scope* or not. Some triggers might be identified as urgent / dangerous and could be received 24/7 through the on-call phone.
3. **Follow Up:** This trigger includes where a TTM Site Review or Site Observation has previously been undertaken and there is a need for a later Site Observation. This might be to assure AT RCA that the site continues to perform as expected (this might be a high profile or high-risk site) or has been previously found to be failing to meet AT expectations for any reason. These are planned observations.
4. **Targeted / Strategic:** This trigger includes where a Site Observation has been planned based on pre-determined factors. This might include the site or activity being high profile, high risk, high impact or the operation of any of the PCBU involved might be of interest to AT RCA. It could be linked to those PCBU identified through the AT RCA TTM Assurance outlined in 15.4 PCBU Performance Assurance. These are planned observations.
5. **Intelligent System:** This trigger includes where an Artificial Intelligence tool (or equivalent) highlights a specific site for observation.

3.3 Assurance Strategy

The Assurance strategy should focus on and target those matters that:



- Align to what is important to AT (refer 1.3)
- Prioritise those items which have the greatest impact (long-term over short-term)

Generally, the triggers should be dealt with in the following order of priority / importance:

1. Stakeholder highlighted & Intelligent System
 - a. Death or Serious Injury crash at a worksite
 - b. Emergency / Dangerous such as call outs and those deemed as urgent
 - c. Safety Matters
 - d. Congestion, primarily those on busy roads
 - e. Redundant TTM
2. Targeted / Strategic
 - a. Activities of known high risk
 - b. High road user numbers (routes &/or areas)
 - c. Organisation Performance Monitoring
 - d. Other programs
3. Follow Up

As identified by Review Panel or others:

 - a. Stop Work Order verification / effectiveness
 - b. Sites considered more likely to operate poorly despite the previous Site Review
4. Random / Patrol
 - a. High road user numbers (routes &/or areas)
 - b. Other programs
 - c. Any area.

It should be noted that the above is a general prioritisation. However, individual matters need to be considered in the context of what is important to AT.

3.4 Limitations of Observations

It is important to recognise that a Site Observation **represents a short period of time** often with **limited information**. While the TTM Reviewer may communicate their observations to / with PCBUs (and determine that there was no need to progress to a formal TTM Site Review), this does not imply that any site mitigations or controls are guaranteed to remain or



even are suitable under all conditions or throughout the entire duration of any activity. The information provided by the TTM Reviewer reflects what was observed at the time and should not be seen as a blanket endorsement of any ongoing risk management compliance.

Following from this, any observation conducted by Auckland Transport as the RCA, does not remove or transfer the contractor PCBUs responsibility to continually monitor, assess, and manage risks throughout the lifecycle of the activity. The Contracting and Contractor PCBU remain fully accountable for ensuring that TTM controls remain effective and are adjusted as risk contexts change.

3.5 Initial Site Observation

3.5.1 General

The initial site observation undertaken by the TTM Reviewer either remotely, or on site, involves the TTM Reviewer collecting sufficient information to assess the situation and determine what, if any, actions are to be taken.

There are two primary means of collecting information necessary to complete the initial site observation:

- On Site Observation; or
- Remote Observation.

3.5.2 On Site observation

This involves either a drive-through, a walk-through, or a combination of both. The purpose of this is to give the TTM Reviewer an overall picture of the location highlighted by the trigger.

The TTM Reviewer should select the method that provides safe access to observe the location and determine if there is:

- TTM equipment on the road corridor; or
- The presence of a temporary risk that should have TTM mitigations on the AT network.

The positive determination (in scope) of any of the above and noting the obvious of either of the above options is often easy with just a drive-through. In all other cases, a walk-through will often be required to confirm with certainty either in or out of scope. This is because some risks are not obvious purely from a moving vehicle no matter the speed.

An additional consideration is the time differential between on-site presence of the TTM Reviewer and the trigger. The TTM Reviewer may need to exercise judgement and utilise some of the Remote Observation tools to complete the observation. This might also include observing evidence of past activity to determine likely work type and thus the likely PCBUs who may have been involved. In this instance, another tool that has proven useful is to talk with some of the local stakeholders present, especially residents that are at home for a good portion of the day, as they will often be able to confirm or provide additional information such as names of some or all the PCBUs, work types or dates.



3.5.3 Remote Observation

There are several tools and systems that allow an TTM Reviewer to undertake an observation without physically attending the site. The systems available include:

- CCTV cameras: live and/or playback; fixed or permanent
- Stakeholder: written, videos, photos or livestream, verbal (eg Social Media). In this context, stakeholder includes any person other than a AT TTM Reviewer who has viewed the site and / or impacts such as a customer, road user, PCBU, worker, other contractor, resident, business owner, AT employee, etc.
- Conex outputs

An important aspect of remote observations is to ensure the gathering of sufficient information to be able to make an informed observation and decision. This will mean having obtaining multiple sources of information to provide the context, and confirmation of evidence or where using footage, multiple videos at different times to give more context for the observation.

3.5.4 CONEX Outputs

CONEX is an AI project that scans the live CCTV camera views to detect TTM delineation devices (cones). When this is detected in the current view of the camera

3.6 Observation Assessment

3.6.1 Overview

The TTM Reviewer must make an assessment based on their observations (See 3.5 above) whether the situation is:

1. In scope for TTM Assurance; or
2. Not in scope for TTM Assurance, but an issue exists (generally results in referral of situation to another party); or
3. None of the above apply as there is nothing in scope or requiring action.

3.6.2 In Scope TTM Assurance

The situation is in scope where the TTM Reviewer identifies any of the following with respect to the Auckland Transport road corridor:

1. No risk identified by the TTM Reviewer (and TTM Equipment is present):
 - a) Redundant TTM equipment: Limited to a few items; or more where not linked to a specific PCBU or WAP; or



- b) Redundant Worksite: More than a few items and generally reflecting some part or whole set up, may be linked to a specific PCBU and/or WAP; workers may be present but no risk exposure for workers or road users. [NB: Some situations initially identified as meeting this criterion may change to #2 below where and when further information regarding the risk is available to the TTM Reviewer].
2. Risk associated with a temporary work or activity:
 - a) Activity or work may be active or inactive; and
 - b) TTM Equipment may or may not be present; and
 - c) Site may be attended or unattended; and
 - d) Activity may be occurring on or adjacent to the road corridor; and
 - e) A risk to any road user is identified by TTM Reviewer.
 3. Risk associated with a temporary hazard not associated with any work or activity:
 - a) TTM Equipment must be present; and
 - b) The risk to any road user is identified by TTM Reviewer.

NB: Where a non-temporary hazard exists (eg drop out) but no TTM equipment is present, this is out of scope for TTM Assurance and the matter is to be referred to the appropriate party for consideration.

3.7 Observation Escalations and Actions

3.7.1 Escalation to a TTM Site Review

A (formal) TTM Site Review is normally required when the TTM Reviewer identifies that there is either:

- a Redundant Worksite; or
- a risk associated with a work or activity; or
- a temporary hazard with TTM equipment present.

Where the Site observation is the result of, or identifies there has been a crash, a TTM Site Review must be conducted.

An exception might be where there are significant time constraints for the TTM Reviewer to do so (such as another high priority case). These should be rare, and, in most cases, the expectation is that the TTM Reviewer quickly collects sufficient information to undertake a TTM Site Review to Level 1 as a minimum later.



3.7.2 In scope / No TTM Site Review

A location may be found to be in scope but no TTM Site Review should be carried out. This could include where:

- Some redundant TTM equipment is present (but there is too few to be considered a worksite, and/or it is not linked to an obvious previous worksite)
- TTM equipment that has been placed by adjacent property occupiers
- There is a work site present had a TTM Site Review very recently and there is no significant change
- The trigger for the Initial observation is not supported by the evidence obtained.

3.7.3 Out of scope (Action required)

As part of our duty to the Auckland community, it is important that where we find opportunities for improved outcomes on the road corridor or immediately adjacent, we gather the information we have and pass this on to the group or party who may be able to take an action.

This could include:

- Broken / damaged service covers
- Gates opening into the corridor
- Damage to assets in the road corridor that is not linked to an in scope activity
- Vegetation issues
- Private property issues
- Any other issue out of scope where action is possible

3.7.4 No further action (Out of scope)

Sometimes, when a TTM Site Reviewer undertakes an observation of a location that has been highlighted by a stakeholder or has been assigned to check and observe, there are no issues or matters in scope. It is important from a customer service perspective, that the Site Reviewer takes all reasonable steps to assure themselves that there is nothing to see. This might involve using several of the different tools or methods identified in the Remote Observation.

3.8 Safety of the TTM Reviewer

The priority for the TTM Reviewer is personal safety and the ability to gain a clear understanding of what is present at the location.



A Standard Operating Procedure is being developed that will provide guidance for the management of the safety of TTM Reviewers and others undertaking TTM Assurance activities. A reference / link to this will be provided here when available.

The outcome of the draft risk assessment is that the risks are best mitigated through training, competency, actions and behaviours of the TTM Reviewer rather than the use or implementation of TTM measures. As a result, the SOP is critical and is not supported by a TMP.

End of section – Go back to Table 1 Table of Contents

DRAFT



4. Redundant TTM

4.1 Introduction

This section provides guidance around the management of redundant TTM equipment and redundant worksites on the AT road network. Redundant TTM is a significant driver of community dissatisfaction with TTM and creates additional risk for road users and road workers. This section also outlines the processes for either getting it removed or escalating to the Site Review

4.2 Redundant TTM Definitions

Redundant TTM is any TTM equipment on the road corridor that is not mitigating any risk. This includes equipment that is stored or deployed. Its safety or otherwise is not a determinant or mitigator for its redundancy.

A Redundant Worksite is where all TTM equipment at a location is redundant, and there is strong evidence that this was a substantial part of, or all of an installed TTM Worksite at this location. This must include TTM that directly impacts road users in movement or use of the road corridor. It does not include equipment clearly stored on the road corridor unless the quantity is a substantial number.

4.3 Why Redundant TTM is an issue

There have been many incidents where redundant TTM equipment has caused serious injury to road users. Most reports refer to injuries being caused with the potential for far more serious consequences were it not for a chance occurrence.

There are also related negative consequences. These include:

- an increasing number of reports regarding redundant TTM equipment (typically more than a 100 reports every month);
- customer feedback about the plethora of cones (or in other words, a sea of orange) out on the network;
- this is an eye sore not just for Aucklanders and New Zealanders, but also for tourists.

Indirectly, the sea of orange de-sensitises road users to where there are real risks and this leads directly to increased risks for both road users and our workers because of lesser care and attention by road users.

4.4 Redundant TTM Background

Redundant TTM has been a known problem dating back to prior to 2012. Specifically, an injury incident in 2012 triggered a greater focus on the problem.

Redundant TTM equipment can be on the road corridor for a variety of reasons:



- Theft from other sites and used by others for another reason without authorisation
- They have been left behind at a worksite and / or the site has not been checked adequately to ensure all equipment has been returned to the truck or yard
- The adjacent resident (or occupier) has placed them for their own purposes such as reserving roadside parking or for another reason. Often this will be using stolen or otherwise misappropriated TTM equipment.

Some can also appear redundant but are mitigating (in as far as it is possible) a forgotten risk.

Surveys in the past indicated there was a lot of redundant equipment that had accumulated on the road network:

- January / February 2018: 16,500 redundant TTM equipment items;
- July / August 2019: > 20,000;
- October / November 2022: 45,000.

4.5 Redundant Worksite

If a Redundant TTM Worksite is found, a TTM Site Review should be completed – refer to 6 Site Reviews.

4.6 Owners to pick up

Where Redundant TTM is found by a TTM Reviewer, and the equipment has known PCBU identification features, or it is known to link to a specific activity, it is best that the owner be contacted to remove. Expectation is that the owner removes the same day and advises the TTM Reviewer when complete. If there is more than 10 items owned by the same organisation, this may be considered as a Redundant Worksite and completion of a Site Review (refer to 6 Site Reviews) should be considered.

A list of all known logos and identification features for operators is provided in Appendix B: TTM Equipment Identification Features for Organisations.

4.7 Reactive Redundant TTM Collection

AT has engaged a contractor to undertake small quick win activities and works. Included in this contract is an task to respond to cases where customers are reporting redundant TTM equipment left or found on the road corridor. Two contracts exist with one North & West and the other Central and South.



Each week or fortnight, a batch of cases (above a minimum threshold) will be sent to each contractor. The contractor is expected to visit each site, remove redundant equipment found and to report back. AT RCA will close out the case.

These contracts are not intended to deal with redundant worksites – these must be managed by an AT TTM Reviewer. In addition, some cases that are inspected by a contractor might identify an issue that they are unable to resolve. In this case, a Site Observation is triggered (refer 3).

4.8 Proactive Redundant TTM Collection

AT has engaged a contractor to complete a thorough inspection of entire AT road network and remove all identified redundant TTM. This is to be completed every six months. Assurance of the work involves a pre and post inspection assessment to ensure that all equipment that should be removed has been.

This contract is not to be used for the removal of redundant TTM from individual locations – these should be passed to the Reactive Redundant TTM Collection (refer to 4.7).

During the contractors' inspections, some TTM equipment will be found that are unsuitable for collection by them. These are known as Exceptions and should be dealt with accordingly:

- Protecting a hazard – refer the hazard to the appropriate organisation (such as AT PM, AC, Utility Operator or other party)
- Protecting a temporary hazard or activity - a Site Observation is triggered (refer 3)
- Placed by an adjacent resident or land occupier – this is normally without authorisation. The party must be advised to remove
- Protecting an gate opening into the road reserve – refer to AT Operations to require gate to be changed so that gate does not open into the road.

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5. Crashes at TTM Worksites

5.1 Introduction

This section provides guidance around the requirements for reporting of TTM Crashes and managing, reporting and using the information to support and influence improved safety on the AT road network.

5.2 Why

Road crash reporting is important because it provides the data necessary to **improve public safety, support legal, insurance processes, inform policymaking and inform legal processes** aimed at preventing future crashes.

Crash reporting:

- **Identifies hazardous locations and trends:** Collected data helps all us and the TTM Industry identify high-risk areas, such as common crash causes (e.g., any combination road user, environment, risk and TTM features).
- **Informs road safety initiatives:** Analysis of crash data can be used to design and prioritize a range of safety improvements, including better TMP design, implementation, management, and public education campaigns.
- **Monitors effectiveness of changes:** Reporting influences what areas are best to be monitored and to help inform the evaluation planned and implemented safety measures so that they are effective in reducing the likelihood and severity of crashes.
- **Supports research:** The data is a primary source for researchers and the industry in the to development of improved and new ways to reduce risks and crashes.
- **Facilitates insurance claims:** Stakeholders & Road users rely heavily on crash reports to verify details, determine fault, and process claims.
- **Coronial Inquests:** Crash reporting helps provide facts for inquests and helps trigger more information gathering by all responsible parties (AT RCA, PCBUs, Police and others). Without it, obtaining a complete and accurate outcome can be challenging.

5.3 TTM Crash Definition

A crash is defined as any incident involving at least one road user that results in damage to any vehicles, plant or injury to a person. It can also include incidents that renders any TTM risk mitigations deficient (this would exclude one or two cones being hit and moved or removed).

5.4 TTM Crash Reports

It is mandatory that PCBU report all known TTM crashes to AT. This includes both crashes when staff are on site and when the site is unattended. This might mean that evidence of some crashes may be identified during PCBU site monitoring of unattended closures.



The reports should focus on collecting and providing all known information. They should not provide opinions as it is best simply to provide the facts.

A good report would include the following:

- Details of what happened including movements before and during the crash and how it happened (
- Any injuries (if any) and damage
- A copy of the relevant TMP (if any) or the TMP # and the relevant TMD. If none exists, state the fact
- Photos of the TTM Worksite at the time or
- A sketch of the scene specifically showing the actual TTM and risk present, and where the crash happened
- A copy of relevant site monitoring records and very recent PCBU assurance

Poor reporting might include the following:

- Poor location or date details such it is unable to be determined with certainty
- A statement such as “the closure was in accordance with the TMP” – this implies everything is perfect (better would be to at least include photos and best is not to include this statement even if it is believed to be true)
- No report is submitted for a known crash

It is recognised that the collecting all information for a good crash report can take time. A crash involving a death or serious injury (DSI) must be reported immediately to AT RCA. This can be done through the call centre or a direct call to a member of the AT TTM team and can be supplemented by an email to TTM.Crash@at.govt.nz stating the simple known facts at the time of the communication.

AT RCA will seek to get all crashes reported by PCBUs in as complete and as good a quality as possible.

5.5 Information Receipt & Storage

Currently, reports are to be sent by the PCBU to TTM.Crash@at.govt.nz

AT RCA will retrieve all information, will check to make sure the report is complete and has good information. If necessary, the PCBU will be sent a request for more information.

The report (including any additional information received) will be stored in a robust and available system to allow easy reporting and retrieval of the information. The system currently available is SharePoint and the information must be suitably tagged and documented. Each crash must be in its own document set.



Where a DSI is reported, in most cases a Site Observation must be undertaken by a TTM Reviewer as a high priority. If the worksite and / or risks are still present, a full TTM Site Review must be completed and as much footage and photos of the site collected. This would be undertaken as normal process although all levels must be completed irrespective a failed outcome at any level. The TTM Site Review is to be stored as per normal process and a reference, or full copy, of this TTM Site Review must also be recorded with the crash report.

A database must be maintained recorded key information relating to reported crashes at worksites. The information recorded should aspire (tempered by practical realities) to be equivalent in detail to that which is recorded in the CAS database (refer [Crash Analysis System \(CAS\) | NZ Transport Agency Waka Kotahi](#)). TTM / temporary activity centric information should include such information as the type of risk of the hazard, the activity phase (attended or unattended), and differentiation between who was injured to name a few.

A system should be developed that makes it easier for PCBU to report quickly such as an online form.

5.6 Crash Reports usage and Education

5.6.1 General

All information that is sent to external parties (outside of AT) must be anonymised wherever reasonable and practical. This must be considered with regard to information which is not already within the public domain (such as authorised TMPs which is available publicly).

5.6.2 Data Reporting

Currently, reporting is relatively simplified primarily reporting numbers of crash reports received each month and showing trends over the last 13 months.

However, there is a need to be more sophisticated in how it is analysed and reported. Reporting should aspire to reporting crash data trends including such aspects as environment, speed, closure type, attended or unattended.

Anonymised data should be presented in each TTM Newsletter sent to the industry.

5.6.3 Crash Case studies

Information regarding Fatal crashes often end up in limbo for some time before information can be widely shared with those who have opportunity to learn from the event.

However, for many crashes, information would not flow much further beyond the PCBU involved. This is a missed opportunity, and AT RCA can help to reduce the gap by taking a crash report and compiling the anonymised information into digestible form that can be shared with the wider industry through the TTM Newsletter.

A crash case study should be prepared each quarter.



5.6.4 Risk Assessments Reviews

Relevant information and analysis from crashes must be communicated with those involved in the reviewing of risk assessments.

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6. Site Reviews

6.1 Introduction

This section provides an overview for those acting for the AT RCA of the full TTM Site Review process of TTM sites. This includes safety, the TTM Site Review overview, documentation and records, and communication and provision of feedback.

TTM Site reviews are the escalation step from an initial Site observation.

There are 4 levels of TTM Site Reviews. The reasons for this include:

1. The increasing level generally requires a greater input of time and verification. By clearly outlining the Site Review levels and escalation points, this guidance enables a broader range of personnel, particularly within contract management, to contribute to assurance activities at the lower levels. It also allows staff with a higher level of competence to limit their time commitment to a site where there is no perceived benefit.
2. The increasing level requires of higher level of competence. An TTM Reviewer's level of competence will limit how far they can progress the site review before escalating to someone with a higher level of competence.

This approach increases AT's overall auditing capacity and allows TTM SMEs to focus their expertise on more complex or high-risk situations.

6.2 Site Review Strategy

The focus of the AT RCA TTM Monitoring resource and individual staff members must be on the areas that have the greatest benefit for the effort invested. This will be impacted by the factors important to AT RCA (and by extension AT) as well as other more dynamic factors including:

- Short term community expectations (eg Arterial & Town Centres)
- High profile projects
- Industry and Organisation performance and trends
- Stakeholder highlighted & Intelligent System

It is important to understand that any activity is the responsibility of the PCBUs irrespective of any assurance undertaken by AT RCA. If an outcome can be achieved after AT RCA undertakes one action before communication with the PCBUs, there is little benefit doing two actions and achieving the same outcome.

6.3 Site Review Framework

The Figure 14 TTM Site Review Framework below presents a high-level overview of the TTM Site Review, illustrating how the levels of assurance progress from a Site Review



verifying RCA authority exists at the top to more sophisticated Site Review undertaking a risk-assessment at the bottom.

The outcomes from each of these levels may lead to a deeper review, the issuance of a stop work order and / or any other interventions / enforcement actions.

More detailed process maps of this flowchart are provided for each level of Site Review in subsequent sections and in the Risk Based TTM Site Review Technical Guidance.

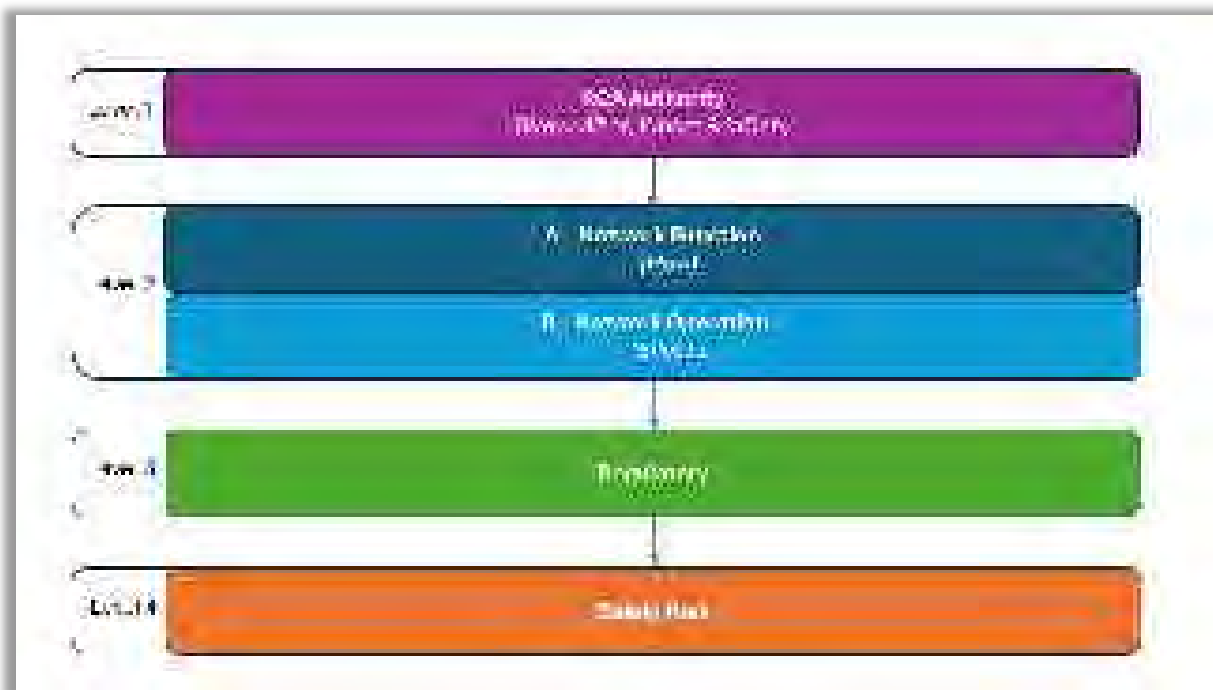


Figure 14 TTM Site Review Framework

All TTM Site Reviews begin at Level 1 and progress down through the levels as is appropriate based on the competency of the TTM Reviewer and the findings of each level.

After completing Level 1, the TTM Reviewer would progress to the next level in the TTM Site Review Framework only if there is a perceived benefit in doing so.

Where the TTM Reviewer is insufficiently trained and competent to undertake the next level of the Site Review and it is deemed necessary, the Site Review will need to be handed over to or overseen / verified by a TTM Reviewer who is sufficiently trained and competent to complete.

Detailed technical guidance for the completion of a Site Review by Level and task is provided in the separate Risk Based TTM Site Review Technical Guidance.

6.4 In scope

The site is in scope for a TTM Site Review where the TTM Reviewer has identified during the Initial observation that there is either a risk associated with a temporary hazard, work or



activity (the site has or should have TTM equipment due to the risks) or where there is a Redundant Worksite (where TTM equipment is present, but no temporary risks exist).

Another definition or perspective is that this will include any temporary activity or hazard (active or inactive) or traffic control device(s) that prevents any road user from using any part or length of the road reserve for either access to private property or infringes on their unfettered right to pass.

This could include (but is not limited to):

- a) Any activity for which any PCBU involved has determined that at least one Traffic Control device is required to mitigate any risks
- b) Machinery in operation on any part of the road reserve (excludes those with the purpose of moving itself, and / or moving goods or people)
- c) Breaking ground in any part of the road reserve
- d) Specific events that have a more than a minor impact the normal road user level of service (including Redundant worksites).

6.5 Limitations of the TTM Site Review

It is important to recognise that a TTM Site Review **represents a snapshot in time**. While the TTM Reviewer may determine that the TTM controls appeared appropriate and sufficient during their site visit, this does not imply that those controls are guaranteed to remain or even are suitable under all conditions or throughout the entire duration of the work. The TTM Site Review reflects what was observed at the time and should not be seen as a blanket endorsement of ongoing risk management compliance.

Following from this, any TTM Site Review conducted by Auckland Transport as the RCA, does not remove or transfer the contractor PCBUs responsibility to continually monitor, assess, and manage risks throughout the lifecycle of the activity. The Contracting and Contractor PCBU remains fully accountable for ensuring that TTM controls remain effective and are adjusted as risk contexts change.

6.6 Evidence limitations for a TTM Site Review

While the TTM Reviewer may complete a Site Review with certain findings, it is important to recognise that these have been **based on the evidence available at the time**.

Balancing the sometimes-conflicting demands of an accurate Site Review with the need to communicate the Site Review the findings promptly. Evidence received after the communication of the Site Review may necessitate a revision of the Site Review. The revised Site Review must be completed and communicated promptly and will replace the previous Site Review.

6.7 Authorised Traffic Management Plans

During the completion of a Site Review, it is important that the TTM Reviewer does not try to re-litigate the TMP.



What was authorised is what is expected by AT as the RCA. This is also especially true when communicating with the STMS and site crew. The TTM Reviewers opinion as to what should or should not be included in the TMP is somewhat irrelevant. What is important is what shows up when undertaking the various levels of the Site Review.

If the TTM Reviewer identifies any issues or areas for concern within the authorised TMP, these must be noted as opportunities for the PCBU to consider and must be highlighted with the CAR Coordinator for their consideration as well. The risks or issues perceived should be identified to aid in their consideration. Note that this can and should be undertaken irrespective of whether those risks or issues impact the actual worksite.

6.8 TTM Reviewer Safety

The TTM Reviewer must consider their personal safety when they are undertaking the Site Review on site. The mode of review is determined by the TTM Reviewer based on an initial risk assessment that considers both the safety of the TTM Reviewer and the need to thoroughly observe all relevant aspects of the TTM setup.

The TTM Reviewer should select the method that:

- Provides safe access to observe the site conditions.
- Allows sufficient visibility of controls, including those affecting pedestrians, cyclists, vehicles, and work crews, to carry out a fair Site Review
- Aligns with the complexity and layout of the site.

An updated SOP is currently in development.

6.9 Information Collection

6.9.1 General

Information collection to complete a Site Review will build upon that information gained from the Initial Site Observation.

At least two sources of information will be required to complete a Site Review, and more is generally better if time and cost to obtain do not overly delay the completion of the Site Review. In almost every case, this must include some form of visual evidence although there are very rare cases where the other evidence / information is overwhelmingly sufficient to complete a TTM Site Review.

Information necessary to complete a Site Review can be via any of the following

- On Site Inspection; and / or
- Remote information.

A TTM Site Review commenced with either means may revert to the other to collect sufficient information to complete the process.

Some TTM Reviews may consider only a part of the site. This may either be by choice by the Site Reviewer, or by necessity such as due to limited available information. In either case, there must be sufficient information to be confident in the Site Review. The documentation must record the limited scope of the Site Review.



It is important for TTM Reviewers that there are any number of opportunities to gather information. The TTM Reviewer may, in some circumstances, need to use intelligent and lateral thinking to discover the information to be able to compile a Site Review with sufficient certainty.

6.9.2 On Site Inspection

This involves either a drive-through (part or full), a walk-through, or a combination of both. The purpose of this is to give the TTM Reviewer an overall picture of the activity space, environment itself.

In many (urban) cases where there are facilities for those other than cars, a hybrid approach is appropriate, starting with a drive-through to assess general layout and hazards, followed by a walk-through to inspect specific risk areas more closely.

The mode and scope of review is determined by the TTM Reviewer based on their level of competency, an initial risk assessment that considers both the safety of the TTM Reviewer and the need to thoroughly observe all relevant aspects of the TTM setup.

The TTM Reviewer should select the method that:

- Provides safe access to observe the site conditions
- Allows full visibility of all controls, including those affecting pedestrians, cyclists, vehicles, and work crews
- Aligns with the complexity and layout of the site

Regardless of the method chosen, the TTM Reviewer must ensure they have observed the site in sufficient detail to make an informed judgement about whether:

- The site looks and feels safe for all road users
- Risks are being appropriately managed for the location and type of activity

The priority for the TTM Reviewer is personal safety and the ability to gain a clear understanding of how the site is functioning in practice.

6.9.3 Remote Information

There are several tools and systems that allow an TTM Reviewer to undertake a Site Review and possibly without physically attending the site. The systems available (some of which will have been used in the Observation stage) include:

- CCTV cameras: live and/or playback; fixed or permanent; Bus
- Stakeholder: written, videos, photos or livestream (eg Social media such as WhatsApp)
- Conex outputs
- MyWorksites: authorised TMPs & WAPs
- PCBU Records (such as site records; provided by PCBU and others)



- Knowledge of PCBU / activity type connections and evidence of past activity linkage

6.9.4 Recording of Information

The TTM Reviewer should ensure that each Site Review is properly recorded and supported by evidence that accurately reflects conditions at the time of the Site Review. This includes capturing clear photographic or video evidence (wherever possible) and documenting any notable observations. TTM Reviewers are expected to make direct contact with the on-site STMS, either by phone if contact details are available, or by stopping at the site to engage in-person.

All findings, particularly those that result in a need for action by the PCBU, must be substantiated with appropriate evidence, preferably visual, to ensure that Site Review outcomes are transparent, proportionate, and justifiable.

Table 7 outlines the evidence that, where available, needs to sufficiently support the Site Review to include in the record of information. Note that not all will be available for all Site Reviews.

Evidence	Expectations
Photographic or video footage of site (TTM Reviewer on site)	A video file of the full or part of the site from a drive through (or walk through), or enough photographs of the site to give a sufficient overview of what was present at the time on which the Site Review is based.
Photographic or video footage of site (TTM Reviewer remote)	A video file or photographs of the full or part of the site from CCTV cameras, or from another source, to give a sufficient overview of what was present at the time on which the Site Review is based.
TTM Reviewer notes	Sometimes, observations by the TTM Reviewer will not be “caught on camera”. In these instances, the TTM Reviewer must record what was observed accurately and in detail.
Authorised TMP	If it exists, a copy of the authorised TMP at the time of the Site Review.
PCBU records	Copies of any Site Records and other information provided by the PCBU.
Customer (or other) reports	Information provided by others, recognising that some of these might need to be redacted to avoid compromising Privacy Act for private parties.

Table 7 - Record of evidence for the Site Review

All the above records (excepting parts of customer reports) must be made available to the PCBU. This is currently through the Auckland Transport [Temporary Traffic Audit Videos for Sharing - Home](#).



6.10 Site Review documentation

6.10.1 Overview

A critical part of a TTM Site Review is documentation. This includes essential details such as where and when the Site Review took place, who was involved, what work was being carried out, and the TTM Reviewer's observations. It must also record any actions taken, or recommendations provided to relevant parties.

This information is valuable not only for PCBUs, who can use it to inform future improvements, but also for Auckland Transport, as it provides data and insight that helps AT track contractor performance across the network. TTM Site Review findings could also be referenced to support a range of decisions, including procurement evaluations and contract performance management by contracting PCBU, and for the assessment of new TMP submissions involving any of the PCBUs involved.

6.10.2 Site Identification details

Recording the basic details of the site is important for identification and future follow up Site Reviews and many other aspects. This information also helps for providing multiple data points on which trend analysis can be undertaken (information collected over time that reveals patterns, shifts, or changes in performance, behaviour, or outcomes).

Information recorded must include the following as a minimum:

- Location of Site Review – including road name, specific location on the road such as address number(s), and suburb
- Date and Time of Site Review
- Name and contact details of the TTM Reviewer
- Project type
- Activity underway
- The reason that triggered the TTM Reviewer to undertake a Site Review

The following information must be recorded if and where known, available and applicable:

- Name of the PCBUs (Client PCBU, Lead Contractor PCBU, TTM PCBU & any other PCBU relevant to the risk)
- Contact person for each key PCBU and their contact details
- Authorisation details (WAP & TMP Numbers)
- TTM Assurance program identifier

In some cases, some of this information might not become available until days or even weeks after the TTM Site Review. In these cases, the Site Review should be documented at the time of the inspection and updated as the other information becomes available.

6.11 Feedback to the PCBUs

It is important that the Site Reviewer records any feedback from the TTM Site Review that has been completed. This could include areas for:

- Recognition (positive); and / or



- Potential Improvement (constructive)

It is important that the Site Reviewer identify to site staff any areas for recognition

Potential areas for improvement could be identified through any of the levels of assessment undertaken. All feedback should be linked to a specific situation that has arisen on site that the TTM Reviewer has observed or identified and is evidenced. This helps the feedback to be relevant and easily understood. Where possible, the TTM Reviewer should describe the cause and effect, for example identifying where something has been done on site outside of the scope of the authorisation documents, and what the effect of that has been or could be.

The feedback information needs to differentiate between the potential on-site improvements for the STMS / PCBU, and potential off-site improvements for the contractor PCBU and Contracting PCBU to address. This is recorded in the TTM Site Review itself.

- a. **On-Site Improvement opportunities and issues** – these are tangible opportunities and issues that the STMS and contractor PCBU need to investigate further and address on site. It is up to the contractor PCBU to determine the best way to address the identified issues.

As with any feedback provided, it is not the TTM Reviewers responsibility to provide specific actions that the STMS and contractor PCBU need to take, but rather to highlight less-effective controls, opportunities and potential improvements. The TTM Reviewer **can** provide advice or ideas on how the contractor PCBU may improve things, but this should always be highlighted as **opinion** or **advice only**, and not the TTM Reviewer directing another PCBU in how to manage risk.

- b. **Off-Site Improvement opportunities, issues and/ or actions** – these are actions or improvements that the contractor PCBU and / or contracting PCBU need to consider / investigate further to support the completion of the activity. Some of these may be mandatory actions to allow the activity to continue further.

6.12 Communicating the Site Review

It is important that PCBU are informed in a timely manner using the best information available at the time. Prompt communication opportunities for improvement significantly assist in ensuring any duties under HSWA are complied with.

A copy of the TTM Site Review documentation and any key supporting information must be sent to the relevant parties on the same day the Site Review has been completed and ideally immediately. If the TTM reviewer has physically attended the worksite, the Site Review documentation should be completed there and communicated to PCBU at that time. Delays should only occur where the PCBU and / or their contact details are unknown or unavailable. The TTM Reviewer must take all reasonable actions to identify the necessary information so that the relevant parties can be informed and take appropriate remedial actions (if any).

In some cases, some information relevant to the Site Review might not become available until hours, days or even weeks after the TTM Site Review. If necessary, the Site Review must be updated in consideration of any new / additional information and re-communicated



with the relevant parties. The absence of this information should not overly delay the preliminary completion and distribution of the TTM Site Review and not beyond the same day as the inspection / information review.

The target for same day delivery of the Site Review is 95%.

Table 8 below provides the list of parties the TTM Site Review must, where relevant, be distributed to.

Site Review recipient	Stakeholder role	Typical recipient
Contractor PCBU (All)	Site delivery and risk management, continuous improvement	All of the following: <ul style="list-style-type: none"> • STMS • Site supervisor / foreperson • Standard mailbox (if any) • Sub-contractors
Contracting PCBU (All)	Contract oversight, continuous improvement	All the following: <ul style="list-style-type: none"> • Project / Contract Manager • Assurance officer • Standard mailbox (if any) • Client contract manager / principal representative
WAP Key Contacts (All)	Network oversight, continuous improvement	All the following: <ul style="list-style-type: none"> • Applicant • Any contacts not included in the above including TTM Contractor and Lead Contractor • TMP Planner
RCA (AT)	Network oversight, continuous improvement	All the following: <ul style="list-style-type: none"> • RCA Approver (if any) • RCI (if relevant) • RCA storage

Table 8 – TTM Site Review distribution list

6.13 Filing in ATs systems

All Site Reviews results and reports must be filed in a central database within Auckland Transport's system for access by different stakeholders within AT as soon as practical upon completion. This is a critical function as the TTM Site Review results should be available for personnel to filter on and establish trend data for their relevant role within AT.

Likewise, all information / evidence collected must be stored in one place that is available to others.

The RCA Temporary Traffic Monitoring department should be the gate keepers of the centralised system and ensure the quality of the content being uploaded.



Ideally, the method for recording TTM Site Review should link directly (or be uploaded) into a centralised database system to avoid double handling of the data, simplify completion of Site Reviews, and make it easier to search, sort and filter later.

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7. Site Review – Level 1 RCA Authority

7.1 Introduction

The first level of a TTM site review focuses on the verification of the activity and its authority to be present on the AT Road Corridor. Any activity that is in scope requires an authorised TMP and associated WAP, confirming that the PCBUs have authorised access to the network, and authorisation to install traffic control devices. This level is the foundation upon which all other levels of the Site Review are completed. If this level is not completed accurately, there is a very high probability that the remaining parts of the Site Review will also be incorrect.

The assessment is based on TTM Reviewers observations with reference to the various sources of evidence available during the initial observation. A reminder that all outcomes or escalations should be justifiable and based on transparent factual evidence.

This level does not require an in-depth detailed analysis of the TMP or supporting risk documentation.

This level of the Site Review is focussed on the following assurance items:

- Identifying if the activity has a relevant authorised TMP, or, if not;
- Identifying if the activity meets the definition of Emergency Works.

Note: Even when there is an immediate need to escalate Site Reviews to subsequent levels and procedures, TTM Reviewers must complete the Level 1 site review process and record their reasoning before proceeding to subsequent levels. This part of overall Site Review process forms the foundation on which the remainder of the Site Review can be completed. This also ensures that the formal Site Review document is comprehensive, with a transparent audit trail from initial observations through to the formal evaluation.

7.2 Overview of Level 1 Process

There are three assessment steps within the Site Review Level 1. These are:

1. Authorised TMP
2. Relevant Authorised TMP
3. Emergency Works



The *Figure 15 Site Review - Level 1 RCA Authority Process* below provides an overview of these assessment steps.

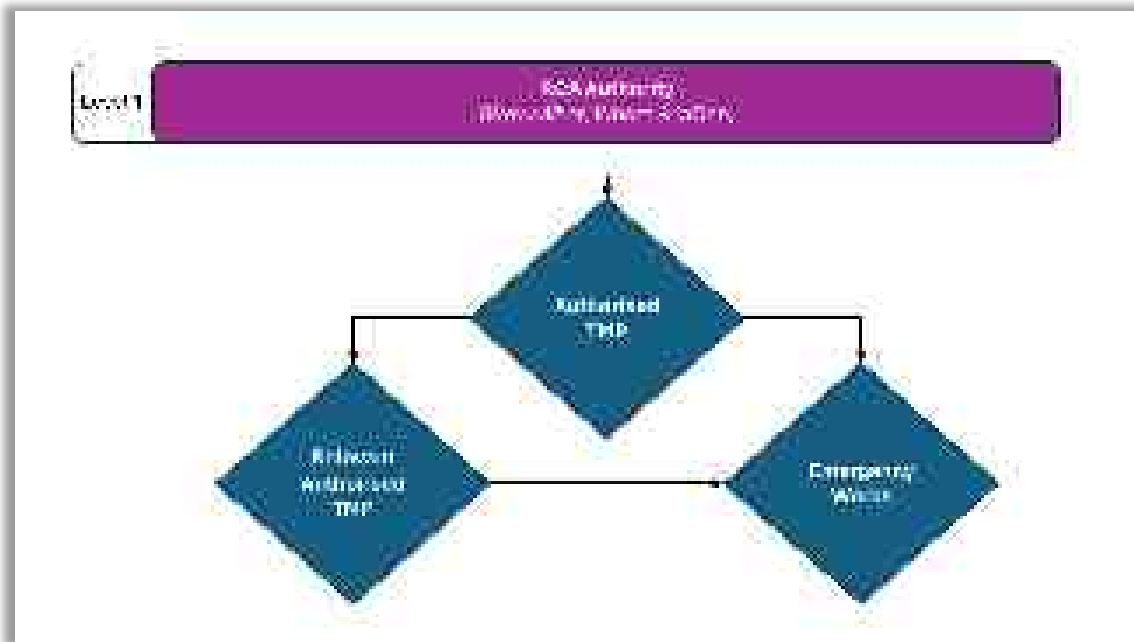


Figure 15 Site Review - Level 1 RCA Authority Process

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7.3 Authorised TMP

The first element to be assessed in the Site Review is to determine if there is an authorised TMP that the PCBUs are, or that they suggest that they are operating within.

7.3.1 Authorised TMP Process

Figure 16 RCA Authority – Authorised TMP below provides an outline of this element.

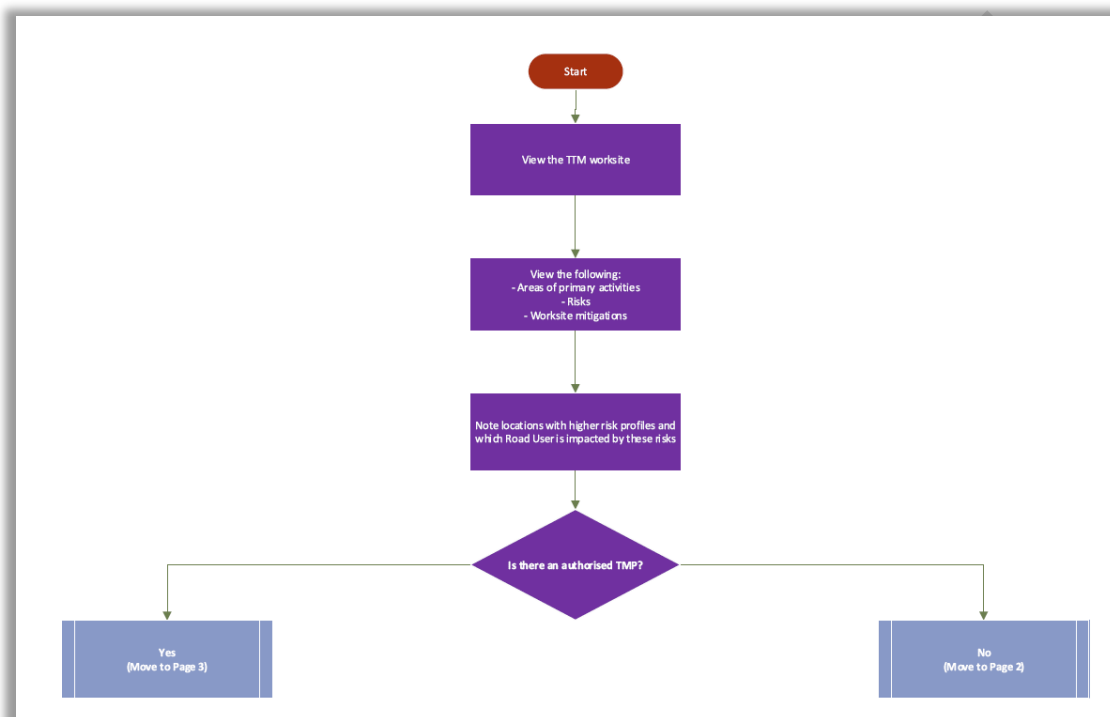


Figure 16 RCA Authority – Authorised TMP

The authorisation will include the following:

- WAP including any conditions of approval
- An authorised TMP
- Any other endorsements, permits or approval documentation from relevant stakeholders (service disruptions or public transport, KiwiRail authorisation, for example)
- Relevant risk assessment and risk management documentation

Obtaining this authorisation information establishes a clear baseline of the planned and authorised arrangements, forming the foundation for the Site review. It can also provide an indication of the preparedness of the PCBU / STMS, with site staff having all necessary documentation and understanding needed to implement the site in accordance with those authorisations.



If the TTM Reviewer has assisted the STMS or PCBU by consulting with the CAR processing team and/or My Worksites to gather information on the authorisations, this indicates poor systems and processes on the part of the contractor PCBU and TTM subcontractors.

Operating a site without ready access to these risk management documents remains a serious deficiency and warrants documented advice in the Site Review (and to PCBU / STMS).

If the TTM Reviewer is unable to obtain (either through a simple MWS query or from the PCBU) any evidence of an Authorised TMP within a reasonable time (normal time allowance is 30 minutes), the TTM Reviewer shall conclude that no Authorised TMP exists. Any actions taken because of this conclusion is because of a failure of the PCBUs irrespective of any information provided later that may challenge this conclusion.

7.3.2 Authorised TMP Evidence

Table 9 outlines the evidence that needs to be recorded at this stage of the audit to include in the audit record.

Evidence	Expectations
Confirmation of the WAP number and TMP number. Copy of Authorised TMP and WAP	Confirmation of the approved WAP number that the site is operating under, and the TMP number. The TTM Reviewer must briefly view these documents as confirmation of their existence and obtain a verified copy of both the WAP and TMP (generally a download from MyWorksites)

Table 9 - Record of evidence for presence of TMP/WAP

7.3.3 Authorised TMP Key Question

Is there an authorised TMP and WAP for the site?

YES (NEXT STEP): If there is an authorised TMP and/or WAP for the site, then the Site Review will continue to the next step (Relevant TMP).

NO (NEXT STEP): If there is no authorised TMP and/or WAP for the site then the TTM Review moves to the next step (Emergency Works)

Note that the answer to this question does not determine a result as to whether the activity has RCA Authority or not. All results lead to a next step in the assessment.



7.4 Relevant TMP

Where an Authorised TMP has been identified in the previous step of the Site Review, the next step is to determine if that Authorised TMP is currently relevant for the activity.

All the following conditions must be met for the Authorised TMP to be **relevant**:

- Location
- Date
- Time (NB this is a change from the previous TTM SCR)
- Activity type
- Workspace scope

Notification for the day and time (& acceptance where relevant) is included as a supplementary check (See 11 Site Review – Supplementary Checks) in this version of the TTM Assurance System. A future state would have this check included in the list of requirements for the Authorised TMP to be considered **relevant**.

7.4.1 Relevant TMP Process

Figure 17 RCA Authority – Relevant Authorised TMP on below provides an outline of this element.

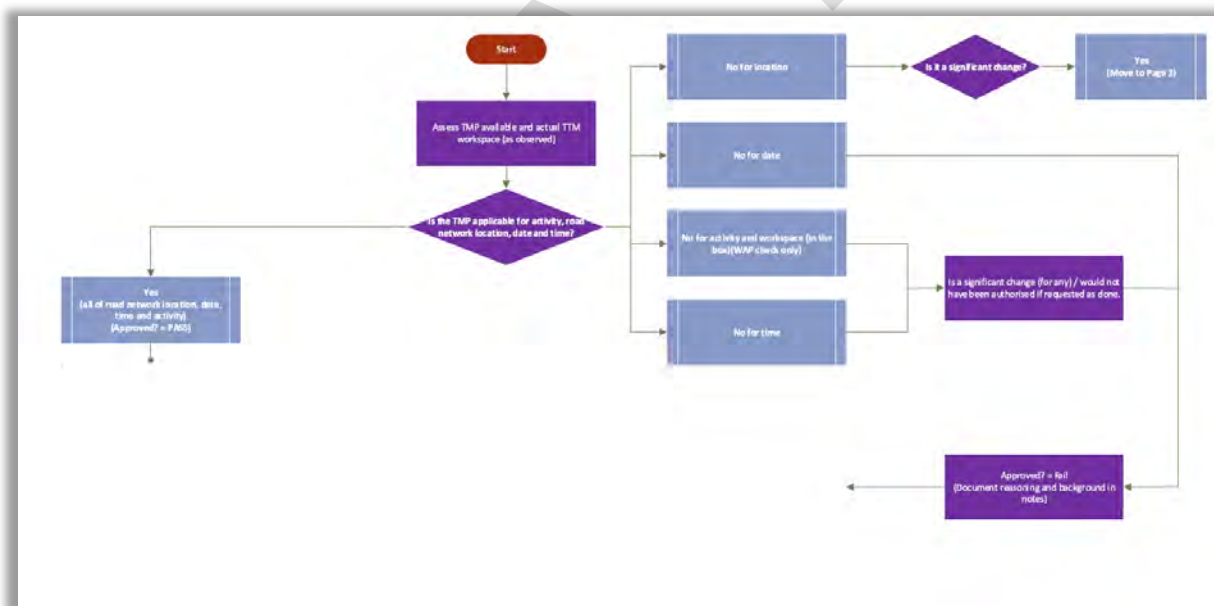


Figure 17 RCA Authority – Relevant Authorised TMP

7.4.2 Relevant Authorised TMP Evidence

Table 10 - Record of evidence for confirmation of authorised and/or approval documents outlines the evidence that needs to be recorded at this stage of the TTM Site Review to include in the audit record.



Evidence	Expectations
Confirmation of relevant authorised TMP for activity	<p>Detail of the authorisation and approval documents that are valid for the site location, activity, scope and workspace.</p> <p>Confirm that the dates and times authorised in the TMP and WAP align with the current date and time for the deployed TTM, including specific dates and time authorisations for the specific TM diagram that has been deployed (if there are multiple TM diagrams and/or stages).</p>
Confirmation of notifications	<p>The PCBUs must have notified AT RCA (through MWS) as required on the day.</p> <p>Where applicable, they may have to notify AT's service disruptions team before any works impacting public transport and advised freight and heavy vehicle stakeholders if the works are located on, or affect, an over-dimensional or heavy vehicle route.</p>
NAC authorisations	Record any non-compliance with the NAC expectations in the TMP and the deployment on site
WAP approval and conditions	Record any non-compliance with the WAP approval and conditions and the deployment on site
Other stakeholder approvals and endorsements	Record any non-compliance with between the approvals or endorsements of other stakeholders and the deployment on site

Table 10 - Record of evidence for confirmation of authorised and/or approval documents

7.4.3 Relevant TMP Key Question

Is there a **relevant** authorised TMP and WAP for the site?

YES: If the authorised TMP is relevant for all conditions.
If any of the time, workspace extent and/or activity type have insignificant differences from the TMP

Outcome: RCA Authorisation = PASS

NO: If the date is not authorised; or
If the activity type is significantly different; or
If the workspace extent is significantly different; or
If the time is significantly different from that authorised.

Outcome: RCA Authorisation = FAIL

NO (NEXT STEP): If significant difference in location (but activity is linked to the activity in the Authorised TMP), then the TTM Review moves to the next step (Emergency Works)



7.5 Emergency Works

Where it has been found that a Relevant Authorised TMP does not exist, assessment must consider if the activity meets the criteria for Emergency Works.

7.5.1 Emergency Works Process

Figure 18 RCA Authority – Emergency Works below provides an outline of this element.

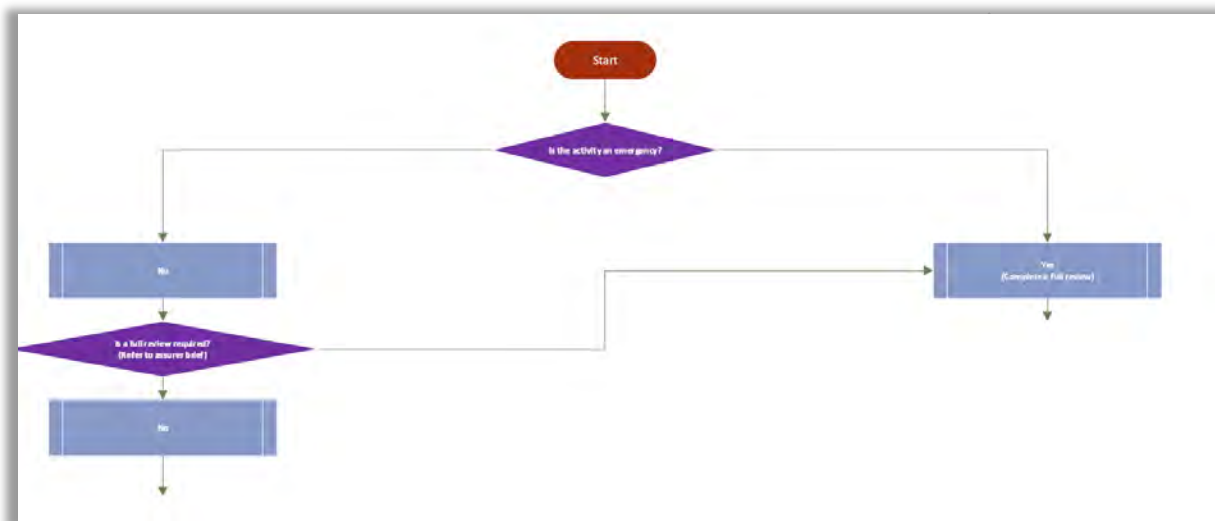


Figure 18 RCA Authority – Emergency Works

7.5.2 Definition: Emergency Works

Figure 19 below is an excerpt from the NAC guidance document and provides a summarised definition of an emergency in relation to the road corridor. This is based on the definition in the National Code for Utilities Access to Transport Corridors with expansion for other legitimate emergency activities.

“An emergency refers to any unplanned or time-critical situation that requires immediate occupation of the road corridor where there is imminent threat to life, health, property, public safety, or critical infrastructure.”

This includes (but is not limited to):

- Civil defence emergencies involving large-scale natural or man-made events
- Urgent responses by fire, police, or emergency services under statutory authority
- Incidents requiring rapid access or network closures due to public danger, criminal activity, or traffic crashes
- Critical utility failures (or imminent failures) where network access is essential to restore essential services or prevent wider infrastructure disruption

Figure 19 - excerpt from the NAC Guidance providing a definition of emergency



Risk of taking an action immediately is less than the risk of urgent or normal PDCA. Good planning prior to an activity reduces the risk to workers and road users and will have better outcomes for the functionality of the road network. An emergency, by its very nature has no pre-planning and therefore undertaking an emergency activity on the network introduces risks that would otherwise be planned out.

For real emergency works, the holistic risk associated with risk remaining longer on the road corridor and having a delayed response that is (probably) safer whilst undertaking the activity is greater than the risk of immediately attending and reducing the risk on the road corridor in a manner that is probably less safe. When the overall risk of responding in a planned way (and later time) is greater than the overall risk of responding immediately (often in a less planned, safe, efficient and effective way).

For more significant activities, the initial response deals with the immediate risk only until such time as it becomes safer or better (or both) to undertake planning to result in lower overall risk. Response immediately and continues being an emergency until work activity ceases for any reason and shift (for example overnight, over the weekend or even until a subsequent work activity/phase can be provisioned). A CAR is required (submitted immediately after the temporary ceasing of the activity) and a WAP is required to be in place before the next activity/active shift commences.

Commencement of emergency work is expected to begin immediately after awareness of issue & continues without cessation until end of emergency event; Issue is of immediate risk to human life. Stopping or delaying the “emergency” activity for a period means it is not an emergency by definition and nor in the minds and actions of some or all the PCBU.

7.5.3 Emergency Works Evidence

Table 11 outlines the evidence that needs to be recorded at this stage of the audit to include in the audit record.

Evidence	Expectations
Confirmation of emergency	Detailed explanation on why the site is considered an emergency (or not) with evidence of initial client record, reason for emergency and immediate response. No evidence of contradictory documentation or communication. Evidence may need to be obtained through multiple sources. Activity must meet definition of Emergency Works (See 7.5.2)

Table 11 - Record of evidence for emergency situations

7.5.4 Emergency Works Key Question

Is the activity emergency works?

YES: If the activity is emergency works.
Outcome: RCA Authorisation = Not Applicable

NO: If the activity is not emergency works.
Outcome: RCA Authorisation = FAIL



7.6 RCA Authorisation: Actions & Escalations

7.6.1 RCA Authorisation = PASS

When the activity has been determined to have a relevant Authorised TMP, the TTM Reviewer must record on the inspection record and include the relevant WAP, TMP and TMD numbers / identifiers. A note is to be recorded as an off-site action where site personnel were unable to provide the evidence of relevant RCA Authorisation.

Actions & Escalations by TTM Reviewer:

- Action: Record findings only.
- Escalation: Undertake Site Review Level 2 Network Function where competent to do so.

7.6.2 RCA Authorisation = FAIL

When the activity has been determined to not have a relevant Authorised TMP, the TTM Reviewer must record on the inspection record that this assessment has failed. There will be both an on-site action and an off-site action.

Actions & Escalations by TTM Reviewer:

- Action: Issue Stop Work Order (See Intervention Actions On-Site)
- Escalation: Generally, additional levels of the Site Review are not required nor are they easily or accurately undertaken. The TTM Reviewer shall make some very concise factual notes (without assessment) on any areas of significance that are observed with respect to the actual TTM, road user movements, environment, impacts and activity.

7.6.3 RCA Authorisation = Not Applicable

This outcome will occur when the activity has been determined to be Emergency Works and the TTM Reviewer must record on this on inspection record.

Actions & Escalations by TTM Reviewer:

- Action: Record findings only.
- Escalation: Undertake Site Review Level 2 Network Function where competent to do so. All later Levels of the Site Review will generally be undertaken in an advisory capacity only. There are some exceptions.

End of section – Go back to Table 1 Table of Contents



8. Site Review– Level 2 Network Function

8.1 Introduction

This level of the site review is to assess and to identify performance issues focused on the network function.

There are two separate elements in the assessment of network function. These are:

- Site Impact (how) – Considers the TTM closure impact at the worksite by considering the primary controls for each affected road user and comparing the actual implementation with that authorised. Assessment is also known as following the authorised TMP;
- Network Impacts (affects) – Considers the impact of the closure on road users by considering and comparing actual delay, congestion & accessibility with that in the plan; Note that this element also includes the consideration of the need of the closure, ie, if the impact is unnecessary (also known as a redundant closure).

All outcomes or escalations should be justifiable and based on transparent factual evidence.

8.2 Network function importance

Maintaining network function is a core responsibility for AT in its role as an RCA under the NZGTTM. It ensures that essential transport services continue to operate safely, reliably, and efficiently during (and despite) the presence of temporary activities. In addition, road users and the community expect a certain level of service in the use of the road network.

Appropriate network function can be defined as:

The ability of the road network to continue operating in a safe, accessible, and efficient manner for all users (including general traffic, public transport, freight, cyclists, pedestrians, and emergency services) during the presence of temporary traffic management (TTM).

By proactively identifying and responding to signs of compromised network function, AT fulfils its duty to ensure that safety, efficiency and accessibility are preserved for all road users while enabling necessary work to proceed.

8.3 Site Impact (how) assessment

8.3.1 Introduction

The assessment of the Site Impact (how) element focuses on determining if the implemented impacts / closure types (primary controls) have been undertaken as authorised and expected. An alternative summary is: have the PCBU followed the authorised TMP?

There are several key facts and evidence for the TTM Reviewer to consider in determining the outcome:

- Authorised TMP
- Major & Minor Changes
- Primary Controls



- Assessment Scope

8.3.2 Authorised TMP

The TTM Reviewer will have obtained the authorised TMP from the previous level of the Site Review (RCA Authority). This is the benchmark upon which the Site Impact is assessed. The TTM Reviewer needs to be familiar with what is in the TMP, and specifically what is contained that is relevant to the phase of the activity / closure.

The TTM Reviewer must not (under any circumstances) attempt to re-litigate the decisions made in determining the authorisation of the TMP, or to consider what should or could have been authorised. It is important for TTM Reviewers to remember that the comparison with the approval documentation is **not a review** of what was authorised – it is simply a comparison to see where there is a difference between what was planned and what was implemented on site. This is an important distinction.

It must also be noted that previous experience has shown that having conversations about what should or could have been approved with the site crew is not helpful in most cases and should be avoided.

8.3.3 Definition: Major & Minor Changes

PCBUs will often, while undertaking the work, need to make changes to the original plan to undertake the work. The challenge is determining the threshold for when a change becomes significant enough to require the PCBUs to obtain RCA authorisation prior to making that change. The common industry language identifies that a MAJOR change requires an authorisation (except in the advent of an activity meeting the definition of an emergency) whereas a MINOR change does not.

A MAJOR change is where the primary control (Closure type) for any road user on any section or intersection differs from that which has been authorised by the RCA. The determination of the primary control can be impacted by either the placement of the TTM or the extent of the workspace.

8.3.4 Primary Controls (Closure type)

Primary controls or closure types authorised by AT RCA reflect the activity as presented in the application and the level of impact that AT has been willing to accept based on the information provided in the application.

This information about closure types is (and should be) fully available to the road users and the wider community. Each primary control has a different level of impact, and road users make decisions on road usage based on this impact. Examples of road user decisions could include:

1. Road closure authorised: Road users may avoid the area; emergency services will plot the fastest alternative route which is slower than the original;
2. Footpath closure diversion to back berm authorised: Road users (pedestrians) may decide to not change this route or, if they are mobility impaired, go on an alternative route or not travel at all.



Irrespective as to whether the impact is significant or not, if the actual primary control is different to the authorised primary control, road users can be detrimentally impacted. Using the examples above, the following possibilities and consequences should be considered:

1. Road closure authorised & Stop Go implemented: Additional traffic on less optimal detour route; Emergency Services delayed when potential opportunity to not be delayed;
2. Footpath closure diversion to back berm authorised & pedestrians sent across the road implemented: Mobility impaired pedestrians adversely affect

A detailed list of the different primary controls for the different road users is provided in the Risk Based TTM Site Review Technical Guidance.

8.3.5 Choice of Specific Locations to be Assessed

The assessment can consider any part of the road network (Specific Location) directly affected by the presence of the activity and/or TTM.

The specific locations chosen will be one road section between intersections and / or one intersection. If the extent of the temporary activity and direct impacts is no more than this, then the whole should be assessed as one specific location. Where a worksite on a road section has multiple different controls and risks, the TTM Reviewer can consider splitting the specific locations to a smaller scope. However, the TTM Reviewer needs to exercise care to ensure that the TTM Site Review is a fair reflection. If the activity extends over multiple blocks and intersections, the TTM Reviewer can choose to assess only one-specific location, or several specific locations or all the temporary activity in which case each specific location will be assessed separately and in combination. The specific locations can include parts of any signed or non-signed detour routes where this applicable and significant.

The TTM Reviewer must choose the specific locations carefully where there are more than 2 specific locations available (such as for larger projects). Whilst the TTM Reviewer could choose all possible locations in this situation, this could mean a quite lengthy and time-consuming Site Review especially when all for levels of the Site Review are completed. The TTM Reviewer should tailor the specific locations chosen to those where there is benefit for the PCBUs and road corridor. This might mean that the TTM Reviewer may be drawn to only choosing areas which are likely to have a certain outcome. However, it is best to choose specific locations which provide a balanced review, for example, 2 locations which are likely not a pass and one or two that are likely a pass.

8.3.6 Road User Groups

The assessment must consider any Road User group affected by the activity at each of the specific locations chosen above. These road user groups are:

- Vehicular traffic (carriageway)
- Footpath users
- Cycle path / lane users



8.3.7 Site impact (how) Assessment

Using the authorised and/or approved documentation, preferably as supplied by the STMS (or contractor PCBU), the TTM Reviewer is to conduct a review to compare what has been deployed on site against what has been authorised.

An important first step is for the TTM Reviewer to ensure they understand what TM diagram(s) from the TMP have been deployed on site.

This is particularly important with larger TMPs where there could be multiple TM diagrams authorised within a single TMP with differing specific locations, Stages / phases, times and dates.

The TTM Reviewer is to determine the Primary Controls, as evidenced by the areas of the road corridor that are impacted (such as shoulders, lanes, turning bays, footpaths, cycle paths), on the different road user groups for each of the following:

- Planned, as in the TMP authorisation, and;
- Actual, as on the site

Where there are differences, the TTM Reviewer should endeavour to get an understanding why the differences exist. This will allow the TTM Reviewer to identify if and how the STMS has identified and responded to unplanned or emerging risks, and whether appropriate adjustments may have been made.

This also helps provide indicators of where opportunities for improvement lie - was the TMP correct, but not deployed accurately, or was there an issue in the planning of the TMP, for example.

8.3.8 Site Impact Process

Figure 20 below provides an outline of this element.

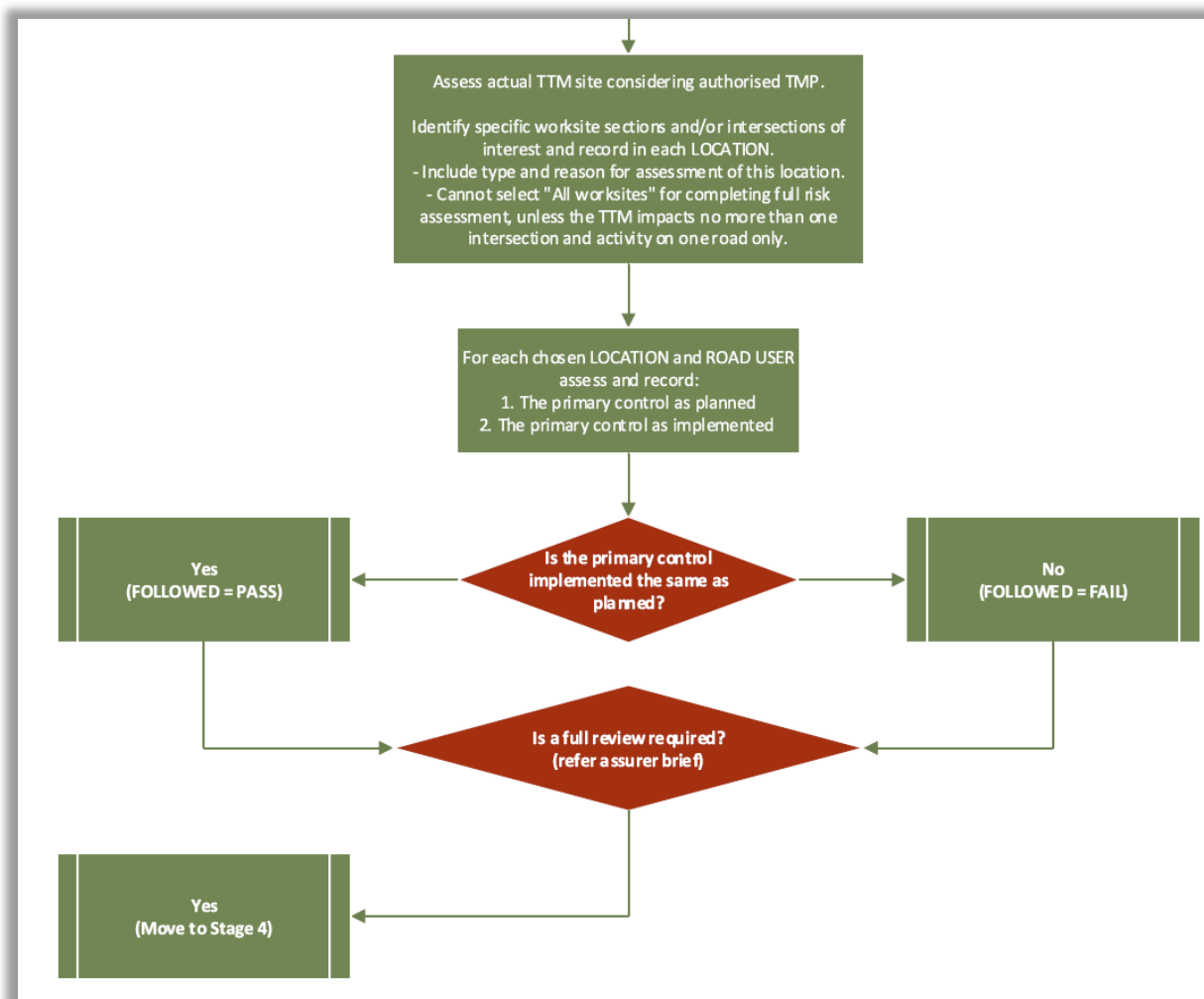


Figure 20 Network Function – Site Impact

8.3.9 Site Impact (how) Evidence

Table 12 - Record of evidence for site impact outlines the evidence that needs to be recorded at this stage of the TTM Site Review to include in the audit record.

Documentation	Description
What traffic management diagram is relevant	This is particularly important with larger TMPs where there could be multiple TM diagrams authorised within a single TMP with differing working hours and dates.
What are the primary controls in the traffic management diagram	Record of the planned primary control for each area and road user group.
What are the actual primary controls	Record of the actual primary control for each area and road user group.

Table 12 - Record of evidence for site impact



8.3.10 Site Impact (how) Key Question

Is the actual **Primary Control** for all road users and locations the same as the relevant authorised TMP (ie, is the TMP being followed)?

YES: If all Primary Controls are the same for all road users and locations.

Outcome: Site Impact (TMP followed) = PASS

NO: If any of the Primary Controls are different for any location or road user

Outcome: Site Impact (TMP followed) = FAIL

Where there are areas of differences, the TTM Reviewer must have a conversation with the STMS or equivalent to determine the reasoning for the differences.

Side Note:

Some aspects of this assessment could be considered as bordering on determining whether the PCBUs have authorisation for the closure and thus potentially bring into question whether this would be better included in the previous level of the Site Review. A point to note is that why an operation has or has not passed this level is not questioned or determined. Where a fail is determined, it is possible that the PCBUs may have been able to undertake the activity without deviating from the TMP and, by extension, they do have authorisation for how they could have undertaken the activity.

8.4 Site Impact: Actions & Escalations

8.4.1 Site Impact = PASS

Where the primary controls have been determined to be as expected and authorised in the TMP, the TTM Reviewer must record this on the inspection record and include the relevant road users types and specific locations.

Actions & Escalations by TTM Reviewer:

- Action: Record findings only.
- Escalation: Undertake Site Review Level 2 Network Function – Network Impacts where competent to do so.

8.4.2 Site Impact = FAIL

When the primary controls for the activity have been determined to not be the same with the Authorised TMP, the TTM Reviewer must record on the inspection record that this assessment has failed. There will be an on-site action and may be an off-site action.

Actions & Escalations by TTM Reviewer:

- **Action:** Advise the PCBU of the finding. The issuing of a Stop Work Order is to be considered.



- **Escalation:** Additional levels of the Site Review are not required but can proceed if there is a perceived benefit by the TTM Reviewer. Sometimes, this will support additional actions (such as the issuing of a Stop Work Order) that would otherwise not be sufficiently evidenced. The TTM Reviewer shall make some very concise factual notes (without assessment) on any areas of significance that are observed with respect to the actual TTM, road user movements, environment, impacts and activity.

8.5 Network Impact (effects)

8.5.1 Introduction

In this part of the assessment, the TTM Reviewer evaluates whether the temporary traffic management setup is adversely impacting the road user travel beyond acceptable limits as has been determined as part of the authorisation of the TMP. The review may consider both the immediate site and beyond such as might be experienced on alternative and formal detour routes.

It is important to understand that this is a comparative assessment between what has been planned & authorised, and what is happening on the road network at the time of the Site Review.

Signs of a compromised network functionality act as a 'red flag', triggering deeper review or escalation to ensure AT's safety, accessibility, and efficiency standards are maintained.

A functional network maintains:

- Traffic flow through and around the site as expected (planned / authorised)
- Preserved access to critical destinations (e.g. residences, schools, businesses, public transport stops)
- Clear navigation and minimised confusion for road users
- Appropriate provision for vulnerable users such as pedestrians and cyclists

Compromised network functionality can be defined as:

A situation in which the TTM implementation causes the transport network to operate below an acceptable threshold, resulting in unnecessary and / or unmanaged disruption, safety concerns, or accessibility barriers.

Indicators of compromised functionality may include but are not limited to:

- Traffic queuing beyond advance warning areas
- Spillover congestion affecting nearby intersections
- Blocked or delayed access for emergency services
- Public transport being delayed, rerouted, or unable to access key facilities
- Pedestrian or cyclist routes being obstructed or unsafe
- TTM footprint disproportionate to the work area or risk context

Note: An apparent compromise in network functionality as indicated above, does not necessarily mean the site is not complying with the authorised TMP nor does it mean that the review will indicate a failed result. Instead, it signals the need for detailed assessment to understand whether what is present is like the expectations documented in the authorised TMP, communication of RCA expectations and the NAC approval, and/or whether any corrective action is required.



In some cases, it is important to understand from the STMS to help clarify whether the issue is a temporary anomaly or if appropriate mitigations are already in place. For example, identifying that access to a fire station appears to be restricted, does not mean that the STMS hasn't spoken to the station already and arranged a plan for ensuring access. However, this issue, the mitigations and the expected level network function must be documented in the Authorised TMP. The omission of information would suggest that there is a planning and/or authorisation opportunity to be considered.

8.5.2 Network Impact Assessment

The assessment of Network Impact is a comparison of planned and actual at the specific locations as decided in the Site Impact Assessment (refer 8.3.5).

Impacts must be assessed for each road user group.

This assessment of the planned network impact should be straight forward as the information would normally be included in the authorised TMP or at worst, in the NAC approval if this is readily available. Where the information is not available or present in the TMP, the TTM Reviewer should take a conservative approach with respect to the assessment of the planned impact, that is, underestimate the network impact or even record it as none. This should be done if for no other reason as to encourage PCBU to consider and document the expected Network Impact in the development of any plan and application for the activity on or affecting the road corridor.

The assessment of the actual network impact requires the TTM Reviewer to assess several things. The actual travel time or delays needs to be calculated with a sufficient level of accuracy to be certain that it is a fair reflection of the actual travel times experienced by each road user group. For pedestrians, extra travel time can be linked to the extra distance to travel to a key location.

Some sites and locations may have a closure that is unnecessary because there is no hazard or activity present. This will result in an unnecessary impact on road users and is a source of significant discontent for road users and the wider community. They can also drive unsafe behaviours at other sites on the road network. Irrespective of actual or possible delays, the Site Review must call this out.

8.5.3 Default Network Levels of Service

Default Network Levels of Service in this context is intended to reflect the expected minimum network functionality of any road without the presence of temporary activities. This helps provide a contrast with the situations where a temporary activity is present. The default LOS is not currently available here and so there is reliance on the TTM Reviewer to consider their knowledge of the network.

8.5.4 Network Function Assurance Process Map

Figure 21 below provides an outline of this element.

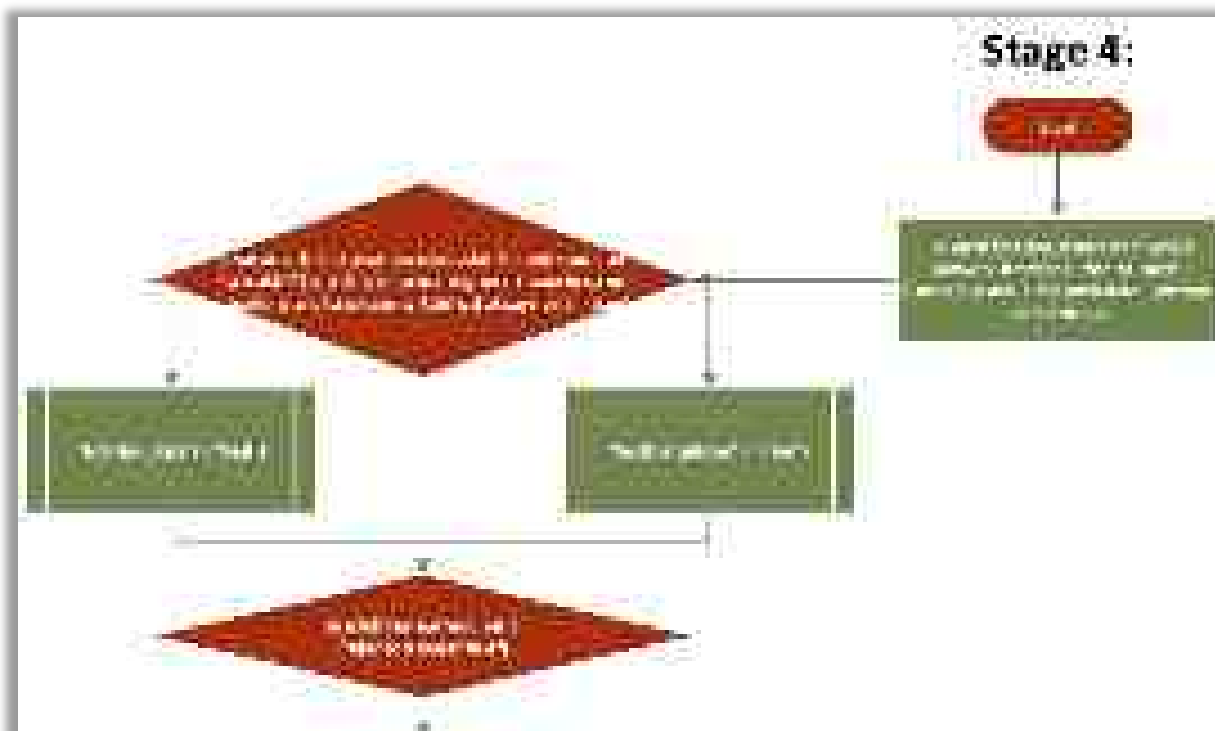


Figure 21 Network Function – Network Impact

8.5.5 Network Impact Evidence

Table 13 below outlines the evidence that needs to be recorded at this stage of the TTM Site Review to include in the inspection record.

Evidence	Expectations
Confirmation of network Impact	Detailed explanation on the network function assessment and, if applicable, why it was found to be compromised. This should include specific assessment of actual impacts, eg travel time and how this compares to the authorisation's expectations.
Observation data	This will include data collected which may include for plan, actual and where the temporary activity does not exist, time to travel a distance, length of route, average speeds.
Network access coordination authorisations	This should include understanding what the anticipated disruption to the network would be as was documented in the authorised TMP, and what the contingencies are should the disruption exceed the expected thresholds. This should be then compared with what is occurring on site and what the PCBUs may (or may not) have done to mitigate the disruption.



Evidence	Expectations
NAC authorisations	Record any non-compliance with the NAC expectations in the TMP and the deployment on site

Table 13 - Record of evidence for network impact

8.5.6 Network Impact Key Question

KEY QUESTION: Is the Network Impact acceptable?

YES: If the network impact is close to what was expected for all road user groups, and there are specific sites with an unnecessary closure.

Outcome: Network Impact = PASS

NO: If the network impact is worse than what was authorised, or where there is an unnecessary closure

Outcome: Network Impact = FAIL

8.6 Network Impact: Actions & Escalations

8.6.1 Network Impact = PASS

When the activity has been determined to have an acceptable network impact the TTM Reviewer must record this on the inspection record.

8.6.2 Actions & Escalations by TTM Reviewer:

- Action: Record findings. If the Site Review was undertaken at a time when Network Impact was not tested by high road user flows, the TTM Reviewer could, where it is perceived to be beneficial, schedule another Site Review at that time.
- Escalation: Undertake Site Review Level 3 Regulatory where beneficial and competent to do so.

8.7 Network Impact = FAIL

When the activity has been determined to have impacted road user flows more than was planned, or where any part of the site is unnecessary, the TTM Reviewer must record on the inspection record that this assessment has failed. There will be both an on-site action and an off-site action.

Actions & Escalations by TTM Reviewer:

- Action: Record the findings. Issue Stop Work Order (See 12.3) is to be considered. Encourage the PCBUs to implement of the contingency plans where appropriate.
- Escalation: Refer the information to the Corridor Manager or person who authorised the TMP. Additional levels of the Site Review are not required but can proceed if there is a perceived benefit by the TTM Reviewer.

End of section – Go back to Table 1 Table of Contents



9. Site Review – Level 3 Regulatory

9.1 Introduction

This level of the site review is to assess and to identify performance issues focused on the implementation of temporary regulatory traffic control devices.

There are two separate elements in the assessment of regulatory controls. These are:

- **Speed Limits** – Considers the enforceability of any speed limits including both temporary and permanent speed limits within and affected by the worksite;
- **Non-Speed Limit Regulatory controls** – Considers that the required non-speed limit regulatory controls are authorised, and they are implemented such that they are enforceable.

All outcomes or escalations should be justifiable and based on transparent factual evidence.

9.2 Importance of Regulatory Controls

Traffic regulatory controls are important because they are legally enforceable commands that **maintain law and order**, **prevent crashes**, and ensure the safe and efficient movement of all road users.

Key reasons for their importance

- **Prevent Accidents and Enhance Safety:** By establishing the right-of-way, controlling speed, and dictating actions (e.g., "NO ENTRY", "keep left"), these controls help drivers make predictable and safe decisions, significantly reducing the likelihood of crashes.
- **Control Traffic Flow:** In busy areas, especially, regulatory controls manage the flow of vehicles and pedestrians. This prevents congestion, promotes efficiency, and ensures that traffic moves in an orderly and predictable manner.
- **Provide Consistency and Reduce Confusion:** Standardized signs with uniform symbols, colors and usage requirements provide a consistent system of communication for all road users, regardless of their location or language. This consistency minimizes confusion and the potential for dangerous situations.
- **Protect All Road Users:** Regulatory controls aren't just for drivers; they also protect vulnerable users like pedestrians and cyclists. Speed limits, for instance, require motorists to slow down in urban areas and lower still as part of the safer speeds.
- **Guide New Drivers:** For new drivers or visitors unfamiliar with an area, accurate and consistent usage of regulatory controls are vital for providing clear instructions and building confidence on the road.

9.3 Speed Limit Assessment

Speed limits are assessed for each specific location as chosen in Level 2 of the Site Review.

The following is to be assessed and recorded:

- Permanent Speed



- TSL Authorized
- TSL Implemented (includes covering conflicting, or uncovering necessary permanent speed limit controls)
- TSL Enforceability
- STMS record of TSL implemented.

9.4 Other (Non-TSL) Regulatory controls Assessment

The assessment of the other (non-TSL) regulatory controls is undertaken for each specific location determined previously in the Site Review.

Regulatory controls considered in the assessment include:

- Mandatory actions— directions (such as no entry, no right turn, keep left), bridge weights
- Weight/axle controls for heavy vehicles
- Parking restrictions and conditions
- Traffic Signals – temporary and permanent
- Road Markings

Assessment is of the site to ensure that all necessary regulatory controls are implemented (including covering, obscuring or otherwise of conflicting regulatory controls) and that all are authorised. This is assurance not just of the implementation phase but also touches on the planning phase.

The key questions (& options for answers) are

- Regulatory controls implemented are authorized? (All / Some / None / NA)
- Required regulatory controls are implemented? (All / Some / None / NA)

The assessment considers both the implemented (actual and required) Temporary and conflicting permanent regulatory controls.



9.5 Regulatory Assurance Process Map

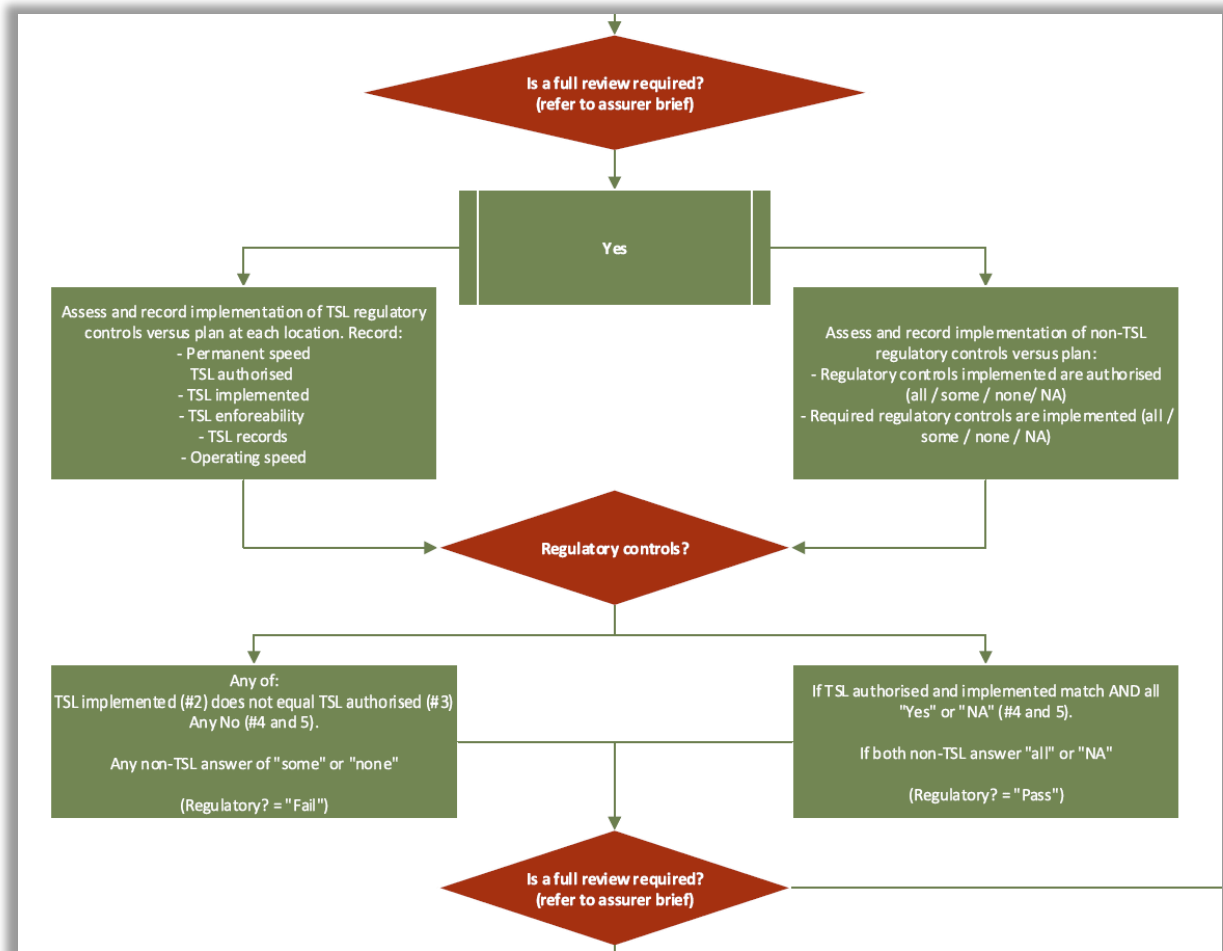


Figure 22 Regulatory Process



9.6 Regulatory Controls Evidence

Table 14 outlines the evidence that needs to be recorded at this stage of the audit that should be included in the formal audit record.

Evidence	Expectations
Regulatory authorisations	Record any non-compliance with the regulatory approvals in the TMP and the deployment on site
Regulatory controls	Record any regulatory controls (or covering of conflicting messages) that should be implemented but have not been authorised
Regulatory authorisations implementation	<p>Check that the approved temporary speed limit information in the TMP matches what has been deployed on site including location, dates, times, and the speed limits themselves.</p> <p>Check that any road closures align with what was approved in the TMP including locations, dates, and times.</p> <p>Check that the traffic control devices on site are approved standard devices, and if not, check that the differing ones are approved in the TMP.</p>

Table 14 - Record of evidence for Regulatory Controls

9.7 Regulatory Controls Key Questions

9.7.1 Temporary Speed Limits

Are the **Temporary Speed Limits** authorised, enforceable and recorded?

YES (NEXT STEP): If any, all Implemented TSL are authorised, enforceable and recorded, the next key question is to be considered (9.7.2 Implemented Regulatory Controls).

NO: If any:
Implemented TSL is not enforceable, or not recorded.
Outcome: Regulatory = FAIL

NO: Where the activity is not Emergency Works, if any:
Implemented TSL is not authorised.
Outcome: Regulatory = FAIL

Note that where a speed limit, either affected by or implemented for the worksite, is determined to be not enforceable, the outcome is a FAIL irrespective of the authorised TMP.

9.7.2 Implemented Regulatory Controls

Are all implemented non-TSL Regulatory Controls authorised in the TMP?

YES (NEXT STEP): If all Implemented non-TSL Regulatory Controls are authorised, the next key question is to be considered (9.7.3 Required Regulatory Controls)
Outcome: Regulatory = PASS



NO: If any:
Implemented non-TSL Regulatory Controls are not authorised.
Outcome: Regulatory = FAIL

NOT APPLICABLE: The site review relates to Emergency Works
Outcome: Regulatory = NOT APPLICABLE

9.7.3 Required Regulatory Controls

Are the required non-TSL Regulatory Controls implemented?

YES: If all:
Required non-TSL Regulatory Controls are implemented.
Outcome: Regulatory = PASS

NO: If any:
Required non-TSL Regulatory Controls are not implemented.
Outcome: Regulatory = FAIL

9.8 Regulatory Controls: Actions & Escalations

9.8.1 Regulatory = PASS

Where the regulatory controls have been determined to be as pass, the TTM Reviewer must record this on the inspection record and include the relevant road users types and specific locations.

Actions & Escalations by TTM Reviewer:

- **Action:** Record findings only.
- **Escalation:** Undertake Site Review Level 4 Safety Risk where beneficial and competent to do so.

9.8.2 Regulatory = FAIL

When the Regulatory controls for the activity have been determined to be a fail, the TTM Reviewer must record on the inspection record that this assessment has failed. There may be an on-site action and/or may be an off-site action.

Actions & Escalations by TTM Reviewer:

- **Action:** Advise the PCBU of the finding. The issuing of a Stop Work Order is to be considered if the PCBU (through comment or inaction) do not take steps to remedy.
- **Escalation:** Additional levels of the Site Review are not required unless there is a perceived benefit to do so by the TTM Reviewer. Sometimes, this will support additional actions (such as the issuing of a Stop Work Order) that would otherwise not be sufficiently evidenced. The TTM Reviewer shall make some very concise factual notes (without assessment) on any areas of significance that are observed with respect to the actual TTM, road user movements, environment, impacts and activity.



9.8.3 Regulatory = NOT APPLICABLE

When the Regulatory controls for the activity have been determined to be Not Applicable, the TTM Reviewer must record on the inspection record that this assessment is Not Applicable.

Actions & Escalations by TTM Reviewer:

- **Action:** Advise the PCBU of any opportunities for improved management of the site.
- **Escalation:** Additional levels of the Site Review are not required unless there is a perceived benefit to do so by the TTM Reviewer. Sometimes, this will support additional advice that could be provided or actions that would otherwise not be sufficiently evidenced by previous levels of the Site Review. The TTM Reviewer shall make some very concise factual notes (without assessment) on any areas of significance that are observed with respect to the actual TTM, road user movements, environment, impacts and activity.

End of section – Go back to Table 1 Table of Contents



10. Site Review – Level 4 Safety Risk

10.1 Introduction

This outlines the fourth and highest review of the site determining if the activity is operating at the level of safety and risk as planned, expected and accepted. The Site Review Level 4 Safety Risk assessment is the most technically demanding and potentially time-consuming level of the Site Review.

There are two parts in the determination of outcomes for the safety risk assessment. These are:

- Relative risk (considers whether the level of risk implemented is similar to that authorised)
- Absolute risk (considers whether the level of risk is acceptable or could be further mitigated)

All outcomes or escalations should be justifiable and based on transparent factual evidence.

10.2 Safety Risk Assessment overview

The methodology has drawn its inspiration and foundation from the AustRoads Safe System Assessment Framework Research Report AP-R509-16.

The approach involves assessing different elements of the system as they work together to help eliminate risk to road users and workers, specifically death and serious injury. It involves recognising that persons conducting business or undertaking (PCBU) on the road corridor have a responsibility to manage the health and safety of their workers and others. There is a recognition that people do make mistakes and that a key objective for PCBUs is to ensure that when errors do occur, they are less likely to cause harm and do not result in high severity outcomes.

The framework supports the TTM Reviewer in assessing how closely Traffic Management Planning design and implementation / operation align with the objectives of the NZGTTM, namely, to manage the actual risks effectively, and in clarifying which elements may need to be (or must be) modified to achieve closer alignment with these objectives.

To complete the site review, a risk assessment must be completed for both the Authorised TMP and the Implemented TTM.

10.3 Authorised TMP

A key element of the assessment, especially the relative assessment, is the Authorised TMP. If there is no relevant authorised TMP (such as where the activity is deemed Emergency Works), the relative risk as part of the Safety Risk assessment is not possible to be completed.

Where there is a relevant Authorised TMP, a key position to recognise is that, for whatever reasons, the risks associated with the authorised TMP were considered acceptable to AT as



the RCA at the time of authorisation. The TTM Reviewer must not take it on themselves to question why or to suggest a better way to the PCBUs.

10.4 Crash type

The assessment of both the Authorised TMP and implemented TTM is undertaken considering following crash types:

- Worker (hit by vehicle)
- loss of control (also referred to as 'run-off-road')
- head-on (or 'vehicles from opposing directions')
- intersection ('vehicles from adjacent directions')
- other (this incorporates all same direction, manoeuvring, overtaking, on path and miscellaneous crashes)
- pedestrian
- cyclist
- motorcyclist.

These crash types represent the main crash and road user types that contribute to death and serious injury at worksites. They are included to help concentrate thinking on crash causes and potential actions. They are also provided in this way to ensure that vulnerable road users are specifically and directly considered.

The TTM Reviewer should consider each Specific Location and choose the Crash Types to be assessed based on their perception of both the Authorised TMP and the Implemented TTM. Those crash types perceived to be the most probable to be an issue in either would normally be included in the assessment. It is also important to also include some assessments of those crash types that are perceived to be issue free, ie, the risks have been well mitigated.

10.5 Risk Assessment Mechanics

The assessment of the risk, whether of the Authorised TMP or of the Implemented TMP requires the TTM Reviewer to undertake an assessment of the risks of each chosen Crash Type at each Specific Location (See 8.3.5 Choice of Specific Locations to be Assessed).

The assessment involves determining the rating for each of the following as a number between 0 and 4 inclusive where 4 is high:

- Exposure – the number of people that have the potential to be involved in the crash type.
- Likelihood - the probability that an individual (worker, vehicle occupant, pedestrian, cyclist or motorcyclist) will be involved in a crash.
- Severity – the probability of a death or serious injury should a crash occur.

Once assessed, the rating for exposure, likelihood and severity for each crash type are multiplied to give a product out of 64. This product is the Risk Score for each of the combinations of the particular:

- relevant authorised TMP or implemented TTM;
- Crash Type; and
- Specific location.



For example, the Implemented Risk Score may be 48 for the combination of Cyclist (Crash Type) & Ex St / Why Rd Intersection (Specific location).

10.6 Communication

As part of undertaking the assessment of risk of the Implemented TTM on an active attended site, it is important to discuss any differences between the authorised TMP and the site (this includes the implemented TTM and the road environment) with the STMS or the site manager. This will help highlight risks that have been identified which the TTM Reviewer can use to complete the safety risk assessment.

The TTM Reviewer must exercise their own judgement as to accuracy and completeness of any information obtained from others as experience has shown that some will provide to unduly influence the outcome of any Site Review to their benefit.

10.7 Relative Safety Risk%

The Relative Safety Risk is a comparison of the Implemented with the Authorised and calculated as the difference of the Implemented TTM Risk Score from the Relevant Authorised TMP divided by the Relevant Authorised TMP Risk Score. The relative Safety Risk is expressed as a percentage variance where, if both implemented and authorised have the same risk score the result would be 0%.

Using the example previously, the Implemented Risk Score may be 48 for the combination of Cyclist (Crash Type) & Ex St / Why Rd Intersection (Specific location) while the Relevant authorised TMP Risk score for the same may be 36. This would show a Relative Safety Risk of +33% (Implemented of 48 is 12 or 33% above Authorised of 36).

Relative Safety Risk calculations are undertaken on both the Implemented and Relevant Authorised TMP for every combination of Crash Type and Specific Location chosen. The calculation is also undertaken for each Specific Location combined, and for all of the site combined.

Any Relative Safety Risk of 0% or less is a good result although might still have opportunities.

10.8 Risk Based TTM Site Review Technical Guidance

The Risk Based TTM Site Review Technical Guidance (will) provide(s) extensive technical information to support TTM Reviewers in the consistent completion of an Site Review - Level 4 Safety Risk assessment.

10.9 Relative Safety Risk Tolerances

Building on the position that the Authorised TMP is the benchmark upon which the TTM Reviewer undertakes much of the Site Review, this Authorised TMP reflects the positions of both the AT RCA and the PCBUs as the maximum theoretical (As planned) risk that is tolerated.



The realities of what happens on site (As done) often means that minor changes occur and this can have impacts on the actual risk. It must be assumed that there is a recognition of this differential (As done / As planned) is understood by all parties and accounted for within the system and that a particular risk tolerance or slippage of risk is acceptable to a certain tolerance beyond which AT cannot allow to continue.

The relative safety risk tolerances for AT RCA are as follows:

- **+25%** for any crash type (excluding Worker) and specific location combination
- **+20%** for any specific location (multiple crash types assessed)
- **+15%** for a whole of site assessed (multiple specific locations assessed)

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10.10 Safety Risk Assurance Process Map

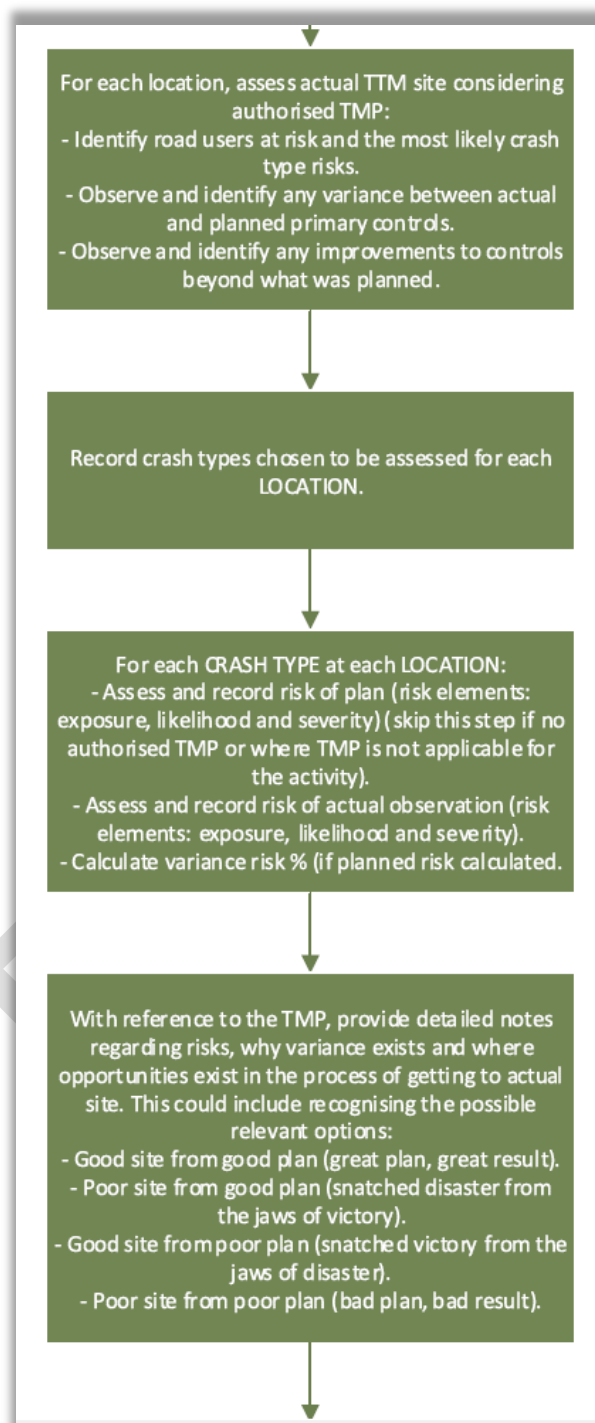


Figure 23 Safety Risk process map



10.11 Safety Risk Evidence

Table 15 outlines the evidence that needs to be recorded at this stage of the Site Review to include in the record.

Evidence	Expectations
Record of each assessed risk and associated control and whether it manages the risk effectively	Detail each of the risks that have been assessed as part of the auditors' dynamic risk assessment and a clear assessment on whether the controls for them are managing the risk effectively

Table 15 - Record of evidence for Safety Risk Assessment

10.12 Significant Safety Risk Peer Review

Confirmation from a peer (another TTM Reviewer of equivalent or higher competency) must be sought where the TTM Reviewer assesses that the Relative Safety Risk% is more than the Safety Risk Tolerance for any:

- Crash type (excluding Worker) and specific location combinations; or
- Specific Locations; or
- Whole of assessment combined.

This part of the process seeks a peer review of the assessment by the TTM Reviewer and can lead to an outcome of either:

- Confirming that there is unmanaged significant risk(s) on site and escalation to respond to those risks through actions / interventions (see 12 Intervention Actions on site)
- An adjusted / modified assessment by agreement between the peer reviewer and the TTM Reviewer

The methodology for seeking a peer review is through request with sufficient information into the TTM Advisors WhatsApp Group Chat "TTM Unit Go/No-Go SWO Check, Whats the Risk Score?".

Generally, only one TTM Reviewer will respond and if they disagree, the result will generally be moderated downwards. Where multiple TTM Reviewers respond, the result traditionally is weighted towards the lowest risk position / assessment.



10.13 Relative Safety Risk Key Question

Is the **Relative Safety Risk%** less than zero%?

NOT APPLICABLE: There is no relevant authorised TMP (such as where the site review relates to Emergency Works)

Outcome: Relative Risk = Not Applicable

YES: If the Relative Safety Risk% is less than 0% for all:
Crash type and specific location combinations; or
Specific Locations; or
Whole of assessment combined.

Outcome: Relative Risk = PASS

NO: If the Relative Safety Risk% is more than the Safety Risk Tolerance for any:
Crash type (excluding Worker) and specific location combinations; or
Specific Locations; or
Whole of assessment combined.

Outcome: Relative Risk = FAIL

NO: If Relative Safety Risk% is less than the Safety Risk Tolerance and more than 0% for any:
Crash type and specific location combinations; or
Specific Locations; or
Whole of assessment combined.

Outcome: Relative Risk = OPPORTUNITY

10.14 Relative Safety Risk: Actions & Escalations

10.14.1 Relative Safety Risk = NOT APPLICABLE

Where the Relative Safety Risk has been determined to be Not Applicable, the TTM Reviewer must record this on the inspection record.

Actions & Escalations by TTM Reviewer:

- **Action:** Record findings only.
- **Escalation:** Complete Absolute Safety Risk assessment.

10.14.2 Relative Safety Risk = PASS

Where the Relative Safety Risk has been determined to be as pass, the TTM Reviewer must record this on the inspection record and include the relevant road users types and specific locations. It is important to understand that a PASS does not necessarily mean that there are no improvements or remedial measures possible. Simply, the impact of these are below the threshold for a FAIL (refer 10.9). Some elements of the relative safety risk assessment will be better than that of the plan. These might be opportunities for planning for both the current situation and future activities. Again this should be recorded and advised where appropriate but might not need to be remedied on site unless it has a detrimental impact on other crash types in the same or different specific location.



Actions & Escalations by TTM Reviewer:

- **Action:** Record findings and advise the PCBU / site staff of any matters that should be considered to improve the safety of the site.
- **Escalation:** Complete Absolute Safety Risk assessment.

10.14.3 Relative Safety Risk = FAIL

When the Relative Safety Risk for the activity has been determined to be a fail, the TTM Reviewer must record on the inspection record that this assessment has failed. There may be an on-site action and/or may be an off-site action.

Actions & Escalations by TTM Reviewer:

- **Action:** Advise the PCBU of the finding. Record information regards exactly what triggered the fail (may be multiple issues). The issuing of a Stop Work Order is to be considered if the PCBU (through comment or inaction) do not take steps to remedy.
- **Escalation:** Complete Absolute Safety Risk assessment. Sometimes, this will support additional actions (such as the issuing of a Stop Work Order) that would otherwise not be sufficiently evidenced.

10.14.4 Relative Safety Risk = OPPORTUNITY

When the Relative Safety Risk for the activity has been determined to be an Opportunity, the TTM Reviewer must record on the inspection record that this assessment has an opportunity. There may be on-site action and/or off-site actions.

Actions & Escalations by TTM Reviewer:

- **Action:** Advise the PCBU of the finding including where this includes the Worker Crash type. Record information regards exactly what triggered the opportunity (may be multiple issues).
- **Escalation:** Complete Absolute Safety Risk assessment. Sometimes, this will support additional actions or opportunities that would otherwise not be sufficiently identified.

10.15 Absolute Safety Risk Assessment

The assessment the absolute safety risk assessment requires a deeper understanding of the risk assessments especially with consideration to the Implemented TTM.

This assessment will need to look to areas where despite any previous passes, there may be factors that could make it better. For example, a site, or any part thereof, might have a relative safety risk of -10% but within this this lies some significant improvements masking one omission or detrimental matter. This needs to be surfaced by the TTM Reviewer to the PCBU.



A key point to note is that there is no “Fail” this part of the assessment – the primary focus is of identification of improvement opportunities, communicating these and allowing a more thorough consideration by the PCBUs and, where applicable, the RCA.

Opportunities will more likely be picked up within the Likelihood rating and to a lesser extent in the Severity assessment.

10.16 Absolute Safety Risk Key Question

Is there any **Safety Risk in the Implemented TTM** that could be improved?

YES: If there are any opportunities for improvement.

Outcome: Absolute Safety Risk = OPPORTUNITY

NO: If there are no opportunities for improvement identified.

Outcome: Absolute Safety Risk = PASS

10.17 Absolute Safety Risk: Actions & Escalations

10.17.1 Absolute Safety Risk = PASS

TTM Reviewer must record this on the inspection record.

Actions & Escalations by TTM Reviewer:

- **Action:** Record findings only.
- **Escalation:** No further action for this assessment level.

10.17.2 Absolute Safety Risk = OPPORTUNITY

The TTM Reviewer must record on the inspection record that this assessment has identified opportunities. There may be on-site and/or off-site actions by either the PCBUs and / or RCA.

Actions & Escalations by TTM Reviewer:

- **Action:** Advise the PCBUs of the finding. It is the responsibility of the PCBU to consider the feedback and act accordingly.
- **Escalation:** Where the TTM Reviewer considers the triggers for the opportunity are significant in terms of absolute risk, the TTM Reviewer must escalate the matter to person who Authorised the TMP (or their manager).

End of section – Go back to Table 1 Table of Contents



11. Site Review – Supplementary Checks

11.1 Introduction

This section covers several supplementary checks that, whilst they might not currently have a formal place in the Site Review historically, they will be checked and can result in intervention actions.

The Supplementary Checks include Notifications and WAP contact details.

11.2 Notifications

Included here as a supplementary check as it is currently. This check can trigger actions in terms of additional road corridor management fees designed and intended to incentivise the complying actions to support the desired safety and function of the AT network (See 1.3 What is important to AT RCA (& why)).

11.2.1 Notification Key Question

Is the activity or worksite occurring within the dates authorised and is work status in MyWorksites WORK STARTED?

YES: The activity has a current authorised TMP or it is emergency works and a relevant notification has been received

Outcome: NOTIFICATION = PASS

NO: The activity has no relevant authorised TMP and / or WAP; or there is relevant notification

Outcome: NOTIFICATION = FAIL

In due course this will move to Site Review – Level 1 RCA Authority when it becomes a higher level determinant in TTM Assurance

11.3 WAP Contact details

Included here as a supplementary check as it is currently. It could trigger actions after the Site Review and additional road corridor management fees.

Where there is an Authorised TMP (irrespective of the relevance), a check is to be undertaken to ensure all contacts provided in the WAP for the relevant Authorised TMP are correct.

11.3.1 WAP Contact Details Key Question

Is the activity or worksite occurring within the dates authorised and is work status in MyWorksites WORK STARTED?



YES:	The activity has a current authorised TMP or it is emergency works and a relevant notification has been received Outcome: NOTIFICATION = PASS
NO:	The activity has no relevant authorised TMP and / or WAP; or there is relevant notification Outcome: NOTIFICATION = FAIL

Where contact details are found to be incorrect in any way, this is to be recorded as a FAIL. Some discretion is available for recent developments.

End of section – Go back to Table 1 Table of Contents

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12. Intervention Actions on site

12.1 Introduction

This section outlines actions to be considered and undertaken on site in the response to matters that are not a PASS as identified in the TTM Site review. Some actions allow for the PCBU to voluntarily respond in alignment with their own policies and procedures, whilst others are considered significant to the RCA and thus will result in mandatory actions by the PCBU(s).

12.2 Intervention Actions

A trigger for an intervention on site is where there is any FAIL or OPPORTUNITY in any level of the assessments.

These are summarised in Table 16 – Intervention Actions On Site Summary by Assessment outcome

Outcome	Default / Preferred intervention on site	Other possible interventions
RCA Authorisation = FAIL	Stop Work Order	PCBUs remedy immediately Police; WorkSafe. Disestablishment
Site Impact = FAIL	Stop Work Order	Advise PCBUs to remedy & PCBUs remedy immediately Police; WorkSafe.
Network Impact = FAIL	Stop Work Order	Advise PCBUs to remedy & PCBUs remedy immediately
Regulatory = FAIL	Inform / Advise PCBUs to remedy	PCBUs to take immediate action to remedy. If no action, consider Stop Work Order
Relative Risk = FAIL	Stop Work Order	
Relative Risk = OPPORTUNITY (Not Worker risk)	Inform / Advise PCBUs to remedy	PCBUs to take immediate action to remedy. If no action, consider Stop Work Order
Relative Risk = OPPORTUNITY (Worker risk)	Inform / Advise PCBUs to remedy	PCBUs to take immediate action to remedy. If no action, consider Stop Work Order and / or Inform Worksafe if appropriate
Absolute Risk = OPPORTUNITY (Not Worker risk)	Inform / Advise PCBUs to remedy	PCBUs take immediate action to remedy. TMP Designer to re-evaluate TMP and risk review.



		If no action, consider Stop Work Order
Absolute Risk = OPPORTUNITY (Worker risk)	Inform / Advise PCBUs to remedy	PCBUs take immediate action to remedy. If no action, consider Stop Work Order and / or inform Worksafe if appropriate
Notification = FAIL	No intervention action on site	
Contact Details = FAIL	No intervention action on site	

Table 16 – Intervention Actions On Site Summary by Assessment outcome

Where different Outcomes suggest different Interventions, they shall be considered in the priority as follows:

- A. Stop Work Order (Refer 12.3)
- B. Police & / or WorkSafe (Refer 12.4)
- C. Inform / Advise PCBUs to remedy (Refer 12.5)

The detailed procedures for each intervention action is covered in the following sections.

12.3 Stop Work Orders (SWO)

12.3.1 Introduction

A Stop Work Order is required where there is a significant breach in the expectations of the RCA. These breach thresholds are defined in 12.2 Intervention Actions.

Stop Work Orders require all physical works to cease on the project apart from making (and keeping) the site safe and are issued under the Activities on the Road Corridor Bylaw and, for utility operators, the National Code of Practice for Utility Operators in the Transport Corridor.

12.3.2 Considerations

It is recognised that there can be a significant impact on the PCBUs in terms of cost and time along with a potential impact on road user safety when a SWO is issued. However, this must be balanced out by the risks associated with the reasons for considering a SWO. A failure to issue a SWO when it should have been places risk on road users, the road asset, others working legitimately in the road corridor and the efficient operation of the road network.

The TTM reviewer must therefore undertake a simple risk assessment on what hazards will be present should a SWO be issued and what might be an acceptable level of risk after mitigation. If it is the operation itself which is causing the risk, a SWO is clearly going to be



effective. However, in most instances, the stopping of the activity leaves a hazard in the road corridor (for example, a trench) and this must be mitigated by actions and / or controls by the PCBU.

Determining how a site can be safely shut down with the contractor PCBU

The auditor shall work with the contractor PCBU (including the STMS, and site foreperson) and any other relevant parties to develop a strategy for shutting the site down safely and ensuring that further unmitigated risks are not generated by stopping work.

Though it is ultimately the responsibility of the contractor PCBU to shut the site down, the auditor has a responsibility as well to ensure that this is done safely and doesn't generate further unmanaged risks in the process.

This is a consultative process, and the auditor should consider the items in Table 17 below while engaging with the contractor PCBU and other relevant stakeholders.

Consideration	Description
Scope of the stop works order	<p>The TTM Reviewer needs to understand the scope of the stop works order they are considering issuing.</p> <p>Sites vary in size and complexity, and it may not always be appropriate to shut down an entire site and significantly impact on the productivity of the contractor PCBU.</p> <p>The TTM Reviewer should be clear on what work activity or area of the site that the unmanaged significant risk relates to and focus on shutting down that activity or area of work specifically, if possible.</p>
What would be the timeframe to affect the shut down	<p>The TTM Reviewer needs to understand how long it would take to shut down the site – they should consider the actual work activity that is taking place and how quickly that can be reinstated or made safe for the site to be left unattended or disestablished entirely.</p> <p>The situation could arise that the time it would take to reinstate or make the site safe is so long that the work activity would be considered complete when it is done. Or alternatively, it may be more prudent to allow the work to be completed rather than affect a shut down, and then the contractor PCBU must return again to complete the works later. If the TTM Reviewer feels it is more prudent to allow the works to finish, then they need to work with the contractor PCBU to mitigate the significant risk in-situ. In this case, the issue of the SWO would still occur but may be in place only long enough to allow the parties to conduct a regrouping assessment of any mitigations that can be readily implemented. The TTM Reviewer would at least remain on site long enough to release the SWO to allow the activity to promptly reach a safe state.</p>
Different unmanaged risks may require different levels of action	<p>Where there are multiple unmanaged significant risks present on a site, they may need a different approach for each – particularly if there is an immediate need to resolve</p>



Consideration	Description
	<p>an unmanaged significant risk where the likelihood of the risk being realised is very high or almost certain.</p> <p>The Reviewer needs to be prepared to help make multiple decisions with the contractor PCBU to address each significant risk individually if necessary.</p>
What will remain on site following shut down	<p>It is important for the TTM Reviewer to understand what will remain on site after the site is shut down. The site could have:</p> <ul style="list-style-type: none">• An unattended TM diagram remain in place• Still have attended TTM in place in other areas outside of the scope of the shut down• Be entirely disestablished and removed <p>The TTM Reviewer will need to understand the remaining risks that will be present and whether there is the potential for them to be significant. And then ensure that the contractor PCBU has a strategy for mitigating the remaining risks.</p>
Historical trends for audit results	<p>The TTM Reviewer should consider and understand what the historical trends are for the specific site, contractor PCBU (and their sub-contractor PCBUs) as well as the contracting PCBU.</p> <p>This may give insight into historical trends of issues on their sites, or conversely, show that the PCBUs have historically not had any issues on their sites.</p> <p>This information can be helpful for the TTM Reviewer in deciding how to approach shutting the site down, including its scope and the expectations that form the CAP that is issued.</p>

Table 17 - Considerations when determining how to shut down a site safely

12.3.3 Decision Making

The risk of a poor decision is impacted by the competency of the TTM Reviewer, emotional state and other factors all of which can vary day to day and minute to minute. They can for example be influenced by interactions with worksite crew. This manifests as a risk for Auckland Transport should a SWO be issued when it was not warranted or is inappropriate. A robust process is required to significantly reduce this risk. Therefore, it is important that AT TTM Assurance is consistent, and the decisions and determinations made align to expectations of AT, AT RCA and the community & road users we represent.

Mitigations of the risks include:

- Competency training and ongoing education
- A thorough TTM Assurance System
- Quality Control / Assurance



Quality Control / Assurance in this instance is achieved through ensuring that all SWO are only issued where there has been two or more people involved in the decision making.

The TTM Reviewer is to prepare a brief outlining the location, situation and the key reasons for a Site Review failing and thus requiring a SWO. The TTM Reviewer must be completely transparent with information and unemotional with the presentation of it. This shall be documented in the order that the Site Review has been completed (ie, starting with RCA Authorisation). This shall then be posted to a WhatsApp chat group SWO Go / No Go that AT TTM Reviewers use. This allows anyone in the team to see and respond as available. On most occasions, one other TTM Reviewer will respond in a timely manner asking questions and / or providing their assessment of the matter based on the information provided. Whether one or more responds, all must agree with the SWO need for it to be issued. If one disagrees, it is either not issued and an alternative action

12.3.4 Issuing a Stop Work Order

A verbal SWO can be immediately issued.

The TTM Reviewer, in consultation with the PCBU, shall then discuss and agree (where possible) the most reasonably practical actions for the PCBU to take to mitigate any risks that may remain with the activity ceased. This would be assessed using the hierarchy of controls (elimination, substitution, engineering controls, administrative controls and personal protective equipment) and might mean that that some additional work is undertaken. There must be a consideration of the risks of any activity and the risks associated with the remaining hazard.

The TTM Reviewer completes and issues the Stop Work Order (Form as shown in Appendix E: Stop Works Order Form) to formalise the SWO. The SWO would detail of the shutdown solution that was agreed between all parties, including:

- Who the stakeholders who were consulted with
- Timeframe for implementation
- What further actions each party will take
- what activity is permitted to be undertaken as agreed or otherwise in the discussion

The TTM Reviewer shall record the risk assessment that confirms that the proposed shutdown solution should mitigate the unmanaged significant risk(s) and not transfer or generate further significant risks that aren't managed.

The form is sent to all PCBU (generally with the completed TTM Site Review) and uploaded to the relevant WAP in MyWorksites (if any) and the WAP is to be flagged as having a SWO.

The relevant Fees (refer 2.8) for the SWO would also be applied or recorded at this time.

12.3.5 Confirming the site has been shutdown

Due to the significance of issuing a stop works order and the unmanaged risk situation that led to it, it is critical that the TTM Reviewer confirm with evidence that the site was shut down in accordance with what they agreed in 12.3.4 above.

The auditor has two options to verify this, as detailed in Table 18 below.



Evidence		Expectations
Option 1	Witness the site being shutdown themselves	<p>This option requires the TTM Reviewer to remain on site and visually witness the shutdown being implemented themselves (or alternatively the TTM Reviewer could return to site at a later time).</p> <p>This option may be appropriate where the shutdown can be implemented quickly or where the TTM Reviewer believes it is critical that they remain on site to either ensure the site is actually shutdown, or to ensure that the shutdown has the intended effect on risk reduction.</p> <p>Whatever their reason for pursuing this option the auditor will need to record the following evidence:</p> <ul style="list-style-type: none"> • Record of the time that the site was shutdown • A risk assessment to verify that the unmanaged significant risk(s) have now been mitigated and no other significant risks remain unmanaged
Option 2	Require evidence to be supplied by the contractor PCBU	<p>This option allows for the TTM Reviewer to leave the site on the provision that the contractor PCBU provides suitable evidence that the site has been shut down.</p> <p>This option may be appropriate where the timeframe for shutdown is extended, and it is not possible for the TTM Reviewer to return.</p> <p>If this option is used, then the TTM Reviewer must arrange for the following:</p> <ul style="list-style-type: none"> • Who from the contractor PCBU will provide the evidence • What format (phone call initially, followed by an email, email only, etc) • What timeframe will the evidence be provided <p>And the evidence shall include:</p> <ul style="list-style-type: none"> • Photographs or video showing the site shutdown • Record of the time that the site was shutdown • A risk assessment to verify that the unmanaged significant risk(s) have now been mitigated and no other significant risks remain unmanaged

Table 18 – Options for evidence of the site being shut down

12.3.6 Corrective Action Plan for SWO

Introduction

The RCA relies on the parties to have a desire to undertake operations on the road network in accordance with prior authorisation where applicable and maintaining safety risks within the tolerance of that authorised. Whilst this Assurance System sets out a manner to assure the RCA that activities on the network are performing at an acceptable level, and therefore



the network is safe and efficient for road users, practicalities mean that the RCA cannot monitor every activity 24/7. As a result, the network and holistic RCA system operates on a high level of implied trust that the various parties are operating with excellent systems to ensure all activities are in line with expectations with respect authorisations, network functionality, regulatory and safety.

However, the need for a SWO in any situation indicates a significant systemic failure within the project / activity management and, with all probability, many if not all the PCBUs involved. The fact that it required a visit from Auckland Transport (AT) to identify that fact before works were ceased is a breach of this trust.

A CAP is required for the lifting of the SWO.

SWO CAP expectations

A CAP submitted in response to a SWO is expected to be:

- focussed on the project that was issued the SWO
- must ensure that there are additional controls sufficient to ensure that the site TTM is appropriately managed
- deals with the issues experienced on the project (as identified in the Site Review and others that come to light)

The CAP thus may need to focus on increased or improved on-site management resources and will almost always require an increase in documented monitoring / auditing (most likely an independent and recognised TTM Reviewer). Other controls unique to the organisation(s) and the project may be required to satisfy Auckland Transport RCA that the site TTM is going to be appropriately managed.

The SWO CAP must include the following:

- Each root cause of one or more identified issues
- Additional Controls and mitigations; & who is responsible for these
- Monitoring actions to ensure effectiveness, frequency and who will be responsible for this

The Risk Owner is often the Contracting PCBU for the works and they must sign off on the CAP, along with an Officer of the PCBU of the Lead or Main Contractor PCBU.

The CAP should be sent as soon as the plan has been prepared and signed (It is okay that this might be before any actions are able to be implemented) to Auckland Transport Notices of Non-Conformance (AT) NoticesofNonConformance@at.govt.nz.

Lifting of SWO

The TTM Reviewer must recognise that the CAP is for and owned by the PCBUs. We will respond in one of three ways:



1. Returned: This will be where the SWO CAP has not included everything as expected. – The SWO will not be lifted and work is still prevented

2. Accepted with or without comment: All elements present - The TTM Reviewer lifts the SWO and the rescinds SWO

3. Received with comments / advice (All elements present - Advice is given where and when we believe there are improvement opportunities available for the CAP based on our experience. This advice must be considered. We will NOT lift the SWO and work is still prevented)

If there are issues identified that are subject to an unfulfilled or improperly fulfilled CAP for a Improvement Notice, there is likely to be a requirement for the organisation to deal with that CAP (and necessary actions) prior to the consideration of any SWO CAP acceptance (and a lifting of the SWO).

Once the CAP is accepted and the SWO is lifted, AT will often reinspect the site after the work has recommenced. If the SWO CAP is found to have been partly or not complied with, a SWO may be issued immediately irrespective of the physical condition of the worksite.

12.3.7 After a SWO has been lifted

The lifting of a SWO triggers the need for a follow up observation (refer 3.2 Triggers for undertaking Site Observation). This should be undertaken when the activity is first active or a short time thereafter. The ability to do this is enhanced by good communication by the PCBUs to the TTM Reviewer on the date and times of the activity commencing.

12.4 Enforcement by other organisations / departments

In some instances, the TTM Reviewer may need to refer the matter to another organisation in order to support the interventions they are undertaking, or for their action independently.

Other organisations referred could include (and why we might undertake a referral):

- Worksafe (especially where there are risks other than that identified with regards to TTM such as within the work space)
- KiwiRail (such as near an interface with the rail corridor; where there are concerns around proximity and the need for PCBUs to get permission from KiwiRail but may not have)
- Auckland Council (for matters relating to noise, environmental damage or RMA concerns)
- Utility Operators (where work is in close proximity to a utility that might be concerning or damage to a utility asset)
- AT RCA Road Corridor Inspectors (where there is damage within the road corridor, or issues associated with a vehicle crossing)
- Parking Enforcement (illegal or non-compliant parking)
- Police (such as for the enforcement of a SWO or where this is a risk to the TTM Reviewer)



12.5 Inform / Advise PCBUs to remedy

The TTM Reviewer may identify, during the completion of the Site Review, one or more matters that need to be rectified or considered by the PCBUs.

12.5.1 Assessing whether the issues / risks can be remedied on site

Utilising what the TTM Reviewer knows about the site, they need to assess whether they believe the failures identified in the Site Review can be rectified on site. Note that this is only a simple assessment at this stage to give them an indication of which path to go down: in-situ remedy; or issuing a stop works order for the site.

In order to make the assessment, the auditor should consider the following criteria in Table 19 and ensure that the unmanaged risk(s) fits into one of them.

Criteria		Detail
1	Already available solution	Is there already a solution within the authorised documentation to rectify the unmanaged significant risk? (that just hasn't been implemented on site)
2	Non-repeating, resolved risk	Is the unmanaged significant risk non-repeating and already resolved or easily resolved by stopping the activity?
3	Solution is within STMSs authority to make through TMP amendment	Are there solutions available to resolve the unmanaged significant risk that fit within the STMSs authority to implement as an amendment to the TMP?

Table 19 - Criteria for quickly assessing ease of risk mitigation

Where the TTM Reviewer has determined that the best means to proceed would be to inform and advise the PCBUs to remedy, these matters should be discussed with the STMS and / or site management (whomever is available). This must be contractor PCBU-led as it is their responsibility to effectively manage risks on the site.

The TTM Reviewers responsibility at this point is to consult with the contractor PCBU (STMS, site foreperson, TTM planner) and other parties like the CAR manager and NAC reviewer to ensure that the solution is effective and will manage the significant risk(s).

This does not preclude the TTM Reviewer from suggesting ideas for managing the risk – their experience and presence on site brings a valuable perspective to the process, but all parties need to recognise that it is the contractor PCBU who is taking ultimate responsibility for managing the risk effectively.

There are a few possible outcomes of this communication:

- A. The Site Review finding is agreed by the PCBUs and the PCBU determines and actions the remedy promptly
- B. The Site Review finding is partly agreed by PCBUs and remedy partly implemented



C. The Site Review finding is disputed (or ignored) by the PCBUs and no remedy action is taken

In the case of B & C above, the TTM Reviewer needs to consider whether the issues not remedied are of sufficient concern to necessitate another On Site action (eg Issue of a SWO or any other On Site action in this section). The TTM Reviewer would follow the guidance / system provided in those other actions.

Resolving the unmanaged significant risk(s) in-situ means that the risks can be mitigated without the need for shutting down the site under a stop works order. This is a helpful option for the TTM Reviewer to pursue as it resolves the unmanaged risks, while also allowing work to continue.

It does not change the final outcome of the TTM Site Review.

12.5.2 Evidencing PCBU remedy on site

Holding the contractor PCBU accountable for making the agreed upon amendments is critical to ensure that the audit process remains robust and effective. This means that there needs to be evidence that the amendments were implemented on site and verification that the unmanaged significant risk(s) is now effectively mitigated.

The auditor has two options to verify this, as detailed in Table 20 below.

Evidence		Expectations
Option 1	Witness the amendments being implemented on site themselves	<p>This option requires the auditor to remain on site and visually witness the amendments being implemented themselves (or alternatively the auditor could return to site at a later agreed upon time).</p> <p>This option may be appropriate where the amendments can be implemented quickly or where the auditor believes it is critical that they remain on site to either ensure the amendments are made, or to ensure that the amendments have the intended effect on risk reduction. Whatever their reason for pursuing this option the auditor will need to record the following evidence:</p> <ul style="list-style-type: none"> • Photographs or video of the amendments in place • Record of the time that the amendments were implemented • A dynamic risk assessment to verify that the unmanaged significant risk(s) have now been mitigated and no other significant risks remain unmanaged



Evidence		Expectations
Option 2	Require evidence to be supplied by the contractor PCBU	<p>This option allows for the auditor to leave the site on the provision that the contractor PCBU provides suitable evidence that the amendments have been implemented. This option may be appropriate where the timeframe for implementation is extended, and it is not possible for the auditor to return.</p> <p>If this option is used, then the auditor must arrange for the following:</p> <ul style="list-style-type: none">• Who from the contractor PCBU will provide the evidence• What format (phone call initially, followed by an email, email only, etc)• What timeframe will the evidence be provided <p>And the evidence shall include:</p> <ul style="list-style-type: none">• Photographs or video of the amendments in place• Record of the time that the amendments were implemented• A dynamic risk assessment to verify that the unmanaged significant risk(s) have now been mitigated and no other significant risks remain unmanaged

Table 20 – Options for evidence of the amendments being made on site

End of section – Go back to Table 1 Table of Contents



13. Intervention Actions off site

13.1 Introduction

This section outlines intervention actions that do not involve engagement with the PCBU staff on the site. These can be considered after a Site Review where the result is not a pass.

13.2 Intervention Actions off site

A trigger for an intervention off site is where there is any FAIL or OPPORTUNITY in any level of the assessments.

These are summarised in Table 21 – Intervention Actions off site

Outcome	Default / Preferred intervention off site	Notes	Possible Fees (if applicable)
RCA Authorisation = FAIL	Additional Corridor Management Fees Refer to AT TTM Review Panel		Unapproved works Late completion
Site Impact = FAIL	Refer to AT TTM Review Panel		Early establishment or late disestablishment affecting traffic in peak periods
Network Impact = FAIL	CAR Coordinator or their manager discussion Additional Corridor Management Fees Refer to AT TTM Review Panel	Joint decision include NFA, additional conditions or a withdrawal of authorisation	Early establishment or late disestablishment affecting traffic in peak periods
Regulatory = FAIL	CAR Coordinator or their manager discussion Refer to AT TTM Review Panel	Joint decision include NFA, additional conditions or a withdrawal of authorisation	
Relative Risk = FAIL	Refer to AT TTM Review Panel		
Relative Risk = OPPORTUNITY (Not Worker risk)	NA		



Relative Risk = OPPORTUNITY (Worker risk)	NA		
Absolute Risk = OPPORTUNITY (Not Worker risk)	CAR Coordinator or their manager discussion	Joint decision possibly include NFA, additional conditions or a withdrawal of authorisation	
Absolute Risk = OPPORTUNITY (Worker risk)	NA		
Notification = FAIL	Additional Corridor Management Fees		No notification of the commencement of works
Contact Details = FAIL	Refer to AT TTM Review Panel		
Stop Work Order	Additional Corridor Management Fees Check to ensure SWO is effective	Review SWO CAP when it arrives	Issue of a stop-work order
Crash Reporting (Failure to report a known crash to AT RCA)	Issue Improvement Notice Additional Corridor Management Fees	Review CAP when it arrives	

Table 21 – Intervention Actions off site Summary by Assessment outcome

Notes for table:

- I. Multiple additional road corridor fees can be applied for one Site Review
- II. The following fees may be applicable for any Site Review with a FAIL: After hours call-out fee; Site Inspection; & Progress Inspection
- III. Refer to Table 6 – Corridor Management Charges (Part of RCA Schedule of Fees and Charges) for more information
- IV. For Site Reviews where no WAP exists, it is best to await decision by Review Panel before requesting an invoice be created.

End of section – Go back to Table 1 Table of Contents



14. After the Site Review

14.1 Introduction

This section covers the actions that are undertaken after the Site Review and all immediate post review actions have been taken where the Site Review has a FAIL result in any level of the assessment.

14.2 Review Panel

All Site Reviews which have any outcome with a FAIL are referred to the Review Panel.

14.2.1 History & Background

The Review Panel was set up in 2011 to provide a level of consistency across the region with respect to decisions relating to TTM Site Reviews that identified non-compliant and / or unsafe worksites. The Review Panel was originally set up to manage the risk of, and actual inconsistency across a large team. This recognised that no two individuals are the same. They will each have different competencies, different thresholds and perspectives of risks and as a result, could (and will on occasion) compile inspection records (TTM Site Reviews) for the same site with very different findings.

Beyond the TTM Site Review, there are potential consequences for parties where the final result of a TTM Site Review is not a pass. We wanted to make sure the subsequent decision making was made based on robust and consistent TTM Site Review determinations.

In essence, the Review Panel was intended to form a part of our assurance process.

14.2.2 Purpose & Benefits

The main purpose and benefits are all around providing consistent and high quality TTM Site Review. Whilst a lot of work to build and develop our team's competency and skill but training will only get us so far towards our goals.

As the Review Panel was embedded, it was found that it's benefits and purpose went beyond the original expectations. As previously mentioned, consistency was a key driver. However, we found that it enhanced competency of team members, allowed us to help drive improvement, supports the effort for specific worksites for example with respect to re-reviews and has supported engagement and gives insight to those that attend.

14.2.3 Scope

The scope of the Review Panel is to:

- Review all TTM Site Review where the outcome was not a Pass in all aspects reviewed and verify the accuracy of the Site Review and that the outcome determined was fair, reasonable and aligns with this system



- Determine any changes or actions to be taken with respect to the TTM Site Review
- Review any appeals relating to TTM Site Reviews or Notices
- Additional matters that can be reviewed include the non-reporting of crashes & matters relating to supplementary checks (refer 11 Site Review – Supplementary Checks).

14.2.4 Members of the Review Panel

The members of the Review Panel are:

- Temporary Traffic Monitoring Manager
- TTM Advisors presenting Site Reviews
- Road Corridor Access and Coordination Manager or a representative

Not all the above are required to attend for the Review Panel to be convened. However, any decision requires a quorum of 4 attendees. This can be satisfied through attendance by any combination of the above members along with invited voluntary optional attendees below.

Voluntary Optional attendees:

- Others within AT as invited including:
 - Health & Safety Representative
 - Special Events representative
 - Project Managers
- Others outside of AT as invited (an NDA must be signed and agreed prior to being invited – refer Appendix I: Review Panel Attendance NDA) including:
 - NZTA representatives
 - Other RCA representatives
 - Contractor or Client representatives
 - Industry representatives
- Any other person invited to attend (an NDA must be signed if they are employed outside of Auckland Transport)

14.2.5 Pre-Meeting Processes

Agenda must be prepared prior to the meeting and TTM Reviewers will be expected to table their recommendations in the agenda.

Recommendations could include:



- issue of an Improvement Notice to the PCBU(s) considered responsible (with or without applicable Additional Corridor Management Fees)
- Education
- No further action
- Escalation
- Deferral
- referral of the matter to another party such as NZ Police, Worksafe or other organisation or department
- Any other reasonable action

The consideration here regarding a PCBU being “responsible” includes:

- The PCBU had a part to play in the FAIL result and /or
- The PCBU has an opportunity for improved quality management systems (with or without a certified quality management system)

14.2.6 Procedures for Review Panel

Meetings will generally be held weekly on Fridays. Additional meetings will be held on other days to deal with overflow matters or where a TTM Reviewer is unavailable on the Friday at which their matter would be considered.

Each TTM Reviewer will be considered in order, generally as follows:

1. TTM Reviewer going on call
2. Consultant TTM Reviewers
3. TTM Reviewer going off call
4. All other TTM Reviewers

Agenda items include TTM Site Review; Appeals; Non- Reported Crashes; Supplementary Checks & Complex CAPs.

The following outlines the procedures for each agenda item by type of item.

TTM Site Review

- A. TTM Reviewer present the TTM Site Review in the order of the levels assessed:
 - I. RCA Authorisation



- II. Network Function
 - III. Network Operation
 - IV. Regulatory
 - V. Safety Risk
- B. TTM Reviewer Present / show or share key evidence such as footage and anything other information collected that succinctly (as possible) supports the outcome of the Site Review.
 - C. TTM Reviewer Present and discuss any appeals received.
 - D. Open discussion by panel members: TTM Reviewer Answer for any questions. The other members of the Review Panel will ask questions, challenge findings to ensure integrity of decision making
 - E. TTM Reviewer Propose the recommendation
 - F. Members propose any possible amendments (Amendments could include withdrawal of the TTM Site Review; amendment of the Site Review which may or may not change the outcome; deletion or additional PCBU)
 - G. The Review Panel votes on the recommendation and any possible amendments.

Decisions are considered passed by a simple majority in the votes. Where a voting tie exists, the lesser of the recommendations is considered passed.

The TTM Reviewer will then take actions in accordance with the decision passed

Appeals

A PCBU may appeal the findings of a Site Review or an Improvement Notice after it has been issued. This is to be considered by the Review Panel and assessed on its merits subject to information available at that time. Sometimes more information will be requested. This may result in any number of outcomes including but not limited to the appeal being rejected or the TTM Site Review being revised. The actions taken are subject to the decisions by the Review Panel.

Non-reported Crashes

AT RCA may identify that a crash has occurred on a worksite that has not been report. The TTM Reviewer will present to the Review Panel the reasonable attempts that they have invested in order to get a Crash Report from the PCBUs over a reasonable amount of time. The Review Panel will decide what actions need to be taken which may include the issue of an Improvement Notice.



Supplementary Checks

- **Non-Notification**

The TTM Reviewer may encounter situations where an activity has been found to be not notified that due its nature, should (in their assessment) require a system improvement in/to the PCBU involved (Improvement Notice would drive this). They would submit these as an agenda item to be discussed. The TTM Reviewer would need to present their reasoning to the Review Panel and rely on the decision of the Review Panel. Note that this would be a separate agenda item only if the Site Review otherwise does not have a FAIL result.

It is important to note that these criteria will have a future state of being included in the RCA Authorisation check and so would only be discussed as part of a Site Review (FAIL) in the Review Panel.

- **WAP Contact details**

Accurate PCBU contact details are critical to the ability of the RCA to be able to respond to critical matters that arise from time to time. Where details have been found to be incorrect or out of date, the TTM Reviewer may submit this as a Review Panel agenda item. The TTM Reviewer would need to present the facts to the Review Panel and rely on the decision of the Review Panel. Note that this would be a separate agenda item only if the Site Review otherwise does not have a FAIL result.

Complex CAPs

Some SWO CAPs and CAPs (because of an Improvement Notice) are more complex and may benefit from a thorough consideration of the Review Panel (attendees would be limited to AT TTM Reviewers only).

Post-Review Panel Activities

Fees are to be added, deleted or adjusted after any relevant decisions made in the Review Panel.

14.3 Improvement Notices

14.3.1 Introduction

An Improvement Notice is to be issued after the Review Panel has determined this action.

14.3.2 The Improvement Notice

A copy of a standard Improvement Notice is provided in Appendix G: Improvement Notice Form. Once it is issued, the TTM Reviewer shall apply fees where applicable for the Improvement Notice.

The issuing of the Notice must be recorded in the database.

The TTM Reviewer must track the response to the Improvement Notice and if there is no response (a submitted Corrective Action Plan) within the required timeframe, the TTM Reviewer shall reissue the Notice and add an additional fee as applicable for this Notice.



14.4 Corrective Action Plans (CAP)

14.4.1 Introduction

Any Corrective Action Plan (CAP) is created for and by the PCBU. Creating a CAP is a real opportunity for the PCBU to understand the root cause(s) for the failed TTM Site Review and to develop and implement improvements that reduce risk to workers and the public.

It is important to understand that the TTM Site Reviews are a review of the effectiveness of the entire system, from the planning, design, implementation, and monitoring of the TTM. Many reviews which fail, fail for various reasons and the root cause(s) of such failures can be varied. Only once the PCBU accurately understands the “why” behind the failure(s), can the PCBU begin the work on the “how” and the “what” to move forward on the path of success.

The purpose of a corrective action plan is to help the PCBUs ensure that any significant safety, network functionality or other deficiencies identified during an TTM Site Reveiw are formally addressed and prevented from recurring. Specifically, it is intended to:

- Drive accountability by placing clear responsibility on the PCBUs to investigate root causes and implement improvements.
- Ensure a structured improvement by translating audit findings into actionable steps, with defined deliverables and timelines.
- Allows for verifiable effectiveness by requiring evidence such as updated procedures, training records, or other evidence to confirm that corrective measures actually mitigate the root causes of the deficiencies that were identified
- Prevents recurrence of the same issues by promoting lasting system and process changes to reduce the likelihood and / consequence that the same issues will arise on this site or future projects.

Maintains ATs own compliance requirements by providing AT with documented assurance that the PCBU is meeting its legal, contractual, and safety obligations before work continues.

There are several situations where a CAP will be required:

1. In response to a Stop Work Order (SWO)
2. In response to an Improvement Notice [Individual or Organisation] (previously/also known as a Notice of Non-Conformance)

Each of these will be discussed in more detail.

14.4.2 PCBU CAP in response to IN

There are several key aspects to consider in the drafting of this CAP:

- Focussed on the organisation (system, processes, resources, etc)
- Must identify all the root causes of the issues identified at the specific worksite
- Must find ways to eliminate, minimise or mitigate the effects of the root causes on works with similar/overlapping characteristics in the future



- Must include ongoing monitoring to measure effectiveness of your CAP with respect to the root causes and allow you to modify your CAP if necessary.
- Might include a plan for any individual (behaviour, training, knowledge, experience, development, resources)
- Might in the form of a Personal Development Plan

This means that it will often be looking towards improving the performance of the whole organisation in the TTM space and will involve amending, improving or implementing new systems or processes or improving quality of resources.

We have found that those individuals and organisation who have sought to understand and set about implementing long-term systemic improvements with their proposed CAP's, have also improved their overall TTM delivery.

In short, this is your opportunity to improve your systems, policies or procedures, and to make sure that any improvements identified in the CAP are embedded in the organisation(s), not just with the specific project or the project manager, as the project manager, principal, contractor(s) and the STMS all own the CAP, as they own the outcomes, and these outcomes can influence various aspects of your business or site(s) moving forward.

Each root cause will be evaluated for risk level and assigned a rating and priority. The higher the rating / priority, the sooner the deadline for implementation to mitigate your risk. Generally higher risk / priority issues need to be commenced within a week or sooner whilst lower risk / priority issues might be planned to be commenced within a month.

Sometimes when an Improvement Notice is issued, the Review Panel will determine that there are significant concerns regarding the performance of the STMS. This might be as a result of their actions (or inactions) on the worksite in conjunction with their track record. In this instance, the Review Panel might determine that the STMS should be suspended from STMS duties until such time that Corrective Action Plan has been accepted and implemented (including any conditions of acceptance). They are not permitted to operate in a position of responsibility (as either a STMS or delegated) on the Auckland Transport road network. Failure to suspend them as an STMS (or delegated) will likely result in a Notice of Non-Conformance being issued to the employer.

The Risk Owner for this CAP may be any combination of the Person Conducting the Business or Undertaking (PCBU) or someone suitably senior within the organisation to fulfil the role of Officer, or the Clients Representative for the organisation.

The CAP should be sent as soon as the plan has been prepared and signed by the Risk Owner (It is okay that this might be before any actions are able to be implemented). This is to be sent to Auckland

14.4.3 CAP Acceptance / Closing an Improvement Notice

The TTM Reviewer must recognise that the CAP is for and owned by the PCBUs. We will respond in one of three ways:

1. Returned: This will be where the CAP has not included everything as expected. The IN is still considered open and any WAP can not be completed.
2. Accepted with or without comment: All elements present - The TTM Reviewer releases the Notice of Non-Conformance on MWS and records that the Improvement Notice has been responded.



3. Received with comments / advice (All elements present - Advice is given where and when we believe there are improvement opportunities available for the CAP based on our experience. This advice must be considered by the PCBU.

14.5 Data Management System

It is critical that a system & / or resources are available to manage the Review Panel and subsequent Notices and CAPs. This system must allow AT TTM Assurance to track the following:

- Review Panel Agenda and decisions
- Review Panel Actions
- Improvement Notices issuance and response (or not)
- CAP tracking of responses, acceptance or otherwise
- Analysis of CAP contents, and effectiveness (cross link with TTM Site Review data)

End of section – Go back to Table 1 Table of Contents



15. Network and Organisation Performance

15.1 Introduction

This section contains how AT RCA TTM Assurance will support the safe and efficient road network by education, engagement and enforcement of the desired outcomes on an organisational (PCBU) level.

This section also outlines the goals and what reporting and sharing of information to the industry and others to help and encourage PCBU improve into the future

15.2 Education and Engagement

15.2.1 General

The TTM Assurance System collects a lot of information through various activities across the network. It is important that information that may be of use to the improved performance of TTM and sites on the road corridor.

This is achieved through the following:

- PCBU Meetings (Generally an individual PCBU and TTM Assurance – information and analysis limited to the PCBU along with insights from information across the assurance system. May be one off or a regular occurrence. Provides information to TTM Reviewers also. Builds connection)
- Newsletters (Quarterly to the industry)
- Industry communications (Irregular key communications of useful, interesting or timely key messages)
- Safety Alerts (Safety Issues that need to be propagated relating to safety risks that PCBU might create or be exposed to)
- Practice notes & information (Documents or information created by AT or others including Nationally)
- Crash Case Studies and Crash data – helping inform the industry as to where risks may exist
- Ride-Along – Provides transparent sharing of how AT undertakes TTM Assurance and specifically Observations and TTM Reviews. Can lead to AT Verified TTM Reviewer recognition
- Review Panel Attendance – subject NDA agreement (Refer Appendix I: Review Panel Attendance NDA)

15.3 Performance Reporting

Auckland Transport reviews Key Performance Indicators (KPI) of each organisation every month. The KPI is calculated by determining the percentage of Site Reviews where the result is a PASS or OPPORTUNITY in all elements assessed.



This is calculated on a:

- Network level
- PCBU level (Contracting PCBU, Contractor and Sub-Contractors)

Information is available within AT and anonymised externally unless permission received from the specific PCBU.

15.4 PCBU Performance Assurance

15.4.1 Introduction

AT RCA must proactively manage TTM performance on the network to ensure sites have the highest reasonable opportunity to achieve what is important to AT (refer 1.3).

Experience has shown that the level of impact of the various actions and interactions varies. Much of the system to this point has focussed on individual interactions as shown below:

Impacts (Primary means most impact)

- Site Observation: The STMS (Secondary)
- Site Review: The STMS (Primary); Site crew (Secondary)
- Stop Work Order: Project, Site Manager & STMS (Primary)
- Improvement Notice: Project Manager - PCBU recipients only (Primary); Systems (Secondary)

The PCBU Performance Assurance considers PCBU performance not just on an individual site basis but over time to analyse trends and proactively respond by either driving improvement of the lesser performing PCBU or limiting their impact or risk on the network.

15.4.2 PCBU Performance Assessment

Auckland Transport reviews performance of each organisation / PCBU every month.

A PCBU may trigger consideration for an Organisation Notice by the AT RCA Senior Leadership Review Panel. All PCBU (Client PCBU, Contracting PCBU and Contractor PCBU) will be considered. The following criteria are considered:

Poor Trend: A rolling average of Site Reviews where the PCBU is involved and is not a recipient of an Improvement Notice calculated across the last 10 (providing a measure of recent performance), 20 or 50 (longer term performance) Site Reviews. Lowest considered.

Poor performance: The number of Site Reviews with a FAIL (linked to being a named recipient of an Improvement Notice) in the last 12 months. Highest numbers considered. This criterion recognises that each Improvement Notice will have a resultant



Significant Level 4 (Safety Risk) Site Review Fail: Occurrence on an Arterial, Regional (or National – none currently on AT Network) road.

Significant Unplanned Disruption: This includes late uplifts affecting peak hours and on Arterial or Regional roads (Also includes National roads when any recorded on the AT Network).

Non-response (or non-acceptable response) to a prior Notices: This includes the response and assessment of the effectiveness of responses to Improvement and Organisation Notices.

Notifications: An assessment of PCBU's notifications performance for activities on the network.

All PCBU that trigger any of the above will be referred for consideration for an Organisation Notice to the AT RCA Senior Leadership Review Panel.

15.4.3 AT RCA Senior Leadership Review Panel

The members of the AT RCA Senior Leadership Review Panel are:

- Group Manager Road Corridor Access and Coordination
- Temporary Traffic Monitoring Manager
- Road Corridor Access and Coordination Manager
- Works Coordination Manager
- Road Corridor Inspection Managers

The Panel will consider each matter referred to it and determine what (if any) Notice or other action shall be taken. Ideally a unanimous decision is to be achieved by consensus for the decision to proceed. However, a simple majority is sufficient to proceed where agreement cannot be reached.

The Panel will also consider other matters such as any sanctions to be applied, and whether if any sanctions previously applied should be lifted or modified.

15.4.4 Organisation Notices

Once the AT RCA Senior Leadership Review Panel has determined an action

a. Organisation Notice- First Warning

Once the process has been triggered, an organisation will be issued an Organizational Notice (Org NNC) First Warning. This will be communicated to the PCBU by Auckland Transport via a warning notice.

Organizations issued the first Warning are expected to submit a plan to Auckland Transport detailing actions to prevent reoccurrence of their non-compliant activities. This includes:



1. **Deep Dive into Performance:** Conduct a comprehensive analysis of their performance.
2. **Identify Corrective Actions:** Identify multiple corrective actions and implement them. This will be required to be submitted to AT RCA.
3. **Monitor and Review:** Continuously monitor self-implemented actions and, if necessary, review and correct.

A First Warning can be expunged in certain circumstances where an organization has demonstrated significant improvement in systems, people culture and other elements that have had a tangible impact on performance for an acceptable period. A decision on this will be notified in writing. Note that a record will be retained of both the First Warning and the Expungement of this, but this will play not part in the decision-making process with respect to future poor performance.

b. Organisation Notice - Final warning

If an organization receives a Final Warning, the steps outlined in the First Warning must be repeated although likely with a greater level of scrutiny given the need for this Final Warning.

A Final Warning can be expunged in certain circumstances where an organization has demonstrated significant improvement in systems, people culture and other elements that have had a tangible impact on performance for an extended period. Note that the conditions for expungement of a Final Warning are more onerous than that for a First Warning, and that expungement of the Final Warning will not necessarily expunge the existence of the First Warning. A decision on this will be notified in writing. Note that a record will be retained of both the Final Warning and the Expungement of this but this will play not part in the decision making process with respect to future poor performance.

c. Organisation Notice - Apply sanctions

If a third Organisation Notice is triggered after the issuance of the Final Warning, Auckland Transport may enforce sanctions against the offending organisation. These sanctions will be communicated in writing and will specify the type and duration of the sanctions.

Sanctions which may be applied include, but are not limited to, any or all the following:

1. **Network Access:** Denied access to the road network or parts of it or restricted network access subject to tailored conditions.
2. **Suspension of own TTM deployment:** The company/organization may not be allowed to provide their own TTM for their own or client's worksites. Instead, they will be required to employ a TTM provider approved by the RCA for their and their client's worksites for a period.
3. **Retraining:** Undertake training or re-training of some or all staff.
4. **Quality Management System:** External audit of existing system, or implementation of a (new) quality management system.



The following actions may also be taken:

1. **AT Pre-Qualification Status:** The organization's Pre-Qualification status, or status on an AT Supplier panel for work with AT (as the Contracting PCBU) may be affected.
2. **Standards Organization Notification:** Information will be forwarded to the appropriate standards organization, potentially impacting the company/organization's ISO9000 or TQS1 quality rating.

15.4.5 Organisation Corrective Action Plan (ORG CAP)

The CAPs in response to Organisational Notices will involve a deep-dive into the organisations operation looking at all aspects of monitoring outcomes and what needs to change in order that performance and safety is improved.

There are several key aspects to consider in the drafting of this CAP:

- Focussed on the organisation (system, processes, resources, etc)
- Must identify all the root causes
- The Risk Owner for this CAP is the Person Conducting the Business or Undertaking (PCBU) or someone suitably senior within the organisation to fulfil the role of Officer.
- Must find ways to eliminate, minimise or mitigate the effects of the root causes on works with similar/overlapping characteristics in the future
- Must include ongoing monitoring to measure effectiveness of your CAP with respect to the root causes and allow you to modify your CAP if necessary
- Must include ongoing reporting to Auckland Transport (usually monthly but may be stretched to every two months)

The intention of all CAPs is to positively influence the performance of the organisation across all TTM activities from the date of implementation.

The CAP should be sent as soon as the plan has been prepared and signed by the Risk Owner (It is okay that this might be before any actions are able to be implemented). This is to be sent to Auckland Transport Notices of Non-Conformance (AT) NoticesofNonConformance@at.govt.nz. Generally, a meeting will be required to discuss the findings. AT will respond in one of three ways:

1. Returned (This will be in cases where there is any combination of no root causes, no actions, no involvement by senior staff, or no monitoring identified – The Notice will not be closed out)
2. Received with no comment (All elements present - We will close out the notice as responded. Reporting frequency and next meeting will be set)
3. Received with comments / advice (All elements present - Advice is given where and when we believe there are improvement opportunities available for the CAP based on our experience. This advice is not mandatory to follow – we only ask you to consider it. We will close out the Notice as responded. Reporting frequency and next meeting will be set)



The PCBU is expected to report monthly, or at a frequency as agreed, performance and effectiveness of the ORG CAP. Any improvements or additional actions should also be highlighted.

15.4.6 Response to an ORG CAP

The TTM Reviewer must recognise that the CAP is for and owned by the PCBUs. However, we must be satisfied that it meets our expectations. We will respond in one of three ways:

1. Returned: This will be where the ORG CAP has not included everything as expected. The response time continues.
2. Accepted with or without comment: All elements present - The TTM Reviewer records the Notice as being responded to. Implementation and Monthly reporting by the PCBU can commence.
3. Received with comments / advice (All elements present - Advice is given where and when we believe there are improvement opportunities available for the CAP based on our experience. This advice must be considered. The response time continues.

15.4.7 Lifting Sanctions

Lifting of any sanctions will be considered by the AT RCA Senior Leadership Review Panel and will involve considering a range of factors that will be unique to each PCBU.

15.5 Ride Along

AT TTM Reviewers may be available to take individuals (generally those involved with planning or working on the road corridor) on a half day or full day ride along. This helps provide mutual insight into the challenges each party faces in carrying out their respective roles.

A ride along generally will take the individual to several sites and allow them to see how TTM Assurance is performed. This will include at least one TTM Site Review in most cases. The assurance will in most cases not be linked to the individual attendee.

Previous benefits of the experience include greater insight into the challenges, and benefits of TTM Assurance.

Attendees are welcome to do more than one ride along.

Priority is given to those individuals who work for PCBU (as employee or consultant) and specifically in Assurance and Health & Safety type roles.

Some attendees will show an interest in learning more and becoming an AT Verified TTM Reviewer.



15.6 Auckland TTM Reviewers

15.6.1 AT Verified TTM Reviewers

PCBU are responsible for assuring themselves that their activities on the road corridor meet all expectations including that Safety Risk is being managed as expected. It is important that PCBU have an assurance system that aligns to their needs.

To support self-assurance and improved outcomes on the network, AT TTM Assurance help support individuals (whether working for a PCBU or as a consultant) to improve their TTM Assurance skills. This can culminate in a recognition by AT TTM Assurance that an individual is able to perform TTM Site Review to the same quality and expectations as an AT TTM Reviewer. This would be recognised to a specified level of Site Review.

Note that recognition of an individual as an AT Verified TTM Reviewer is an informal qualification and is specific to the individual irrespective of their place of employment.

Pathway to become an AT Verified TTM Reviewer

1. Employer to nominate person as suitable to become a TTM Reviewer
2. Joint review(s) with AT TTM Advisor (or with a previously AT Verified TTM Reviewer) who is willing and able to become the mentor for the prospective TTM Reviewer
3. Doing Site Reviews on a regular basis (aim for minimum 25 documented with a mixture of results and closure types) – connect with Mentor from time to time
4. Attendance at a TTM Review Panel (once the mentor believes they are close to attaining verified stat)
5. Attendance to a mock AT TTM Review Panel (for them to present 2 - 3 TTM SCR mixed results – 1 x pass and 1 x fail) – Panel to choose recent TTM SCR from list on day
6. Assessment if previous steps completed successfully

Alternative to Step 5 above:

Verification by an On-site Assessment by Mentor and an AT peer

Candidate AT Verified TTM Reviewer to complete in front Mentor & peer:

- an unassisted TTM Site Review
- introduce AT TTM staff and reason for presence to STMS
- communicate and deliver TTM Site Review feedback and outcome with STMS;
- ask STMS to repeat back to confirm what they understood of the results

What is assessed:

Soft Skills: test is observation of delivery plus the receipt of information by the STMS (not normally able to be assessed in Mock Review Panel):



- Professional delivery
- Key points understood by STMS
- Valuable information for the STMS
- Effectively communicate (written and oral)
- Actively listened / receive information from STMS / site crew
- Professional, approachable and polite
- Firm but fair

Technical skills (Scope is dependent upon level of assessment):

- All key points identified with most important items identified
- Explanation of reasoning for outcome
- Assessment aligns with system
- Fact / evidence based

Whichever the pathway, on completion of the assessment and discussion by those undertaking the assessment, feedback and / or confirmation or otherwise will be provided to the candidate.

15.6.2 TTM Assurance Centre of Excellence

AT arrange quarterly workshops inviting all AT Verified TTM Reviewers to attend. Workshops will typically allow attendees to continually improve their knowledge of TTM Assurance, keep in communication with others in the same space and keep abreast of anything happening in the TTM Assurance space at AT. Discussions will often include:

- A topical matter in TTM Assurance and TTM generally
- Discussion of TTM Assurance of a site recently encountered by AT TTM Reviewers
- Any other TTM Matters

End of section – Go back to Table 1 Table of Contents



16. TTM Assurance Training & Competency

16.1 Introduction

There are 4 Levels of TTM Assurance. Each increasing level requires an increasing level of knowledge, understanding and competency. The following tables includes each of the task competencies required for the assurance area of responsibility that are covered by this guidance document.

16.2 TTM Assurance Pre-Requisite Competency

Task	Competency description	AT NZGTTM framework Ref. No.
Keep accurate and thorough records of conversations with other PCBU's.	<p>This task involves maintaining accurate, detailed, and well-organised documentation of interactions with other PCBUs.</p> <p>Records should be kept electronically in a format that is accessible and understandable to other team members, ensuring consistency and transparency. They must be precise and detailed, capturing key points of discussion, decisions made, and any agreed actions.</p> <p>Competent record-keeping requires timely documentation, ensuring that information remains current and relevant.</p> <p>Additionally, records should clearly differentiate between opinions, other perspectives, and formal decisions, enabling clarity for all stakeholders and supporting accountability and collaboration within the organisation.</p>	9
To provide specific, actionable feedback to on-site personnel regarding the management of risks on their site.	<p>This involves balancing technical insight, effective communication, and interpersonal skills.</p> <p>Team members must recognise that while risks may be adequately managed in ways they would not personally choose, multiple valid approaches can achieve the same outcome.</p> <p>They must clearly articulate their perspective, ensuring their feedback is precise, relevant to the specific site conditions, and framed constructively.</p>	20



Task	Competency description	AT NZGTTM framework Ref. No.
	<p>Building rapport with on-site personnel is essential, fostering trust and openness to feedback.</p> <p>This competency enables team members to guide improvements and reinforce safe practices while maintaining collaborative and respectful interactions.</p>	
<p>Initiate and participate in audits of the TTM system of other PCBUs in the contracting system.</p>	<p>This requires the ability to identify when an audit is necessary and effectively trigger the process with a contracting PCBU or their subcontractors.</p> <p>This involves presenting clear, logical evidence to justify the audit and communicating the need for it in a transparent and constructive manner.</p> <p>The team member must be able to conduct an impartial review of TTM systems, identifying gaps that may have contributed to observed issues or could lead to future risks.</p> <p>Strong collaboration and communication skills are essential to engage with other PCBUs fairly and respectfully, ensuring the audit process is conducted in a spirit of cooperation and continuous improvement.</p>	<p>23</p>
<p>Core Legislative environment</p>	<p>It also requires a basic understanding of the legislative framework that covers the key principles of operating as an RCA. This includes Local Government Act (1974 & 2002), Health & Safety At Work Act (2015), Utilities Access Act (2010), Traffic Control Devices Rules (as it relates to road controlling authorities) and other acts as required</p>	<p>N/A</p>
<p>TTM Assurance System</p>	<p>Understanding of this guide and, understanding the limitations of each level of competency</p>	<p>N/A</p>
<p>Organisational roles and scopes</p>	<p>Understanding the various key departments within Auckland Transport, Auckland Council and key client PCBU parties, their roles and their contact details.</p>	

Table 22 – General / Pre-requisite competencies

16.3 Site Review Level 1 RCA Authority Competency



Task	Competency description	AT NZGTTM framework Ref. No.
Understand documentation and determine if permission exists	<p>This requires the ability to seek and review any documentation available including what is available through the Auckland Transport systems.</p> <p>This also requires the knowledge to understand what works fit within the scope of Emergency Works; and what changes to the activity, location, time and footprint are acceptable and what are not.</p>	N/A
Issue of Stop Work Order	<p>This requires the ability to determine if a Stop Work order is required and what actions are required to effect this.</p> <p>It also requires a basic understanding of the legislative framework that allows AT to impose these.</p>	N/A

Table 23 – RCA Authority (Level 1) competencies

16.4 Site Review Level 2 Network Function Competency

Task	Competency description	AT NZGTTM framework Ref. No.
Assess the installed TTM on site against the authorised traffic management plan.	<p>This involves a team member having clear understanding of TMPs, including the ability to interpret and apply their specifications accurately.</p> <p>This requires knowledge of relevant legislation, such as the Health and Safety at Work Act 2015 (HSWA 2015), guidelines like the NZGTTM, and equipment standards to ensure compliance with legal and operational requirements.</p> <p>Key skills include the ability to compare the installed TTM elements with the approved TMP, identifying discrepancies or areas of non-compliance.</p>	17
Reviewing and understanding risk assessment documentation supplied by other PCBU's.	<p>This involves a skilled team member who can interpret the structure and completeness of the risk assessment documentation submitted by other PCBU's.</p> <p>The focus on confirming whether the documentation satisfies AT's expected risk management process and ensuring that the contractor has followed and met those requirements.</p> <p>This includes ensuring all environmental and work activity contexts have been identified and whether all other relevant PCBU's and other stakeholders or risk subjects have been considered – not on evaluating</p>	11



Task	Competency description	AT NZGTTM framework Ref. No.
	<p>the adequacy of the risk controls or the technical methodology used.</p> <p>A skilled team member ensures that any peer review duties are fulfilled in accordance with AT's obligations under the NZGTTM, without re-performing the applicants risk assessment.</p>	
Assessing, measuring, & understanding the actual impacts on the traffic flow and road network	<p>This involves a team member having clear understanding of authorised TMPs and the expectations associated with network function contained within the documentation including mitigation plans and their network function impacts. This includes journey times, queuing, accessibility, impacts on different transport modes and public transport reliability. The team member also needs to have a thorough understanding of the assessment of the actual impacts and the context within the network location and time of assessment.</p> <p>Key skills include assessing the TMP, actual impacts and any mitigations included, and to make a fair and reasonable assessment.</p>	N/A

Table 24 – Network Function (Level 2) competencies

16.5 Site Review Level 3 Regulatory Competency

Task	Competency description	AT NZGTTM framework Ref. No.
Understand legislation as it applies to all Traffic Control Devices, especially regulatory controls	Knowledge of legislation with respect to all regulatory Traffic Control Devices, their use and what is not legally enforceable; Setting of speed limits rules, and more	N/A

Table 25 – Regulatory (Level 3) competencies

16.6 Site Review Level 4 Safety Risk Competency



Task	Competency description	AT NZGTTM framework Ref. No.
<p>To be able to review a risk assessment provided as part of an authorised TMP whilst on site.</p>	<p>This involves the ability to evaluate identified and managed risks within the TMP and to identify any unaddressed risks present in the environment.</p> <p>This requires strong analytical skills to assess whether the risk assessment in the authorised TMP aligns with what is observed on site or not.</p> <p>It's important that the team member understands that the review is procedural in nature and is not a reassessment of risk levels or a critique of the methodology used.</p> <p>The team member should be able to demonstrate the ability to decide on appropriate escalation pathways, whether any issues can be resolved by the on-site crew, requires input from a TMP designer, or needs to be escalated to higher levels within the contractor organisation.</p> <p>Additionally, a thorough understanding of the principle of ensuring that risks are managed as far as reasonably practicable is critical.</p>	<p>18</p>
<p>To be able to complete a risk assessment of TTM while on an operational work site.</p>	<p>This involves the ability to identify and differentiate between managed and unmanaged risks, ensuring that site safety and compliance are maintained.</p> <p>This requires thorough understanding and reference to the authorised TMP to recognise pre-managed risks while actively assessing new or unaddressed hazards.</p> <p>It is important that the team member understands that it is not a re-assessment of the original risk analysis, but a real-time observational check to ensure risk controls remain relevant and effective on site.</p> <p>The team member must be able to evaluate the urgency of intervention, applying sound judgement to determine appropriate actions. Effective communication is critical, both in engaging with on-site staff to collaboratively resolve immediate risks and in liaising with planning and design teams to address longer-term concerns.</p> <p>Additionally, the ability to interpret and apply AT's risk appetite for TTM is essential in determining the level of intervention required—whether risks should be escalated to the contractor PCBU for resolution or require AT's direct involvement as the RCA.</p> <p>By demonstrating these capabilities, the team member ensures that unmanaged risks are</p>	<p>19</p>



Task	Competency description	AT NZGTTM framework Ref. No.
	identified, addressed appropriately, and aligned with organisational risk management principles.	
To contribute to providing high level, systemic feedback regarding risk management to other PCBUs in the system.	<p>This requires recognising that the feedback targets how the PCBU manages risk as a system, particularly in situations where trends indicate consistent issues with planning that result in ineffectively managed risks on-site.</p> <p>Competent team members must be able to contribute to critically assessing the planning framework, uncovering root causes of systemic inefficiencies or gaps in processes.</p> <p>Building productive relationships with senior stakeholders involved in developing and managing TTM systems is essential to foster collaboration and drive meaningful change.</p> <p>Feedback must be constructive and actionable, providing system-level recommendations backed by real-world evidence of the consequences of poor planning.</p>	21
Participate in a full-scale risk review of a site (similar to a road safety audit).	<p>This involves a comprehensive understanding of road safety principles and a collaborative approach to problem-solving.</p> <p>Team members must understand the principles of a road safety audit and the safe system approach, recognising that simply complying with standards and guidelines does not always ensure a safe road environment.</p> <p>They must be capable of working effectively within a multidisciplinary auditing team, contributing insights while remaining open to learning from others' perspectives and experiences.</p> <p>Critical thinking is essential for analysing site-specific situations, identifying risks, and proposing practical, evidence-based recommendations.</p>	22

Table 26 – Risk / Safety (Level 4) Competencies

End of section – Go back to Table 1 Table of Contents



17. Quality Management System

17.1 Introduction

A quality management system is a clearly defined set of processes and responsibilities that makes a business run how it's supposed to and ensure that the products and / or services provided meet expectations for the customer and affected stakeholders. For this reason, we have chosen to develop a Quality Management System.

The focus and benefits being sought are:

- Consistency (further development and enhancement)
- Compliance
- Continuous Improvement
- Customer & Stakeholder satisfaction

This chapter is currently a placeholder for a QMS to be developed once the first version of the rest of the AT TTM Assurance System (as provided in this document and previous sections) is finalised.

17.2 Quality Policy and Objectives

This defines the RCAs commitment to quality and sets measurable goals to achieve it. It serves as a guiding principle for all quality-related activities.

17.3 Structure and Responsibilities

Clearly defined roles and responsibilities ensure that everyone in the Temporary Traffic Monitoring team understands their part in maintaining quality standards.

17.4 Document Control and Records Management

This involves managing all documents and records related to quality processes, ensuring that they are up-to-date, accessible, and properly archived.

17.5 Process Management

This includes the planning, execution, and monitoring of processes to ensure they are efficient and effective in delivering quality products and services.

The system covered in the rest of this document.



17.6 Risk Management

Identifying, assessing, and mitigating risks that could impact quality is crucial for maintaining standards and preventing issues before they arise.

17.7 Training and Competency Management

Ensuring that employees are adequately trained and competent in their roles is essential for maintaining quality.

See chapter in this document on Training and Competency.

17.8 Supplier and Vendor Management

This involves evaluating and managing relationships with suppliers to ensure that the materials and services provided meet quality standards.

Only obvious parts of this are:

- Internal suppliers (BT)
- External stakeholders (eg Auditing functionality in the industry)

17.9 Internal Audits and Self-Inspections

Regular audits help identify areas for improvement and ensure compliance with quality standards.

17.10 Continuous Improvement

A QMS should include mechanisms for ongoing improvement based on feedback, performance metrics, and changing requirements.

17.11 Customer Feedback and Complaints Management

Collecting and analysing customer feedback helps organizations understand their performance and areas for improvement.

17.12 Regulatory Compliance

Ensuring that all processes and products comply with relevant regulations and standards is a critical part of a QMS.



End of section – Go back to Table 1 Table of Contents

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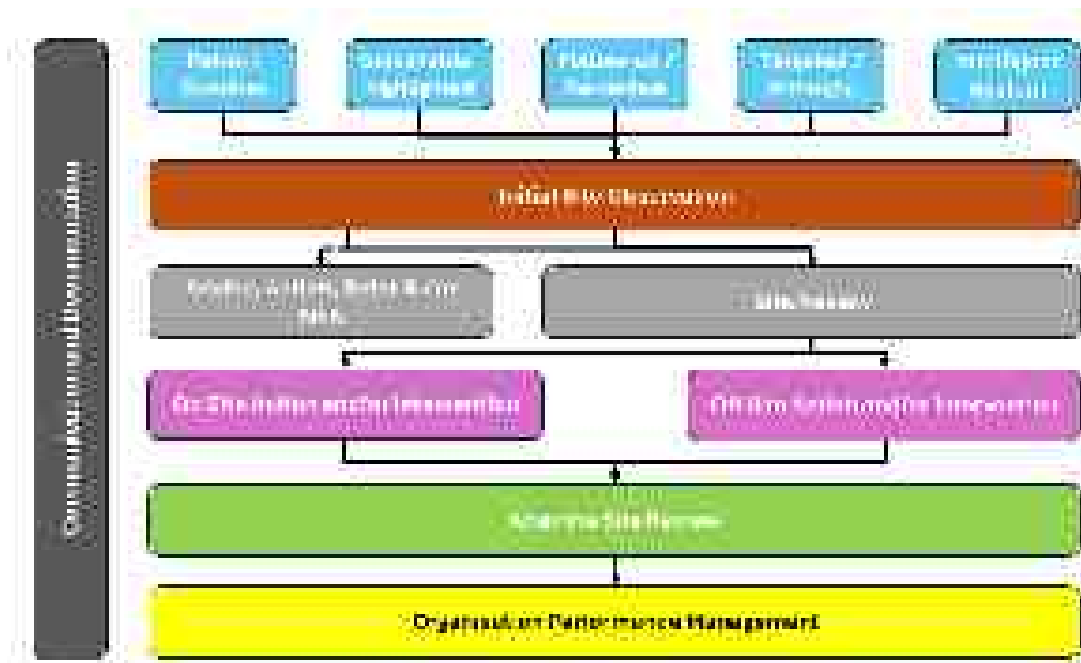


Appendices

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Appendix A: Assurance Process



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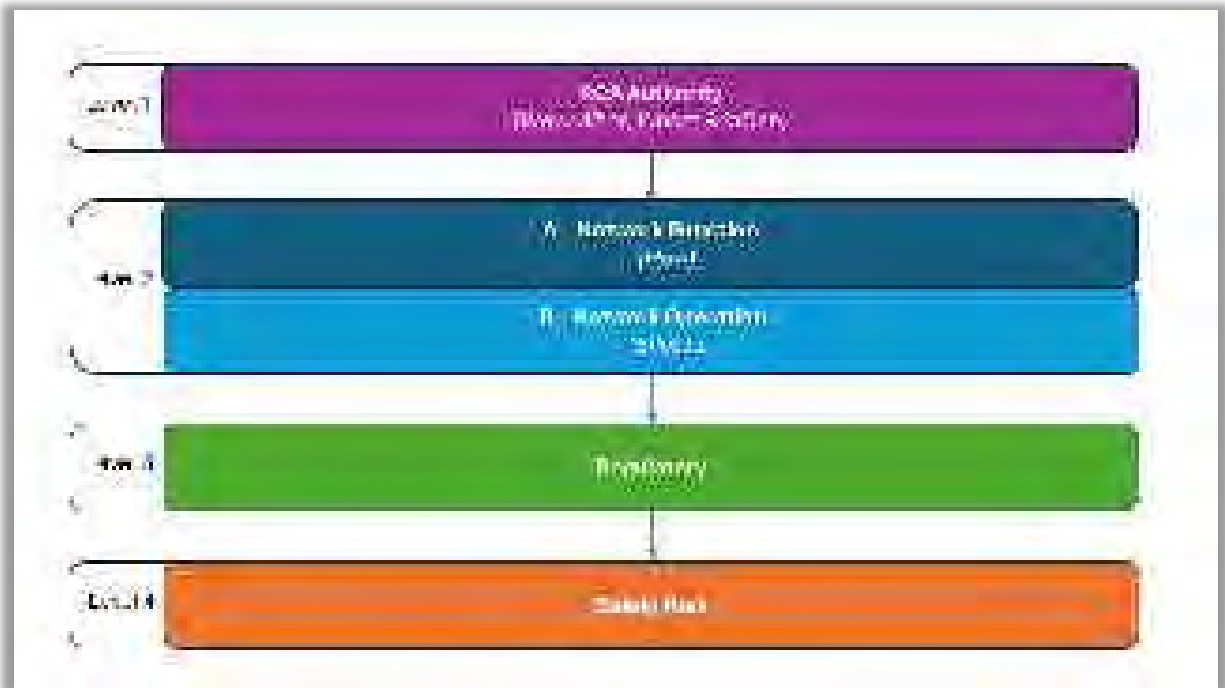
Appendix B: TTM Equipment Identification Features for Organisations

Organisation	Logo	Stand Colour	Phone (24/7)	Email

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Appendix C: TTM Site Review Process



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Appendix D: Site Review Form Version 3

RISK BASED TTM WORKSITE ASSESSMENT FORM										Version #3.2			
ACTIVITY INFORMATION					PCBU INFORMATION								
Road Name				Date & Time				Client / Principal				Contact information if new	
Location Description								Main Contractor				Contact information if new	
WAP #				TMP Ref #				TTM Company				Contact information if new	
WAP / TMP Type				TMD Ref #				Other Sub Contractor				Contact information if new	
Project Description				WAP Contact Details	Yes / No			Site Manager				Contact information if new	
Project Type	Project Type	Notification	Yes / No	Notification Acceptance	Yes / No	Site Traffic Management Supervisor (STMS)						Contact information if new	
SUMMARY OUTCOME					Summary Findings (Areas for Recognition)								
Authorised TMP?	Pass / Fail	TMP Issue		Pass / Opportunity									
Relevant TMP	Pass / Fail	Notification		Pass / Fail									
Site Impact (TMP Followed)?	Pass / Fail	Network Functionality?		Pass / Fail									
Regulatory (TSL)?	Pass / Fail	Regulatory (Other non TSL)?		Pass / Fail									
Relative Safety Risk?	Pass / Fail	Absolute Safety Risk?		Pass / Opportunity									
SUMMARY ACTIONS			Summary Findings (Areas for Improvement)										
On Site	On Site Actions												
Off site	Off site actions												
Other Considerations	Non TTM Specific Comments												
LOCATION SPECIFIC ASSESSMENT													
SPECIFIC LOCATION													
INTERSECTION / MID-BLOCK?	Intersection / Link	ASSESSMENT REASON	Assessment Reason	KEY RISK EVENT			Who What could happen Why would it happen (cause) Consequence		KEY POINTS				
ACTIVITY													
NETWORK FUNCTIONALITY ASSESSMENT													
	MOTOR VEHICLE		Network Type	CYCLIST		Network Type	PEDESTRIAN		Network Type	PUBLIC TRANSPORT		Network Type	
PLANNED	Primary Control	Vehicle Volume	Level of Service	Primary Control (Cycle)	Cyclist Volume	Level of Service	Primary Control (Peds)	Pedestrian Volume	Level of Service	Primary Control (PT)	PT Volume	Level of Service	
ACTUAL	Primary Control	Vehicle Volume	Level of Service	Primary Control (Cycle)	Cyclist Volume	Level of Service	Primary Control (Peds)	Pedestrian Volume	Level of Service	Primary Control (PT)	PT Volume	Level of Service	
REGULATORY ASSESSMENT				RISK ASSESSMENT									
Permanent Speed	50	Operating Speed	55	#VALUE!	Head On (Motor vehicle)	Planned	Actual	Pedestrians & footpath users	Planned	Actual	Crash Type (Choose one)	Planned	Actual
TSL Authorised	N/A	TSL Implemented	N/A		Exposure	2	1	Exposure	1	2	Exposure	0	0
TSL Enforceable	Yes / No	TSL Recorded	Yes / No		Likelihood	2.67	2.89	Likelihood	0.43	2.71	Likelihood	0	0
Implemented Regulatory controls (achieved)?	All / Some / None	Required regulatory controls (achieved)?	All / Some / None		Severity	1	1	Severity	3	4	Severity	#VALUE!	#VALUE!
REGULATORY NOTES				RISK ASSESSMENT NOTES	Risk Rating (Var.% = 45.9%)	5.34	2.89	Risk Rating (Var.% = 1580.6%)	1.29	21.68	Risk Rating (Var.% = 0%)	#VALUE!	#VALUE!
LOCATION SPECIFIC ASSESSMENT													
SPECIFIC LOCATION													
INTERSECTION / MID-BLOCK?	Intersection / Link	ASSESSMENT REASON	Assessment Reason	KEY RISK EVENT			Who What could happen Why would it happen (cause) Consequence		KEY POINTS				
ACTIVITY													
NETWORK FUNCTIONALITY / DISRUPTION													
	MOTOR VEHICLE		Network Type	CYCLIST		Network Type	PEDESTRIAN		Network Type	PUBLIC TRANSPORT		Network Type	NETWORK FUNCTION NOTES
PLANNED	Primary Control	Vehicle Volume	Level of Service	Primary Control (Cycle)	Cyclist Volume	Level of Service	Primary Control (Peds)	Pedestrian Volume	Level of Service	Primary Control (PT)	Level of Service		
ACTUAL	Primary Control	Vehicle Volume	Level of Service	Primary Control (Cycle)	Cyclist Volume	Level of Service	Primary Control (Peds)	Pedestrian Volume	Level of Service	Primary Control (PT)	Level of Service		
REGULATORY ASSESSMENT				RISK ASSESSMENT									
Permanent Speed	Speed	Operating Speed	Operating speed	#DIV/0!	Crash Type (Choose one)	Planned	Actual	Crash Type (Choose one)	Planned	Actual	Crash Type (Choose one)	Planned	Actual
TSL Authorised	TSL Authorised	TSL Implemented	TSL Implemented		Exposure	0	0	Exposure	0	0	Exposure	0	0
TSL Enforceable	Yes / No	TSL Recorded	Yes / No		Likelihood	0	0	Likelihood	0	0	Likelihood	0	0
Implemented Regulatory controls (achieved)?	All / Some / None	Required regulatory controls (achieved)?	All / Some / None		Severity	0	0	Severity	0	0	Severity	0	0
REGULATORY NOTES				RISK ASSESSMENT NOTES	Risk Rating (Var.% = 0%)	0	0	Risk Rating (Var.% = 0%)	0	0	Risk Rating (Var.% = 0%)	0	0
Specific Contact Details					Reviewer								
Entity (PCBU)							TTM Advisor						
Key Contact Person							Reviewing Organisation			Organisation Name	Organisation Type		
Email							Email						
Mobile							Mobile						

Helping friends and family get home safely



Appendix E: Stop Works Order Form

STOP WORK ORDER



Pursuant to the authority and responsibilities of Auckland Transport (Corridor Manager) as stated or assumed in any of the Local Government Act, Health and Safety at Work Act, and various Utility Acts, **an order is hereby given to stop work on the following job/s:**

WAP NUMBER:	0
ROAD NAME:	
SPECIFIC LOCATION:	0

The reason for this is that the Work does not comply with the following requirements:

In the meantime, the only work to be carried out is work that is necessary to remedy either the above aspects that do not comply, or work necessary to protect the safety of Road users, and to remedy any inconvenience to pedestrian and vehicular traffic.

This Stop Works Order is in relation to any/all activities or operations affecting the Auckland Transport Road Reserve. This Stop Works Order does not pertain to works or activities within the private boundary, unless such affects the AT road reserve.

The stopped work is not to recommence until appropriate remedial work is carried out and an 'Approval to Recommence Work' authority is signed and issued by the TTM Reviewer.

Signed By:		
TTM Reviewer on behalf of TMC		
Time:		
Date:		
Received By:	Emailed to Parties (Details Provided on Site)	Verbal On Site

Approval to Recommence Work

This is to confirm that following the 'Stop Work Order' issued for the following Work, the remedial work has been satisfactorily completed and the stopped work may now re-commence from ~~Not Yet Given~~

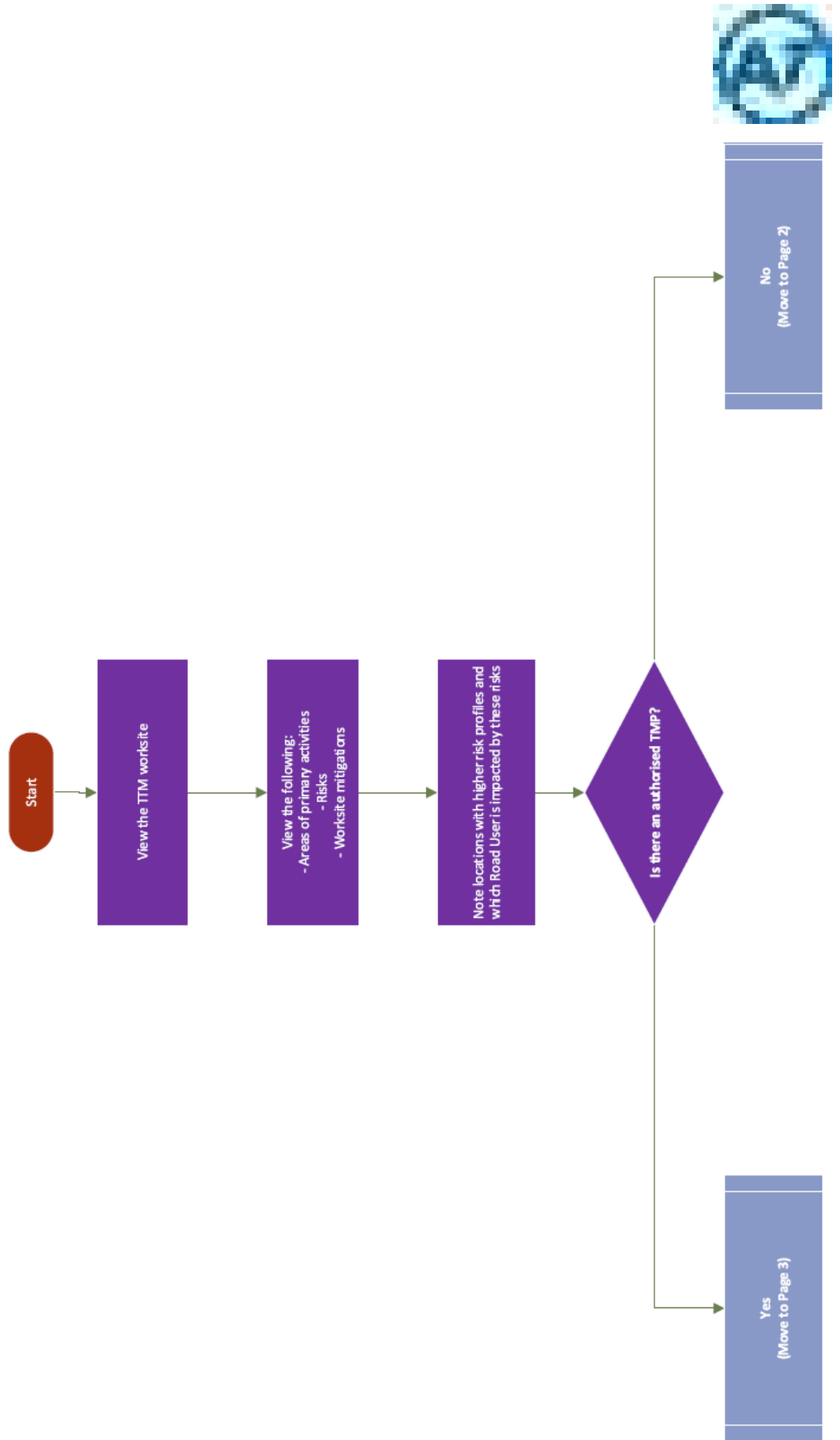
Signed By:		
TTM Reviewer on behalf of TMC		
Time:		
Date:		

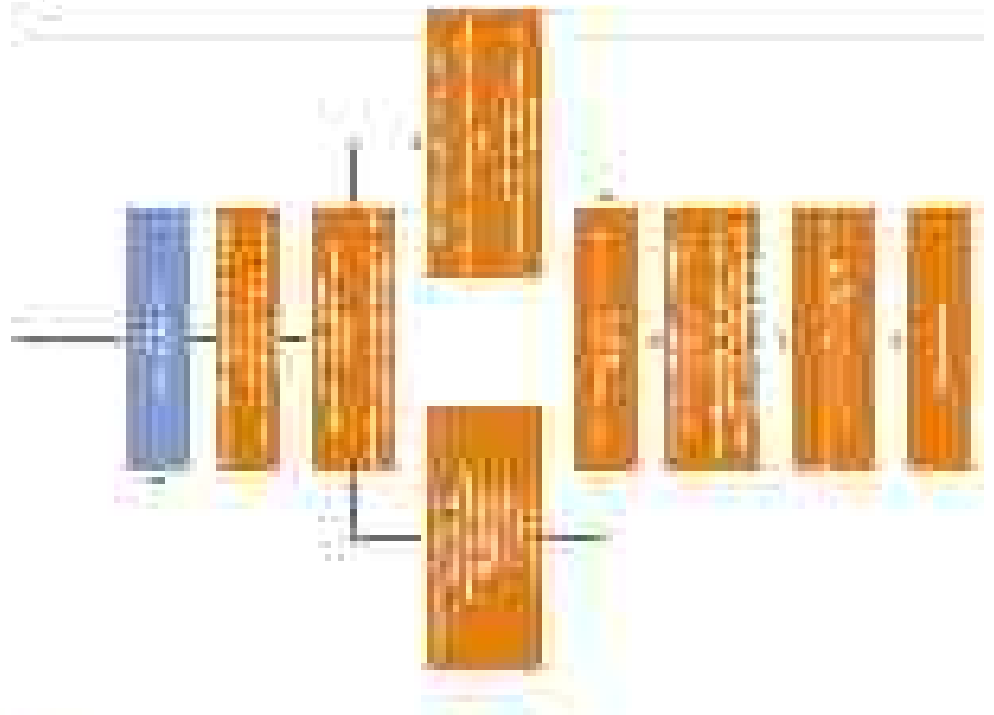


Appendix F: TTM Site Review Process

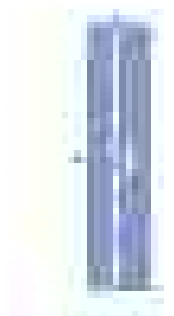
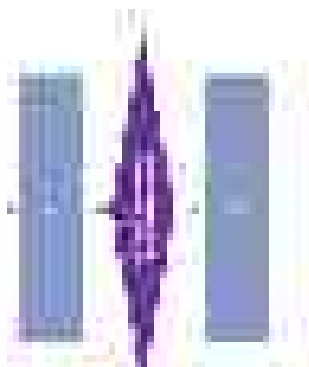


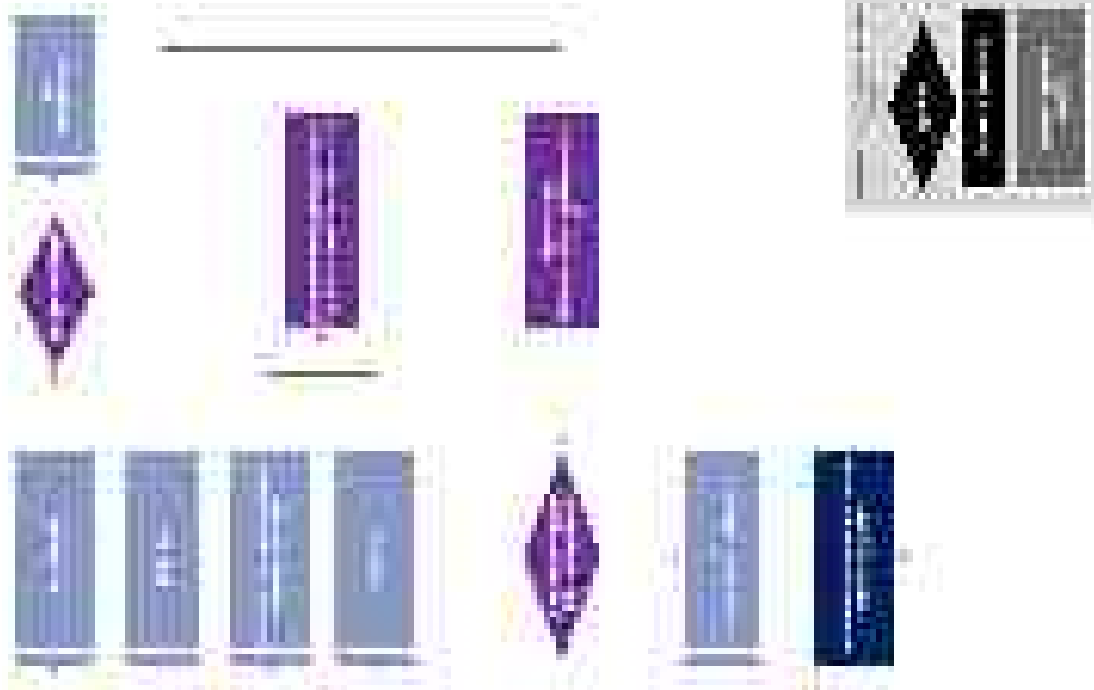
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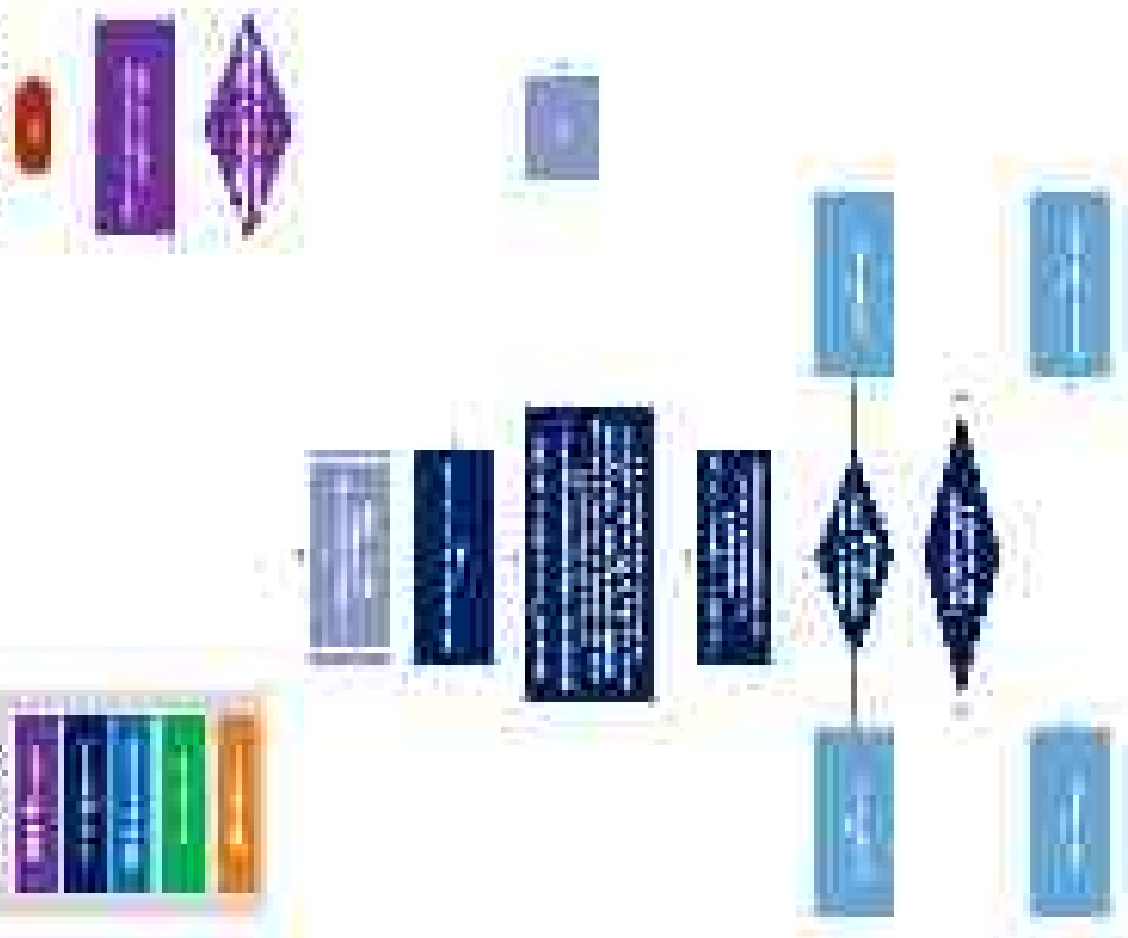


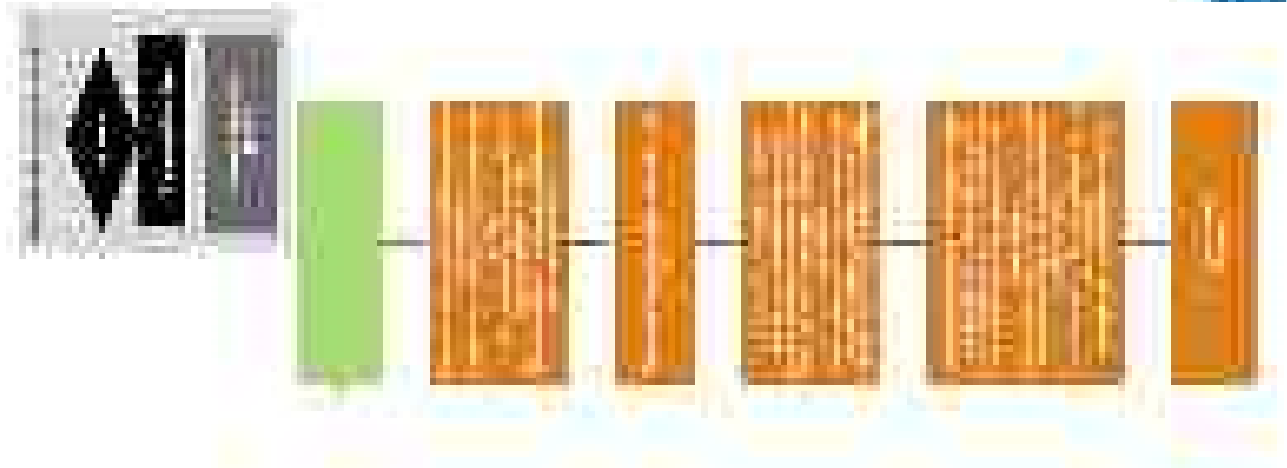
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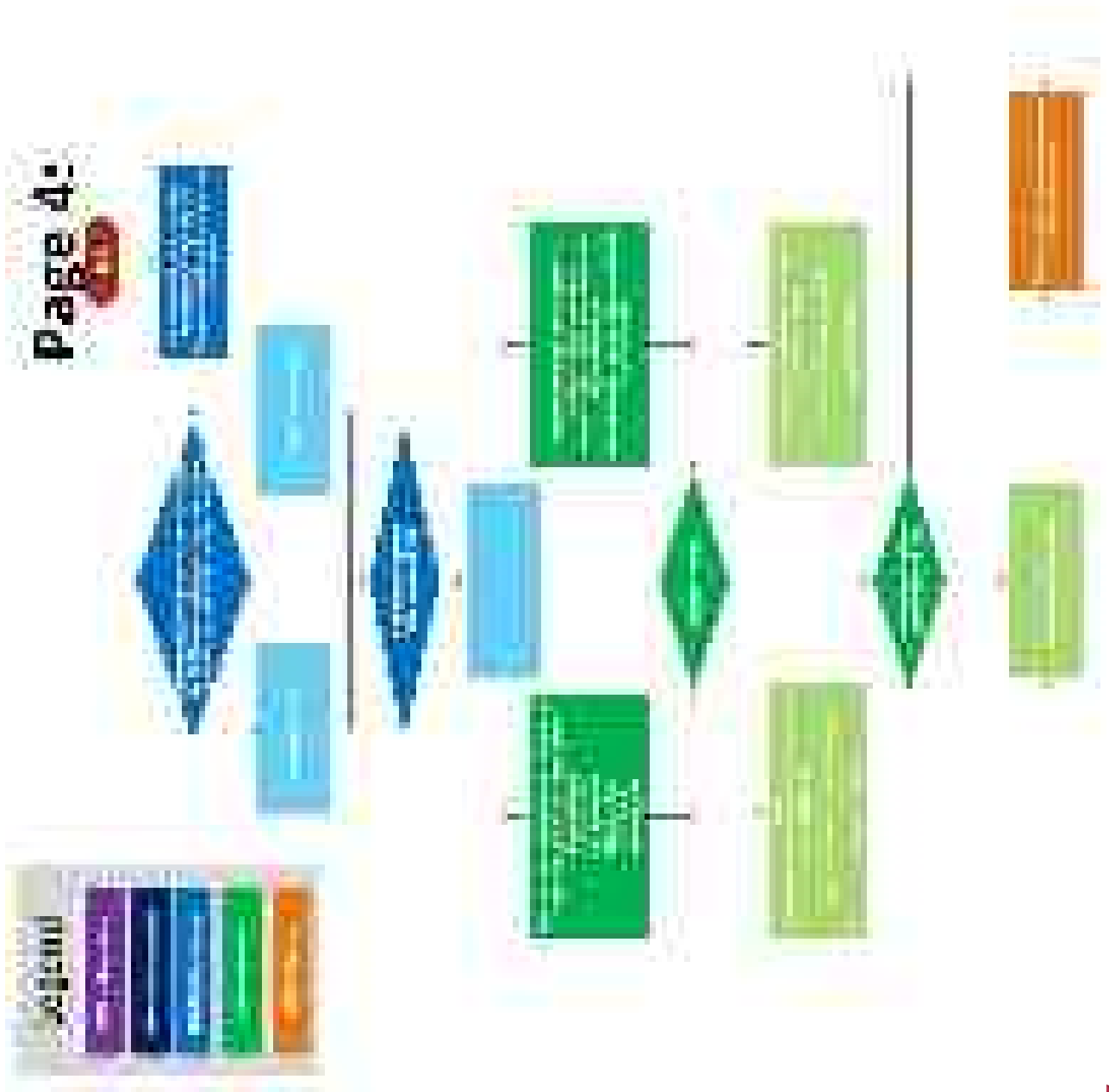


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Appendix G: Improvement Notice Form

Temporary Traffic Management (TTM) Improvement Notice (aka Notice of Non-Conformance (NNC))		 Auckland Transport <small>An Auckland Council Organisation</small> 20 Viaduct Harbour, Auckland 1010 Private Bag 92250, Auckland 1010 Ph 09 355 3553 Fax 09 355 3550	
Location, Time & Date of Site Review			
CAR / WAP number		TMP / TMD number	
Contracting PCBU	Client PCBU	TTM Reviewer	
Other Responsible PCBU <small>Amend / Delete as required</small>	Lead Contractor PCBU	Sub-Contractor PCBU	
	Sub-Contractor PCBU	Sub-Contractor PCBU	
	Other PCBU	Other PCBU	
<p>This notice is issued to inform you that the temporary traffic management at the time of the Site Review, the worksite was not in accordance with Activities in the Road Corridor Bylaw 2022 and / or the authorised Traffic Management Plan. This Improvement Notice is issued to the responsible party(s) named above. The following temporary traffic management defects are noted:</p> <ul style="list-style-type: none"> • Relevant Authorised TMP Fail • Site Impact (TMP followed) Fail • Network Functionality Fail • TSL Regulatory Control Fail • Other Regulatory Control Fail • Relative Risk Fail 			
The details of temporary traffic management where improvement opportunities exist are:			
The AT TTM Review Panel made the following additional comments / notes:			
Each PCBU and other organisations named above shall:			
<p>Identify and investigate the root causes of the non-conforming temporary traffic management identified in the Site Review and this notice to find a permanent cure to prevent the problem recurring.</p> <p>Prepare and Implement a Corrective Action Plan applicable to their organisation to prevent recurrence of the issues causing the above non-conformances at any future worksites under the management of any of the parties involved</p> <p>A response to this Notice must be returned within 10 working days detailing the Corrective Action Plan(s) for the defects identified above.</p> <p>Implementation of the Corrective Action Plan(s) shall commence as soon as possible and no later than 20 working days from the date of this Notice.</p> <p>Your response will be considered by the Review Panel to determine the close out of this Improvement Notice. All findings will be retained on record by Auckland Transport for future reference.</p> <p>Please note that this notice is NOT an Organisational NNC.</p>			
Notice sent to:	All PCBU and relevant stakeholders	on	
Signed:		Received:	
	on behalf of the AT TTM Review Panel		Lead Contractor PCBU



Appendix H: Organisation Notice Form (Sample)

Temporary Traffic Management (TTM) Organisational Notice of Non-Conformance First Warning		 Auckland Transport <small>An Auckland Council Organisation</small> 20 Viaduct Harbour, Auckland 1010 Private Bag 92250, Auckland 1010 Ph 09 355 3553 Fax 09 355 3550	
Organisation	TEST	Branch / Region	Auckland Region (AT road network)
Reference Number	134	Date	1 December 2025
<p>This notice is to inform you that on the 19 May 2025, the AT RCA Senior Leadership Review Panel determined that your organisation be issued with a First Warning . This is the Notice for the First Warning. This notice is hereby issued in accordance with Auckland Transport Activities in the Road Corridor Bylaw 2022.</p>			
<p>This Organisational Notice of Non-Conformance (Org NNC) is issued in respect of the following temporary traffic management issues:</p>			
<p>Your organisations performance as a Lead Contractor has been determined to be significantly sub standard with a KPI of 15% for the last 10 inspections to 31 December 2025 and 20% for the last 20 inspections our staff have undertaken. Further, the KPI for the last 50 inspections was 19%. The KPI is measured counting the number of sites which were deemed to be more or less safe and compliant, that is, the TTM review identified a final result of Needs Improvement or better.) Further, the KPI for the last 50 inspections was 19%.</p>			
<p>The actions required to be implemented are to:</p>			
<p>Identify and investigate the root causes of the non-conforming temporary traffic management identified in the various TTM Site Reviews issued to your organisation during this period.</p> <p>Prepare and Implement a Corrective Action Plan to prevent recurrence of the issues causing the above non-conformances at any future worksites under the management of your staff and / or organisation.</p> <p>A response to this Notice must be returned within 10 working days detailing the Corrective Action Plans for the defects identified above.</p> <p>You will be expected to implement the Corrective Action Plan as soon as possible and no later than 20 working days from the date of this Notice.</p> <p>Your response will be considered by the RCA Senior Leadership Review Panel to determine the close out of this Organisational Notice of Non-conformance. All findings will be retained on record by Auckland Transport for future reference.</p> <p>A failure to respond will be grounds for further actions to be taken by Auckland Transport.</p> <p>You may wish to appeal this Organisational Notice of Non-Conformance. In order to do so, your Appeal must be submitted to the AT Temporary Traffic Monitoring Manager tom.kiddle@at.govt.nz.</p>			
<p>Sanctions</p> <p>Not Applicable</p>			
Notice sent to:		Test Address via/or Test Address	
Signed:		Received:	
AT RCA Senior Leadership Review Panel		Contractor: TEST	



Appendix I: Review Panel Attendance NDA

1.0 PURPOSE

The purpose of this document is to provide information to the Review Panel members regarding the confidentiality of the information they will be reviewing and the requirements for their attendance at the Review Panel meetings.

2.0 SCOPE

This document applies to all Review Panel members who are required to attend the Review Panel meetings.

3.0 CONFIDENTIALITY

All information received by the Review Panel members is confidential and must be kept confidential. This includes information received from the public, the media, and other sources. Confidential information must not be disclosed to anyone outside the Review Panel, and must not be used for any purpose other than the purpose for which it was provided.

4.0 REVIEW PANEL MEETINGS

Review Panel meetings will be held on a regular basis. The Review Panel members are required to attend all Review Panel meetings unless they have a conflict of interest or are unable to attend for other reasons. The Review Panel members are required to attend the Review Panel meetings in person, unless they are unable to attend for other reasons. The Review Panel members are required to attend the Review Panel meetings for the full duration of the meeting.

5.0 REVIEW PANEL MEMBERS

The Review Panel members are appointed by the Review Panel Chair. The Review Panel members are required to attend the Review Panel meetings for the full duration of the meeting. The Review Panel members are required to attend the Review Panel meetings in person, unless they are unable to attend for other reasons. The Review Panel members are required to attend the Review Panel meetings for the full duration of the meeting.

6.0 REVIEW PANEL CHAIR

The Review Panel Chair is appointed by the Review Panel members. The Review Panel Chair is required to attend the Review Panel meetings for the full duration of the meeting. The Review Panel Chair is required to attend the Review Panel meetings in person, unless they are unable to attend for other reasons. The Review Panel Chair is required to attend the Review Panel meetings for the full duration of the meeting.

7.0 REVIEW PANEL SECRETARY

The Review Panel Secretary is appointed by the Review Panel members. The Review Panel Secretary is required to attend the Review Panel meetings for the full duration of the meeting. The Review Panel Secretary is required to attend the Review Panel meetings in person, unless they are unable to attend for other reasons. The Review Panel Secretary is required to attend the Review Panel meetings for the full duration of the meeting.

8.0 REVIEW PANEL MEMBERS' OBLIGATIONS

The Review Panel members are required to attend the Review Panel meetings for the full duration of the meeting. The Review Panel members are required to attend the Review Panel meetings in person, unless they are unable to attend for other reasons. The Review Panel members are required to attend the Review Panel meetings for the full duration of the meeting.

9.0 REVIEW PANEL MEMBERS' RIGHTS

The Review Panel members are required to attend the Review Panel meetings for the full duration of the meeting. The Review Panel members are required to attend the Review Panel meetings in person, unless they are unable to attend for other reasons. The Review Panel members are required to attend the Review Panel meetings for the full duration of the meeting.

10.0 REVIEW PANEL MEMBERS' RESPONSIBILITIES

The Review Panel members are required to attend the Review Panel meetings for the full duration of the meeting. The Review Panel members are required to attend the Review Panel meetings in person, unless they are unable to attend for other reasons. The Review Panel members are required to attend the Review Panel meetings for the full duration of the meeting.

