Part 8 of the Traffic Control Devices Manual (TCD Manual)

Code of Practice for Temporary Traffic Management (CoPTTM)

(CoPTTM) - (SP/M/010)

Fourth Edition – Technical Note re Revised Temporary Traffic Management (TTM) Safety Audit/Review Procedures

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Circulation	Regional Operations Managers, holders of the Code of Practice for Temporary Traffic Management and NZTA website. Please forward to your consultants and contractors
Objective	To update the January 2015 version of the Fourth Edition of the CoPTTM.
Effective Date	**The revised SCR audit/review form is now available for use.** All audits/reviews using the full audit SCR completed after 1 January 2019 must use the revised SCR form.
Status	This document is a guideline for use by the roading industry, road controlling authorities, network utility operators and event holders.
Implications	Includes changes to the TTM safety audit procedures and introduces an electronic audit form and a new auditing role descriptor of 'reviewer'.
Reminder for all holders	It is important to keep holders of our documents up to date. Holders can update by copying the relevant sections from the NZTA website: www.nzta.govt.nz/copttm
Additional copies	These may be downloaded from NZTA's website, free of charge or purchased direct from our distributor either via the website, or directly to NZ Print, PO Box 2491, Wellington, 6140

Changes of note from June 2015 to February 2017		
Reference in 4th Edition	**Change**	**Implementation / implications**
Appendix C: Procedures for safety audit/review of worksites	*This technical note replaces the existing section E3 with the following amendment. This revision:* • *Clarifies the basis for audit* • *Provides links to audit resources which have been added to the CoPTTM page on the NZTA website* • *Provides guidelines for when the TMP and on-site record are to be sighted* • *Clarifies who can be issued a notice of non-conformance (NNC) and introduces the procedure for organisational NNCs* • *Introduces a new full audit SCR form* • *Introduces 3 new categories of site condition rating; Unacceptable [other], Unacceptable, Unacceptable [multiple issues]* • *Replaces previous guidelines for completion of the SCR with new guidelines.*	

E3 Appendix C: Procedures for safety audit/review of worksites

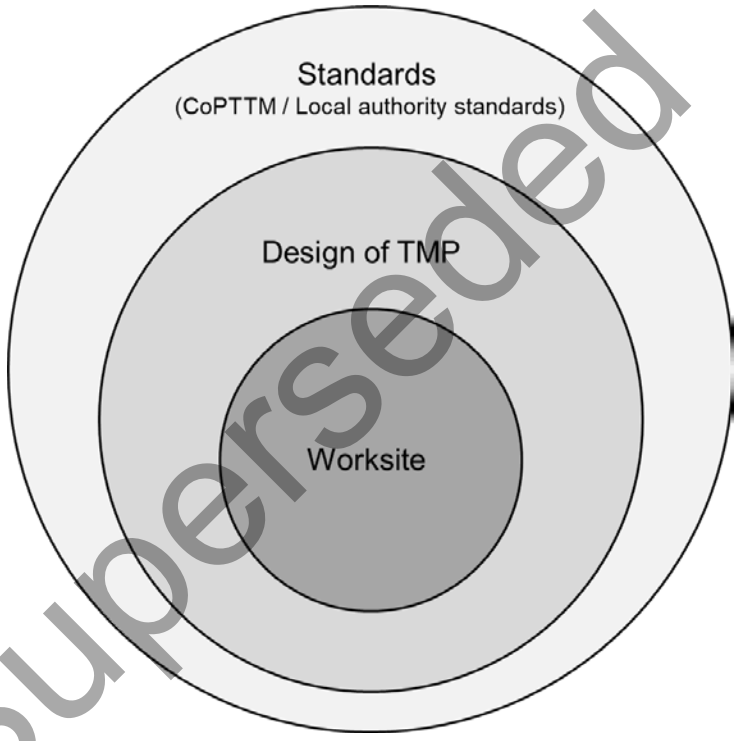
E3.1 Introduction

E3.1.1 Focus for auditor/reviewer

The initial focus for the auditor/reviewer is the worksite.

The auditor/reviewer also assesses:

- the design of the TMP
- application of CoPTTM and Local authority standards.



E3.1.2 Audit principles

Key principles that underpin all audits/reviews are:

- auditors/reviewers are consistent in their approach
- audits/reviews are fair
- where required, auditors/reviewers reference the relevant standard (either CoPTTM or local authority standards) when explaining issues
- auditors/reviewers take time to educate and encourage high standard/acceptable TTM work activities.

E3.1.3 Audit/review resources

Audit/review forms are available from the CoPTTM pages of the NZTA website (refer to Forms used for traffic management).

Audit/review resources are also available in section I: 21 Audit/review resources of the CoPTTM pages of the NZTA website.

E3.2 TTM safety audit/review methodology

E3.2.1 General methodology

An audit/review includes the following:

- a review of the worksite
- completion of the site condition rating (SCR) form
- a review of the TMP and onsite record (where required).

The general methodology recommended for using these procedures is:

- proceed through the worksite (including intersecting roads) making note of issues and recording them on the SCR form. Photographs or videos are recommended to record items of interest

  If at any stage the auditor/reviewer considers the worksite to be of high risk to road users/workers, immediate corrective action must be initiated

- review the on-site documentation (TMP and on-site record) as required. Refer to appendix C, subsection E3.4 Sighting TMPs
- rework the SCR to reflect any approved variances to the CoPTTM and local authority standards
  Note: Where there are issues with the design and/or approval of the TMP, these are recorded on the SCR for follow-up
- establish the site condition rating:
  - for the full audit/review:
    - SCR is based on the total accumulated points for the worksite and other worksite aspects
  - for the short audit:
    - total the number of scores for each rating given against each standards category
- take appropriate actions with respect to SCR outcomes (refer appendix C, subsection E3.5 Actions following SCR).

A copy of the SCR is to be provided to the STMS and the company responsible for the TTM. A copy may also be provided to the company responsible for the working space and the principal if required.

E3.3 SCR for full and short audit/review

E3.3.1 Full audit/review - site condition rating

The SCR evaluates temporary traffic management (TTM) compliance with the minimum requirements of the CoPTTM and Local Authority standards.

Each element of non-compliance is given a value that reflects its importance in terms of TTM at the worksite and is tallied to give the SCR.

E3.3.1.1 SCR categories

High standard	Acceptable	Needs improvement
0 - 10	11 - 25	26 - 50

Unacceptable (Other)	Unacceptable	Unacceptable (multiple issues)
SCR **under 51** and item(s) in OTHER WORKSITE ASPECTS are **marked N**	SCR **51+** and Item(s) in OTHER WORKSITE ASPECTS are **marked Y**	SCR **51+** and item(s) in OTHER WORKSITE ASPECTS are **marked N**

Dangerous
51+ and LOW RISK? is **rated No**

A notice of non-conformance may be issued when the worksite is rated Unacceptable (Other), Unacceptable, Unacceptable (multiple issues) or Dangerous. Refer to appendix C, subsection E3.4 Sighting TMPs and subsection E3.6 Notice of non-conformance.

E3.3.2 Short audit - site condition rating

The SCR evaluates TTM compliance with the minimum requirements of the CoPTTM and Local Authority standards.

Short audit ratings are as follows:

- Acceptable
- Needs improvement
- Dangerous.

If an item is rated dangerous it must be rectified at once.

If there are one or more dangerous ratings the auditor/reviewer must consider issuing a notice of non-conformance.

In the case of issuing a notice of non-conformance, the auditor/reviewer must either provide a detailed report, and if possible photographs, or a SCR using the full audit/review.

E3.4 Sighting TMPs

E3.4.1 When to site onsite documentation

Reviewing the onsite documentation (TMP and on-site record) confirms that:

- there is an approved TMP for the worksite
- the worksite layout complies with the approved TMP (including any engineering exception decisions (EEDs) approved for the worksite)
- the TMP, which may include an EED, is appropriate to the actual situation
- any authorised TSLs are appropriate to the worksite and activity
- the on-site record has been completed and is correct.

Guidelines for when to review the onsite documentation are set out below:

For both attended and unattended worksites	
High standard (0 – 10)	**Optional**
Acceptable (11 – 25)	**Optional** (unless worksite SCR is high risk)
Needs improvement (26 – 50)	**Optional** (unless worksite SCR is high risk)
Unacceptable	**Must check documentation**
Dangerous	**Must check documentation**

RCAs may establish their own policies for when onsite documentation is to be reviewed.

E3.5 Actions following SCR

E3.5.1 SCR of high standard or acceptable

The auditor/reviewer need not take any action on site when the SCR is either within the High Standard or Acceptable categories. It is recommended however, that the STMS be advised of these good audit/review results at the time of the audit/review.

E3.5.2 SCR of needs improvement

Where the SCR is Needs improvement, the STMS must be informed of the audit/review result immediately. The auditor/reviewer must discuss the TTM features that are non-complying with the STMS and make recommendations as to how the worksite safety can be improved.

The STMS must undertake remedial action as soon as possible and has a maximum of four hours to bring the SCR to an Acceptable standard or better.

E3.5.3 SCR of Unacceptable (Other)	Where the SCR is Unacceptable (Other) the STMS and/or organisation must be informed of the audit/review result immediately. The auditor/reviewer will advise the STMS/Contractor as to expected actions. This may include anything from the STMS implementing immediate remedial actions through to the ceasing of all activity/work and making the site safe until such time as the TTM is improved to Acceptable SCR or better. A stop works order (SWO) may be issued in some circumstances such as where no approval exists for the activity/TMP.
E3.5.4 SCR of Unacceptable, Unacceptable (multiple issues) and Dangerous	Where the SCR is Unacceptable, Unacceptable (multiple issues) or Dangerous the STMS and/or organisation must be informed of the audit/review result immediately. A rating of Dangerous is grounds for the issuing of a SWO. In some circumstances, a rating of Unacceptable, or Unacceptable (multiple issues) could also result in the issuing of a SWO such as where the STMS and/or organisation is unable to or unwilling to voluntarily implement the required corrective actions. Where a SWO has been issued, the activity/work may not recommence at the worksite until the auditor/reviewer (or appropriately RCA authorised person) is satisfied that the site TTM is appropriately managed and releases the SWO. During the period the SWO is in effect, the contractor may only undertake actions that maintain or improve the safety of the site. Where no SWO has been issued, all work activity must cease immediately and the TTM be improved to an Acceptable SCR or better as determined by the STMS in consultation with the auditor/reviewer. If the TTM cannot be improved to the required rating, the worksite must be cleared and the road left in a safe condition. A notice of non-conformance may be issued against the STMS and/or any other responsible party for worksites with an SCR of Unacceptable (Other), Unacceptable, Unacceptable (multiple issues) or Dangerous. Where it can be shown there is a systemic failure and the company/organisation is complicit in the non-conformance an Organisational NNC may be applied (see E3.6.2 About Org NC). It may be necessary to supplement the SCR form with an attached memo or coversheet on which the auditor/reviewer may add additional comments regarding the audit/review. Where an auditor/reviewer issues a notice of non-conformance a copy of the NNC and of the SCR form must be forwarded to the senior traffic and safety engineer (CoPTTM) for consideration and be recorded in the NZTA's database.

E3.5.5 Non-compliance with TMP principles

Where non-compliance with TMP principles is recorded and forwarded to the contractor (and principal if required) in accordance with appendix C, subsection E3.2 TTM safety audit methodology, the contractor must either make prompt changes to address the issues raised or forward reasons why the issues should not be addressed to the TMC within 24 hours.

E3.5.6 Appropriate action for non-complying TTM

E3.5.6.1 If the TTM is being completed under contract

Appropriate action for identified non-complying and/or unsafe TTM may include the following:

- issue a NNC to contractor detailing non-compliance(s) and expected corrective action(s)
- replacement of the contractor's nominated STMS
- arrange for another TTM contractor to make the worksite safe
- apply liquidated damages
- close the worksite down.

E3.5.6.2 If the activity is not being completed under contract to the RCA

Safety standards must still be met. The authorisations for activities on roads must require the appropriate standard for traffic management to be met.

Actions for identified non-compliance may include the following:

- issue an advisory note requiring a corrective action plan
- issue a notice to the person carrying out the activity detailing the non-compliance and expected corrective action
- close down the worksite as an unauthorised worksite
- lay a complaint with the police
- lay a complaint with WorkSafe NZ
- arrange for another contractor to make the worksite safe.

E3.6 Notice of non-conformance

E3.6.1 Who can be issued a notice of non-conformance (NNC)

A rating of Unacceptable (Other), Unacceptable, Unacceptable (multiple issues) or Dangerous is grounds for the issue of a notice of non-conformance.

A NNC can be issued to:

- The STMS and/or delegate in charge of the worksite
- The designer of the TMP

Continued non-conformance from a company/organisation may result in the issue of an organisational NNC (Org NC).

E3.6.2 About Org NC

An Org NC applies if there is a systemic failure where the company/organisation is complicit in the non-conformance. An Org NC may be issued by the RCA for a one-off incident or for multiple failures.

A 3 strikes approach is used with sanctions being applied if 3 strikes have been issued within a 12-month period. Strikes 1 and 2 will lapse if no further strike is issued within 1 year. Any warnings and sanctions are applied at the branch level of a company.

Where subcontractors receive an Org NC a 'please explain' letter will be sent to the principal contractor asking how they propose to overcome the failure(s).

Appeals may be submitted to the Senior Traffic and Safety Engineer (CoPTTM), NZ Transport Agency National Office, Private Bag 6995, Wellington 6141.

E3.6.3 Org NC 3 strikes process

Strike 1 Org NC Warning	• The RCA notifies the company/organisation that it will be applying a **Strike 1 Org NC**. Notification is also sent to NZTA. • On receipt of **Strike 1 Org NC**, NZTA registers the event and sends a warning letter to the company/organisation/subcontractor to warn of the consequences of continued non-compliant activity • The company/organisation submits a plan to the RCA detailing actions to prevent reoccurrence of the non-compliant activity
Strike 2 Org NC Final warning	• A similar process is followed for the issue of a **Strike 2 Org NC**. • On receipt of a **Strike 2 Org NC** within 1 year, NZTA sends a final warning letter to the company/organisation/subcontractor also outlining the consequences of continued non-compliant activity • The company/organisation submits a plan detailing actions to prevent reoccurrence of the non-compliant activity

Strike 3 Org NC Apply sanctions	• On receipt of **Strike 3 Org NC** within 1 year, NZTA sends a letter to the company/organisation/subcontractor detailing the sanctions to be applied and the time period for these sanctions **Specific NZTA sanctions** • This non-conformance will affect an organisation's NZTA Pre-Qualification status • The information will be forwarded to the appropriate standards organisation and may affect the company/organisation's ISO9000 or TQS1 quality rating. **Other sanctions which may be applied by RCAs** • Denied access to the road network for a period of time • The company/organisation may not be allowed to provide their own TTM for their and their clients worksites and will be required to employ an RCA approved TTM provider for their and their clients worksites on the network for a period of time • Undergo retraining for CoPTTM warrants • Contract penalties

E3.7 Example of site condition rating (SCR) form – full audit/review

TTM SITE CONDITION RATING FORM

SITE DETAILS			
RCA			
Suburb			
Road name			
CAR/WAP number		Road ID	
Date/Time		TTM level	

OPERATIONAL DETAILS	
Activity description	
TTM method	
TTM Contractor	
Contractor- working space	
Client / Principal	

SIGNS			Weighting	Tally	Total
A1	Missing	Sign	5		
A2	Position	Sign	2		
A3	Not visible/fallen over	Sign	5		
A4	Wrong sign	Sign	5		
A5	Condition unacceptable	Sign	4		
A6	Permanent sign	Sign	5		
A7	Unapproved sign used / too small	Sign	4		
A8	Non-compliant support / sign too low	Support	2		
				Subtotal	

MOBILE & SEMI STATIC			Weighting	Tally	Total
B1	Tail pilot vehicle/AWVMS omitted or incorrect location	Vehicle	30		
B2	Lead pilot vehicle omitted or incorrect location	Vehicle	20		
B3	Shadow vehicle omitted or incorrect location	Vehicle	26		
B4	TMA missing or non compliant	TMA	26		
B5	AWVMS/arrowboard non compliant	Vehicle	26		
				Subtotal	

PEDESTRIANS / CYCLISTS			Weighting	Tally	Total
C1	Inadequate provision for pedestrians	Feature	10		
C2	Inadequate provision for cyclists	Feature	10		
				Subtotal	

DELINEATION			Weighting	Tally	Total
D1	Missing or ineffective taper	Leading taper	26		
D2	Tapers too short	Leading taper	15		
D3	Taper too short or missing	Trailing taper	5		
D4	Spacing in taper	Taper	5		
D5	Spacing along lanes	Per 100m	3		
D6	Missing or ineffective delineation along lanes	Per section	10		
D7	Condition unacceptable	Device	2		
D8	Using non-approved device	Device	4		
D9	Road marking incorrect at long term level 2 or 3 roads	Site	30		
D10	Inadequate/missing site access	Access	10		
				Subtotal	

MISCELLANEOUS			Weighting	Tally	Total
E1	Working in live lanes	Individual	20		
E2	Missing or ineffective controller	Individual	20		
E3	Safety zone compromised	Individual	10		
E4	High visibility garment not acceptable	Individual	5		
E5	Marginal surface condition (carriageway only)	Occasion	15		
E6	Unacceptable surface condition (peds, cyclists or carriageway)	Occasion	30		
E7	Barrier defects (missing or incorrect components)	Component	10		
E8	Unsafe or redundant TTM	Equipment	5		
E9	VMS message incorrect or inappropriate	VMS	15		
E10	Flashing beacons / indicator lights not used or ineffective	Vehicle	3		
E11	Parking / stopping features not relocated	Feature	5		
E12	Unsafe and illegal parking of plant/equip.	Feature	20		
E13	Marginal items (signs, delineators, Hi vis garments)	Feature	1		
				Subtotal	

OTHER WORKSITE ASPECTS		
G1	Qualified person on site *[refer to A5 of CoPTTM]*	Yes / Unacceptable
G2	TSL appropriate *[refer to C4 of CoPTTM]*	Yes / Unacceptable
G3	Road user flow acceptable	Yes / Unacceptable
G4	On-site record *[form must include STMS authority, 2 hourly checks and TSL details]*	Yes / Unacceptable
G5	TMP approved?	Yes / Unacceptable
G6	Approved TMP sighted?	Yes / Unacceptable
G7	Approved TMP applicable?	Yes / Unacceptable
G8	TTM in accordance with approved TMP?	Yes / Unacceptable

FINAL RESULT				
Score	✓ Rating		✓ Rating	
		High standard (0-10)		**Unacceptable** (51+ **only**)
		Acceptable (11-25)		**Unacceptable – Multiple** (both 51+ and Other Aspects)
		Needs Improvement (26-50)		**DANGEROUS** (LOW RISK? rated NO)
		Unacceptable - Other (Other Aspects **only**)		
Actions planned by STMS			**Site activity ceased by**	
Site fixed?	Yes / No			

KEY POINTS	Complaint callout?	Site activity status		Notification to RCA *[does not affect score]*		TMP design issues?	LOW RISK?	
	Yes / No	Audit/review	Attended/Unattended Planned/Unplanned	Good site induction? *[does not affect score]*	Yes/No Yes/No	Yes / No		Yes / No

ACTIONS TO BE TAKEN

AUDITED / REVIEWED BY			
Signature			
Auditor/Reviewer name			
Qualifications		NZTA ID No.	
Auditor mobile number			

STMS DETAILS			
Received by / signed		SCR left onsite?	Yes / No
STMS name			
Qualifications		NZTA ID No.	
STMS mobile number			

In submitting this form, the auditor/reviewer specified above agrees that they have explained the significant issues and proposed remedies to the relevant parties specified above and have provided these parties a physical copy of the audit (does not apply for unattended sites)

E3.8 Full audit/review site condition rating (SCR) – defect descriptions

Multiple deficiencies relating to one item of TTM may only be recorded as a single defect assigned against the rating that is the highest. For example, a sign which is concealed by a tree and is in the wrong position is to be assigned as 'Not visible/fallen over' as this item has a rating higher than the 'Position' item.

E3.8.1 Signs

A1	Missing	Any signs that should have been erected that are missing. A sign and supplementary plate combination is to be counted as one sign eg T1A plus T144. If either the sign or a supplementary plate is missing from a combination when required, then, it is counted as one sign missing.
A2	Position	Any signs where the spacing is too close or too far from other signs or the working space. Refer to CoPTTM worksite layout distance tables. Also includes signs that are too close or too wide apart across the road (eg gated speed signs that are placed on the back berm); signs that are offset by more than allowed (eg TSL signs offset by more than 20m); signs blocking bus stops, cycle lanes or footpaths. Minor amendments should be noted on the TMP. Movement of TSL signs should be notified to RCA to maintain legality.
A3	Not visible / fallen over	Any TTM sign that should be erected at the worksite, which is not visible (eg knocked down or visibility blocked by a parked vehicle, vegetation or street furniture). Signs on a vertical lean outside the minimum permitted in the CoPTTM. If obstruction is noted in on- site record and best endeavours have been made, do not include in tally.
A4	Wrong sign	The wrong sign has been used, eg TL2L or TL2R sign showing the wrong lane being closed. Inappropriate signage. Incorrect TSL signage (eg TSL reinstatement incorrect for permanent speed limit). Wrong use of the signs from its intended purpose including detour arrows, no entry instead of road closed, or use of sign with similar message but not the right sign per CoPTTM definition of use. Non standard signs should be approved as part of TMP.
A5	Condition unacceptable	Refer to CoPTTM Section C19 Maintenance Standards. Includes signs unreadable at sign visibility distance and graffiti affecting the message of the sign. Marginal signs not included in the tally but must be advised to STMS.
A6	Permanent sign	Permanent signs that have not been covered and are no longer relevant to road users because of the activity. Includes curve advisory if advisory speed higher than TSL (chevron must be left visible), permanent speed limits, permanent lane advisory signs, passing lane advisory signs and permanent signs removed from site to facilitate works but still required. Consider suitability of sign coverage (eg must not affect the reflectivity of the sign when cover is removed). Includes permanent signs blocked by temporary signs. Parking features when relocated but signs not covered recorded under E11.

	A7	**Unapproved sign used / too small**	Signs used that are not approved for use at worksites, includes using level 1 signs at level 2 and 3 TTM worksites. Also includes using signs not approved in TMP (excludes applicable CoPTTM sign where appropriate) and use of a small sign when full sign could be implemented when not approved on TMP or use of small sign in combination with full sized sign (eg small main sign with full size supplementary plate). RD6 sign - CoPTTM does not include use of cone mounted single arrow, twin disc preferred, not counted in SCR but advise to TTM provider to phase out use. If smaller sign is required due to environmental factor this should be referenced in the TMP.
	A8	**Non-compliant support / sign too low**	Using banned supports or supports that fail to meet the requirements of subsection B1.3.4 Sign stands and supports. Also includes signs mounted lower than the accepted minimum as described in the CoPTTM, stop/go paddles not in direct physical control of the MTC, attaching sign to regulatory sign pole or street furniture where it will cause obstruction or damage to the asset. Also includes signs not being appropriately delineated.
E3.8.2 Mobile & semi static	B1	**Tail pilot vehicle / AWVMS omitted or incorrect location**	Missing when required or location (lateral or longitudinal) is incorrect. Note if arrow is incorrect record under E9.
	B2	**Lead pilot vehicle omitted or incorrect location**	Missing when required or location (lateral or longitudinal) is incorrect.
	B3	**Shadow vehicle omitted or incorrect location**	Missing when required or location (lateral or longitudinal) is incorrect. Note if arrow is incorrect record under E9. When shadow vehicle is missing and requires a TMA record in both B3 and B4.
	B4	**TMA missing or non compliant**	TMA not on mobile operation vehicle(s) when required. TMA is being used correctly but does not meet the certification for compliance as per the test level stated in the United States National Cooperative Highway Research Program NCHRP 350 and section B11 Truck- mounted attenuators in the CoPTTM including the weight requirements for the vehicle. Crash cushion not deployed when it should be. Also includes TMA in centre lane with no additional TMAs to close additional lanes.
	B5	**AWVMS / arrowboard non compliant**	AWVMS, horizontal arrow board or European arrow board not displaying the correct message (eg the right lane is closed but the arrow is directing traffic to the right). Also includes arrow board not fitted or is not used on mobile operation vehicles when it is required.

E3.8.3 Pedestrians/ cyclists	C1	**Inadequate provision for pedestrians**	Footpath obstructed by activity and neither temporary path nor direction to alternative pedestrian facilities provided. Features (recorded individually) include footpath width, ramps, gradient (including cross fall), visibility, location, any obstructions from exiting environment (low hanging tree branches, street furniture blocking path etc.). Ramp surface must be non-slip, must not move around and must be of sufficient width. Surface of footpath to be recorded under E6. Signs and delineation for pedestrian management covered under the other relevant sections in A and B.
	C2	**Inadequate provision for cyclists**	Work in cycle lane or high cycle use area and temporary cycle lanes have not been provided. Features (recorded individually) include cycle lane width, ramps, gradient (including cross fall), visibility, location, any obstructions from existing environment (low hanging tree branches, street furniture blocking etc.). Surface of cycle lane to be recorded under E6. Signs and delineation for cyclist management covered under the other relevant sections in A and B.
E3.8.4 Delineation	D1	**Missing or ineffective taper – leading taper (including chicane)**	Where leading taper delineation is missing which is required for traffic to shift from normal alignment. If due to environmental factors a short taper is required then it should be included in TMP with appropriate EED and mitigation measures. If 75% of the taper is installed it would be marked as too short rather than ineffective. Any less than 75% installed is ineffective. Also includes if there are too few cones installed to form the taper.
	D2	**Tapers too short – leading taper**	Taper has been formed but is too short. CoPTTM requires that two thirds of a taper must be visible. Refer to spacing tables for length requirements.
	D3	**Taper too short or missing – trailing taper**	Taper has been formed but is too short. CoPTTM requires that two thirds of a taper must be visible. Refer to spacing tables for length requirements.
	D4	**Spacing in taper**	Taper has been formed but spacing of delineation devices is too great (eg between 1 to 1.5x the spacing required in CoPTTM). If more than 1.5x record under ineffective. Refer to spacing table for requirements.
	D5	**Spacing along lanes**	Cones placed in rows, which are generally parallel to the centreline, but spacing of delineation devices is too great (eg 1 to 1.5x spacing required in the CoPTTM). If stop/go centreline delineation is missing to be recorded in D6. Refer to spacing tables for requirements. Refer to D6 for ineffective where spacing is greater than 1.5x spacing required.
	D6	**Missing or ineffective delineation along lanes**	Where delineation is missing or where the delineation is ineffective at separating lanes or ensuring the road user continues on the desired travel path, misleads traffic or provides conflicting message (eg traffic is required to travel on right but left side looks open and cones do not effectively keep traffic in the right lane). Refer to spacing tables for requirements. Refer to D5 for spacing in lanes. Note requirements around chip seal and paving operations with allowance to double cone spacing.
	D7	**Condition unacceptable**	Refer to section C19 Maintenance Standards, specifically C19.3.4. Includes punctures, large areas of staining, and significant area of missing or

			stained reflective material. Note non-compliant logos may be considered unacceptable if visible to vehicles. Auditor/reviewer to note marginal devices and advise STMS but not to be included in the SCR result.
	D8	**Using non-approved device**	Delineation or channelling devices that fail to meet the criteria specified in the CoPTTM. Includes marker posts, drums and barriers or other devices used in the place of cones.
	D9	**Road marking incorrect at long term level 2 or 3 roads**	Road marking not correctly adjusted at long term level 2 and 3 TTM static worksites where alterations are required as part of the approved TMP and other delineation is not implemented. Consider if TTM is applicable for the construction methodology in which case record in "other checks". Where it is not identified in the TMP, a closure will be considered as long term where the site is in a continuous configuration for more than 72 hours.
	D10	**Inadequate / missing site access**	Inadequate site access where required as defined in the CoPTTM. No site access visible for level 2 and 3 sites (exception is re-surfacing operations where site access is frequently moved). Site access in poor location. Vehicles accessing site in unapproved manner including against the flow of traffic or impeding traffic flow in unacceptable manner. Signs missing recorded under missing signs. Delineation of site access recorded under D5. Location and spacing of access gap recorded in D10.
E3.8.5 Miscellaneous	E1	**Working in live lanes**	People associated with the activity are in the live lane outside the established working space. If personnel cross the road without any equipment this is not classified as working in live lane but if carrying or moving equipment/materials from one side of the carriageway to the other, then this is classified as working as their full focus is not on task of crossing road. If there is no traffic flowing, then it is permissible for personnel to cross the road (not allowed on a level 3 road). Consider proximity to pedestrian crossing if available but not used. Traffic must not be expected to slow down or stop for personnel to cross the road. If under stop/go operation and MTCs change flow to stop/stop for all traffic approaches then lanes are not to be considered as live. If MTC needs to speak to motorist this should be done via the passenger side.
	E2	**Missing or ineffective controller**	Manual traffic controller not at stop/go position, footpath controllers not available to manage pedestrian movements, or spotter not being used when required for inspection activities. Also includes where the MTC is on the right hand side rather than the left hand side to stop traffic. **Note:** It is acceptable for a cone to be placed in front of the first vehicle provided the MTC remains on the left hand side until the vehicle has come to a complete stop prior to re-positioning the cone. The cone must be retrieved while paddle remains on stop. The MTC must be able to easily reach the paddle if required (eg to prevent the paddle from turning in the wind). If SCR result is High Standard or Acceptable consideration to be given to "road user flow acceptable" in Other Checks.
	E3	**Safety zone compromised**	Where either the lateral or longitudinal safety zone is insufficient (eg too small or missing). Score points for each zone compromised and on each occasion and for both plant, materials and personnel. **Note:** This is not applicable if under a stop/go operation and all traffic

		flows are on stop.
E4	High visibility garment not acceptable	Refer to section C19 Maintenance Standards, specifically B3, C19.3.6, C19.3.7, C19.4.2 and C19.4.3. Includes garments not done up, torn garments, large areas of staining, and significant area of missing or stained reflective material. Also includes STMS not wearing STMS garment (exception A5.8.7).
E5	Marginal surface condition (carriageway only)	Surface is rough and likely to be dangerous for any type of road user for the speed limit, temporary or permanent posted, at the worksite. Marginal if advised speed on site is 1 step higher than the speed determined by using the TSL decision matrix. If a TSL is not implemented when required due to surface condition record in this section but if a TSL is implemented when it is not required record in G2. For example a 100km rural road with chip seal surface not swept with no TSL recorded as marginal surface condition recorded in E5 however 100km rural road with swept chip seal and line marked with 50 TSL in place recorded in G2. Also includes steel plates used to protect excavation but not appropriately secured in place.
E6	Unacceptable surface condition (peds, cyclists or carriageway)	Surface is unacceptably rough and likely to be dangerous for any type of road user for the speed limit, temporary or permanent posted, at the worksite. Unacceptable if advised speed on site is 2 steps higher than the speed determined by using the TSL decision matrix. For pedestrian and cyclist this includes trip hazards, wet concrete, obstructions, or soft/impaired surfaces (including weather affected).
E7	Barrier defects (missing or Incorrect components)	Includes missing or incorrect end treatments on barriers, non-compliant barriers, end flares too sharp, barrier too close to live lane, barriers not linked, barriers not pinned where required and barrier not used when required. **Note:** Multiple defects for this item must be counted individually. Also includes device that is being used as a barrier but does not meet the CoPTTM requirements and barriers deployed not in accordance with manufacturer's specifications (eg water filled barriers not filled with water). Component are defined as leading terminal, trailing terminal (if required), flare if not terminal end, barrier alongside work site, linkage of barriers, installation in accordance with manufacturers specifications, damage to individual units (eg Leaking water filled barrier, cracked concrete barrier sufficient to compromise integrity of barrier etc.). Consideration should also be given to the surface the barriers are installed on if the surface would prevent the barrier performing as expected (eg on or in front of a kerb). Delineation of barriers to be recorded under delineation. If barriers not needed but deployed incorrectly record as redundant TTM.
E8	Unsafe or redundant TTM	Redundant TTM to be removed from site if not to be used within 48 hours (eg site reviewed on Friday with signs not required for unattended site stored on site, but further works taking place Sunday night, therefore time between active sites extends past the 48 hours permitted so signs should be removed). TTM equipment non-compliantly stored on site when not required for active closure. Also includes when TTM equipment is stored in front berm, frame and

		base left upright with sign on ground, or frame and base left upright with signs turned to have back panel facing traffic or the sign turned 90° to the travelling path. Includes signs in cycle lanes or footpaths, cones stacked to side not required for unattended, TTM equipment left in manner which causes hazard to road user (eg not delineating equipment). Hierarchy for storing TTM equipment: remove from site, then back berm, finally front berm if permanent speed limit is under 65km/h and there is a kerb and channel. Footpaths must not be impacted by the storage of equipment regardless of the width of the footpath available. Storage is only permitted in suburban or commercial areas but not near schools or shopping areas. To be recorded for each sign that is unsafe or redundant and once for every 10 delineation devices. Also includes barriers when deployed but not needed.
E9	VMS message incorrect or inappropriate	VMS displaying incorrect messages in relation to activities or VMS board message not approved by RCA.
E10	Flashing beacons / indicator lights not used or ineffective	Amber flashing beacons are not in operation or have been omitted from vehicles where required or do not comply with the CoPTTM requirements. Record in E10 if hazard lights used to access site **Note:** Only indicators should be used to give direction to road users of a pending site access movement.
E11	Parking / stopping features not relocated	Work encroaches on parking or stopping feature, which has not been relocated to a position clear of the worksite. Such features could include bus/transit lane, clearway (during enforceable timeframes), taxi stands, bus stop, bus parking locations, loading zone, mobility spaces and/or drop off areas. This SCR element is different to E12 where the feature is being used to park in but not as part of work site. E11 refers to feature being within work site but not appropriately relocated.
E12	Unsafe and illegal parking of plant / equipment	Plant and equipment is unsafely parked or illegally parked. Includes plant and equipment parked outside of designated work area on footpath, cycle lane, broken yellow lines, clearways, bus/transit lanes, bus stops, bus parking spaces, loading zones, taxi stands, mobility spaces, or restricted parking spaces. Also includes plant and equipment on site when unattended and not appropriately protected from public (for example miller with no shoulder closure protection). Consideration to be given to manner plant or equipment is parked for example if forcing road user across the centreline. Vehicles must be parked in the direction of travel. Shoulder closures to protect parked plant/equipment should be approved as part of the TMP. Parked plant and equipment should be visible to vehicles, cyclists and pedestrians so they can see the hazard. **Note:** While a vehicle may be legal under the Land Transport Rule to be on the road it may be classified differently under the Health and Safety Act.
E13	Marginal items (signs, delineators, Hi	Refer to section C19.3 Evaluation for classification of TTM devices. Note non-compliant logos may be considered unacceptable if visible to vehicles.

		vis garments)	A sign is marginal if there are many surface abrasions throughout the sign face and many are within the individual letters or symbol of the message; the surface is marked by material (such as asphalt, bitumen, cement slurry or dirt) not obscuring the lettering or symbol; some colour fading is evident, the background colour and reflectivity are still apparent; the message is legible and matches the approved design as per section B1 Signs. A cone is marginal if the surface is marked by material (such as asphalt, bitumen, cement slurry or dirt) and cannot be readily cleaned; the reflective bands have numerous tears and scratches; the reflective bands are largely free of residue. A high-visibility garment is marginal if the garment has numerous tears and scratches; the garment has some marks (from materials such as asphalt splattering, bitumen, dirt or cement slurry) and may not be readily cleaned due to abrasion or discoloration. However, it is free of large areas of residue or missing reflective material.
E3.8.6 Other worksite aspects	G1	**Qualified person on site [refer to A5 of CoPTTM]**	Site must be under the control of an STMS or briefed TC for level Low Volume and level 1 sites and an STMS L2/3 Practising or a briefed STMS NP (where allowed) for level 2 and 3 sites. If site control has been delegated by the STMS, there must be correct documentation of handover including time and briefing. Briefing must include reference to site specific details such as delivery movements or any minor amendments made to the TMP. Delegated STMS-NP/TC should be satisfied with the site condition they are taking responsibility for prior to accepting delegation. STMS delegating the site must ensure that the person they are delegating to is suitably qualified. Consideration should be given to handover process for when physical handover is not practical (eg if STMS off sick). Auditor/reviewer should allow time for the STMS to be away for auditing purpose (to gain access to the start of the site and while conducting site checks).
	G2	**TSL appropriate [refer to C4 of CoPTTM]**	The TSL should be appropriate in accordance with the CoPTTM TSL decision matrix. The speed limit, including de-restriction, is not appropriate for the physical works or correct for permanent speed limit derestriction. If the TSL is too low (refer to subsection G4.4.6 Excessive or inappropriate use of TSLs), a notice of non-conformance is issued. Consideration should also be given if the speed limit is too high (eg if a 70km/h TSL has been installed however the CoPTTM TSL decision matrix determines a 50km/h is appropriate). Also refer to notes under E5.
	G3	**Road user flow acceptable**	When road user flow is acceptable road users are flowing appropriately through the site and any queues do not extend past first advance warning sign, and there are no unreasonable delays or delays in excess of five minutes or durations approved by the RCA in the TMP. Unacceptable flows includes any instances of vehicular conflict for example two directions of traffic sent on "go" during a stop/go operation or where minimum lane widths are not maintained. G3 can be used to record if access to residents or businesses are not maintained or alternative solutions have not been agreed with the relevant parties, including the RCA. **Note:** 5 minute delay is to be in addition to the normal traffic flow on the road for that time period.

G4	**On-site record [form must include STMS authority, 2 hourly checks and TSL details]**	On-site record available on site which includes information required under the CoPTTM example form. **Note:** This does not need to be the CoPTTM form. Required checks have been conducted in accordance with approved TMP and CoPTTM and are appropriate to the time of the audit/review (eg not completed ahead of the time of the audit/review). Site checks should be robust and provide a high level of confidence in the effective management of the site. Any TSL implementation must be recorded correctly including the installation start time and all individual street names with defined TSL and derestriction signs locations recording where the TSL signs are positioned on that street (eg driveway for a street number or fixed identifying location). If a TSL is not required the STMS should record N/A for the TSL section of the documentation.
G5	**TMP approved?**	TMP documentation must be at all attended worksites and include the WAP, Conditions, TMP proforma, diagrams and other attachments. Documents must be stamped with the CAR approval stamp and the CAR reference applicable to TMP must match for all documents. Where applicable documentation must be available for extensions. Verifiable information is acceptable (eg if approval is via a phone call and there is a record of the date, time and who was involved in the conversation so the agreement can be confirmed with that party).
G6	**Approved TMP sighted?**	TMP documentation must be at all attended worksites and include the WAP, Conditions, TMP proforma, diagrams and other associated documents. A copy must be available on site (within 30 minutes of request from auditor/reviewer). Physical hard copies or electronic copies are acceptable however if using electronic format consideration should be given to a charging device and a mechanism for being able to record information including induction information, on-site record and TSL requirements etc.
G7	**Approved TMP applicable?**	The approved TMP accurately reflects the road environment including lane configurations, pedestrian features (including signalised crossings, zebra crossings and refuge islands), bus stops, parking features and other site specific features. If not, minor amendments are accurately recorded and notified to RCA with evidence available of this notification (eg email or phone call with record of who was spoken to, time of conversation and agreed mitigation). Amendments of a significant nature may require submission of a revised TMP for approval. If the TMP is not applicable this is followed up off site with the TMP designer and/or CAR Manager who approved the TMP.
G8	**TTM in accordance with approved TMP?**	The TTM measures implemented on site match the approved TMP. Minor amendments, as long as they are noted on TMP with the date, time and signature are acceptable if for reasons of improving road user safety or traffic flow. Minor amendments must not be for benefit of cost or ease of construction. Any significant changes must have been agreed with the RCA and correctly documented (refer G7). Examples of unacceptable amendments a stop/go approved but contraflow implemented or a shoulder closure upgraded to contraflow with no documented evidence of approval. Significant changes must be in consultation with the RCA / TMC / CAR Manager, not just notified, so they can be agreed prior to implementation.

E3.9 Example of site condition rating (SCR) form – short audit

SITE CONDITION RATING FORM (SHORT AUDIT)					
Street name(s)		RCA permit reference		Attended / Unattended	
Number *(from/to)*		Principal			
Employer of site STMS		Audit commences	am / pm	Date	
Rating	A = Acceptable	NI = Needs improvement		D = Dangerous	

SUMMARY OF STANDARDS		A	NI	D	ACTION NEEDED
1. Responsible party	STMS / TC at attended site? Name: Registration number:				
2. TMP	On site? Appropriate to situation?				
3. High-visibility garments	Worn by all? Done up? Condition acceptable?				
4. Signs	All necessary signs present? Correct positions? Sand bagged for expected wind? Conflicting signs covered? Signs in good condition? Other:				
5. Delineation	Protects working space/other features? Taper lengths compliant? Correct spacing of cones? Sufficient positive traffic control? Other:				
6. Pedestrian needs	Footpath widths OK? Safe passage for pedestrians? Surfaces / ramps OK? Other:				
7. Cyclist needs	Cycle widths OK? Safe passage for cyclists? Surfaces OK? Other:				
8. Traffic needs	Lane widths OK? Speed limit appropriate? No significant delays? Surfaces OK? Other:				
9. Property access	Property access OK?				
10. Site scores	Number in each rating				
		A	NI	D	
Action agreed by STMS/TC					

Auditor _____ (Name) _____ (Warrant Number) _____ (Signature) STMS/TC _____ (Signature)

CONTRACTOR COPY – Hand to contractor once audit has been completed Audit finished am / pm

E3.10 Examples of ratings (short audit)

EXAMPLES OF RATINGS (SHORT AUDIT)			
ASPECT	A = Acceptable (Standard met)	NI = Needs improvement (Moderate risk)	D = Dangerous (High risk)
1. Responsible party	• STMS/TC is at attended site	• TC at attended site but STMS arrives after allowed time limit	• No STMS/TC at attended site, or • No STMS responsible for the site
2. TMP (only for attended sites)	• TMP on site, and • Appropriate to the situation	• TMP on site, and • Appropriate to the situation, but • There are some safety issues	• TMP not on site, or • TMP not appropriate to situation
3. High-visibility garment	• Worn by all • Done up • Condition acceptable	• Worn by all, and • All high-visibility garments done, and • Condition of high-visibility garments marginal	• Not everyone wearing high-visibility garments, or • Some high-visibility garments not done up, or • High-visibility garments have unacceptable condition
4. Signs	• All necessary signs present • Correct order and distances • Conflicting signs covered	• Some signs are either missing, of poor quality, or inadequate distance and visibility, but • An adequate message given to motorists, or • Some conflicting signs not covered, or • Some signs not well supported	• Some signs are either missing, not visible or conflict with other signs, or blown over, or • Motorists are not reasonably warned; causing a hazard to road users
5. Delineation	• Protects working space/other features • Taper lengths compliant • Spacings of cones close enough • Sufficient positive traffic control	• Protects working space/other features but could be better, or • Taper lengths should be longer, or • Cone spacings need to be reduced, or • Not sufficient positive traffic control	• Does not protect working space/other features, or • Does not provide sufficient positive traffic control
6. Pedestrian needs	• Footpath widths OK • Surfaces and ramps in place • Appropriate protection provided	• Safe passage for pedestrians but footpath width could be greater, ramps and surfaces could be better, entry point could be more obvious	• Insufficient footpath widths, or • No safe passage for pedestrians, or • Surfaces not suitable for pedestrians, or • Pedestrians forced onto road close to fast traffic or past a dangerous site without sufficient protection • Pedestrians not using option provided
7. Cyclist needs	• Cycle widths OK • Surfaces OK • Safe passage provided	• Safe passage provided for cyclists, but • Widths need to be greater, or • Surfaces need to be better, or • Signage more appropriate	• Cycle widths not acceptable, or • No safe passage for cyclists provided, or • Surfaces not suitable for cyclists, or • No positive traffic management to enable cyclists to merge
8. Traffic needs	• Sufficient lane widths OK • Speed limit appropriate • No significant delays • Surfaces OK	• Lane widths not narrow enough for positive traffic management needs, or • Too narrow and causing a nuisance, or • Some unnecessary delays • Surfaces rough and uneven	• Lane widths causing hazard by failing to positively control traffic, or • Speed limit not appropriate to site, or • Surfaces unacceptably rough
9. Property access	• Occupants well catered for and informed	• Some minor access difficulties	• Serious access difficulties