





TMP Title: Downer - Water Tank Upgrade - Manutahi Road, Paraite, Taranaki

ATTACHED IS THE PROFORMA WHICH IS SUMMARISED BELOW:

Description Summary:	The Contractors conducting Upgrades to the existing Water Tank on Manutahi Road, Paraite, Taranaki as per Work Scope attached.	
Work Space Address:	Manutahi Road, Paraite, Taranaki - TTM from MANUTAHU ROAD/0.200 to MANUTAHU ROAD/0.001	
Workspace Orientation:	Berm, Shoulder, One Lane, Whole Road	
Active Closure Type(s):	Berm, Manually Controlled Alternating Flow, Traffic Signal Controlled Alternating, Manually Controlled Road Closure (eg. Tree Felling), Trucks Crossing with Speed Reduction	
Unattended Closure(s):	No Unattended Closure Required	
Night time Closure(s):	No Night Time Closure	
Speed:	Permanent Speed: 80km/h	TSL Requested: Attended: 30km/h, 50km/h Unattended: N/A
Road Level:	Level 1	
Approval requested from	07/01/2019 to 28/06/2019	Scheduled Start: 07/01/2019
Work Times:	7:00 to 19:00	Expected Duration: 25 Day(s)
TMP Applicant:		Isaiah Moore 021588252 Email: cars@trafficsafe.co.nz
Contractor:1		Project Manager: Tim Haylock +64226572716 Tim.Haylock@downer.co.nz
On Site Traffic Management:		Site Contact: Braden Brooks 027 536 4883 braden.brooks@trafficsafe.co.nz
TMC:1		Greig Bosley 0275848358 greig.bosley@npdc.govt.nz


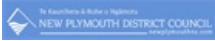
RCA consent (eg CAR/WAP) and/or RCA contract reference



TRAFFIC MANAGEMENT PLAN (TMP) – FULL FORM

Use this form for complex activities. Refer to the NZ Transport Agency's Traffic control devices manual, part 8 Code practice for temporary traffic management (COPTTM), section E, appendix A for a guide on how to complete each field.

TMP Reference: 031218002

Organisations

<p>Contractor (Working Space):</p>  <p>Project Manager: Tim Haylock +64226572716 Tim.Haylock@downer.co.nz</p>	<p>Principal (Client):</p>  <p>New Plymouth District Council 067596060 enquiries@npdc.govt.nz</p>
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<p>Contractor (TTM):</p>  <p>Braden Brooks 027 536 4883 braden.brooks@trafficsafe.co.nz</p>	<p>RCA:</p>  <p>Greig Bosley 0275848358 greig.bosley@npdc.govt.nz</p>
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	Road names and suburb	House no./RPs (From and to)	Road level	Permanent speed	AADT
Location details and road characteristics	Manutahi Road, Paraite, Taranaki	MANUTAH ROAD/0.200 - MANUTAH ROAD/0.001	Level 1	80km/h	2260
	Henwood Road, Paraite	HENWOOD ROAD/2.760 - HENWOOD ROAD/3.240	Level 1	80km/h	2257
	Manutahi Road, Paraite	MANUTAH ROAD/0.120 - MANUTAH ROAD/0.001	Level 1	80km/h	2260
	Henwood Road, Paraite	HENWOOD ROAD/2.660 - HENWOOD ROAD/3.240	Level 1	80km/h	2257
	Manutahi Road, Paraite	MANUTAH ROAD/0.180 - MANUTAH ROAD/0.001	Level 1	80km/h	2260
	Henwood Road, Paraite	HENWOOD ROAD/2.780 - HENWOOD ROAD/3.215	Level 1	80km/h	2257

Traffic details (main route)	AADT = 2260	Peak hourly flows = 226
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Description of work activity

The Contractors conducting Upgrades to the existing Water Tank on Manutahi Road, Paraite, Taranaki as per Work Scope attached.

Methodology:

- Establish Site Office on the corner of Henwood Road and Manutahi Road, Paraite.
- Carry out all earth works for Truck Deliveries on Manutahi Road, Paraite.
- Carry out earth works for Pedestrian Access to Work Site via Henwood Road, Paraite.
- Conduct Water Tank Upgrades.
- Open cut trench that will be dug across to do a Water Pipe tie in.

Various Earth Moving Machinery, Trucks, Cranes and Utility Vehicles will be onsite.

No Active works are to be constructed during all Moratorium Dates unless been given approval by all affected RCA's/TMC's.

Planned work programme

Start date	07/Jan/2019	Time	7:00	End date	28/Jun/2019	Time	19:00
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Consider significant stages, for example: *The Contractors will have an Attended Trucks Crossing Closure with a Speed Reduction of 50km/h on Manutahi Road and Henwood Road, Paraite, Taranaki.*

<ul style="list-style-type: none"> • road closures • detours • no activity periods. 	<p>- Refer to Design Number TMD 1.</p> <p><i>An Attended Berm Closure will be installed on Manutahi Road and Henwood Road, Paraiti.</i></p> <p>- Refer to Design Number TMD 2.</p> <p><i>Traffic Management may install a Manual Traffic Control to help assist all large work vehicles that need assistance with entering and exiting the Work Site on Henwood/Manutahi Road, Paraiti.</i></p> <p>- Refer to Design Number TMD 3.</p> <p><i>A Temporary Traffic Light Closure will be installed to carry out all Water Pipe Installation and Tie In works on Henwood/Manutahi Road, Paraiti.</i> <i>An Manual Traffic Control will be used as contingency if any Traffic Light Faults occur.</i></p> <p>- Refer to Design Number TMD 4 and TMD 6. - Refer to Design Number TMD 5 and TMD 7.</p>				
Alternative dates if activity delayed	<ul style="list-style-type: none"> • A time contingency within the valid date range has been allocated to allow for delays 				
Road aspects affected (delete either Yes or No to show which aspects are affected)					
Pedestrians affected?	No	Property access affected?	Yes	Traffic lanes affected?	Yes
Cyclists affected?	No	Restricted parking affected?	No	Delays or queuing likely?	Yes
Proposed traffic management methods					
Installation <i>(includes parking of plant and materials storage)</i>	<p><i>On arrival on site and following the safety and hazard briefing the STMS will instruct the crew to install the TTM equipment following the approved site diagram and in the following order:</i></p> <ol style="list-style-type: none"> <i>The first sign erected must be the advance warning sign.</i> <i>Remaining signs are placed in order from the advance warning sign until the works end sign is reached. The vehicle then makes a loop on a single direction carriageway or simply turns around on a bidirectional carriageway to make the next run. This process is continued until the sign network is complete.</i> <i>Tapers and delineation devices must only be placed once all signs have been installed.</i> <i>Before any construction equipment or materials are brought onto the worksite a drive through check of the worksite must be made in all directions including all side roads. This check must confirm that the worksite is safe & to the minimum standard shown in the TMP and that:</i> <ul style="list-style-type: none"> <i>- the restriction to traffic flow is reasonable</i> <i>- the signs and delineation devices give clear messages to road users, and</i> <i>- the signs and delineation devices are securely erected and will remain in their correct position under the expected traffic volumes and weather conditions.</i> <p><i>All plant and material will either be within the working space for daily use or delivered to site on an 'as required' basis.</i> <i>If MTC site required, once the signage has been placed the manual traffic controllers to be placed to assist with controlling traffic flow as the remainder of the delineation is placed around the working space.</i></p>				
Attended (day)	<p><i>As the site will be attended at all times when equipment is on the carriageway the STMS or delegated TC will monitor the TTM regularly and maintain or make changes as necessary for the ongoing safety of the site. All site checks and or changes to be recorded on the "on site record" (attached).</i></p> <p><i>The time of installation and placement of the TSL signage is to be documented in the 'on site record'.</i></p> <p><i>The STMS or delegated TC will also monitor the MTC operation for competence, timings of traffic flow through the site and specifically the safety of cyclists passing through the controls.</i></p> <p><i>The MTC operators will maintain contact with each other and the operators within the closure at all times in case of emergency and specific site traffic or plant requirements for movement through and into the closure.</i></p>				
Attended (night)	<i>Night works are not planned for this activity.</i>				
Unattended (day)	<i>No unattended day site</i>				
Unattended (night)	<i>No unattended night site</i>				

Detour route	A detour will not be required for this activity			
	Does detour route go into another RCA's roading network?			No
	Note: Confirmation of acceptance from affected RCA must be submitted prior to occupying the site.			
Removal	<p>The removal of TTM measures must be in the reverse order of establishment, i.e. reverse order for removal as per (c), (b), (a). The traffic truck will be used for the removal and the amber flashing beacon will be used at all times. The last sign of removal will be the advance warning. The STMS or delegated TC to make a final check and record of the cleared site before leaving at the end of the day.</p> <p>The MTC paddle operators to assist with controlling the flow of traffic when equipment is removed from the carriageway. The time of removal of the TSL signage is to be documented in the 'on site record'.</p>			
Proposed TSLs (see TSL decision matrix for guidance)				
	TSL details as required Approval of Temporary Speed Limits (TSL) are in terms of Section 5 of Land Transport Rule: Setting of Speed Limits 2003, Rule 54001 (List speed, length and location)	Times (From and to)	Dates (Start and finish)	Diagram ref. no.s (Layout drawings or traffic management diagrams)
Attended day/night	Manutahi Road, Paraiti, Taranaki : A temporary maximum speed limit of 50km/h is hereby fixed for motor vehicles travelling over the length of road situated between MANUTAHU ROAD/0.150 House no/RP and MANUTAHU ROAD/0.001 House no/RP on Manutahi Road, Paraiti, Taranaki	7:00 - 19:00	07 January, 2019 to 28 June, 2019	See designs attached TMD 1
	Henwood Road, Paraiti, New Zealand : A temporary maximum speed limit of 50km/h is hereby fixed for motor vehicles travelling over the length of road situated between HENWOOD ROAD/2.820 House no/RP and HENWOOD ROAD/3.180 House no/RP on Henwood Road, Paraiti, New Zealand	7:00 - 19:00	07 January, 2019 to 28 June, 2019	See designs attached TMD 1
	Henwood Road, Paraiti, New Zealand : A temporary maximum speed limit of 30km/h is hereby fixed for motor vehicles travelling over the length of road situated between HENWOOD ROAD/2.780 House no/RP and HENWOOD ROAD/3.015 House no/RP on Henwood Road, Paraiti, New Zealand	7:00 - 19:00	07 January, 2019 to 28 June, 2019	See designs attached TMD 2
Unattended day/night	Not Required	Not Required	Not Required	Not Required
TSL Duration	Will the TSL be required for longer than six months? <i>If yes, attach the completed checklist from section I-18: Guidance on TMP Monitoring Processes for TSLs to this TMP</i>			No
Positive traffic management measures				
Side friction using cones Signs both sides of the road (Gated) as necessary MTC's using Stop/Go paddles Cones placed down the centre of the road providing side friction from the TSL to derestriction 2 x cones placed at the end of longitudinal to define safety zone Additional measures available to the STMS are as follows: Narrowing lane widths adjacent to the work space, closer spacing of cones and cones offset (Where cones are placed either side of lane(s), the cones on one side are placed longitudinally offset from the other by a half cone spacing).				
Contingency plans				
Generic contingencies for:	Major Incident A maior incidents is described as:	Actions		

<ul style="list-style-type: none"> major incidents incidents pre planned detours. <p>Remove any options which do not apply to your job</p>	<p>A major incidents is described as:</p> <ul style="list-style-type: none"> Fatality or notifiable injury - real or potential Significant property damage, or Emergency services (police, fire, etc) require access or control of the site. 	<p>The STMS/ in charge person must immediately carry out the following:</p> <ul style="list-style-type: none"> stop all activity and traffic movement secure the site to prevent (further) injury or damage contact the appropriate emergency authorities render first aid if competent and able to do so notify the RCA representative and / or the engineer under the guidance of the officer in charge of the site, reduce effects of TTM on the road or remove the activity if safe to do so re-establish TTM and traffic movements when advised by emergency authorities that it is safe to do so. Comply with any obligation to notify WorkSafe.
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	<p>Incident</p> <ul style="list-style-type: none"> excessive delays - real or potential minor or non-inquiry accident that has the potential to affect traffic flow Structural failure of the road. 	<p>Actions</p> <p>The STMS/in charge person must immediately carry out the following:</p> <ul style="list-style-type: none"> stop all activity and traffic movement if required secure the site to prevent the prospect of injury or further damage notify the RCA representative and / or the engineer STMS to implement a plan to safely remove TTM and to establish normal traffic flow if safe to do so re-establish TTM and traffic movements when it is safe to do so and when traffic volumes have reduced.
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	<p>Detour</p>	<p>Actions</p>
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	<p>Note also the requirements for no interference at an accident scene:</p> <p>Requirements for no interference at an accident scene: In the event of an accident involving serious harm the STMS must ensure that nothing, including TTM equipment, is removed or disturbed and any wreckage article or thing must not be disturbed or interfered with, except to:</p> <ul style="list-style-type: none"> save a life of, prevent harm to or relieve the suffering of any person, or make the site safe or to minimise the risk of a further accident, or maintain the access of the general public to an essential service or utility, or prevent serious damage to or serious loss of property, or follow the direction of a constable acting in his or her duties or act with the permission of an inspector. 	
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<p>Other contingencies to be identified by the applicant (i.e. steel plates to quickly cover excavations)</p>	<p>On site TTM to be used to protect victim(s), protect the accident scene, give access to emergency services if required or control traffic flow in case of unforeseen circumstance affecting the carriageway.</p>
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Authorisations

<p>Parking restriction(s) alteration authority</p>	<p>Will controlled street parking be affected?</p>	<p>No</p>	<p>Has approval been granted?</p>	
	<p>Not Required</p>			
<p>Authorisation to work at permanent traffic signal sites</p>	<p>Will portable traffic signals be used or permanent traffic signals be changed?</p>	<p>Yes</p>	<p>Has approval been granted?</p>	
	<p>Not Required</p>			
<p>Road closure authorisation(s)</p>	<p>Will full carriageway closure continue for more than 5 minutes (or other RCA stipulated time)?</p>	<p>No</p>	<p>Has approval been granted?</p>	
	<p>Not Required</p>			

Bus stop relocation(s) – closure(s)	Will bus stop(s) be obstructed by the activity?	No	Has approval been granted?		
	Not Required				
Authorisation to use portable traffic signals	Make, model and description/number		MPB 40000 Portable Traffic Lights		
	NZTA compliant?		YES		
EED					
Is an EED applicable?	No	EED attached?	Not Required		
Delay calculations/trial plan to determine potential extent of delays					
AADT= 2260 Divide by 2 lanes = 1130 divide by 8 hours to estimate peak flow = 226 /hr. If we apply a calculation test of 5 minute delays resulting in queue lengths of up to 10 vehicles (est. 100m), and subsequent delay times of up to 0:58 minutes:seconds. Therefore queue lengths are maintainable and delays will be less than 5 minutes.					
Public notification plan					
Public notification plan attached?	No				
On-site monitoring plan					
Attended (day and/or night)	The attended site shall be monitored (self audited) by the STMS or delegated TC a minimum of 2 hourly, which will be documented on the attached form				
Unattended (day and/or night)	No unattended site				
Method for recording daily site TTM activity (eg CoPTTM on-site record)					
As per CoPTTM on site record					
Site safety measures					
<p>All persons traveling on the back of a moving Traffic Control Truck MUST wear full harnesses attached to sliding lanyards High Viz uniform must be worn by Traffic Safe people at all times. Hard hats and safety eye wear are to be worn whenever outside of a vehicle 2.5KG Fire Extinguishers and First Aid Kits are to be stowed in the Traffic Control Truck available for all people at all times Sand bags from the Traffic Control Truck shall be used to contain toxic spills if needed.</p>					
Other information					
Site specific layout diagrams					
Number	Title				
	TMD 1 - Attended Trucks Crossing with TSL.pdf TMD 2 - Attended Berm Closure.pdf TMD 3 - MTC, STOP STOP.pdf TMD 4 - Traffic Lights.pdf TMD 5 - MTC Contingency.pdf TMD 6 - Traffic Lights.pdf TMD 7 - MTC Contingency.pdf MPB 4000 Portable Traffic Lights Brochure.pdf				
Contact details					
	Name	24/7 contact number	CoPTTM ID	Qualification	Expiry date
Principal	New Plymouth District Council, New Plymouth District Council	067596060			

TMC	New Plymouth District Council, Greig Bosley	0275848358			
Contractor	Downer, Tim Haylock	+64226572716			
STMS	Traffic Safe NZ Ltd, Braden Brooks	027 536 4883	104868	STMS L1	17/08/2020
	Traffic Safe NZ Ltd, Badinlee Munro-Smith	027 536 4883	100061	Level 1	26/10/2021
	Traffic Safe NZ Ltd, David Antill	027 541 6291	83643	Level 1	24/05/2021
	Traffic Safe NZ Ltd, Eric Ayala	027 226 3787	115765	Level 1	22/06/2021
	Traffic Safe NZ Ltd, Grant Morrison	027 202 5376	114367	Level 1	16/04/2021
	Traffic Safe NZ Ltd, Kaleb Hitchcock	022 171 4946	78480	STMS L1	08/07/2019
	Traffic Safe NZ Ltd, Richard (Rjay) Jansen	027 254 8946	86793	Level 1	30/11/2020
	Traffic Safe NZ Ltd, Robyn Gordon	027 536 4883	119296	Level 1	26/10/2021
TC					

TMP Preparation

Preparation	Isaiah Moore	03/12/2018	<i>A.M.</i>	80931	STMS 2/3 NP	14/08/2021
	Name (STMS qualified)	Date	Signature	ID no.	Qualification	Expiry date
This TMP meets CoPTTM requirements		Number of diagrams attached		8		

TMP returned for correction (if required)						
	Name	Date	Signature	ID no.	Qualification	Expiry date

Engineer/TMC to complete following section when approval or acceptance required

Approved by TMC/engineer (delete one)	Greig Bosley					
	Name	Date	Signature	ID no.	Qualification	Expiry date

Acceptance by TMC (only required if TMP approved by engineer)						
	Name	Date	Signature	ID no.	Qualification	Expiry date

Qualifier for engineer or TMC approval

Approval of this TMP authorises the use of any regulatory signs included in the TMP or attached traffic management diagrams.

This TMP is approved on the following basis:

1. To the best of the approving engineer's/TMC's judgment this TMP conforms to the requirements of CoPTTM.
2. This plan is approved on the basis that the activity, the location and the road environment have been correctly represented by the applicant. Any inaccuracy in the portrayal of this information is the responsibility of the applicant.
3. The TMP provides so far as is reasonably practicable, a safe and fit for purpose TTM system.
4. The STMS for the activity is reminded that it is the STMS's duty to postpone, cancel or modify operations due to the adverse traffic, weather or other conditions that affect the safety of this site.

Notification to TMC prior to occupying worksite/Notification completed

Type of notification to TMC required		Notification completed	Date	
			Time	

TMP or generic plan reference						
ON-SITE RECORD <i>On-site record must be retained with TMP for 12 months</i>			Today's date			
Location details	Road Names(s):	House number/RPs:	Suburb:			
Working Space						
Person responsible for working space						
	Name		Signature			
	Where the STMS/TC is responsible for both the working space and TTM they sign above and in the appropriate TTM box below					
TTM						
STMS in charge of TTM						
	Name	TTM ID Number	Warrant expiry date	Signature	Time	
Worksite handover accepted by replacement STMS						
	Name	ID Number	Warrant expiry date	Signature	Time	
	Tick to confirm handover briefing completed					
Delegation						
Worksite control accepted by TC/STMS-NP						
	Name	ID Number	Warrant expiry date	Signature	Time	
	Tick to confirm briefing completed					
Temporary Speed Limit						
Street/road name (RPs or street numbers):		TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
From: To:		TSL installed				
		TSL remains in place				
		TSL removed				
Street/road name (RPs or street numbers):		TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
From: To:		TSL installed				
		TSL remains in place				
		TSL removed				
Street/road name (RPs or street numbers):		TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
From: To:		TSL installed				
		TSL remains in place				
		TSL removed				
Street/road name (RPs or street numbers):		TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
From: To:		TSL installed				
		TSL remains in place				
		TSL removed				

COMBINED LEVEL LV & LEVEL 1 LAYOUT DISTANCES TABLE

Permanent speed limit or RCA-designated operating speed (km/h)		≤50	60	70	80	90	100		
Traffic signs									
A	Sign visibility distance (m)	50	60	70	80	90	100		
B	Warning distance (m)	50 or 30*	80	105	120	135	150		
C	Sign spacing (m)	25 or 15*	40	50	60	70	75		
Safety zones									
D	Longitudinal (m) ⁺	10 or 5*	15	30	45	55	60		
E	Lateral (m) ⁺	1	1	1	1	1	1		
	Lateral behind barrier installation	As specified by the Installation Designer							
Tapers									
G	Taper length (m) [#]	30	50	70	80	90	100		
G	LV roads taper length (m) [#]	25	30	35	40	45	50		
K	Distance between tapers (m)	40	50	70	80	90	100		
Delineation devices									
	Cone spacing in taper (m)	2.5	2.5	5	5	5	5		
	Cone spacing: Working space (m) ^{##}	5	5	10	10	10	10		
<p>* Larger minimum distances apply on all state highways and also on all multi-lane roads. The smaller minimum distances may be applied on other roads to accommodate road environment constraints.</p> <p>⁺ On LV roads the longitudinal and lateral safety zones may be reduced, or eliminated, in order to retain a single lane width. Positive traffic management and an appropriate TSL must be used.</p> <p>[#] On non-state highways with speeds 50km/h or less, a 10m taper (with cones at 1m centres) may be used when there are road environment constraints (eg intersections and commercial accesses). On all roads where shoulder width is less than 2.5m and the activity does not affect the live lane, a 10m shoulder taper is permitted (with at least 5 cones at no greater than 2.5m centres). A taper of 30m (with cones at 2.5m centres) must be used where manual traffic control (stop/go), portable traffic signals or priority give way are employed.</p> <p>^{##} LV roads: double the cone spacing alongside working space (eg 5 = 10, 10 = 20).</p>									
Lane widths									
	Speed (km/h)	30	40	50	60	70	80	90	100
F	Lane width (m)	2.75	2.75	3.0	3.0	3.25	3.25	3.5	3.5

Except for delineation device spacings, which are maximum values, the distances specified in the above tables are minimum values.

LV/low risk roads

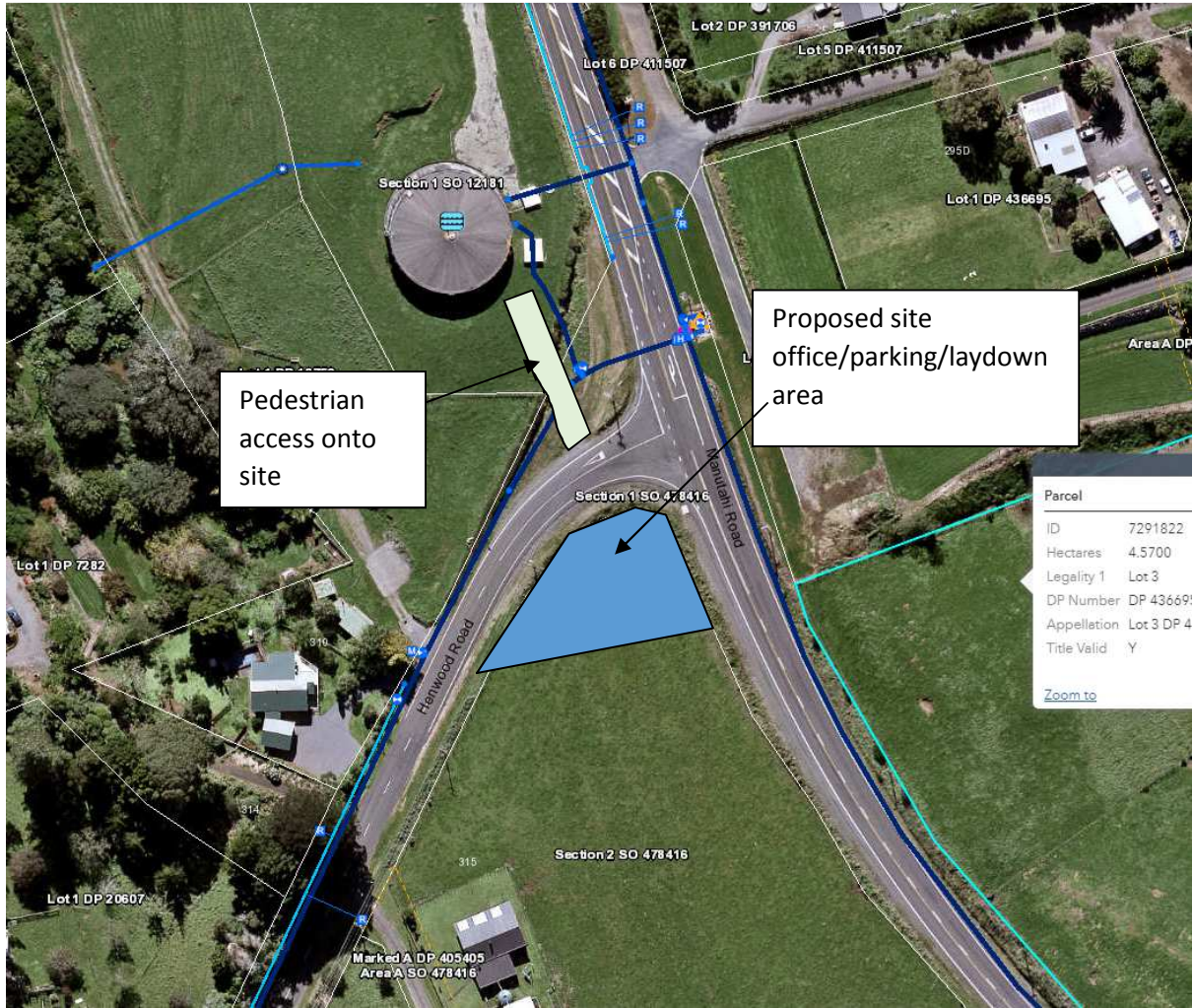
Working on roads designated as LV/low-risk roads (less than 250vpd - less than 20 vehicles per hour), with clear sight distance to the operation and an operating speed of less than 65km/h:

- use an appropriate advance warning sign (static installation) and amber flashing beacon(s) on working vehicle when on the shoulder
- consider stop/go or give way control of traffic when activity encroaches onto lane.

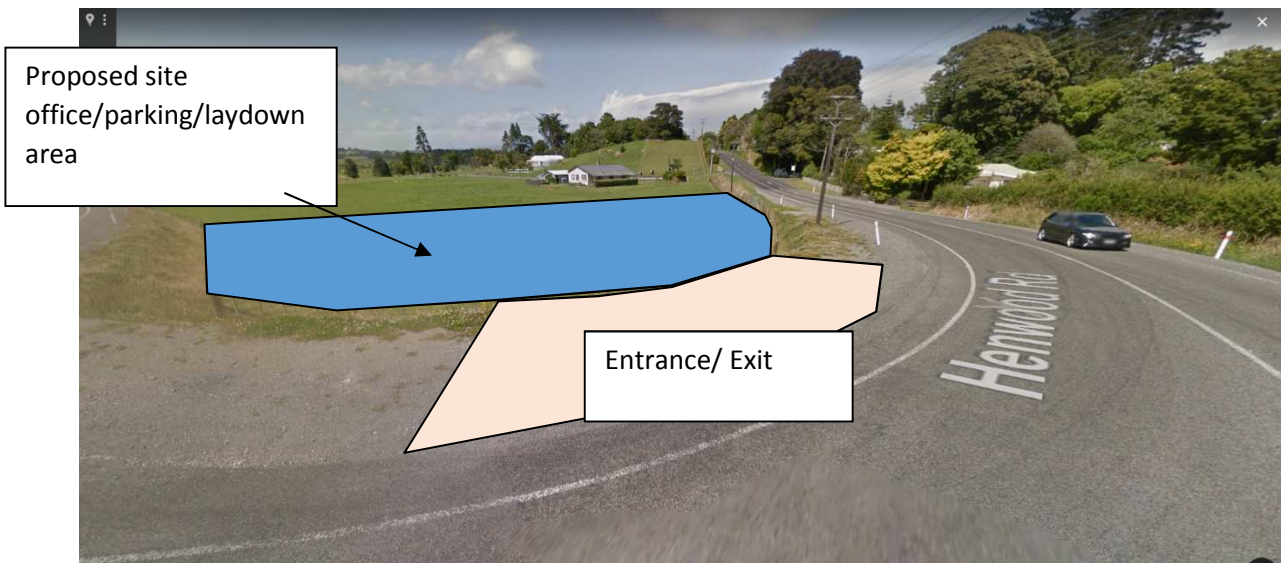
If the above requirements cannot be achieved, the operation must be modified to comply with the requirements of a higher risk rating.

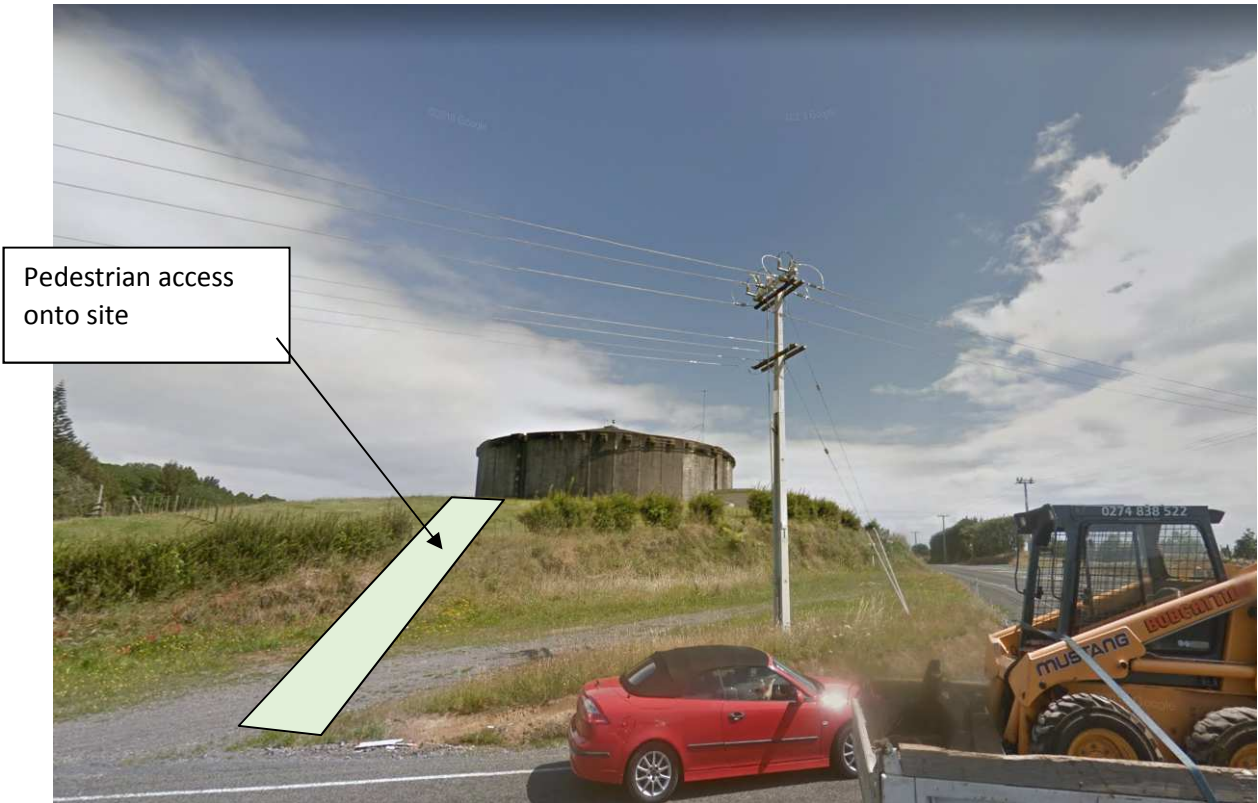
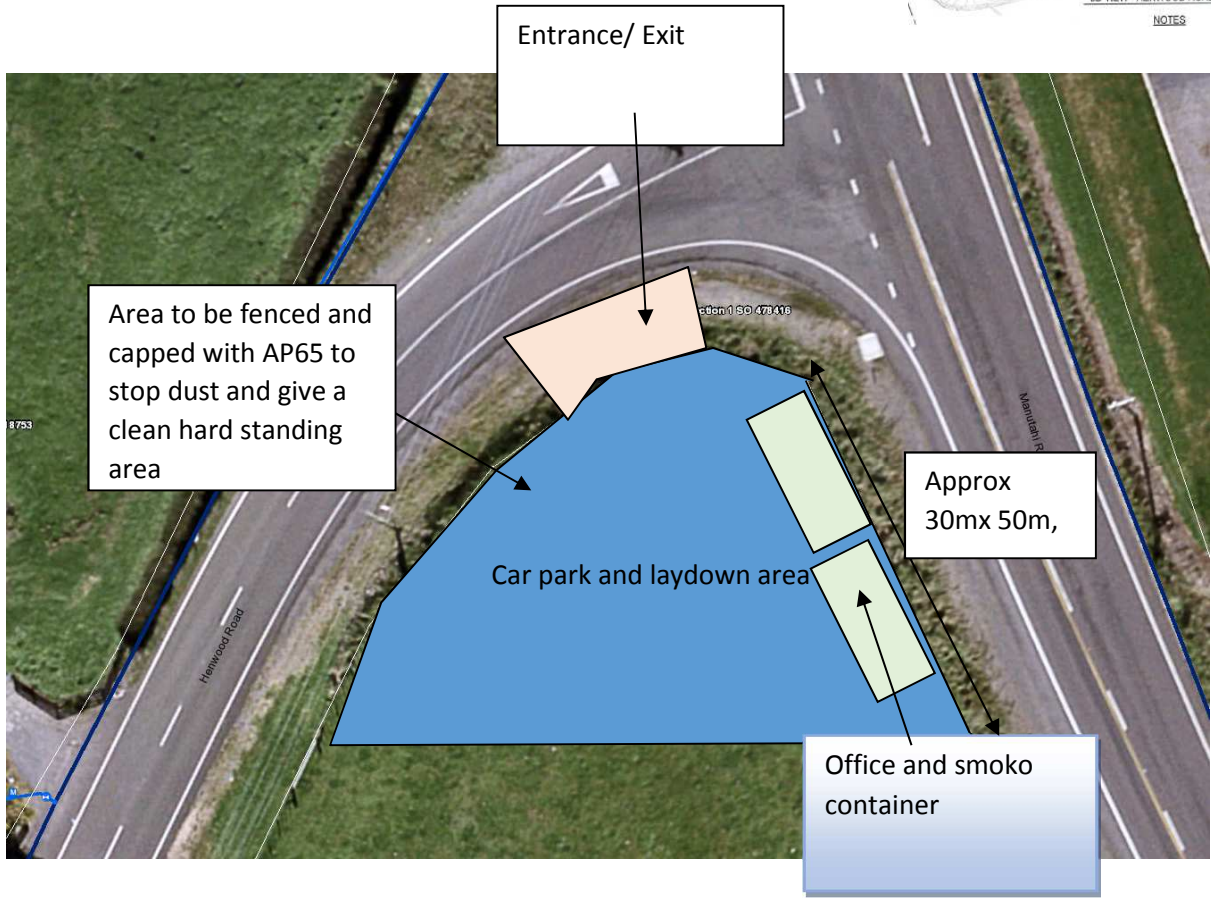


Proposed site set up



Proposed site set up







Access onto site

The restricted site and site access need to be reviewed, to give the project the safest and efficient entering/ exiting the site for the Public and the Site operatives.

The site vehicles are likely to enter and exit from both directions due to the direction of the Tip/Quarry and New Plymouth



Vehicles from
New Plymouth-
80KPH

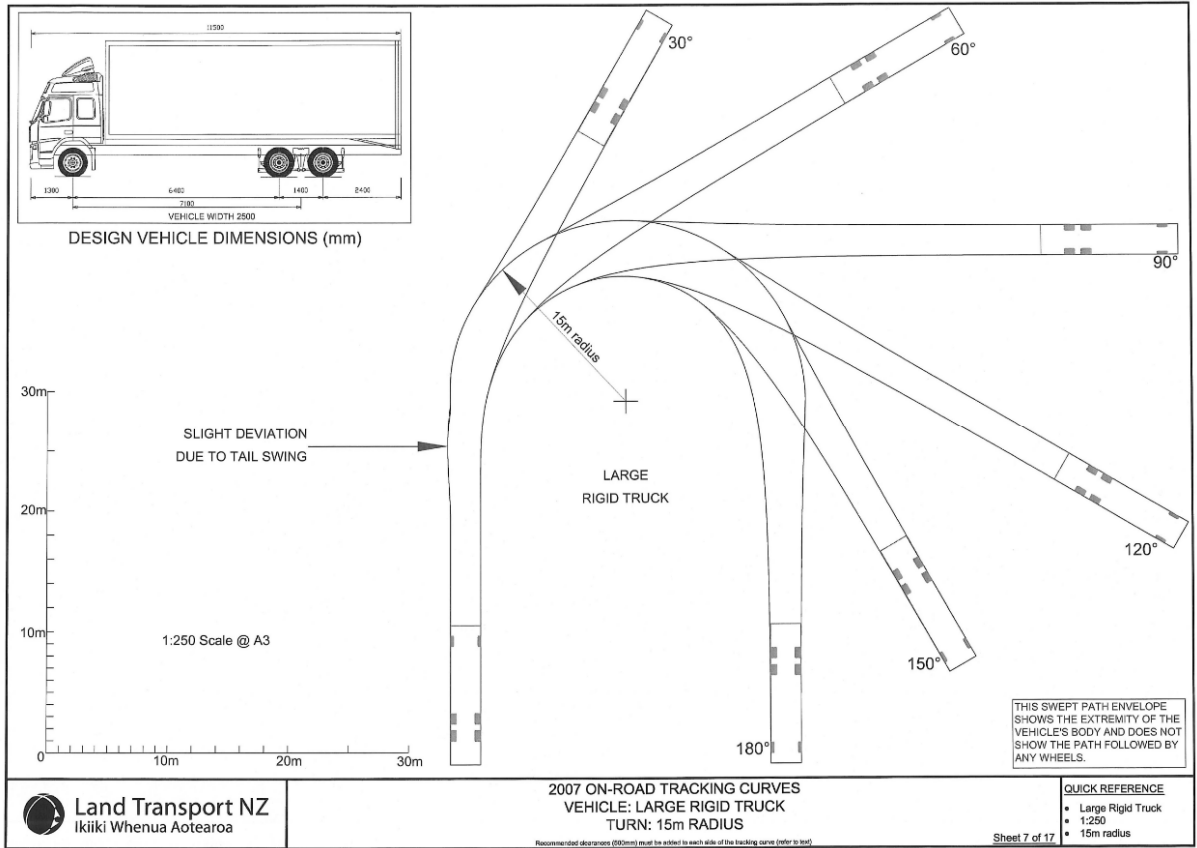
Site vehicles to and
from the
Tip/Quarry- 80KPH



Possible Site access changes



- Site measurements to see if there is enough room to make entrance from both direction, if not what other options- Where else can they turn around?
- Is it possible to make a new entrance? Any other options?



Speed calming on Henwood Road

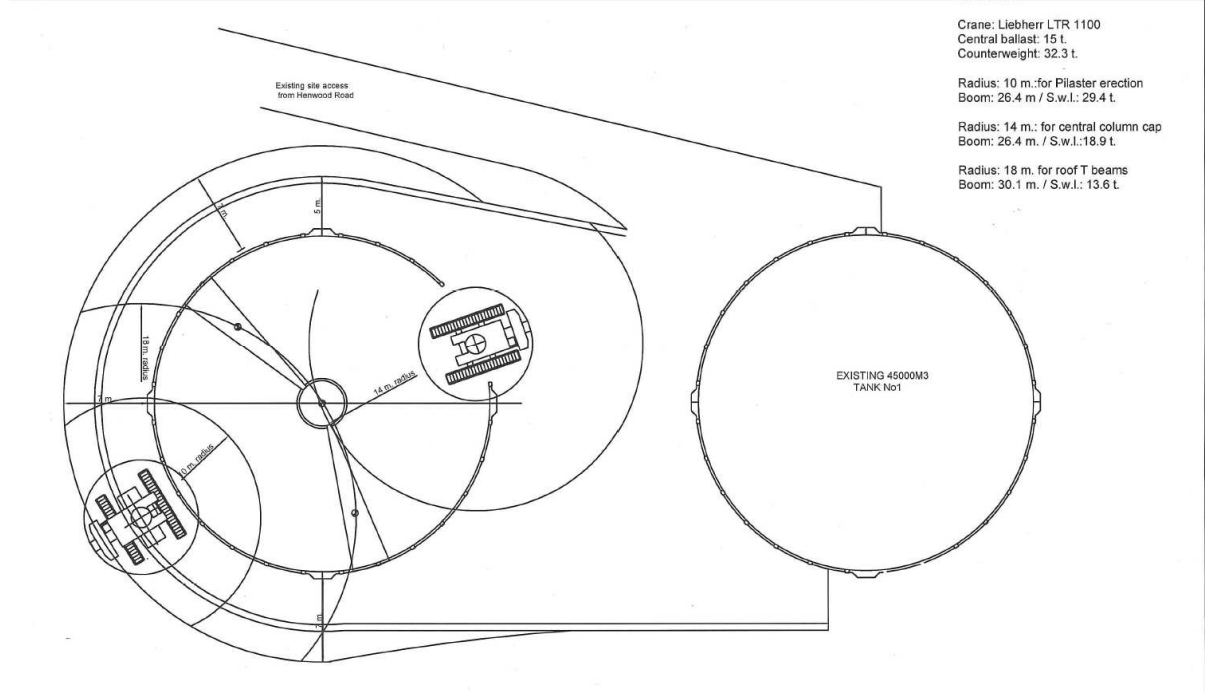


Normal Traffic management signage and cones help warn motorist but doesn't mean they will slow down.

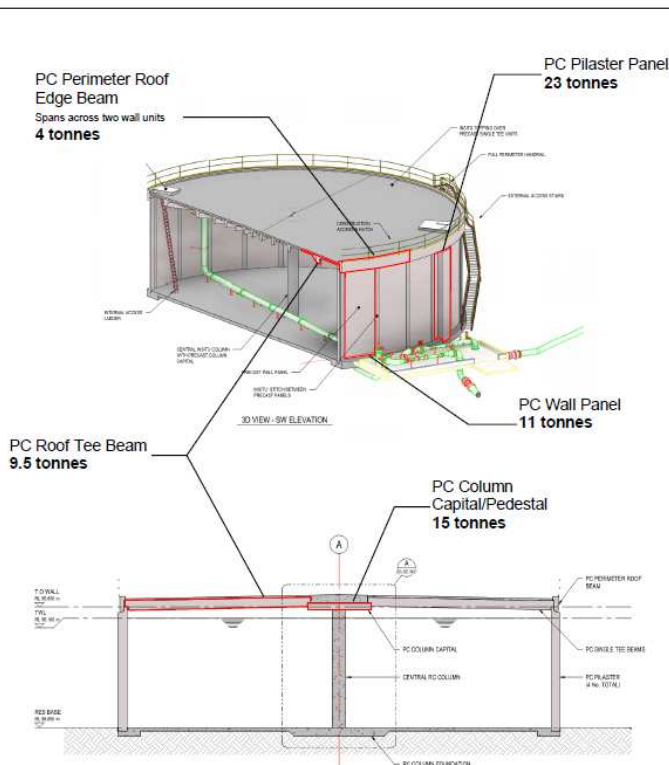


Cranage

Options are to have a crawler crane to service the whole requirements with a 7m track or have lift specific mobile cranes as required, if small mobile crane are to be used than crane will need access onto tanks slab



Precast weights





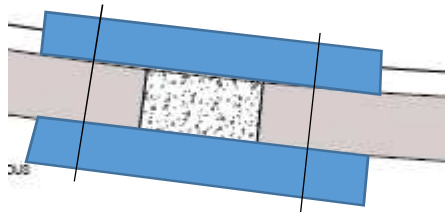
Temp works

- Wall support



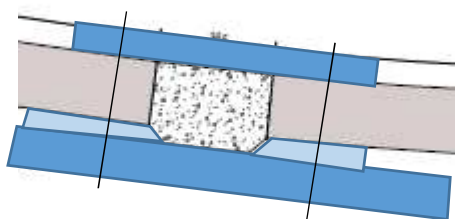
- Shutter for precast wall stiches

Option to pump Self compacting concrete from a gate valve at the bottom



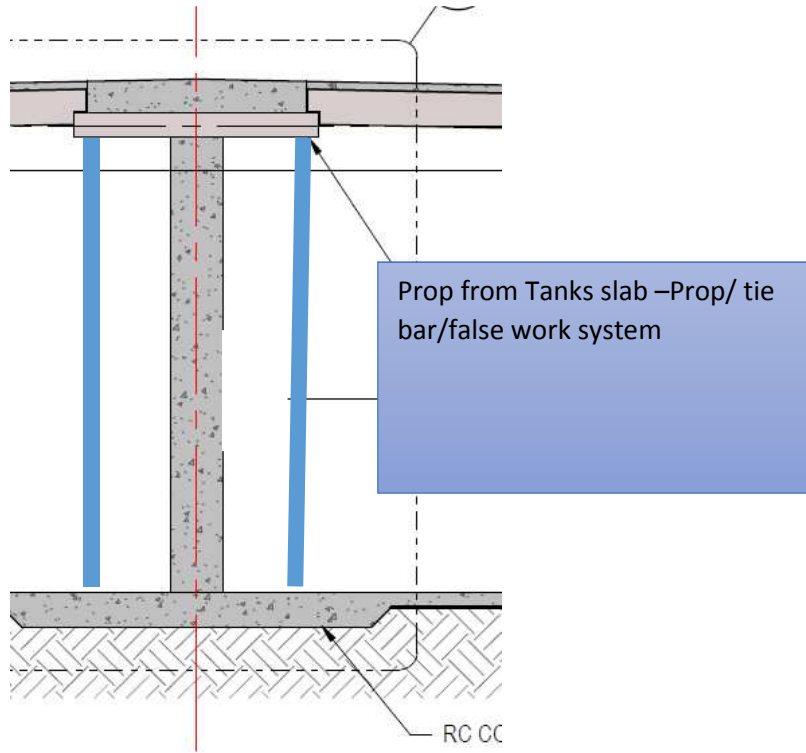
Or

Skip Normal concrete with openings in the shutter approx every 2.5m high



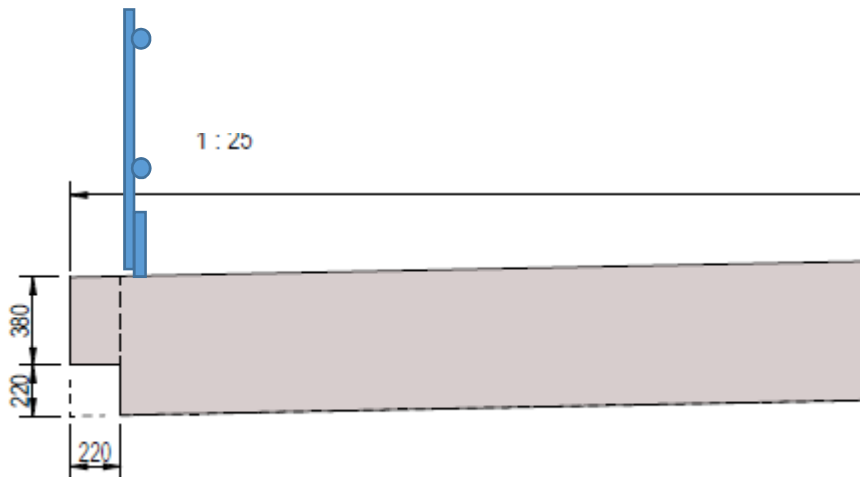


- Capital support



- Temp handrail

Install temp handrails on the precast before they are installed to remove working at height tasks



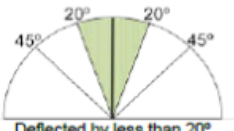
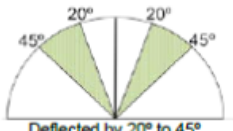
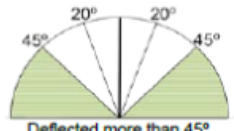
**TEMPORARY SPEED LIMIT (TSL)
DECISION MATRIX
WORKSHEET**

INSTRUCTIONS

Select the appropriate road condition description for each of the four factors, and in the right hand circle list the chosen TSL for that road condition. Transfer lowest TSL to the bottom circle.

Appendix B



	EXCELLENT	AVERAGE	BELOW AVERAGE	POOR	
	100 90	80 70	60 50	40 30 20	
1. Minimum Lane Width	3.5m	3.25m	3.00m	2.75m	50
2. Pavement / Surface Condition	The shoulder and lane is clear of loose or greasy material and the traveled way is smooth	The road is close to normal condition except for a few minor defects (eg small pot holes or a few pieces of loose aggregate) 70km/h where new seal has been swept but not marked	Defects and / or loose material on the lane (eg unattended reseals) 50km/h for protection of a new seal	There are major defects and / or significant loose material on the lane (eg recently milled surface, large stones, steel plates)	50
3. Visibility and Alignment	There is greater than 140m visibility to the first cone in taper, and the worksite has not imposed a change in alignment	There is less than 140m visibility to the first cone in taper, or vehicles are deflected by 20 degrees or less from the original direction of travel 	There is less than 60m visibility to the first cone in taper, or vehicles are deflected by 20-45 degrees from the original direction of travel 	There is less than 30m visibility to the first cone in taper, or vehicles are deflected by more than 45 degrees from the original direction of travel 	50
4. Site Clutter	Low site clutter, clear vehicle lanes, cycle lanes and footpaths	Some site clutter either plant or materials, vehicle lanes, cycle lanes and footpaths are lightly trafficked	Considerable site clutter requires additional management to guide vehicles though the site. Some queues of road users	Has numerous driver distractions including construction traffic. Cycle lanes or footpaths are closed. 30km/h for portable traffic signals, MTC operations or where traffic has to traverse the actual active working space (either in a delineated single lane or where traffic is not separated from the working space)	50

Is the LOWEST TSL at least:



- 20km/h below the permanent speed on roads greater than 50km/h
- 10km/h below the permanent speed on roads 50km/h or less

Yes → Use this Temporary Speed Limit

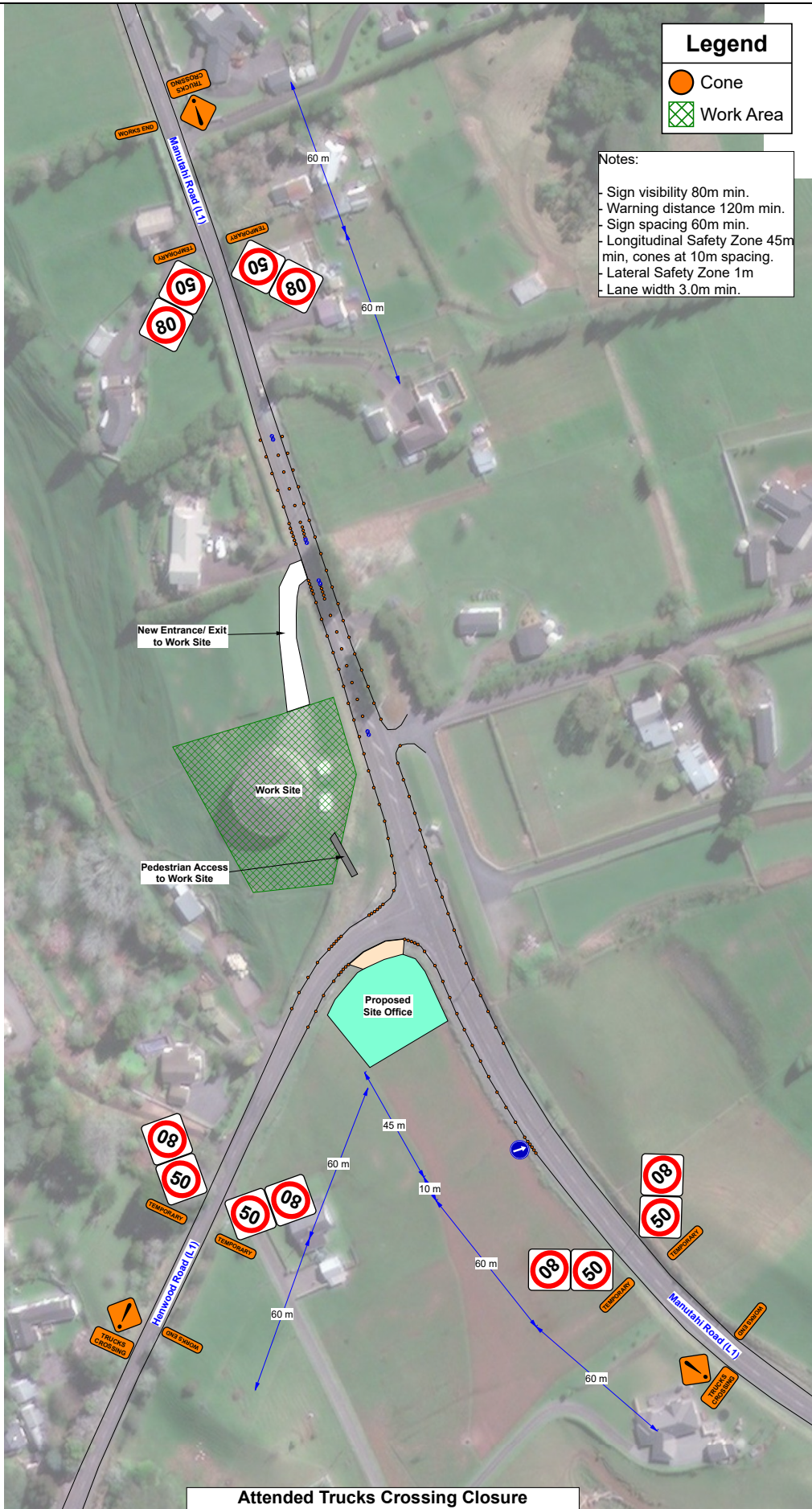
No → No Temporary Speed Limit Required



Legend

-  Cone
-  Work Area

- Notes:
- Sign visibility 80m min.
 - Warning distance 120m min.
 - Sign spacing 60m min.
 - Longitudinal Safety Zone 45m min, cones at 10m spacing.
 - Lateral Safety Zone 1m
 - Lane width 3.0m min.



Attended Trucks Crossing Closure with a Speed Reduction on Manutahi Road and Henwood Road, Paraite, Taranaki





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Not to scale

DESIGN NUMBER: TMD 1

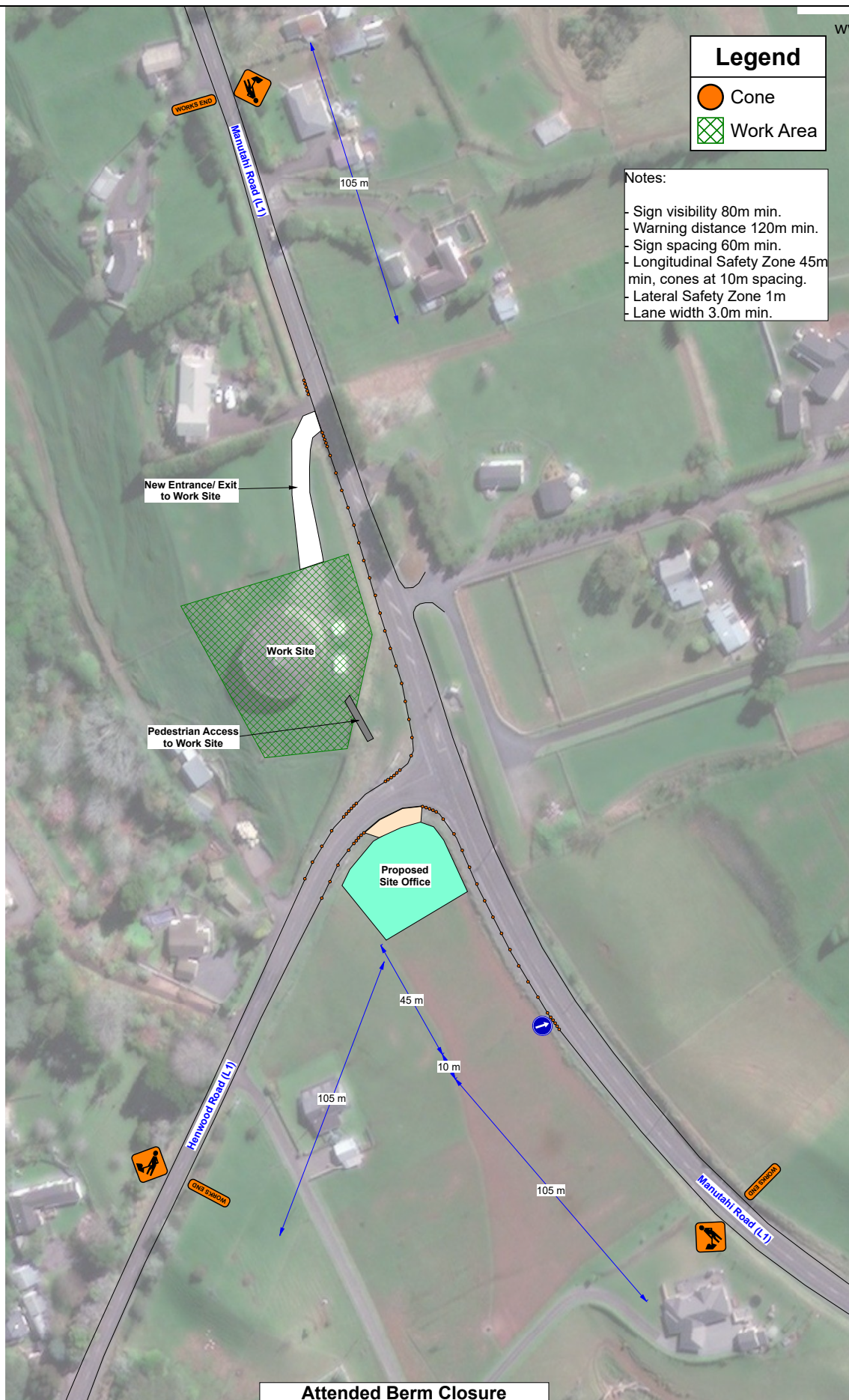
PREPARED BY:	NAME: Isalah Moore
STMS: Level 2/3 NP	ID: 80931
CHECKED BY: Shelley Winiana	

Legend

-  Cone
-  Work Area

Notes:

- Sign visibility 80m min.
- Warning distance 120m min.
- Sign spacing 60m min.
- Longitudinal Safety Zone 45m min, cones at 10m spacing.
- Lateral Safety Zone 1m
- Lane width 3.0m min.



Attended Berm Closure on Manutahi Road and Henwood Road, Paraiti, Taranaki



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DESIGN NUMBER: TMD 2

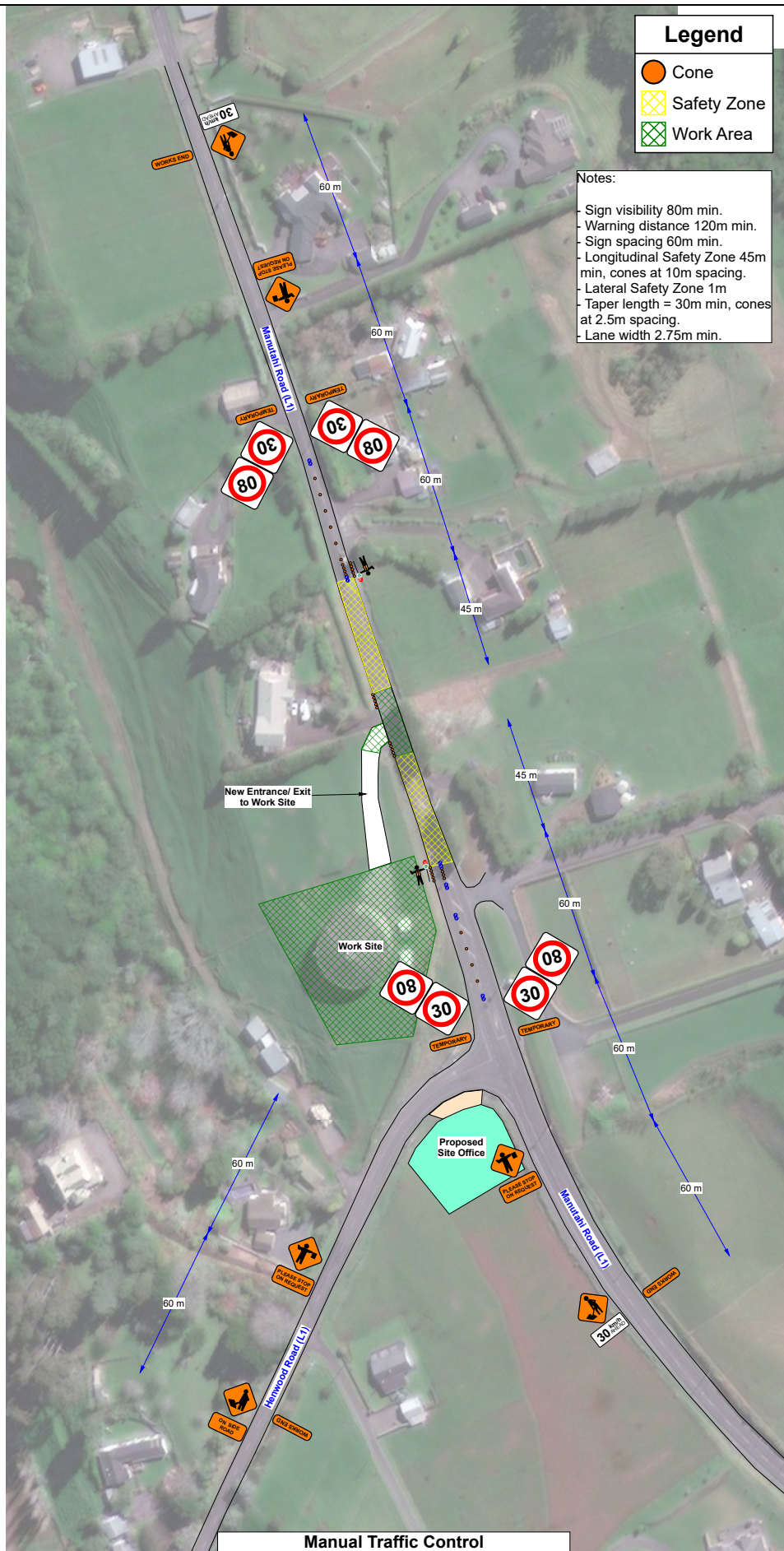
PREPARED BY:	
NAME:	Isalah Moore
STMS:	Level 2/3 NP
ID:	80931
CHECKED BY: Shelley Winiana	

Legend

-  Cone
-  Safety Zone
-  Work Area

Notes:

- Sign visibility 80m min.
- Warning distance 120m min.
- Sign spacing 60m min.
- Longitudinal Safety Zone 45m min, cones at 10m spacing.
- Lateral Safety Zone 1m
- Taper length = 30m min, cones at 2.5m spacing.
- Lane width 2.75m min.



**Manual Traffic Control
of a Stop/Stop Operation on Manutahi Road
Paraite, Taranaki**





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PREPARED BY:	NAME: Isalah Moore
STMS:	Level 2/3 NP
ID:	80931
CHECKED BY:	Shelley Winiana

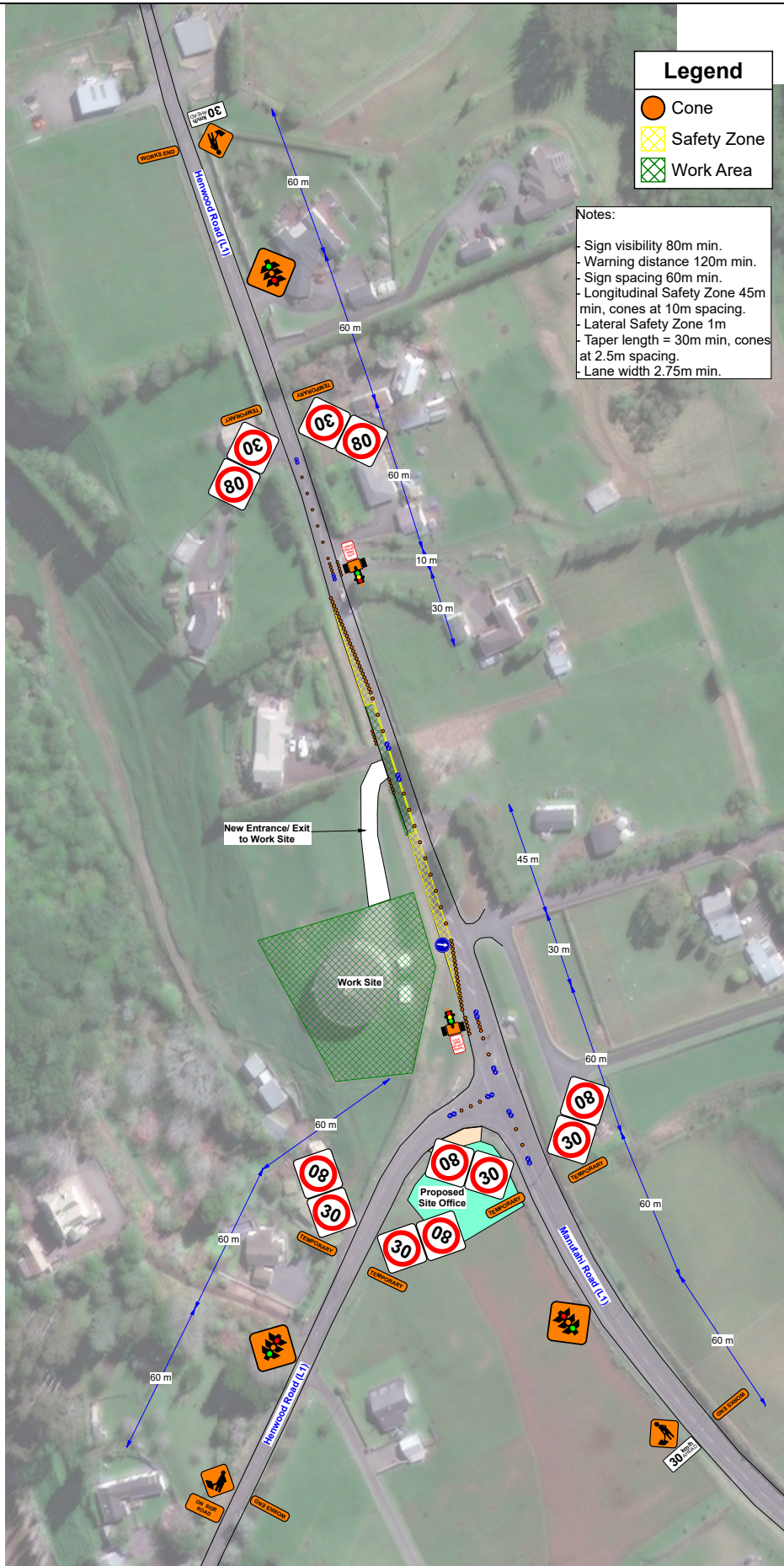
DESIGN NUMBER: TMD 3

Legend

-  Cone
-  Safety Zone
-  Work Area

Notes:

- Sign visibility 80m min.
- Warning distance 120m min.
- Sign spacing 60m min.
- Longitudinal Safety Zone 45m min, cones at 10m spacing.
- Lateral Safety Zone 1m
- Taper length = 30m min, cones at 2.5m spacing.
- Lane width 2.75m min.



**Temporary Traffic Light Closure
of a Stop/Stop Operation on Henwood/Manutahi Road
Paraite, Taranaki**



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PH: 0800 756442

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DESIGN NUMBER: TMD 4

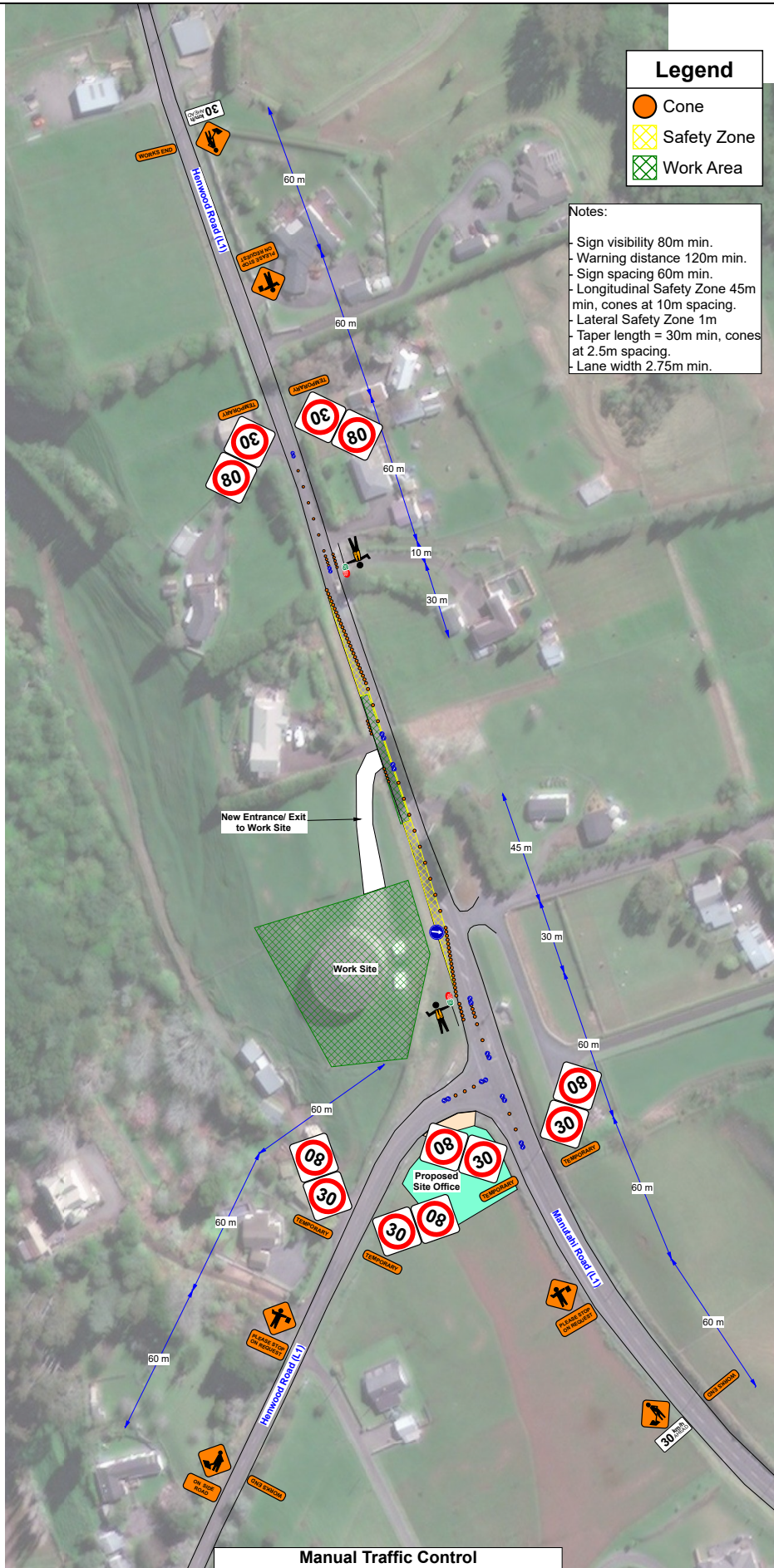
PREPARED BY:	
NAME:	Isaiah Moore
STMS:	Level 2/3 NP
ID:	80931
CHECKED BY:	Shelley Winiana

Legend

-  Cone
-  Safety Zone
-  Work Area

Notes:

- Sign visibility 80m min.
- Warning distance 120m min.
- Sign spacing 60m min.
- Longitudinal Safety Zone 45m min, cones at 10m spacing.
- Lateral Safety Zone 1m
- Taper length = 30m min, cones at 2.5m spacing.
- Lane width 2.75m min.



**Manual Traffic Control
of a Stop/Stop Operation on Manutahi Road
Parate, Taranaki**



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PH: 0508 756474

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DESIGN NUMBER: TMD 5

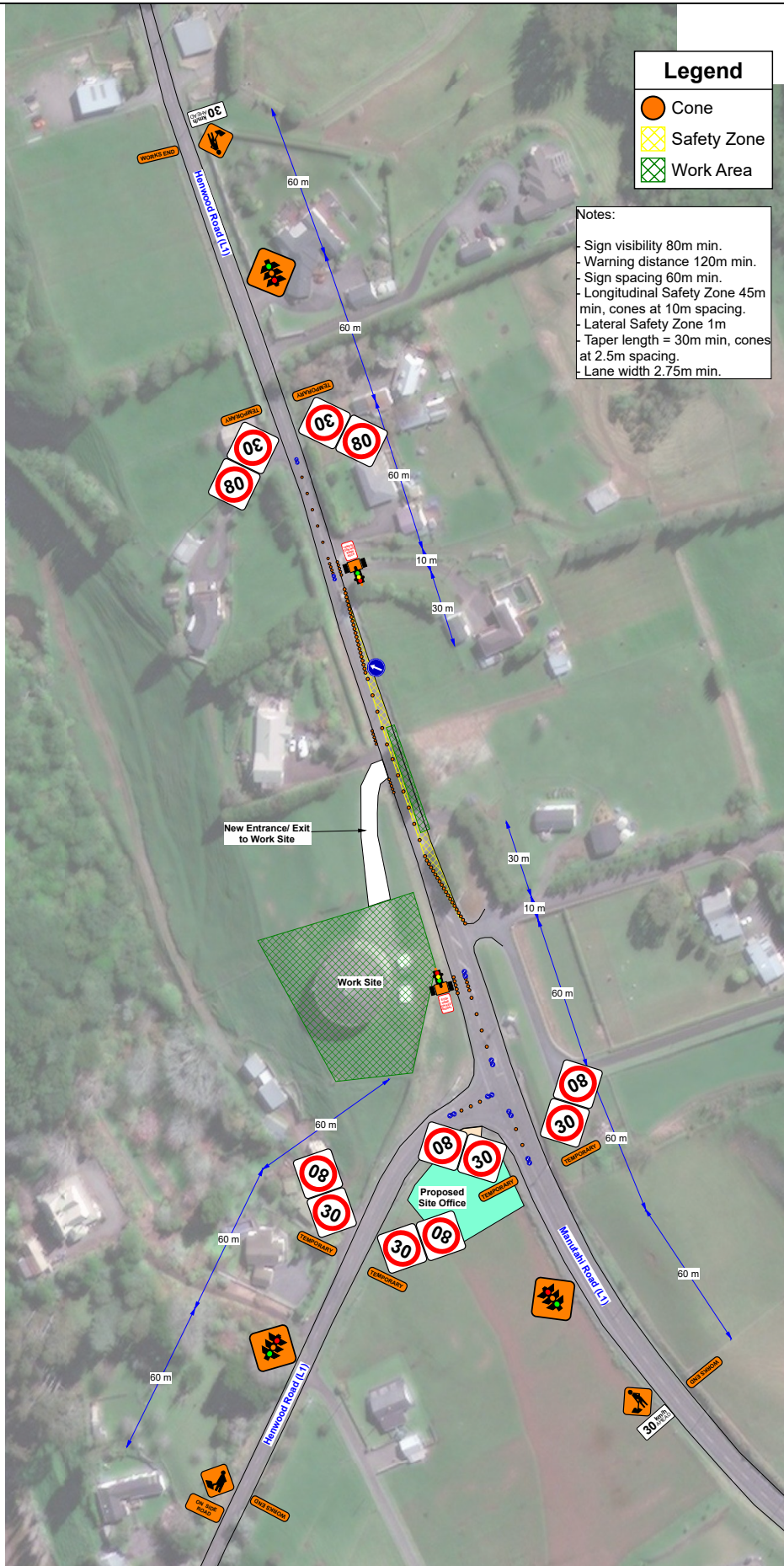
PREPARED BY:	
NAME:	Heath Moore
STMS:	Level 2/3 NP
ID:	80931
CHECKED BY:	Shelley Winiana

Legend

-  Cone
-  Safety Zone
-  Work Area

Notes:

- Sign visibility 80m min.
- Warning distance 120m min.
- Sign spacing 60m min.
- Longitudinal Safety Zone 45m min, cones at 10m spacing.
- Lateral Safety Zone 1m
- Taper length = 30m min, cones at 2.5m spacing.
- Lane width 2.75m min.



**Temporary Traffic Light Closure
of a Stop/Stop Operation on Henwood/Manutahi Road
Paraite, Taranaki**



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DESIGN NUMBER: TMD 6

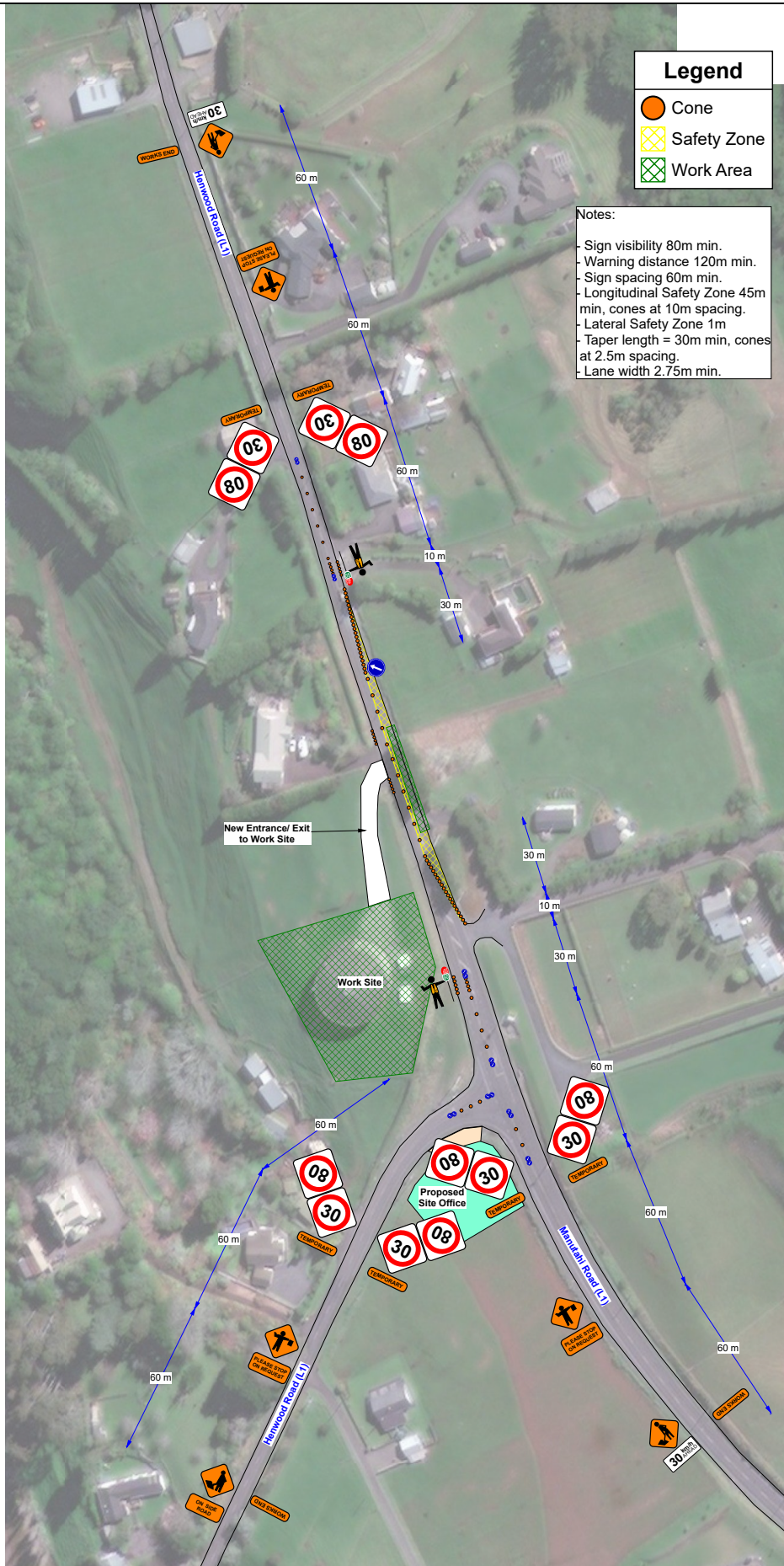
PREPARED BY:	
NAME:	Iziah Moore
STMS:	Level 2/3 NP
ID:	80931
CHECKED BY:	Shelley Winiana

Legend

-  Cone
-  Safety Zone
-  Work Area

Notes:

- Sign visibility 80m min.
- Warning distance 120m min.
- Sign spacing 60m min.
- Longitudinal Safety Zone 45m min, cones at 10m spacing.
- Lateral Safety Zone 1m
- Taper length = 30m min, cones at 2.5m spacing.
- Lane width 2.75m min.



**Manual Traffic Control
of a Stop/Stop Operation on Henwood/Manutahi Road
Paraite, Taranaki**



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DESIGN NUMBER: TMD 7

PREPARED BY:	
NAME:	Heath Moore
STMS:	Level 2/3 NP
ID:	80931
CHECKED BY:	Shelley Winiana



Operational Features

Compliant to AS 4191 – 1994 and listed in the Register of Approved Traffic Signal Systems in the COPTTM Technical Note, our RTL Portable Traffic Lights offer reliable operation and easy transportation.

Our MPB 4000 portable traffic lights are NZTA approved, radio controlled and vehicle activated. Equipped with LED technology and with the ability to connect up to 24 MPB 4000 signal heads together, this system is extremely versatile and can be used to control different traffic configurations, from alternating one-way traffic through to crossroads traffic.

The MPB 4000 is programmed conveniently with a hand box and is very easy to use. The signal system can be programmed in just a few steps without the user needing extensive prior knowledge. The versatility and cost effectiveness of the MPB4000 makes this system very popular.

- NZTA Compliant
- Reliable Operation
- Simple Programming
- Economical
- Multiple Traffic Configurations
- LED Lanterns



Technical Specifications

Operating voltage:	12 volt dc / 230 volt ac
Daylight:	1.4 amp per signal head (Approx)
Night:	1.1 amp per signal head (Approx)
LED Power Consumption	
Daylight:	0.68 amp per signal head (Approx)
Night:	0.58 amp per signal head (Approx)
Data Transfer	Quartz (timing controlled) Direct cable link or digital radio transmission (multiple frequencies of your choice available).
External Manual Control	
Radio range:	2000 metres maximum (Subject to environmental conditions)
Battery Life	Two Weeks (Approx) (Based on a single Battery Charge, 8 hrs per Day)



A pair of MPB 4000 Portable Traffic Signals

Range of Applications

- Single lane alternating traffic
- T-junction traffic
- Cross road traffic

Operating Modes

- Manual operation
- Flashing
- 6 Day programs
- Night time operation
- Automatic fixed time mode
- Automatic green time extension
- Automatic green on demand

AS 4191 - 1994 Compliant

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Fax 09 259 2610

WELLINGTON

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