NZGTTM webinar series 2025

Webinar 5: How to do a risk assessment

10 June 2025

NZ TRANSPORT AGENCY WAKA KOTAHI | GO TEMPORARY TRAFFIC MANAGEMENT INDUSTRY STEERING GROUP

Opening karakia

Tūtawa mai i runga	Come forth from above,
Tūtawa mai i raro	below, within,
Tūtawa mai i roto	And from the environment
Tūtawa mai i waho	Vitality and wellbeing for all
Kia tau ai	Strengthened in unity.
Te mauri tū, te mauri ora	
Ki te katoa	
Haumi e, hui e, tāiki e	

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NZGTTM webinar series 2025

Webinar	Topic	Date
Webinar 1: Introducing the NZGTTM	A refresh on what a risk-based approach is about and where the sector is at with the change	Tuesday 25 March 2025, 2.30pm
Webinar 2: TTM Credentials Framework - overview	For anyone who wants to learn about the TTM Credential Framework development, micro-credentials available now, and what you can expect in 2025.	Tuesday 8 April 2025, 2:30pm
Webinar 3: TTM Competency - what you need to know now	From a practical perspective, we'll discuss what people need to do right now to show competency.	Wednesday 30 April 2025, 2:30pm
Webinar 4: Procurement	Primarily for clients and project managers; but may be of interest to supplier contract managers.	Tuesday 20 May 2025, 10:30am
Webinar 5: How to do a risk assessment	A step-by-step session explaining the importance of risk management and practical exercises to teach people how to do risk assessments.	Tuesday 10 June 2025, 10:30am
Webinar 6: Assurance	While every PCBU should have their own audit and assurance programme, we look at what's happening in this space across the sector.	Tuesday 15 July 2025, 2:30pm
Webinar 7: Wrap-up session	Dedicated open FAQ session.	Tuesday 29 July 2025, 2:30pm

TODAY

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What we'll cover today

- Legislative and Industry driving the pace of change
- High level refresh on risk
- Examples of Risk process
- Practical examples
- Review key points
- Questions & Answers / Resources

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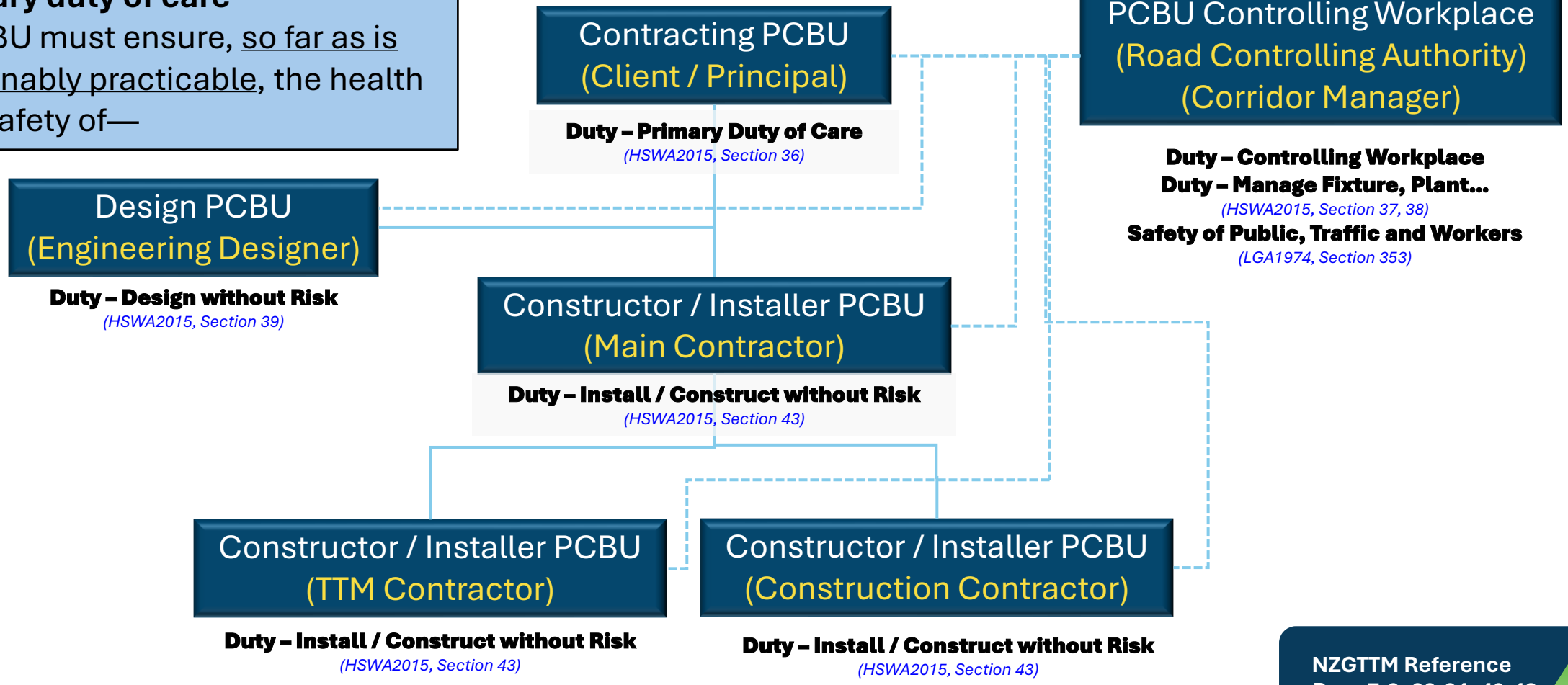
Legislative perspective

(Everyone is Responsible and Accountable!)

(Organisations cannot contract out of their responsibilities – the law prevents this!)

Primary duty of care
A PCBU must ensure, so far as is reasonably practicable, the health and safety of—



NZGTTM Reference
Page 7-9, 22-24, 40-43

Example: Downer
Relationships creating success

Embedding risk into process

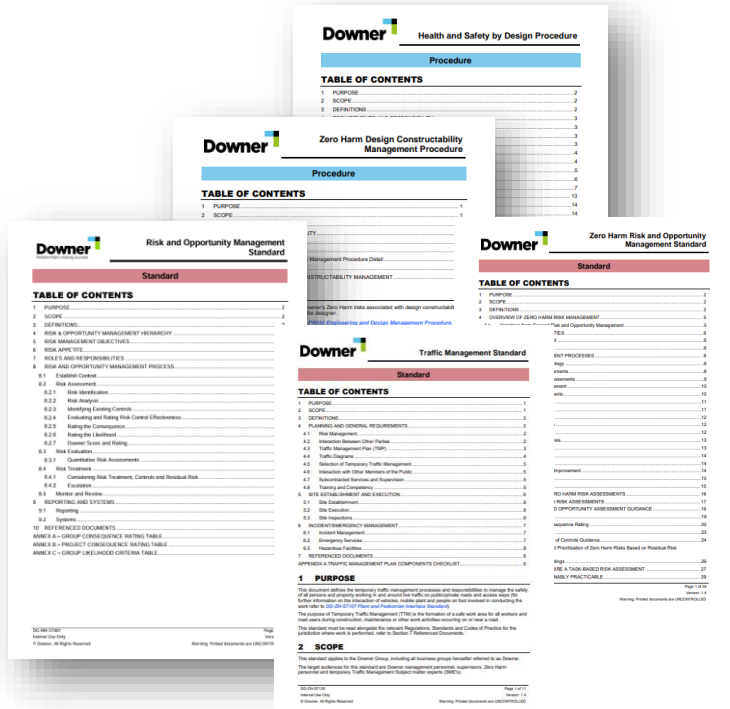
1. Follow The Applicable Risk Management Standard

2. Use Client Risk Framework where specified
   (this should be permitted under the overarching Risk Standard)

3. Where responsible for Engineering Design,
   ensure Health and Safety by Design process
   is followed.

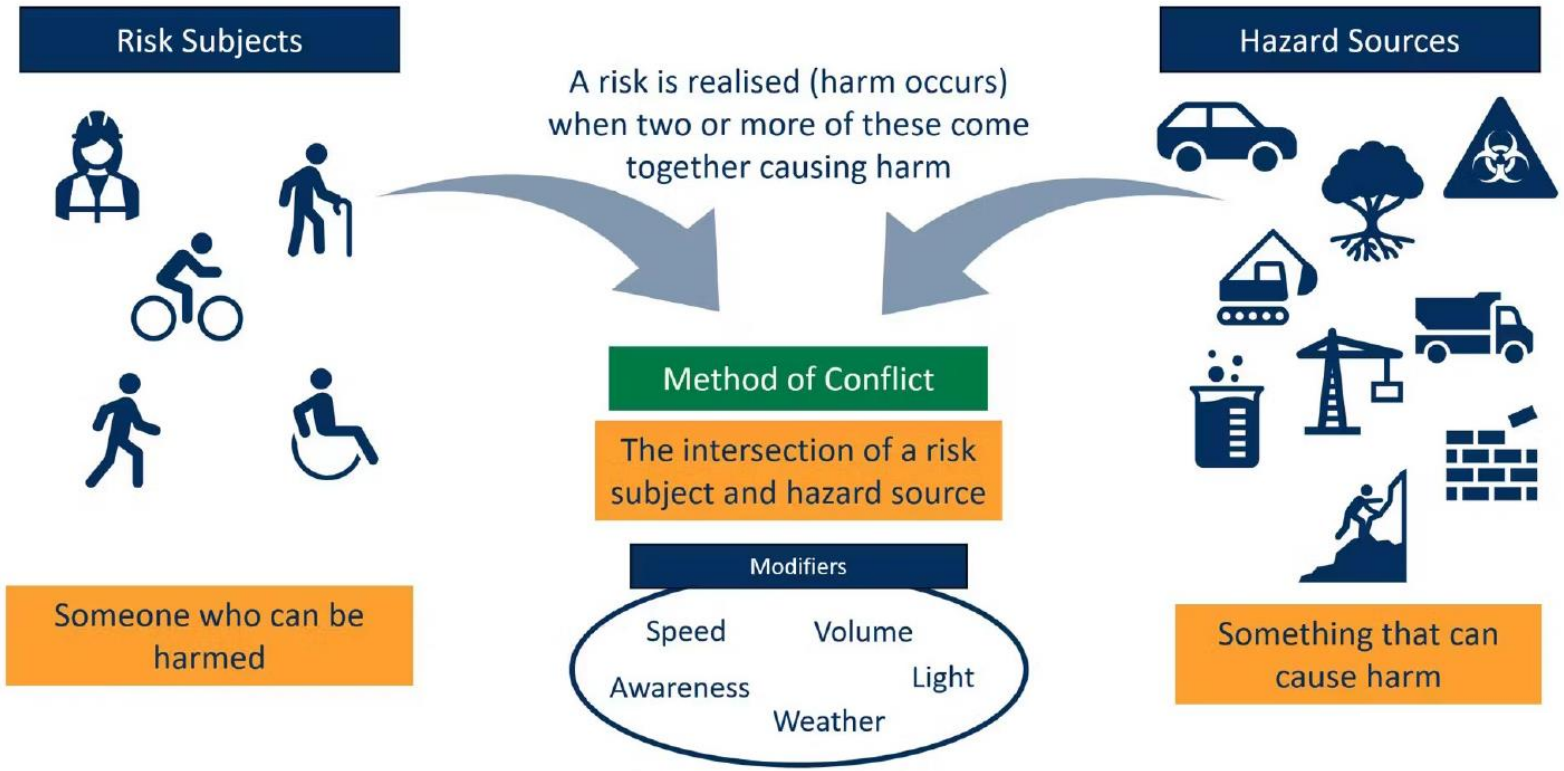
4. Where not responsible for Engineering Design,
   obtain a copy of Health and Safety by Design Assessment

5. Always ensure risk of harm to people is eliminated
   (or minimised) **So Far As is Reasonably Practicable**.



Risk process

- TTM risk integrated into our wider approach to HSQE



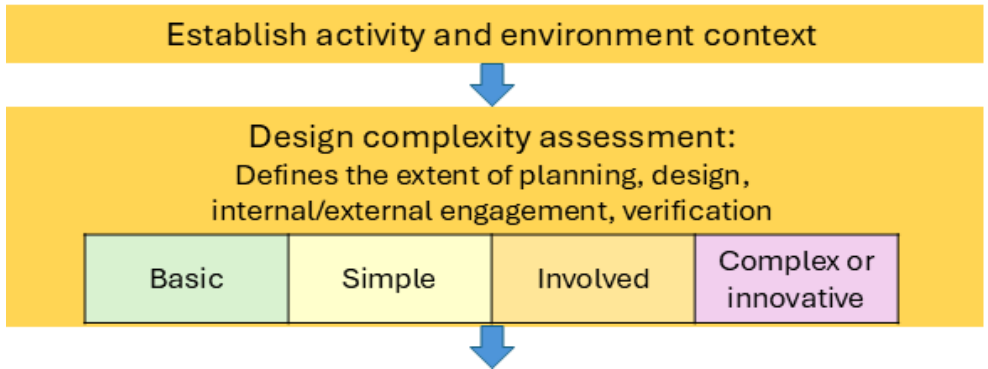
LIVING SAFELY 2.0
People at the heart of everything

What am I doing?
What could go wrong?
How can we do it safely?

Civil Contractors 2024 Risk-based TTM Roadshow

Example: Fulton Hogan

Risk-based TTM – minimum requirements



1. Fulton Hogan 'regulation'
2. Applies to sub-contractors
3. Need to include client and third party risks.
4. Similar to other temporary works procedures
   (e.g Engineering NZ/Temporary Works Forum and FHNZ)
   - Design Complexity is used as an initial proxy for the likelihood of a risk occurring
   - The extent of design effort and verification required is proportionate to the Design Complexity (implicitly the likelihood), and the potential consequences of the risks.

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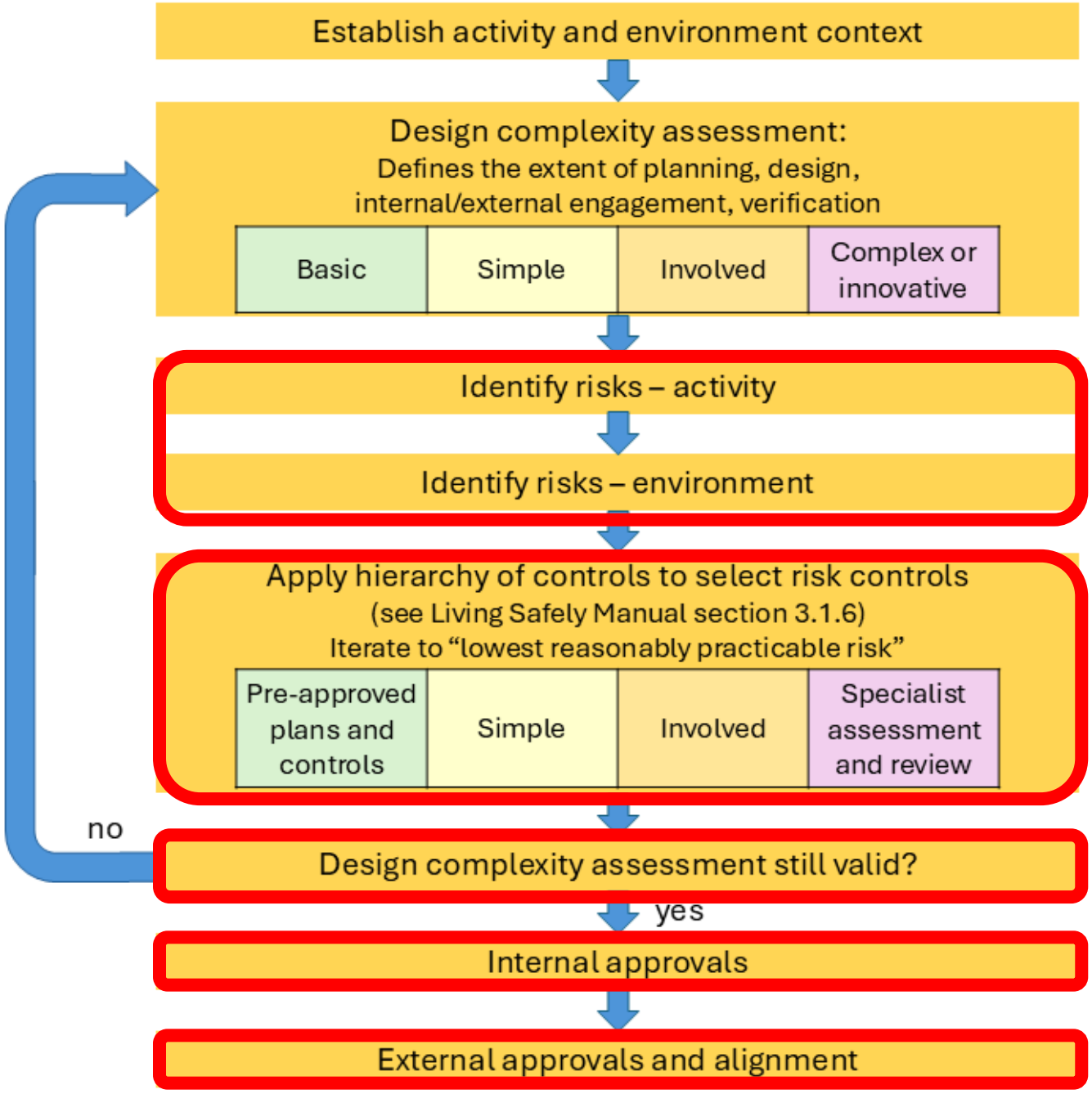

Minimum level of Design, Verification and engagement now defined.

Example: Fulton Hogan

Forms to standardise analysis

Risk subject *(Someone who can be harmed)*	Hazard source and method of conflict *(Something that can cause harm, and how)*	Modifiers	Control consideration *(If not eliminated, why not… and other measures of control that maybe applied)*
E.g. Road workers	*A member of public vehicle enters the working space, hitting workers on foot*	*Speed, volume, separation between subjects*	*Can the risk be eliminated by closing the road?* *Yes, a viable detour is available via… and this is supported by the neighbouring RCA.* *Consider the residual risk of the detour route…* *Discuss with stakeholders the best timing for the road closure* *Identify the residual risk for errant and hostile vehicle / road user interactions. Record this as its own risk subject &/or hazard source and method of conflict so that controls can be considered for these.*
	Hostile road user, frustrated by the road closure verbally or physically assaults a road worker. *Errant or hostile vehicle breach of the road closure hits road workers, plant, equipment or materials*	*Length & tolerance of detour, speed, volume, wider network effects*	*Engineering controls to be incorporated into TTM design to include… barriers, barricades, hostile breach controls …* *"…every person on a site can communicate by radio with every other person on that site" (Source: REDNZ 23-006)*

Objective is lowest reasonably practicable risk

Most realistic potential outcome with controls in place?

Risk Assessment	Insignificant ☐	Minor ☐	Significant ☐	Major ☐	Severe ☐

Unbranded forms at : [TTM library | NZ Transport Agency Waka Kotahi]

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Example:
Fulton Hogan
2024-09-16 21:44:25 112km/h
BLACKVUE DR770X/FHD-OFF

Risk-based road marking

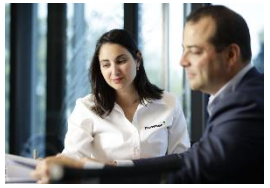
- Actively being delivered across all 8 Downer NOCs.
- Downer’s mobile-oriented TTM methods have streamlined road marking operations across all Downer NOCs, reducing setup and removal times by using a more flexible approach to TTM controls instead of traditional static CoPTTM controls.
- These innovative TTM methodologies have reduced the overall road marking timeframes per contract, boosting productivity, efficiency, and the enablement of faster programme delivery.
- Downer's practical and fit for purpose TTM solutions have helped their teams feel safer on the job, letting them focus on what they do best within their core roles, in addition to the efficiencies it has led to increased performance and team morale.

What do TTM teams have to do?

1. Contract Engagement

Sets out responsibilities, roles and Risk Framework

(Cannot contract out of legal responsibilities)



2. Receive Design & Risk Assessment

This should demonstrate how it can be executed safely without harm.

(Including Lowest Total Risk)

ZERO HARM

Health and Safety in Design Minimum Standard

New Zealand guide to temporary traffic management:

Lowest total risk

Waka Kotahi NZ Transport Agency

3. Prepare / Select Traffic Management Plan

Including Site Based Risk Assessment.

4. RCA / TAO / NAC Review / Approval

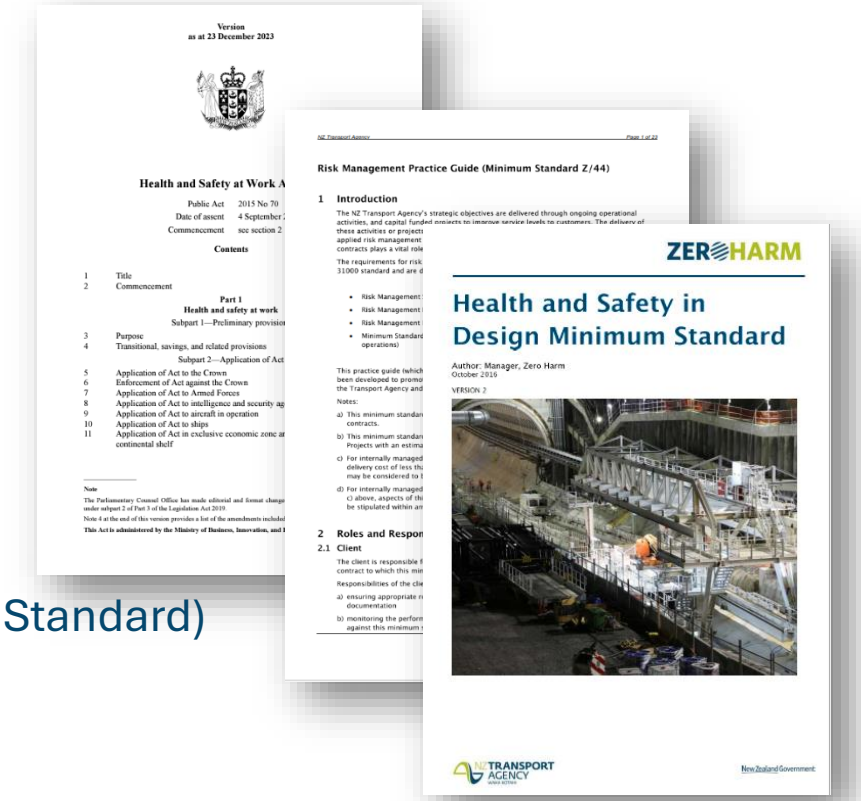
Including Layout, Risk Assessment & Coordination.

5. Implement Traffic Management Plan

Keeping Workers and Users as Safe as Reasonably Practicable.

Design risk assessment

Client (Contracting PCBU) Responsible to ensure this is completed and provided.
(Including Lowest Total Risk)



Risk Assessment must consider:

- Site / Environment
- Users
- Construction Workers
- Traffic Management Workers
- Maintenance of asset over lifecycle
- Persons in vicinity, exposed to or affected by activity

Risk Management Framework:

- NZ Transport Agency Z/44 Risk Management Practice Guide (Minimum Standard) applies
- Should demonstrate Lowest Total Risk
- Identify any Residual Risks not eliminated through design phase
- Provide any information on conditions necessary to ensure no risk to health and safety

References:
- *Health and Safety at Work Act 2015, Section 39*
- *Health and Safety in Design Minimum Standard (NZTA)*
- *Contractor Health and Safety Expectations: Guidance for Supply Chain Partners, Section 5.3, 6.2*
- *New Zealand Guide to Temporary Traffic Management, Page 24*

NZGTTM Reference
Page 24, 34-35

What if there is no “designer”?

(e.g. TTM for an ‘Event’)

Consult, Cooperate, Coordinate with Client, RCA / TAO / NAC and others:

- Users of Road Corridor – including vulnerable Road Users
- Site / Environment / Other activities on network
- Coordination with other PCBU’s
- Construction Workers
- Traffic Management Workers
- Persons in vicinity, exposed to or affected by activity

Risk Management Framework:

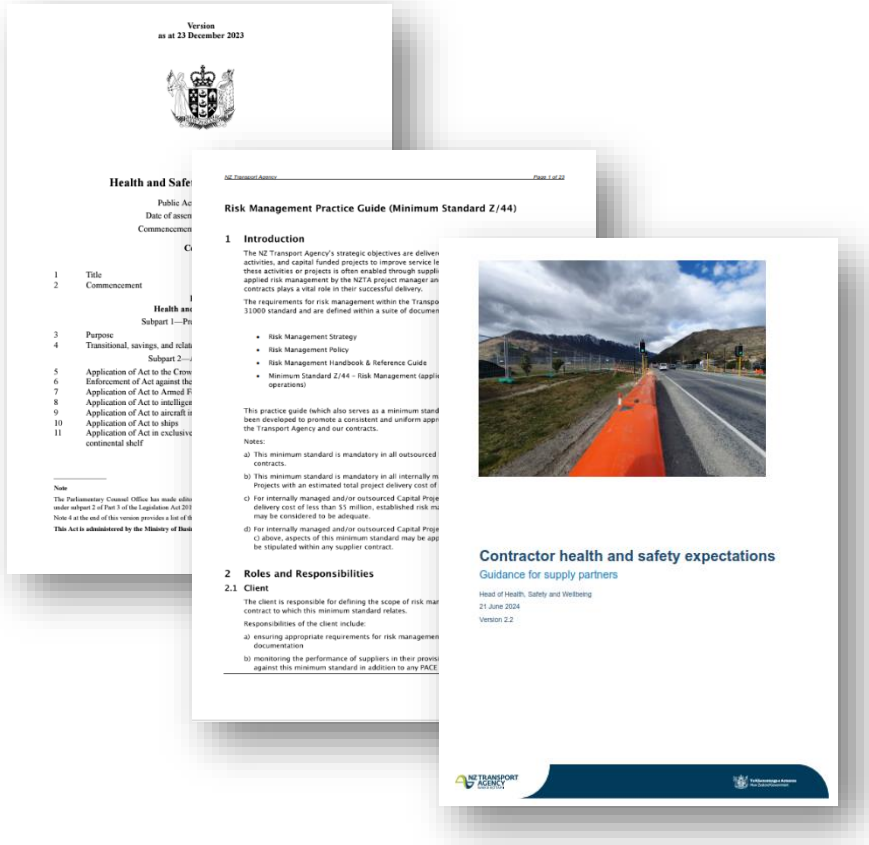
- Agree the Risk Management Framework to be used
- Identify any Residual Risks and Controls
- Agree with Client and RCA/TAO/NAC achievement of Lowest Total Risk – So Far As Is Reasonably Practicable (Risk Acceptance must be established with respective PCBUs)

Example: Downer
Relationships creating success

Site risk assessment

Risk assessment must consider:

- Users of Road Corridor – including vulnerable Road Users
- Site / Environment / Other activities on network
- Coordination with other PCBU's
- Construction Workers
- Traffic Management Workers
- Persons in vicinity, exposed to or affected by activity



Risk Management Framework:

- NZ Transport Agency Z/44 Risk Management Practice Guide (Minimum Standard) applies
- Identify any Residual Risks and Controls

References:

- Health and Safety at Work Act 2015, Section 43
- Contractor Health and Safety Expectations: Guidance for Supply Chain Partners, Section 5.3, 7.7
- New Zealand Guide to Temporary Traffic Management, Page 24

NZGTTM Reference
Page 24-36

Example: CHEVRON TRAFFIC SERVICES

3 Broad Risk Identification Methods

Observation based evidence

- Site inspections
- Safety audits
- Hazard ID meetings
- Pre-inspections
- Aerial/drone
- Drive through
- Videos and photos
- Incidents and accidents

Consultation based

- Client meetings
- RCA meetings
- Sub-contractor meetings
- Health and safety meetings
- Project management meetings

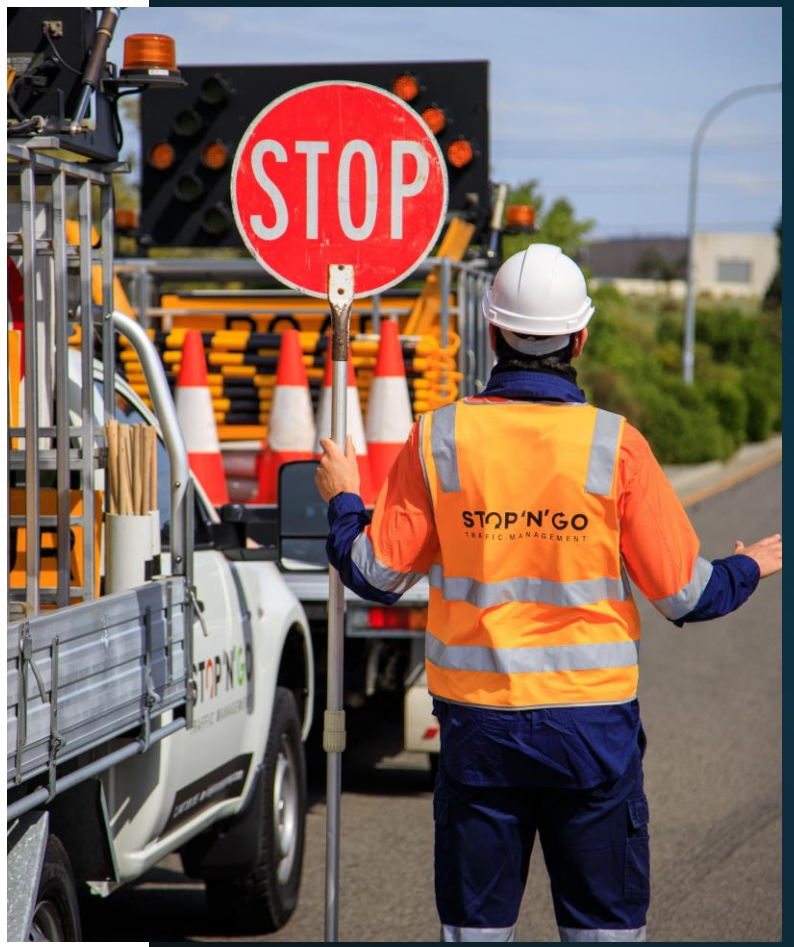
Records & data-based evidence

- Accident reports
- Site diary entries
- Compensation claims
- Feedback records
- Inspection reports
- Earlier Audits/CAPs
- RCA database
- Telemetry data
- Crash analysis data

Example: TRAFFIC SAFE NZ

Stop / Go paddles: a hazard focus

- Stop/Go: Inherent Worker Risk
  - Reliance on human control: Directs traffic flow based on worker judgment and action.
  - High worker exposure: Places workers directly in the path of live traffic.
  - Risk factors:
    - Driver inattention/impairment
    - Vehicle speed
    - Aggressive drivers
    - Worker fatigue/distraction
    - Poor visibility (night, weather)
  - Potential Consequences:
    - Worker injury (minor to fatal)
    - Near misses
    - Public endangerment if worker error

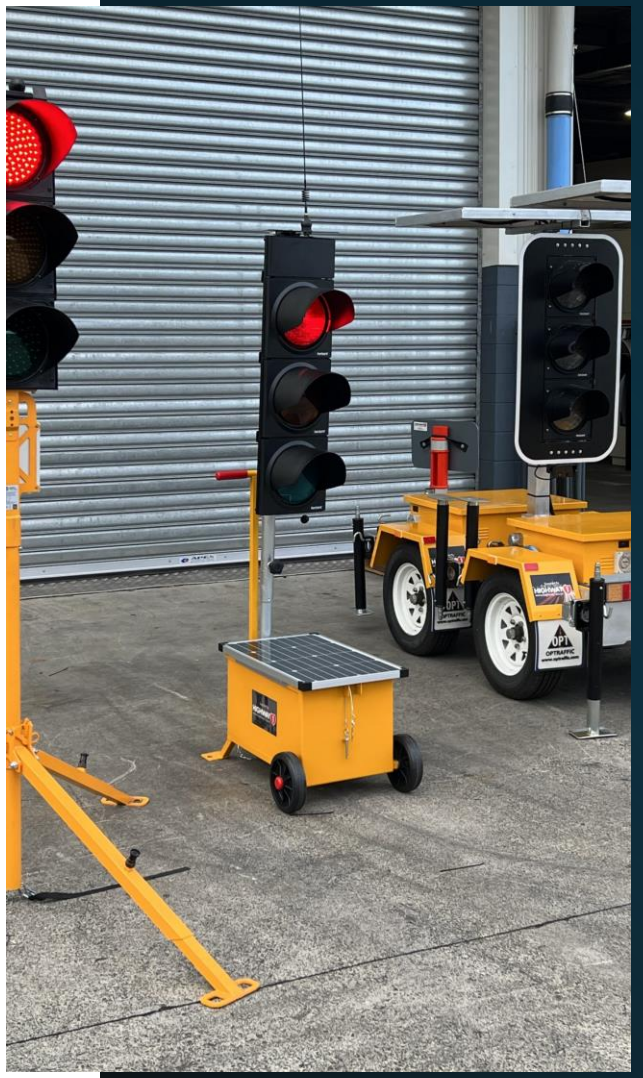


Portable traffic lights: a risk reduction focus

Example: TRAFFIC SAFE NZ

Portable Traffic Lights: Engineered Control

- Automated control: Regulates traffic flow through a programmed sequence.
- Manual control: Regulates traffic flow through operator activate
- Reduced worker exposure: Workers are positioned away from the immediate traffic flow.
- Key Advantages:
  - Consistency: Less prone to human error or variability.
  - Improved visibility: Lights are designed to be seen in various conditions.
  - Predictability: Drivers understand and respond to traffic light signals.
  - Removes the risk of harmful interactions
- Risk Reduction:
  - Decreased risk of worker being struck by a vehicle (engineered control is higher in the hierarchy)
  - More consistent traffic flow, potentially reducing driver frustration.



Recap

Resources

- The NZGTTM:
  - https://www.nzta.govt.nz/roads-and-rail/new-zealand-guide-to-temporary-traffic-management/
- Check our ISG and NZTA websites for webinar recording and presentation:
  - https://www.ttm-isg.org/
  - https://www.nzta.govt.nz/roads-and-rail/new-zealand-guide-to-temporary-traffic-management/
- Questions: email info@ttm-isg.org / ttm@nzta.govt.nz

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Your questions

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Closing karakia

Hoea ki uta	Journey from the mountains
Hoea ki tai	to the sea
Hoea ki te kotahitanga o tātou katoa	Journey safely together united as one
Kia māia	Be brave
Kia ngākau aroha	Be caring
Eke panuku	Acknowledge the unseen forces
Eke Tangaroa	of the land and sea to inspire
Haumi ē, Hui ē,	success and achievement
Tāiki ē	Come together, gather together United together