



# Healthy Waters - Te Ararata Flood Resilience Works - Walmsley Road Bridge Replacement

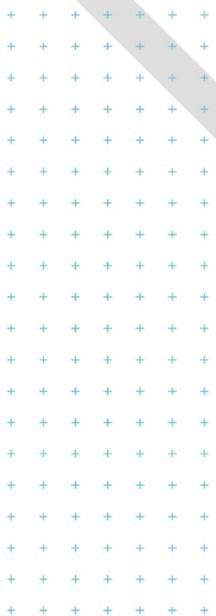
## Draft Construction Traffic Management Plan

**Prepared for**  
Auckland Council Healthy Waters

**Prepared by**  
Tonkin & Taylor Ltd

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## Definitions

Table 0.1: Definitions and abbreviations

Abbreviation	Detail
AT	Auckland Transport
ATOC	Auckland Transport Operations Centre
ASM	Auckland Systems Management
CAR	Corridor Access Request
CEMP	Construction Environmental Management Plan
CMO	Compliance Monitoring Officer
CoPTTM	Code of Practice for Temporary Traffic Management <sup>1</sup>
CTMP	Construction Traffic Management Plan
EED	Engineering Exception Decisions
ITA	Integrated Transport Assessment
MOTSAM	Manual of Traffic Signs and Markings <sup>2</sup>
NZGTTM	New Zealand Guide To Traffic Management
NZTA	New Zealand Transport Agency
PEL	Project Engagement Lead
PPE	Personal Protective Equipment
RCA	Road Controlling Authority
SSTMP	Site Specific Traffic Management Plan
STMS	Site Traffic Management Supervisor
SQEP	Suitably Qualified Experienced Practitioner
TCD	Traffic Control Devices manual
TMC	Traffic Management Controller
TMD	Traffic Management Diagram
TMP	Traffic Management Plan
WAP	Work Access Permit

<sup>1</sup> NZTA is developing a new approach to how temporary traffic management will be delivered on Aotearoa New Zealand's state highways and roads. The new guidance (NZGTTM) aligns with WorkSafe's Road Good Practice Guidelines (2022) and will be implemented from 2023 in stages to eventually replace CoPTTM.

<sup>2</sup> NZTA plan to archive the Manual of Traffic Signs and Road Marking (MOTSAM) after the publication of the Traffic Control Devices Manual Part 4 in 2024.

# 1 Introduction and project overview

## 1.1 Introduction

Tonkin & Taylor Ltd (T+T) has been engaged by Auckland Council's Healthy Waters department to prepare a Draft Construction Traffic Management Plan (CTMP) related to the proposed Te Ararata Walmsley Road bridge replacement Project (the Project). The Project is flood resilience works, with this assessment prepared to support a resource consent application under the Severe Weather Emergency Recovery (Auckland Flood Resilience Works) Order 2024.

This CTMP is based on an indicative construction methodology and concept design developed to support the resource consent application. Although a CTMP is not required to be submitted to support a resource consent application, Healthy Waters have taken the initiative to prepare a Draft CTMP to assist Auckland Council in determining the Resource Consent application.

## 1.2 Project background

The January 2023 floods, followed closely by Cyclone Gabrielle, marked a period of unprecedented weather challenges for Auckland. The floods, and the subsequent cyclone caused significant infrastructural damage, with an estimated 8,000 homes destroyed or damaged and thousands of residents' lives affected. The events underscored the city's vulnerability to extreme weather, prompting Auckland Council to endorse the "Making Space for Water Programme" developed by Healthy Waters. This initiative aims to mitigate flood risks through a series of blue-green networks, addressing critical flood-prone areas with sustainable stormwater solutions.

As part of the overall Programme, Healthy Waters identified a combination of interventions within the Te Ararata catchment (overall referred to as the Te Ararata Project) to collectively address the flood resilience issues further outlined in the Assessment of Effects on the Environment (AEE).

## 1.3 Project Overview

The first package of works within the overall Te Ararata Project is for the Walmsley Road bridge replacement works (i.e. the Project) and is the subject of this draft CTMP. The Project seeks to achieve greater flow capacity and reduce blockage risk beneath Walsmsley Road and within Te Ararata Creek.

A detailed description of the proposed work and indicative methodology is provided in the AEE prepared for the application. The Project is located within the existing Walmsley Road bridge, Te Ararata Creek, Black Bridge Reserve and Walmsley Road Reserve as shown in *Figure 1.1* below.

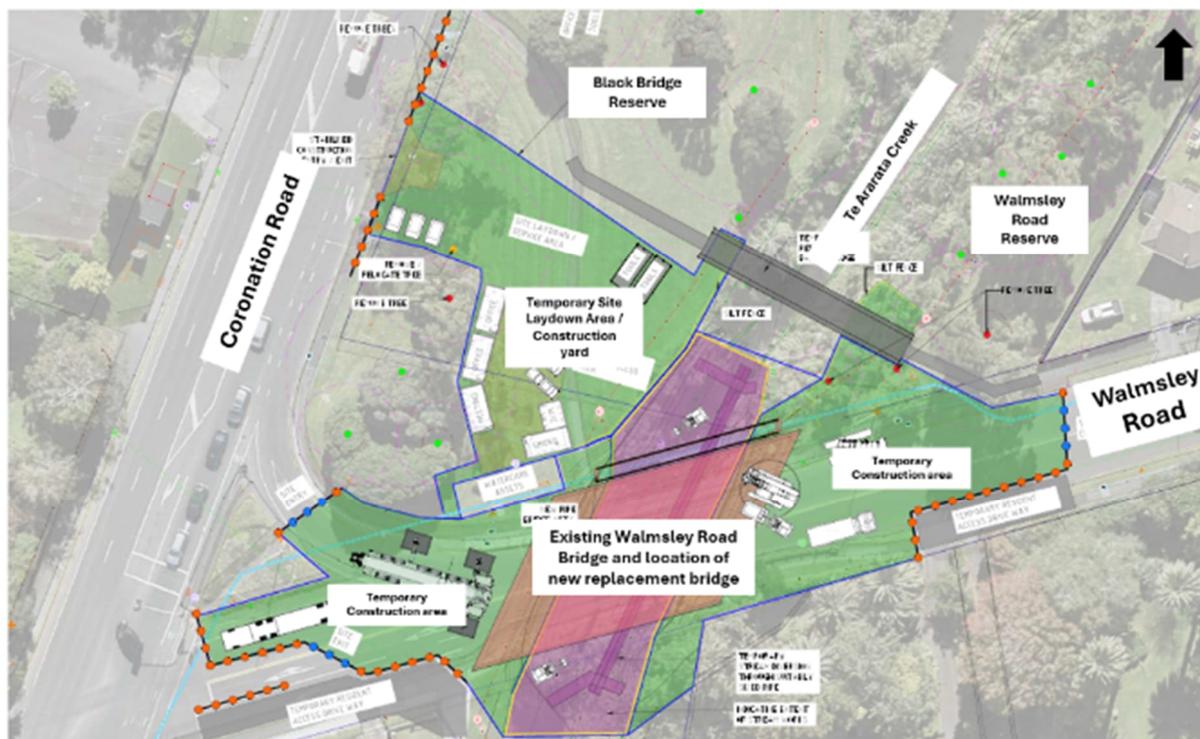


Figure 1.1: Proposed site layout.

Overall construction of the Project is anticipated to take approximately 10 – 12 months, with closure of the existing Walmesley Road bridge required for approximately 7 months during this period (and resultant diversion of traffic).

In summary, the Project includes the following key elements:

- Demolition and removal of the existing Walmesley Road twin culvert.
- Construction of a new replacement Walmesley Road bridge over Te Ararata Creek.
- Works to tie in the new replacement bridge with the existing road network.
- Recontouring of the stream banks under the bridge to achieve a wider stream channel.
- Relocation of the existing Watercare watermain pipe bridge foundations to achieve a wider clearance beneath the structure.
- Existing service relocation and/or realignment.
- Vegetation clearance, including within riparian margins and the removal of trees.
- Earthworks associated with temporary and permanent works, including within the riparian margins.
- Other temporary works and activities to facilitate the construction of the permanent Project including:
  - The formation and operation of laydown areas and a site compound predominantly within Black Bridge Reserve.
  - Works within and around the Te Ararata Creek including temporary stream diversion.
  - Temporary traffic management measures including a temporary bailey bridge to facilitate pedestrian and active mode diversions between Coronation Road and Walmesley Road. Vehicular traffic will be diverted to the wider existing road network.

Black Bridge Reserve will be used as the main construction compound and laydown area. Working hours are anticipated to be 7 am to 7 pm on weekdays and 8:30 am to 7 pm on Saturday with no works planned on Sundays and Public Holidays. Some night works may be required (for pavement tie-ins, road markings and bridge beam deliveries) and some early morning work required for concrete pours.

Some flexibility in construction methodology is sought given the constrained implementation timeframes and to accommodate outcomes from ongoing engagement with Auckland Transport (AT) and New Zealand Transport Agency Waka Kotahi (NZTA), which is currently being undertaken in parallel with the consenting process.

Final temporary traffic management (TTM) measures and drawings will be confirmed by the contractor closer to the time of construction and in accordance with the Construction Environmental Management Plan (CEMP) condition requirements of the Order in Council (Oic).

#### 1.4 Purpose of draft CTMP

The purpose of the draft CTMP is to outline the standards and agreed approach and measures that will be taken to avoid, remedy, mitigate, minimise or manage the traffic effects associated with construction works for the duration of this Project. However, some information was not available at the time this CTMP was drafted as the resource consent application is being prepared. The purpose of this CTMP is to:

- Provide a fundamental structure and demonstrate the initial findings for the CTMP which will be developed prior to the commencement of any construction activities. The CTMP shall be implemented throughout the entire construction period and is intended to be the primary tool to inform the project's management of construction traffic effects.
- The CTMP will also establish a framework that can be used to support the development of the Site-Specific Traffic Management Plans (SSTMP) and Corridor Access Requests (CAR), which will enable physical works in the road corridor once approved by Auckland Transport (AT).

The draft CTMP is generally consistent with the Integrated Transport Assessment (ITA) prepared by T+T, as part of the resource consent application.

This draft CTMP is consistent with the NZTA New Zealand Guide to Traffic Management (NZGTTM) and Code of Practice for Temporary Traffic Management (CoPTTM), noting that CoPTTM is proposed to be withdrawn in 2024. Where applicable, works within transport corridors will be undertaken in accordance with the National Code of Practice for Utility Operators Access to Transport Corridors (November 2011), unless otherwise agreed between the consent holder and the Corridor Manager.

The CTMP describes the general measures required to reduce the impacts of construction traffic and maintain the safety of all road users (including public transport and active modes) and residents/businesses that may result from construction traffic. This will entail the implementation of strategies to maintain, or minimise the impact on, traffic capacity and safety, while managing the effects on project delivery.

This CTMP does not enable physical works to take place. Approved Corridor Access Requests (CAR) and SSTMPs will be required for each activity to enable live works on the road corridor.

The draft CTMP has been based on the best available information from HEB (proposed Healthy Waters Contractor). It is noted however that resource consent has not yet been granted, construction methodology has not been finalised and a traffic management company has not yet been engaged. All traffic management measures included in the following CTMP have yet to be approved by AT. As such, it cannot be guaranteed that the methodology and management of effects described herein will be that employed verbatim at the time of construction.

The draft CTMP makes reference to (and does not repeat) the following sections of the ITA (submitted in support of the resource consent):

- Section 2 - site location.
- Section 3 - existing transport network.
- Section 4 - proposed construction methodology and construction traffic volumes.
- Sections 5 and 6 - assessment of temporary construction traffic effects.

## 1.5 Philosophy

This draft CTMP has been developed in general accordance with the traffic management recommendations put forward in the ITA report prepared for the resource consent application. Updates will be made in the CTMP should the construction methodology change in the future and/or where alternative measures have been identified.

Monitoring will be an important aspect of the CTMP and will enable the evaluation of construction effects as the Project evolves. Given the duration of the project and the potential for changing conditions and environment, the CTMP will remain a live document to be updated when necessary.

The following objectives have been set as a summary of the philosophy for the CTMP:

- Maximise safety of the travelling public and site staff.
- Enable construction efficiencies.
- Minimise delays to the public and road users.
- Minimise disruption to property access.
- Ensure appropriate access for emergency vehicles.
- Inform the public about potential impacts of Project construction traffic on the road network.
- Remediate and maintain the current condition of road assets where damage has been directly caused by construction activity.

This will be achieved by a high standard of:

- Planning construction traffic movement.
- Design of site access points and temporary traffic management (TTM).
- Maintenance of roads, signs, and work sites.
- Communication internally within the Project, and with road users.

## 1.6 Relationship to other plans

This draft CTMP forms part of a comprehensive suite of environmental controls within the Construction Environmental Management Plan (CEMP) for the construction phase of the Project.

## 1.7 Sequence of traffic management documents

Figure 1.2 below shows the relationship between the sequence of documents relating to traffic management activities. As mentioned above, the CTMP does not enable physical works to take place on the road corridor but rather sets the philosophy as to how traffic will be managed for this project.

SSTMPs and CAR's approved by AT enable physical works to take place within the road corridor. These will be developed in accordance with the philosophy documented in this CTMP.

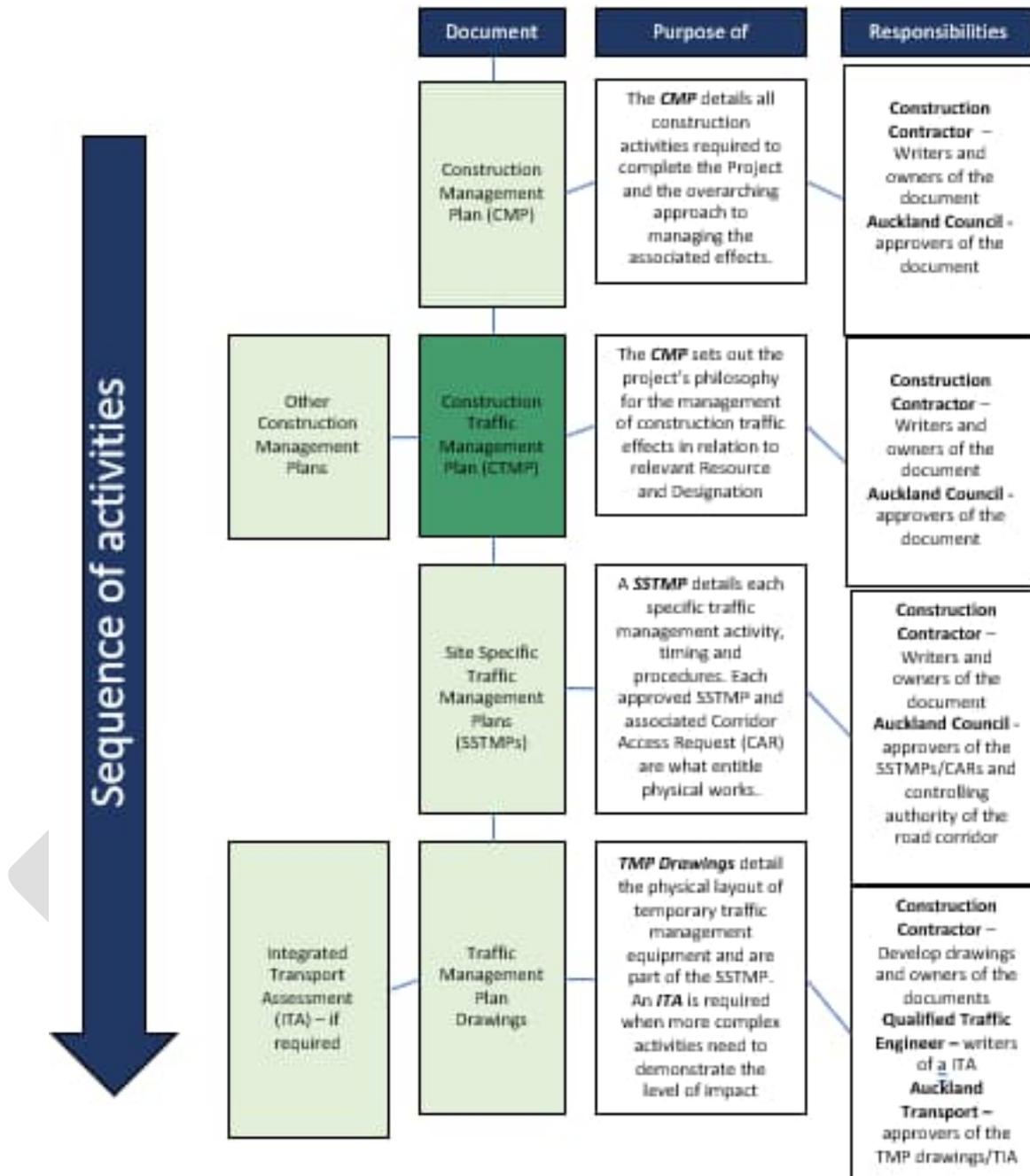


Figure 1.2: Sequence of activities for traffic management related documents.

## 1.8 SSTMP planning

Traffic Management Plans (TMPs) are required for all activities that vary the normal operating conditions of a road, irrespective of whether the activity is on a carriageway, on a footpath or on a road shoulder. Site Specific Temporary Traffic Management Plan's (SSTMPs) are a document describing the nature and extent of TTM at a work site and how road users (including pedestrians and cyclists) will be managed by the use of TTM. These documents outline the TTM procedures to be implemented, to ensure the safety of both the public and contractors is maintained throughout the duration of each construction activity.

Following programming of construction tasks, associated TTM requirements will be identified and SSTMPs prepared to ensure construction activity is conducted using an approved methodology, with agreed mitigation measures in place. There need not be a unique SSTMP for every construction activity, where appropriate generic SSTMPs can be used.

A Contractor required to undertake work within the road corridor will need a Works Access Permit (WAP) from AT. To obtain this WAP, the Contractor will apply for a CAR through the beforeudig website <http://www.beforeudig.co.nz/#>, with a SSTMP uploaded to this CAR along with any supporting information required.

## 1.9 Performance standards

The following standards and guidelines shall be adhered to in planning and implementing TTM during construction of the project:

- NZTA New Zealand Guide To Traffic Management (NZGTTM).
- NZTA Code of Practice for Temporary Traffic Management (COPTTM).
- NZTA Traffic Controls Devices Manual (TCD).
- NZTA Manual of Traffic Signs and Markings (MOTSAM).
- Austroads "Road Design" and "Traffic Management" guides.
- Auckland Council and AT specific requirements.

The CTMP and the subsequent SSTMP's shall be consistent with the applicable version of the NZGTTM / COPTTM. Where it is not possible to adhere to this standard, the COPTTM prescribed Engineering Exception Decision (EED) process will be followed, which will include appropriate mitigation measures agreed with AT Road Asset Manager. The Traffic Management Controller (TMC) has authority to approve SSTMPs and consider any associated EEDs.

TMPs must be prepared by a qualified Site Traffic Management Supervisor (STMS). The TMP is then included in a CAR and submitted to AT by the STMS for approval. The Contractor shall allow up to 5 working days for approval of a SSTMP.

## 1.10 CTMP related consent requirements

A condition of consent requires details of *"how potential adverse effects of construction traffic on the safe and efficient operation of the surrounding road network will be managed"* to be submitted as part of the CEMP for certification prior to any works commencing. This CTMP will form a part of the CEMP to address the aforementioned matter.

## 1.11 Draft CTMP structure

The remainder of this document is structured as follows:

- Section 2 defines the roles and responsibilities that will apply for the Project.

- Section 3 details the management activities required to mitigate the anticipated impacts of construction activity.
- Section 4 details the procedures that will apply for the operation and management, governance, development of SSTMPs, approvals and monitoring of the traffic management throughout the life of the Project.
- Section 5 details key stakeholders for the Project site, communications and engagement forums.
- Section 6 details the key review monitoring and update mechanisms of the CTMP.

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## 2 Roles and responsibilities

### 2.1 Defined roles and delegated level of responsibility

Specific roles and responsibilities relating to the implementation of this CTMP are detailed in Table 2.1 below.

Table 2.1: CTMP Roles and responsibilities

Role	Responsibility
Auckland Council – Regulatory Consents	<ul style="list-style-type: none"> <li>• Certification of the CTMP.</li> <li>• Monitoring of compliance with the Consent Conditions during site operations.</li> </ul>
AT	<ul style="list-style-type: none"> <li>• Approval of SSTMPs.</li> <li>• Auditing of TTM during site operations.</li> <li>• Advising network considerations such as other scheduled road works which could impact project works and TTM.</li> </ul>
ASM/NZTA	<ul style="list-style-type: none"> <li>• Advising network considerations which could impact project works and TTM.</li> </ul>
ATOC	<ul style="list-style-type: none"> <li>• Advising network considerations which could impact project works and TTM.</li> </ul>
Temporary traffic management working group	<ul style="list-style-type: none"> <li>• A Temporary Traffic Management Working Group (TTMWG) could be formed consisting of technical and communications representatives from AT and NZTA including Auckland Traffic Operations Centre (ATOC), Auckland Systems Management (ASM) and the AT Metro Service Delivery Team.</li> </ul>
Consent Holder	<ul style="list-style-type: none"> <li>• Overall responsibility to ensure resource consent conditions and TMP requirements are complied with.</li> </ul>
Construction Manager	<ul style="list-style-type: none"> <li>• Confirming site works are being undertaken in accordance with the construction methodologies and relevant management plans.</li> <li>• Responsible for delivering resources to ensure TTM is managed and maintained.</li> </ul>
Construction Traffic Manager (CTM)	<ul style="list-style-type: none"> <li>• Responsible for establishing and maintaining safe processes for all traffic management activities.</li> <li>• To ensure the Site is operated in accordance with the CTMP.</li> <li>• Responsible for coordinating all temporary traffic management activities for the Project.</li> <li>• Responsible for preparation, submission, and coordination of all traffic management plans for the Project.</li> <li>• Responsible for arranging any Integrated Transport Assessments (ITA) that are required for the SSTMP.</li> <li>• Responsible for the management of all temporary traffic site crew and operations.</li> <li>• Liaise with AT and NZTA throughout the process (in each of the preparation, submission and coordination phases) to ensure the best possible traffic management result for each party (principals, RCA and contractors).</li> <li>• Provide the approved SSTMPs to the site traffic management supervisor (STMS) to implement on site.</li> <li>• Arrange for pre-construction pavement surveys.</li> <li>• Arrange regular meetings with the CMO regarding upcoming works and permissions/approvals required.</li> <li>• Ensure that staff parking is appropriately managed.</li> </ul>

Role	Responsibility
	<ul style="list-style-type: none"> <li>To facilitate coordination meetings with AT and NZTA.</li> <li>To respond to complaints and incidents.</li> <li>To provide inductions and training for staff.</li> <li>Ensure complaints and incidents register and write reports.</li> <li>Manage the SSTMP process.</li> </ul>
Site Traffic Management Supervisor (STMS)	<ul style="list-style-type: none"> <li>Responsible for onsite implementation, maintenance and removal of the approved SSTMPs in accordance with the requirements of NZGTTM / CoPTTM.</li> <li>Be onsite during attended periods and monitor traffic flows.</li> <li>Provide feedback to the traffic manager regarding how the SSTMP is operating to the traffic manager who can propose any amendments to improve traffic flows or safety.</li> <li>Monitor the site at regular intervals (minimum of every 12 hours) to ensure that safety is maintained.</li> <li>Prepare and submit SSTMPs to AT for approval.</li> </ul>
Traffic controllers (TC)	<ul style="list-style-type: none"> <li>Traffic Controllers are responsible for assisting the STMS with their responsibilities and in accordance with the requirements of NZGTTM / CoPTTM.</li> </ul>
Construction staff	<ul style="list-style-type: none"> <li>To create a safe working environment.</li> <li>To operate the Site traffic and pedestrian management according to the CTMP.</li> </ul>
Project Engagement Lead (PEL)	<ul style="list-style-type: none"> <li>Lead and coordinate community and stakeholder engagement and communication processes.</li> <li>Arrange for letter drops to neighbours as required.</li> </ul>
External SQEP traffic engineers and planners	<ul style="list-style-type: none"> <li>The Project may draw on a wider group of experts to undertake ITAs, monitoring PCA reports and assist with planning and review of SSTMPs and planned Temporary Traffic Management (TTM).</li> </ul>

### 2.1.1 Contact details

The final CTMP will include contact details for key staff including the PEL (including role, name, phone number and email), for general queries or complaints. Project contact details will be provided in the final CTMP and any further contact details will be provided in the CEMP Communications Plan.

## 2.2 Approvals

An internal approvals procedure will be implemented by the Contractor to address all relevant issues and provide necessary notice and consultation prior to application for the SSTMPs.

The SSTMP's shall be prepared and reviewed for compliance with NZGTTM / CoPTTM and issued to the approvals team of Auckland Council. For TTM the SSTMP will be issued to the AT Road Protection Team for approval.

All TTM applications will go to the following contact as appropriate (to be completed in Final CTMP):

AT
Phone:
Email:

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### 3 Draft CTMP strategies

#### 3.1 Background

Based on assessment of temporary effects identified in the ITA, this section sets out the general traffic management strategies applicable to the project including:

- Applied standards.
- Site specific CTMP activities.

#### 3.2 Applied standards

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

- Land Transport (Road User) Rule 2004.
- Land Transport Rule: Traffic Control Devices 2004.

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

- NZTA Traffic Control Devices Manual.
- NZGTTM / CoPTTM.
- National Code of Practice for Utility Operators Access to Transport Corridors (November 2011).

This document and the SSTMPs shall be consistent with the applicable version of the NZGTTM / CoPTTM. Where it is not possible to adhere to this standard, the CoPTTM's prescribed Engineering Exception Decision process will be followed. This will include appropriate mitigation measures that shall be agreed with the AT Asset Manager.

Traffic and temporary warning signage shall conform to the standards specified in NZGTTM / COPTTM. All such specific signage will be clearly shown on plans to the approval of AT, as an integral part of the CTMP and any subsequent TTMP's.

#### 3.3 Site Specific CTMP management strategies

This section summarises the CTMP management strategies that are applicable to mitigate the traffic effects of construction activities. The approach and measures will be discussed and agreed on and will be used to inform the construction site set-up, operations and development of SSTMPs.

The objectives of the CTMP are to:

- Ensure construction traffic movements on the transport network are appropriately managed.
- Provide for the safety of everyone at all times.
- Minimise disruption and maintain pedestrian and vehicle access to/from surrounding residential properties.
- Minimise disruption from construction traffic on the travelling public and road users along the identified sections of the construction routes.
- Seek to avoid full road closures and minimise any partial or managed closures.

- Manage integration with other construction projects and AT projects – noting that as reported in section 3.2.9 of the ITA, AT have confirmed there are no planned works adjacent to the Project site or on the proposed signed diversion routes during the anticipated construction period.

Table 3.1 below provides the general management strategies that are applicable to mitigate the traffic effects of construction activities.

Table 3.1: General management strategies for the Project sites

Traffic management activity	General management strategies
Construction vehicle movements, routes and hours of operation	<ul style="list-style-type: none"> <li>• Where possible, truck layover areas will be provided within the compound.</li> <li>• Temporary removal of parking on surrounding streets will occur if a truck layover area is unable to be provided on site.</li> <li>• All over dimension vehicle routes to be agreed with AT.</li> <li>• Procedures shall be developed to ensure any spill of materials being transported to or from the site are contained.</li> <li>• Major construction activities that generate peaks of traffic, such as significant concrete pours will, as far as practicable, be scheduled to avoid the AM and PM peak periods and school arrival and departure periods.</li> <li>• Any works that may need to take place outside of the specified hours shall provide a report to AT and Auckland Council, prior to the commencement of such work, detailing how the work will be carried out and why it is necessary.</li> </ul>
Parking	<ul style="list-style-type: none"> <li>• There will be loss of approximately 30m of on-street parking on Walmsley Road.</li> <li>• Contractor will provide some staff and visitor parking within the compound, with the closed off section of Walmsley Road also available for contractor staff to park on street.</li> <li>• Workers will be encouraged to car share/pool vehicles to minimise single occupancy vehicle movements.</li> </ul>
Emergency vehicle access	<ul style="list-style-type: none"> <li>• Emergency vehicle access will include provisions for Fire and Emergency Services New Zealand (FENZ), NZ Police and St Johns.</li> <li>• If requested by the emergency services, any vehicles within the sites will be removed to provide for emergency vehicle access. Vehicles will not be moved unless load is secured and safe to move.</li> <li>• Emergency vehicles will have unrestricted access to the site for any emergencies that occur at ground level and when the site is attended.</li> <li>• The emergency services (notably FENZ, St Johns and NZ Police) will be notified of the appropriate contact for 24hr site access prior to the works through the CEMP and SSTMP application processes.</li> </ul>
Active user requirements	<ul style="list-style-type: none"> <li>• SSTMPs will be developed to manage this effect with alternative access arrangements via the temporary Bailey Bridge.</li> <li>• Temporary access in accordance with NZGTTM / CoPTTM.</li> <li>• Full reinstatement of any footpaths that have been impacted during construction.</li> </ul>
Parks and reserves	There will be no public access to the works areas at all times.
Public transport and school buses	In conjunction with AT, monitoring of bus journey times and reliability will be undertaken.

Traffic management activity	General management strategies
Compound site access	<p>The following requirements will be met as part of the Project site access works:</p> <ul style="list-style-type: none"> <li>• SSTMPs will cater for safe and effective site access point use.</li> <li>• If vehicles are required to stop or reverse in a live lane to gain access to site, Manual Traffic Control (MTC) will be implemented using an approved SSTMP during off peak hours.</li> <li>• Vehicle-mounted flashing beacons must be switched on prior to a work vehicle entering or leaving a closure.</li> <li>• Construction and delivery drivers will call ahead to the STMS by radio or mobile phone when approaching the worksite access to ensure that the gate is clear of obstructions, and they can enter the site without blocking flowing traffic.</li> <li>• Traffic Control (TC) will be in place at each site access to remove cones and allow vehicles into site.</li> <li>• TTM must be designed to allow the safe and efficient movement of visitors or workers either in work vehicles or on foot.</li> <li>• Maintaining the safety of the site access is the responsibility of all and will be managed by the STMS.</li> </ul>
Kerbside refuse collections	<p>At this stage this is not anticipated to be affected by the proposed works. Should there be any changes required this will be managed by the TTM team. Residents will be advised to leave bins outside their properties as usual and Traffic Controllers onsite will move bins to the nearest accessible location for collection. Collectors to be advised where these locations are via the PEL and any Newsletters as per the Communication Plan.</p>
Wait areas	<p>Any trucks waiting to enter the sites will need to park on adjacent roads in accordance with NZ laws and Council regulations and be called to the site if there is insufficient room to accommodate multiple trucks on-site.</p>
Materials storage	<p>Materials are to be stored in the compound.</p>
Utility services	<p>Some limited disruption to utility services may occur but it is not foreseen that outside of these works there will be a need to restrict access to utility services.</p>
Pedestrian safety	<ul style="list-style-type: none"> <li>• At all times, pedestrians will be managed in accordance with NZGTTM / CoPTTM with provision of a temporary diverted footpath and Bailey bridge.</li> <li>• Should footpaths be impacted then pedestrians will be managed in accordance with NZGTTM / CoPTTM and footpaths temporarily closed (if required) with appropriate signage and ramps provided to direct pedestrians. It is considered prudent that a fence is put in place around the perimeter of the compounds to prevent inadvertent / unauthorised access into the site by pedestrians.</li> <li>• At the interface of the construction accesses with the footpaths these will be safely managed using a hierarchy of measures as follows: <ul style="list-style-type: none"> <li>– Carry out construction whilst maintaining access to existing footpath with no impact to pedestrians.</li> <li>– Realign or redirect the facility onto temporary surfacing on the same side of the road.</li> <li>– Close the facility, with an alternative facility provided on the opposite side of the road. Safe crossing points will be provided and signed.</li> <li>– Temporarily close the facility, with an alternative route signposted and communicated to the public.</li> </ul> </li> </ul>

Traffic management activity	General management strategies
Vehicle Environmental Controls	<p>Dust suppression and detritus control is to be provided by the Contractor. If earth worked materials are carried onto the surrounding road network (dropped from vehicles carting materials to and from site), the Contractor shall be responsible for cleaning and repairing the road back to its original condition each evening during the earthworks period. In doing this, the Contractor shall ensure that approved TTM measures are in place to undertake this work safely and that no materials are washed or swept into any stormwater drains or natural drainage systems.</p> <p>The Contractor shall take all practicable measures to minimise the discharge of dust and detritus from the site. These measures shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Training staff and contractors on practices relating to minimising dust emissions, dust control and procedures for reporting and dealing with dust emissions if they arise.</li> <li>• Minimising the areas of exposed ground.</li> <li>• Mulching, re-grassing and/or planting of bare areas such as topsoil piles and completed batters as soon as reasonably practicable.</li> <li>• Using water and/or dust suppressants on all disturbed surfaces including roads when required.</li> <li>• Applying a speed restriction on all internal roads and not exceeding 30 km/h at all times and erecting a sign at the entrance to the site advising of this.</li> <li>• Provision of wheel cleaning facilities including hoses, brooms and shovels or maintaining a contingency of sweeper equipment on call at all times to clean up material which may have been accidentally spilt onto public roads.</li> </ul> <p>The Contractor is to adhere to any further guidance given by the Traffic Management Co-ordinator and/or AT in relation to dust suppression and removal of detritus material.</p>
Private properties	<p>Pedestrian and vehicle access will be maintained to all private properties for residents and/or stakeholders at all times. In the unlikely situation where vehicle access is not possible access plans for properties for residents and/or stakeholders are to be developed and agreed upon by the TTMWG prior to closure implementation. The process is:</p> <ul style="list-style-type: none"> <li>• Sensitive receptor plan development – Stakeholder Manager to speak with all residents affected by upcoming works to determine if special access is required (i.e. – frequent Ambulance visits, mobility access needs).</li> <li>• Plan developed to maintain access to properties.</li> <li>• Plan discussed with construction team and distributed to TTM team and emergency services.</li> <li>• Residents advised where and how to access site safely – this is during attended and unattended hours.</li> </ul> <p>Discussions with the occupants of the affected properties will take place at least 48 hours in advance to identify:</p> <ul style="list-style-type: none"> <li>• Any times of day that are better than others for the work.</li> <li>• Any alternative routes that can be established.</li> <li>• Any need for shuttles etc. to or from transport on either side of the work area.</li> </ul> <p>These processes will avoid any unreasonable inconvenience to landowners and minimise disruption to private property access.</p>

Traffic management activity	General management strategies
Site Staff	<p>All staff involved in the Project will attend a Project induction prior to the commencement of work to ensure a common basis for approaching their work. The induction will include environmental, health and safety and hazard management in relation to the Project area, along with temporary traffic control.</p> <p>Training will include the following:</p> <ul style="list-style-type: none"> <li>• Specific training will be provided to those involved in temporary traffic management as appropriate to their role and responsibilities.</li> <li>• Regular toolbox talks will provide a forum to reinforce and educate Project staff around specific temporary traffic control issues and actions during the Project.</li> <li>• The STMS will also conduct briefings on-site prior to every TTM operation to identify hazards pertaining to the work site and controls to be implemented to protect the safety of Project staff and public.</li> </ul>
Driver induction and driver safety briefings	<p>The STMS is responsible to undertake a site induction and ongoing driver safety briefings with all contracted transport operators to/from the compounds. The training is to cover (but not be limited to):</p> <ul style="list-style-type: none"> <li>• Routes of travel to and from the Project Site.</li> <li>• Requirement for, and use of possible communication systems.</li> <li>• Requirements to abide by local speed restrictions for dust and detritus management.</li> <li>• Requirement for courteous driving.</li> <li>• Appropriate following distances.</li> <li>• Requirements to report hazards on the transport route.</li> <li>• Check rear view mirrors regularly and where safe to pull over, allow traffic behind to pass.</li> <li>• No overtaking on public roads unless this can be done safely.</li> <li>• Strict adherence to speed limits. The contractor will strictly monitor speeds of the construction workforce.</li> <li>• Protocols around other road users such as cyclists / pedestrians. This includes, all construction related activity to give way to pedestrian/cycle traffic, all traffic to reduce to 20 km/h when passing pedestrians / cyclists and ensuring that at least 1.5 metres of separation between vehicles and cyclists / pedestrians. If this separation cannot be achieved, then the vehicle is to wait until a safe passing space is available or the rider signaled that it was safe to pass.</li> <li>• No unnecessary stopping and no idling outside private residences / driveways.</li> <li>• Reporting of any incidents / issues to the Contractor.</li> <li>• Drivers made aware to maintain clean public road surfaces throughout the construction period and report any dust / dirt tracking.</li> <li>• Signs will be installed within the site requiring that when vehicles headlights are used, they shall be dipped (low beam) at all times.</li> </ul>
Personal Protective Equipment	<p>As a minimum, all personnel working on site must wear a day or night compliant high visibility garment. Construction workers will therefore be clearly visible and will set a consistent high level of Personal Protective Equipment and appearance across the site.</p>
Other permits or approvals	<ul style="list-style-type: none"> <li>• Over-dimension and over-weight permits if applicable.</li> <li>• Approvals from road controlling authority, such as approved CAR application.</li> </ul>

Traffic management activity	General management strategies
Construction Traffic Speed enforcement	<p>Monitoring of speeds of Construction staff during construction will be the responsibility of the STMS. The STMS will obtain feedback from the Traffic Controllers who are best to advise of any concerns in relation to speed. Should the STMS or Traffic Controllers suspect speed is an issue then there are two methods for monitoring and enforcement:</p> <ul style="list-style-type: none"> <li>• Floating car surveys (i.e. car following) or</li> <li>• Use of a radar gun.</li> </ul> <p>The STMS will record the registration plate of the offender, and a formal warning process will occur. In the event that the same offence occurs twice for one person, that person will be expelled from the site unless the reason is based on an emergency situation.</p>
Clean Roads	<p>Public roads will be maintained in a clean state to minimise any potential dirt tracking onto the road surfaces and subsequent effects such as sediment runoff, dust and loss of traction. The proposed management measures include:</p> <ul style="list-style-type: none"> <li>• Maintaining a contingency of implementing portable truck washes at all site access points.</li> <li>• Twice daily formal monitoring and education of all construction staff / drivers to monitor for any material which may be accidentally spilt onto public roads from construction traffic.</li> <li>• Maintaining a contingency of water carts and sweeper trucks on call at all times to clean up any material which may be accidentally spilt onto public roads from construction traffic.</li> <li>• Coordinate residents reporting to site staff of any tracked / spilt material for immediate clean up.</li> </ul>
Communications	<ul style="list-style-type: none"> <li>• Communication campaigns should be undertaken in relation to traffic management activities throughout construction activities (including letter drops to affected residents, flier drops, project signage, web based resources etc).</li> <li>• Appropriate temporary traffic management measures should be incorporated by AT to advise other road users of the construction traffic.</li> <li>• Liaison with FENZ, NZ Police and St Johns with details of the start and end of the road closure, so that the emergency services are informed of diversionary routes.</li> </ul>

Table 3.2 below details site specific management strategies where the general strategies are not sufficient. In case of a conflict between general and site-specific management strategies, the site specific management strategies always take precedence.

Table 3.2: Site specific management strategies for the Project sites

Site specific activity	Description of impact	Mitigation measures
Site Compound	Construction traffic routing	<p>Access to the site will be from:</p> <ul style="list-style-type: none"> <li>• Left in from Coronation Road and left out to McKenzie Road.</li> <li>• Walmsley Road east of the bridge.</li> </ul>
	Site access	<ul style="list-style-type: none"> <li>• Construction accesses will be designed in accordance with relevant AT design standards (including sight lines, accessway widths and gradients).</li> </ul>
	Operation	<ul style="list-style-type: none"> <li>• A 1.8 m high security fence will be erected around the perimeter of the site to delineate the construction area to prevent public access.</li> <li>• TTM and clear warning signs of the construction site access and egress.</li> <li>• Appropriate wheel wash facilities to be set up at the exit points.</li> <li>• Site Traffic Management Supervisor will safely manage the movements of construction traffic to and from the road network to ensure the safety of all road users is maintained and that construction vehicles can negotiate access and egress to avoid any additional queueing on in the peak periods on Coronation Road and Walmsley Road.</li> <li>• Site Traffic Management Supervisor will co-ordinate (for example via radio control) trucks accessing the site to ensure that construction vehicles arriving and departing the site can do safely.</li> <li>• The CTMP will implement a construction driver education programme given the close proximity to residential properties and pedestrians.</li> <li>• Movements of specialised machinery or large components (e.g. cranes) will not occur on a day to day basis. Separate to the Resource Consent application, bespoke SSTMPs and CARs will be developed once exact details of the machinery and vehicles required is known, as they have successfully been carried out for other Healthy Water projects. Agreement with Auckland Transport will be required and over-dimension rules and associated permitting processes will need to be complied with.</li> <li>• Contractor to provide appropriate staff and visitor parking within the site.</li> <li>• Wheel wash facilities to be set up at the exit points of the compound.</li> </ul>
Walmsley Road Properties east and west of the bridge	Residents access	<ul style="list-style-type: none"> <li>• Ongoing communications with residents will be essential to rapidly address any traffic issues should they arise.</li> <li>• Where required, design and provide temporary accessways and vehicle crossings to residential properties to ensure residents have 24 hour access to their homes.</li> <li>• Clear signing of the diversion routes.</li> </ul>

Site specific activity	Description of impact	Mitigation measures
		<ul style="list-style-type: none"> <li>FENZ, NZ Police and St Johns, as well as Council refuse collection will be informed of changes to access to #2 and #4 Walmsley Road.</li> </ul>
Pedestrians and cyclists on Walmsley Road	Safety	<ul style="list-style-type: none"> <li>TTM direction signing on Coronation Road and Walmsley Road either side of the construction works for pedestrians and cyclists to the bailey bridge.</li> <li>Where construction traffic needs to enter the site and needs to cross a footpath, the CTMP will include measures to ensure the safety of pedestrians including warning signs, provision of traffic marshals at the site entrances and construction driver education programmes implemented, particularly in relation to access and egress of sites adjacent to footpaths.</li> </ul>
Bus routes 309 and 309X	Routing and journey times/reliability	<ul style="list-style-type: none"> <li>Identify the final diversion routes and associated temporary infrastructure (and any supporting Traffic Resolutions), communications (including multilingual posters and social media to advise of route changes) and any other mechanisms to help maintain bus service reliability (such as supporting financial contributions towards additional operational costs (including extra kilometres, driver's hours and potentially extra bus(es)).</li> <li>Coordinate timing of the Walmsley Road closure and reopening with AT Metro timing of notification of the 309 and 309X bus schedule changes.</li> <li>Fortnightly meetings with AT Metro prior to and during the Walmsley Road closure to coordinate changes of the bus services.</li> <li>Communications with residents and other users of the temporarily closed 3 pairs of bus stops (on Walmsley Road east of the bridge, Hall Avenue and Dornall Avenue) to inform them of the bus stop closures and available alternative bus stops.</li> <li>Direction signing at each of the three pairs of bus stops on Walmsley Road to the nearest alternative bus stop.</li> </ul>
School buses	Routing and journey times/reliability	<ul style="list-style-type: none"> <li>For school buses contracted by AT, identify the final diversion routes, associated temporary infrastructure (and any supporting Traffic Resolutions), communications to schools and parents/guardians of the children (to advise for example route changes and any pick up and drop off changes) to advise of route changes, any other mechanisms to help maintain school bus service reliability (such as supporting financial contributions towards additional operational costs and the exact timing of implementation of the changes).</li> <li>Coordinate timing of the Walmsley Road closure and re-opening with school term time start and end dates and subsequent AT Metro timing of notification of the school bus schedule changes.</li> <li>Fortnightly meetings with AT Metro prior to and during the Walmsley Road closure to coordinate changes of the school bus services.</li> <li>For school buses not contracted by AT (e.g. existing MoE contracted buses operating on Bader Drive on the detour route and any private school buses), consultations will be carried out with the schools and wider project communications to make the schools aware of the road closure.</li> </ul>

Site specific activity	Description of impact	Mitigation measures
Walmsley Road Over Dimension and High Productivity Motor Vehicle (HPMV) detour route	OD and HPMV route	Liaise with AT OD team with details of start and end of the road closure, so that AT can carry out necessary business consultations and communications.
Emergency Services	Consultation	Liaison with FENZ, NZ Police and St Johns with details of the start and end of the road closure, so that the emergency services are informed of diversionary routes.
Existing McKenzie Road/Miller Road/Coronation Road intersection	Specific measures	<ul style="list-style-type: none"> <li>• Work with ATOC to review and optimise traffic signal timings at the Miller Road/McKenzie Road/Coronation Road traffic signal intersection.</li> <li>• Right turn lane McKenzie Road to Walmsley Road temporarily closed.</li> <li>• Coronation Road left turn lane to be closed (except for construction traffic).</li> <li>• Miller Road lane configuration unchanged except ahead lane markings to be temporarily removed.</li> <li>• Work with AT to identify suitable measures required with temporary closure of the Walmsley Road Lifeline route.</li> </ul>
Specific measures for Bader Drive (south of Elmdon Street) and Robertson Road signed diversion route	General measures	<ul style="list-style-type: none"> <li>• Clear signing of the diversion routes including use of VMS signs where appropriate.</li> <li>• Work with ATOC to optimise existing traffic signal timings with the changes in traffic flows on Bader Drive and Robertson Road.</li> </ul>
Mahunga Drive and Rimu Road signed diversion route	Specific measures	<ul style="list-style-type: none"> <li>• Introduce TTM traffic calming measures (e.g. warning signs) on Rimu Road and Mahunga Drive to advise drivers to reduce vehicle speeds.</li> <li>• Given the existing crashes that currently occur on the bend at Mahunga Drive/Rimu Road east of the SH20 off ramp intersection, introduce TTM safe hit poles on the centre line to increase conspicuity of the bend. A suggested layout is shown in Appendix E TTM drawing No T2024/038/002.</li> <li>• Given the crashes that currently occur at the Rimu Road/SH20 on ramp intersection, introduce TTM traffic signal control. A suggested layout is shown in Appendix E TTM drawing No T2024/038/002.</li> <li>• Work with ATOC and ASM to review and optimise traffic signal timings at the the Rimu Road/ SH20 on and off ramp traffic signal intersection (including the TTM signal proposal) including monitoring of queues on the SH20 off ramp.</li> </ul>

Site specific activity	Description of impact	Mitigation measures
		<ul style="list-style-type: none"> <li>• Work with ATOC to review and optimise traffic signal timings at the Walmsley Road/Mahunga Drive and Rimu Road traffic signal intersection.</li> <li>• Work with ATOC to optimise existing traffic signal timings at the Rimu Road/SH20 off ramp and Mahunga Road/Walmsley Road/Donnell Road Intersections with the changes in traffic flows.</li> <li>• Clear signing of the diversion routes including use of VMS signs where appropriate.</li> </ul>
<p>Bader Drive (north of Elmdon Street), Elmdon Street and Hall Avenue signed diversion route</p>	<p>Specific measures</p>	<ul style="list-style-type: none"> <li>• Working with AT introduce temporary 30 km/h speed limit on Bader Drive (north of Elmdon Street), Elmdon Street and Hall Avenue to reduce vehicle speeds and hence injury severity in the event of an accident. Note the temporary speed limit would be introduced in accordance with Section 7 of the Land Transport Rule: Setting of Speed Limits 2024. Signs would be placed approximately every 200m.</li> <li>• Introduce TTM traffic calming measures in the form of bolt down rubber speed cushions (in accordance with ATCOP Drawing No. TC006) on Bader Drive, Elmdon Street and Hall Avenue to reduce vehicle speeds, especially on the approaches to and adjacent to Māngere College as indicated in Appendix E TTM drawing No T2024/038/001. The cushions would be located at approximately 60m intervals taking into account locations of side roads, car park accesses, bus stops, intersections and the Bader Drive raised zebra crossing. PW39 signs would be provided on the approach to each cushion. Daily checks will be carried out to ensure the speed cushions have not been dislodged and remedial action taken if they have.</li> <li>• Introduction of TTM measures to change the priorities of the Walmsley Road/Hall Avenue intersection with Walmsley Road west (residents access) being changed to give way with supporting No Stopping At All Times (NSAAT) parking restrictions on Hall Avenue. A suggested layout is shown in Appendix E TTM drawing No T2024/038/006.</li> <li>• Introduction of TTM improvements at the Bader Drive/Elmdon Street priority intersection with Option 1 traffic signals (a suggested layout is shown in Appendix E TTM drawing No T2024/038/003) or Option 2 temporary bolt down roundabout (a suggested layout is shown in Appendix E TTM drawing No T2024/038/004). With Option 2 daily checks would be carried out to ensure the roundabout has not been dislodged and remedial action taken if it has.</li> <li>• Introduction of TTM No Stopping At All Times (NSAAT's) on the Elmdon Street/ Hall Avenue bend and its approaches to improve forward visibility for approaching vehicles and to reduce any scope for delays. A suggested layout is shown in Appendix E TTM drawing No T2024/038/005.</li> <li>• Clear signing of the diversion routes in particular in respect of routes for light vehicles and heavy vehicles through use of VMS signs.</li> </ul>
<p>Monitoring</p>	<p>Specific measures</p>	<p>A number of monitoring actions will be undertaken within the CTMP including fortnightly reporting (to be carried out by a Suitably Qualified Experienced Practitioner (SQEP) in Transport Engineering) including:</p>

Site specific activity	Description of impact	Mitigation measures
		<ul style="list-style-type: none"> <li>• Directional classified tube traffic counters will be installed both before the Walmsley Road closure and during the 7 month closure period at the locations shown in Figure 3.1 of the ITA. In addition to these being located on the proposed signed diversion routes, additional locations have been included as identified in discussions with AT. Based on these traffic counters, reporting to AT will be undertaken comparing the results from the traffic counters with both the ITA predicted peak period flow changes and with the pre closure traffic flows. Depending on the findings from this review, in consultation with AT, additional TTM mitigation measures will be identified and agreed with AT to address any issues arising.</li> <li>• On Hall Avenue and Elmdon Street, changes in heavy vehicle flows will be monitored. Should heavy vehicle flows be significantly higher than pre closure, then periodic site surveys will be carried out to identify the heavy vehicle operators on this route and additional TTM mitigation measures will be identified and agreed with AT to address any issues arising. These measures could include a review and improvement to VMS displays and /or undertaking targeted communications with specific heavy vehicle operators observed using this route.</li> <li>• Review of the CAS database will be undertaken on the signed diversion routes. Should this highlight any significant safety issues associated with increased traffic flows from the Walmsley Road closure, then additional TTM mitigation measures will be identified and agreed with AT.</li> <li>• With AT and ASM, use ATOC supplied data to monitor queues on the SH20 off ramp at Rimu Road. Where required, work with ATOC and ASM to optimise traffic signal timings at the Rimu Road/ SH20 on and off ramp traffic signal intersections (including the TTM traffic signal proposal).</li> <li>• Available AT Metro data on bus journey times and reliability for the re-routed 309 and 309X bus services will be reviewed. Depending on the findings from this review, in consultation with AT, additional TTM mitigation measures will be identified and agreed with AT to address any issues arising.</li> <li>• Available AT Metro data on school bus journey times and reliability for the six re-routed school bus services will be reviewed. Depending on the findings from this review, in consultation with AT, additional TTM mitigation measures will be identified and agreed with AT to address any issues arising.</li> <li>• Available AT Metro data on bus and school bus journey times and reliability on the signed diversion routes will be reviewed. Depending on the findings from this review, in consultation with AT, additional TTM mitigation measures will be identified and agreed with AT to address any issues arising.</li> </ul> <p>In addition as part of wider monthly community engagement reporting, the Project Engagement Lead (PEL) will ensure ongoing communications with residents, schools, churches and businesses is undertaken to rapidly address any traffic issues should they arise. Additional TTM mitigation measures arising from these consultations will be identified and agreed with AT.</p>

Site specific activity	Description of impact	Mitigation measures
Pavement Condition Assessment (PCA)	Construction truck movements Coronation Road, McKenzie Road and Walmsley Road	<p>It is proposed that a Pavement Condition Assessment (PCA) is carried out by a Suitably Qualified Experienced Practitioner (SQEP) in Transport Engineering to provide an assessment of the road surface condition, prior to and post construction of:</p> <ul style="list-style-type: none"> <li>• Coronation Road (between Miller Road / McKenzie Road intersection and the Coronation Road / SH20 on and off ramp intersection).</li> <li>• McKenzie Road (between Kirkbride Road and Miller Road).</li> <li>• Walmsley Road (between the site and Walmsley Road / SH20 on and off ramp intersection).</li> </ul> <p>This will allow for an evaluation of any changes to the condition of the road pavement.</p> <p>A pre-construction PCA will be carried out by a visual inspection of the road surface and the findings will be presented in a Pre-construction PCA report which will identify any pre-existing road surface condition issues. Upon completion of the construction works, a post construction PCA will be carried out by a visual inspection of the road surface. A comparison of the road surface conditions pre-and post-construction will be carried out and reported in a post construction PCA report. This will also identify any remedial works and a timescale for implementation that are directly attributable to the construction traffic (as opposed to general wear and tear). In order to determine what is directly attributable to the construction traffic will require pre and post construction classified tube traffic counts on the sections of these roads and a comparison with records from the contractor of the daily number of trucks accessing the Project. This then allows calculation of the proportion of the Project construction trucks compared to existing total and heavy vehicle traffic flows and hence the contribution to any required remedial measures.</p>
Pavement Condition Assessment (PCA)	Signed Diversion Routes	<p>It is proposed that a Pavement Condition Assessment (PCA) is carried out on the diversion routes. The PCA will provide an assessment of the road surface condition of the signed diversion routes prior to and post construction. This will allow for an evaluation of any changes to the condition of the road pavements.</p> <p>The signed diversion roads to be surveyed are:</p> <ul style="list-style-type: none"> <li>• Bader Drive between McKenzie Road and Robertson Road.</li> <li>• Robertson Road between Bader Drive and Walmsley Road.</li> <li>• Hall Avene and Elmdon Street between Walmsley Road and Bader Drive.</li> <li>• Mahunga Drive and Rimu Road between Walmsley Road and Coronation Road.</li> </ul> <p>A pre-construction PCA will be carried out by a visual inspection of the road surface and the findings will be presented in a pre-construction PCA report which will identify any pre-existing road surface condition issues. Upon completion of the construction works, a post construction PCA will be carried out by a visual inspection of the road surface. A</p>

Site specific activity	Description of impact	Mitigation measures
		<p>comparison of the road surface conditions pre-and post-construction will be carried out and reported in a post construction PCA report. This will also identify any repair works and a timescale for implementation that are considered to be directly attributable to the diverted traffic (as opposed to general wear and tear).</p>
<p>TM signage</p>		<p>Signage helps with control of traffic. The following types of signage are proposed:</p> <ul style="list-style-type: none"> <li>• AT regulatory standard signage and Information signage.</li> <li>• Health and Safety (H&amp;S) signage.</li> <li>• Temporary traffic management (TTM) signage.</li> </ul> <p>All signs will be removed at the completion of construction.</p> <p>Regulatory signs</p> <p>As part of SSTMPs, regulatory signs will be installed including:</p> <ul style="list-style-type: none"> <li>• Temporary signs warning of turning construction traffic at both the compounds access for the duration of the construction period.</li> </ul> <p>These signs will be agreed with AT in accordance with Part 4 of the Traffic Control Devices (TCD) Manual, noting that TCD now replaces Manual of Traffic Signs and Markings (MOTSAM). The Contractor will position the signs in accordance with the detailed design drawings and AT traffic management requests.</p> <p>H&amp;S signs</p> <p>Health and Safety signage will be erected in accordance with the Health and Safety and Employment Act and associated New Zealand Standards in relation to the works. These signs are general warning signs in relation to work activities or hazards and will be used in various locations along the route.</p> <p>TTM signs</p> <p>As part of SSTMPs, temporary traffic management signs will comply with COPPTM/ NZGTTM. The signs and traffic control will be temporary in nature and will be managed by the contractor. Daily inspection and random audits of the signage will be undertaken by the Contractor to ensure it complies with the final approved CTMP.</p>

## 4 Temporary traffic management framework

### 4.1 Background

This section sets out the general operational procedures for temporary traffic management activities for the Project discussed in this CTMP.

### 4.2 Site specific traffic management plan development

SSTMPs will be required (under the Local Government (Auckland Council) Act 2009) for all work or physical controls that occur within the road corridor at the Project sites.

The SSTMPs will be prepared for discrete stages of work within the road corridor and will follow the format set in NZGTTM / CoPTTM. They will describe the measures to be implemented to manage the temporary traffic effects associated with the movement of construction traffic or particular works.

SSTMPs will be submitted to, and approved by, AT. The SSTMPs will be assessed by the Traffic Management Coordinator for compliance with NZGTTM / CoPTTM and the ability to avoid adverse effects on the travelling public.

During the development of each SSTMP, the Project personnel will liaise directly with AT and NZTA to ensure that the overall concept of the TTM is acceptable to all parties. This will, in turn, assist with timely approvals of SSTMPs.

The general framework for the submission of a SSTMP is as follows:

- Initial liaison with internal Project personnel to determine scope of SSTMP.
- Depending on the projected disruption to traffic, consultation with AT and NZTA may be required immediately, otherwise the development of initial draft Traffic Management Diagrams (TMD) shall begin. Should an ITA be required, the development of the ITA would start immediately.
- Liaison between internal Project personnel to confirm work areas shown on draft TMDs are correct and allow for the construction works to proceed.
- Consultation with AT and NZTA utilising the agreed draft TMDs. This stage will allow AT to determine if an ITA is required, as well as notification from AT of any other additional specific requirements. If an ITA has been requested at this stage, this is when development of the ITA would commence.
- Finalising of the SSTMP (and ITA if required) as well as any other AT requirements and then submission to AT for official approval.
- Any further liaison with AT and NZTA as required.
- Receiving the approved SSTMP from AT and dissemination to the wider Project team in preparation of implementation.

### 4.3 Site specific traffic management plan structure

The following four elements summarise the structure of a typical SSTMP:

- SSTMP Pro-forma - This is the text of the document, which outlines the requirements, methodologies and standards required in observing the SSTMP. Details included in each SSTMP Pro-forma will vary depending on the activity requiring traffic control.
- Engineering Exception Decisions (EED) - All applicable EED's will be appended to the SSTMP.
- CAD drawings - CAD drawings will be employed for illustrating the closures defined by the pro-forma 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 strategies, or driver information signage installed.

A template of the SSTMP will be provided in the final CTMP.

### 4.4 Review and approvals

SSTMPs once fully developed and ready for final approval, will be submitted to AT. MyWorksites, an online TMP submission system, will be used to submit and manage SSTMPs relevant to the Project.

Following submission of the SSTMPs to AT, the contractor will work with AT to resolve any remaining issues prior to final approval. Most of these items should be covered off during the initial liaison period with AT and NZTA while developing the SSTMP.

Any SSTMPs or CARs obtained from AT will be forwarded to Auckland Council's compliance monitoring officer for record.

### 4.5 Monitoring and audits

The STMS will continuously monitor the site they are responsible for while works are ongoing. This will be recorded in the form of two hourly checks each day and will include any issues and actions taken to rectify them.

The Contractor's Traffic Controller (TC) will conduct official audits of the construction site, in compliance with NZGTTM/ CoPTTM, specifically Section A8, on a weekly basis. The TC will then discuss the results of these audits with the relevant STMS and ensure any issues are understood and rectified.

Copies of the audits will be kept by the Project and made available to Healthy Waters (or their representative) on request.

### 4.6 Training

Training in relation to temporary traffic management is outlined in Table 4.1 below:

Table 4.1: TM training

Qualification / Training	Description	Who
Project Induction	Initial induction.	All site staff.
Appropriate Site Safe accreditation	Demonstrate proficiency on site.	All site staff.

Qualification / Training	Description	Who
Toolbox talks	Regular meetings to highlight key messages or issues and receive feedback.	All site staff.
STMS Level 1	NZQA qualification to oversee site in live road environment.	Person responsible for traffic management associated with the project.
Traffic Controller (TC)	NZQA qualification to assist with traffic management.	All staff undertaking traffic management associated with the project.

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## 5 Communications

### 5.1 Background

The following section outlines the key stakeholders affected by the traffic related activities for the proposed work. The Communication Plan will include more details on the consultation and engagement process for key stakeholders where required.

### 5.2 Key stakeholders

Table 5.1 below identifies the key stakeholders and specific issues that will be engaged with prior to and during construction include:

Table 5.1: Key stakeholders and issues to be discussed during the development of the Project

Key Stakeholder	Specific issues to be discussed
AT	<ul style="list-style-type: none"> <li>• CTMP, SSTMP, CAR and assessment of effects of construction activities.</li> <li>• Monitor bus journey times and reliability and identify any TTM measures that could assist bus operations.</li> <li>• Monitor AT contracted school bus journey times and reliability and identify any Temporary Traffic Management (TTM) measures that could assist school bus operations.</li> <li>• Assist AT OD team with consultations with businesses on alternative OD route.</li> </ul>
NZTA	<ul style="list-style-type: none"> <li>• Assessment of effects of construction activities.</li> </ul>
Walmsley Road residents	<ul style="list-style-type: none"> <li>• Continuous communications with residents will be essential to rapidly address any traffic issues should they arise.</li> <li>• Where required, design and provide temporary accessways and vehicle crossings to residential properties to ensure residents have 24 hour access to their homes.</li> <li>• Clear signing of the diversion routes.</li> <li>• FENZ, NZ Police and St Johns, as well as Council refuse collection will be informed of changes to access to Walmsley Road properties.</li> </ul>
Owners and occupiers of properties on diversion routes e.g. residents, schools (including school bus operators where appropriate), churches, businesses etc	<ul style="list-style-type: none"> <li>• Keep residents and adjacent properties on the diversion routes informed of Project activities and progress and also to understand any specific access requirements and effects experienced during the construction activity and to rapidly address any traffic issues should they arise.</li> <li>• Monitor (non AT contracted) school bus journey times and reliability and identify any Temporary Traffic Management (TTM) measures that could assist school bus operations.</li> </ul>
Local Board	<ul style="list-style-type: none"> <li>• Timing and duration of construction.</li> </ul>
Auckland Council – Parks, Sports and Recreation	<ul style="list-style-type: none"> <li>• Impact on reserve and public and maintenance access to them.</li> </ul>
Emergency Services	<ul style="list-style-type: none"> <li>• Liaison with FENZ, NZ Police and St Johns with details of the start and end of the road closure, so that the emergency services are informed of diversionary routes.</li> </ul>

This will be updated in the development of the final CTMP.

Key themes and topics of relevance for the key stakeholders relating to traffic related construction activities include:

- Where construction related vehicle movements may impact normal operations of the key stakeholders.
- Any impacts upon access or parking due to traffic management measures on roads adjacent to the site.
- Any construction related activities that may impact upon the safety of key stakeholders at any time during the construction period of the Project.
- Communication of significant construction works and vehicle movements that may impact key stakeholders to ensure safety is maintained.

### 5.3 Special considerations

#### 5.3.1 Special events

Special events are defined as construction activities that generate a major peak in construction traffic or a change in vehicle access that may require a further level of planning for traffic impacts. These are generally non-typical and occur very infrequently over the course of the construction programme. Special events could include:

- Major delivery and pick up of large plant for example the crane at the start and end of the project.
- Large concrete pours that may result in a greater volume of truck movements.

#### 5.3.2 Neighbour notifications – letter drop

Letter drops to Walmsley Road residents east and west of the bridge will be undertaken to inform neighbours of information and any changes relating to the Project. This may include:

- Working hours.
- Estimated arrival / departure times of site personnels (separate to working hours).
- Periods of heavy vehicle activity.
- Night works if applicable.
- Changes to on-street parking.
- Significant changes in project activities.

As a minimum the letter will include:

- Auckland Council / Healthy Waters logos.
- Project description and work programme and progress.
- Location of the changes.
- Reason for the changes.
- Expected duration (dates).
- Project contact details and communication channel.

The Project Engagement Lead (PEL) shall arrange for letter drops to the neighbours as required throughout the project. In addition to the physical letter drop, an electronic copy of the letter should also be provided to the compliance monitoring officer for their reference and information.

### 5.3.3 Incident response

An incidents register will be developed to provide “a detailed process for detecting, investigating, and recording incidents” and the CTM will be responsible for updating this. Actions to be undertaken in the event of an incident are described below:

#### Scope

The contractor will have necessary resources available to respond promptly in the event of a traffic incident or other emergency situation. The top priority will be the safety and wellbeing of everyone involved and then take any actions, working in conjunction with AT, NZTA, NZ Police, FENZ and St Johns to minimise disruption or inconvenience, whilst keeping the incident or area isolated from members of the general public.

#### Extent

In the event of a traffic incident, the nominated site STMS and available crew will attend in the first instance and report to the Traffic Management Site Lead. The project will make available any mobile plant (eg water trucks, excavators etc.) which can assist in the case of a serious incident. Any TTM resource on site not immediately involved in critical works will be made available to assist as appropriate.

#### Emergencies and incident communications

An emergency action plan will be produced prior to implementation of any TTM activities. The Plan will outline procedures, requirements and responsibilities in the case of an emergency. In addition to this plan, each SSTMP will address specific requirements in the case of an emergency. Events that may require implementation of the emergency action plan include:

- Traffic accidents.
- Emergency services requiring access to or through the site.
- Natural disasters.
- Flooding.
- Unplanned construction events.
- Emergency works.
- Significant traffic congestion.
- Inclement weather.

In the event of a crash or significant incident, the Contractor will provide immediate assistance and where necessary, contact the 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.

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

In the event that a representative of the NZ Police requests a copy of implemented TMP for safety or emergency reasons, the contractor will immediately comply with this request. In the event of an emergency or breakdown on site, the contractor will endeavour to provide a clear passage for emergency vehicles or tow trucks to ensure that the disruption and delay to other motorists through the site is minimised.

Relevant teams at AT/NZTA shall be advised of any incident at the worksite via email and/or phone call and then an incident report sent to AT CAR/Compliance team ([TTM.crash@aucklandtransport.govt.nz](mailto:TTM.crash@aucklandtransport.govt.nz)) AT CAR Manager, Project Manager and any other appropriate parties within 48 hours of the incident. This will include:

- A description of the nature, timing and cause of the incident.
- An assessment of any adverse effects of the incident on the environment.
- A description of any remedial and/or mitigation measures that have been, or will be, implemented as a result of the incident to prevent the incident reoccurring in the future.

Remedial action and/or mitigation measures described in the incident report must be implemented as soon as practicable of the incident report being provided to AT to ensure that they are not ongoing. This could also involve updates to the CTMP.

#### 5.3.4 Complaints management

Any legitimate traffic complaints received will be taken seriously and matters raised shall be investigated and responded to as quickly as possible. This will involve maintaining a register of any complaint received regarding the construction activities associated with this Project. The register will include:

- Contact details of the complainant.
- Nature and details of the complaint.
- Location, date and time of the complaint and the alleged event giving rise to the complaint.
- Weather conditions.
- Other activities in the area, unrelated to the Project, that may have contributed to the complaint.
- Description of any measures taken to respond to the complaint.

The CEMP requires "*methods for responding to queries and complaints*" and the CTM will be responsible for updating the CTMP complaints register.

## 6 CTMP review, monitoring and update

This Draft CTMP should be considered as a live document. It will be developed by the Contractor to become a final CTMP following the resource consent approvals and will be included in the CEMP for certification prior to construction.

The final CTMP will also be updated throughout the course of the project to reflect material changes to construction methods, site conditions or the natural environment. Table 6.1 outlines the temporary traffic monitoring to be undertaken during construction of the Project:

Table 6.1: CTMP monitoring programme

Monitoring activity	Frequency	Responsibility
Check method statement reflects requirements and requisite TMP has been approved.	Prior to approving work packs.	Construction Manager.
Inspect temporary traffic management layout.	2 hourly when site is live.	STMS.
Documented check of all temporary traffic management.	Daily and as layouts change.	STMS.
TTM audit in accordance with NZGTTM / CoPTTM.	Monthly.	Traffic Engineer.

AT may from time to time undertake random audits of the TTM installations. The STMS will be notified of this audit at the time it is undertaken and the site condition rating form resulting from the AT inspection will be made available to the Project Team in accordance with NZGTTM / COPTTM.

Approved CMTPs and SSTMPs will be reviewed by the Project Manager and STMS on a regular basis, to ensure that the documents remain relevant for use. Any changes to these plans will be recorded.

## 7 Applicability

This report has been prepared for the exclusive use of our client Auckland Council Healthy Waters, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that our client will submit this report as part of an application for resource consent and that Auckland Council as the consenting authority will use this report for the purpose of assessing that application.

Tonkin & Taylor Ltd  
Environmental and Engineering Consultants

Report prepared by:

Report reviewed by:

.....  
Colin Shields  
Senior Principal Transport Planner

.....  
James Dyer  
Principal Transport Planner

Authorised for Tonkin & Taylor Ltd by:

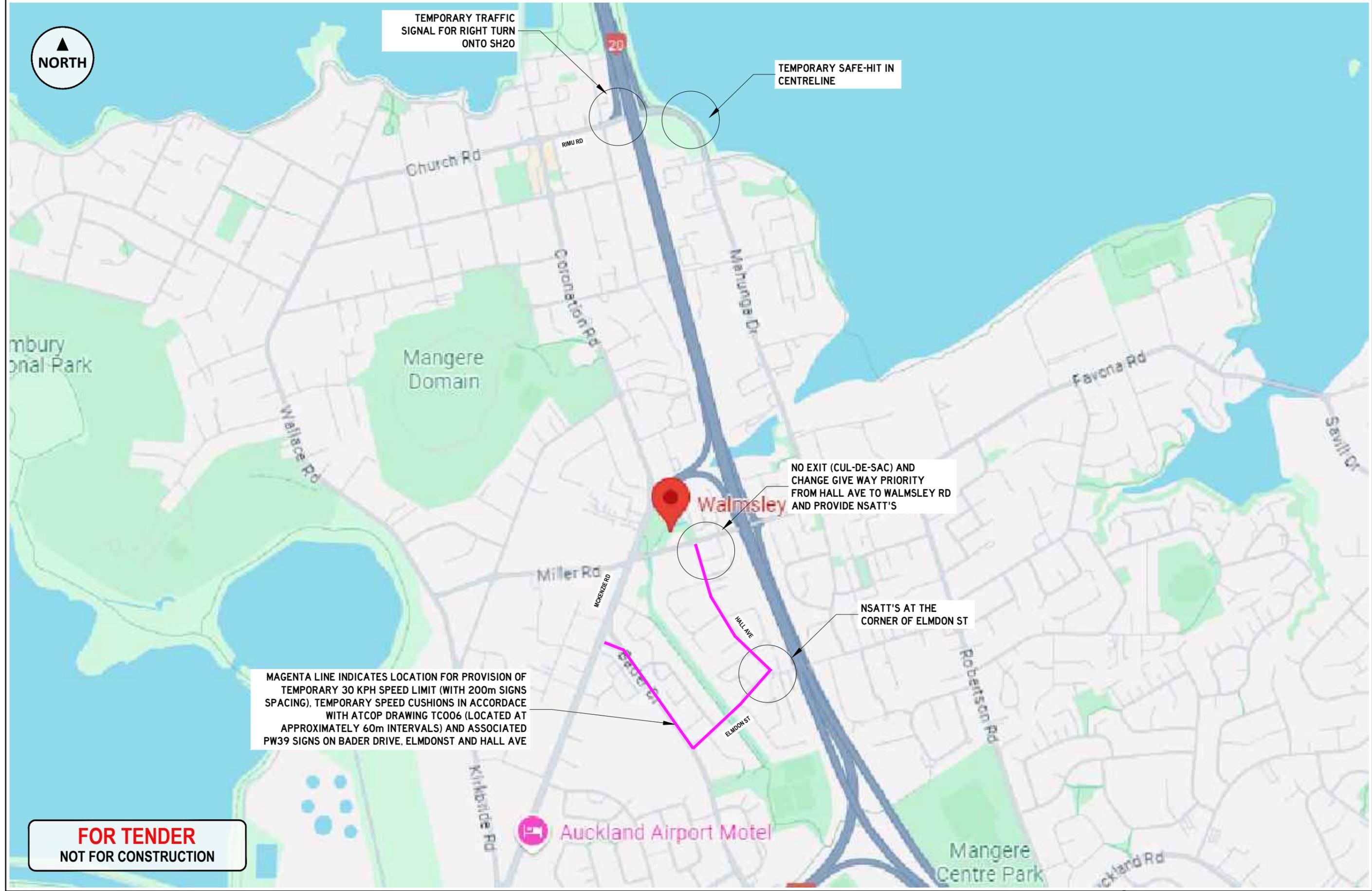
.....  
Chris Bauld  
Project Director

COSH  
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# Appendix A TTM Plans

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DRAFT



TEMPORARY TRAFFIC SIGNAL FOR RIGHT TURN ONTO SH20

TEMPORARY SAFE-HIT IN CENTRELINE

NO EXIT (CUL-DE-SAC) AND CHANGE GIVE WAY PRIORITY FROM HALL AVE TO WALMSLEY RD AND PROVIDE NSATT'S

NSATT'S AT THE CORNER OF ELMDON ST

MAGENTA LINE INDICATES LOCATION FOR PROVISION OF TEMPORARY 30 KPH SPEED LIMIT (WITH 200m SIGNS SPACING), TEMPORARY SPEED CUSHIONS IN ACCORDANCE WITH ATCOP DRAWING TCO06 (LOCATED AT APPROXIMATELY 60m INTERVALS) AND ASSOCIATED PW39 SIGNS ON BADER DRIVE, ELMDONST AND HALL AVE

**FOR TENDER**  
NOT FOR CONSTRUCTION

RCA / Client / Contractor / Contract: 	Author / Originator: 	Project / Contract: <b>TE ARARATA CULVERT REPLACEMENT PROJECT</b> Layout Title: <b>OVERVIEW OF TEMPORARY TRAFFIC MANAGEMENT (TTM)</b> Layout Parts: 1 of 1	Designed: A Sukasem Drawn: Nov 2024 Checked: V Waru 	Scale: <b>NTS A3</b> Drawing No. <b>T2024 / 038 / 001</b>
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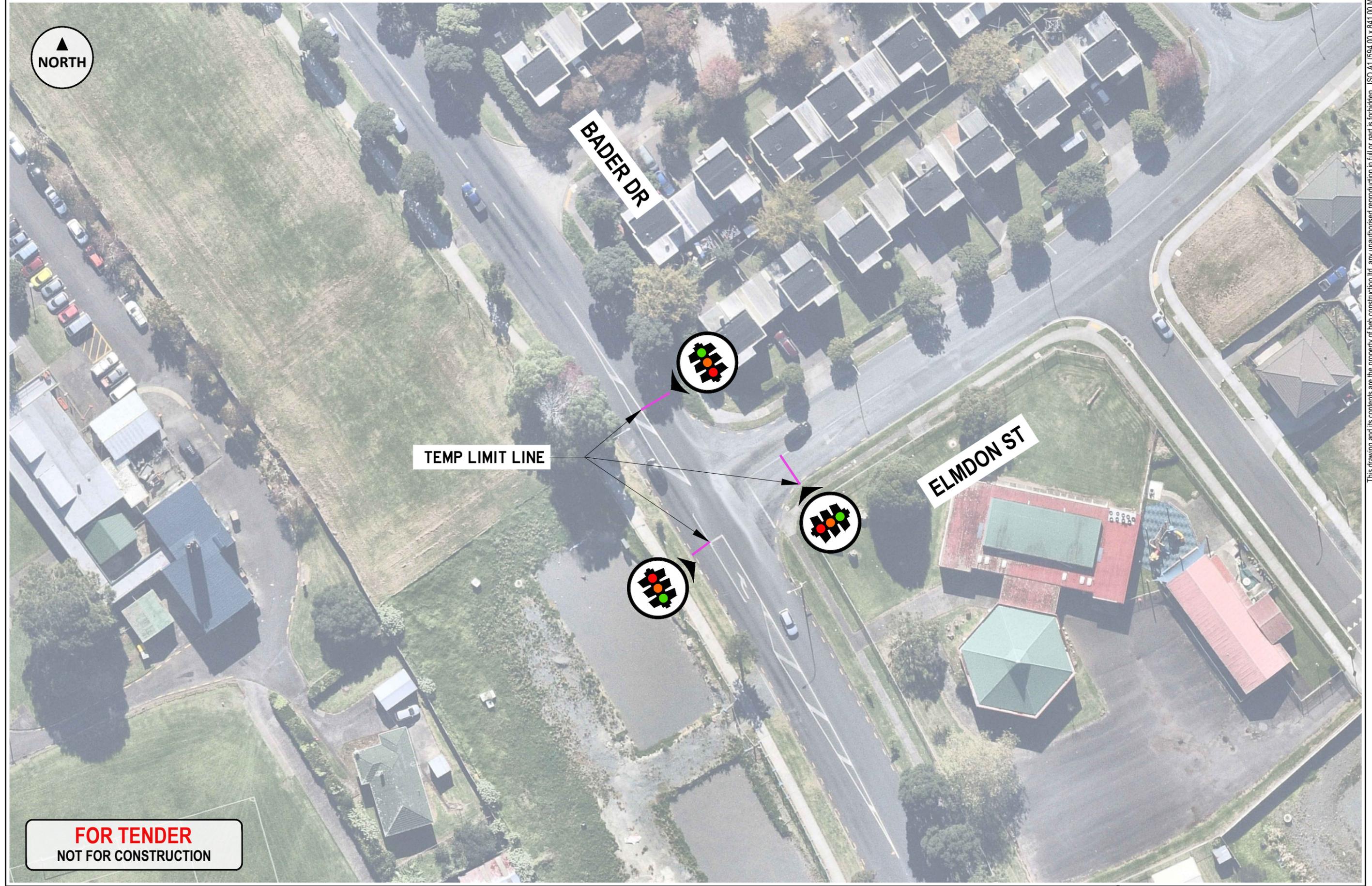
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				Layout Title: <b>MAHUNGA DR/ RIMU RD AND SH20</b>		Drawn: V Waru Nov 2024		Drawing No. <b>T2024 / 038 / 002</b>	
				Layout Parts: <b>1 of 1</b>		Checked: V Waru <i>[Signature]</i> Nov 2024		Revision No. 0	

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TEMP LIMIT LINE

BADER DR

ELMDON ST

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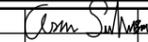


3m RADIUS  
ROUNDABOUT  
(RUBBER)

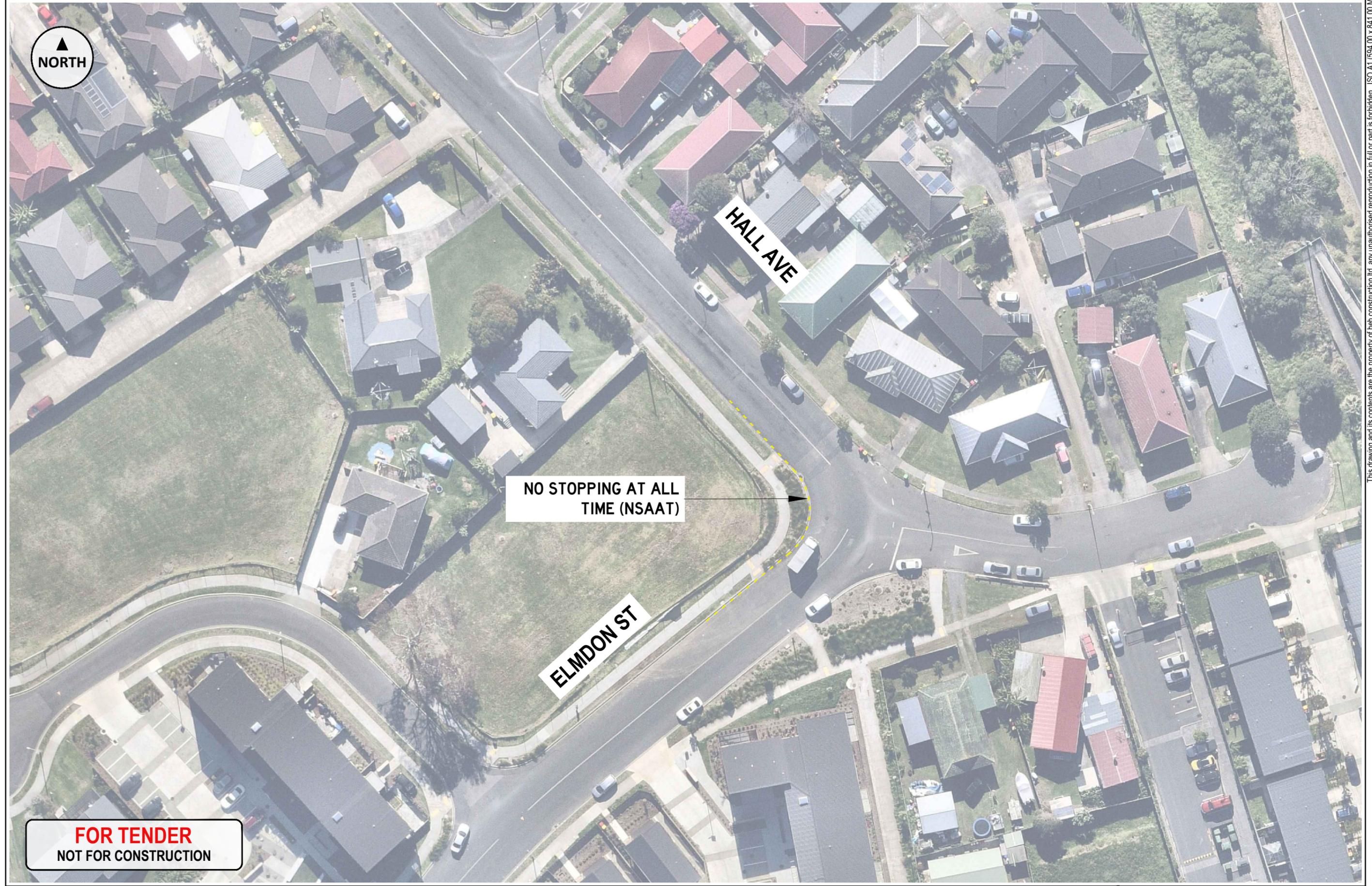
BADER DR

ELMDON ST

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**NO STOPPING AT ALL  
TIME (NSAAT)**

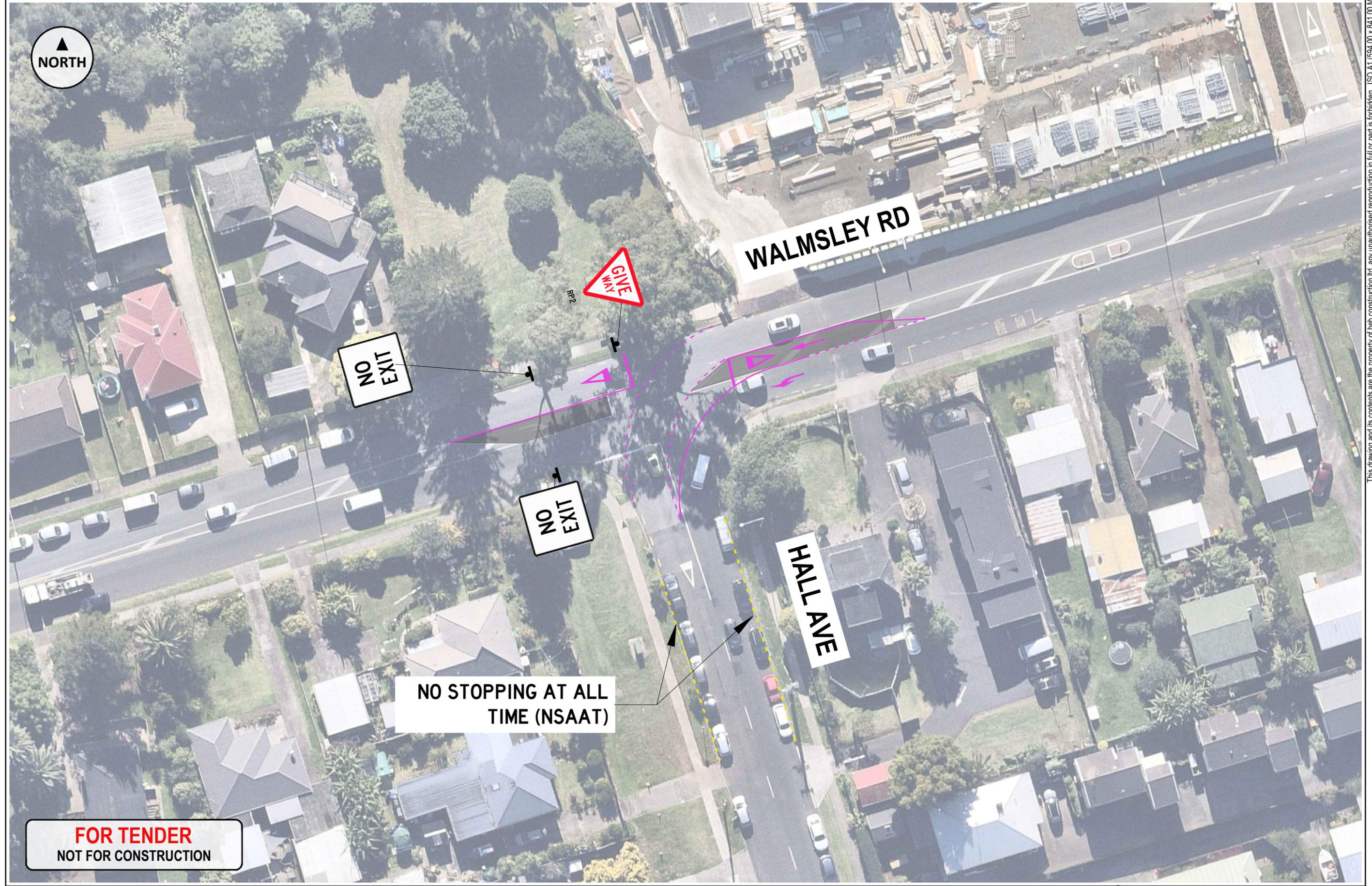
**HALL AVE**

**ELMDON ST**

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Designed	A Sukasem	<i>A. Sukasem</i>	Nov 2024													
Drawn			Nov 2024													
Checked	V Waru	<i>V. Waru</i>	Nov 2024													



**WALMSLEY RD**

**HALL AVE**

**NO EXIT**

**NO EXIT**

**NO STOPPING AT ALL TIME (NSAAT)**



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