Minutes of the CoPTTM Governance Group (CGG) meeting on 13 December 2017

Meeting details

Start	Finish	Venue
9.00am	3.30pm	Cliftons Conference Centre, Level 28, Majestic
		Centre, 100 Willis Street, Wellington

Meeting attendees

Person	Representing	Person	Representing
Fergus Tate	NZTA (Chairperson)	Simon Harty	СТОС
Stuart Fraser	NZTA	Tom Kiddle	Auckland Transport
Matt Anderson	Broadspectrum	Andrew McLeod	Stantec (formerly MWH)
George Boyd	GHD Hamilton	Brett North	WCC
Mike Darnell	Opus International Consultants	Sean O'Neill	Downer NZ
Alan Gardiner	HEB Construction	Dave Rendall	Fulton Hogan and AMA
Neil Greaves	CoPTTM trainers	Andrea Williamso	Fletcher Infrastructure

Meeting support

Tony Stella	Meeting support
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Unable to attend

Angie Crafer	FlowNZ
Darcy Prendergast	New Zealand Road Markers Federation
Ray Edwards	Higgins Contractors
Alan Stevens	Civil Contractors NZ
Doris Stroh	Calibre Group

Welcome

The meeting was opened by Fergus Tate who welcomed CGG members to Wellington.

He also introduced Rob Hannaby, Technical Services Manager, System Design and Delivery, NZTA who observed the meeting for the first hour.

NOTE: Refer to the 'Actions list' at the back of this document for a specific list of actions for each person.

Approval of minutes from last meeting

Minutes of the meeting of 7 June 2017 were adopted.

Matters arising

Report on progress with projects

Workers riding on the back of work vehicles

A	ctions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
•	Await reply from NZ Road Markers Federation	Fergus Tate	Not yet actioned To be completed by next CGG meeting
•	Circulate legal opinion re. workers riding on the back of work vehicles	Fergus Tate	Not yet actioned To be completed by next CGG meeting

Review traffic crashes at worksites

Ac	tions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
•	Add AT's crashes to the CoPTTM incident database	Neil Greaves	Not yet actioned To be completed by next CGG meeting
•	Need to promote the use of the CoPTTM incident form	Neil Greaves	Promoted through the CoPTTM training and the website
			Reporting is improving. NZTA is receiving approximately 20 incident reports per month
•	Revise the incident form to include additional information about the role of TTM in the crash	Neil Greaves	Actioned. Form amended

Ac	ctions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
•	Develop instructions on how to complete the CoPTTM incident form	Neil Greaves	Not yet actioned To be completed by next CGG meeting
•	Consider introducing an electronic CoPTTM incident form completed on either a smart phone or tablet	Fergus Tate	Zero Harm have offered to make the incident form electronic in the future
•	Draft a letter expressing CGG's support for the use of point to point speed cameras. Submit this by 16 June 2017 Note: On-line submission completed on behalf of CGG on 14 June 2017	Fergus Tate	Submission made Send another letter requesting change to legislation for point-to-point speed cameras

Undertake a Value for Money assessment of CoPTTM

Actions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
 Develop question(s) to be answered by the research and circulate to CGG for comment 	Fergus Tate	To be reported on later in the meeting
 Include the research project into site clutter in the list of potential projects for the 2017/2018 financial year. 	Fergus Tate	To be reported on later in the meeting

Develop model for CoPTTM training and competencies

A	ctions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
•	Issue the document to be used for industry consultation on the Training and Competency model to CGG once it has been developed	Tony Stella	Actioned To be reported on later in the meeting

Pedestrians / Cyclists / Parking

Ac	tions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
•	Add additional information to the working party recommendations on when it is appropriate to require cyclists to dismount and walk around a closure	Neil Greaves	Not yet actioned To be completed by next CGG meeting
•	Working party to discuss the use of Blue signs for cyclists as well as pedestrians	Neil Greaves	To be reported on later in the meeting
•	Keep the Cycling Action Network (CAN) informed of changes to TTM for cyclists at worksites	Stuart Fraser	Not yet actioned To be completed by next CGG meeting
•	Add additional information to the working party recommendations about when it is safe to require cyclists to merge with other traffic	Neil Greaves	Working party to meet to discuss the next steps early in the new year (2018)

Audit

Δ	ctions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
•	Complete a road show in August 2017 for the electronic audit system	Tony Stella	To be reported on later in the meeting

Report on progress with business as usual tasks

Guidelines for mowing activities

Ac	ctions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
•	Complete review of trials	Stuart Fraser	Trials are under way and have been successful
•	Make amendments and submit to CGG for comment	Stuart Fraser	A discussion paper will be developed and submitted to the next CGG meeting

Review of STMS-NP 2-day workshop material and assessment documents

Acti	ons agreed at CGG meeting 7 June 2017	Person responsible	Progress report
6	Complete amendments to the assessment documentation and post to the website	Neil Greaves	Assessment documentation has been amended and is now online

Register of equipment approved for use on NZ roading network

Actions agreed at CGG meeting 7 June 2017		Person responsible	Progress report
•	Add the Register of traffic signals to the Register of equipment approved for use on NZ roading network	Tony Stella	Not yet actioned. Will be completed early in the new year (2018)
Actions agreed		Person responsible	Timeframe
•	Portaboom and RoboSign signs: The legislation needs to be amended. Currently the legislation states that the sign must be hand held	Fergus Tate	To be completed by next CGG meeting
•	Work closely with the TCD Advisory Group to ensure any new legislation is 'enabling' rather than 'restricting'. Also consider reviewing legislation to identify any other roadblocks to improved practices	Fergus Tate	To be completed by next CGG meeting

Actions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
 Consider making it mandatory for CoPTTM trainers to attend at least one COE meeting a year 	Stuart Fraser	We are unable to make attendance at the COE mandatory until there is a COE in each region
		Review this once there is a COE in each region

Regional centres of excellence for trainers

Submission to TCD advisory group for new signs and changes to existing signs

Ac	ctions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
•	Submit the use of RRPM and non- reflectorised tape to TCD Advisory Group for marking of temporary lanes	Fergus Tate	Fergus Tate reported that the TCD Advisory Group have not approved the use of orange tape for marking of temporary lanes
•	Pedestrians, cyclists and parking working party to discuss the impact of having the CYCLE LANE CLOSED sign as well as the CYCLISTS MERGING signs – consider having just one of the signs	Neil Greaves	Submission made to TCD Advisory Group To be reported on later in the meeting

TMC workshops

Ac	tions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
•	Await recommendations from the Training and Competency working party before deciding the future of the TMC training	Stuart Fraser	To be reported on later in the meeting

Include consideration of a conceptual master TMP in NZTA contracts documentation

Actions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
Develop a TMP aide memoire for use with construction projects	Edit team	Work has begun on developing a conceptual master
		Stuart Fraser is now being asked to review the proposed temporary traffic management set outs for new projects
Actions agreed	Person responsible	Timeframe
NZTA is to investigate issues with the buildability of project plans and construction traffic management plans	Stuart Fraser	To be completed by next CGG meeting
Brett proposed these be called Logistic Plans to help remove them being confused with traffic management plans – NZTA is to investigate this		

Review traffic signal requirement

Actions agreed at CGG meeting 7 June 2017	Person responsible	Progress report
• Contract Opus Labs to extend testing of portable traffic signals to include 3 and 4-way operation if requested by the company submitting portable traffic signals for testing	Stuart Fraser	To be reported on later in the meeting

2LS Roads

Actions agreed	Person responsible	Timeframe
Review the 2LS roads at the next CGG meeting	Stuart Fraser	To be completed by next CGG meeting

Zero Harm – Safety at Road Works Advisory Group

Fergus Tate and Andrea Williamson reported back on the progress of the advisory group.

About the advisory group

Sponsor

• Tommy Parker as chair of Zero Harm Leadership Forum

Chair

Steve Abley

Members

- Andrea Williamson
- Oliver Fradley
- Damien Houlahan
- James Minton/Ryan Cooney
- Fergus Tate

Purpose of the advisory group

The Zero Harm Leadership Forum has identified that the current Code of Practice for Temporary Traffic Management (CoPTTM version 4) system could be amended to improve outcomes for road worker safety.

The purpose of the Industry safety at road works advisory group is to critically review CoPTTM with its independent focus and to make recommendations to the Zero Harm Leadership Forum including how potential changes might be implemented.

The advice provided by the group may inform changes to CoPTTM or subsequent advice to be provided to Austroads for the Safety at Road worksites (2016-19) project.

The advisory group represents a broad range of interests including operations, management and consultants.

The advisory group must liaise with the CoPTTM Governance Group (via Fergus Tate).

The overall objective of the group is to help create a safer working environment for road workers in NZ by identifying improvements to the way road worker safety is managed and how these improvements could be implemented through changes to CoPTTM.

Key Tasks

Identify the top issues currently facing construction workers, stakeholders and customers at sites operating temporary traffic management.

Identify the collection of information necessary to validate that the issues exist, and where possible, explain why.

Possible activities that could be undertaken to validate the identified issues are (not limited to):

- Contractors keeping a record of what crashes, incidents and near misses are happening at worksites including monitoring speed and driver behaviour around road works
- · Possibly creating trial worksites
- Undertaking consultation with Traffic Operations Centres to gather footage of crashes, incidents and near misses around road works sites nationwide
- · Accessing police and AA road user data

Use the information gathered to independently and critically review CoPTTM including preparing a gap analysis to determine what changes may be necessary, and how they might be implemented.

To liaise with the Austroads Safety at Road Worksites Project Manager regarding the 'Immediate Priority Guide Parts' and specifically Part 4) Static Worksites, Part 5) Mobile Works, and Part 6) Short Term Low Impact Works.

The advisory group should not duplicate work being undertaken by Austroads and rather understand the NZ context to better inform the Austroads Safety at Road Worksites project.

Make recommendations to the Zero Harm Leadership Forum.

Identify the top issues currently facing construction workers, stakeholders and customers at sites operating temporary traffic management

The advisory group conducted four facilitated focus groups:

- Auckland
- Wellington
- Christchurch
- Hamilton.

Representation at the focus groups provided a range of different road environments (urban, rural, motorways) and geographic locations, and levels of experience.

Each session lasted at least 2 hours and was facilitated by a behavioural expert. The sessions were split into three phases:

Issue Identification: An exploratory approach to identify the critical safety areas aided by key prompts and visual aids to ensure wide thinking about topics that included:

- Environment: For example, weather conditions, night work, working in high temperatures
- Site setups: Specific sites that are problematic, impractical setups, process around site setup, issues just outside the worksite
- Road user behaviours: Driver speed, driver navigation, lane changing, cyclist behaviour, pedestrian behaviour
- Organisational: Worker behaviours, internal communications, inter-agency communication, internal processes/policies, better data

Thematic areas: Questions to explore some expert-informed themes with areas known to be of importance (such as guidance, training and data needs)

Solutions session: Finish with a solutions session, to identify solutions and gain consensus on which solutions to pursue in terms of safety outcomes to New Zealand.

Initial recommendations from advisory group

Fergus and Andrea discussed some of the possible recommendations but were unable to go into detail as the final report has yet to be released.

Going Forward

The advisory group will report back to the Zero Harm Leadership Forum and make its report and recommendations available to interested parties.

Any required trials will then be completed as part of the implementation of the recommendations from the advisory group.

The full report will be provided to CGG once it has been released.

A	ctions agreed	Person responsible	Timeframe
•	Present a proposal for CGG to conduct an annual focus group with site STMS (along the similar lines as ones completed by the advisory group)	Stuart Fraser	To be completed by next CGG meeting
•	Add item to agenda for next CGG meeting – Report from Zero Harm Safety at Road Works Advisory Group	Stuart Fraser	To be completed by next CGG meeting

Proposed Training and Competency Model

Stuart Fraser and Tom Kiddle reported back on the proposed Training and Competency Model as follows.

Stuart explained that in the lead up to this project there was general concern from the TTM industry that:

- There was no apparent career path for workers within the TTM industry
- Some of the CoPTTM Trainers did not have enough practical experience
- The CoPTTM training was considered theoretical and not practically based
- There was a lack of experienced TTM staff at worksites
- Some labour hire companies are training TCs who have no practical experience of working on the road

NZTA also received a Coroners Court recommendation that a test of competence be included as part of training for TTM personnel.

CGG set as a priority project the development of a new way of delivering the TTM training incorporating a test on competence (the Training and Competency model). A working party of 11 industry representatives (including 6 CGG members) was established to develop the Training and Competency model.

Four industry consultation workshops were conducted in Dunedin, Christchurch, Palmerston and Auckland. 339 submissions were received for amendments/improvements to the Training and Competency model. The general consensus from those attending the workshops was that the model outlined the right way to proceed.

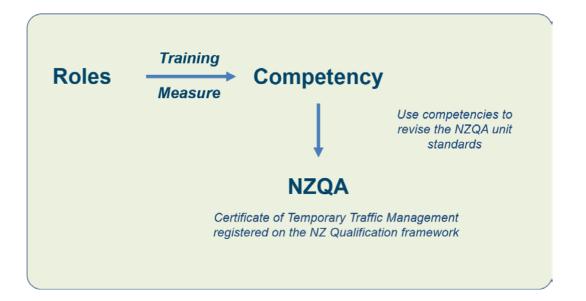
About the model

Tom Kiddle explained that the Training and Competency model consists of 3 parts:

Key roles	A list of key roles requiring some form of CoPTTM knowledge
Learning blocks	A map showing the CoPTTM learning blocks with a preferred order of learning and any pre-requisites identified
Profiles	 A profile has been developed for each learning block identifying: Knowledge to be covered during the learning Skills to be assessed after the training has been completed.

The working party decided that the best way to develop the model was to work through the following process:

- Identify the key TTM roles requiring CoPTTM competency (of some type)
- Identify the elements needed to be competent in the roles (primarily knowledge and practical skills)
- · Identify the training needs, and measures for testing of sufficient knowledge/skill
- Use these competencies to revise the NZQA unit standards
- Work with NZQA to develop a Certificate of Temporary Traffic Management registered on the NZ Qualification framework.



Roles requiring some form of CoPTTM knowledge

The key roles requiring some form of CoPTTM knowledge were identified as:

Role/Group	What do they do – broad description
General Worker (site personnel)	Anyone working on or who is likely to visit a worksite
TTM Worker	A worker who assists with TTM under direction (eg puts signs and cones out, assists with stop/go, driving activity)
Inspector	A person carrying out inspection activities Note: This may include surveyors, staff working on their own, and people doing simple roadside activities provided their work fits within the range of inspection activities
тс	 The qualified person on level LV and level 1 roads who: Assists with deployment of the operation Maintains the site within existing TTM phase while the STMS is away from worksite. Note: The TC will only be able to assist an STMS installing, modifying or removing TTM at a worksite Includes additional specialist activities for example, assisting an STMS with event management
STMS (Onsite supervisor)	Set up, change and remove a worksite to a predetermined plan Covers additional specialist activities if required eg Event management, traffic signals, sealing, road marking and barriers
TTM Mentor	Mentors/trains staff on the practical aspects of their role. May be an in-house person
CoPTTM Trainer	Formally trains people in CoPTTM requirements and the theoretical application of those requirements
TTM Verifier	Verifies work completed to standard (could be onsite or in the office) Up to STMS level 1 (includes TTM Worker, TC & L1 STMS) a verifier determines whether the candidate is competent. At level 2 and level 3, the verifier furnishes a statement of competence to a CoPTTM Assessor The Verifier must have been assessed to the level they are verifying May include a continued requirement for ROPEs
CoPTTM Assessor	Selected by NZTA to assess competence in a specific specialist activity (eg L2/3 practical assessment, TMP design assessment, barriers assessment)
TMP Designer	Develop and submit TMPs for approval. Brief onsite supervisor on TMP. Also includes specialist activities as required. For example, Event management

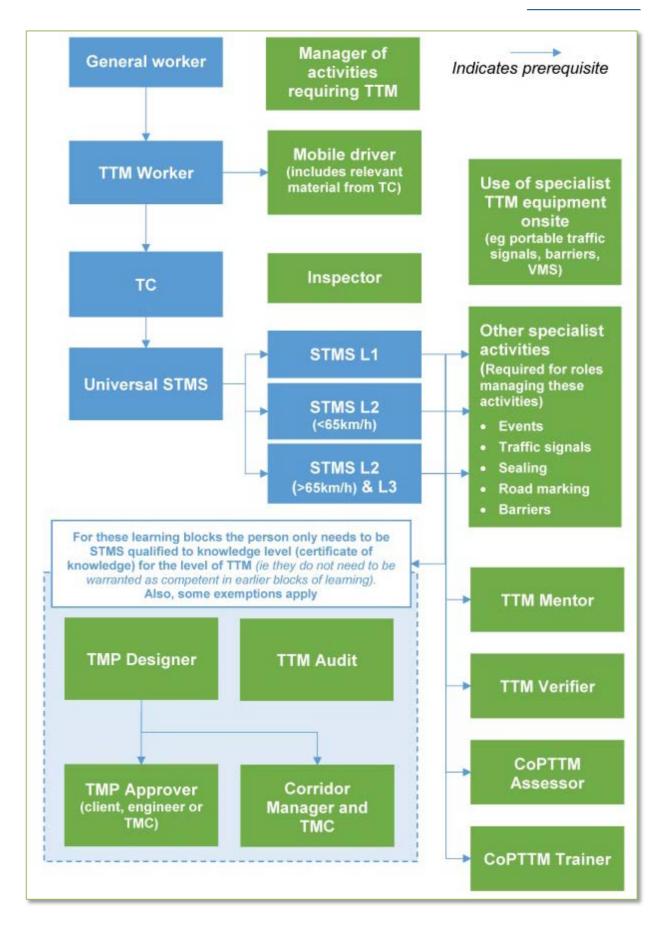
Role/Group	What do they do – broad description
Corridor Manager (includes TMC)	Manage and permit road space impact (TMP and potentially WAP approvals)
Approving Engineer	To be considered as an option where Corridor manager and client mutually agree that this could add value. Includes first stage approval of a TMP
Traffic Operations Manager	The person who is managing multiple STMSs or the TTM activities of a company
Auditor	Assess worksites to support continuous improvement and identify and report on poor performance
Manager of activities requiring TTM	People who are managing activities requiring TTM resources and do not require more detailed TTM qualifications – general high-level overview (these people would generally employ others to undertake TTM)

Map of CoPTTM learning blocks

The map of learning blocks (see over page) shows the training required to ensure that TTM personnel are competent in their roles.

Set out below are some key points about the map of learning blocks:

- The Blue blocks show the main learning blocks for TTM crews
- The arrows show prerequisite training that must be completed
- On successful completion of the training for each learning block the participant will receive a certificate of achievement
- A **warrant** is issued once the person has been assessed as competent in all of the practical skills associated to the learning block.
- The Universal STMS learning block includes all of the common knowledge/skills for STMS at all levels (eg what a TMP is, how to read a TMP, how to do a safety briefing)
- It is a prerequisite learning block for **all** of the learning blocks that follow it
- Participants will attend the STMS workshop relevant to the level of road they are working on (they will need to attend multiple workshops if working on multiple levels of road)
- The TTM Mentor, TTM Verifier and CoPTTM Trainer must be STMS warranted for the level of road they are mentoring, verifying or training on
- The TMP Designer, TTM Auditor, TMP Approver and Corridor Manager / TMC only have to be STMS qualified to knowledge level (certificate of knowledge) for the level of TTM (ie they do not need to be warranted as competent in earlier blocks of learning).



Matrix – Warrant of overall competence (W) or Certificate of knowledge (Cert)

Set out on the following pages is a matrix showing what qualifications each role requires.

Some roles only require an understanding of the requirements (certificate of achievement) for any prerequisite learning blocks. Other roles require the person to be have been assessed as competent (warrant) for prerequisite learning blocks.

The matrix is a quick way to establish what qualifications each role requires.

For example, the **TTM Worker** requires warrants (assessed as competent) in the General Worker and TTM Worker learning blocks.

The STMS L1 requires warrants in the following learning blocks:

- General Worker
- TTM Worker
- TC
- STMS L1.

They also need a **certificate of achievement** for the STMS Universal learning block.

A **TMP Designer** developing TMPs on level 1 roads requires a **certificate of achievement** in the following learning blocks:

- TTM Worker
- TC
- STMS Universal
- STMS L1.

They will also need a warrant in the TMP Designer learning block.

										ROLE	S					
WORKSHOPS	General Worker	TTM Worker	Inspector	TC	STMS LV & L1	STMS L2 <65km/h	STMS L2 <65km/h & L3	TTM Mentor	CoPTTM Trainer	TTM Verifier	CoPTTM Assessor	TMP Designer	Corridor Manager (includes TMC)	Approving Engineer (if approving TMPs)	Auditor	Manager of activities requiring TTM
General worker	w	w		w	w	w	w	w	w	w	w				Cert	
Manager of activities requiring TTM																Cert
TTM Worker		w		w	w	w	w	w	w	w	w	Cert	Cert	Cert	Cert	
Mobile driver (if required)	W if required to be a driver in a mobile operation (or be in charge of a mobile operation)															
Use of specialist TTM equipment						,	W if requ	uired to p	orogram	and oper	rate specie	alist TTM e	quipment			
тс				w	w	w	w	w	w	w	w	Cert	Cert	Cert	Cert	
Inspector			w													
STMS Universal					Cert	Cert	Cert	Cert	Cert	Cert	Cert	Cert	Cert	Cert	Cert	
STMS L1					w											
STMS L2 (<65km/h)						w		W for level of	W f or level of	W for level of	W for level of	Cert for level of	Cert for level of	Cert for level of	Cert for level of	
STMS L2 (>65km/h) & L3							w	ТТМ	TTM	TTM	TTM	TTM	TTM	TTM	TTM	

Matrix showing requirement for Warrant (W) or Certificate of knowledge (Cert)

	General Worker	TTM Worker	Inspector	TC	STMS LV & L1	STMS L2 <65km/h	STMS L2 <65km/h & L3	TTM Mentor	CoPTTM Trainer	TTM Verifier	CoPTTM Assessor	TMP Designer	Corridor Manager (includes TMC)	Approving Engineer (if approving TMPs)	Auditor	Manager of activities requiring TTM
TTM Mentor								W								
TTM Verifier										W						
Other specialist activities						W	if require	ed to be	in charge	e of, or con	duct trainii	ng on special	ist activities		-	
CoPTTM Assessor											W					
CoPTTM Trainer									w							
TMP Designer												w	W (if approving TMPs)	w		
TTM Audit															w	
TMP Approver													W (if approving TMPs)	w		
Corridor Manager and TMC													w			

Profile for each learning block

A detailed learning block outline has been prepared for each learning block. The outline identifies:

- Who it is for
- What learning blocks are prerequisites
- The competency objectives for the learning block (what the person will be able to do at end of training/briefing and assessment)
- What's covered during formal learning
- What's covered on the job
- Practical skills to be assessed and the assessment approach
- Whether a refresher is required
- Approximate learning time (not including time after the training/briefing session to practice skills and complete assessment)

Extract from Training and Competency model of 1st page of profile for TTM Worker

3. Profile – TT	M Worker			
Block of learning:	TTM worker	Who it is for:	A worker who assists with puts signs and cones out	h TTM under direction (eg t. assists with stop/go)
Prerequisite:	General worker			
Competency objecti ve	Knowledge of TTM Worker Skills in performing the TTM			
Knowledge of basic	CoPTTM elements covered	Assessment method	Pass criteria	Misc.
Health and safety: • Identify / recognise	correct PPE	 Visual check – STMS TTM Verifier Hi Vis worn correctly 	Not required	Briefing delivered by: TTM Mentor
May complete the General worker training as the first part of the TTM Worker training TTM Knowledge • No go zones (including safety zones) • Manual handling/lifting of TTM equipment • Using a Stop/Go paddle • Using radio communications • Set out set out TTM equipment • The role of a 'spoter' • Interaction with people (good/bad practises and dealing with conflict) • About TMP (TMP for each site, includes text and diagram. Worksite set out as per TMP) Worksite rules: • Site Traffic movements – V.M.P (vehicle		 Written questionnaire Reporting Responsibilities Safety zones Real-life situational experiences and scenarios TTM Verifier determines if knowledge requirement has been met 	100% Open book Resits allowed	Note about learning Much of the leaning will be informal while on the road. Also, a reader/writer needs to be supplied if required The order of completing the knowledge and
				showledge and skill elements can be changed to organisation/learn ing of the TTM Workor, but all items in the

Implementation strategy dealing with current warrants

Priority for development

NZTA acknowledges that the development of the learning packages (either training session, briefing, checklists of items to cover or online package) and the associated assessment packages for each of the learning blocks will need to occur over multiple years.

NZTA recommends that the following priority for development be adopted:

Priority 1	TTM Mentor
	TTM Verifier
	General Worker
	TTM Worker
	• TC
	Universal STMS
	STMS L1
	STMS L2 under 65km/h
	STMS L2 over 65km/h and L3
Priority 2	TMP Designer
	Mobile driver
	Inspector
	 Use of specialist TTM equipment on-site
	Other specialist activities
Priority 3	Manager of activities requiring TTM
	TTM Audit
	TMP Approver
	Corridor Manager & TMC
	CoPTTM Assessor
	CoPTTM Trainer

Existing warrants

It is proposed that the following implementation strategy be applied to those holding existing warrants:

- The existing warrant continues to apply until the expiry date for that warrant
- The candidate completes the competence assessment(s) for the current warrant with verification from a TTM Verifier/CoPTTM Assessor as required
- Candidate attends the refresher workshop for the warrant, but trainer does not process the renewal until all the required competence assessments have been completed.

To allow time for this process to be organised and TTM Verifiers to be warranted, it is suggested that an initial period of 6 months, following the implementation of the model, be allowed before the competence assessment requirement kicks in.

This means that anyone refreshing their warrant during that 6-month phase in period will not be required to complete the competence assessment for the warrant. They will however have to do the competence assessment at or before the next renewal of their warrant.

Note: Current warrants on database 48,000 (29K TC - 19K STMS)

People in key roles requiring a warrant

For some key roles (eg TMC or TMP Approver) it may be necessary to consider an acting role during the transition period, with competency verification / proof / training etc being completed within a certain timeframe.

There needs to be more discussion on how this strategy is to be applied.

Implications of implementing the model

If the Training and Competency model is implemented, there are some implications that the TTM industry needs to be aware of.

Possible increased \$\$\$ due to competency

• The competence assessment has the potential to add costs, but for many companies it will be business as usual as they are already working with a competency system.

Longer time to get qualified for some roles

• For some roles, it may take longer to get qualified. This is because the warrant is only issued once the person is competent in all of the skills required for completion of the learning block.

Companies will need to align to a national system

• Companies who already have a competency system may need to make changes to their system to align with the national approach.

Benefits of adopting the Training and Competency Model

Whilst there are some implications that need to be worked through, there are some major benefits in adopting the Training and Competency model.

Competent staff – Lower risk

• There will be competent staff at worksites which will lower risks and make worksites safer.

Confidence of using a national system

 Companies will have the comfort of knowing that they are using an industry approved national system.

Career path

• There will be a career path that staff can work towards.

Example of the competency assessment

Tony Stella presented an example of how the competency assessment could look.

He emphasised that the example presented was draft and had not been reviewed by the working party.

CGG comments and decisions on Training and Competency model

- It was unanimously agreed to submit the training and competency model to NZTA with a recommendation that the model be adopted (subject to the following CGG decisions)
- Concerns were raised with the link to the NZ Qualifications Framework as this may require a lot of time and effort to set up initially and operate on an ongoing basis. It was agreed to proceed with the link to NZQA and decide whether it was too time consuming once the system is operating
- Before the model is submitted to NZTA for approval, the implementation strategy is to be revised to include:
 - More detail about how existing warrant holders are to be handled
 - A comparative costing of the current approach versus the new approach for selected warranted positions
- Pricing to be based on the following:
 - All existing STMS roles will automatically receive the certificate of knowledge
 - Recognise the existing warrants but on renewal a competency check is required

Traffic Controller (TC)

- It was decided to restrict the TC role to a maintainer of the worksite (this means that the TC will not be able to set up or remove TTM at worksites)
- Concern was expressed about the term delegated TC. It was felt that this could be
 misleading given the new limitations on the TC role. It was suggested that it be made
 very clear what a TC will be able to do in the future. The following wording was
 suggested...When instructed by the STMS, the TC can do the following: (list of specific
 TC roles).....

Level 2/3 roads

- There was a discussion point raised by the working party about allowing the TC (or equivalent role) to be a minder on level 2 and level 3 roads in the absence of the STMS (eg during a drive through inspection of the worksite). CGG decided that the TC role would be restricted to Level LV and Level 1
- It was decided that all TTM at worksites on level 2 and level 3 (including shoulders) must be under the control of an STMS warranted for that level of road – level 2 or level 3 (ie in current terms, a L2/3 STMS must be in control of TTM on a shoulder and not an STMS-NP as is currently allowed)
- This ruling also applies to capital projects where each worksite must be controlled by an STMS warranted for the level of the road. Exceptions to this requirement may be dealt with by an EED or risk assessment which is signed off by the RCA

TMP (installation) Designer

• It was decided to remove the word 'Installation' from the title of this learning block

TMP (installation) Designer, TMP Approver and Auditor

- It was decided that a barrier qualification would not be required as a prerequisite to these learning blocks
- Ensure that these learning blocks include information about when barriers are required

TMP (installation) Designer

- It was decided that only three TMPs need to be submitted as part of the assessment for this learning block. The TMPs need to be reasonably complex
- The initial version of the TMP and also the final approved version of the TMP needs to be submitted for assessment.
- Each TMP submitted for assessment needs to include:
 - Feedback from the warranted STMS who installed the TTM at the worksite
 - On-site records
 - A video drive through of the installed TTM installed at the worksite
 - Any audits/reviews completed on the worksite.

Ac	tions agreed	Person responsible	Timeframe
•	Amend the Training and Competency model as directed by CGG	Tony Stella	January 2018
•	Post Training and Competency model to website under the documents under discussion section	Tony Stella	January 2018
•	Develop comparative costing and circulate to Training and Competency working party for comment and review	Tony Stella	January 2018
•	Circulate final version of Training and Competency model to working party and CGG for review and comment - amend as required	Tony Stella	February 2018
•	Submit to NZTA on CGG's behalf recommending that NZTA adopt the training and Competency model	Tony Stella	February 2018
•	NZTA develop an implementation plan with key milestones (include promotion of the model to the industry)	Stuart/Neil/Tony	February 2018

Update on progress with revised database

Progress report

The old database is no longer supported and relies on duplicated data entry.

Often only 1 person can enter data into the database at a time.

The new database is an online system which will be supported and will be faster to use.

The database will allow people to log in and view selected information (eg an individual's qualifications - warrants and certificates of achievement for non-warranted qualifications).

Warrant cards will also include qualifications held by the person.

Audit rollout

Progress report

Audit rollout strategy

The strategy has been to roll out the revised audit procedure to RCAs first and then allow them time to complete their preparation. RCAs will roll out the revised audit procedures on their network when they are ready.

NZTA will support the rollout with a presentation at TTM Conference in May 2018.

RCA workshops were held at the following locations:

- Christchurch
- Dunedin
- Palmerston North
- Hamilton.

Effective dates

- A Technical Note for the revised audit procedure went online towards the end of September 2017.
- The revised SCR audit/review form has been available for use since 18 September 2017.
- All audits/reviews using the full audit SCR completed **after 1 January 2019** must use the revised SCR form.

Options for using the SCR form

- Paper
- Smart PDF
- Excel (requires customisation)
- Online tool (requires some setup)

Section I-21: Audit resources

The following audit resources have been added to section I-21:

- RCA strategies to improve TTM at worksites
- Technical note: Revised audit
- TTM SCR form Paper version
- TTM SCR form Smart PDF version
- TTM SCR form Excel version
- TTM SCR form Online tool
- TTM SCR guidelines
- TTM Advisory Note Template
- Notice of non-conformance
- PDF of NZTA presentation for rollout
- User Guide for Excel SCR
- RCA presentation for rollout
- SCR form Master Database.

Cyclists, Pedestrians and Parking Working Party

Progress report

Submissions made to the TCD advisory group on the following signs:

- NO ENTRY sign
- Single / double RD6L/R
- Smaller cyclist/pedestrian signs
- Smaller LAS without the TMA (for use on 2LS and L1 roads)
- CYCLE LANE CLOSED / CYCLISTS MERGING
- STOCK EMERGENCY
- MOBILITY SCOOTERS
- FOOTPATH CLOSED PLEASE
 WAIT TO BE ESCORTED

TCD advisory group decisions as follows:

Mobility device symbol sign

Any diversion of pedestrians should be designed to accommodate mobility devices when a TMP is approved.

If pedestrians and mobility devices have to be separated, then the TB1 general temporary warning sign could be used with a text message (eg "Mobility Devices" or "Mobility Vehicles").

Pedestrian supplementary sign

A PEDESTRIAN supplementary sign for use with the T2A/B (Hazard warning) sign was agreed.

No entry sign

Although the RD2 No Entry sign is a regulatory sign, it is legitimate to use it for temporary traffic management.

Keep left disc

The request to use the 400mm RD6L single disc for speed limits less than 80 km/h, instead of the 600mm disc, was not agreed to.

The preference of the Steering Group was to use the RD6L twin 300mm discs.

The use of a ballasted cone to mount the discs was not endorsed.

It is a matter for the CoPTTM Governance Group to consider, taking into account the general safety requirements for traffic control devices in the TCD Rule and the RSMA Compliance Standard for Traffic Signs.

Pedestrian signs

The request for use of regulatory pedestrian signs and new pedestrian and cycle temporary management signs was referred for further consideration with the RCA Forum Active Modes working Groups.

Ac	tions agreed	Person responsible	Timeframe
•	Request TCD Advisory Group to reconsider the ballasted cone to support RD6L twin 300 mm discs	Neil Greaves	January 2018
•	Contact the RCA Forum Active Modes working Groups to arrange a presentation about the submissions that have been referred to them	Neil Greaves	January 2018

Training update

Progress report

Evaluations

Latest review of participant evaluations shows:

- Understanding of content of workshops is high
- Trainers are knowledgeable and well organised.

One issue coming through – Venue. This is being addressed by an addition to administration pack with minimum venue requirements.

Barrier workshops

3 types of barrier workshop:

- Installation and Maintenance Inspections (IMI)
- Temporary Barrier
- Design Barrier

Details of the barriers workshops to be delivered in 2018 are set out below:

Month	Dates	Туре	Location
February	20, 21 and 22	IMI	Christchurch
March	13, 14 and 15	Design Barrier	Auckland
Мау	7 and 8	Temporary Barrier	Hamilton
July	24, 25 and 26	IMI	Auckland
August	28, 29 and 30	IMI	Lower Hutt
September	25, 26 and 27	Design Barrier	Auckland

Moderation of trainers

Moderation of trainers is an ongoing task.

6 moderations have been completed so far since June 2017. A further 6 moderations have been requested by CoPTTM Trainers (these will be carried out early 2018).

NZTA has appointed and trained one new level 1 moderator in Auckland.

Regional COE for trainers

The Napier COE is now operating. We now have 4 COEs operating:

- Auckland
- Hamilton
- Napier
- Wellington

Some COEs are also including TMCs and key contractors in their meetings.

The COE approach is to be reviewed in 2018.

TTT & Trainer Refresher workshops in Taupo

A train the trainer (TTT) workshop was held in Taupo from 21 to 23 November 2017.

There were 21 participants and 6 qualified as TC trainers with the rest qualifying as STMS trainers.

A Trainer Refresher workshop was held in Taupo from 27 to 28 November 2017.

As there were 26 participants we ran 2 separate workshops. 5 requalified as TC trainers with the rest requalifying as STMS trainers.

Overall observation from TTT and Trainer refresher workshops

CoPTTM knowledge has improved in the last 3 years with most participants getting 90%+ in the tests. The practical TTM knowledge has also improved considerably.

2018 Training calendar online

The NZTA training calendar is now online. Key dates are as follows:

January

- ATMP Auckland
- KCTL TTT Auckland

March/April

- TTT ChCh
- Trainer Refresher ChCh

Мау

TTM Conference

June

• SSEW

November

- TTT Taupo
- Trainer Refresher Taupo

Conference update

Progress report

The third TTM conference will be held on 9 and 10 May 2018 at the Distinction Hotel, Hamilton

The theme for the conference is "COMPETENCY and CUSTOMER SATISFACTION in Temporary Traffic Management"

Over 220 participants attended the conference in 2015. It is expected that over 250 participants will attend in 2018

Registrations for the conference can be made through the **Conference Brokers** website

Presentations will be accepted on the following topics:

- Competency in TTM
- Qualifications in TTM
- Reports (eg TTM Harmonisation with Australia)
- Safety audits / electronic safety audits
- New technology / standards for new technology
- TTM on specific sites eg the alternate route (Lewis Pass)
- TTM on major work sites
- Work site experiences / dos & don'ts / what works what doesn't (eg Haywards Intersections – Hy 58 / SH 2 Transmission Gully / Kapiti Expressway / McKays – Peka Peka / Waterview Tunnel / Christchurch Southern Route)
- TTM on routes of national importance
- Use of electronic signage in TTM
- Planning and design for TTM projects

If you want to present at the conference, complete an Abstract (maximum 100 words) before **1 February 2018**

Abstracts available from **Conference Brokers** website

Actions agreed	Person responsible	Timeframe
Add sessions from NZTA about customer feedback	Stuart Fraser	January 2018
 Invite Dan Sullivan to present a session about AustRoads harmonisation project and their review of CoPTTM 	Stuart Fraser	January 2018
Publicise TTM conference in Australia	Stuart Fraser	January 2018

Review of project plans

Progress report

The following projects were rated priority projects by CGG at the last CGG meeting on 7 June 2017.

Priority projects	CGG consolidated score	Team leader & others
Use of ITS for TTM	9	Dave Rendall
Clean up of CoPTTM inconsistencies	9	Stuart Fraser
Managing delays on the network (this may break into several sub projects)	8	Simon Harty Sean O'Neill, Dave Rendall
P37 VMS standard (possibly including P35/6)	7	Dave Rendall Simon Harty
Review traffic signal requirement to include 3-way and 4-way portable traffic signals	6	Stuart Fraser Alan Gardiner
Worksite clutter/excess TTM	5	Fergus Tate
Effectiveness of electronic speed signs	5	Ray Edwards Fergus Tate

Managing delays on the network

Simon Harty discussed the key points of the action plans which were approved for implementation.

Actions agreed	Person responsible	Timeframe
 Publish action plans to the CoPTTM pages of the NZTA website 	Tony Stella	January 2018

Clean up of CoPTTM inconsistencies

Stuart Fraser discussed the key points of the action plan which was approved for implementation.

Actions agreed	Person responsible	Timeframe	
Publish action plan to the CoPTTM pages of the NZTA website	Tony Stella	January 2018	
Investigate a non-Gmail address for the CoPTTM Updates email	Neil Greaves	January 2018	

3-way and 4-way portable traffic signals

Stuart Fraser discussed the key points of the action plan which was approved for implementation.

Actions agreed	Person responsible	Timeframe
 Publish action plan to the CoPTTM pages of the NZTA website 	Tony Stella	January 2018

Worksite clutter/excess TTM

Fergus Tate discussed the key points of the action plan which was approved for implementation.

Actions agreed	Person responsible	Timeframe
 Publish action plan to the CoPTTM pages of the NZTA website 	Tony Stella	January 2018

Update on CoPTTM Strategic Direction

Simon Harty reported on the initial work towards developing a strategic direction for CoPTTM and the Governance group

Α	ctions agreed	Person responsible	Timeframe
•	Develop discussion document	Simon Harty	March 2018
•	Discuss strategic direction at next CGG meeting	Simon Harty	June 2018

Development of the remainder of the action plans		
Some action plans for priority projects still need to be developed		
Actions agreed Person responsible Timeframe		
.		

General business items

Shared road reserve		
Stuart Fraser raised the issue of shared road reserves (eg <65km/h L2 state highway with work by Local Authority on berm or footpath). He wanted some discussion on options to manage this dual responsibility		
Actions agreed Person responsible Timeframe		Timeframe
Add a risk assessment to CoPTTM	Stuart Fraser	August 2018
 Add shared road reserves and the CAR/WAP process to the Training and Competency model in the topic lists for the TMC and TMP Approver learning blocks 	Tony Stella	January 2018

Standard for pedestrian ramps

Brett North raised the issue of the lack of a CoPTTM standard for temporary accessibility arrangements (eg ramps).

He recommended that a specification be added to CoPTTM for pedestrian ramps. CGG agreed with the recommendation

Brett is to run a trial of a specification for a pedestrian ramp and report back to CGG at the next meeting.

Ac	ctions agreed	Person responsible	Timeframe
•	WCC develop and trial a specification for a pedestrian ramp and report back to CGG at the next meeting	Brett North	August 2018

AustRoads harmonisation

Fergus Tate reported back on progress with the AustRoads Harmonisation project. He said that the next iteration of their documents will be issued for review in January or February 2018. The documents to be reviewed are:

- Static operations
- Mobile operations
- Low impact operations

It was agreed that Fergus would allocate the documents to selected people for review.

A	ctions	agreed	Person responsible	Timeframe
•		ate the AustRoads documents for w to the following people:	Fergus Tate	February 2018
	0	Simon Harty - Static operations		
	0	Dave Rendall – Mobile operations		
	0	George Boyd – Low impact operations		
	0	Tom Kiddle/Bruce Claypole - Static operations/ Mobile operations/ Low impact operations		

CoPTTM requirements for low risk situations

Stuart Fraser advised that NZTA have been asked to review CoPTTM to consider reducing requirements for inspection like activities in low risk situations:

- Reduced paperwork (no TMP)
- Reduced training requirements
- Reduce qualification (using non-qualified personnel)

Simon Harty advised that CTOC have been working on a similar issue

A	ctions agreed	Person responsible	Timeframe
•	Supply CTOC documentation dealing with low risk situations	Simon Harty	January 2018
•	Develop guidelines for these low risk situations to go into section I (include a sample TMP)	Stuart Fraser	March 2018

Concern about misuse of TSLs – delegations to be reviewed

Stuart Fraser explained that during recent transformation, NZTA set TSL delegations at senior management level.

An application was made to return TSL delegations to TMCs

Fergus Gammie has expressed concern. His issues are:

- Appropriate TSLs approved
- Consistency throughout the country
- Monitored appropriately

A	ctions agreed	Person responsible	Timeframe
•	CGG to write to Fergus Gammie pointing out that restricting the delegations for approval of TSLs to senior managers rather than TMCs is not addressing the issue.	Fergus Tate	January 2018
•	CGG to promote correct use of TSLs to the industry	CGG members	Ongoing

Heavy Haulage

Mike Darnell raised issues with heavy haulage operations using Pilot vehicles. He explained that there have been a number of fatalities involving pilot vehicles and felt that the risks involved in these operations warranted a closer focus by CGG.

It was agreed that the loading and unloading of a house for transport often required a TMP and TTM greater than the pilot vehicle(s)

Actions agreed	Person responsible	Timeframe
 NZTA to meet with the Heavy Haulage association to discuss the issues and concerns 	Stuart Fraser	March 2018

Approval of new TTM equipment

CGG asked that the approval process for new TTM equipment be added to the website under section I -19 Register of new TTM equipment.

A	ctions agreed	Person responsible	Timeframe
•	Extract the process from the register and add as a separate item under section I-19	Tony Stella	January 2018

Issue of minutes of meeting and date for Next CGG meeting

Draft minutes of the meeting will be sent out by 21 December 2017.

The next meeting of CGG is suggested for 11 May 2018 (day after the TTM Conference).

A meeting invite will be issued shortly for this date.

Actions list

Actions for CGG members

Act 201	tions agreed at CGG meeting 13 December	Person responsible	Timeframe
	CGG to promote correct use of TSLs to the industry	CGG members	Ongoing

Actions for Brett North

Actions agreed at CGG meeting 13 December 2017	Person responsible	Timeframe
• WCC develop and trial a specification for a pedestrian ramp and report back to CGG at the next meeting	Brett North	August 2018

Actions for Simon Harty

Ac 20	tions agreed at CGG meeting 13 December 17	Person responsible	Timeframe
•	Supply CTOC documentation dealing with low risk situations	Simon Harty	January 2018
•	Develop discussion document for the strategic direction	Simon Harty	March 2018
•	Discuss strategic direction at next CGG meeting	Simon Harty	June 2018

Actions for Fergus Tate

Ac 20	tions agreed at CGG meeting 13 December 17	Person responsible	Timeframe
•	CGG to write to Fergus Gammie pointing out that restricting the delegations for approval of TSLs to senior managers rather than TMCs is not addressing the issue.	Fergus Tate	January 2018
•	Allocate the AustRoads documents for review to the following people:	Fergus Tate	February 2018
	 Simon Harty - Static operations 		
	 Dave Rendall – Mobile operations 		
	 George Boyd – Low impact operations 		
	 Tom Kiddle/Bruce Claypole - Static operations/ Mobile operations/ Low impact operations 		
•	Await reply from NZ Road Markers Federation re Workers riding on the back of work vehicles	Fergus Tate	To be completed by next CGG meeting
•	Circulate legal opinion re. workers riding on the back of work vehicles	Fergus Tate	To be completed by next CGG meeting
•	Consider introducing an electronic CoPTTM incident form completed on either a smart phone or tablet	Fergus Tate	Zero Harm have offered to make the incident form electronic in the future
•	Draft a letter expressing CGG's support for the use of point to point speed cameras. Submit this by 16 June 2017	Fergus Tate	Send another letter requesting change to

Ac 20	tions agreed at CGG meeting 13 December 17	Person responsible	Timeframe
	Note: On-line submission completed on behalf of CGG on 14 June 2017		legislation for point-to-point speed cameras
•	Develop question(s) to be answered by the <i>Undertake a Value for Money assessment of</i> <i>CoPTTM</i> research and circulate to CGG for comment	Fergus Tate	To be completed by next CGG meeting
•	Include the research project into site clutter in the list of potential projects for the 2017/2018 financial year.	Fergus Tate	To be completed by next CGG meeting
•	Portaboom and RoboSign signs: The legislation needs to be amended. Currently the legislation states that the sign must be hand held	Fergus Tate	To be completed by next CGG meeting
•	Work closely with the TCD Advisory Group to ensure any new legislation is 'enabling' rather than 'restricting'. Also consider reviewing legislation to identify any other roadblocks to improved practices	Fergus Tate	To be completed by next CGG meeting

Actions for Stuart Fraser

Ac 20	tions agreed at CGG meeting 13 December 17	Person responsible	Timeframe
•	Add session to Conference topics from NZTA about customer feedback	Stuart Fraser	January 2018
•	Invite Dan Sullivan to present a session about AustRoads harmonisation project and their review of CoPTTM	Stuart Fraser	January 2018
•	Publicise TTM conference in Australia	Stuart Fraser	January 2018
•	NZTA develop an implementation plan with key milestones (include promotion of the model to the industry)	Stuart/Neil/Tony	February 2018

Ac 20	tions agreed at CGG meeting 13 December 17	Person responsible	Timeframe
•	Develop guidelines for low risk situations to go into section I (include a sample TMP)	Stuart Fraser	March 2018
•	NZTA to meet with the Heavy Haulage association to discuss the issues and concerns	Stuart Fraser	March 2018
•	Keep the Cycling Action Network (CAN) informed of changes to TTM for cyclists at worksites	Stuart Fraser	To be completed by next CGG meeting
•	A discussion paper for mowing and gardening activities will be developed and submitted to the next CGG meeting	Stuart Fraser	To be completed by next CGG meeting
•	Consider making it mandatory for CoPTTM trainers to attend at least one COE meeting a year	Stuart Fraser	We are unable to make attendance at the COE mandatory until there is a COE in each region
			Review this once there is a COE in each region
•	NZTA is to investigate issues with the buildability of project plans and construction traffic management plans	Stuart Fraser	To be completed by next CGG meeting
•	Brett proposed these be called Logistic Plans to help remove them being confused with traffic management plans – NZTA is to investigate this		
•	Review the 2LS roads at the next CGG meeting	Stuart Fraser	To be completed by next CGG meeting
•	Present a proposal for CGG to conduct an annual focus group with site STMS (along the similar lines as ones completed by the advisory group)	Stuart Fraser	To be completed by next CGG meeting
•	Add item to agenda for next CGG meeting – Report from Zero Harm Safety at Road Works Advisory Group	Stuart Fraser	To be completed by next CGG meeting
•	Develop a TMP aide memoire for use with construction projects	Stuart Fraser	To be completed by next CGG

Ac 20 ⁻	tions agreed at CGG meeting 13 December 17	Person responsible	Timeframe
•	Work has begun on developing a conceptual master		meeting
•	Stuart Fraser is now being asked to review the proposed temporary traffic management set outs for new projects		
•	Add a risk assessment to CoPTTM	Stuart Fraser	August 2018

Actions for Neil Greaves

Ac 20	tions agreed at CGG meeting 13 December 17	Person responsible	Timeframe
•	Request TCD Advisory Group to reconsider the ballasted cone to support RD6L twin 300 mm discs	Neil Greaves	January 2018
•	Contact the RCA Forum Active Modes working Groups to arrange a presentation about the submissions that have been referred to them	Neil Greaves	January 2018
•	Investigate a non-Gmail address for the CoPTTM Updates email	Neil Greaves	January 2018
•	Add additional information to the working party recommendations about when it is safe to require cyclists to merge with other traffic	Neil Greaves	Working party to meet to discuss the next steps early in the new year (2018)
•	Add AT's crashes to the CoPTTM incident database	Neil Greaves	To be completed by next CGG meeting
•	Develop instructions on how to complete the CoPTTM incident form	Neil Greaves	To be completed by next CGG meeting
•	Add additional information to the working party recommendations on when it is appropriate to require cyclists to dismount and walk around a closure	Neil Greaves	To be completed by next CGG meeting

Actions for Tony Stella

Ac 20	tions agreed at CGG meeting 13 December 17	Person responsible	Timeframe
•	Draft minutes of the meeting will be sent out by 21 December 2017.	Tony Stella	December 2017
•	Add the Register of traffic signals to the Register of equipment approved for use on NZ roading network	Tony Stella	January 2018
•	Amend the Training and Competency model as directed by CGG	Tony Stella	January 2018
•	Post Training and Competency model to website under the documents under discussion section	Tony Stella	January 2018
•	Develop comparative costing and circulate to Training and Competency working party for comment and review	Tony Stella	January 2018
•	Publish action plans to the CoPTTM pages of the NZTA website	Tony Stella	January 2018
•	Follow up with the team leaders of the projects still requiring action plans	Tony Stella	January 2018
•	Add shared road reserves and the CAR/WAP process to the Training and Competency model in the topic lists for the TMC and TMP Approver learning blocks	Tony Stella	January 2018
•	Extract the process from the register and add as a separate item under section I-19	Tony Stella	January 2018
•	Circulate final version of Training and Competency model to working party and CGG for review and comment - amend as required	Tony Stella	February 2018
•	Submit to NZTA on CGG's behalf recommending that NZTA adopt the training and Competency model	Tony Stella	February 2018
•	NZTA develop an implementation plan with key milestones (include promotion of the model to the industry)	Stuart/Neil/Tony	February 2018