



**Fresh Choice Supermarket
12 Hastwell Street, Greytown**

Transportation Assessment Report

13 April 2023





4 Leek Street, Newmarket
PO Box 128259, Remuera 1541, Auckland
Ph. 09 869 2825
www.commute.kiwi

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Report Status	Prepared By	Reviewed By	Approved By
Final Report	Josh Brajkovic	Leo Hills	Leo Hills
			

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1 INTRODUCTION

1.1 GENERAL

Commute Transportation Consultants has been commissioned to assess the transportation effects of proposed works to an existing supermarket at 12 Hastwell Street, 105 West Street and 134 Main Street, Greytown (referred to as the “site”).

The redevelopment includes:

- Demolition of an existing residential dwelling;
- New entry-only vehicle access from State Highway 2 (Main Street);
- New pylon sign at the new entry;
- New pedestrian footpath to Main Street;
- Reconfiguration of the existing loading dock;
- Removal of two on-street parking spaces;
- One new customer parking space; and
- Minor modifications to the existing customer carpark.

This report assesses the transport-related effects of the proposal, including:

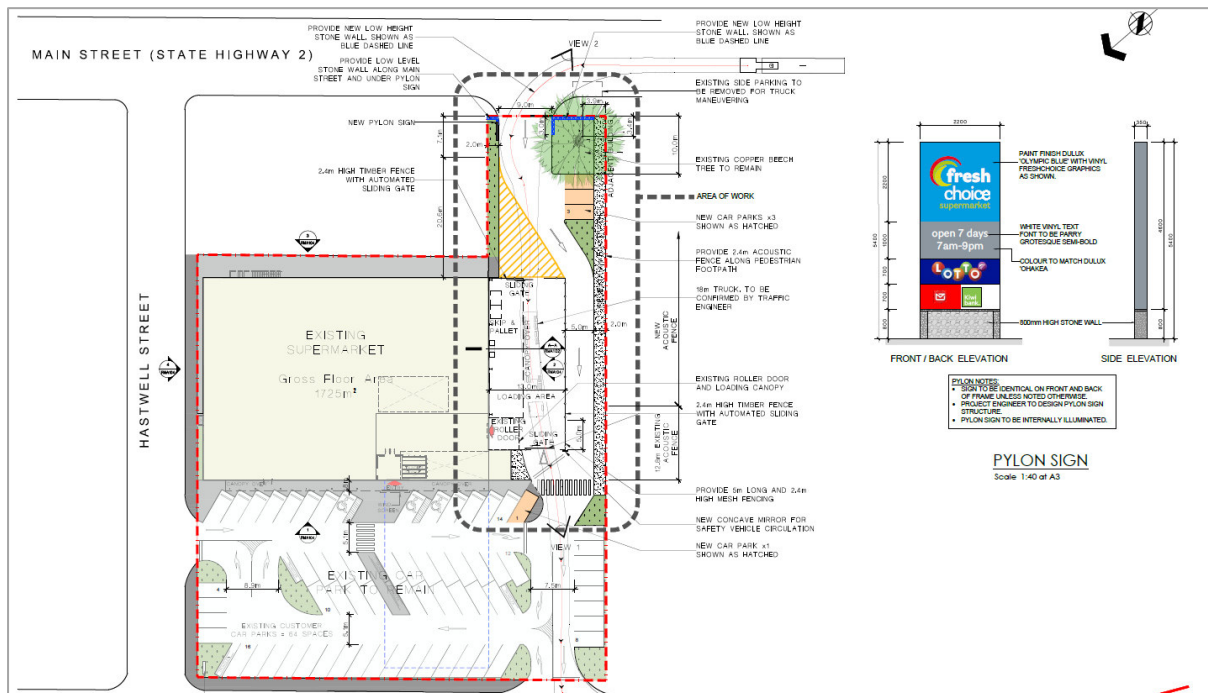
- a description of the site and its surrounding traffic environment;
- a description of the key transportation-related aspects of the proposal;
- the traffic anticipated to be redistributed by the proposal;
- the proposed form of access and egress;
- the proposed form of vehicle and bicycle parking; and
- the proposed servicing arrangements.

These and other matters are addressed in detail in this report. This report concludes that the proposed works can be undertaken in a way so that their effect on the function, capacity and safety of the surrounding road network will be minimal.

1.2 BACKGROUND

An application at the development site was previously lodged in July 2022. The proposed site plan for the previous application is detailed in Figure 1 below.

Figure 1: Proposed Site Plan - Previous Application (July 2022)



The key transport related changes that have been made to this previous application plan for the subject application are as follows:

- Vehicle crossing width reduction from 9.0m to 8.3m;
- Vehicle crossing design updated to show a continuous footpath over the crossing, ensuring pedestrian priority;
- Removal of three 90 degree parking spaces located within the entry aisle;
- Removal of right turning large delivery vehicles into the new access;
- Extension of NSAAT markings south of the new crossing to ensure vehicle and pedestrian sightlines; and
- Reduction in signage scale and revision in design to more appropriately respond to the surrounding special character environment.

The updated proposal is detailed in Section 3 below.

2 EXISTING ENVIRONMENT

2.1 SITE LOCATION

The site is located at 12 Hastwell Street, 105 West Street and 134 Main Street, Greytown. With reference to the Wairarapa Combined District Plan (District Plan), the site is zoned Residential (105 West Street), Industrial (12 Hastwell Street) and Commercial (134 Main Street).

Adjacent to the site, Hastwell Street and West Street are classified as local roads, with Main Street part of the State Highway network.

Figure 2 shows the site location in relation to the road network and Figure 3 shows the existing roading environment.

Figure 2: Site Location

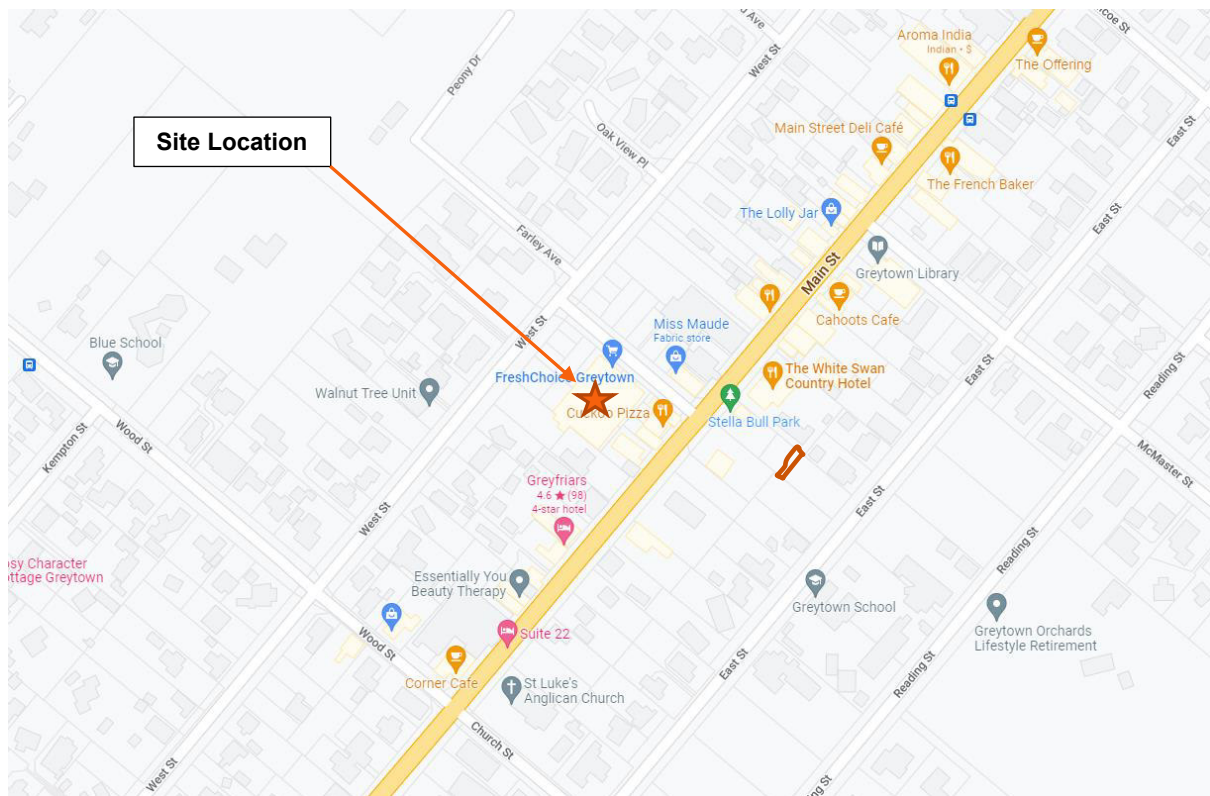


Figure 3: Surrounding Road Environment



2.2 ROAD NETWORK

Adjacent to the site, Hastwell Street, West Street and Main Street all provide a single traffic lane in each direction, with footpaths provided on both sides of the road. All local intersections are priority-controlled give way intersections. Access to the supermarket is provided to both West Street and Hastwell Street for both customers and loading vehicles. The residential dwelling features access to Main Street. The posted speed limit is 50km/h.

2.3 TRAFFIC VOLUMES

Peak hour traffic counts at the following intersections were undertaken on Thursday 30 March and Saturday 1 April 2023.

- Supermarket access to West Street;
- Supermarket access to Hastwell Street; and
- Hastwell Street / Main Street intersection.

The peak hour surveys indicate minimal flows through the subject intersections, and are considered typical of local road intersections in Greytown.

The survey results are detailed in Tables 1 to 6 below.

Table 1: Traffic Volumes - Supermarket access to West Street (Thursday)

	AM				AM Total	PM				PM Total
	Cars	Trucks	Buses	Cyclists		Cars	Trucks	Buses	Cyclists	
West St (East)	76	3	0	1	80	107	1	0	0	108
Left into Supermarket Access	1	0	0	0	1	10	0	0	0	10
Thru to West St (West)	75	3	0	1	79	97	1	0	0	98
Supermarket Access	34	4	0	0	38	75	2	0	0	77
Left into West St (West)	21	3	0	0	24	46	1	0	0	47
Right into West St (East)	13	1	0	0	14	29	1	0	0	30
West St (West)	113	9	0	0	122	122	3	0	0	125
Thru to West St (East)	82	8	0	0	90	75	2	0	0	77
Right into Supermarket Access	31	1	0	0	32	47	1	0	0	48
Grand Total	223	16	0	1	240	304	6	0	0	310

Table 2: Traffic Volumes - Supermarket access to West Street (Saturday)

	IP				IP Total
	Cars	Trucks	Buses	Cyclists	
West St (East)	122	6	0	4	132
Left into Supermarket Access	11	1	0	0	12
Thru to West St (West)	111	5	0	4	120
Supermarket Access	69	1	0	5	75
Left into West St (West)	35	0	0	5	40
Right into West St (East)	34	1	0	0	35
West St (West)	135	4	0	1	140
Thru to West St (East)	88	3	0	0	91
Right into Supermarket Access	47	1	0	1	49
Grand Total	326	11	0	10	347

Table 3: Traffic Volumes - Supermarket access to Hastwell Street (Thursday)

	AM				AM Total	PM				PM Total
	Cars	Trucks	Buses	Cyclists		Cars	Trucks	Buses	Cyclists	
Hastwell St (North)	31	3	0	0	34	65	3	0	1	69
Thru to Hastwell St (South)	23	1	0	0	24	30	0	0	0	30
Right into Supermarket Access	8	2	0	0	10	35	3	0	1	39
Hastwell St (South)	61	2	0	0	63	65	0	0	0	65
Left into Supermarket Access	32	2	0	0	34	40	0	0	0	40
Thru to Hastwell St (North)	29	0	0	0	29	25	0	0	0	25
Supermarket Access	21	0	0	0	21	66	2	0	0	68
Left into Hastwell St (North)	5	0	0	0	5	36	1	0	0	37
Right into Hastwell St (South)	16	0	0	0	16	30	1	0	0	31
Grand Total	113	5	0	0	118	196	5	0	1	202

Table 4: Traffic Volumes - Supermarket access to Hastwell Street (Saturday)

	IP				IP Total
	Cars	Trucks	Buses	Cyclists	
Hastwell St (North)	59	1	0	3	63
Thru to Hastwell St (South)	39	1	0	0	40
Right into Supermarket Access	20	0	0	3	23
Hastwell St (South)	73	3	0	1	77
Left into Supermarket Access	40	2	0	1	43
Thru to Hastwell St (North)	33	1	0	0	34
Supermarket Access	67	2	0	0	69
Left into Hastwell St (North)	39	2	0	0	41
Right into Hastwell St (South)	28	0	0	0	28
Grand Total	199	6	0	4	209

Table 5: Traffic Volumes - Hastwell Street / Main Street Intersection (Thursday)

	AM				AM Total	PM				PM Total
	Cars	Trucks	Buses	Cyclists		Cars	Trucks	Buses	Cyclists	
Hastwell St	38	1	0	0	39	66	0	0	0	66
Left into Main St (East)	34	1	0	0	35	57	0	0	0	57
Right into Main St (West)	4	0	0	0	4	9	0	0	0	9
Main St (East)	398	47	8	0	453	372	39	7	0	418
Thru to Main St (West)	348	46	8	0	402	319	38	7	0	364
Right into Hastwell St	50	1	0	0	51	53	1	0	0	54
Main St (West)	316	52	9	0	377	435	45	5	0	485
Left into Hastwell St	16	1	0	0	17	22	0	0	0	22
Thru to Main St (East)	300	51	9	0	360	413	45	5	0	463
Grand Total	752	100	17	0	869	873	84	12	0	969

Table 6: Traffic Volumes - Hastwell Street / Main Street Intersection (Saturday)

	IP				IP Total
	Cars	Trucks	Buses	Cyclists	
Hastwell St	69	2	0	0	71
Left into Main St (East)	58	2	0	0	60
Right into Main St (West)	11	0	0	0	11
Main St (East)	423	25	0	2	450
Thru to Main St (West)	366	22	0	2	390
Right into Hastwell St	57	3	0	0	60
Main St (West)	425	14	3	3	445
Left into Hastwell St	35	2	0	1	38
Thru to Main St (East)	390	12	3	2	407
Grand Total	917	41	3	5	966

2.4 ROAD SAFETY

A search of the New Zealand Transport Agency's (NZTA) Crash Analysis System (CAS) has been carried out to identify all reported crashes in the vicinity of the site during the five-year period 2018 - 2022 as well as any available 2023 data. The study area includes the site frontages to Hastwell Street, West Street and Main Street, as well as the Main Street / Hastwell Street and the West Street / Hastwell Street intersections. A total of three crashes were recorded within the search area:

- One crash occurred on Main Street involving a vehicle stopping or slowing for a queue and resulted in minor injury;
- Two other crashes occurred within the search area and did not result in any injury.

The number of crashes within the crash search are considered typical of roads within a town centre area. It is noted that no crashes recorded involved vehicles turning into or out of the site, and no crashes resulted in serious injuries. The proposal is not considered to detrimentally affect the good existing crash record, with the new crossing designed to ensure safe movements into and out of the site.

3 PROPOSED DEVELOPMENT

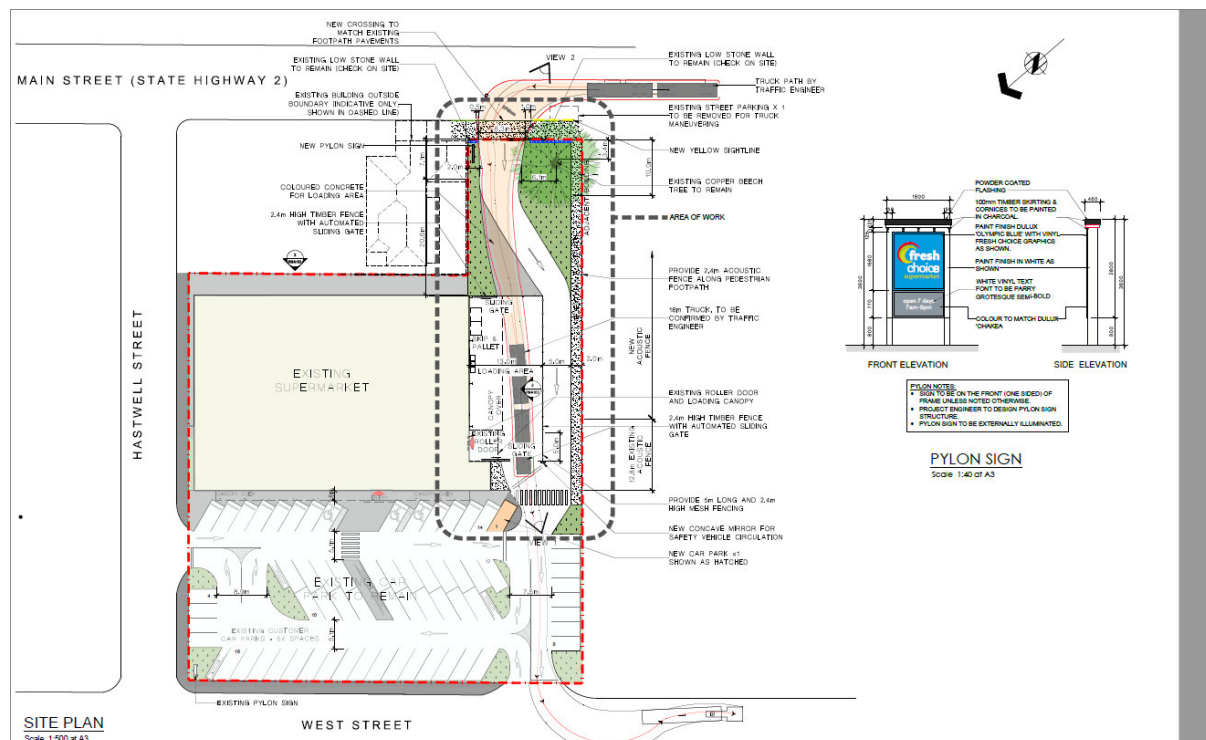
It is proposed to undertake works to an existing supermarket 12 Hastwell Street, 105 West Street and 134 Main Street, Greytown.

This development includes:

- Demolition of an existing residential dwelling;
- New entry-only vehicle access from State Highway 2 (Main Street);
- New pylon sign at the new entry;
- New pedestrian footpath to Main Street;
- Reconfiguration of the existing loading dock;
- Removal of two on-street parking spaces;
- One new customer parking space; and
- Minor modifications to the existing carpark.

Figure 4 shows the proposed redevelopment.

Figure 4: Proposed Redevelopment



4 ACCESS

4.1 GENERAL

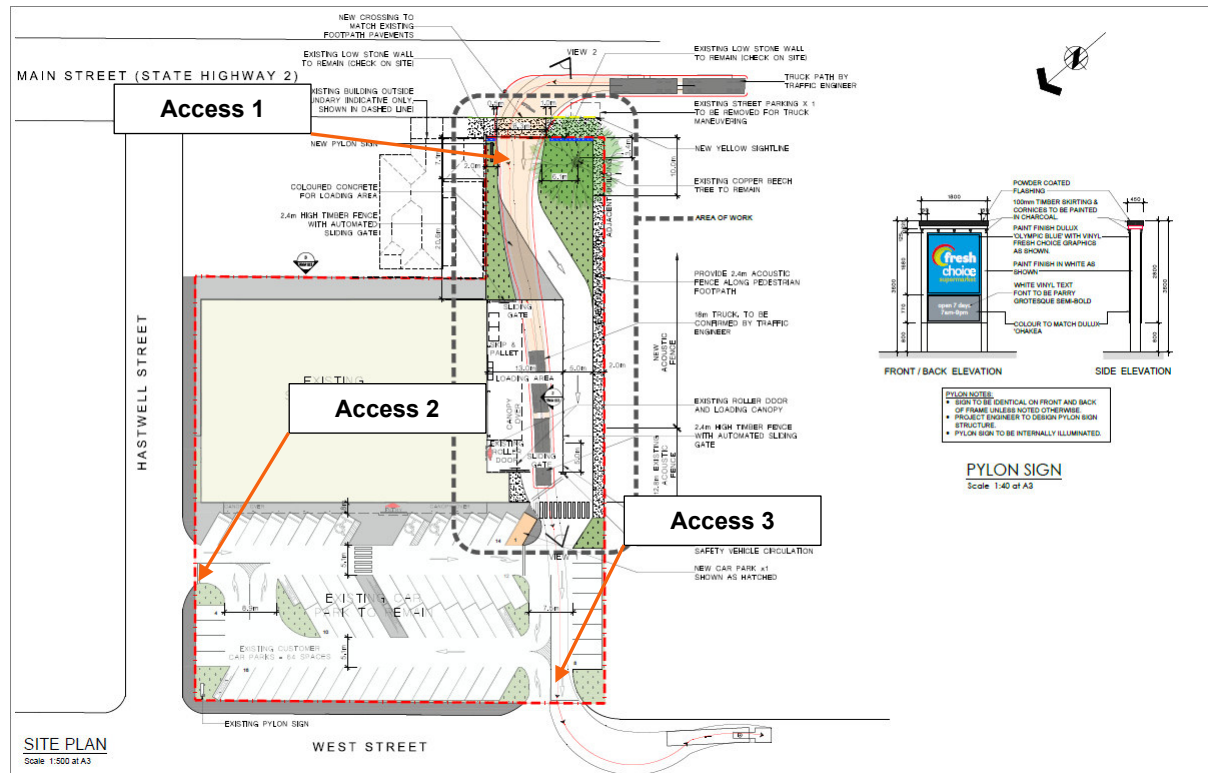
The three site accesses are described below.

- **Access 1** – a new entry-only access from Main Street. The access will serve both customer and truck entry, and will be further assessed within this report. The existing access to Main Street will be removed and replaced with the proposed entry-only access. The vehicle crossing will measure 8.3m wide at the property boundary, and the internal customer vehicle lane will measure 5.0m wide. Customers and light delivery vehicles (vans and light trucks) will turn both left in and right in to the development, with large delivery vehicles only left turning into the site;
- **Access 2** – existing two-way customer access to Hastwell Street. The access currently serves two-way customer movements and entry-only truck movements. The access will not be modified as part of the redevelopment, however will no longer serve truck entry movements; and

- **Access 3** – existing two-way customer access to West Street. The access currently serves two-way customer movements and exit-only truck movements. The access will not be modified as part of the redevelopment.

The access plan is shown in Figure 5 below.

Figure 5: Access Plan



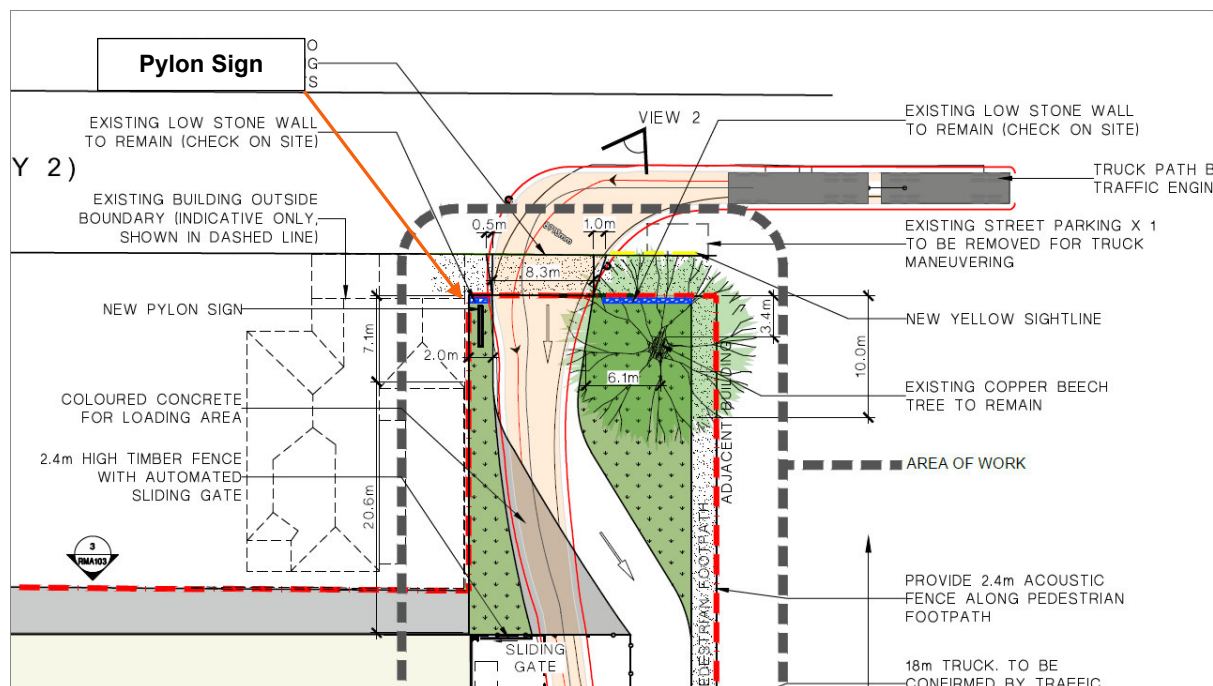
The new access from Main Street also provides a 2.0m wide pedestrian footpath, which directly connects Main Street with the supermarket.

4.2 SIGHT DISTANCE

No modifications to Access 2 or Access 3 are proposed as part of this redevelopment, however are located on straight and flat sections of road and therefore are considered to feature excellent visibility. The new access will feature entry-only movements, and therefore sight distance calculations for exiting vehicles are not required. Main Street in this location is straight and flat and therefore excellent visibility is available for vehicles waiting to turn into the site, and therefore is considered acceptable.

A proposed pylon sign is located adjacent to the new access, and is shown in Figure 6 below.

Figure 6: Pylon Sign Location



As detailed previously, no exit manoeuvres are permitted from this access, and therefore the pylon sign will not affect visibility to vehicles or pedestrians on Main Street. Vehicles entering the site from Main Street will have full visibility to other vehicles and to pedestrians on the footpath. As such, the proposed pylon sign location is considered acceptable.

5 DISTRICT PLAN RULES

5.1 GENERAL

The section below details an assessment of the proposal against the relevant rules detailed in *Section 6.5 – Commercial Zone – Rules & Standards* and *Appendix 5 – Requirements For Roads, Access, Parking & Loading* of the Wairarapa Combined District Plan.

It is noted that the new vehicle crossing and loading arrangements are located within the Commercial Zoned area of the site.

5.2 DISTRICT PLAN ASSESSMENT

Rule 6.5.2(g)(i) - Compliance with the standards in Appendix 5 Requirements for Roads, Access, Parking and Loading.

The development will comply with this requirement.

Rule 6.5.2(g)(ii) - One vehicle access point per frontage.

The development complies with this requirement.

Rule 6.5.2(g)(i) - Compliance with the standards in Appendix 5 Requirements for Roads, Access, Parking and Loading.

The development will comply with this requirement.

Rule 32.1.4 - *Road and accessway intersections shall be designed to ensure sufficient sight distances and safety, having regard to expected traffic volumes and speeds on approach roads.*

Where it is proposed to create a vehicle access or road intersection with any State Highway, the applicant shall obtain the approval of New Zealand Transport Agency. Intersections with State highway shall meet New Zealand Transport Agency requirements.

Access 1 provides entry-only movements and therefore sight distance assessments are not required. Consultation with Waka Kotahi has been undertaken, and will be continued following this application.

Rule 32.1.9 - *Pedestrian facilities shall be provided on footpaths in accordance with NZS 4121:2001 Design for Access and Mobility – Buildings and Associated Facilities and RTS 14 Guidelines for Facilities for Blind and Vision Impaired Pedestrians.*

The development will comply with this requirement.

Rule 32.1.10 - *All sites and allotments shall have legal practicable vehicle access from a public road. Seal widening at accesses shall be in accordance with Figure 32.2 below. Any vehicle access crossing a waterway shall incorporate culverts appropriate to the volume of water in the waterway and the traffic load on the access. Any earthworks shall comply with the requirements of this Plan.*

The development has legal practicable access from a public road. It is noted that Figure 32.2 details widening for rural roads and therefore is not applicable in this instance. The access does not cross a waterway.

Rule 32.1.11 - *All required vehicle parking spaces, loading spaces and access aisles shall be formed and sealed, and shall be provided with surface water drainage in accordance with NZS 4404:2004.*

The development will comply with this requirement.

5.3 PARKING

The *Standards for Roads, Access, Parking and Loading* table within the District Plan requires parking spaces comply with AS/NZS 2890.1:2004.

For 90 degree spaces, AS/NZS 2890.1:2004 requires:

- 2.6m width;
- 5.4m length; and
- 5.1m manoeuvring space.

The new angled space within the customer carpark measures 2.6m wide by 6.6m long with 5.1m manoeuvring space and therefore is acceptable.

6 TRAFFIC GENERATION AND ASSESSMENT

6.1 GENERAL

The proposed works to the existing supermarket do not increase the retail floor area, and therefore no additional traffic is expected to be generated by the proposal. The assessment below details the effects of the redistribution of customer and service vehicles with the introduction of the new access to SH2.

6.2 DELIVERY VEHICLES

Information provided by the applicant indicates an average of 6 vans, 2 light trucks and 10 b-trains providing deliveries to the supermarket throughout the day. To enable a conservative assessment, the analysis below assumes that 50% of these deliveries will occur within the peak hour. All b-trains will arrive from the Distribution Centre in Palmerston North, with the remaining deliveries sourced locally.

6.3 CUSTOMER TRAFFIC GENERATION

The key periods for a supermarket traffic modelling assessment are considered to be the weekday evening peak hour and Saturday peak hour. The traffic surveys detailed in Section 2.3 of this report recorded the inbound and outbound customer movements in both peak hours. Table 7 below details the existing traffic generation for the supermarket.

Table 7: Development Trip Generation

Activity	GFA (sqm)	Thursday Trip Generation (from surveys)	Thursday Trip rate (per 100sqm GFA)	Saturday Trip Generation (from surveys)	Saturday Trip rate (per 100sqm GFA)
Supermarket	1,725	273	15.7	254	14.7

As shown in Table 7, the supermarket generates 273 vehicles per hour (vph) and 254vph in the weekday PM and Saturday peak periods respectively.

Trip rates for the proposed Supermarket activities have also been taken from the New South Wales Roads and Traffic Authority Guide to Traffic Generating Developments (RTA Guide). The RTA Guide is the industry standard traffic generation document within New Zealand and Australia.

The RTA guide details a peak hour trip generation rate for supermarkets:

- Thursday evening – 15.5 vehicles per 100sqm Gross Leasable Floor Area (GLFA).
- Saturday – 14.7 vehicles per 100sqm GLFA.

As detailed above, the calculated trip generation rates based on the surveyed data are almost identical to the industry standard trip rates, and therefore are considered appropriate for analysis.

The new entry-only access is conservatively estimated to accommodate 40% of customer entry movements into the site, with the other two accesses accommodating the remaining 60% of customer entry movements. All service vehicles will now enter through the new access, with large trucks (b-trains and semi-trailers) only left turning into the site. The modelling assessment of the new access is detailed below.

6.4 TRAFFIC MODELLING

Existing traffic volumes on SH2 were recorded in the traffic surveys detailed in Section 2.3 of this report. The Access 1 intersection performance is detailed in Tables 8 and 9 below. The new access accommodates the customer traffic redistribution (40% of existing entry volumes) and all delivery vehicles.

Table 8: Access 1 – Thursday Evening Peak Hour

MOVEMENT SUMMARY										
▽ Site: 101 [Thursday PM (Site Folder: General)]										
New Site Site Category: (None) Give-Way (Two-Way)										
Vehicle Movement Performance										
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE	
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m
South: Main Street South										
1	L2	36	7	38	19.4	0.297	5.8	LOS A	0.0	0.0
2	T1	475	50	500	10.5	0.297	0.1	LOS A	0.0	0.0
Approach		511	57	538	11.2	0.297	0.5	NA	0.0	0.0
North: Main St North										
8	T1	365	45	384	12.3	0.243	0.4	LOS A	0.4	3.0
9	R2	26	2	27	7.7	0.243	9.2	LOS A	0.4	3.0
Approach		391	47	412	12.0	0.243	1.0	NA	0.4	3.0
All Vehicles		902	104	949	11.5	0.297	0.7	NA	0.4	3.0

Table 9: Access 1 – Saturday Peak Hour

MOVEMENT SUMMARY										
▽ Site: 101 [Saturday IP (Site Folder: General)]										
New Site Site Category: (None) Give-Way (Two-Way)										
Vehicle Movement Performance										
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE	
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m
South: Main Street South										
1	L2	33	7	35	21.2	0.266	5.8	LOS A	0.0	0.0
2	T1	442	17	465	3.8	0.266	0.1	LOS A	0.0	0.0
Approach		475	24	500	5.1	0.266	0.5	NA	0.0	0.0
North: Main St North										
8	T1	399	22	420	5.5	0.248	0.3	LOS A	0.3	2.4
9	R2	23	2	24	8.7	0.248	8.8	LOS A	0.3	2.4
Approach		422	24	444	5.7	0.248	0.8	NA	0.3	2.4
All Vehicles		897	48	944	5.4	0.266	0.6	NA	0.3	2.4

As shown above, the intersection operates satisfactorily, with reasonable queues on the major approaches, typical of an arterial intersection in a peak hour. Overall, the intersection operates with an LOS of A in both peak hours, which is considered acceptable for a priority intersection. Minimal queues of less than one vehicle arise on SH2, and therefore the queuing is considered to have minimal impact on the operation of the State Highway. As detailed previously, all large delivery vehicles will turn left into the site, and therefore any queuing will not affect the existing pedestrian crossing on SH2.

6.5 SENSITIVITY TEST

To ensure the operational efficiency of the new access a sensitivity test was undertaken. The weekday PM peak hour was reassessed with the following conservative parameters:

- Increased distribution of customer traffic entering through the new access from 40% to 50%; and
- Traffic growth on SH2 of 1% for 10 years, therefore a 10% increase in through traffic volumes.

The Access 1 sensitivity test intersection performance is detailed in Table 10 below.

Table 10: Access 1 – Sensitivity Test

MOVEMENT SUMMARY

▼ Site: 101 [Thursday PM - Sensitivity (Site Folder: General)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance										
Mov ID	Turn	INPUT VOLUMES [Total veh/h]		DEMAND FLOWS [Total veh/h]		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh]	95% BACK OF QUEUE Dist [m]
South: Main Street South										
1	L2	43	7	45	16.3	0.329	5.8	LOS A	0.0	0.0
2	T1	523	55	551	10.5	0.329	0.1	LOS A	0.0	0.0
Approach		566	62	596	11.0	0.329	0.5	NA	0.0	0.0
North: Main St North										
8	T1	402	50	423	12.4	0.274	0.6	LOS A	0.6	4.4
9	R2	32	2	34	6.3	0.274	9.9	LOS A	0.6	4.4
Approach		434	52	457	12.0	0.274	1.3	NA	0.6	4.4
All Vehicles		1000	114	1053	11.4	0.329	0.9	NA	0.6	4.4

As shown above, the assessment of the additional conservative parameters in a future design year of 2032 result in a vehicle queue of only 4.4m, and therefore does not affect the pedestrian crossing. As such, the proposal is considered acceptable.

7 LOADING AND SERVICING

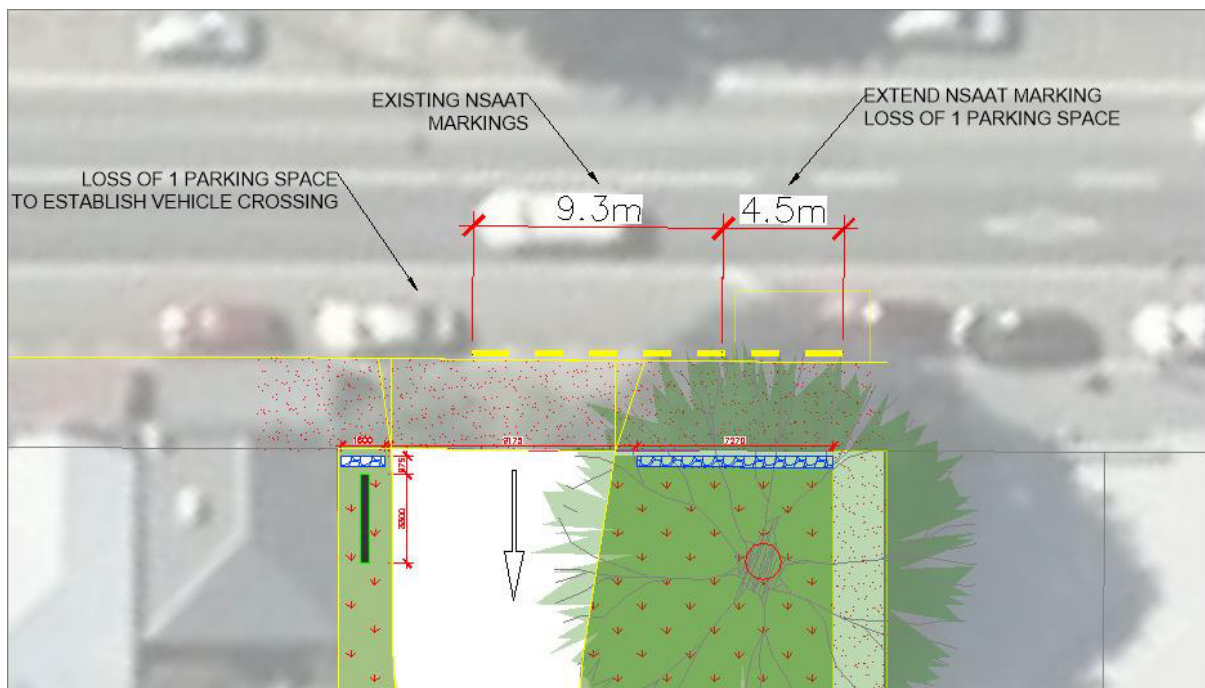
7.1 TRUCK VOLUMES

As detailed previously, information provided by the applicant indicates an average of 6 vans, 2 light trucks and 10 b-trains providing deliveries to the supermarket throughout the day. These vehicles will now all access the supermarket from the new access. The proposed access design is considered appropriate to serve this volume of trucks. This is considered an improvement on the existing situation, as detailed further in Section 7.2 below.

7.2 ACCESS DESIGN

The vehicle crossing measures 8.3m wide at the property boundary, with the width required to accommodate the vehicle tracking of the largest anticipated design vehicle. It is noted that the establishment of the vehicle crossing will require the removal of one on-street parking space, with an additional parking space removed to enable clear sightlines between left turning trucks and pedestrians. The changes to the on-street parking spaces and the proposed vehicle crossing are shown in Figure 7 below.

Figure 7: On-Street Parking Space Changes



As detailed above, NSAAT markings currently exist in the location of the vehicle crossing. Therefore an extension to these markings is proposed of approximately 4.5m (approximately one parking space) to enable the sightlines mentioned previously. An additional parking space is required to be removed to establish the new vehicle crossing. This results in a total on street parking space loss of two spaces.

Vehicle tracking into the site of a 23m truck and trailer and a 17.9m semi-trailer is shown in **Attachments A1 and A2**. As shown, the trucks can safely and efficiently manoeuvre into the site. The vehicle crossing will satisfy relevant SWDC design requirements; the footpath either side of the crossings will maintain a consistent surface finish, signalling to drivers that pedestrians have right of way. This is also consistent with other crossings along SH2 in Greytown.

As such, the proposed vehicle crossing is considered acceptable.

7.3 LOADING OPERATION

7.3.1 EXISTING OPERATION

The existing loading operations are shown in Figure 8 and Figure 9 below.

Figure 8: Existing Operation - Entry

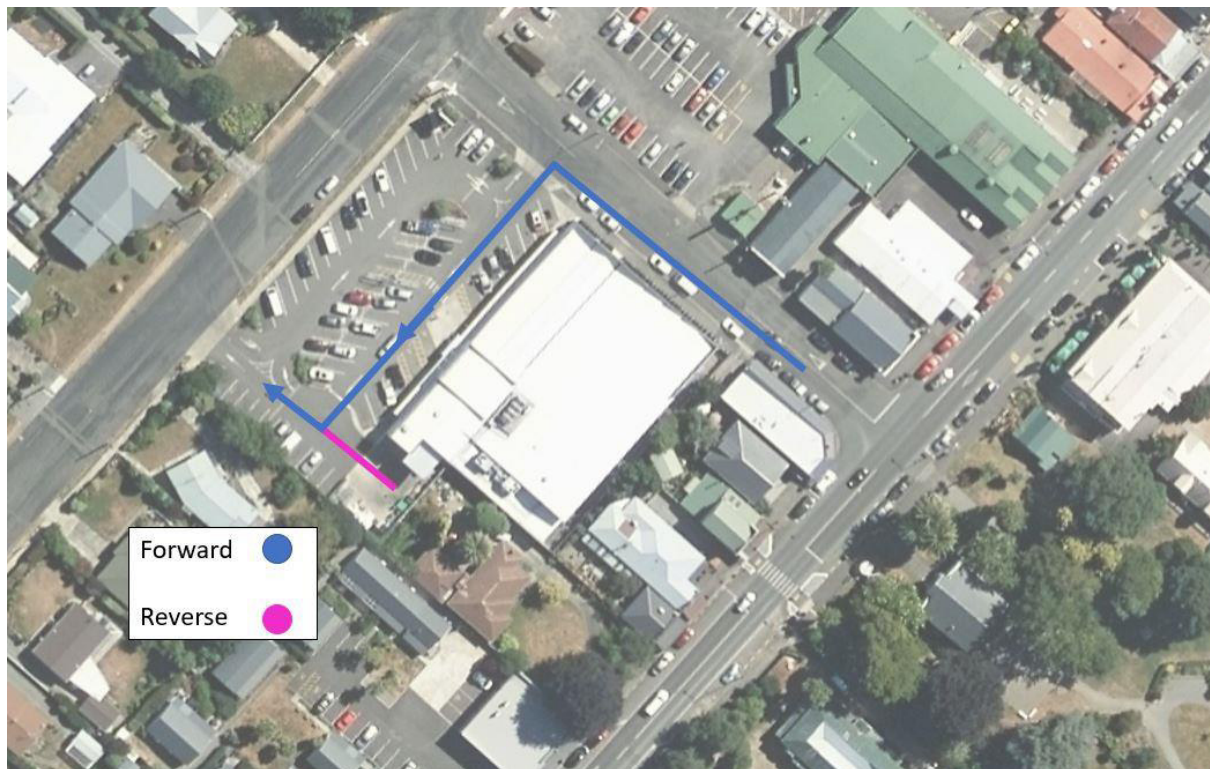
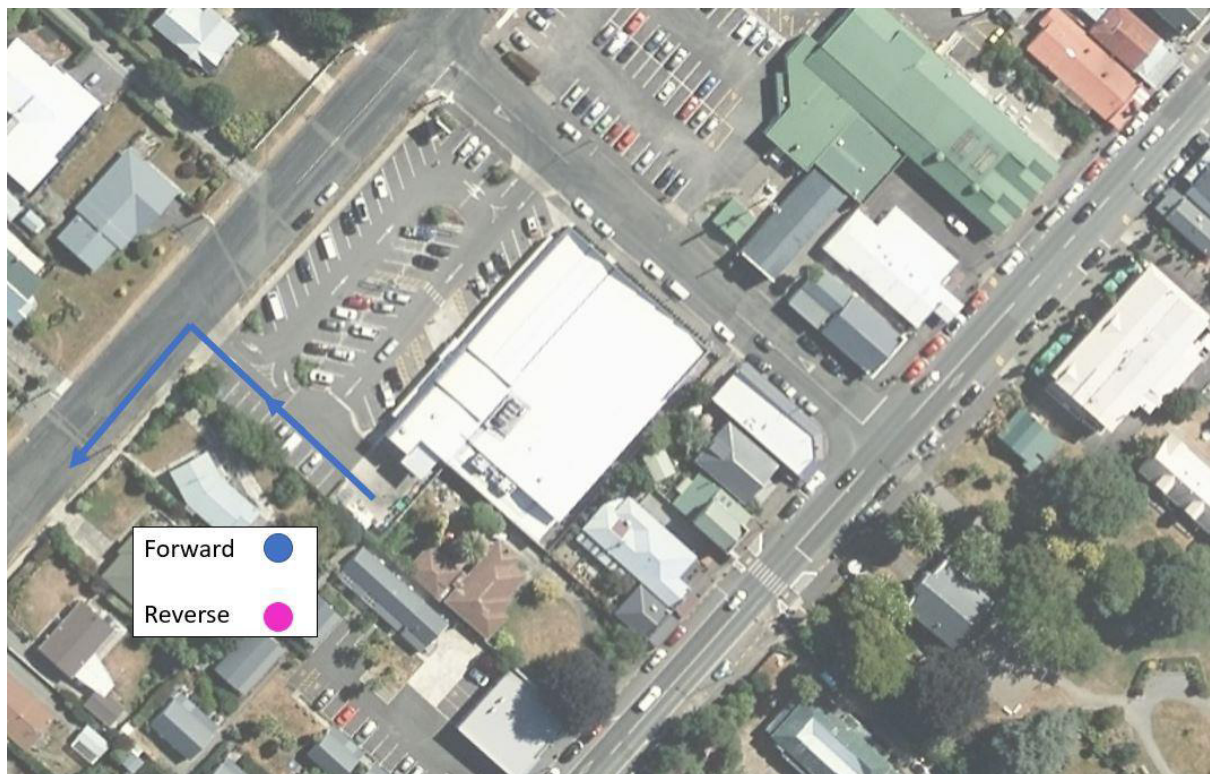


Figure 9: Existing Operation - Exit



As shown above, trucks are currently required to travel through the customer carpark, and then reverse within the customer carpark up into the loading dock. Reversing manoeuvres within customer carparks are typically avoided where possible, as they can pose safety issues with regards to pedestrians and customer vehicles. The proposal intends to remove

the requirement for these reversing manoeuvres and in our opinion therefore results in an improvement in on-site safety.

7.3.2 PROPOSED OPERATION

The loading vehicles will access the loading area directly from the new access, and then exit to West Street as per the existing arrangement. Customer vehicles can access the customer carpark from the new access, bypassing the loading area. Customer vehicles can also access the site from the other two existing accesses. Trucks exiting the loading area will give way to customer vehicles and pedestrians. The fencing near this give way area will be visually permeable for 5m and a concave traffic mirror will be provided, to ensure visibility between trucks and customer vehicles. It is recommended that a speed bump is provided within the customer vehicle lane to slow vehicles in this area.

The proposed operation is considered an improvement on the existing operation. Trucks are no longer required to reverse on-site or within the customer carpark, and are able to easily access and egress the loading area. The trucks also are no longer required to travel within the customer carpark in front of the supermarket. With the improvements detailed as part of this proposal, as well as the visibility mitigation detailed above, the proposed access is considered acceptable, and will have positive effects in terms of safety.

8 CONSULTATION

8.1 SOUTH WAIRARAPA DISTRICT COUNCIL

Consultation with SWDC was undertaken through the Section 92 process as part of the previous application. The Section 92 requests were formally responded to in August 2022. The concerns raised by SWDC have been addressed through the updated application plans as part of this consent.

A meeting with SWDC's traffic expert Harriet Fraser was subsequently held in December 2022 to discuss the updated application plans. A summary of this discussion is detailed below:

- SWDC agreed that the proposed redevelopment will improve safety on-site as a result of removing reverse manoeuvres;
- SWDC raised concerns with pedestrian safety across the new driveway. Commute consider the updated design to suitably provide for pedestrian safety. Commute will undertake data collection in the peak summer period to understand existing pedestrian volumes within the supermarket area. The pedestrian survey data at the Hastwell Street / Main Street intersection is detailed in **Attachment C**; and
- SWDC agreed that the removal of right turning delivery vehicles would ensure safety of the existing pedestrian crossing on Main Street is maintained.

8.2 WAKA KOTAHI

Consultation with Waka Kotahi was undertaken via email with Kelsey Watson (Environmental Planner) for the new subject application. The comments provided by Waka Kotahi are provided below in *italics*, with the Commute response provided below.

The primary concern Waka Kotahi has with the application, is the impact of large delivery vehicles on the safety of the pedestrian crossing to the north of the site and it is not clear how the revised plan has addressed our concerns below.

- *Whilst it is noted that the modelling shows a queue of 4.7m currently and 8m in the future, this does not account for the larger B-train vehicles which are expected to be using the new entrance, and which would result in the blocking of the pedestrian crossing and associated sightlines.*
- *Stationary vehicles on or near the pedestrian crossing will obscure pedestrians from approaching vehicles, and significantly reduce or obscure sight lines for pedestrians as they are using the crossing.*
- *This pedestrian crossing is in a strategic location in the town centre, is extensively used and is programmed for a safety upgrade soon with a raised platform.*
- *Due to the proximity of the proposed access to the pedestrian crossing, the intended use and the type of vehicles using the access, it is considered that this conflict cannot be resolved, while maintaining a right turn into the site.*
- *Compromising the safety of this pedestrian crossing is not acceptable.*

The comments provided by Waka Kotahi have been incorporated into the updated design. All large heavy vehicle deliveries will turn left into the site only, and therefore will not queue near the pedestrian crossing, nor will they affect visibility for pedestrians on the crossing. Customers will be able to turn right into the site, however as detailed in Section 6.4 and 6.5, will not form queues near the pedestrian crossing, even under sensitivity testing. As such, the proposed design is considered acceptable and addresses the concerns raised by Waka Kotahi.

In addition, Waka Kotahi has the following concerns with the current proposal:

Safety of pedestrians on the footpath navigating the accessway:

- *Even though the design has reduced the width of the accessway it still requires pedestrians to traverse a long section of footpath in conflict with turning traffic. This is compounded by the use of the access by heavy delivery vehicles.*

The access design features several key design features which ensure pedestrian safety:

- Narrowed width of 8.3m;
- Located on a flat and straight section of road;
- Designed to SWDC engineering standards, which ensure pedestrian priority over the access;
- Features entry-only movements; and
- Includes an extension to NSAAT markings to ensure heavy vehicles are provided with excellent visibility to pedestrians when left turning in.

As detailed in Attachment C, pedestrian volumes in the peak hour on a weekday are minimal, with slightly increased volumes on Saturday. As such, the access is considered to be appropriately designed and can safely accommodate all road users.

Safety of cyclists:

- *Cyclists on the inside of a vehicle slowing to turn left into the accessway may not be seen by a right turning vehicle due to the shadowing effect.*

As detailed in Section 2.3, cyclist volumes on Main Street are low. As detailed in Tables 5 and 6, the surveys at the Main Street / Hastwell Street intersection only recorded 5 cyclists in the Saturday peak hour, and did not record any cyclists on Thursday in either peak hour. The development will only accommodate up to 18 deliveries a day, appreciate 1-2 deliveries per hour. As such, the possibility of this

situation occurring is very low. In any case, a right turning vehicle will still give way to the left turning vehicle and therefore the cyclist. The driveway and cycle arrangement is similar to all other driveways on Main Street, however is considered a safer arrangement as the driveway will not feature any exit movements. As such, the proposed design is considered acceptable.

Pavement effects:

- *Waka Kotahi consider the application did not include any assessment of the heavy vehicle movements on the pavement structure. The applicant has stated that they do not have the available information for this query but suggest that any such information could easily be conditioned via application of appropriate engineering standards. We do not consider this is necessary for an analysis of effects of the proposal at resource consent stage. The Applicant would certainly accept a condition requiring that any damage to the public footpath be rectified / that the footpath be reinstated to Council's satisfaction following construction. Waka Kotahi have asked them to consider the effects at the resource consent stage.*

This is noted, and will be addressed in the Civil Engineering reporting provided as part of the Engineering Plan Approval stage.

Stormwater:

- *Waka Kotahi have provided the applicant preliminary advice regarding stormwater, if these are not addressed in their resource consent application then we would request these be conditions on the consent:*
 - *Stormwater should be hydraulically neutral or discharge into SWDC reticulation if SWDC approve.*
 - *Effects of stormwater runoff are appropriately managed on-site before any runoff is discharged into State Highway 2 network.*
 - *Peak stormwater flow to the State Highway 2 network will not increase with the development.*
- *In regards to your point around a soakpit being required for any new commercial activity in Greytown, this would be under Council jurisdiction to ensure this occurs on site.*

This is noted, and will be addressed in the Civil Engineering reporting provided as part of the Engineering Plan Approval stage.

On-street parking loss:

- *Additional information is sought from the applicant on the anticipated number of on-street parking spaces which will be lost as a result of the construction of the new access.*

This is detailed and assessed in Section 7.2 of this report.

Accessway separation:

- *The proposed crossing cannot meet the required separation distance of 160m from an intersection, as state in the New Zealand Transport Agency Planning Policy Manual: Appendix 5B Accessway standards and guidelines, Section 5B/3 Guidelines for minimum accessway spacings, shown below.*

Agreed, although it is noted that this requirement cannot be complied with in most town centre environments such as the proposed development. The majority of existing driveways in Greytown also do not comply with this requirement. In any case, the proposed vehicle crossing is considered to be consistent with development in the area, and is designed appropriately to safely accommodate all road users.

9 CONSTRUCTION TRAFFIC

The construction methodology for the proposal has not been finalised as it will depend on a range of factors, including any resource consent requirements. As such, it is proposed that provision be made in the resource consent conditions for a Construction Traffic Management Plan (CTMP) to be developed for the works anticipated (as is typically the case for other developments in New Zealand). It is considered that this CTMP should include:

- i. construction dates and hours of operation including any specific non-working hours for traffic congestion/noise etc, aligned with normally accepted construction hours for this town centre context;
- ii. truck route diagrams both internal to the site and external to the local road network;
- iii. temporary traffic management signage/details for both pedestrians and vehicles to appropriately manage the interaction of these road users with heavy construction traffic;
- iv. details of how the site will be managed should a portion of the site be opened to residents and visitors while construction is still being completed; and
- v. details of site access/egress over the entire construction period.

Based on experience of constructing similar supermarket redevelopments and bearing in mind the capacity within the existing roading network, with the appropriate CTMP in place and the above measures implemented, it is considered that construction activities will be managed to ensure an appropriately low level of traffic effects.

Further, construction activities are temporary and with the above measures in place will be appropriately managed and therefore the construction traffic effects are considered minimal.

10 CONCLUSION

On the basis of the assessment contained in this report, the following conclusions can be made:

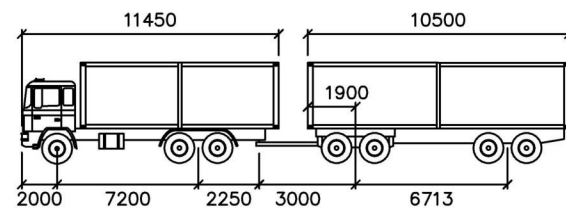
- The proposal is not expected to detrimentally affect the existing good safety record;
- The new entry-only access provides excellent visibility for both pedestrians and vehicles;
- The proposed access generally complies with District Plan requirements;
- The proposed parking arrangements comply with the District Plan requirements;
- The existing traffic generated by the supermarket, redistributed by the implementation of the new access, can be readily accommodated by the surrounding road network, with minimal effect to vehicles on Main Street;
- The access has been designed to suitably accommodate the largest anticipated design vehicle; and
- The loading and servicing provisions are considered an improvement on existing arrangements in terms of safety.

It is recommended that:

- A speed bump is provided within the customer vehicle lane internal to the site to slow vehicles; and
- The development should provide a CTMP before construction begins. The construction traffic effects are considered to be minimal.

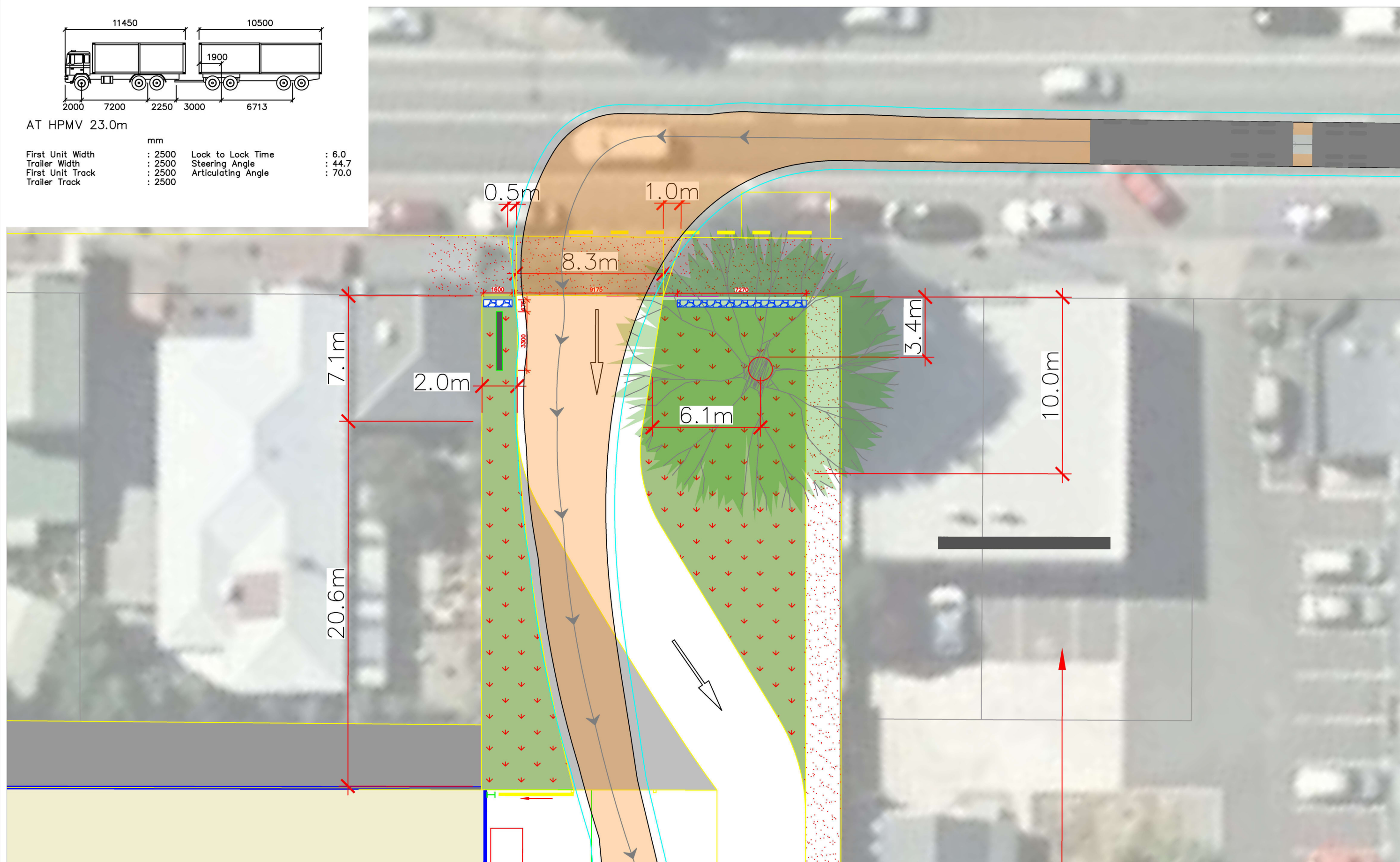
Accordingly, subject to the recommendations above, it is concluded that there is no traffic engineering or transport planning reason that would preclude the proposed new access to the supermarket as intended.

ATTACHMENT A: VEHICLE TRACKING – HEAVY VEHICLES



AT HPMV 23.0m

First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2500	Steering Angle	: 44.7
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2500		



Revision notes:

Rev:	Date:	Notes:

Drawn by:

JB

Client:

Countdown

Project:

Fresh Choice, Greytown

Supermarket

Drawing Title:

23 Truck and Trailer
Vehicle Tracking

Date:

12/04/23

Scale @ A3:

1:200

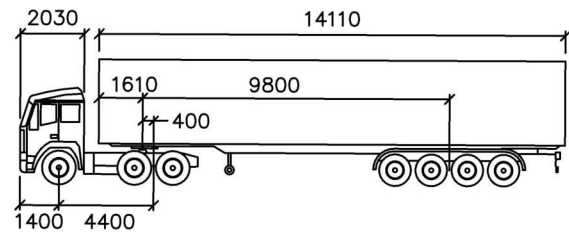
Revision:

A

commute
TRANSPORTATION CONSULTANTS

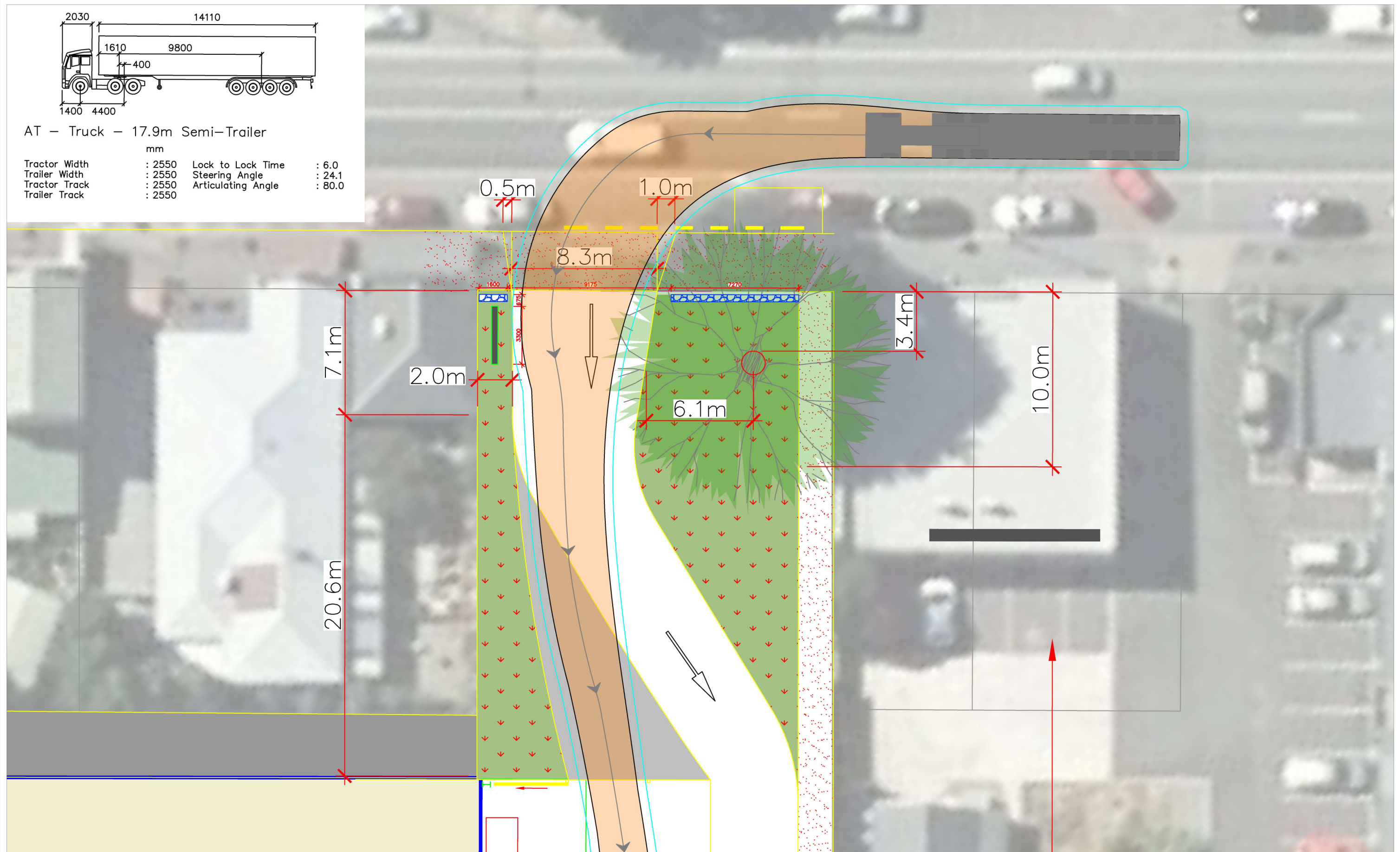
Figure:

A1



AT – Truck – 17.9m Semi-Trailer

	mm		
Tractor Width	: 2550	Lock to Lock Time	: 6.0
Trailer Width	: 2550	Steering Angle	: 24.1
Tractor Track	: 2550	Articulating Angle	: 80.0
Trailer Track	: 2550		



Revision notes:

Rev:	Date:	Notes:

Drawn by:

JB

Client:

Countdown

Project:

Fresh Choice, Greytown

Supermarket

Drawing Title:

17.9m Semi Trailer
Vehicle Tracking

Date:

12/04/23

Scale @ A3:

1:200

Revision:

A

commute
TRANSPORTATION CONSULTANTS

Figure:

A2

ATTACHMENT B: VEHICLE CROSSING DESIGN

ATTACHMENT C – PEDETSRIAN SURVEYS

Hastwell St - Main St Weather Fine Thurs 30/03/23

Period	Time	Hastwell St		Main St (East)		Main St (West)	
		West to East	East to West	North to South	South to North	South to North	North to South
		Pedestrians	Pedesrians	Pedestrians	Pedesrians	Pedestrians	Pedesrians
AM	7:00	0	1	1	0	0	0
AM	7:15	2	1	0	0	0	0
AM	7:30	0	1	0	1	0	0
AM	7:45	1	1	0	0	0	1
AM	8:00	0	0	0	0	0	0
AM	8:15	2	0	0	0	0	3
AM	8:30	2	4	0	0	0	11
AM	8:45	0	3	0	0	2	1
PM	16:00	0	5	1	2	2	1
PM	16:15	4	1	0	0	2	1
PM	16:30	1	3	1	0	2	2
PM	16:45	0	7	0	1	2	2
PM	17:00	3	3	2	2	4	1
PM	17:15	2	0	0	1	2	0
PM	17:30	3	2	2	1	0	0
PM	17:45	2	1	0	0	0	0

Hastwell St - Main St Weather Fine Sat 01/04/23

Period	Time	Hastwell St		Main St (East)		Main St (West)	
		West to East	East to West	North to South	South to North	South to North	North to South
		Pedestrians	Pedesrians	Pedestrians	Pedesrians	Pedestrians	Pedesrians
IP	10:00	10	14	2	2	1	5
IP	10:15	18	16	2	3	7	4
IP	10:30	7	12	0	3	7	3
IP	10:45	8	17	5	0	3	10
IP	11:00	20	12	2	2	10	4
IP	11:15	15	6	2	1	7	4
IP	11:30	17	12	0	0	8	12
IP	11:45	12	11	2	2	13	12
IP	12:00	26	17	0	6	5	7
IP	12:15	14	15	6	4	18	13
IP	12:30	11	9	6	0	9	8
IP	12:45	6	22	5	5	12	10
IP	13:00	33	19	1	2	10	7
IP	13:15	22	11	5	5	16	10
IP	13:30	9	8	9	3	13	8
IP	13:45	7	16	1	2	8	8