

Construction Traffic Management Plan (CTMP)


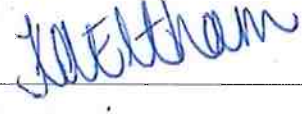
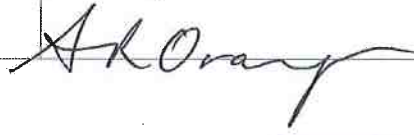
Construction Traffic Management Plan (CTMP) Revision History

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1.0	Stephen Hewett	Draft for EPA Designation Condition Compliant Review	19 April 2013
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Independent Review

Action	Name	Signed	Date
Reviewed by	Tim Kelly		April 2013

Document Acceptance

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Prepared by	Stephen Hewett		19 April 2013
Reviewed by	Kylie Eltham (M2PP Alliance)		19 April 2013, 10 May 2013
Approved by	Alan Orange Alliance Project Manager		10 May 2013
on behalf of	M2PP Alliance		

Certification

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Regulatory Manager Approval	Andrew Guerin		26 August 2013
on behalf of	Kāpiti Coast District Council		

Table of Contents

- 1 Introduction.....1**
 - 1.1 Purpose and scope..... 1
 - 1.2 Project description 2
 - 1.3 Performance standards 3
 - 1.4 Document Structure..... 4
- 2 Environmental Impacts Summary.....4**
 - 2.1 Summary of traffic management activities 5
 - 2.2 Summary of Impacts..... 6
 - 2.3 Summary of Mitigation Measures 10
- 3 Implementation and operation..... 16**
 - 3.1 Operation / management procedures..... 16
 - 3.2 SSTMP development..... 19
 - 3.3 Monitoring 28
 - 3.4 Reporting 30
 - 3.5 Training..... 31
 - 3.6 Complaints..... 31
- 4 Post-construction transition phase32**

Appendices

- Appendix A – Proposed Traffic Management Staging Plans**
- Appendix B – Independent Review Comments**
- Appendix C – KCDC Review Comments**
- Appendix D – SSTMP Templates**

Quick Reference Guide to Conditions

Condition Number	Condition Requirement	Comments	Key Final CTMP Reference
DC 7A c), d)	Management Plans General		S3.1.3
DC 10C	Management Plans General		S3.1.3
DC 12 a)	Management Plans General		S3.2.1
DC 13 d) 1)	Management Plans General		S3.2
DC 14 d)`	Management Plans General		S3.6
DC.16A	Outcomes for managing construction traffic		a) Table 2.2, s3.13, s3.2
			b) s3.2.2, s3.3, s3.3.2
			c) s1.3
			d) s3.2, s3.2.2i, s3.3.2
DC.17	Purpose of the CTMP		s3.1.3
DC.17A	Purpose of the SSTMP's		s3.1.2, s3.1.3, s3.2
DC.17B	Consultation required for the SSTMP's		s3.1.1, Diagram 3.1
DC.18	CTMP and SSTMP's shall be consistent with relevant standards		s1.3
DC.19	Independent review of the CTMP		Appendix B
DC.20	Random auditing of temporary road closure/s		s3.3.1
DC.21	Pre-construction condition survey of the carriageway/s		s3.2.2f
DC.22	Maintenance of Otaihanga Road		s3.2.2d
DC.23	Regular inspections of the road network		s3.2.2f

DC.24	Design and layout of Otaihanga Construction Yard		s2.1.2
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1 Introduction

This Construction Traffic Management Plan (CTMP) forms part of a comprehensive suite of environmental controls within the Construction Environmental Management Plan (CEMP) for the construction phase of the MacKays to Peka Expressway Project (the Project). The CTMP addresses the potential construction traffic effects associated with the construction of the Project.

1.1 Purpose and scope

The purpose of this Construction Traffic Management Plan is to fulfil the requirements of the MacKays to Peka Peka designation condition DC.17 which require:

DC.17(a) "...shall confirm the procedures, requirements and standards necessary for managing the traffic effects during construction of the Project so that safe, adequate and convenient facilities for local movements by all transport modes are maintained throughout the construction period"

This management plan is submitted to the Manager in accordance with DC.17 (a) for certification.

This CTMP identifies the standards necessary for management of traffic control on the Project in accordance with the Designation Conditions.

The traffic impacts of the Project will not be fully understood until the detailed design is finalised and detailed construction planning has commenced, so this document does not prescribe or limit the activities that will be required for construction of the Project. Instead, it develops procedures under which traffic management will be implemented to the satisfaction of the Designation Conditions and road controlling authorities.

It is expected that the methodologies and mitigation measures specified in this document will be refined during the Site Specific Traffic Management Plan (SSTMP) development stage, at a time closer to commencement of construction.

Refer to Specific Traffic Management Plan (SSTMP) template in Appendix D

The CEMP provides a more detailed description of the construction activities involved in the Project and procedures for how these will be managed.

The CTMP will be updated, with the necessary approval, throughout the course of the Project to reflect material changes associated with changes to the construction methodology, regulatory environment and requirements for implementation of traffic control.

1.2 Project description

The MacKays to Peka Peka Expressway is approximately 16 kilometres of new Expressway and will become the new State Highway 1 once completed. Construction works start just south of Poplar Ave (chainage 1900m) and extend to just north of Peka Peka Road (chainage 18,050m).

The Expressway once completed will include:

- A four lane median divided Expressway (two traffic lanes in each direction);
- Partial interchange at Poplar Avenue;
- Full interchange at Kāpiti Road;
- Four lane bridge over the Waikanae River;
- Full interchange at Te Moana Road;
- Partial interchange at Peka Peka Road;
- Grade separated overbridges and underbridges to cross local roads, watercourses and the Expressway;
- Stormwater treatment and attenuation facilities;
- Provision of a shared cycleway/walkway separated from the shoulder of the Expressway; and
- Provision of a bridleway over sections of the corridor.

The project has been divided into three zones and a number of specific construction sections:

South Zone

This zone includes chainage 1900 to 4500 and includes the following specific construction sections:

- Poplar Avenue (POP)
- Poplar Avenue-Raumati Road (POP-RAU)
- Raumati Road – Wharemauku Stream (RAU – WHA)
- Wharemauku Stream – Kapiti Road (WHA – KAP)
- Kapiti Road Interchange (KAP).

Central Zone

This zone includes chainage 4500 to 11,500 and includes the following specific construction sections:

- Kāpiti Road-Mazengarb Road (KAP-MAZ)
- Mazengarb Road Bridge
- Mazengarb Road- Otaihanga (MAZ-OT)
- Otaihanga Road Bridge

- Otaihanga Project Office/Yard
- Otaihanga Road – Waikanae River (OT-WAI)
- Waikanae Bridge
- Waikanae River – Te Moana Road (WAI – TEM).

Northern Zone

This sector includes chainage 11,500 to 18,050 and includes the following specific construction sections:

- Te Moana Interchange (TEM)
- Te Moana Road – Ngarara Road (TEM – NGA)
- Ngarara Road (NGA)
- Smithfield Road (SMI)
- Smithfield to CH15400 (SMI – 15400)
- 15400 to Peka Peka (15400 – PP)
- Peka Peka Interchange (PP).

1.3 Performance standards

Temporary Traffic Management (TTM) is governed by New Zealand legislation, in particular, the Land Transport Act 1998. Land Transport Rules made pursuant to that act, which relate to TTM, include:

- Land Transport (Road User) Rule 2004
- Land Transport Rule: Traffic Control Devices 2004
- Land Transport Rule: Setting of Speed Limits 2003.

The project shall adopt the following standards and guidelines insofar as they are relevant:

- NZTA Traffic Control Devices Manual (TCD); and
- NZTA Cope of Practice for Temporary Traffic Management (COPTTM).

This document and the SSTMPs shall be consistent with the applicable version of the COPTTM. Where it is not possible to adhere to this standard, the COPTTM's prescribed Engineering Exception Decision (EED) process will be followed, which will include appropriate mitigation measures agreed with the KCDC Road Asset Manager.

In managing construction activities, the M2PP Alliance Project Team will comply with the following standards:

- i. Local traffic on local routes will not be held up by construction activities by any longer than 2 minutes except in regard to bridge construction when the structure components are being put in place, when the maximum delay shall not exceed 5 minutes; and
- ii. Emergency services will be provided with unimpeded access along all local roads 24 hours per day, unless bridge or wall construction requires the temporary closure of a road, in which case, as part of the relevant SSTMP, an Emergency Action Plan must be developed and agreed with emergency services prior to any temporary closure so that an alternative access via a detour route is available for the duration of that temporary closure.

It should be noted that while the TCD Manual part eight (COPTTM) generally provides comprehensive guidance, there are likely to be circumstances where other manuals will be required for guidance on specific areas. The Austroads' Guide to Traffic Management is the likely source of additional guidance. This document will be employed where design of traffic signals, road layouts, signage or other traffic engineering elements require more detailed analysis.

1.4 Document structure

The remainder of this document is structured as follows:

- Section 2 outlines the traffic management activities, the anticipated impacts and mitigation measures proposed
- Section 3 details the procedures that will apply for the operation and management, governance, development of site specific TMPs, approvals and monitoring of the traffic management throughout the life of the Project
- Section 4 details the post construction transition phase.

2 Environmental impacts summary

This section provides a description of the expected traffic management activities for the Project and an overview of the anticipated impacts of these activities. The construction methodology will be further refined as the design phases move through to detailed design and construction. This report therefore reflects the best understanding of expected traffic management methodologies for the required construction works, and is based on similar construction activities implemented across the country.

2.1 Summary of traffic management activities

The Project comprises “green field’s” construction of a 4-lane expressway between MacKays Crossing and Peka Peka Road. Interchanges will be constructed at Poplar Ave, Kāpiti Road, Te Moana Road, and Peka Peka Road. Expressway bridges will also cross Raumati Road, the Wharemauku Stream, Mazengarb Road, Otaihanga Road, the Waikanae River, and Ngarara Road. The Project has been broken up in to three zones, based on the environment and construction activities expected in each zone.

A brief description of the expected traffic management activities for each zone based on the current understanding of construction methodology that will be adopted is provided below.

The proposed construction staging for each sector is provided in **Appendix A**.

2.1.1 South Zone

In the first stage site accesses will be constructed on each side of Poplar Avenue for ground improvements works. Then Poplar Avenue and the existing SH1 / Poplar Avenue intersection are planned to be realigned under three stages to allow off line construction of the Poplar Avenue interchange.

The SH1 / Leinster Avenue intersection will be closed permanently.

The construction of the overbridge on Raumati Road is planned to be constructed mostly off-line but with bridge beams planned to be lifted into position overnight under a detour.

During the Wharemauku Stream Bridge construction pedestrians and cyclist on the Wharemauku Stream trail will be temporarily diverted around the construction area.

The construction of the Kāpiti Road Interchange is planned to be constructed under three stages. Kāpiti Road is planned to be realigned in each stage around the construction area with narrowed lane widths.

2.1.2 Central Zone

The construction of the overbridge on Mazengarb Road and the lowering of Mazengarb Road are planned to be constructed under a staged process. The Mazengarb Road lanes and shoulder are proposed to be narrowed and realigned around the construction works. Pedestrians will be diverted to the opposite footpath to the construction area. Bridge beams are planned to be lifted in place overnight under a detour.

The main Project office and yard are planned to be established off Otaihanga Road. The resulting high construction traffic volume on Otaihanga Road is considered to require the construction of a roundabout at the SH1/ Otaihanga Road intersection.

The construction of the SH1/ Otaihanga Road roundabout is due for completion by the end of 2013. It has been consented separately and therefore has its own set of conditions with which to comply.

Otaihanga Road Bridge is planned to be staged, requiring traffic lanes to be realigned around the construction works, maintaining bi-directional flow. The Otaihanga Road Bridge beams are planned to be lifted in place overnight under a detour.

The construction of the Waikanae River Bridge is expected to require the realignment of the Waikanae River trail. Pedestrian and cycle detours are expected to be required during abutment construction and bridge beam placement.

2.1.3 North Zone

The construction of the Te Moana Road Interchange is planned to be constructed under three stages. Te Moana Road is planned to be realigned in each stage around the construction area with narrowed lanes. The Te Moana Road Bridge beams are planned to be lifted in place overnight under a detour.

The Ngarara Road Overbridge and Smithfield Road Extension are planned to be constructed using a single lane flow operation. Construction vehicles will access the site along a haul route from Peka Peka Road.

The construction of the Peka Peka Interchange is planned to be constructed under three stages over a period of three years. Peka Peka Road is planned to be diverted down the proposed service road to a temporary intersection with SH1 at the location of the southern roundabout. This temporary intersection will also serve as an alternative construction site access and egress point. Once the service road between Peka Peka Road and Te Kowhai Road is completed and opened, the SH1/ Te Kowhai Road will be permanently closed. The connection works and reconstruction of the existing highway will be constructed using short term traffic management measures.

2.2 Summary of impacts

The following section provides an overview of the typical impacts that are anticipated to arise from temporary traffic management activities conducted for the Project.

The construction activities anticipated for the Project are routinely undertaken in the Wellington region (although not to the scale of this project) and hence the short-term traffic impacts of construction activities have become well understood. In addition, methods for managing and mitigating those impacts are well developed and have been implemented successfully on a range of maintenance and infrastructure projects throughout the region.

The range of traffic control activities expected for the construction of the Project and identified impacts are shown in **Table 2.1** below. It has three components:

- **Traffic control activity.** This column lists the types of traffic control activities that may be implemented for construction of the Project.
- **Impacts.** This column outlines the impact of the traffic control activity on pedestrians, cyclists, residents, businesses, public transport, and general traffic.
- **Relevant Zone.** This column indicates which Zones are expected to experience each traffic control activity.

Table 2.1 Impact of Traffic Control Activities by Sector

Traffic Control Activity	Impact	Relevant Zone		
		1	2	3
Footpath closure / detour	<ul style="list-style-type: none"> ■ Inconvenience to pedestrians and residents along route; ■ Disconnection of access to bus stops. ■ Increased exposure of pedestrians to traffic 	✓	✓	✓
Cycle lane closures / path closures/ detours	<ul style="list-style-type: none"> ■ Inconvenience to cyclists along route ■ Increased exposure of cyclists to traffic 	✓	✓	✓
Property access closures	<ul style="list-style-type: none"> ■ Inconvenience to residents and businesses along route. 	✓	✓	✓
Shoulder closures	<ul style="list-style-type: none"> ■ Reduced safety ■ No room for incident management, breakdowns etc. ■ Increased severity of recurrent and non-recurrent congestion 	✓	✓	✓
Lane closure - alternating flow operation Lane closure - contra-flow operation Lane closure - one-direction closure	<ul style="list-style-type: none"> ■ Inconvenience to road users ■ Reduced traffic capacity through site as a result of: ■ Fewer lanes than existing corridor; ■ Increased side-friction resulting from narrowed lanes and reduced shoulders; ■ Construction activities visible to motorists resulting in 'rubber necking'; ■ Reduced capacity across a link due to stop-go operations. ■ Diversion of traffic away from the closure onto inappropriate routes such as residential streets, past schools or other sensitive facilities. 	✓	✓	✓

Traffic Control Activity	Impact	Relevant Zone		
		1	2	3
Road closure / detours	<ul style="list-style-type: none"> ■ Inconvenience to road users; ■ Inconvenience to residents and businesses within closed road segment; ■ Congestion on detour routes; ■ Congestion on alternative routes; ■ Diversion of traffic away from the closure onto inappropriate routes such as residential streets, past schools or other sensitive facilities. ■ Disconnection of bus routes; ■ Disconnection of access to bus stops. 	✓	✓	✓
Short term closures for installation of long-term closures / traffic control measures	<ul style="list-style-type: none"> ■ Congestion through closure as discrete closures are required for installing long-term (i.e. greater than 24 hour) closures; 	✓	✓	✓
Site access	<ul style="list-style-type: none"> ■ Truck movements reducing traffic capacity through a closure; ■ Reduced traffic safety due to truck manoeuvring in or out of the closure; ■ Impact on capacity of access routes arising from higher proportion of trucks ■ Increased traffic on access routes resulting in congestion and increased travel times 	✓	✓	✓
Temporary speed limit	<ul style="list-style-type: none"> ■ Inconvenience to road users; ■ Slower operating speeds; ■ Potential non-compliance with speed limit. 	✓	✓	✓

2.3 Summary of mitigation measures

Traffic management measures will be planned and implemented to a level appropriate for the activity or work site. In accordance with COPTTM, traffic management measures will be implemented in order to fully consider the safety and level of service provided as the travelling public approaches, passes through and continues beyond the Project area.

The following sets out broadly the proposed mitigation measures and the procedures which will be adopted to manage the impacts identified in Section 2.2 above.

The range of traffic control mitigation measures expected to be implemented are summarised in **Table 2.2** below. It has three components:

- **Traffic control activity.** This column lists the types of traffic control activities that may be implemented for construction of the Project.
- **Impacts.** This column outlines the impact of the traffic control activity on pedestrians, cyclists, residents, businesses, public transport, and general traffic.
- **Typical mitigation measures.** This column outlines the types of measures that will be considered in development of SSTMPs and management of the Project.

Table 2.2 Impact and Mitigation of Traffic Control Activities

Traffic Control Activity	Impact	Typical Mitigation Measures
Footpath closure / detour	<ul style="list-style-type: none"> ■ Inconvenience to pedestrians and residents along route; ■ Disconnection of access to bus stops. ■ Increased exposure of pedestrians to traffic. 	<ul style="list-style-type: none"> ■ Letter drops to affected residents in advance of works in the area; ■ Provision of warning and advisory signage prior to and during the closure; ■ Provision of pedestrian crossings and refuges or controlled crossing points; ■ M2PP Alliance Project team to advise interested parties/ stakeholders of closures in heavily trafficked areas; ■ Provision of convenient pedestrian detour routes well in advance of the closure to provide safe and convenient crossing; ■ Provision of temporary pedestrian access to property within the construction corridor.
Cycle lane closures / path closures/ detours	<ul style="list-style-type: none"> ■ Inconvenience to cyclists along route ■ Increased exposure of cyclists to traffic 	<ul style="list-style-type: none"> ■ Letter drops to affected residents in advance of works in the area; ■ Provision of convenient detour routes well in advance of the closure to provide safe and convenient cycle routes; ■ Install signage adjacent the cycle lane prior to construction commencing to allow cyclists to alter their travel patterns; ■ Install warning signage in advance of shoulder closures to alert motorists of cyclists; ■ Install a temporary speed limit.
Property access closures	<ul style="list-style-type: none"> ■ Inconvenience to residents and businesses along route. 	<ul style="list-style-type: none"> ■ Personal visit by M2PP Alliance Project team to advise and discuss impacts of the closure with affected residents and businesses; ■ Letter drops to affected residents and businesses in advance of works in the area; ■ Provision of temporary car parking in an area within the length of the traffic control site; ■ Provision of metal-plate crossings into properties where feasible and safe; ■ Scheduling of works during holiday or low-demand periods of the year.

Traffic Control Activity	Impact	Typical Mitigation Measures
Shoulder closures	<ul style="list-style-type: none"> ■ Reduced safety ■ No room for incident management, breakdowns etc. ■ Increased severity of recurrent and non-recurrent congestion 	<ul style="list-style-type: none"> ■ Install a temporary speed limit ■ Install Signage in Advance of shoulder closure
Lane closure - alternating flow operation Lane closure - contra-flow operation Lane closure - one-direction closure	<ul style="list-style-type: none"> ■ Inconvenience to road users; ■ Reduced traffic capacity through site as a result of: <ul style="list-style-type: none"> ■ Fewer lanes than existing corridor; ■ Increased side-friction resulting from narrowed lanes and reduced shoulders; ■ Construction activities visible to motorists resulting in 'rubber necking'; ■ Reduced capacity across a link due to stop-go operations. ■ Diversion of traffic away from the closure onto inappropriate routes such as residential streets, past schools or other sensitive 	<ul style="list-style-type: none"> ■ Public notification in local (Kāpiti Observer) and regional publications (Dominion Post) where necessary; ■ Letter drops to residents and / or businesses (where necessary), which are located: <ul style="list-style-type: none"> ■ within the closure length; ■ along detour routes; ■ along approaches to the corridor that may experience congestion or queues. ■ Installation of concrete / water-filled barriers along site to isolate the site from public; ■ Installation of sight screens to reduce 'rubber necking'; ■ Installation of secondary detour routes where necessary; ■ Review and optimisation of traffic signals on detour and alternative routes where necessary; ■ Use of Variable Message Signs (VMS) for recommending alternative routes. Where possible, alternative routes will be recommended at a cordon around the closure, well in advance, in such a way to avoid traffic following the prescribed detour route where an alternative is a more convenient route to their intended destination. Install such signage in advance of the closure (i.e. a month prior, to inform road users). ■ Provision of access via a temporary corridor or narrow lane within the closure for

Traffic Control Activity	Impact	Typical Mitigation Measures
Road closure / detours	<p>facilities.</p> <ul style="list-style-type: none"> ■ Inconvenience to road users; ■ Inconvenience to residents and businesses within closed road segment; ■ Congestion on detour routes; ■ Congestion on alternative routes; ■ Diversion of traffic away from the closure onto inappropriate routes such as residential streets, past schools or other sensitive facilities. ■ Disconnection of bus routes; ■ Disconnection of access to bus stops. 	<p>residents and businesses within construction corridor, where possible.</p> <ul style="list-style-type: none"> ■ Personal visit by M2PP Alliance Project team to advise and discuss impacts of the closure with affected residents and businesses; ■ Public notification in local (Kāpiti Observer) and regional publications (Dominion Post) where necessary; ■ Advertising on radio or through internet where necessary; ■ Letter drops to residents and / or businesses (where necessary), which are located: <ul style="list-style-type: none"> ■ within the closure length; ■ along detour routes; ■ along approaches to the corridor that may experience congestion or queues. ■ Installation of secondary detour routes where necessary; ■ Use of VMS for recommending alternative routes. Where possible, alternative routes will be recommended at a cordon around the closure, well in advance, in such a way to avoid traffic following the prescribed detour route where an alternative is a more convenient route to their intended destination. Install such signage in advance of the closure (i.e. a month prior, to inform road users). ■ Scheduling of works during holiday or low-demand periods of the year; ■ Staging of works to require night time or weekend full-closures only; ■ Consultation with NZTA / KCDC to develop detour routes and minimise bottle-necks on detours; ■ Provision of barricades on the approaches to the closure to prevent public access and visibility to activities within the site;

Traffic Control Activity	Impact	Typical Mitigation Measures
		<ul style="list-style-type: none"> ■ Extension of closures to intersections with arterial routes with access to residents only on the approaches to the works. ■ Provision of access via a temporary corridor or narrow lane within the closure for residents and businesses within construction corridor, where possible.
Short term closures for installation of long-term closures / traffic control measures	<ul style="list-style-type: none"> ■ Congestion through closure as discrete closures are required for installing long-term (i.e. greater than 24 hour) closures; 	<ul style="list-style-type: none"> ■ Installation of long term work sites that require temporary barriers etc. to occur during night time or off-peak periods.
Site access	<ul style="list-style-type: none"> ■ Truck movements reducing traffic capacity through a closure; ■ Reduced traffic safety due to truck manoeuvring in or out of the closure; ■ Impact on capacity of access routes arising from higher proportion of trucks ■ Increased traffic on access routes resulting in congestion and increased travel times 	<ul style="list-style-type: none"> ■ Provision of site accesses at the end of the closure only; ■ Development and distribution of site access plans which specify permitted access movements, times and procedures; ■ Limiting site access movements / plant deliveries to off-peak periods or night time; ■ Consultation with NZTA and KCDC to agree HCV routes and operation procedures; ■ Avoid peak traffic flow periods where possible;

Traffic Control Activity	Impact	Typical Mitigation Measures
Temporary speed limit	<ul style="list-style-type: none"> ■ Inconvenience to road users; ■ Slower operating speeds; ■ Potential non-compliance with speed limit. 	<ul style="list-style-type: none"> ■ Public notification in local (Kāpiti Observer) and regional publications (Dominion Post) where necessary; ■ Monitor and review use of Temporary Speed Limits to ensure the speed limit is appropriate for the environment. ■ Speed controlling measures may be put in place, such as: lane narrowing or introduction of horizontal curves. The M2PP Alliance Project team will liaise with the Police and work towards temporary speed limits which can be enforced.

3 Implementation and operation

Section 3 sets out the general operational procedures for Temporary Traffic Management activities for the entire Project.

3.1 Operation / management procedures

Traffic Management impacts will typically be mitigated through the measures described above in Section 2.3. The mitigation measures will be governed by this document and implemented through the Traffic Management Plan (TMP) process.

The complete Traffic Management procedure is illustrated in **Diagram 3.1**.

3.1.1 Traffic management procedure governance

This CTMP is envisaged to remain a working document throughout the Project and inform all associated traffic management activities.

The active governance of traffic management activities will occur through the approval process of SSTMP(s) by NZTA and KCDC's Manager and through on-going monitoring by the Independent engineer and assessment of Key Performance Indicators as outlined in Condition DC. 16A.

Planning for effective traffic management must begin during the initial stages of construction planning. Following programming of construction tasks, associated traffic management requirements will need to be identified for each task.

The process will allow for a 'no-surprises' approach to traffic management planning where temporary traffic management requirements feed back into the construction planning process at an early stage. SSTMP(s) shall be prepared in consultation with KCDC and following consultation with affected key stakeholders. Results of the consultation and responses from key stakeholders to any matter must be specified in the relevant SSTMP.

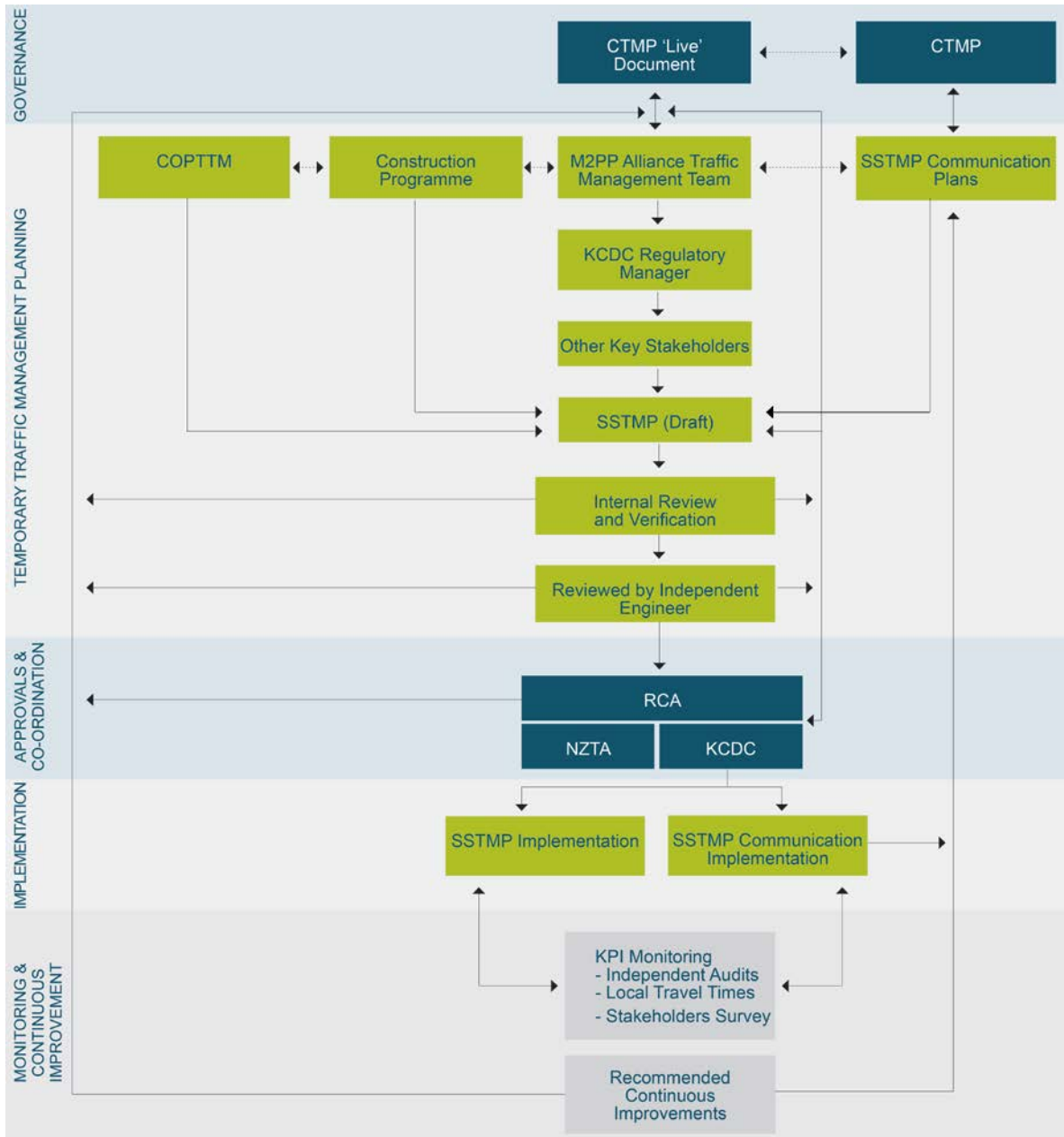
The following will be key stakeholders for consultation on relevant SSTMP(s):

- Emergency services (police, fire and ambulance);
- Public health services;
- Schools, childcare centres and other educational activities with frontage or access to roads where construction work in relation to the Project will take place;
- GWRC in respect of public transport services;
- Arthur Bill Resettlement Trust and Harrisons Country Gardenworld Ltd; and

- Raumati South Residents' Association in respect of construction work on and in the vicinity of popular Avenue and Leinster Avenue.

The TMP process is illustrated in Figure 3.1 below.

Figure 3.1 Traffic Management Plan (TMP) Process



3.1.2 Site Specific Traffic Management Plans

SSTMPs are documents that outline the procedures and measures to be implemented so that safety is maintained for road users and Project staff throughout every activity associated with the Project. Each SSTMP will therefore outline the measures to be implemented so that road users

may negotiate the site safely, and it will also outline the procedures required to be followed by construction or road workers in order to maximise the safety of the site.

The relevant SSTMP must be identified at the construction planning stage for implementation along with work site mobilisation. If a SSTMP has not been developed previously, the need will be flagged for development and the programme of works adjusted accordingly. The process employed for development and approval of SSTMPs is outlined in Section 3.2.

A SSTMP will be prepared so that every construction activity which impacts the road network is conducted using an approved methodology, with the agreed mitigation measures in place and to the correct standard. Every construction method plan which impacts on the road network will have an appended SSTMP.

For the purpose of this documents and to satisfy Designation Condition DC. 17A, SSTMP(s) will be divided into two kinds Minor and Major. A “Minor SSTMP” will be a SSTMP that relates to construction works of 5 days or fewer days in duration, and a “Major SSTMP” will be a SSTMP that relates to construction works of more than 5 days in duration.

Each SSTMP will be given a unique identifying number for ease of reference. A ‘live’ register of SSTMPs will be kept to monitor and report on the progress of each SSTMP.

3.1.3 Approval process

The CTMP (this document) shall be reviewed by a qualified independent engineer, prior to being submitted to the KCDC Manager for certification, at least 15 working days prior to commencement of construction. Tim Kelly has been selected as the qualified independent engineer as satisfying Condition DC.19. Comments and inputs received from the independent engineer will be documented and responded to by the M2PP Alliance Project team. A record of these comments and responses will be held in Appendix B. Any comments not incorporated will be tracked and clearly explained in Appendix B.

Construction work shall not start until receiving the KCDC Manager’s signed certification of the CTMP. Once certified the CTMP will outline the proposed procedures, requirement and standards necessary for managing the traffic effects of construction to achieve the outcomes and standard required under Condition DC.16A.

In terms of satisfying Condition DC 17A each STMP is to be certified by KCDC Manager. In the case of a “Minor SSTMP” at least 5 working days prior to the commencement of construction works in that area to which that “Minor SSTMP applies, and in the case of a “Major SSTMP” at least 10 working days prior to the commencement of construction works in that area to which the “Major SSTMP” applies. Works associated with each SSTMP shall not commence until written certification from the KCDC Manager has been received by the M2PP Alliance Project Team.

In term of satisfying Condition DC 7A ,The Requiring Authority may make minor changes to a SSMP if the request to make the change is made at least two working days prior to implementing the change and the Manager certifies that change. For the purpose of this condition, 'minor change' shall be defined in the relevant Management Plan and shall generally refer to either physical work of less than one day duration or a small change to design detail or construction methodology that the Manager considers will result in an improved environmental outcome. The Requiring Authority shall maintain a record of minor changes to SSMPs and provide a copy of this record to the Manager within 2 working days of each update. If the proposed change to a SSMP is more than minor, the Requiring Authority shall submit the change for certification to the Manager 5 working days prior to the Work commencing.

The SSTPM is a living document and needs to react to changes as they arise.

In terms of satisfying Condition DC 10C, the Requiring Authority shall submit to the Manager 2 months prior to the start of the anticipated construction Work a detailed programme outlining:

The anticipated dates by which SSTPMs will be submitted to the Manager for certification prior to the commencement of Work at each applicable stage of construction.

The purpose of this programme is to assist the Council in planning for resources to certify these management plans within the appropriate timeframes.

The Requiring Authority will provide the Manager with an updated programme of construction sequencing and/or SSMPs if changes occur in the programme. The updated programme shall be submitted at least 20 working days before any changes in sequencing occurs.

3.2 SSTMP development

Preparation and implementation of SSTMPs will be conducted so that a consistent approach is taken where practicable, and that adjacent activities are adequately planned and integrated in order to mitigate concurrent effects.

Each SSTMP will comply with each of the relevant standards outlined in Section 1.3 and Condition DC. 16A. Care will be taken in identifying the safety requirements of both road users and construction workers.

Each SSTMP will comply with any relevant condition from the Environmental Management Plan.

A SSTMP will describe the measures that will be taken to manage the traffic effects associated with the construction of specific parts of the Project prior to construction of the relevant part (s) of the Project commencing. The purpose of the SSTMP is to identify the specific construction traffic management methods proposed to address the particular circumstances, local traffic and community travel demands, and environmental context of each sector or stage of the Project in

order to comply with the outcomes and standards outline in section 1.3 and required under Condition DC 13 d) 1., 16A(a) and (d). In particular, SSTMP(s) will describe, where appropriate:

- i. Temporary traffic management measures required to manage impacts on road users during proposed working hours;
- ii. Assessment of delay associated with the proposed closure(s) and detour(s);
- iii. The capacity of any proposed detour route(s) and their ability to carry the additional traffic volumes likely to be generated as a result of the construction of the Project and any known safety issue associated with the detour route, including any mitigation measures the Requiring Authority proposes to put in place to address any identified safety issue;
- iv. Measure to maintain existing vehicle access to adjacent properties and businesses;
- v. Measure to maintain safe and clearly identified pedestrian and cyclist access on roads and footpaths adjacent to the construction works. Where detours are necessary to provide such access the Alliance will provide for the shortest and most convenient detour which is reasonably practicable to provide, having regard to safety;
- vi. Measure to maintain passenger transport services and facilities;
- vii. Any proposed temporary changes in speed limit;
- viii. Provision for safe and efficient access of construction vehicles to the from construction site(s);
- ix. Measures that will be undertaken by the Alliance to communicate traffic management measures to affected road users and stakeholders; and
- x. Address effects of construction traffic on schools and other educational and community facilities from feedback from the Community Liaison groups.

At the completion of works under discrete traffic management closures the site must be made safe for the travelling public once all traffic control measures are lifted from the site, so that no hazard has been introduced or left behind as a result of the work. This philosophy does not explicitly limit the type of activity that may be conducted under either form of closure, however it limits the construction methodologies such that the safety and level of service provided to the travelling public is maintained at all times.

In terms of satisfying DC.18, where it is not possible to adhere to COPTTM Standard for the SSTMP, the prescribed Engineering Exception Decision (EED) process will be followed, which will include appropriate mitigation measures agreed with the Road Asset Manager.

The process and triggers for requiring the EED process will be included with the SSTMP.

The following sets out the general operational procedures for Temporary Traffic Management (TTM) activities for the Project.

3.2.2 SSTMP structure

Each SSTMP will include:

- SSTMP Proforma. This is the text of the document, which outlines the requirements, methodologies and standards required in observing the SSTMP and the required approvals required/ obtained. Details included in each SSTMP Proforma will vary depending on the activity requiring traffic control;
- Engineering Exception Decisions. All EEDs applicable will be appended to the SSTMP.
- CAD drawings. CAD (or similar computer-generated) drawings will be employed for illustrating the closures defined by the proforma, and will include all relevant road features that require consideration in managing the impacts of construction.
- Communications strategy. The communications strategy will outline the proposed strategy for informing the public of the works. This may include public notifications in local newspapers, advertisements, radio communications, flyer or posters, Variable Message Signs (VMS) strategies, information boards or driver information signage installed. The Stakeholder and Communications Management Plan (SCMP) will be appended as reference where relevant.

3.2.3 Specific requirements

a. Network capacity

The main indicator of the impact of traffic management on the road network is the delay caused by the activity.

Lane closures resulting in alternating flow will be avoided, where possible. If a lane closure is required, justification as to why this TTM method is necessary will be provided in each SSTMP. Single lane operations will be used outside of peak flows on road with relatively low traffic volumes to set up long term temporary arrangements.

The impacts of construction activities or TTM measures on road network traffic capacity will be mitigated so as not to exceed the 2 minute delay trigger on local roads.

The impact of traffic management will be considered in each SSTMP, with queue modelling, delay estimates or traffic modelling conducted where appropriate in order to satisfy the relevant RCA that the impacts should not exceed the 2 minute delay trigger and will be appropriately mitigated.

Rectification measures will be tracked in the updated SSTMPs to demonstrate changes made to meet compliance.

Works may also be programmed for holiday periods during which traffic demands are reduced and there are a higher proportion of discretionary trips on the network if it is deemed necessary to meet the 2 minute delays target. Such opportunities will be investigated on a case by case basis, with an approach agreed with KCDC prior to the proposed activity. However, in accordance with general NZTA practice the start and end of holiday periods will be avoided.

b. Peak Hour Capacity

The effect of construction activities or TTM measures on traffic flows during peak hours will be mitigated to meet the 2 minute delay trigger on local roads. Activities that may impact on the capacity of the adjacent carriageway (as outlined above) will be restricted depending on the type of activity and the level and traffic characteristics of the affected carriageway.

c. Lane Delineation

Each SSTMP will specify how traffic lanes will be delineated for each traffic management activity which affects the road alignment. In accordance with COPTTM, traffic lanes will be delineated using temporary signs and cones for short term traffic management activities which are generally only in place for a day. Long term closures on high volume roads which are in place for a number of weeks will be delineated by remarking the existing lanes and installing safety barriers where appropriate. Remarkings of lanes will be in accordance with MOTSAM and generally replicate the original arrangement.

Temporary lane and shoulder widths will be specified in each SSTMP.

d. Site Access

Site access will be subject to the same restrictions as activities that impact upon the capacity of the network and peak hour activities. Each site access will be required to have an approved SSTMP (or be noted in the appropriate SSTMP covering the work site) which will outline the systems and procedures required for safe operation.

Site access points will be installed as detailed on the SSTMP drawing. The site specific requirements for installation and use of site accesses will be outlined in the SSTMP, which may include the following:

- Required signage and delineation;
- Permitted entry / exit movements to / from the site access;
- Permitted hours of use;

- Entry / exit escort procedures to be implemented;
- Types of vehicles allowed, and any procedures relating to particular classes of vehicles (articulated trucks or oversized vehicles);
- Requirements for wheel washes (refer Sediment Control Plan); and
- Provision for manned accesses where required.

Entry and exit will be operated in a manner that will minimise disruption to road users. Accordingly, all drivers of vehicles using the access points will be specifically briefed.

The M2PP Alliance Project Team will design the Otaihanga Road construction yard, including any fences, so that it does not impede reasonable access or the efficient operation of any existing activities on the landfill site including waste management, dog training and the car club activities.

In addition, a contribution of fair and reasonable costs towards the maintenance of Otaihanga Road caused by the increased heavy vehicle movements related to the yard and site access will be made. This process will be agreed with KCDC Manager and Road Asset Manager prior to opening the Otaihanga Road construction yard.

e. Construction Traffic Movements

A significant amount of construction vehicle movements will be required, particularly truck movements to transport fill, aggregate and concrete to site during construction of the Project. The construction traffic movements are expected to reduce the available capacity of some roads and intersections. Some movements may require active traffic management, particularly for over dimensioned vehicle movements and movements on geometrically constrained roads.

Construction vehicles are expected to use SH1 and major roads, and will avoid using residential streets where possible. Normal operation hours for construction vehicles will be as stated in Section 7 of the Construction Noise and Vibration Management Plan (CNVMP):

- Monday to Friday 6.30am to 8pm
- Saturday 7.30am to 6pm.

Night works would generally occur between the hours of 8pm to 6.30am. Night works will only be scheduled for construction activities which would impact on normal day-time traffic operations such as the placement of bridge beams across Raumati, Kapiti, Otaihanga and Te Moana Roads and tie-in and surfacing works at the existing SH1. The Alliance will notify the parties identified in Section 11.1 of the CNVMP of these works at least five days prior to commencement.

The appropriate analysis of swept paths and vehicle weight will be carried out in accordance with KCDC's requirements. The frequency of these truck movements, their routes and any operational

requirements will be outlined and appropriate mitigation measures agreed with the RCA in the appropriate SSTMP.

All site based personnel, truck drivers in particular, will be made aware of the sensitive areas around the Project. Drivers will be required to take extra care while passing these areas and be extra vigilant of children or mobility impaired persons. This requirement will be included in safety briefings once detailed planning is underway.

An over dimension permit will be obtained from the Over dimension Permit Issuing Agency (OPIA) for any over dimensioned vehicle movements related to the Project.

The Local KCDC Roading condition as follows will be accommodated.

National Code of Practice for Utilities Access to Transport Corridors. KCDC Local Conditions Version 3, Revision April 2012. Restrictions on time of work on specific roads. " lane closure and disruptions are not permitted between 7.30am to 9am and 4pm to 6pm Monday to Saturday. At other times between 6am and 7pm Monday to Saturday, a minimum of one lane each way shall be maintained." Road sections to be applied. Te Moana, Kapiti, Raumati, Ihakara, Poplar. Entire lengths.

f. Local Road Condition Surveys

Carriageway condition surveys will be undertaken of the local roads affected by the Project, which will consist of photographic / video documentation of the carriageway including roughness, rutting defects and surface condition.

Pre-condition surveys will be undertaken prior to the commencement of works and will be submitted to the KCDC Manager and Roading Asset Manager. Following the completion of construction of the Project post-construction surveys will be undertaken. The results of the surveys will be compared and where damage to the carriageway and footpaths has occurred as the result of construction traffic, repairs will be arranged by the M2PP Alliance Project Team.

In addition, regular inspections (nature, extent and frequency as agreed with the Council Road Asset Manager) of the road network affected by the Project construction will be undertaken to ensure all potholes and other damage resulting from the construction and identified and repaired as soon as practicable.

Traffic Detours

All full closures and associated detour routes will be implemented under an approved SSTMP. The RCA with roads affected by a detour will be consulted prior to finalisation of the SSTMP. Detour routes will follow major roads where possible, so that impacts on residential streets are minimised. Detours will only be undertaken off peak when traffic flows are low.

Where necessary, steps will be taken in order to improve the capacity of the detour route, by implementation of the following:

- Traffic modelling to determine the maximum theoretical capacity of intersection(s) along the detour route;
- Traffic management measures installed at the critical intersection to provide greater capacity; and / or
- Splitting of the detour routes depending on approach to the closure.

Pre-conditioning of road users will also be considered and where deemed necessary it will be implemented through a communications campaign via VMS boards, project information signs or advertising. This will attempt to reduce the demands on the road network so that delays are reduced. Alternative routes will be recommended at a cordon around the closure well in advance of the closure and in such a way to allow traffic to avoid following the prescribed detour route where an alternative route is a more convenient route to their intended destination.

The SSTMP will include measures that will be implemented to avoid, remedy or mitigate effects on access to and from businesses and other organisations in the area.

Details of any analysis, modelling, mitigation measures or communications will be appended to the SSTMP for approval.

g. Passenger Transport Services

The effect of construction activities or TTM measures on passenger transport services will be mitigated where possible in consultation with Great Wellington Regional Council.

Activities that will impact upon passenger transport services will be identified at the construction planning stage, such as traffic management measures which impinge upon bus stops. This will allow for the maximum possible available time to arrange for changes to be made to services, or for methodologies to be developed that minimise impacts.

Any impacts, mitigation or communications relating to passenger transport services will be outlined in the SSTMP for approval.

h. Property Access

The impact of construction activities or TTM measures on existing vehicle access to properties and businesses will be mitigated to maintain access. Communications with the affected residences or businesses will be undertaken as part of the SSTMP process.

The impacts of such activities will be mitigated, through the use of:

- Temporary access ways using metal plates or other methods;

- Construction methodologies that allow access during critical time periods; and / or
- Provision of alternative access ways, parking or manoeuvring areas for the duration of the works.

Activities that may impact on access and their associated mitigation measures will be outlined in the SSTMP for approval by the relevant RCA.

i. Pedestrian, Mobility and Cycling Access

Pedestrian facilities will be maintained on each side of a road where current facilities exist, where possible. Where access is impeded as a result of construction works, safe and clearly identifiable alternative access arrangements will be implemented, such as:

- Temporary access in accordance with COPTTM;
- Temporary detours that are as short as possible and as convenient as practicable , having regard to safety;
- Safety fences for restricted access zones;
- Hoarding for long term work sites with excavations or other hazardous environments;
- Pedestrian bridges across uneven surfaces; and / or
- Pedestrian protection barriers for protection from traffic.

If the facilities are required to be combined on one side of a road, justification as to why this is the case will be provided. Mitigation for combining pedestrian facilities on one side of a road may include pedestrian ramps pedestrian refuges, traffic calming, assisted crossing for school children, and/or temporary controlled/zebra crossings.

Existing cycle lanes or shoulders used by cyclists will be maintained, where possible. If cycle lanes or shoulders are required to be reduced or cyclists are detoured, the shortest and most convenient detours which are reasonably practicable will be provided, having regard to safety. Cycle access will be mitigated by maintaining the existing traffic lanes through the construction area where possible otherwise a temporary cycle route will be established where an existing route cannot be maintained. Where lane widths impact on cyclists' safety, signage will be installed in advance of the area to enhance driver awareness.

Any impacts upon pedestrian, mobility or cycling access and associated mitigation will be outlined in the SSTMP for approval.

j. Traffic Management Communications

It is expected that communication campaigns will be undertaken for a wide variety of traffic management activities throughout construction of the Project. The overall strategy for communication management is outlined in the Stakeholder and Communication Management plan.

Communication associated with traffic management activities will be undertaken on a case-by-case basis depending on the location and impact of the construction and traffic management activities. Communication may include some or all of the following, as part of a project communication plan:

- Personal visit by a M2PP Alliance Project team member to advise and discuss impacts of the closure with affected residents and businesses;
- Letter drops to affected residents and / or businesses which are located:
 - within or adjacent to the construction zone;
 - along detour routes; and
 - along approaches to the corridor that may experience congestion or queues.
- Communication of changes to passenger transport services such as signage in buses, at bus stops or letter drops to residents;
- Flier drops to cars parked in affected areas in advance of works in the area;
- Use of VMS for recommending alternative routes during detours;
- Use of project signage or information boards where necessary;
- Public notification in local (Kāpiti Observer) and regional publications (Dominion Post) where necessary; and / or
- Advertising on radio or through internet where necessary.

k. Emergency Action Plan

Emergency services will be provided with unimpeded access along all local roads 24 hour per day, unless a road closure is required for bridge or wall construction, in which case, as part of the relevant SSTMP, an Emergency Action Plan must be developed.

The emergency action plan will outline the procedures, requirements and responsibilities of the M2PP Alliance Project team in the case of emergency, and will conform to the principles of CIMS (Coordinated Incident Management System) and related road network incident response plans identified by the RCA. In addition to the emergency action plan, each SSTMP will address site specific requirements in the case of emergency. The SSTMP will outline the following key issues, where applicable:

- Diversion routes in the case of delayed works;
- Secondary diversion routes in the case of incidents on diversion routes used under full closure SSTMPs; and / or
- Methodologies for reducing the risk of construction over-run, where applicable.

The emergency action plan will be used in the case of an emergency within the site, and will include procedures for co-ordination with the KCDC, NZTA's representatives, NZ Police, NZ Fire Service,

Ambulance Services, and Civil Defence. The M2PP Alliance team will liaise early with each of these organisations when developing the emergency action plan. Events that may require implementation of the emergency action plan include:

- Traffic accidents;
- Emergency services requiring access to or through the site;
- Natural disasters;
- Unplanned construction events;
- Emergency works;
- Significant traffic congestion on KCDC roads or State Highways; and / or
- Inclement weather.

In the event of an accident the M2PP Alliance team will provide immediate assistance and where necessary contact the relevant emergency services. Full support to those organisations will be provided to manage traffic whilst the incident is being brought under control. An incident report will be completed for each incident or near-miss. Significant incidents will require input from a variety of M2PP Alliance Project team members and may involve reporting to emergency services or other external parties.

In an emergency event the STMS must ensure the traffic management staff protect their personal safety, the safety for continuing public access through the site then notify the necessary authority and then attend to the situation.

3.3 Monitoring

In accordance with COPTTM the STMS (assisted by other project staff) will be responsible for the day to day monitoring of TTM measures. The site layout, queues and delays will be monitored at each active site which is governed by an approved SSTMP.

In addition, the effectiveness of the mitigation measures described in the above section will be monitored by the following Key Performance Indicators (KPI):

- Traffic Management Auditing;
- Local route travel times; and
- Stakeholder Surveys.

These monitoring methods are discussed below.

3.3.1 Traffic management auditing

It is anticipated that traffic control measures will be subject to a random audit every two months by an independent party.

Internal audits will be carried out following major control changes. In addition, regular internal audits will also be carried out by the Project's Traffic Management team.

The procedure for carrying out an audit of traffic management activities is prescribed in COPTTM. COPTTM audit scores (the site condition rating) will be generated for a number of sites, which will then be weighted by the Annual Average Daily Traffic (AADT) volume of the road affected by TTM. The AADT volume weighting system will draw attention to the higher volume roads where safety is more of a concern and quality and consistency of traffic control is more critical.

The audit team will generally be a two-person team, however may be expanded as appropriate to include road safety auditors, independent auditors or other external parties. The auditors will be required to provide their report to the M2PP Alliance Project TTM Manager within one week of the site inspection. The audit scores and finding will be made available to the KCDC and NZTA Managers.

3.3.2 Local route travel times

The efficiency and safety of the road network during road construction is a key objective of the Project. Efficiency and safety can be measured by monitoring of travel times through each construction site.

Journey times will also be monitored on:

- Poplar Avenue: from Maitai Road in the west to SH1 in the east, including intersection delays to capture the impact on traffic turning right out of Poplar Avenue onto SH1 southbound. Journey times will be monitored in both directions.
- Raumati Road: from Matia Road in the west to Rimu Road in the east. Journey times will be monitored in both directions.
- Kāpiti Road: from Langdale Avenue in the northwest to Warrimoo Street in the southeast, this section has been chosen to avoid the unrelated delays from those generally occurring at the SH1 intersection. Journey times will be monitored in both directions.
- Mazengarb Road: from Realm Drive in the northwest to Waterstone Avenue in the southeast. Journey times will be monitored in both directions.
- Otaihanga Road: from Ratanui Road in the northwest to Greendale Drive in the east. Journey times will be monitored in both directions.
- Te Moana Road: from Lavinia Grove in the northwest to Park Avenue in the southeast. Journey times will be monitored in both directions.

The base journey time will be measured on these roads before the commencement of construction. The KPI is proposed to be based around the base journey time plus maximum 2 minute delays expected for construction works. The surveys will be undertaken monthly on a Wednesday

covering AM, PM and interpeak periods and on a Saturday covering the midday peak while the roads are being affected and one week after the TTM is implemented or altered on these roads.

3.3.3 Stakeholders survey

The perceptions of those affected by the traffic management activities will also be monitored during construction. This will take the form of a stakeholder survey to be carried out at regular intervals. The survey will assess the performance of the Project's traffic management in the areas of: perceived delay, safety, communication, comfort, coherency, and overall standard. The targeted stakeholders are expected to include the general public, local residents, the Police, and community groups.

The perceptions of key stakeholders will also be monitored through surveys. The key stakeholders' survey will additionally assess the performance in the areas of perceived; compliance and responsiveness.

The survey form, interval, and target audience will be agreed with NZTA and KCDC.

3.4 Reporting

Reporting will be conducted in conjunction with the monitoring requirements described above.

3.4.1 Reporting by the M2PP Alliance team to RCAs

The M2PP Alliance team shall inform the NZTA, KCDC and/or the appointed representative of the following:

- Any problems they foresee with traffic management on site and any problems they have regarding the management of traffic on other contractor's sites;
- Any instances where the requirements or limits imposed by this CTMP or SSTMPs are breached or exceeded, probable causes and actions required to be taken to mitigate, remedy or isolate the impact arising from the non-compliance;
- Copies of the random audits undertaken within every two months period;
- The traffic management KPI monitoring results and improvement initiatives on a two month basis;
- A copy of the Complaints Register shall be provided every month; and
- Provide a copy of the CTMP if any significant revisions of the CTMP are made.

3.4.2 Reporting by the RCAs to the M2PP Alliance team

The NZTA, KCDC and/or the appointed representative shall inform the M2PP Alliance team of the following:

- Any complaints received regarding traffic as soon as practical after receipt of the complaint.

3.5 Training

All personnel involved in Traffic Management activities will undergo NZTA's Traffic Controller (TC) training, as a minimum. Any personnel in control of traffic management operations on site will have undergone the NZTA training and be qualified as a Level 2/ 3 Site Traffic Management Supervisor (STMS). Any personnel involved in planning or monitoring traffic management operations on site will have undergone the NZTA training and be qualified as a Level 2/ 3 Site Traffic Management Supervisor (STMS) – Non Practicing (NP).

All site personnel will be briefed on their requirements to comply with the COPTTM relating to site personnel, in particular:

- Wearing of orange high visibility garments;
- The requirements of SSTMPs for each construction site; and
- The authority of the appointed STMS.

3.6 Complaints

At all times during construction work, the M2PP Alliance team will maintain a permanent register of any complaints received alleging adverse effects from, or related to, the exercise of this designation in accordance with Designation Condition DC. 14. The register for traffic management complaints will include:

- The name and address as far as practicable) of the complainant;
- Identification of the nature of the complaint;
- Location, date and time of the complaint and the alleged event;
- Weather conditions at the time of the complaint (as far as practicable)
- The outcome of the M2PP Alliance Project team investigation into the complaint;
- Measures taken to respond to the complaint; and
- Any other activities in the area, unrelated to the Project that may have contributed to the complaint.

An initial response to the complainant will be made within 24 hours of the complaint being received. This initial response will detail the immediate investigations and measures taken to resolve the issue. The complaint is to be closed out with a finalised response within 10 working days of receiving the complaint (refer to Section 7.1 of the CEMP).

The M2PP Alliance team shall also maintain a record of its responses and any remedial actions undertaken.

The SSTMPs will reference the complaints register, and address issues where relevant.

4 Post-construction transition phase

Once the majority of construction work has been completed on the Project and practical completion has been awarded, temporary traffic management procedures will return back to each RCA's original traffic management requirements.