Before the Independent Hearing Commissioner at Wairarapa

Under	the Resource Management Act 1991 (the **RMA**)
In the matter of	an application for resource consent by Woolworths New Zealand Ltd to undertake demolition of a building, undertake new building, alterations, and additions and to establish a sign exceeding the maximum size within the Greytown Historic Heritage Precinct; establish an additional vehicle crossing to State Highway 2 (Main Street) Greytown and to undertake associated landscaping and site works.
Between	**Woolworths New Zealand Limited** Applicant
And	**South Wairarapa District Council** Consent Authority

Statement of evidence of Terry Phillip Church on behalf of Waka Kotahi New Zealand Transport Agency

Traffic

Dated 22 September 2023

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1 SUMMARY OF EVIDENCE

1.1 My full name is Terry Philip Church and I am a Director of Flow Transportation Specialists Limited (**Flow**).

1.2 I have over 24 years experience as a specialist traffic and transport engineer. I am a Chartered Member of Engineering New Zealand and a Chartered Professional Engineer of New Zealand.

1.3 I have been engaged by Waka Kotahi NZ Transport Agency (**Waka Kotahi**) to review and advise on transport matters associated with the Resource Consent application of Woolworths New Zealand Limited (**Woolworths**) who propose a new access with State Highway 2 (134 Main Street) to the existing Greytown Fresh Choice supermarket (**Site**). The Site currently has safe, effective and efficient access for customers and loading from Hastwell Street and West Street.

1.4 Main Street currently has a sign-posted speed limit of 40 km/h. Main Street is a two lane road (one lane in each direction) and experiences different levels of traffic throughout the week and throughout the year, with Greytown being a destination during long weekends, the warmer summer months, and holiday periods.

1.5 Main Street/SH2 is a Strategic Arterial as defined by the Wairarapa Combined District Plan (**WCDP**) and a Regional Route as defined by Waka Kotahi's One Network Road Classification (**ONRC**). Regional roads carry more 10,000 vehicles or more per day, have high commercial vehicle volumes (>400 per day), carry freight, are used by tourists and provide access to key places.

1.6 Traffic volumes through Greytown are seasonal, with daily traffic volumes increasing substantially during the warmer months (daylight savings period). The weekday average annual daily traffic (**AADT**) during the warmer months is 10,025 vehicles per day (January to March 2023 inclusive), with the AADT being as high as 11,305 vehicles per day (warmer months) in 2021. Fridays are generally the busiest day, with the averaging daily traffic increasing to 11,190 vehicles per day (January 2023 to March 2023).

1.7 Pedestrian volumes surveyed along Main Street (fronting the site), are estimated to be some 150-250 pedestrians per day (weekday) and some

750-1000 pedestrians per day (weekends). The Greytown-Woodside Cycle Trail runs along Main Street directly in front of 134 Main Street, before turning left along Hastwell Street and left along West Street.

1.8 I do not support the application by Woolworths as submitted, as:

(a) The Transport Assessment and evidence of Mr Hills on behalf of the applicant has not assessed the proposed customer and service vehicle access at 134 Main Street against the Assessment Criteria in the WCDP, specifically that set out in Standard 22.1.16. I rely on the evidence of **Ms Kathryn St Amand** for Waka Kotahi who sets out the need for the proposed vehicle access to require resource consent. That is, the proposed access is not a permitted activity and therefore the assessment needs to extend beyond the assessment of Appendix 5 – Requirements For Roads, Access, Parking & Loading of the WCDP .

(b) The transport effects of the proposed access have not been assessed against the WCDP Standard 22.1.16 which includes:

(i) The position and function of the road within the road hierarchy, the actual speed environment of the road, traffic volumes and any other factors that will affect congestion and conflicts between vehicles;

(ii) The vehicle type using the site, the time of day the site is inhabited and the anticipated vehicle generation;

(iii) The extent to which the safety and efficiency of the road or the safety of road users may be adversely affected;

(iv) Whether there will be any adverse effects on the safety of pedestrians using the roads, footpaths or vehicle crossings;

(v) Proposed methods for avoiding, remedying or mitigating any potential adverse effects including:

(1) Improving the visibility of vehicle crossing points;

(2) Alternative design, construction, or location.

1.9 In considering how the proposal responds to each of the assessment criteria in Standard 22.1.16 above, I consider that the proposed access:

(a) does not align with the Commercial Zone Policy 6.3.5 as the application includes a poorly sited vehicle crossing, introduces significant safety concerns to all road users and disrupts vulnerable road users (which includes elderly and young children), and will lead to operational issues and safety conflicts on SH2. It also does not align with the Waka Kotahi Activity Street classification as per the One Network Framework ('**ONF**') where the focus is on active modes, that is, people spending a significant amount of time working, shopping, eating, residing, and undertaking recreation;

(b) introduces a significant number of conflicts to through vehicles on the Strategic Arterial/state highway, turning vehicles, pedestrians and cyclists, posing a safety concern to the general public that significantly outweighs the health and safety risk on-site which the Proposal aims to address;

(c) has been assessed using traffic volumes and survey data that do not reflect the seasonal/summer periods of Greytown, when traffic volumes are greater than that used in the assessment. As I set out in my evidence below, volumes surveyed and used to inform the Commute Transport Assessment reflect the lower trafficked time period for Greytown, rather than the busy warmer months when visitor numbers increase;

(d) introduces an unacceptable safety risk to all road users, especially vulnerable footpath users including children and elderly. The vehicle access design put forward does not provide priority to pedestrians;

(e) introduces a high volume access with very poor visibility, that does not accord with RTS 6[1] guidance, Waka Kotahi's Planning and Policy Manual ('PPM') or Austroads engineering design standards; and

[1] Guideline for visibility at driveways RTS 6, Land Transport Safety Authority guideline, May 1993, Reprinted July 2001

(f) the proposal has not considered alternatives to mitigate on-site health and safety concerns.

1.10 I do not support the proposed access at 134 Main Street. I am of the view that on-site effects associated with loading and servicing can be appropriately managed on-site through a travel management plan and reconfiguration of the Site. A pedestrian connection to Main Street is supported provided the design is improved to provide a safer route (between West Street and Main Street) for those using the proposed connection.

1.11 I have also considered an alternative arrangement (right-turn out only, for delivery trucks only). While I consider that the safest approach would be to not establish a vehicle access and exit off Main Street, if such a vehicle access/exit is to be established, then alternatives which mitigate the transport effects (such as I have considered) should be preferred.

1.12 The key differences between my view and the opinion of Mr Hills for the Applicant are:

(a) Mr Hills has not considered the impacts of the Proposal during the particularly busy summer months, when pedestrian and vehicle numbers are expected to be higher than those surveyed;

(b) During busier periods the number of conflicts between road users (vehicles, pedestrians and cyclists) will increase. During these periods vehicles using the proposed access are more likely to conflict with pedestrians using the footpath, as well as vehicles travelling along the highway. These conflicts will impact both safety and efficiency;

(c) I do not consider the Proposal is required in order to address any health and safety concerns with the servicing of the supermarket site. Those concerns could be mitigated on-site, but the applicant has not considered options to do this;

(d) I have assessed the Proposal against the assessment criteria in 22.1.16 of the WCDP and consider that this assessment highlights the adverse transportation effects of the Proposal;

(e) The traffic modelling undertaken is not suitable for predicting delays caused when vehicles need to give way to footpath users.

Vehicles turning into the site which need to give way to pedestrians will block the traffic lanes on the highway and may increase the risk of nose-to-tail crashes or following vehicles taking avoidance action. The SIDRA traffic modelling should also not be used to assess safety impacts;

(f) I do not agree that the crash rates from other supermarkets in South Wairarapa can be applied to the proposed access and exit on Main Street, as the transport environment is very different.

2 INTRODUCTION, QUALIFICATIONS AND EXPERIENCE

2.1 My full name is Terry Philip Church and I am a Director of Flow Transportation Specialists Limited (**Flow**). I am presenting this transportation engineering and transportation planning evidence for Waka Kotahi NZ Transport Agency (**Waka Kotahi**).

2.2 I hold a Bachelor of Engineering Technology degree (2004 – completed while working full time) and a New Zealand Certificate in Civil Engineering (1999), both obtained from Unitec in Auckland. I am a Chartered Member of Engineering New Zealand and a Chartered Professional Engineer of New Zealand. I am also a member of the Engineering New Zealand Transportation Group.

2.3 I have over 24 years of professional experience as a traffic and transportation engineer. I have been actively involved as a transport expert to a range of clients, including National and Local government authorities and private developers. I manage and review applications for designations, plan changes, sub-divisions and land use resource consent projects. I am also the lead traffic engineer with design teams on new roading projects about the country.

2.4 I have been engaged by Waka Kotahi to review and advise on transport matters associated with the Resource Consent application of Woolworths NZ Limited (**Woolworths**) who propose a new access with State Highway 2 (134 Main Street) to the existing Greytown Fresh Choice supermarket (**Site**). The Site currently gains access for customers and loading from Hastwell Street and West Street.

2.5 I have been involved with various projects which seek new accesses or intensification of land adjacent to the state highway network, including the Bluehaven Development in New Plymouth, land use developments in Tokoroa, and the Auranga Development in Drury, Auckland. I have been responsible for assessing a large number of developments that seek changes to or new accesses with key arterial roads, either for private developers or reviewing applications on behalf of Council or the road controlling authority.

2.6 I can confirm that I visited the Site on 5 September 2023 and am familiar with the Site and the surrounding transport network.

3 CODE OF CONDUCT

3.1 I have read the Environment Court's Practice Note 2023 Code of Conduct for Expert Witnesses, and I agree to comply with it. My qualifications as an expert are set out above.

3.2 I confirm that the issues addressed in this brief of evidence are within my areas of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

4 SCOPE OF EVIDENCE

4.1 My evidence addresses the following transportation matters:

(a) The existing transport environment of Main Street about the front of the Site;

(b) Proposed upgrade of Main Street being completed by Waka Kotahi;

(c) Outline of the Woolworth's proposal as it relates to transport matters;

(d) Assessment Criteria needing to be assessed when proposing a new vehicle access at 134 Main Street

(e) An assessment of the proposal against the WCDP Assessment Criteria

(f) Matters raised in the primary evidence of Mr Leo Hills and Mr Daniel Shao for Woolworths.

4.2 In preparing my evidence, I have considered the following:

(a) Council's Section 42A Hearings Report (**Council's Planning Report**) and the transport assessment completed by Ms Harriet Fraser (Council's traffic engineer) included in Appendix 2;

(b) Assessment of Environmental Effects Report (**AEE Report**), Proposed New Access to Existing Supermarket, 134 Main Street, Greytown prepared by Forme Planning, dated April 2023;

(c) Transportation Assessment Report, Fresh Choice Supermarket, 12 Hastwell Street, Greytown, prepared by Commute Transportation Consultants (**Commute Transport Assessment**), dated 13 April 2023; and

(d) Expert evidence of Mr Leo Hills (Traffic Engineering), Ms Kay Panther Knight (Planning) and Mr Daniel Shao (Corporate) on behalf of Woolworths.

4.3 With respect to planning matters, I have relied on the evidence of **Ms Kathryn St Amand** for Waka Kotahi NZ Transport Agency.

5 EXISTING TRANSPORT ENVIRONMENT

5.1 Main Street currently has a sign-posted speed limit of 40 km/h. The speed limit was recently reduced in response to Waka Kotahi's Road to Zero road safety plan.

5.2 Main Street is a two lane road (one lane in each direction) and experiences different levels of traffic throughout the week and throughout the year, with Greytown being a destination during long weekends, the warmer summer months and holiday periods.

5.3 Traffic volumes through Greytown are seasonal, with daily traffic volumes increasing substantially during the warmer months (daylight savings period). Daily traffic volumes and analysis of daily volumes for 2018-2023 is set out in **Attachment A** of my evidence.

5.4 The weekday average annual daily traffic (**AADT**) volumes during the cooler months is in the order of 9,477 vehicles per day (April through to September inclusive) with the survey days (Thursday, 30 March 2023 and Saturday, 1 April 2023) set out in the Commute Transport Assessment (Appendix 4 to the AEE) (being reflective of this, at 9,460

vehicles per day. During the warmer months however, weekday average annual daily traffic volumes increase to 10,024 vehicles per day (January to March 2023 inclusive), with this being as high as 11,304 vehicles in 2021.

5.5 Fridays are generally the busiest day, with the average daily traffic increasing to 11,190 vehicles per day (January 2023 to March 2023). This reflects an increase of 18% over the average annual weekday traffic volume of 9,460 set out in the Commute Transport Assessment.

5.6 Weekday evening and weekend interpeak traffic volumes on Main Street are some 900 to 950 vehicles per hour, with 10% heavy vehicles weekdays and 5% heavy vehicles during weekends. The volumes are generally observed between 10:00am and 5:00pm. The heavy vehicle percentage is high, with 1 in 10 vehicles being classified as heavy. Truck and trailer units hauling logs and heavy equipment are frequent through the town centre. Fronting the site, on-street parking is provided (both sides) and there is no central flush median. During the summer months, peak hour volumes increase to 1,000 vehicles per hour (observed on Friday's between January and March 2023) during the afternoon/evening period (3:00pm to 5:00pm).

5.7 Pedestrian volumes surveyed along Main Street (fronting the site), as set out in the Commute Transport Assessment are:

a) some 10 pedestrians per hour during the weekday commuter peak hours (7:00 to 9:00am and 4:00 to 6:00pm). I estimate this to be some 150-250 pedestrians per day; and

b) some 90 pedestrians per hour throughout the middle of the day (11:30am to 1:30pm). I estimate this to be some 750-1000 pedestrians across the day during weekends.

5.8 As with the traffic volume analysis, pedestrian numbers about the Main Street, particularly Friday and during the summer months are expected to be higher than that surveyed given the attractiveness of Greytown during the warmer months. The busier summer period has not been considered in the Commute Transport Assessment or the evidence of Mr Hills.

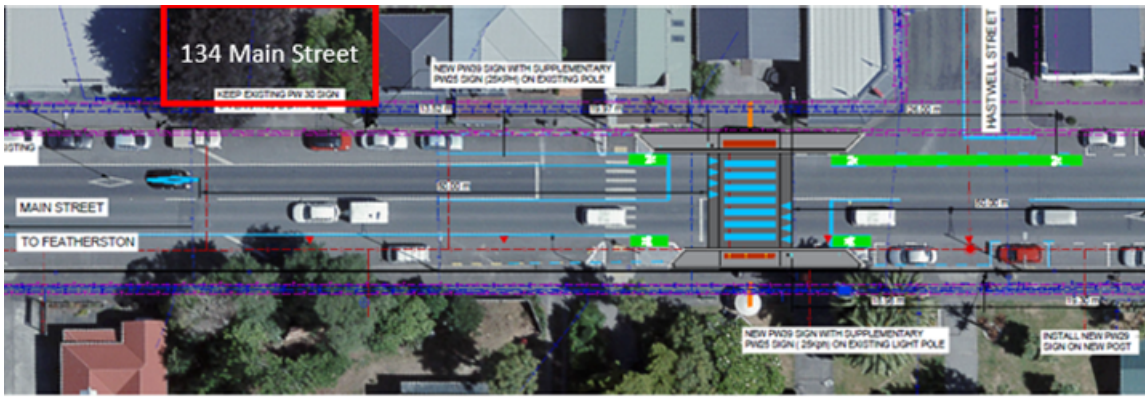
5.9 The Greytown-Woodside Cycle Trail runs along Main Street directly in front of 134 Main Street, before turning left along Hastwell Street and left along West Street.

5.10 With regard to the Site, the FreshChoice Supermarket currently obtains safe and efficient access to Hastwell Street (which connects to SH2) and West Street. However, the Site where access to SH2 is proposed by Woolworths is currently a residential property, with a 3m residential low volume vehicle access.

6 MAIN STREET UPGRADE

6.1 Waka Kotahi is implementing improvements for pedestrians and cyclists fronting the Site, with a new raised pedestrian crossing towards Hastwell Street and cycle lanes approaching and exiting the new pedestrian crossing as shown in Figure 1. This will improve safety for pedestrians and cyclists.

Figure 1: Main Street Greytown Pedestrian and Cycling Upgrade



6.2 This upgrade is understood to be in the detailed design phase with construction being imminent. The detailed design plans may change to that shown above, with the above plan showing the expected intervention design. The design shows cycle markings being extended to or through areas where there is exposure to conflicts, such as at the pedestrian crossing and through intersections.

7 WOOLWORTHS PROPOSAL – MAIN STREET ACCESS

7.1 The transport elements associated with the Main Street access proposal are set out in the application and include:

a) A new 8.3m wide vehicle crossing for use by service and customer vehicles for entry only manoeuvres from Main Street;

b) Removal of two on-street parking spaces, one either side of the proposed vehicle access

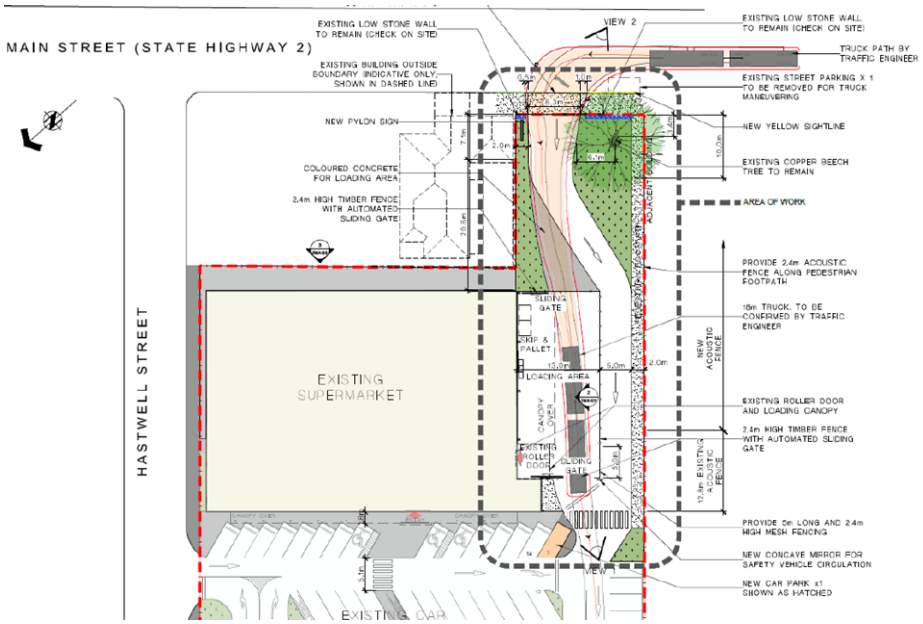
c) Removal of three on-site parking spaces located on the southern boundary and inclusion of one angled parking space on the store frontage;

d) A new 2m wide pedestrian footpath along the southern boundary of the site to connect visitors from Main Street to the front of the store;

e) Reconfigured loading area that allows drive-through of service vehicles.

7.2 A plan of the proposed vehicle access (entry from SH2), pedestrian connection and loading area is shown in Figure 2.

Figure 2: Proposed SH2 access and loading bay layout



7.3 I understand that the transport related drivers of the proposal are as set out in Section 5 of the AEE Report and as set out in Mr Daniel Shao's evidence, which include:

(a) to provide a new access that will improve access and on-site manoeuvring for loading vehicles; and

(b) improve awareness of customers to directly access from Main Street.

7.4 With regard to service vehicles and the health and safety concern raised by the applicant, the AEE Report states that:

a) "*The current arrangements for servicing require service vehicles to enter the site from Hastwell Street, cross in front of the supermarket entrance through the customer car park, reverse manoeuvre into the existing loading area and then exit in a forward manner, again traversing through the car park to the West Street exit. To this end, the existing site layout has compromised on the accepted operational and functional requirements for a modern supermarket. It is this compromise that the current application seeks to address*", and

b) *"The proposal seeks to enlarge and reconfigure the existing loading area in the same general location as existing, albeit with the benefit of service vehicles accessing from the new crossing on Main Street in a forward direction, travel through the new loading area and again exit in a forward direction to West Street*"

7.5 While Section 6.2 and 6.3 of the Commute Transport Assessment suggest an average of 6 vans, 2 light trucks and 10 B-trains/semi-trailer trucks provide deliveries to the supermarket throughout the day, Mr Hills has clarified truck/delivery movements at paragraph 5.3 of his evidence in chief, where truck deliveries are between 5-7 trucks each day. This typically consists of 1 B-train truck, with the remaining deliveries being made by smaller or medium sized trucks, with deliveries generally occurring in the morning, with very few/infrequent deliveries after midday.

7.6 Based on the reports supporting the application, the driver for the application relates to health and safety concerns with the servicing of the Site and the desire to have a customer connection with Main Street. Based on my site visit, the existing vehicle access to the Site via Hastwell Street and West Street, and parking provision for customers performs acceptably.

7.7 While on-site, I note that the loading area already restricts loading movements to the hours of 9am to 3pm and includes a zebra pedestrian crossing fronting the store to provide a safe access to customers on-site.

7.8 The Commute Transport Assessment concludes that “there is no traffic engineering or transport planning reason that would preclude the proposed new access to the supermarket as intended”. I do not agree with this conclusion, as outlined below in my evidence.

8 ASSESSMENT CRITERIA FOR NEW VEHICLE ACCESS

8.1 The Commute Transport Assessment and evidence of Mr Hills on behalf of the applicant has not assessed the proposed customer and service vehicle access at 134 Main Street against the Assessment Criteria in the WCDP, specifically that set out in Standard 22.1.16. I rely on the evidence of **Ms St Amand** and the planning officer’s s42A report who sets out the need for the proposed vehicle access to obtain resource consent. That is, the proposed access is not a permitted activity.

8.2 The Commute Transport Assessment and evidence of Mr Hills considers the access to be a permitted activity and therefore only responds to Appendix 5 – Requirements For Roads, Access, Parking & Loading of the WCDP matters. Transport effects of the proposal that have not been adequately assessed include those listed in Standard 22.1.6, being:

(i) The position and function of the road within the road hierarchy, the actual speed environment of the road, traffic volumes and any other factors that will affect congestion and conflicts between vehicles;

(ii) The vehicle type using the site, the time of day the site is inhabited and the anticipated vehicle generation;

(iii) The extent to which the safety and efficiency of the road or the safety of road users may be adversely affected;

(iv) Whether there will be any adverse effects on the safety of pedestrians using the roads, footpaths or vehicle crossings;

(v) Proposed methods for avoiding, remedying or mitigating any potential adverse effects including:

(1) Improving the visibility of vehicle crossing points;

(2) Alternative design, construction, or location.

9 MY ASSESSMENT OF THE PROPOSAL AGAINST THE DISTRICT PLAN ASSESSMENT CRITERIA

9.1 I have considered each of the above assessment criteria set out in Standard 22.1.16 Roads, Intersections, Access and Loading Areas and summarise my assessment below. I note that I have addressed the criteria in the order set out in the WCDP.

22.1.16 (i) Function of the road

9.2 The function of the road is guided by the WCDP and Waka Kotahi's One Network Road Classification (**ONRC**) and One Network Framework (**ONF**) as summarised below.

9.3 134 Main Street is located in the Commercial Zone. Objective Com2 – Efficient Vehicle and Pedestrian Movement is therefore relevant. This Objective is to ensure efficient pedestrian flows, traffic movement and parking within the Commercial Zone.

9.4 Policy 6.3.5 of the WCDP sets out the need to protect pedestrian safety and convenience. Policies 6.3.5 (a to c) are summarised below:

a) Protect the efficient functioning and safety of activities in the Commercial Zone by providing for adequate parking, loading, manoeuvring space and access, while maintaining a predominance of building over parking areas in town centres, and enhancing pedestrian safety and convenience where appropriate;

b) Allow for flexibility when addressing parking provision within the Commercial Zone, such as alternative sites and multi-use vehicle parks;

c) Ensure all development is safely accessible from the roading network, without compromising the safe and efficient operation of the network.

9.5 The explanation provided at Policy 6.3.5 goes on to read "poorly sited vehicle crossings, excessive vehicle trips from service lanes or inadequate on-site parking can potentially disrupt traffic and pedestrian flows and increase congestion and conflict. These effects may compromise the zone's function….".

9.6 I consider that the application does not align with the transport impacts highlighted in Policy 6.3.5 as the application includes a poorly sited vehicle crossing, introduces significant safety concerns to all road users, disrupts vulnerable road users and will lead to operational issues and safety conflicts on SH2, as set out in my assessment of the proposed access against Standard 22.1.16(i) through to Standard 22.1.16(vi) below.

9.7 I consider that the proposal introduces a greater safety and operational impact to the state highway and Main Street environment to that which currently exists on the FreshChoice Site that could be mitigated on-site with no change to the SH2 network, as set out in my assessment of the proposed access against Standard 22.1.16(i) through to Standard 22.1.16(vi) below.

9.8 Waka Kotahi's One Network Road Classification (**ONRC**) defines Main Street through Greytown as a Regional road. These roads make a major contribution to the social and economic wellbeing of a region and connect to regionally significant places. Within a rural setting Regional roads carry more 10,000 vehicles or more per day, have high commercial vehicle volumes (>400 per day), link places, carry freight, are used by tourists and provide access to key places.

9.9 Waka Kotahi's One Network Framework (**ONF**) is a tool used by Waka Kotahi to classify the place function and the movement function of the roads and streets within the New Zealand transport network. As set out in the evidence of **Ms Roxanne Hilliard**, the ONF acknowledges that roads and streets are destinations and places for people, as well as transport corridors for vehicle movement. The ONF considers a range of modes and their competing demands on the limited road and street space.

9.10 With regard to the section of the state highway/Main Street fronting the proposed access, I note that Waka Kotahi has assessed the section of state highway fronting the proposed access to be an 'Activity Street' with Place/Movement rankings of P3/M2. The attributes of an Activity Street include:

a) People spend a significant amount of time working, shopping, eating, residing, and undertaking recreation; and

b) Support medium to high levels of people walking, cycling, using public transport, or driving through the area.

9.11 Pedestrian volumes for the P3 place function are greater than 1000 per day, which aligns with the weekend pedestrian volumes experienced on Main Street fronting the Site. When introducing a pedestrian connection between Main Street and the Fresh Choice store, this will further increase pedestrian numbers and further reinforce the Activity Street status according to the ONF.

9.12 Regarding movement, an Activity Street caters to all modes and often provides on-street parking or driveway access for motor vehicle drivers to be able to access car parks of desired destinations. Regarding Main Street in Greytown, Main Street provides on-street parking, with designated parking areas accessed from the connecting roads, namely Hastwell Street.

9.13 I consider the FreshChoice proposal conflicts with the Activity Street classification under the ONF. The proposal increases traffic movement in a place where the focus centres around active modes, that is, people spending a significant amount of time working, shopping, eating, residing, and undertaking recreation. The proposal also impacts cycle safety of the Greytown-Woodside Cycle Trail and introduces new (and potentially serious) conflicts between vehicles and pedestrians, while also impacting those travelling by car through Greytown.

22.1.16 (1) Conflicts between all road users

9.14 The proposed access introduces a significant number of conflicts between vehicles and vulnerable road users (pedestrians and cyclists of all ages) on Main Street. The Commute Transport Assessment focusses on 3 peak periods (outside of the busier summer period), however conflicts between Main Street users will exist 24 hours a day.

9.15 The proposal has the potential to introduce up to 50-60 road user conflicts in one hour based on the typical (not summer period) turning vehicle volumes used in the Commute Transport Assessment. Conflicts, from which there are no mitigating elements proposed. Conflicts include:

(a) Supermarket traffic travelling southbound turning across SH2 northbound traffic;

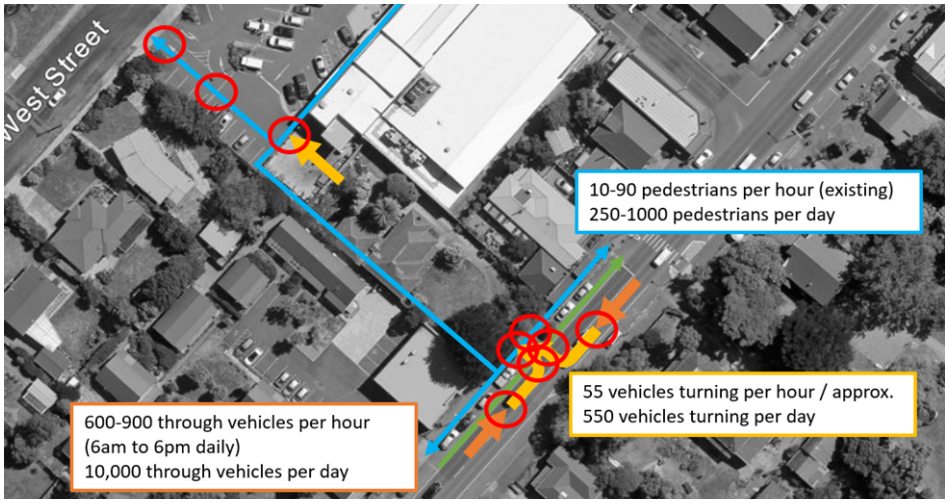
(b) SH2 northbound traffic being impacted by slowing or stationary left turning supermarket traffic;

(c) SH2 southbound traffic being impacted by slowing or stationary right turning supermarket traffic;

(d) Supermarket traffic turning across footpath users and cyclists.

9.16 Conflicts introduced by the new access are highlighted below in red and may be as high as 500 per day.

Figure 3: Conflicts introduced by the proposal



9.17 This is significant when compared to the conflicts that occur at this location today for the residential property (less than 10) and that which occurs on-site, being limited by the number of trucks servicing the site, which is estimated at 5-7 conflicts or less per day, based on the Site traffic surveys and the evidence of Mr Leo Hills.

9.18 Current conflicts on-site are mitigated with a zebra crossing on the circulation aisle used by trucks entering from Hastwell Street, a limit line on the circulation aisle fronting the loading area, restricted hours of operation during school periods and having the loading area located at the southern boundary of the Site.

22.1.16 (ii) Anticipated vehicle generation

9.19 Waka Kotahi's Planning and Policy Manual ('**PPM**')[2] sets out Waka Kotahi's policy and approach to integrated planning. It sets out the

[2] Transit Planning and Policy Manual version 1, Manual No: SP/M/001, https://www.nzta.govt.nz/resources/planning-policy-manual/

approach to assessing, designing and managing effects on state highways.

9.20 The volume surveyed and used in the Commute Transport Assessment and the evidence of Mr Hills reflects a lower trafficked period, which is consistent with a 7 day average daily volume. When considering development impacts, the PPM (Appendix 5A.1) requires that if there is a daily, weekly, seasonal or other peak evident about the development, the maximum number of vehicles per hour will need to be considered.

9.21 The weekday peak for Greytown is typically a Friday, with the warmer months (October through to March inclusive) attracting a high seasonal demand into Greytown. As such, the transport assessment is based on volumes that do not reflect the busier Friday or seasonal period, where traffic volumes increase by 18% and I expect pedestrian volumes, if assessed during the warmer summer months would also increase above the survey volumes recorded in April.

9.22 I therefore consider that the assessment of transport safety and operation effects are not representative of the warmer and busier months that Greytown experiences, and therefore the effects of the proposal are underestimated, and proposed mitigation insufficient.

9.23 While the assessment predicts 40% of the surveyed vehicles shifting from the existing accesses (with a sensitivity test using 50%) to use the proposed new access, traffic volumes during the warmer months and Friday's on the state highway are recorded as being much higher (by some 18%). There is therefore little confidence that the volumes surveyed using the existing Site and therefore the proposed access, even with sensitivity tests is representative of the demand that may be attracted to use the proposed access, particularly during the warmer months.

22.1.16 (iii) Efficiency of the road network being adversely affected

9.24 The efficiency of the road network has not been adequately assessed due to the low traffic volumes used in the traffic modelling assessment not reflecting the warmer, busier trafficked periods experienced in Greytown.

9.25 In addition to this, right turning traffic into the Site will be required to give way to all northbound traffic (either travelling on SH2 or turning into the

proposed access and all pedestrians and cyclists crossing the Site frontage), whereas all northbound traffic turning into the Site will be required to give way to all pedestrians and cyclists crossing the Site frontage. I note that motorists willingness to give-way to footpath users is a concern given the engineering concerns with the access design, which I discuss further below.

9.26 The efficiency impacts to SH2 are not appropriately assessed, as the SIDRA traffic model is not suitable for predicting the delay experienced to turning traffic when having to give-way to footpath users in a main street setting, such as vulnerable users crossing a very wide access, people socialising, mingling and being in a town centre environment.

9.27 I agree with Ms Harriet Fraser, that a pedestrian would take up to 8 seconds to cross the vehicle crossing (9.0m crossing distance in the centre of the footpath at a walk speed of 1.2m/s) with a delay to vehicles being up to 11 seconds should the pedestrian be approaching the vehicle crossing.

9.28 Using a traffic model in this instance is therefore not considered an appropriate tool to determine the efficiency impacts of a vehicle crossing in a main street setting unless the model has been accurately calibrated using observations from a similar site. The above issues present a high risk to the efficiency of the state highway being adversely effected.

22.1.16 (iii) Safety of road users being adversely affected

9.29 I have completed a Safe System Audit (**SSA**) of the proposal, which is attached to **Ms Hilliard's** evidence. The purpose of a SSA is to identify the project's alignment with Safe System outcomes. There is a responsibility on engineers and the road controlling authority to maximise alignment with a Safe System through the design and implementation of transport projects.

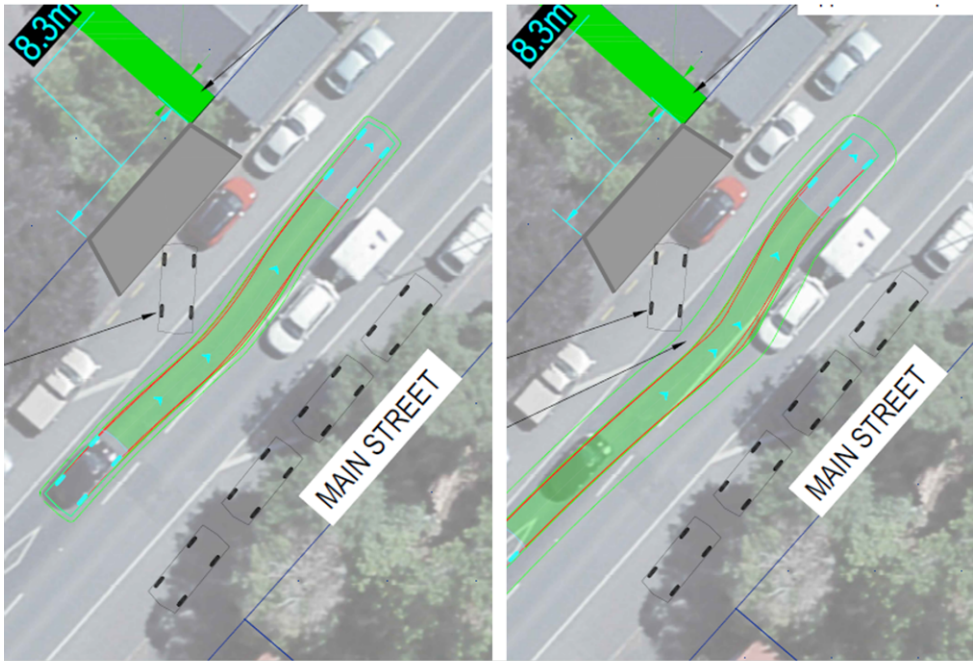
9.30 I have used the SSA framework to identify the safety concerns with introducing a high volume access (or intersection as per the high volume access definition) on the state highway. An initial copy of the SSA was made available to the Applicant, but I have updated the assessment as new information associated with the Site (such as the traffic volumes) have been further analysed.

9.31 Introducing a public access to a supermarket (defined as a high-volume access or an intersection) increases the exposure to crashes. Intersection crashes increase with the proposal and overall, the proposal presents a notable increase in risk compared to the existing conditions.

9.32 There is an increased risk of swerving and head on crashes for vehicles travelling through Greytown. With high pedestrian numbers on Main Street (as surveyed today and expected in the future) vehicles entering the Site will be required to give-way or slow for footpath users, which will result in turning vehicles either partially blocking (northbound vehicles) or fully blocking (southbound vehicles) the traffic lane. With a high volume access proposed on the state highway, the exposure to right turn vehicles being hit by northbound traffic is increased, especially if right turning traffic has to stop suddenly for a pedestrian or misjudges a gap in traffic during the busier trafficked periods.

9.33 There is a risk that following vehicles (travelling northbound) will attempt to go around vehicles giving-way to pedestrians, which may result in vehicles crossing the centreline, placing them in line with southbound traffic. This is a significant safety issue for a state highway which the applicant has not considered, particularly given the high volume of large trucks that cannot stop quickly. The tracking of a passing northbound vehicle is highlighted in Figure 5 for a vehicle giving a tight 0.3m clearance and a more generous 1.0m clearance from the turning vehicle. Both assessments show a northbound vehicle giving way to a pedestrian partially blocking the northbound lane, with the following vehicle being pushed towards the centre of the road, if not onto the opposite side of the road.

Figure 5: Entering vehicles partially block lane northbound (0.3m left, 1.0m right)



9.34 While a design response to this concern would be to remove on-street parking on the eastern side of Main Street, (increasing the effect of the proposal), the existing cross fall of the road as it falls to the channel steepens (greater than 5% cross fall), making it unacceptable for cyclists and traffic to travel along.

Photo 2: Cross fall of Main Street shoulders/on-street parking area

Design considerations of accessways as per the District Plan, RTS6

9.35 Appendix 5 of the WCDP sets out the design requirements of driveways. A design consideration that the Commute Transport Assessment has not

considered includes the guidance set out in RTS 6 Guideline for Visibility at Driveways. Specifically, the RTS 6 standard sets out the following with regard to driveways on arterial roads (those carrying more than 3,000 vehicles per day [emphasis added]:

The dominant function of arterial roads is to carry through traffic from one major area of activity to another. Drivers on these roads are therefore unlikely to expect many driveway manoeuvre type conflicts. The minimum visibility requirement at driveways therefore must allow time for these drivers to observe and react to potential conflicts and then if necessary stop before reaching the conflict point. This is equivalent to the Safe Intersection Sight Distance (SISD) from NAASRA, Intersections at Grade [1]. Driveways onto arterial roads will create conflicts between through traffic and driveway manoeuvres whatever visibility distance is provided. In particular right turn movements into a driveway will disrupt the through traffic. They are also the most common movement in accidents at driveways. High volume driveways on arterial roads should therefore be banned or strongly discouraged particularly on high volume rural arterials.

9.36 The District Plan, through the RTS 6 guideline strongly discourages high volume driveways on high volume rural arterial roads. Highlighting the effects created, being conflicts between through traffic and driveway manoeuvres and crashes at driveways, the proposed access assessment completed by Commute (Appendix 4 to the AEE) is silent on this effect and does not propose any mitigation to address this effect.

9.37 With regard to the sight distance, required by RTS6, I discuss this below, where I set out the guidance in Waka Kotahi's Planning and Policy Manual (**PPM**).

Design considerations of accessways on State Highways

9.38 Waka Kotahi's PPM at Appendix 5B sets out the safety considerations for accessways to state highways[3], noting that new accessways must meet acceptable standards for road safety and must not place road users, users of the accessway, or pedestrians at significant risk of injury. Considerations of new accesses include:

[3] Appendix 5B, App 5B.1, Transit Planning and Policy Manual version 1, Manual No: SP/M/001 Page 210.

a) Whether or not it is practicable to obtain access with a local road, rather than directly from the state highway. I note that the Site already has two local road accesses and note the evidence of **Ms St Amand** with regard to accesses for this activity;

b) Compliance with geometric design standards. I address this below, and note that the access proposed does not comply;

c) The type (including the proportion of heavy commercial vehicles) and volume of traffic using the accessway and the state highway. The state highway has over 10,000 vehicles per day during the warmer months, is an over-dimension vehicle route and has some 10% heavy vehicles during weekdays;

d) Whether particular mitigation measures such as deceleration lanes or turning lanes are required;

e) Any cumulative effects of the proposed accessway and other new accessways on the safety or function of the state highway; and

f) The particular safety needs of cyclists and pedestrians.

9.39 The PPM notes that where accessways generate 100 or more cars per day or have an hourly flow of 20 or more cars per day, the access will normally be treated as an intersection for the purposes of access safety and will be expected to comply with the intersection spacing policy set out in section 3.5 of the PPM[4]. Table App5B/3 in Appendix 5B of the PPM sets out minimum accessway spacings, with a specific criteria associated with accessway spacings between intersections and accessways on national state highways carrying over 10,000 vehicles per day. Based on a 85th percentile operating speed of 50 km/h (which refers to 10km/h above the posted speed limit of 40km/h), a 125m spacing is desired. The access proposed at 134 Main Street is only 50m from the Main Street (SH2)/Hastwell Street intersection.

9.40 With regard to geometric design standards, I have also referred to the Austroads Design Guide Manual[5]. Austroads' Guide to Traffic Management Part 6 provides the warrants used to determine the

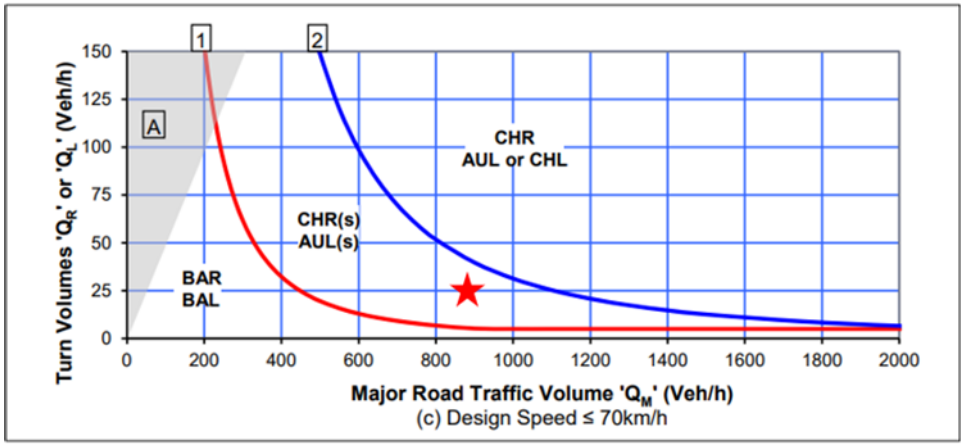
[4] Medium to high volume accessway, Transit Planning and Policy Manual version 1, Manual No: SP/M/001 Page 210

[5] Austroads is a design guide used in Australia and New Zealand that provides the designer with a framework that promotes efficiency in design and construction, economy, and both consistency and safety for road users. https://austroads.com.au/safety-and-design/road-design/guide-to-road-design

requirement for turn treatments at intersections. The warrants apply to turning movements from the major road only (the road with priority) which in this case, is SH2. As per the PPM, a high volume access is treated as an intersection when considering design elements.

9.41 With SH2 having a sign-posted speed of 40km/h, the less than equal to 70km/h design guide has been used, as shown in Figure 6. With the hourly traffic volume on SH2 being 900 vehicles per hour (two way) and the right turn volume being between 25 to 30 vehicles per hour, the warrant requires a channelised right turn treatment with short lane (CHR(s)).

Figure 6: Austroads warrant for turn treatments

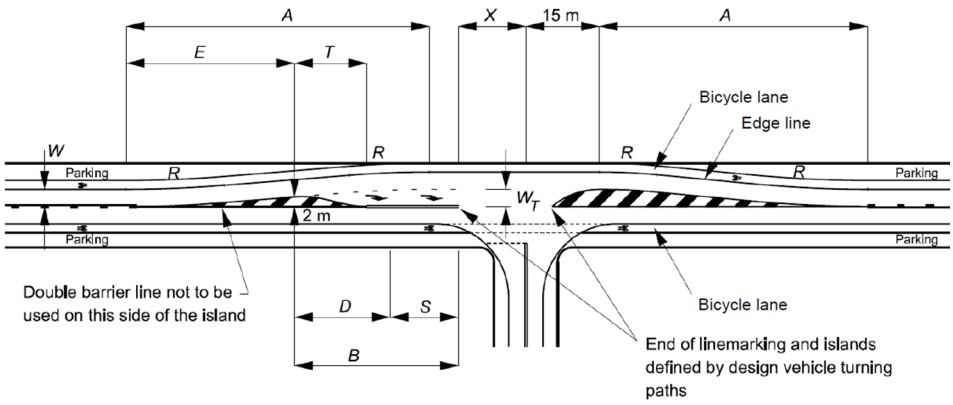


Note: the minimum right-turn treatment for multilane roads is a CHR(s).

Source: TMR (2016a).

9.42 Figure 7 below shows the geometric requirements of providing a channelised right turn treatment (right turn lane) alongside a cycle lane, as per Austroads Guide to Road Design, Part 4A Unsignalised and Signalised Intersections, Section 7.5.2. Based on the width of Main Road fronting the proposed access, there is insufficient width to provide for the elements shown in Figure 7 which include the provision of directional cycle lanes, right turn bay, parking and 3.5m traffic lanes in each direction.

Figure 7: Austroads Channelised Right Turn treatment design elements



9.43 An access that provides sufficient warning to motorists (through the provision of a short right turn lane) may be achievable, but only at the expense of removing a number of on-street parking spaces on both sides of the carriageway (as many as 15 spaces) and regrading the carriageway which currently falls at a steeper cross fall towards the kerb and channel. In addition to a right turn bay, appropriate signage for motorists travelling southbound may not be possible given the narrow access, building awnings and parked vehicles impacting visibility.

9.44 One may argue that none of the existing intersections located along SH2 in Greytown provide right turn treatments at the local intersections. This is a fair point, however, the visibility of intersections, presence of street signs, reduced street clutter and flag lights provide cues to motorists that vehicles may slow or be turning when approaching an intersection.

9.45 In the case of the proposal, a key consideration of an access on a state highway is the geometric design which includes how visible the access is, such that following vehicles expect and are prepared for a vehicle to slow, have sufficient warning and time to slow to avoid a crash with a turning vehicle, whether it is turning left or right, as discussed earlier.

9.46 I am of the view that a safe access/intersection that allows entry movements for a high volume driveway on a state highway cannot be achieved at the location proposed by Woolworths for the reasons I have discussed above.

9.47 With regard to the proposed restriction in the application that all large heavy vehicles will turn left into the Site, rather than right into the Site, there is no mechanism that prevents large trucks from turning right into the Site. While trucks associated with servicing the Site may operate

under a management plan, trucks not servicing the site may still use the access. This presents an operational risk, noting that large trucks will require a longer gap in traffic or pedestrian flows to safely turn into the access, which in turn impacts the safe and efficient operation of the state highway.

22.1.16 (iv) Adverse effects on the safety of pedestrians using the roads, footpaths or vehicle crossings

9.48 I want to first reiterate paragraph 9.25 above, where I note that right turning traffic into the Site will be required to give way to all northbound traffic (either travelling on SH2 or turning into the proposed access) and all pedestrians and cyclists crossing the Site frontage, whereas all northbound traffic turning into the Site will be required to give way to all pedestrians and cyclists crossing the Site frontage. I note that motorists' willingness to give-way to footpath users is a concern given the engineering concerns (visibility, sufficient space to wait safely, width of the access, priority for footpath users) with the access design, as covered in my evidence further below.

9.49 Acknowledging the safety effects and conflicts introduced to pedestrians/vulnerable road users set out above, the design of a high volume commercial vehicle crossing that can accept the demands of the proposed service and customer access and provide priority to footpath users may not be achievable within the current environment.

9.50 Mr Hills at paragraph 7.11 suggests that the vehicle crossing provides priority to pedestrians, yet the design on the plans in the Commute Transport Assessment include a splay that extend the full width of the footpath (road to boundary) with a note stating that the "new crossing to match existing footpath pavements". I note that the design does not provide priority to pedestrians. Further, the design implies the use of concrete in order to provide the necessary strength to accommodate large trucks, which would therefore not match existing footpath pavements. Providing a commercial vehicle crossing that maintains priority to pedestrian users is achievable when constructing concrete vehicle crossings, but only if the footpath is also of concrete construction, which in this case, it is not. The existing footpath through the Main Street is asphalt.

9.51 To achieve a footpath that provides priority to footpath users, Waka Kotahi guidance[6] requires that the footpath design is continuous in grade, crossfall, colour and texture, which suggests that an asphalt footpath is required across the frontage of the Site, similar to that which exists today. I am unsure whether an asphalt footpath would withstand the demands of a high volume access. Further detail is required by the Applicant to determine whether a satisfactory design can be achieved within the Main Street context.

9.52 Should a design be achievable that accords with the Waka Kotahi guidance and is acceptable to Waka Kotahi engineers there remains a significant safety concern, with the width of the vehicle crossing being some 9.8m at the road edge. While pedestrians will have priority, should a motorist choose not to give-way, the width of the crossing makes for a large area where it is unsafe for a pedestrian/vulnerable user.

22.1.16 (vi) Proposed methods for avoiding, remedying or mitigating any potential adverse effects – (1) visibility of vehicle crossing points

9.53 The proposal presents a poorly sighted, unsafe access with no mitigation that accords with geometric design requirements. The visibility of the access is poor, as a result of its location within the main street of Greytown, where buildings front the street, building awnings, street furniture, landscaping and parked cars all obscure the access location and present a safety risk to motorists (either passing through or turning), cyclists and footpath users.

9.54 The access will be located behind the van and the awning in the photo below. While the space which the van is parked is proposed to be removed according to the Commute Transport Assessment, an on-street parking space will remain and therefore block visibility of the access and footpath users (particularly children) when approaching.

9.55 While I was visiting the site during late morning (11:00am) and during the afternoon (2:00pm), most, if not all on-street parking spaces were occupied. Parked vehicles will therefore make visibility of the access,

[6] https://www.nzta.govt.nz/walking-cycling-and-public-transport/walking/walking-standards-and-guidelines/pedestrian-network-guidance/design/paths/footpath-design-other-elements/driveways/#_ftn1

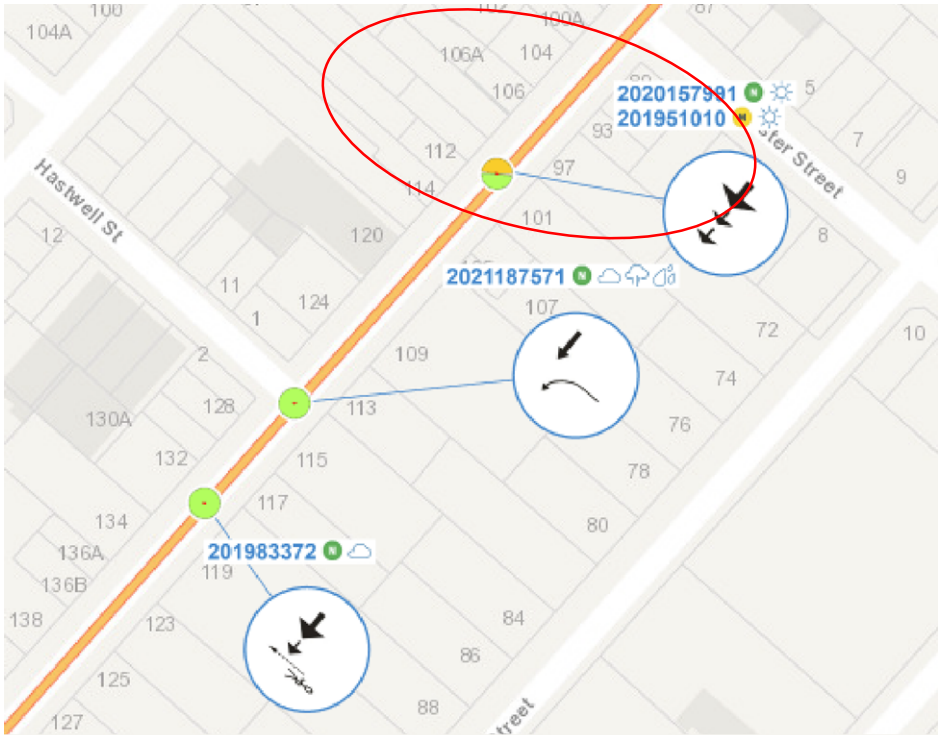
footpath users (particularly children) very hard to see when approaching from the north and before committing to making a right turn.

Photo 1: Poor visibility of Main Street access

9.56 Motorists following cars turning into the Site will not be expecting vehicles to slow as there are no cues on the approach (particularly from the north) to the proposed 'high volume access', such as street signs, a large opening between buildings, restriction of parking, or a right turn bay to indicate a high volume access. This therefore presents a high risk of nose-to-tail crashes (primarily southbound) given the level of traffic expected to use the proposed access.

9.57 Nose to tail crashes have been recorded about 112 Main Street further north where a 'low volume access' exists (60m and 85m south of McMaster Street), as recorded in the Crash Analysis System in the past 5 years (2019 and 2020). One crash included a minor injury crash as shown in Figure 4.

Figure 4: Crash history on Main Street, north of the proposed access



9.58 With the proposed access being a high volume access (greater than 200 vehicle movements per day), the exposure to nose-to-tail crashes (as well as right turn against crashes) is much higher than those already recorded in Greytown, north of the proposed Site and at low volume accesses. The Commute Transport Assessment did not consider crashes beyond the Main Street/Hastwell Street intersection or consider trends at other vehicle accesses. As such, their assessment does not consider the crash trends associated with vehicle accesses on State Highway 2 in Greytown.

22.1.16 (vi) Proposed methods for avoiding, remedying or mitigating any potential adverse effects – (2) Alternatives

9.59 Alternative options exist both on-site which would not require a vehicle access at Main Street. These are my preferred options. I have also provided an alternative option that could be considered (subject to further assessment by the Applicant) that allows a low volume loading egress onto Main Street.

On-site alternatives to address health and safety concerns.

9.60 The applicant has not acknowledged how they have or could address the health and safety concerns with service vehicles within the current Site. Options available to FreshChoice include:

a) Revisiting the loading times, with the current loading times being restricted to 9am to 3pm. These times seem to be based on the operation of the external roading network and therefore focussed on when the transport network is busiest. It is unclear whether a management plan that has delivery vehicles operate outside of the busier roading network and customer periods has been considered, therefore minimising the conflict between customers on-site and where large delivery vehicles are manoeuvring;

b) Restricting the parking spaces along the southern boundary to staff only, as staff can be managed through a travel management plan and be aware of any operational concerns. This ensures no customers are present where trucks will be reversing. I witnessed customers parking along the southern boundary when visiting the Site;

c) Providing a central pedestrian route between West Street and the store frontage with raised pedestrian crossings on the aisles, therefore placing pedestrians in a safe location and away from the loading area across the whole site, rather than just the store frontage; and

d) Remove the southern parking spaces, allowing the southern boundary to be dedicated to loading (yellow hatching), providing sufficient separation between the circulation aisle and reversing trucks.

Alternative SH2 access and loading configuration with a low volume accessway

9.61 While my primary position is that no vehicle access should be entertained on the state highway for FreshChoice, due to safety and operational concerns, a low volume access option could exist subject to tight operational requirements and further assessment.

9.62 Appreciating that a health and safety issue exists on the site for service vehicles (large trucks) and that the applicant is ultimately seeking an improvement in exposure and connection with the state highway, I consider that there is an alternative safer option available that improves safety on-site, protects the safe, effective and efficient operation of the

state highway, and the function of this section of state highway, being an Activity Street where high pedestrian numbers are present.

9.63 I recommended an alternative option that Waka Kotahi presented to Council and the applicant. The applicant however discounted the option, favouring the option set out in their application. The details of my recommended option include:

a) Allowing an exit only onto Main Street for service/loading vehicles only, therefore removing the need for large trucks to reverse on-site. Trucks would be able to travel in a forward direction at all times;

b) Trucks would enter from West Street and travel through the site in a forward direction towards Main Street, avoiding the store frontage;

c) Trucks would operate according to a Management Plan that avoids large trucks from operating at times where volumes on SH2 and pedestrian numbers are high on Main Street; being

   i. Weekday period between 7:00am and 6:00pm

   ii. Weekend period between 9:00am and 5:00pm

d) Large trucks (semitrailer trucks and B-trains) would be restricted from turning left out onto Main Street. This restriction accords with the direction of travel for large trucks set out in the application;

e) The access width of the vehicle crossing on Main Street can be reduced from 8.3m (as proposed) to 6.0m, providing an improved crossing distance for pedestrians;

f) Revised markings about the carpark to provide a clear passage for trucks to enter the loading area and for customers to give-way to vehicles entering the loading area;

g) A sign for the store can be located on the Site, where the sign can include the Fresh Choice logo, clearly identify that this is a Service Vehicle EXIT Only and provides direction to Parking on Hastwell Street; and

h) Opportunity for a wider active mode and green space along the southern boundary connecting customers between the Main Street and the store frontage.

9.64 I have checked the operational requirements of this option, being the tracking of large trucks circulating the access points of the Site, as well as the wider roading network. Trucks currently use West Street to exit, however would now use West Street to enter.

9.65 Mr Hills in his evidence (Figure 5) shows that trucks accessing the Site already use West Street. I have checked the tracking of semi-trailer trucks through the Site (as they access from West Street) and turn right onto Main Street, with the tracking shown in **Attachment B**.

9.66 This option still presents safety concerns with regard to trucks needing to cross the pedestrian footpath and approach the carriageway to obtain suitable sight distance. This may result in exiting vehicles being placed across the footpath while waiting for a gap in traffic. This outcome however would be similar to that experienced today, with a low volume access, similar to the Greyfriars Motel access located to the south of the site, as shown below.

Photo 3: Greyfriars Motel Access – Vehicles pulling onto carriageway to obtain sufficient visibility (low volume access)

9.67 This option removes customer vehicles from using the Main Street access which therefore removes the exposure and safety risk and significant number of conflicts introduced when placing a substandard high volume access in an environment where there are high pedestrian numbers, parked vehicles and high through traffic volumes (and trucks) on the state highway. I also note that there are no issues with regard to safety of the existing FreshChoice customer accesses on West Street and Hastwell Street.

9.68 I recommend that the applicant and their traffic engineer consider this option and provide feedback as to how this option does not address the issues set out in their application being:

a) Separate loading and servicing activities from customer movements;

b) Negating the need for reversing on-site and removing trucks from crossing in front of the store, therefore addressing on-site health and safety matters;

c) Providing a customer connection between Main Street and the store frontage, which includes signage; and

d) Delivering the functional requirements of a modern supermarket.

9.69 I am also of the view that the pedestrian connection being introduced between Main Street and the store will be attractive for the wider community, which in turn places pedestrians connecting between Main Street and West Street in an unsafe environment, being the circulation aisle and vehicle crossing of the car park. The application and supporting transport assessment has focused on connecting Main Street with the store frontage, however the connection will also generate an element of through foot traffic such as to the school, which will in turn generate a new health and safety issue on site, as shown in Figure 7.

Figure 8: Wider pedestrian connectivity created when introducing a connection

9.70 The proposal therefore needs to consider an extension of the footpath to West Street, providing a safe connection that separates pedestrians from vehicle movements. Not doing so introduces additional health and safety concerns for the Site to address.

9.71 I do not support the proposed access arrangement at 134 Main Street sought by the applicant. Should my option not be supported, my position is that no vehicle access to the supermarket is permitted from Main Street, and that on-site effects associated with loading and servicing are managed on-site through a travel management plan, restricted loading times and management of parking spaces for staff (if not removal of parking spaces to allow for a connection to West Street) to improve on-site health and safety.

9.72 I do support a pedestrian connection, provided that the connection provides a safe continuous and direct connection between Main Street and West Street, therefore avoiding a further health and safety issue being introduced to the Site with pedestrians using the circulation aisle and vehicle crossing to connect to West Street.

10 SECTION 42A REVIEW

10.1 I support and agree with the s42A Planning Report of Ms Honor Clark in respect to transport conclusions and the transport assessment completed by Council's traffic engineer, Ms Harriet Fraser.

10.2 With regard to Ms Fraser's views of the Waka Kotahi option, I agree that concerns remain with trucks turning into Main Street, where a traffic management plan would need to be in place to restrict large trucks from turning left out of the access.

10.3 With regard to the wider circulation of trucks, I note that West Street is wide and has sufficient capacity to manage the wider circulation of trucks. Mr Hills has helpfully shown the wider circulation route used by trucks accessing the Site at Figure 5 of his evidence. The current entry route (shown in green) will not change with my suggested alternative, with the tracking entering and exiting the site for large trucks included in Attachment B of my evidence. I am therefore of the view that wider circulation of trucks to and from the Site can be managed through a management plan.

10.4 If the Commissioners were to grant consent, I have proposed additional conditions of consent as set out in my response to Mr Hills evidence below, who also proposes additional conditions of consent.

11 REVIEW OF MR LEO HILLS EVIDENCE

Comparison to other supermarkets about the area

11.1 Mr Hills suggests that the Site is comparable to other supermarket sites and concludes that the new crossing is designed to ensure safe movements into the site. I disagree with Mr Hills as each of the supermarkets access designs, visibility and prominence on the state highway is not comparable to the environment proposed for 134 Main Street.

11.2 Mr Hills has reviewed all supermarkets in the area and has concluded that no crashes (over the past 10 years) have involved a pedestrian or cyclist. The accesses associated with each of the supermarkets about the South Wairarapa however are very different with regard to the transport and engineering environment in which they sit and should not be used as a comparison to the access proposed. I note that:

(a) Featherston Supervalue has a large carpark fronting Fitzherbert Street (SH2) with multiple (three) access points in close proximity on SH2, a central flush median to assist with right turning traffic, clear open and visible signage that provides ample warning to motorists to expect turning traffic.

(b) New World Carterton has a large carpark fronting High Street South (SH2), a right turn bay to assist right turning traffic at the SH2 access, clear open and visible signage that provides ample warning to motorists to expect turning traffic.

(c) Pak'n Save Masterton has a large carpark and service station fronting Chapel Street (SH2), with multiple (two) access points in close proximity, a central flush median and right turn bay to assist with right turning traffic, cycle lanes and clear open and visible signage that provides ample warning to motorists to expect turning traffic.

(d) Woolworths Masterton and New World Masterton both have their store frontage accesses from local roads.

11.3 Each of the above supermarkets that take access from SH2 have a right turn facility that accords with engineering design standards, have clear, open and visible signage that provide motorists ample warning that there may be turning traffic, and have a large opening between neighbouring buildings and presence of a large carpark. No examples have an access that is obstructed by building awnings, have an access that is located in a densely row of speciality retail shops which generate high pedestrian numbers, or are located within a narrow section of the state highway. For these reasons, I do not consider the examples used as a suitable comparison for the proposed 134 Main Street access. Images of each supermarket are attached in **Attachment C**.

Daily traffic counts on Main Street/SH2

11.4 Mr Hills has reported the daily traffic volume fronting the proposed 134 Main Street access to be 9,723 vehicles per day, using 2022 data accessible from Waka Kotahi. Again, I note that this daily volume is a 7 day average daily volume, so includes weekends. When considering development impacts, the Planning and Policy Manual (Appendix 5A.1) requires that if there is a daily, weekly, seasonal or other peak evident about the development, the maximum number of vehicles per hour will need to be considered. As such, the volumes used to undertake Mr Hills' assessment of effects and predicted network operation (in particular that of the state highway) are under-estimated.

11.5 Based on the volumes set out in my evidence and reflecting the speed limit reduction to 40km/h, I consider the guidance provided in the Planning and Policy Manual in relation to accessway separation very relevant in the context of Greytown when considering an 85th percentile speed of 50km/hr (posted speed (40km/h) plus 10km/h) and a high volume (greater than 200 vehicle movements per day) accessway onto a state highway carrying more than 10,000 vehicles per day. I therefore do not agree with Mr Hills' views relating to the acceptability of the access separation and appropriateness within an urban environment, set out at paragraph 7.15 of his evidence.

Clarification of Fresh Choice service vehicle number

11.6 Mr Hills has clarified the number of truck/delivery movements at paragraph 5.3 of his evidence, where truck deliveries are between 5-7 trucks each day.

11.7 The on-site health and safety issue that the applicant leans on for reconfiguring the loading area is therefore further reduced with this clarification. That is, the number of conflicts on-site occur during the morning, where I anticipate customer numbers for the supermarket to be low, with the frequency of trucks passing in front of the store being mitigated by the pedestrian crossing.

Safety impacts to all road users

11.8 Mr Hills concludes in paragraph 2.3 of his evidence that the proposal has "minimal adverse effects on the operation and safety of the road network".

11.9 While I have noted that the assessment has been based on low traffic flow predictions and therefore underestimates the effects and has no supporting mitigation, Mr Hills has not provided an assessment of the safety implications of the high volume access at 134 Main Street. He has considered the operational impacts of an access and considers other sites in relation to access safety (which I consider irrelevant), but this does not provide a safety assessment for the access proposed at 134 Main Street.

11.10 If Mr Hills is relying on the operational assessment to form his opinion on safety, this is not appropriate, with the SIDRA traffic modelling software manual stating that *"SIDRA SOLUTIONS software products are professional tools for the purpose of capacity, level of service, operating performance and travel quality analysis of road traffic. They are not safety design or evaluating tools. We recommend the use of appropriate safety analysis and audit tools for this purpose."*

11.11 It is my view that the Commute Transport Assessment and Mr Hills evidence considers on-site safety (which relates to 5-7 truck conflicts per day during the morning) rather than the safety of the wider community (where hundreds of conflicts will be experienced all day).

Proposed Conditions

11.12 If the Commissioners were of the mind to grant consent, further conditions would be required to ensure the state highway can operate efficiently, effectively and safely given the concerns I have with visibility of the access (particularly from the north), safety of footpath users, lack

of mitigation on main Street and to address the number of conflicts introduced.

11.13 The further conditions I suggest should be imposed on a theoretical design solution. My suggested conditions would require the Applicant to first provide a concept design drawing to Waka Kotahi, demonstrating compliance with engineering standards and the extent of works needed to achieve a design that does not adversely affect the safe, effective and efficient operation of the state highway, footpath users and cyclists. The design elements required to achieve the theoretical design solution would necessitate a significant loss of on-street parking and require a substantial upgrade to the road carriageway, footpath and services.

11.14 Additional conditions to those included in Mr Hills' evidence should require the Applicant to:

(a) Install a solid central raised median on Main Street to prevent right turning traffic from turning into the new vehicle access. A detailed design plan showing the extent of loss of parking on both sides of the road, upgrade of the road, road cross fall, pavement and tie-in works should also be prepared.

(b) Extend the cycle lanes on both side of Main Street, with markings across the frontage of the access, reflecting that it is a high volume access;

(c) Design the vehicle access to provide priority to pedestrians, with the pavement maintaining a continuous grade, crossfall, colour and texture across the vehicle crossing;

(d) Install signs on the approach to the vehicle access warning motorists to watch for and give-way to pedestrians and cyclists;

(e) Install a mechanism within the pavement of the access (about the connection with the carpark) that facilitates one-way travel along with signs indicating no access.

(f) Improve visibility of the access when approaching from the south, through the removal of additional parking spaces, providing a space for vehicles to pull to the left, slow, give-way to pedestrians and turn into the site;

(g) Prepare detailed design drawings covering the above matters, engage with and obtain approval from Waka Kotahi on all changes being proposed within the road reserve. A register of concerns raised by Waka Kotahi and responses on how concerns have been addressed is to be included for Council to review;

(h) Continue the pedestrian connection being introduced between Main Street and the Site to West Street, with a direct and continuous design.

(i) Extend the loading management plan to avoid deliveries by large trucks when pedestrian numbers are high, being no deliveries between 11:00am to 4:00pm weekends, in addition to the current restrictions of allowing deliveries between 9am and 3pm, for weekdays (as currently sign posted on site).

12 REVIEW OF MR DANIEL SHAO EVIDENCE

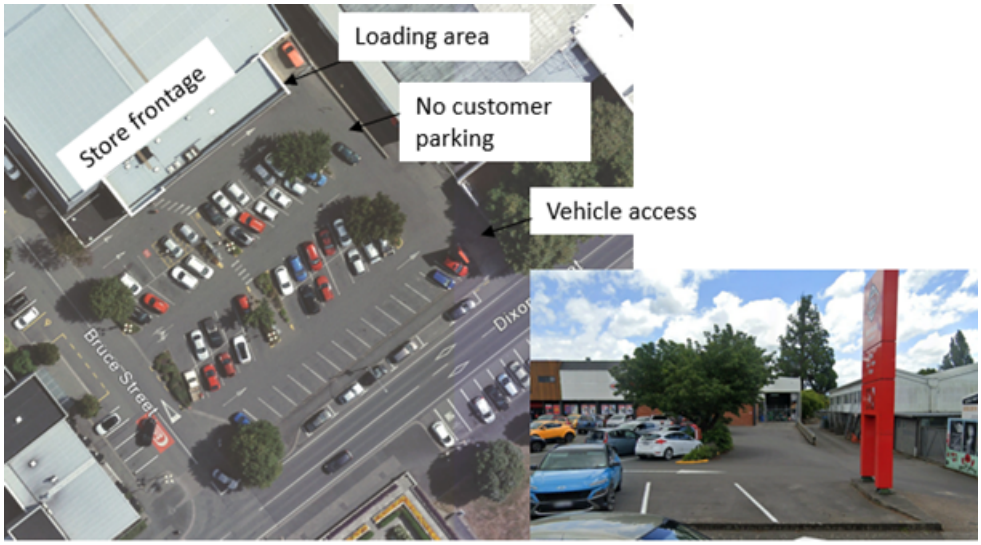
Comparison to other supermarkets about the area

12.1 Mr Daniel Shao, at paragraph 1.4 of his evidence seeks to provide a new access that will improve access and on-site manoeuvring for loading vehicles and improve awareness of customers to directly access from Main Street.

12.2 With regard to addressing on-site effects, similarly to Mr Hills, I have considered how other supermarkets about the area are serviced by delivery vehicles, and how these supermarkets manage to mitigate the effects on-site.

12.3 I note that New World Masterton has a very similar circulation and store layout to the Greytown FreshChoice store, where delivery vehicles are required to pass along the frontage of the store to access the loading area. Similar to Greytown access is required from a local street, an internal zebra crossing is provided to give pedestrians priority and the loading area requires trucks to reverse at far right of the store. The fundamental difference with New World Masterton however, is that no customer parking exists about the area where trucks are required to reverse, therefore placing no customers in an area where it is unsafe.

Figure 9: New World Masterton layout



12.4 The Featherston Supervalue store is similar again, with delivery vehicles required to travel in front of the store frontage, an internal zebra crossing provides pedestrian priority and the loading area is located to the right of the building. Loading from this store occurs in the carpark with the use of cones, as shown below.

Figure 10: Supervalue Featherston layout

12.5 The health and safety concern raised by the applicant can be reduced through on-site changes as discussed earlier in my evidence. The issue raised by Mr Daniel Shao specific to the FreshChoice Greytown are not uncommon to other supermarkets in the area. I am of the view that alternative options do exist and have not been sufficiently considered by the applicant.

12.6 Obtaining direct access for customers from Main Street is achieved through a pedestrian connection, however this directs more customers into an unsafe environment (needing to cross the loading area), noting also that the connection will be attractive to more than just store customers (no connection along the desire line to West Street). I therefore recommend that further thought is required as to how the site operates.

13 CONCLUSION

13.1 I do not support the proposed access at 134 Main Street. The proposed access does not comply with safe engineering requirements and will lead to significant safety and operational concerns to all users of Main Street. I am of the view that on-site effects associated with loading and servicing can be appropriately managed on-site through a travel management plan and reconfiguration of the Site.

Terry Church
22 September 2023

ATTACHMENT A: SH2 Greytown Daily Traffic Summary (2018-2023)

Average Daily Traffic (2018-2023)

Site Ref: 00200908 (Nth of Wood St (Greytown))
Start Date (dd-mon-yyyy): 01-Jan-2018
End Date (dd-mon-yyyy): 16-Sep-2023
Direction: Both
Data Type: ALL Vehicles

	2018	2019	2020	2021	2022	2023
Count (1 Oct-31 Mar) - Warmer	**181**	**93**	**111**	**180**	**182**	**89**
Greater than 10,000vpd	84 46%	51 55%	71 64%	133 74%	87 48%	37 42%
Greater than 11,000vpd	25 14%	20 22%	22 20%	48 27%	27 15%	9 10%
Count (1 Apr-31 Sep) - Cooler	**97**	**181**	**180**	**182**	**183**	**141**
Greater than 10,000vpd	21 22%	35 19%	34 19%	85 47%	58 32%	23 16%
Greater than 11,000vpd	5 5%	5 3%	10 6%	29 16%	13 7%	2 1%
Count (Year)	**278**	**274**	**291**	**362**	**365**	**230**
Greater than 10,000vpd	105 38%	86 31%	105 36%	218 60%	145 40%	60 26%
Greater than 11,000vpd	30 11%	25 9%	32 11%	77 21%	40 11%	11 5%
Average (5D-ADT) Warmer	**10088**	**10365**	**10247**	**11304**	**10269**	**10024**
Average (7D ADT) Warmer	*9988*	*10301*	*9958*	*11064*	*9943*	*9749*
Average (5D-ADT) Cooler	**9501**	**9595**	**8194**	**9636**	**9811**	**9477**
Average (7D ADT) Cooler	*9342*	*9349*	*7967*	*9328*	*9503*	*9107*
Average (5D-ADT) Year	**9885**	**9858**	**8977**	**10463**	**10038**	**9696**
Average (7D ADT) Year	*9763*	*9672*	*8727*	*10191*	*9723*	*9356*

Date	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
1-Jan	8301	8047	-	8661	8680	7764
2-Jan	10584	10989	-	10852	11970	10638
3-Jan	10028	10304	-	9490	10828	9830
4-Jan	9783	10885	-	9363	9874	10018
5-Jan	10090	10602	-	10451	10513	9176
6-Jan	8485	9353	-	11123	9934	9564
7-Jan	9605	9007	-	10620	11056	8076
8-Jan	9279	9681	-	11087	10659	6829
9-Jan	9444	10154	-	10214	8991	8954
10-Jan	9750	10037	-	9369	9827	9411
11-Jan	9973	11129	-	9298	10219	8970
12-Jan	-	9899	-	10456	10484	9333
13-Jan	9841	9082	-	10418	10600	11001
14-Jan	9448	9261	-	10767	11718	9918
15-Jan	9173	9263	-	11955	10373	9032
16-Jan	9282	-	-	10627	9869	9645
17-Jan	10136	10409	-	9428	9840	10139
18-Jan	9973	12184	-	9602	10415	10573
19-Jan	11916	10831	-	9818	10659	10426
20-Jan	10896	11177	-	10438	10598	11823
21-Jan	10195	9261	-	10650	12502	9878
22-Jan	9488	10187	-	12716	11463	10000
23-Jan	9792	10449	-	11229	10304	8540
24-Jan	10041	10722	-	10616	9186	10260
25-Jan	10416	12288	-	10405	9928	10771
26-Jan	11492	10739	-	10908	10230	-
27-Jan	10340	9635	-	10988	10609	11517
28-Jan	9316	9954	-	11554	12161	8408
29-Jan	9422	9758	-	12041	10495	7605
30-Jan	9331	10225	-	10479	9488	9444
31-Jan	9844	9519	-	10014	10299	9767
1-Feb	9872	11736	-	10122	10255	10298
2-Feb	11759	11273	-	10363	10399	10787
3-Feb	11882	9270	-	10886	10494	12724
4-Feb	10863	9468	-	-	12448	11556
5-Feb	10645	11147	-	12421	9051	9597
6-Feb	9384	8951	-	12159	7613	9735
7-Feb	10036	11188	-	10257	8258	10098
8-Feb	9897	11802	-	11280	10023	10295
9-Feb	11315	10141	-	10447	10362	10372
10-Feb	9427	9433	-	10774	10784	11190
11-Feb	8293	9606	-	10927	11444	9244
12-Feb	9244	10049	-	12044	8004	8606

Date	2018	2019	2020	2021	2022	2023
13-Feb	9677	10436	-	10459	5732	8828
14-Feb	10217	10917	-	9986	9461	7278
15-Feb	10470	12082	-	9775	9880	8418
16-Feb	11548	10692	-	9365	10366	8537
17-Feb	10489	10142	-	10136	10647	10883
18-Feb	9843	9903	-	10834	12190	9610
19-Feb	9528	9557	-	12207	10275	9001
20-Feb	8533	10683	-	11003	8615	9721
21-Feb	9870	11177	-	10489	9938	10215
22-Feb	10315	12374	-	9903	9971	10339
23-Feb	11459	12352	-	10543	9997	9940
24-Feb	9806	9051	-	23703	10495	10642
25-Feb	9505	9955	-	24346	11737	8568
26-Feb	7286	10208	-	27808	9831	8008
27-Feb	9684	10446	-	26569	8652	9397
28-Feb	9809	10552	-	20771	9422	10063
1-Mar	10028	12367	-	20880	9881	10245
2-Mar	11923	12504	-	21020	9765	10393
3-Mar	12298	10560	-	-	9770	12018
4-Mar	9404	9286	-	10822	11119	10429
5-Mar	9208	9815	-	11831	9239	8113
6-Mar	9618	10030	-	9632	8546	9390
7-Mar	9213	10554	-	8764	8973	9684
8-Mar	9374	11244	-	9777	9354	10050
9-Mar	10770	9725	-	10101	9358	10295
10-Mar	9852	-	-	10441	9521	11332
11-Mar	9512	9351	-	10435	10646	10275
12-Mar	9376	9954	10282	12003	8184	8968
13-Mar	9450	9882	10731	9988	7441	8814
14-Mar	10203	10301	12117	10232	8555	9486
15-Mar	10009	11568	10456	10045	8768	10242
16-Mar	11247	9793	10282	10173	9079	9886
17-Mar	10185	9173	9541	10652	9439	10580
18-Mar	10052	9351	9596	10794	10529	9390
19-Mar	9459	9700	9831	12229	8877	9080
20-Mar	9639	10359	9819	10592	8361	9228
21-Mar	10066	10544	10895	10106	8633	9588
22-Mar	9819	13121	8203	9878	8938	9996
23-Mar	10854	10507	7185	10683	9072	10566
24-Mar	9014	-	9142	10668	8936	11389
25-Mar	8677	9564	8995	10858	9648	9490
26-Mar	9093	9744	7467	12145	8755	8718
27-Mar	9528	9652	2104	9968	7481	9564
28-Mar	10345	9744	2182	9445	8658	9476
29-Mar	12083	11217	1074	9894	9078	9474
30-Mar	10564	9693	968	10245	9387	9459
31-Mar	11088	9150	2014	10731	9857	10816
1-Apr	12028	9101	2048	12448	10488	8557
2-Apr	10782	9507	2411	9480	9111	7825
3-Apr	9703	10189	2289	11211	8278	9043
4-Apr	9816	10028	2347	9759	8942	10020
5-Apr	9932	11093	1504	10379	9540	10382
6-Apr	10814	8944	1264	10631	9706	11616
7-Apr	9386	8147	2370	10696	9759	9076
8-Apr	9003	8909	2505	11028	11060	12266
9-Apr	8731	9753	2646	12298	9892	9590
10-Apr	8331	10027	2598	10712	8608	8265
11-Apr	9075	10350	920	8957	9576	9534
12-Apr	9787	10505	1515	9948	10006	9732
13-Apr	10884	9353	983	10500	10119	9912
14-Apr	9461	8957	1202	10654	12227	10581
15-Apr	8922	9282	2407	11006	9746	9261
16-Apr	8793	9844	2548	11724	10355	7943
17-Apr	9229	10452	2498	9509	9548	9254
18-Apr	9833	12307	2509	9372	10027	9637
19-Apr	10397	10664	1532	10097	10519	9589

Date	2018	2019	2020	2021	2022	2023
20-Apr	11205	12711	1276	-	10515	10004
21-Apr	10284	8978	2505	10583	10636	10540
22-Apr	9376	9404	2685	11106	11318	8253
23-Apr	9294	10097	2784	12433	10214	8582
24-Apr	10436	10649	2763	11006	9333	9052
25-Apr	8507	8491	2895	9528	8315	6793
26-Apr	10446	11293	1711	9948	10235	9849
27-Apr	11251	9972	1478	10518	10523	9988
28-Apr	9053	8626	1775	10794	10705	10753
29-Apr	-	8503	6087	11170	11479	9104
30-Apr	-	9105	6038	12186	11615	7632
1-May	-	9547	5852	9983	8296	9005
2-May	-	9546	6246	9468	9318	9249
3-May	-	10792	4202	9755	9438	9750
4-May	-	9430	3000	10324	9928	9480
5-May	-	8456	5280	10669	10399	10181
6-May	-	8891	5448	11103	11197	8756
7-May	-	9458	5825	11836	9668	7709
8-May	-	9975	5772	11033	8956	8640
9-May	-	9820	6368	9536	9436	9303
10-May	-	10677	4460	9744	9651	9658
11-May	-	10165	3989	10072	10105	9731
12-May	-	8984	5713	10250	10452	10379
13-May	-	8751	6187	10637	11099	9897
14-May	-	9414	6479	12256	9089	8803
15-May	-	9966	8883	9506	7767	8672
16-May	-	9641	9576	9151	9013	8940
17-May	-	10887	8242	9369	9485	9568
18-May	-	9495	8093	10114	10457	9631
19-May	-	8694	8317	10443	10017	9980
20-May	-	9192	8292	10823	10133	8144
21-May	-	9590	8939	12061	9436	6930
22-May	-	9705	-	10350	8074	8656
23-May	-	9788	10514	8843	9176	9306
24-May	-	10655	9050	9431	9815	9566
25-May	-	9347	7765	10162	10002	9499
26-May	-	8269	8115	10463	9994	10405
27-May	-	8986	8768	10675	11150	9040
28-May	-	-	9178	11277	9337	8045
29-May	-	9466	9523	9662	8393	8989
30-May	-	9436	11685	8405	9009	9242
31-May	-	10955	9872	9428	9198	8910
1-Jun	-	9727	8778	9742	9530	9893
2-Jun	-	7711	8931	10543	9731	10975
3-Jun	-	9089	8859	10855	11354	9886
4-Jun	-	9390	9417	12520	10056	7785
5-Jun	-	9177	9409	11501	8473	6861
6-Jun	-	9528	9311	9425	8346	9068
7-Jun	-	9931	8620	9757	9630	9667
8-Jun	-	8494	7708	10254	9916	9629
9-Jun	-	7880	8629	10640	9500	10228
10-Jun	-	8800	9149	10718	9741	8745
11-Jun	-	9240	9656	11585	7859	7449
12-Jun	-	9799	9677	9960	6805	8892
13-Jun	-	9294	10536	8366	7770	9463
14-Jun	-	10182	9199	9600	8940	9801
15-Jun	-	8650	8653	10064	9641	9607
16-Jun	-	8039	8801	10467	10067	10392
17-Jun	-	8693	9096	10475	10396	8462
18-Jun	-	8752	9645	11295	8643	6941
19-Jun	-	9246	9048	9367	7161	8419
20-Jun	-	9308	10247	7570	8702	9421
21-Jun	-	10396	8588	8724	9606	9956
22-Jun	-	9235	7831	9701	10273	9349
23-Jun	-	7275	8529	10179	11322	9783
24-Jun	-	8438	9468	9551	8895	8060

Date	2018	2019	2020	2021	2022	2023
25-Jun	-	9018	9750	10437	8850	6656
26-Jun	-	9594	9875	8040	8898	8791
27-Jun	-	9452	10387	6988	9354	9258
28-Jun	-	10325	9266	8853	9198	10154
29-Jun	-	9418	8227	7827	9884	10831
30-Jun	-	7993	8546	9382	9966	10662
1-Jul	-	8503	8897	10457	11138	9376
2-Jul	-	9319	9215	12028	9610	7403
3-Jul	-	9485	9013	10899	7643	8301
4-Jul	-	9067	11130	9005	9150	9335
5-Jul	-	9860	10226	9541	9569	9564
6-Jul	-	7940	8433	10168	9608	9861
7-Jul	-	7928	9078	10491	10175	10602
8-Jul	-	8590	9846	10778	10605	8774
9-Jul	-	9186	9571	12011	8705	6698
10-Jul	-	9451	9839	10866	7493	8528
11-Jul	-	9724	11632	8951	8714	9240
12-Jul	-	10153	10364	9386	8142	9535
13-Jul	-	9202	9007	9927	9470	10678
14-Jul	-	7347	9601	10859	9957	9631
15-Jul	-	8356	-	10835	10861	10212
16-Jul	-	8683	10282	11277	9946	7829
17-Jul	-	9479	10419	8109	8361	8773
18-Jul	-	9636	11587	8482	8657	9374
19-Jul	-	10277	10149	9251	8984	9515
20-Jul	-	8592	8587	10069	9358	9674
21-Jul	-	7504	8841	10492	8237	10391
22-Jul	-	8385	9165	10550	10045	8616
23-Jul	-	8810	9766	11879	9414	6949
24-Jul	8814	9042	10116	10831	7936	8436
25-Jul	9269	9346	11098	9355	8543	9390
26-Jul	9432	10446	10660	8988	8757	9266
27-Jul	10152	9605	9023	9333	9075	9460
28-Jul	8986	8088	9026	9955	9161	10269
29-Jul	7486	8483	9564	10581	10860	7600
30-Jul	8385	8764	9900	11531	9272	7572
31-Jul	8812	9022	9968	10648	6730	8544
1-Aug	9303	-	10965	8477	8833	8925
2-Aug	9402	9940	9908	9544	8962	8717
3-Aug	10264	8762	8411	9462	9360	8503
4-Aug	8216	7695	8920	10195	9644	9834
5-Aug	7409	8525	9363	9933	10667	8075
6-Aug	8159	9232	9835	10985	8676	6901
7-Aug	8818	9571	9958	9597	7442	8659
8-Aug	9252	9551	11108	7072	8304	8945
9-Aug	9417	10486	9147	7404	8756	9317
10-Aug	10385	8560	8318	9752	9371	8476
11-Aug	9054	7294	9185	10500	9413	10124
12-Aug	8475	8343	9579	10572	10560	8245
13-Aug	8686	9131	9410	11083	8928	6904
14-Aug	8939	9349	9472	9311	7955	8495
15-Aug	9116	9654	10567	9054	9171	Total
16-Aug	9287	10406	8775	9482	9579	8813.833
17-Aug	10382	8213	7927	10399	9766	9979
18-Aug	8343	7487	8514	3123	9438	8160
19-Aug	8194	8827	9112	2597	10322	6902.5
20-Aug	8274	9225	9228	2581	8188	0
21-Aug	8889	9458	9431	1776	7299	9004.4
22-Aug	9510	9490	10995	1351	8942	0
23-Aug	8972	10680	9612	2555	9319	0
24-Aug	10418	9164	8308	2747	9917	0
25-Aug	8948	8391	8799	2914	10119	0
26-Aug	8345	8443	9416	2768	10601	0
27-Aug	8721	9145	10040	2713	9226	0
28-Aug	9029	9755	9938	1716	8000	0
29-Aug	9190	9618	11074	1440	9118	0

Date	2018	2019	2020	2021	2022	2023
30-Aug	9696	10762	9445	2805	9994	0
31-Aug	10168	9853	8785	2996	10367	0
1-Sep	8915	9145	9138	6811	10162	0
2-Sep	8005	8822	9213	6520	11271	0
3-Sep	8368	9303	-	6708	8949	0
4-Sep	8548	9392	10203	4335	8570	0
5-Sep	9094	9175	11516	3240	9046	0
6-Sep	9163	10231	9534	6037	9205	0
7-Sep	10293	8466	8479	6032	10093	0
8-Sep	8387	8569	8860	9163	10372	0
9-Sep	9249	8723	9604	9614	10814	0
10-Sep	8596	8984	10170	10098	8671	0
11-Sep	8819	9908	10224	9387	8360	0
12-Sep	9269	9900	11069	8285	9263	0
13-Sep	9604	10713	10016	8626	9676	0
14-Sep	10862	9257	8746	9682	9808	0
15-Sep	10209	8335	9140	9944	10234	0
16-Sep	9361	9022	9191	9729	11383	0
17-Sep	8665	9693	10382	11152	9278	0
18-Sep	9135	9795	10165	9211	8621	0
19-Sep	9719	9839	10900	8562	9473	0
20-Sep	9870	10718	9683	9628	9695	0
21-Sep	11003	9202	9402	9737	10305	0
22-Sep	9173	8805	9280	10186	10137	0
23-Sep	8616	9031	9844	10045	10839	0
24-Sep	8826	9548	9997	11781	9307	0
25-Sep	8957	10089	10584	9474	8568	0
26-Sep	9645	10248	11776	8430	7828	0
27-Sep	9670	11375	10069	9247	9148	0
28-Sep	11092	9528	7471	9581	10368	0
29-Sep	9681	8623	8898	10545	10305	0
30-Sep	8056	9234	9476	10605	10537	0
1-Oct	8902	9416	10595	12081	8177	0
2-Oct	9469	9837	10992	10108	6275	0
3-Oct	10136	10249	12137	9112	9017	0
4-Oct	10128	11649	10128	9516	10079	0
5-Oct	11134	9279	10284	10163	9497	0
6-Oct	9412	9452	10081	10812	8792	0
7-Oct	8937	-	10153	10686	11053	0
8-Oct	9297	-	-	12236	9994	0
9-Oct	9625	-	11032	10118	8073	0
10-Oct	10185	-	12285	9819	9698	0
11-Oct	10420	-	10534	10250	10048	0
12-Oct	10507	-	10037	10356	10105	0
13-Oct	8617	-	9523	10210	9823	0
14-Oct	8372	-	10004	10901	11396	0
15-Oct	9108	-	10324	12547	9326	0
16-Oct	9617	-	10439	9862	9157	0
17-Oct	10032	-	11860	9157	9824	0
18-Oct	10397	-	9540	9703	10001	0
19-Oct	13517	-	8675	10181	10285	0
20-Oct	10841	-	9546	10528	10912	0
21-Oct	10071	-	9998	11196	12668	0
22-Oct	10273	-	10758	13364	10309	0
23-Oct	10067	-	11358	11130	9661	0
24-Oct	10186	-	13263	9990	9406	0
25-Oct	10194	-	11340	10643	9940	0
26-Oct	11203	-	10371	10503	10656	0
27-Oct	9203	-	10598	10647	10298	0
28-Oct	8676	-	9889	10714	11684	0
29-Oct	8989	-	10347	11748	9352	0
30-Oct	9333	-	10619	10037	8192	0
31-Oct	10315	-	11734	8794	9557	0
1-Nov	9791	-	9468	10003	9915	0
2-Nov	11302	-	8892	10210	10063	0
3-Nov	8604	-	9396	10416	10251	0

Date	2018	2019	2020	2021	2022	2023
4-Nov	8384	-	9797	10845	11649	0
5-Nov	9324	-	10454	11976	10367	0
6-Nov	9635	-	10623	9854	9976	0
7-Nov	10076	-	11894	9300	9520	0
8-Nov	9596	-	10756	10138	9832	0
9-Nov	11215	-	8214	11667	10455	0
10-Nov	10338	-	9337	11106	10947	0
11-Nov	9765	-	8549	11632	11596	0
12-Nov	9440	-	10077	12202	9011	0
13-Nov	9895	-	10619	9595	8781	0
14-Nov	10311	-	12083	8803	9871	0
15-Nov	10484	-	10643	9995	10213	0
16-Nov	11810	-	9843	9652	10657	0
17-Nov	10859	-	10277	10650	10246	0
18-Nov	9386	-	10114	11054	11591	0
19-Nov	9809	-	10424	12180	9775	0
20-Nov	9860	-	10563	10427	8716	0
21-Nov	9949	-	12348	9297	10078	0
22-Nov	9811	-	10744	10215	10351	0
23-Nov	11284	-	9371	9718	10480	0
24-Nov	9570	-	9834	10886	10596	0
25-Nov	8822	-	10177	11372	12460	0
26-Nov	8919	-	9940	12481	11396	0
27-Nov	9055	-	10444	10299	8549	0
28-Nov	9839	-	12300	9431	9744	0
29-Nov	10328	-	10482	10176	9835	0
30-Nov	11285	-	9818	10551	10327	0
1-Dec	9797	-	9684	10812	10181	0
2-Dec	9033	-	9824	10920	11539	0
3-Dec	9706	-	10690	12232	9536	0
4-Dec	9893	-	11027	9967	9866	0
5-Dec	9796	-	12492	9020	9536	0
6-Dec	10089	-	10139	9261	11192	0
7-Dec	11698	-	10073	9849	10691	0
8-Dec	10391	-	9801	10673	11106	0
9-Dec	10193	-	10294	11262	11986	0
10-Dec	9800	-	10779	12341	9925	0
11-Dec	10029	-	10651	10638	9354	0
12-Dec	10366	-	12130	8821	9920	0
13-Dec	10386	-	10166	10298	10270	0
14-Dec	11614	-	10072	9828	10550	0
15-Dec	9004	-	10055	10502	10635	0
16-Dec	9722	-	10825	12441	11595	0
17-Dec	10004	-	11032	12108	9675	0
18-Dec	10542	-	11246	10504	8397	0
19-Dec	11055	-	12312	9855	10064	0
20-Dec	10600	-	10657	10999	10707	0
21-Dec	11270	-	8758	10955	11037	0
22-Dec	10707	-	10820	11808	10919	0
23-Dec	9748	-	11468	12554	11081	0
24-Dec	10082	-	12538	11724	8945	0
25-Dec	7768	-	11408	8607	8114	0
26-Dec	9618	-	8584	9408	9084	0
27-Dec	10477	-	9121	10495	9723	0
28-Dec	11014	-	9544	8902	10013	0
29-Dec	10156	-	9337	10019	10154	0
30-Dec	9506	-	10150	10818	10322	0
31-Dec	9621	-	10840	10456	9107	0

ATTACHMENT B: Vehicle tracking of alternative option

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	07/08/2023

DESIGN: RG | DRAWN: RG
CHECKED: SC | DATE: 07/08/2023
SCALE: 0 20m
1:300 @ A3

CLIENT: WAKA KOTAHI
PROJECT: FRESH CHOICE SUPERMARKET - REVIEW
LOCATION: 12 HASTWELL STREET, GREYTOWN

FOR DISCUSSION

SHEET TITLE: VEHICLE TRACKING
19.45m SEMI-TRAILER

DRAWING NUMBER: NZTA229-MS-SK01-F

SHEET: 01 of 01
REV: A

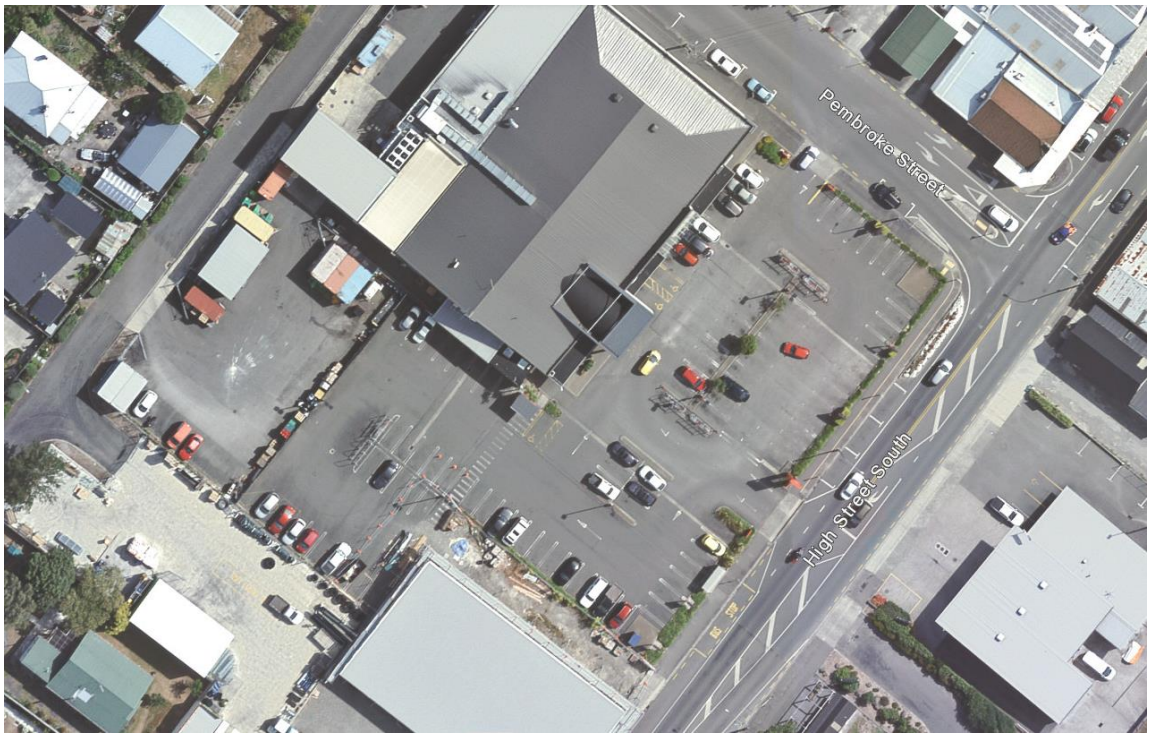
flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

ATTACHMENT C: Supermarket Comparison about the area

Featherston Supervalue

SH2 southbound view of the Supermarket (wide central flush median)

New World Carterton



SH2 southbound view of the Supermarket (right turn bay)

Pak'n Save Masterton

SH2 northbound view of the Supermarket (right turn bay and central flush median)

Woolworth's Masterton

Dixon Street southbound (rear access central flush median)

New World Masterton

New World Loading area