Appendix E
Integrated Transport Assessment

Rolleston PAK'nSAVE Integrated Transport Assessment

Foodstuffs South Island (Properties) Limited

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Quality Assurance Information

Prepared for: Foodstuffs South Island (Properties) Limited
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Reviewed by: Dave Smith, Technical Director

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		Name
9 November 2021	1st draft	Dave Smith
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1. Introduction

Foodstuffs propose to establish, operate and maintain a supermarket with click + collect facility, car parking, access, signage and landscaping at 157 Levi Road in Rolleston, Canterbury. The development site will be referred to herein as the supermarket site.

Abley Limited (Abley) has been commissioned by FSIL to provide transport advice and prepare an Integrated Transport Assessment (ITA) with respect to the supermarket site.

This report provides an assessment of the transportation effects of the proposal. It has been prepared in accordance with the Operative Selwyn District Plan Transportation rules and Waka Kotahi's Integrated Transportation Assessment guidelines published in Research Report 453[1].

Report Structure

This report is divided into sections to aid understanding of the assessment methodology:

- Existing site information
  - Locality, zoning, existing land use
- Existing transport data
  - Road geometry, road hierarchy, existing vehicle flows, public transport and road safety
- Future receiving environment
  - Future planned infrastructure improvements and urban development in the vicinity
- Proposed activity
  - A description of the proposal giving specific attention to the transport related components
- Selwyn District Plan assessment
  - An assessment of the proposal against the transport-related provisions of the Operative Selwyn District Plan
- Appraisal of transport effects
  - An assessment of the anticipated trip generation, parking demand and access arrangements
- Assessment of Non-Compliances
  - An assessment of the non-compliances.
- Conclusions

[1] https://www.nzta.govt.nz/resources/research/reports/422/

2. Existing Site Data

2.1 Site and Locality

The site is located at 157 Levi Road in Rolleston, Canterbury which is a 7.2ha triangular shaped property on the eastern side of the intersection of Levi Road and Lincoln Rolleston Road, situated 1km to the southeast of the Rolleston town centre.

The site is relatively flat and has frontage onto Lincoln Rolleston Road and Levi Road. Lincoln Rolleston Road is an Arterial Road providing a key connection between the Rolleston town centre and Rolleston's south-eastern development areas, Prebbleton and Lincoln. It includes a shared path providing for pedestrian and cycling movements to/from the town centre. Levi Road is also an Arterial Road providing the principal connection to the Christchurch Southern Motorway (via the Weedons interchange), a four-lane high-capacity corridor connection between Rolleston and Christchurch. Both frontage roads have a 50km/hr speed limit, with Lincoln Rolleston Road transitioning to 60km/hr halfway along the site frontage.

Surrounding land uses are rural residential and suburban development. The location of the site in the context of the wider area is shown in **Figure 2.1**.

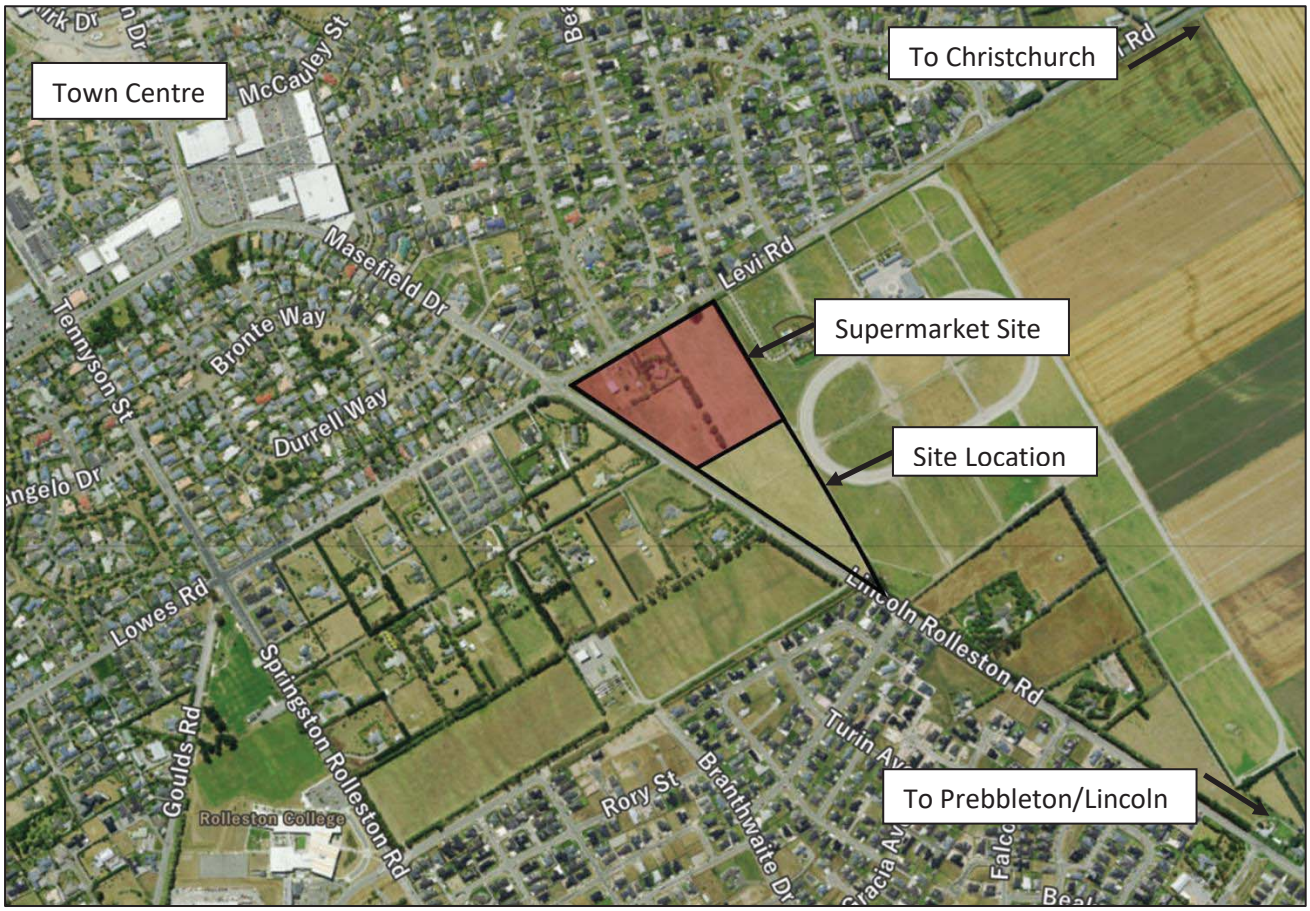

Figure 2.1 Location of site

The existing site has an area of 71,831m^2 and has one residential property developed in the northwest corner of the site. The site is typical of rural residential land use. Lifestyle blocks lie to the west of the site and suburban development is located to the north.

There is currently one existing access to the site from Levi Road serving the existing residential property. The vehicle crossing is sealed however the vehicle access is unsealed. There Are currently no existing vehicle crossings or accessway along the site frontage on Lincoln Rolleston Road.

2.2 Zoning

The site is zoned "Living Zone Z" and borders both the "Living Zone 1" and "Inner Plains" zones under the operative Selwyn District Plan. **Figure 2.2** shows the zoning in the vicinity of the site.

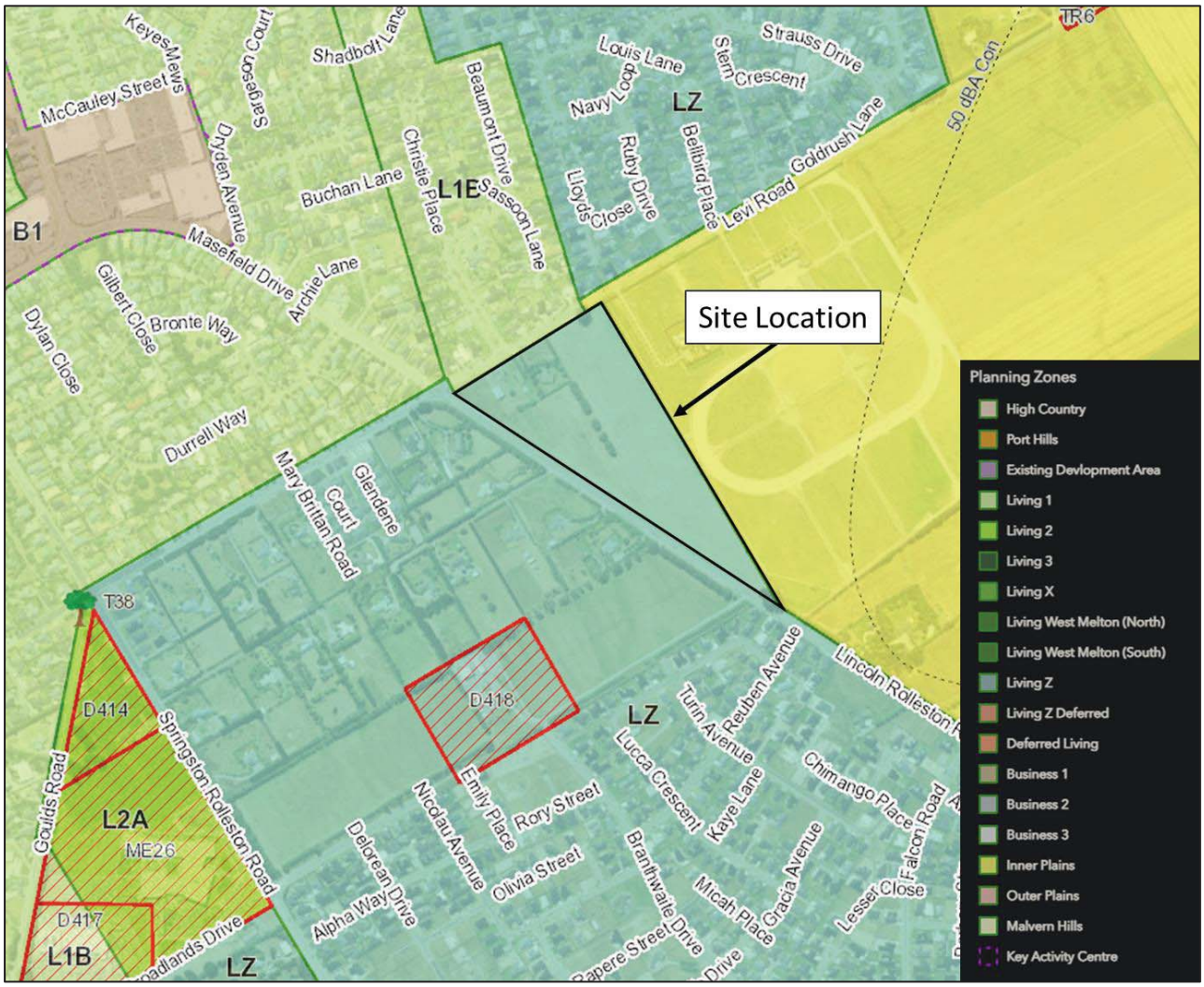

Figure 2.2 Site zoning and the surrounding area

The Selwyn District Plan states that the Living Z Zone provides for "*new urban growth areas within or adjacent to the edge of existing townships. These areas are to be subject to an Outline Development Plan to ensure that good standards of urban design and connectivity with existing townships are achieved. The Living Z zone provides for a range of site sizes and living options, including provisions for lower density stand-alone housing and semi-detached or attached medium density housing types*"[2].

[2] Selwyn District Plan. Township Volume. *Contents and Preparation*. A4 Finding Material.

3. Existing Transport Data

3.1 Frontage Roads

The site has road frontage to Levi Road to the north and Lincoln Rolleston Road to the west.

Levi Road

Levi Road runs between Lincoln Rolleston Road and Weedons Road and is approximately 1.7 kilometres long. Levi Road is classified as an Arterial Road under Appendix 7 of the Selwyn District Plan. An Arterial Road is defined as a road that "*connects areas of district importance not already provided by State Highways. Arterial roads connect the districts townships and other important places and activities together, including across district boundaries. Arterial roads are subject to tighter access controls than collector and local roads to promote efficient traffic flow*[3]*.*

Levi Road is a two-lane two-way road with a large grass berm on its south side, and a footpath, grass berm and kerb and channel on its north side. The speed limit along the site frontage is 50km/hr. The carriageway width is approximately 7.5 metres. There is no provision for parking on the north side of the road, however informal parking is possible on the grass berm on the south side of the road. There are no cycle lanes within the carriageway. The configuration of Levi Road along the frontage of the site is shown in **Figure 3.1**.

Figure 3.1 Levi Road frontage looking east, showing site at right and existing residential development at left

Levi Road intersects with Lincoln-Rolleston Road / Masefield Drive at the western end of the site, and transitions into Weedons Road approximately 1.5km to the east of the site, ultimately leading to the Weedons interchange on the Christchurch Southern Motorway. To this end, Levi Road is a key connection between the Rolleston township and the Christchurch Southern Motorway for travel to and from Christchurch and further north. Beaumont Drive intersects with Levi Road and is give way controlled. It is located approximately 100 metres from the intersection of Levi Road and Lincoln Rolleston Road.

[3] Selwyn District Plan. Township Volume. *Rules and Definitions*. D Definitions.

Lincoln Rolleston Road

Lincoln Rolleston Road is located between Lowes Road and Selwyn Road and is approximately 3.1 kilometres long. Lincoln Rolleston Road is also classified as an Arterial Road under Appendix 7 of the Selwyn District Plan.

Lincoln Rolleston Road is a two-lane two-way road with a large grass berm on its east side and a sealed shared path separated by a narrow grass verge of varying width (1-2m) on its west side. The speed limit is 50km/hr from the roundabout to 185m south and changes to 60km/hr continuing to the south. The carriageway width is approximately 7 metres with no formal parking provision on either side of the road, however there is sufficient width for informally parking on the grass berm on the east side of the road. There are no cycle lanes within the carriageway. The configuration of Lincoln Rolleston Road along the frontage of the site is shown in **Figure 3.2**.

Lincoln Rolleston Road is a key link between the Rolleston Town Centre and the townships of Prebbleton and Lincoln and other outlying areas to the south.

Figure 3.2 Lincoln Rolleston Road frontage looking south, showing site at left and Living Z Zone at right

Lincoln Rolleston Road intersects with Levi Road and is controlled by a 14-metre diameter four leg roundabout, which also connects Masefield Drive (north) and Lowes Road (west). The roundabout is shown in **Figure 3.3**.

Figure 3.3 Levi Road / Lincoln Rolleston Road / Lowes Road / Masefield Drive roundabout looking south from Masefield Drive

SH1 Christchurch Southern Motorway Stage 2

The Christchurch Southern Motorway Stage 2 (CSM2) project[4] opened in 2020. This delivered a high capacity four-lane divided carriageway to connect Rolleston to Christchurch City, reducing travel times for vehicles and public transport movement between the two urban areas, and futureproofing for continued growth in Rolleston township.

The supermarket site fronts Levi Road which is the main corridor between Rolleston town centre (and wider urban area) and the Weedons interchange, located 2.3km to the northeast of the site via Weedons Road. The Weedons interchange as shown in **Figure 3.4** is a full movement grade-separated interchange with roundabouts managing on-ramp and off-ramp flows. This means that the supermarket site is ideally located to facilitate pass by vehicle movements for Rolleston residents travelling to and from Christchurch.

[4] https://www.nzta.govt.nz/projects/christchurch-motorways/christchurch-southern-corridor/christchurch-southern-motorway-stage-2/

Figure 3.4 Location of CSM2 and Weedons Interchange

3.2 Existing Vehicle Flows

Council undertakes regular traffic counts throughout the district. Average daily traffic counts in the vicinity of the site are provided in **Table 3.1**. These are well within the capacity of urban road corridors with similar attributes which accommodate in the order of 1,200-1,400 vehicles per hour per lane[5] which typically translates to 20,000-25,000 vehicles per day.

Table 3.1 Existing traffic flows

Location	Time of the Survey	Average Daily Traffic (veh/day)
Levi Road - between Lincoln Rolleston Road and Beaumont	August 2020	5,483
Levi Road – between Beaumont Drive and Ruby Drive	September 2019	2,267
Lincoln Rolleston Road – between Lowes Road and the 50/60 speed	March 2019	6,038

[5] Austroads Guide to Traffic Management Part 3 Traffic Study and Analysis Methods Section 6.2.1

3.3 Walking and Cycling Facilities

The site is well located with respect to existing provision for walking and cycling. Both Levi Road and Lincoln Rolleston Road have footpaths on the opposite side of the road to the site, with the path on Lincoln Rolleston Road being a marked shared path. The Lincoln Rolleston Road footpath markings outside vehicle accessways are shown in **Figure 3.5**.

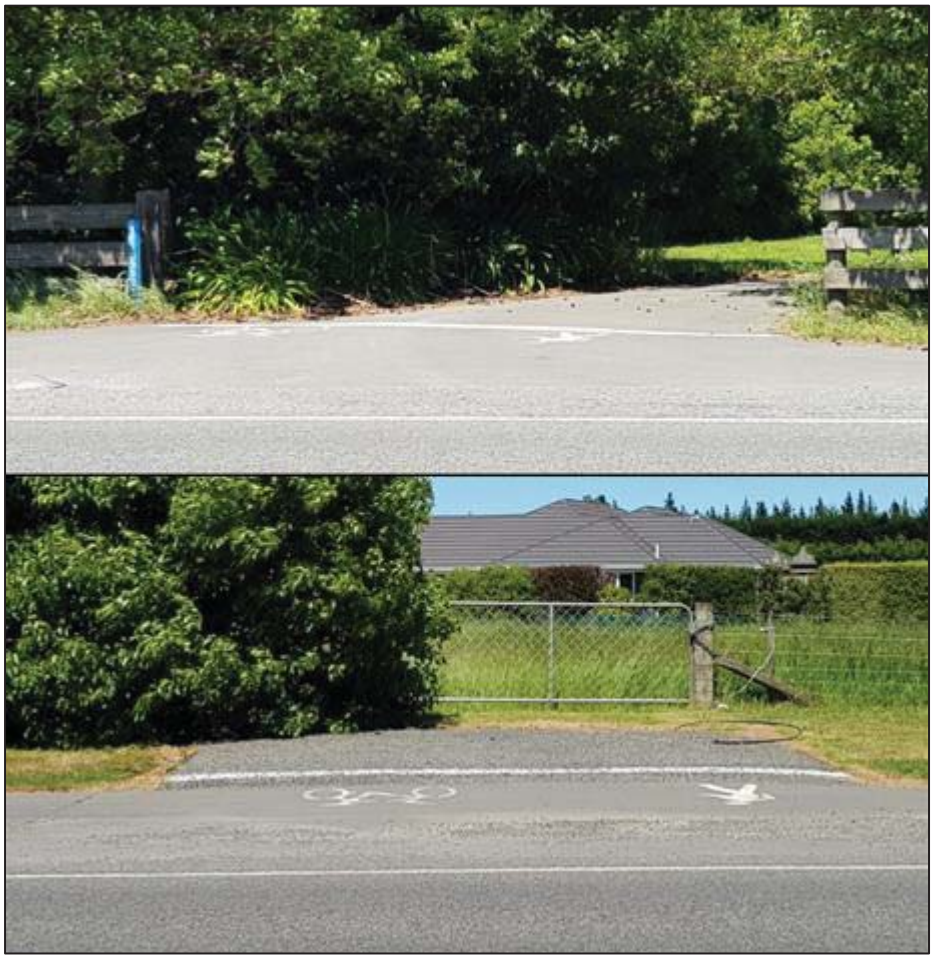

Figure 3.5 Shared path markings on Lincoln Rolleston Road

There are kerb cutdowns to provide for pedestrian crossing movements across the Masefield Drive and Lowes Road approaches at the intersection of Levi / Lowes / Lincoln Rolleston / Masefield Drive. This is shown in **Figure 3.6**.

Figure 3.6 Kerb cutdowns near the roundabout on Lowes Road and Masefield Drive

The shared path on Lincoln Rolleston Road continues to the west along Lowes Road with a continuous shared path on the south side of Lowes Road connecting to further shared paths along Tennyson Street. This is shown in **Figure 3.7**.

Figure 3.7 Shared path located on the south side of Lowes Road, looking west

Lowes Road also includes a footpath on the north side (excluding the shared path) and Masefield Drive includes footpaths on both sides of the corridor connecting directly to the Rolleston town centre as shown in **Figure 3.8** and **Figure 3.9** respectively.

Figure 3.8 Lowes Road cross section looking east toward site, with the footpath on the left side and shared path on the right

Figure 3.9 Masefield Drive cross section looking north toward town centre, with the footpath on both sides

There is wayfinding located on the corner of Levi Road and Masefield Drive shown in **Figure 3.10**. The wayfinding directs pedestrians and cyclists to the Rolleston town centre which is conveniently only 1km from the supermarket site and Lincoln township to the south.

Figure 3.10 Wayfinding sign located on the corner of Masefield Drive and Levi Road

3.4 Public Transport Modes and Accessibility

The closest bus route to the site is Service #5 which links Rolleston and New Brighton through central Christchurch and operates Monday to Saturday at headways of 30 minutes in each direction. Headways increase to 60 minutes on Sundays and on weekdays and Saturdays after 6pm. Journey times between the Christchurch Bus Exchange and Rolleston are timetabled at approximately 50 minutes in each direction. The bus route within the immediate vicinity is shown within **Figure 3.11**.

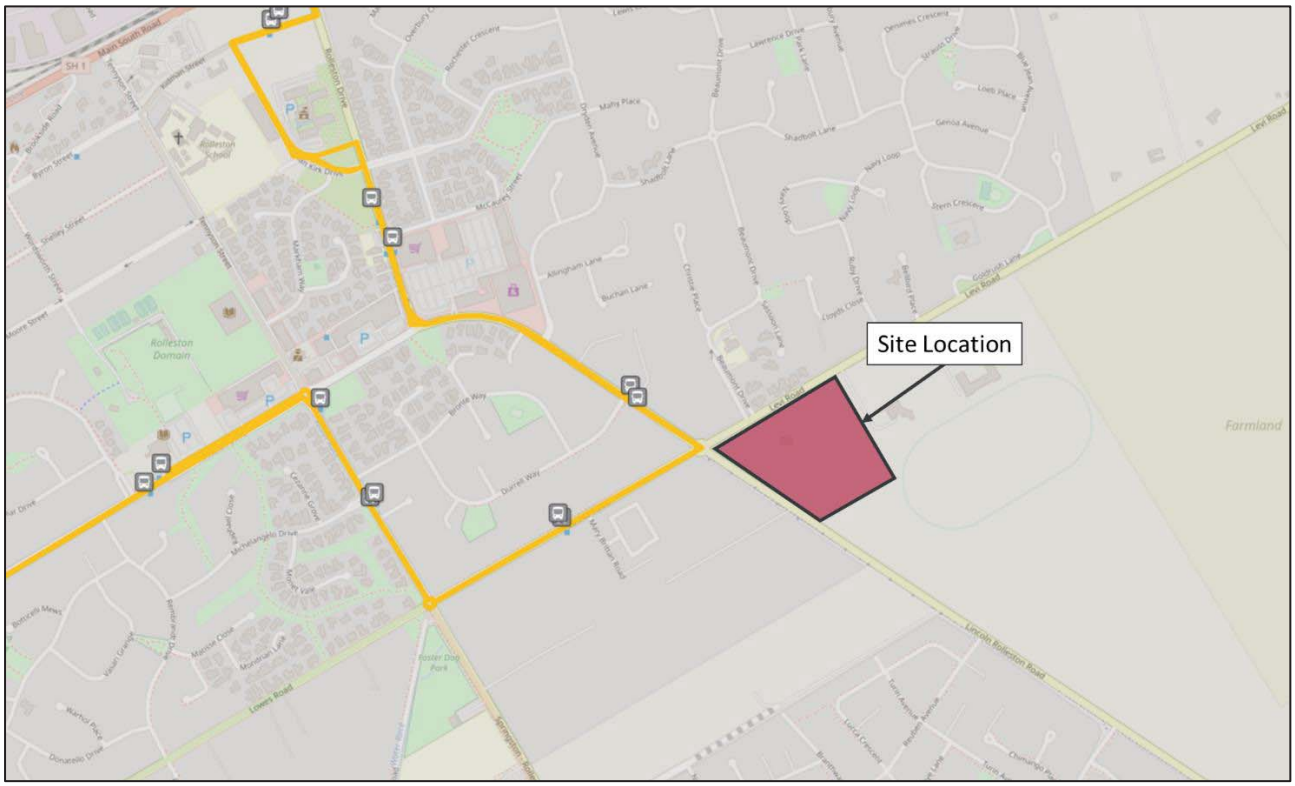

Figure 3.11 Bus route #5 and bus stop locations

There are two bus stops in the immediate vicinity of the site. **Figure 3.11** shows the location of the bus stops which are conveniently located 200m north of the site on Masefield Drive and 300m west of the site on Lowes Road. Bus stops located on Masefield Drive and Lowes Road are shown in **Figure 3.12** and **Figure 3.13** respectively.

The bus stops located on Masefield Drive and Lowes Road are an approximate 3 minute and 5-minute walk, respectively, from the site, demonstrating excellent public transport accessibility. It is noted that with the establishment of a supermarket there may be options to provide a bus stop immediately to the west of Lowes Road.

Figure 3.12 Bus stops located on Lowes Road

Figure 3.13 Bus stops located on Masefield Drive

3.5 Road Safety

A search of the NZTA Crash Analysis System (CAS) database for the period between 2016 and 2020 with crashes from 2021 included in part. Twelve crashes were identified within the search area, as illustrated in **Figure 3.14**.

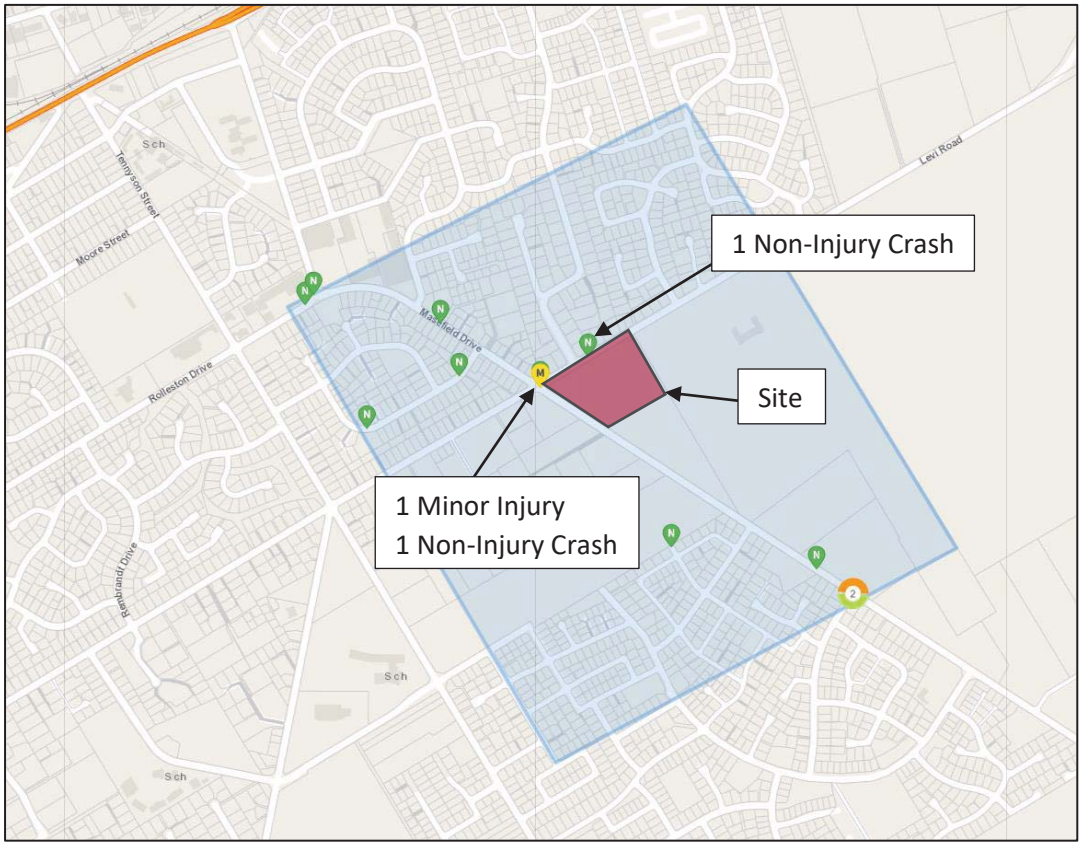

Figure 3.14 CAS assessment area and location of crashes

Two non-injury crashes and one minor injury crash have occurred outside the site frontage, two of which were at the intersection between Levi Road and Lincoln-Rolleston Road. These crashes are annotated in **Figure 3.14**.

The two non-injury crashes outside the site frontage were on Levi Road, one was caused by a distracted driver hitting a parked vehicle and the other was caused by a vehicle failing to give way to two cyclists due to sunstrike. The minor injury crash was caused by a vehicle failing to go around the roundabout and instead drove straight through due to fatigue. One serious crash has occurred at the very edge of the search area caused by a vehicle attempting a U-Turn manoeuvre.

The number and nature of the crashes in the vicinity of the site does not indicate there are outstanding safety concerns with respect to the road environment.

4. Future Receiving Environment

4.1 Urban Development

The site is within the urban boundary for Rolleston township, is zoned for urban purposes and is included in the Selwyn District Plan as Outline Development Plan Area 4 as shown within **Figure 4.1**. The site is currently undeveloped residential zoned land.

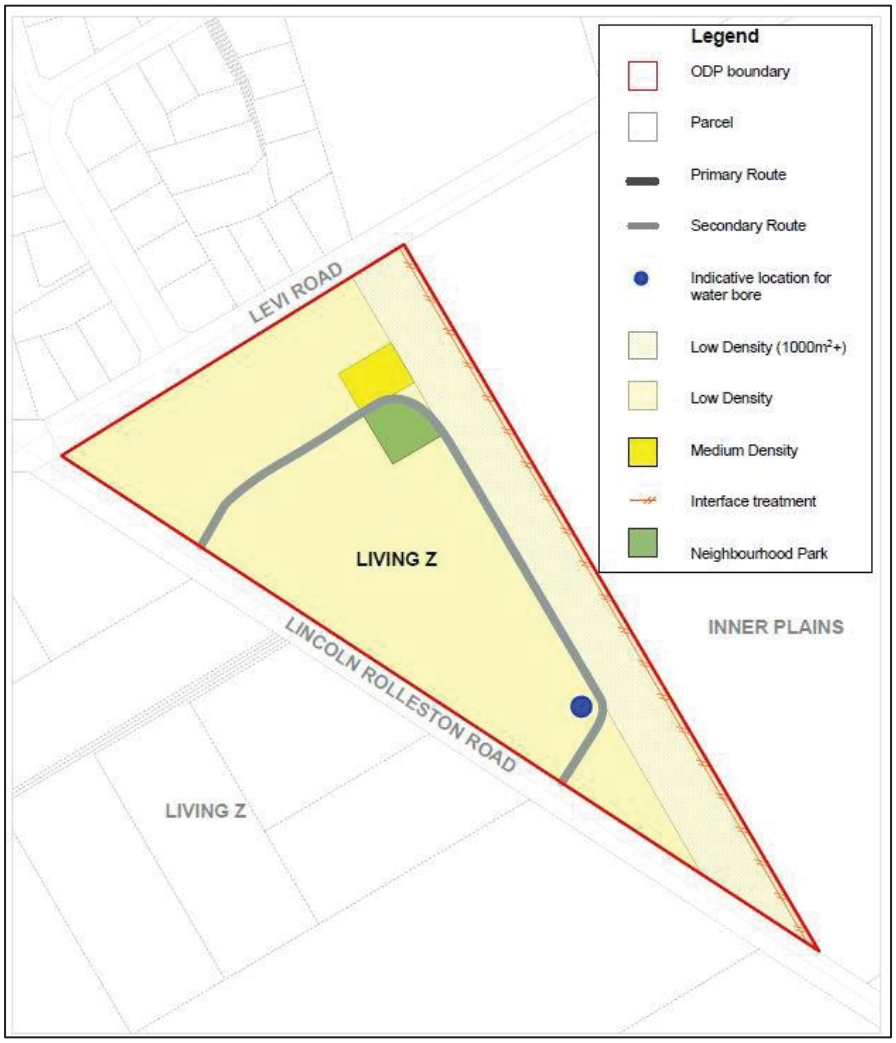

Figure 4.1 Outline Plan Development Area 4 (Source: Selwyn District Plan)

4.2 Future Public Transport Opportunities

Currently there are two public transport routes servicing Rolleston, a direct service to Christchurch (Route #5) and a link service connecting Burnham, Rolleston and Lincoln (Route #820). There are further proposed public transport services updates to these services planned as part of the Greater Christchurch PT Futures Combined Business Case[6] preferred

[6] https://api.ecan.govt.nz/TrimPublicAPI/documents/download/4106274

option. The preferred option proposes additional services on the existing routes as well as an enhanced direct service between Rolleston and Christchurch.

The link service #820 which connects Burnham, Rolleston and Lincoln (which does not currently run past the site) has updated routing in the preferred option to increase accessibility through southern Rolleston, and this would improve connectivity between the supermarket site and residential areas. This would run past the site on Lincoln Rolleston Road.

The supermarket is therefore very well located to experience improved access to public transport in the future through more frequent services, improved routing of existing services and the potential for new routes to widen connectivity via public transport. Ensuring there is a high standard of access for pedestrians across the supermarket site will be key to integration with potential future public transport opportunities.

4.3 Future Transport Infrastructure

There are several planned and funded transport infrastructure works in the vicinity of the site which anticipate future urban growth in Rolleston. The Selwyn District Long Term Plan 2021-31 (LTP) includes the following roading upgrades in the vicinity of the site which are as follows;

- Springston Rolleston Road / Selwyn Road intersection upgrade scheduled for 2024/25;
- Lowes Road / Levi Road / Lincoln Rolleston Road / Masefield Drive intersection upgrade scheduled for 2025/26 – this intersection is directly adjacent to the supermarket site and is understood to be planned to be upgraded from the current single lane roundabout to a signalised intersection;
- Lincoln Rolleston Road / Selwyn Road and Selwyn Road / Weedons Road intersection upgrades planned for 2027/28 – these two intersections are located approximately 3km to the southeast of the supermarket site and provide a direct connection to Prebbleton and Lincoln. It is understood they are planned to be upgraded to two large rural roundabouts with dual circulating lanes.

During discussions with Council on site it was noted that Levi Road is proposed to be upgraded at some stage in the future. As part of this upgrade a shared path is proposed. This is intended to connect with the existing shared path on Lowes Road west of the roundabout, and the Regional Park proposed by Council east of the site near Weedons Road.

There are several other relevant transport infrastructure line items in the LTP demonstrating Council's commitment to improving provision for public transport and active modes including the Rolleston Bus Stop improvement programme, provision for relocating and expanding Park N Ride, and new cycleways including Rollleston to Burnham and Jones Road.

Waka Kotahi are currently delivering the SH1 Rolleston Flyover and Speed Review[7] project which investigates the delivery of a flyover to connect the Rolleston township and Rolleston industrial zone. The flyover is intended to provide for cyclists, pedestrians, buses and local traffic and will be located 1.4km to the north of the supermarket site, accessible via Masefield Drive and Rolleston Drive. This will provide a direct connection between the supermarket site and the industrial area to the north of the township, via Masefield Drive and Rolleston Drive. This is shown in **Figure 4.2**.

[7] https://www.nzta.govt.nz/projects/sh1-rolleston/

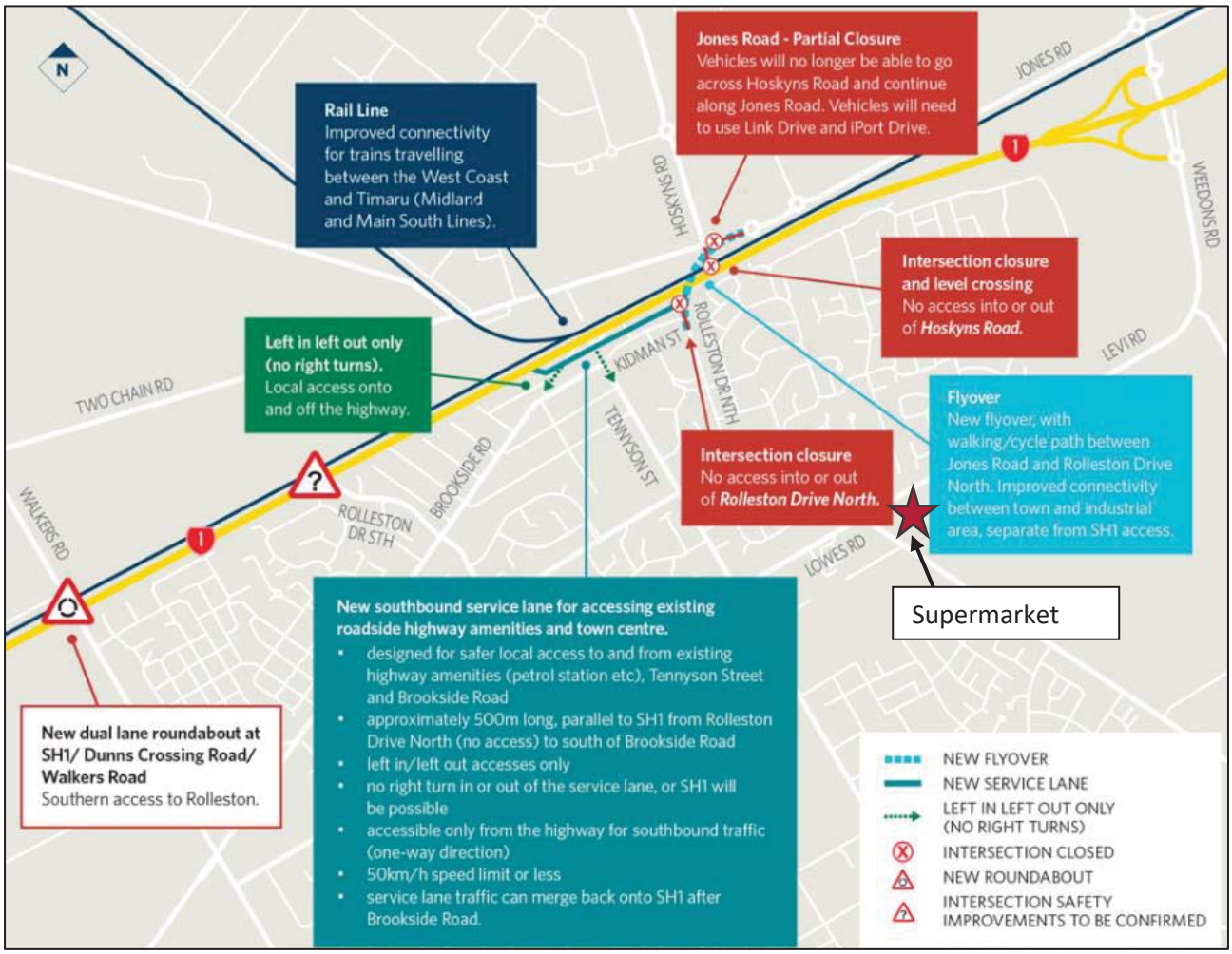

Figure 4.2 SH1 Rolleston Flyover and safety improvements project (source: Waka Kotahi)

5. Proposed Activity

5.1 Overview

The proposal involves constructing a new PAK'nSAVE supermarket (approximately 8,105m^2 GFA) in the northernmost part of the site, with integrated Click & Collect facility and associated vehicle and pedestrian access, on-site carparking and goods delivery arrangements, signage and landscaping. The supermarket will be operative seven days a week from 7am to 10pm.

The site layout plan is shown in **Figure 5.1**.

Figure 5.1 Site layout

5.2 Access Arrangements

The proposed development will have five vehicle accesses as shown in **Figure 5.1**. The attributes of these are as follows:

- Access A – Main access on Lincoln Rolleston Road allows access and egress all movements with give way control. It is 11.2 metres wide at the site boundary and has a queueing length of 30m. This access will be available to delivery vehicles to access and egress, but not semi-trailers.
- Access B – Secondary access on Lincoln Rolleston Road allows access and egress left in and left out only with give way control. It is 7.8 metres wide at the site boundary and has a queueing length of 11.3m.

- Access C – Exit only on Levi Road for left turning vehicles leaving the site only. It is 6.3 metres wide at the site boundary and has a queueing length of 6m.
- Access D - Main access on Levi Road allows access and egress all movements with give way control. It is 16.3 metres wide at the site boundary and has a queueing length of 28.3m. A pedestrian refuge is included to assist pedestrians on Levi Road crossing this access.
- Access E – Secondary access on Levi Road for left turning vehicles accessing the site only. It is 7.4 metres wide at the site boundary and has a queueing length of 3.8m. This access will be available for semi-trailer and other delivery vehicle access.

Goods vehicles access will be via the secondary access on Levi Road (Access E) and main access on Lincoln Rolleston Road (Access A) only, with semi-trailers restricted to entering via Levi Road and exiting via Lincoln Rolleston Road.

Pedestrians and cyclists can access the site via the shared path planned by Council on Levi Road. It is recommended that this be constructed on the north side of the Levi Road corridor to reduce the potential for conflict with supermarket traffic especially for contraflow cyclists. This could be achieved by widening the existing footpath to an appropriate width as a shared path and would be consistent with the shared path treatment along Lowes Road to the west of the Levi / Lowes / Lincoln Rolleston / Masefield intersection.

The adjoining streets on the north side of Levi Road are relatively low volumes and currently have appropriate kerb cut down treatments for upgrading to a shared path treatment. The residential property accesses have very low volumes and potential for conflict, and residents would be well aware of the potential for conflicts at their front gates. This is generally considered to be preferrable to installing a shared path outside commercial premises where the higher volumes of traffic (including heavy vehicles servicing the site) combined with vehicles that do not regularly visit the site (and therefore may not anticipate shared path users) may require more sophisticated design treatments to accommodate a shared path.

Regardless of the outcome in terms of the location of a future Levi Road shared path, the supermarket site will integrate well with the pedestrian and cycling network. At a minimum it is proposed that a footpath be installed on the south side of the corridor and this is proposed to be undertaken by the applicant as part of the proposal. Similarly, a footpath is proposed to be installed along the Lincoln Rolleston Road frontage to maximise opportunities for safe pedestrian access to and from the site. These will be developed to a high standard as is consistent with Council's Engineering Code of Practice. It is reiterated that design treatments for all supermarket accesses will focus on maintaining the safety of all active mode users and would be subject to a series of safety audits as is consistent with best practice.

5.3 On-site parking

The proposal includes a total of 517 parking spaces inclusive of 14 staff spaces, ten mobility parking spaces and eight Click & Collect vehicle spaces. The public parking areas are conveniently located with strong pedestrian connections to the supermarket and staff spaces are provided in a separate and clearly marked car park adjacent to the yard area. Signage will reinforce that staff car parking is not for public access. The dimensions of all parking spaces are consistent with the requirements of the Selwyn District Plan and are laid out to ensure the operational efficiency of the car park including for circulation between the parking areas.

Carparks are 2.6m wide and 5m depth with no encroachment on landscaping. The proposed mobility spaces are at least 3.6m wide and are 5m deep. The proposed aisle width is 7m which exceeds the minimum District Plan requirement ensuring comfortable manoeuvring to access car parks and navigate throughout the site.

There are also 10 visitor cycle parks and 14 staff cycle parks. Visitor cycle parks are located at the southwest corner of the supermarket frontage adjacent to the main supermarket access where there is excellent passive surveillance. Staff cycle parking is located on the southeast corner of the supermarket building and will be located in a secure and covered facility.

Pedestrian connections lead from the public carparking areas directly to the front doors accessing the supermarket and connect to the pedestrian network external to the supermarket site. All internal pedestrian crossings are marked as zebra crossing and include raised treatments to enhance safety of pedestrians within the site and manage the speed of vehicles manoeuvring in the carpark.

5.4 Loading Requirements

Loading operations will occur within the site behind the PAK'nSAVE building within the dedicated loading and yard area on the east side of the building. There are no formal loading spaces proposed, however these areas are large enough to accommodate multiple heavy vehicles and the associated loading operations. **Table 5.1** outlines the expected delivery operations based on a typical 7-day week. At most there may be four 21 metre truck and trailer deliveries per day but typically this would be two deliveries per day.

Table 5.1 Details of delivery operation for a typical day

Delivery Time	Vehicle Type	Delivery Type	Number of Vehicles	Duration of Stay (Minutes)
4:30am	Large bread truck	Bread	1	30
4:45am	Large truck and trailer	Chilled and frozen goods	1	30
7:00am	Large milk truck	Milk	1	15
8:00am to 10:00am	Vans and 12 metre rigid trucks	Small goods	30 to 40	5-10
12:00pm	21 metre truck and trailer	Ambient temperature goods	1	45

As noted in **Section 5.3**, delivery and service vehicles will be limited to enter the site using either Access A or Access E (note that semi-trailers will only enter using Access E) and exit using Access A. This access arrangement will minimise any conflict with car park users. A service lane is provided at the rear of the site to provide access to the loading areas which will only be available to goods vehicles.

Vehicle tracking for the loading areas can be found in **Section 7.6**.

6. District Plan Standards Assessment

An assessment of the proposed development against the relevant transport-related rules of the Selwyn District Plan has been undertaken and the results are summarised in **Table 6.1**. It is of note that the subject site is relatively flat and thus the rules associated with the gradient of parking areas and accessways are assumed to be readily compliant with the corresponding district plan rules and therefore are not included in the following assessment.

Table 6.1 District Plan Rule Assessment

Transport Rule in the Plan	Complies	Notes
Township Volume – C5 Roading		
5.1 Road and Engineering Standards	N/A	*No new roads are proposed as part of the activity.*
5.2 Vehicle Accessways 5.2.1 Permitted activity standards		
5.2.1.1 The site has legal access to a formed, legal road; and	Y	*Both Levi Road and Lincoln Rolleston Road are formed, legal roads and the site will have legal access to these.*
5.2.1.2 Any site with more than one road frontage to a road that is formed and maintained by Council, shall have access to the formed and maintained (and legal) road with the lowest classification, except that where a site has frontage to a collector and a local road frontage may be obtained to either road.	N	*The site will have access to both Levi Road and Lincoln Rolleston Road. Both are classed as Arterial roads under Appendix 7 of the Selwyn District Plan. There are no lower classed roads that border the site.*
5.2.1.3 The vehicle accessway is formed on land which has an average slope of less than 20°; and	Y	*All vehicle accesses are formed on land with an average slope less than 20 degrees.*
5.2.1.4 The vehicle accessway does not have a gradient greater than: (a) 1:6 vertical; or (b) 1:20 horizontal	Y	*The vehicle accessways have gradients less the 1 in 20 horizontally and 1 in 6 vertically.*
5.2.1.5 The vehicle accessway is not located closer than: (a) 20m to any waterbody listed in Appendix 12; or (b) 20m to a site listed in Appendices 3 or 4; and	N/A	*The vehicle access is not located closer than 20m to waterbodies or sites listed in Appendices 3, 4 or 12 within the Selwyn District Plan.*
5.2.1.6 The vehicle accessway is formed to the relevant standards in Appendix E13.2.	***Appendix E13.2.1 Private Vehicle Accessway***	
	E13.2.1.1 The minimum requirements for any private vehicle accessway for a site(s) shall be in	N/A	*The proposed vehicle accessways will not be for private use.*

Transport Rule in the Plan		Complies	Notes
	accordance with Table E13.4.		
	E13.2.1.2 The minimum height clearance for any private vehicle access shall be 4.5m.	N/A	*Not applicable*
	E13.2.1.3 Where a private vehicle access serves more than two allotments, in any zone, it shall be formed and sealed.	N/A	*Not applicable*
	E13.2.1.4 Where turning areas are required in Table E13.4, this may be facilitated through the use of a hammerhead arrangement. Note: refer to the Council's Code of Practice for the design standard required.	N/A	*Not applicable*
	E13.2.1.5 The minimum width of an accessway serving a single site in the Living Zones shall be 3.5m.	N/A	*Not applicable*
5.2.1.7 Shared access to more than six dwellings or sites shall be by formed and vested legal road and not by a private accessway.		N/A	*Activity is non-residential*
5.1.1.8 For the Living 3 Zone at Tai Tapu identified on the Outline Development Plan in Appendix 48, any road shall be consistent with Appendix 44 except that the road shall a legal width of 17 metres, with a sealed width of 6m with 5.5m either side incorporating swales and berm. The berm can be on one side only.		N/A	*The site is not located in the Tai Tapu Living 3 Zone.*
5.3 Vehicle Crossings			
	Appendix E13.2.2 Distances of Vehicle Crossings from Road Intersections		

Transport Rule in the Plan		Complies	Notes
5.3.1.1 The vehicle crossing is formed and sited to comply with the relevant requirements in Appendix E13.2.2, E13.2.4 and E13.2.5	E13.2.2.1 No part of any vehicle crossing shall be located closer to the intersection of any roads than the minimum distances specified in Table E13.5 which states: • Where a vehicle crossing joins to a Arterial which a posted speed equal to 50km/hr a minimum distance of 30m to an intersection with a local road.	Y	*All proposed accesses are located over 30m away from the intersection between Lincoln Rolleston Road and Levi Road.* *The main access on Levi Road is 30m away from the Beaumont Drive intersection and is therefore compliant.*
	E13.2.2.3 No part of any vehicle crossing shall be located closer than 30 metres to the intersection of any railway line measured from the nearest edge of the vehicle crossing to the limit line at the level rail crossing.	N/A	*Not applicable.*
	E13.2.4 Vehicle Crossing Design and Siting		
	E13.2.4.1 Vehicle access to any site from any road or service lane shall be by way of a vehicle crossing constructed at the owner's or developer's expense.	Y	*Five vehicle accesses to the site are proposed which will be constructed at the developers' expense.*
	E13.2.4.2 For all sites in a Living Zone there shall be a maximum of one vehicle crossing per site.	N	*The site will be served by five vehicle crossings.*
	E13.2.4.5 The maximum spacing and width any vehicle crossing shall comply with Table E13.7 which states that for Living Zone: • The distance between crossings (m) on same side of road is to be	N	*The distance between the nearest vehicle crossings on the same side of the road exceeds 7m.* *All the vehicle crossings exceed the 7m maximum permitted width.*

Transport Rule in the Plan		Complies	Notes
	less than 1m or greater than 7m • The vehicle crossing should have a minimum width of 4m and a maximum width of 7m.		
	E13.2.4.8 Notwithstanding E13.2.4.5 above, for vehicle crossings onto a State Highway or Arterial road with a posted speed limit of 70km/h or greater the distances between crossings shall be taken from Diagram E13.4.	N/A	*The site has frontage to two arterial roads. The speed limit of the arterial roads is 50km/hr for Levi Road and 50/60km/hr for Lincoln Rolleston Road.*
	E13.2.5 Standard of Vehicle Crossings		
	E13.2.5.1 Vehicle crossings shall be constructed to the following minimum standards: (a) Standard vehicle crossings shall be provided to sites capable of containing no more than 6 dwellings or which generate no more than 100 vehicle movements per day. (b) Heavy-duty vehicle crossings shall be provided for all other sites.	*Y*	*The proposed site will generate more than 100 vehicle movements per day. See Section 7.3* *All of the proposed accesses will have heavy duty crossings*
5.3.1.2 The vehicle crossing is to be sealed if the adjoining road is sealed; the crossing shall be sealed for the full length between the site boundary and the sealed carriageway; and		Y	*The proposed vehicle crossings will be sealed from the site boundary to the sealed carriageway.*
5.3.1.3 The vehicle crossing complies with the relevant standards in Appendix E13.2.3	***E13.2.3 Sight Distances from Vehicle Crossings***		
	E13.2.3.1 Any access on any road shall have minimum unobstructed sight distances that comply with Tables E13.6 below and	Y	*Sight distance is over 113m at each of the proposed accesses.*

Transport Rule in the Plan		Complies	Notes
	measured in accordance with Diagram E13.2. Table E13.6 states that for Arterials in the Living Zone with a posted speed limit of 50km/hr, a sight distance of 113m is required.		
5.3.1.4 The site does not have access directly on to a State Highway or arterial road listed in Appendix 7; unless: (a) The speed limit on that part of the road to which access is gained is 70 km/hr or less; or (b) The site is used solely to house a utility structure; and. (c) The site generates less than 100 equivalent car movements per day; and		N	*The site has access to two arterial roads listed in Appendix 7 (Lincoln Rolleston Road and Levi Road) and will generate more than 100 equivalent car movements per day.*
5.5 Vehicle Parking and Cycle Parking			
Car Park Spaces			
5.5.1.1 The number of car parks provided complies with the relevant requirements for the activity as listed in Appendix E13.1.1, E13.1.2, E13.1.3 and E13.1.12; and	***E13.1 Parking Requirements***		
	E13.1.1.1 For any new activity, or any increase in an existing activity not complying with Section 10 of the Act (Certain Existing Land Uses in Relation to Land Protected), any provision made for on-site vehicle parking, must be in compliance with the car park dimensions in Table E13.2 and Diagram E13.1. Table E13.2 states that: For Short Term 90-degree parking, a stall width of 2.6m, stall depth of 5.4m (5.0m if	Y	*The provided non parallel parking spaces are 2.6m wide and 5m deep with an aisle width of at least 7m.* *The provided parallel car parking spaces car parking spaces are 2.5m wide and 7m deep. Aisle widths are at least 7m.* *The proposed mobility spaces are at least 3.6m wide and are 5m deep. The proposed aisle width is at least 7m.* *These dimensions are compliant.*

Transport Rule in the Plan		Complies	Notes
	no landscape area is encroached) and an aisle width of 5.4m is required. For Parallel Parking spaces, a stall width of 2.5m, stall depth of 5.4m (5.0m if no landscape area is encroached) and an aisle width of 5.5m (two-way) is required. For Disabled Parking 90 degree parking a stall width of 3.2m, stall depth of 5.4m and an aisle width of 5.4m is required.		
5.5.1.2 All car parking spaces and vehicle manoeuvring areas are designed to meet the criteria set out in Appendix E13.1.5.2, E13.1.6, E13.1.7, E13.1.8, E13.1.9, E13.1.10 and Appendix E13.1.11; and	***E13.1.5 Loading and Manoeuvring***		
	E13.1.5.2 No loading zone shall obstruct any on-site car parking space or any vehicle or pedestrian access. For clarification any loading spaces shall be in addition to parking spaces required in Table E13.1(a) and Table E13.1(b)}.	Y	*The loading zone within the Yard area does not obstruct any onsite car parking spaces or pedestrian accesses.*
	E13.1.6 Parking Spaces for Residential Activities		
	E13.1.6.1 Single garageable parking spaces for any residential activity in any zone shall have a minimum width of 3.1m and depth of 5.5m.	N/A	*The activity is non-residential.*
	E13.1.6.4 The manoeuvring area to and from the site access to the parking space shall be designed to accommodate at	N/A	*The activity is non-residential.*

Transport Rule in the Plan		Complies	Notes
	least the design motor car as set out in the Council's Engineering Code of Practice.		
	E13.1.7 Gradient of Parking Areas		
	E13.1.7.1 The gradient for any on-site parking surface for any non-residential activity, shall be no more than: (a) At 90 degree to the angle of parking - 1:16 (b) Parallel to the angle of parking - 1:20	Y	*The site is flat and compliant with the stated gradients.*
	E13.1.8 Maximum Gradients for Access to any Parking Space(s)		
	E13.1.8.1 The maximum average gradient of any access shall be 1 in 6.	Y	*The site is flat.*
	E13.1.8.2 The maximum gradient shall be 1 in 4 on any straight section and 1 in 6 around curves, the gradient being measured on the inside line of the curve.	Y	*The site is flat.*
	E13.1.8.3 The maximum change in gradient without a transition shall be no greater than 8 degree.	Y	*The site is flat.*
	E13.1.9 On-site Manoeuvring		
	E13.1.9.1 On-site manoeuvring shall be provided to ensure that no vehicle is required to reverse either onto or off a site where: (b) Any site has access to a collector road and	Y	*All proposed parking spaces and loading areas have sufficient manoeuvring space and are not required to reverse off site.*

Transport Rule in the Plan		Complies	Notes
	required 3 or more parking spaces; or (c) Any site containing a non-residential activity having access to a collector road; or (d) Any access to a site that serves 6 or more parking spaces; or		
	E13.1.9.2 Parking spaces shall be located so as to ensure that no vehicle is required to carry out any reverse manoeuvring when entering any required parking space.	Y	*Vehicles are able to enter all proposed parking spaces, forward facing.*
	E13.1.9.3 Vehicles shall not be required to undertake more than one reverse manoeuvre when manoeuvring out of any required parking or loading space.	Y	*Vehicles are able to exit the proposed park and loading spaces with no more than one reverse manoeuvre.*
	E13.1.10 Queuing Spaces		
	E13.1.10.1 A queuing space shall be provided on-site for all vehicles entering or exiting a parking or loading area. The length of such queuing spaces shall be in accordance with Table E13.3 below. Where the parking area has more than one access the number of parking spaces may be apportioned between the accesses in accordance with their potential usage. Table E13.3. states that for over 151 parking spaces on site, a	Y	*There are four vehicle accesses at which vehicles may enter. The main accesses (Accesses A and D) have generous queuing lengths in excess of the required 25m at 30m and 28.3m. The minor accesses (Accesses B, C and E) have less queuing length (11.3m, 6m and 3.8m) but this still exceeds the required apportioned total when divided across four accesses (that is 6.25m per access). There is a total of 79.4m of queuing distance between the five accesses.*

Transport Rule in the Plan		Complies	Notes
	minimum queuing space of 25.5.m is required.		
	E13.1.10.2 The queuing space length shall be measured from the road boundary to the nearest vehicle control point or point where conflict with vehicles or pedestrians on established pathways already on the site may arise.	Noted	*This has been carried out above.*
	E13.1.11 Illumination		
	E13.1.11.1 Any parking and loading areas, (excluding those for any residential activity), which are required at night shall be illuminated to a minimum maintained level of 2 lux, with high uniformity, during the hours of operation.	*Y*	*Lighting will be provided in compliance with these standards.*
State Highways and Arterial Roads			
5.5.1.3 Each site which is accessed from a road listed as a State Highway or Arterial road in Appendix 7 is designed so that a motor vehicle does not have to reverse on, or off, the State Highway or Arterial road		**Y**	*All proposed accesses have been designed to comply with this requirement.*
Loading Space			
5.5.1.2 Each site that is used for an activity which is not a residential activity and which generates more than 4 heavy vehicle movements per day has one on-site loading space which complies with the requirements set out in Appendix E13.1.5. The loading	***E13.1.5 Loading and Manoeuvring***		
	E13.1.5.1 All loading and manoeuvring shall be carried out on-site. The manoeuvring area to and from the loading zone shall be designed to accommodate at least the design truck as detailed in the Council's	Y	*This is compliant as shown in Section 7.7 Vehicle Tracking of this assessment.*

Transport Rule in the Plan		Complies	Notes
space does not count as a car parking space for the purpose of complying with Rule 5.5.1.1; and	Engineering Code of Practice.		
Disabled Car Parking			
5.5.1.4 Each site that is used for an activity other than a residential activity has one car park space for mobility impaired persons for up to 10 car parking spaces provided, and one additional car park space for a mobility impaired person for every additional 50 car parking spaces provided or part there-of; and		Y	*Ten mobility spaces are required and ten are provided.*
5.5.1.5 Car parking spaces for mobility impaired persons are: (a) Sited as close to the entrance to the building or to the site of the activity as practical; and (b) Sited on a level surface; and (c) Clearly marked for exclusive use by mobility impaired persons; and		Y	*The proposed mobility parks are sited close to the building entrance, on a level surface and clearly marked for exclusive use by mobility impaired persons.*
Cycle Parking			
5.5.1.6 Cycle parking spaces are provided in accordance with the standards in Appendix E13.1.4.	E13.1.4.1 Any activity, other than residential activities, temporary activities, activities listed in E13.1.4.2 and activities permitted under Part C, Living Zone Rules - Activities 10.9.1 is to provide cycle parking at a minimum of 2 spaces and then at a rate of 1 cycle space for every 5 car parking spaces required, to a maximum of 10 cycle spaces.	Y	*Ten cycle spaces are required and ten visitor spaces are provided by the five proposed cycle stands.* *Additional staff cycle parking for 14 cycles is provided which is secure and covered.*
	E13.1.4.3 All cycle parking required by Rule E13.1.4.1 or E13.1.4.2 shall be provided on the same site as the activity and	*Y*	*The cycle parking spaces will be hoop stands which is compliant with the Engineering Code of Practice for cycle parking rack systems*

Transport Rule in the Plan		Complies	Notes
	located as close as practicable to the building main entrance and shall be clearly visible to cyclists entering the site, be well lit and secure. The type of stand must comply with the Engineering Code of Practice requirements for cycle parking rack systems.		
Township Volume – C10 LZ Activities			
10.8 Activities and Scale of Activities			
10.8.1 Any activity, which is not a residential activity, shall be a permitted activity if the following conditions are met:	10.8.1.3 Vehicle movements do not exceed: • State Highways, Arterial Roads and Collector Roads: 40 per day plus 4 heavy vehicle movements per day Except that a public Parking Area is a permitted activity in Precinct 6 (Rolleston Reserve) of the Rolleston Key Activity Centre.	*N*	*Both Levi Road and Lincoln Rolleston Road are Arterial Roads. The trip generation threshold of 40 vehicles per day plus four heavy vehicle movements will be exceeded.*
10.9 Activities and Hours of Operations			
10.9.1 Any activity, which is not a residential activity, shall be a permitted activity if the following conditions are met:	10.9.1.2 Visits by customers, patrons, clients or other people to the site, who are not resident on the site shall only occur between the hours of 7:00am and 10:00pm on any day.	*N*	*The opening hours of the proposed PAK'nSAVE will be between 7:00am and 10:00pm.* *As noted in 5.4 Loading Requirements, bread and chilled/frozen goods deliveries are expected before 7am.*

7. Appraisal of Transport Effects

7.1 Location of site

From a transport perspective the supermarket is optimally located with respect to the current and future transport network, being located on two key corridors accessing the Rolleston town centre and connecting Rolleston with Christchurch (in the case of Levi Road) and Prebbleton and Lincoln (Lincoln Rolleston Road).

Currently 11,500 vehicles per day pass the supermarket site daily travelling between Rolleston and Christchurch or other parts of the Selwyn District. Pass by trips are a substantial portion of supermarket trip generation with recent surveys in Christchurch demonstrating these make up as much as 33% of total travel demand. This is important especially during peak periods as the pass by supermarket shoppers are already driving along the frontage road and do not add traffic to the wider transport network. By locating the supermarket on two key arterial roads the potential to serve pass by trips is maximised. As Rolleston continues to grow into the future this will become more important as a means of optimising the performance of the wider network.

Locating a large supermarket outside of the town centre (where the current supermarkets are located) will reduce the extent to which supermarket traffic exacerbates congestion associated with existing and future traffic visiting the town centre. The proposed supermarket site is located such that shoppers will not need to travel through the town centre with Lowes Road, Lincoln Rolleston Road and Levi Road providing connectivity to the majority of Rolleston residents. Being located 1km from the town centre, the supermarket site is also readily accessible for shoppers and workers in the town centre and for service vehicles.

Notably the addition of a supermarket in Rolleston (based on the economic assessment prepared by Insight Economics) will reduce the level of reliance on Christchurch for supermarket shopping. This will reduce travel between Rolleston and Christchurch and resultant vehicle-related emissions throughout the day. The potential for the supermarket to reduce travel will likely increase as Rolleston continues to grow as an urban centre and this will be further supported as the walk and cycle network expands and the Regional Council expands the public transport services in the town.

7.2 Modelling Methodology

Selwyn District Council (Council) developed a Paramics model of Rolleston which has been used to support transportation planning across the township since 2014. The model has been used to support a range of development applications including providing the basis for identifying Long Term Plan infrastructure requirements and inputs to the Development Contributions Policy.

A model scenario of 2033 has recently been developed for Council and used to assess various Private Plan Changes around the township and it was agreed with Council that this model would be used to assess the effects of the proposed supermarket development. Notably this includes full development of the current Urban Growth Overlay as well as the traffic generated by Private Plan Changes 71, 75 and 78 on the east side of Rolleston township that all front onto Lincoln Rolleston Road. As such, this includes the cumulative effect of the full development of these areas on the transportation network. The supermarket site in relation to these Private Plan Changes can be found in **Figure 7.1**.

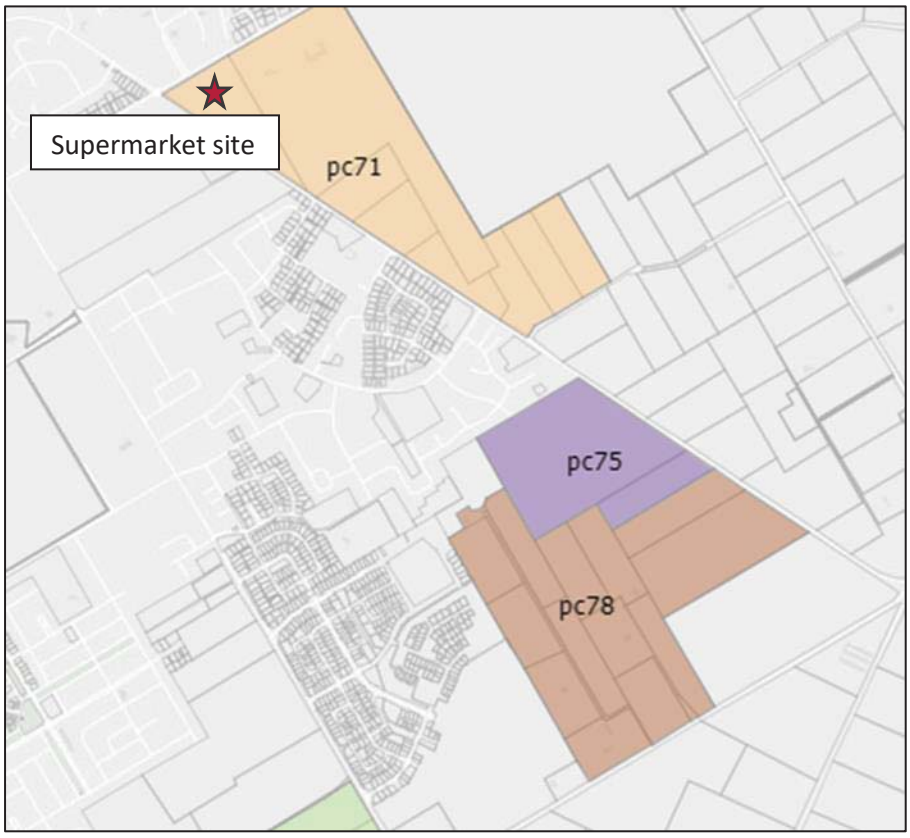

Figure 7.1 Supermarket site location in relation to Private Plan Changes 71, 75 and 78

Although it is noted that the addition of a supermarket in Rolleston will reduce the level of reliance on Christchurch for supermarket shopping which has the potential to reduce travel between Rolleston and Christchurch and resultant vehicle-related emissions throughout the day, to be conservative the modelling assessment assumes no reduction in travel between the two urban centres as a result of having a local PAK'nSAVE offering for Rolleston residents.

Transaction data from the Rolleston New World supermarket was sourced from Foodstuffs in order to determine its peak trading time. The data is plotted and shown in **Figure 7.2**. It shows the number of transactions per hour through an average weekday. Note that the absolute number of transactions is not shown as this information is commercially sensitive. As seen in **Figure 7.2**, the number of transactions peaks between 5pm and 6pm. This peak trading time coincides with peak traffic volumes on the adjacent streets and is therefore the most appropriate period in which to assess the effects of the proposal on the adjacent road network. Subsequently the assessment of effects informed by the model focuses on the evening peak period.

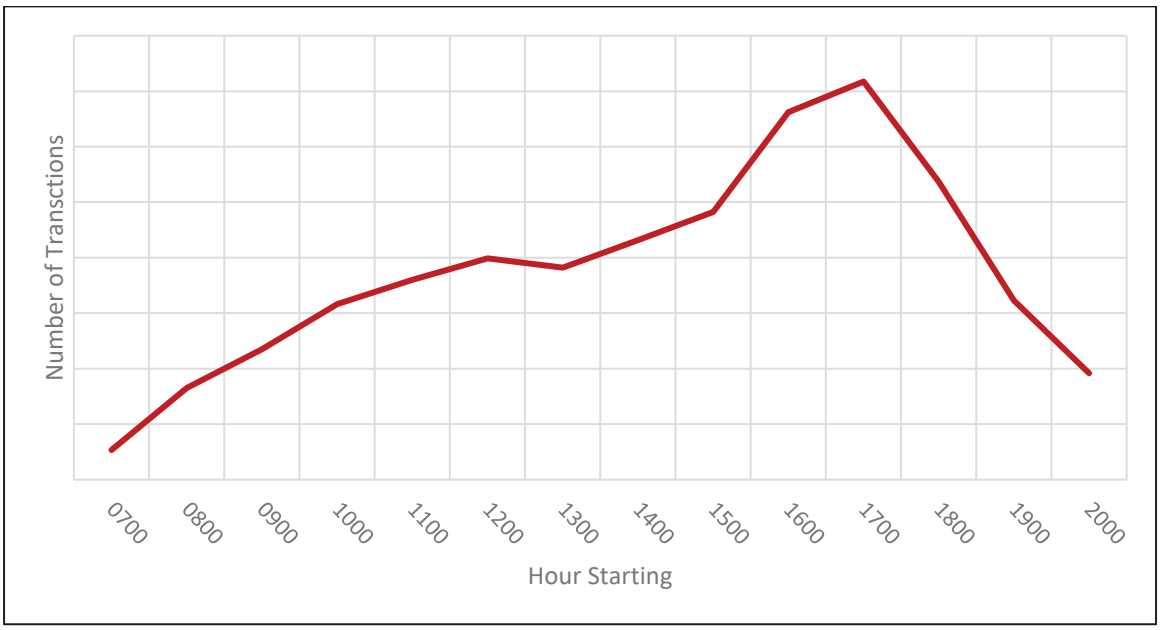

Figure 7.2 Transaction profile of the existing Rolleston New World supermarket

7.3 Baseline Model

Prior to undertaking the analysis in the model, a Baseline scenario was established. The Living Z Zoning and ODP applicable to the site indicates that approximately 74 residential dwellings could be established within the site boundaries. Of these dwellings the proposed supermarket would replace approximately 40 dwellings, leaving the balance of the site having a development potential of approximately 34 dwellings. The zonal activity in the model was adjusted so that 74 residential dwellings are represented in the site 'baseline scenario', and 34 dwellings remain in the 'with development scenario'.

The adjacent Levi Road / Lowes Road / Masefield Drive / Lincoln Rolleston Road intersection is programmed within the Selwyn District Long Term Plan 2021-31 (LTP) to be upgraded in 2025/26, with the description 'safety upgrade – link to Southern Motorway interchange' and it is understood from Council that this is intended to be delivered with the SH1 Rolleston Flyover and Safety Improvements project. Discussions with Council indicate that this will likely be upgraded and funded by Council to a signalised intersection, but a specific layout is yet to be developed.

In the absence of an intersection layout from Council we have developed a signalised intersection layout using nearby recent upgrades to influence the design, based on the space available within the road reserve. The layout includes one lane for each movement on all four approaches to the intersection. In terms of operation there is a single diamond operation on the east/west approaches and filter right turns only from the north and south approaches. This indicative layout developed for the modelling assessment is shown in **Figure 7.3**.

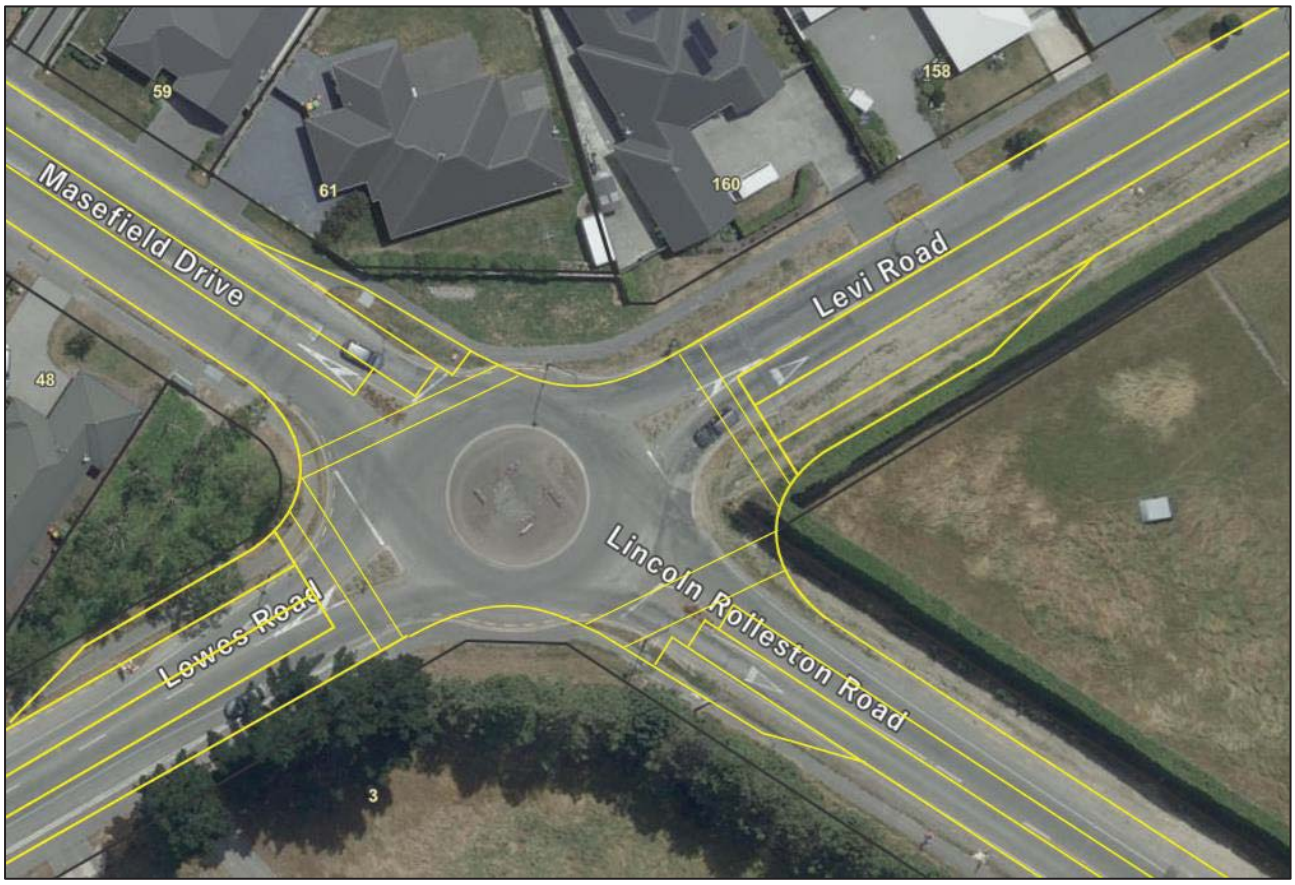

Figure 7.3 Indicative layout for future signalisation of Lowes / Levi / Masefield / Lincoln Rolleston intersection in LTP

7.4 Trip Generation

The Trips Database Bureau (TDB or TRICS) which is New Zealand's pre-eminent source of trips and parking information for land use activities has been referred to source trip and parking rates for the supermarket. The TDB records shows that the average peak hour trip generation for supermarkets is 15.7 vehicle trips per 100m2 GFA (excluding double counts of sites) and typically a trip rate of 15 vehicle trips per 100m2 GFA would be assumed for supermarkets in the range of 3000 to 5000 sqm GFA, however for those sites which have been surveyed post-2005 there is a very clear relationship between trip rates and supermarket GFA as shown in **Figure 7.4**, that demonstrates that larger supermarkets have lower overall trip generation rates than smaller supermarkets.

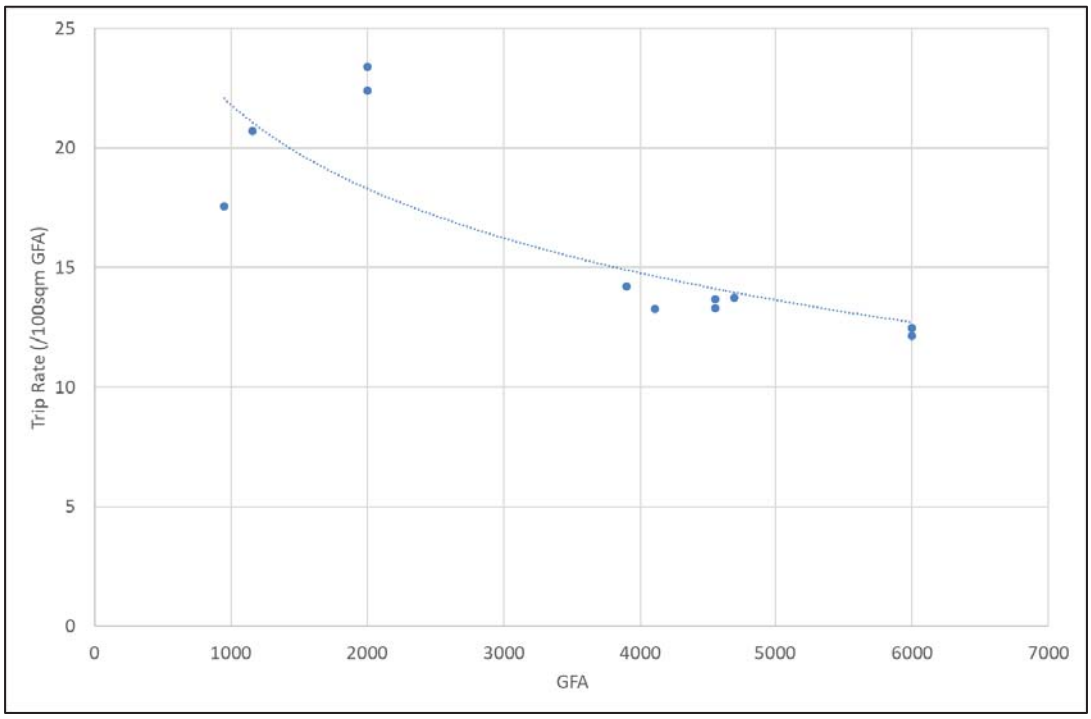

Figure 7.4 Relationship between trip rate and supermarket size

There are two surveys of supermarkets with a GFA greater than 5,000m^2 in the database (both related to Wainoni PAK'nSAVE supermarket) with comparatively low trip generation rates of 12.1 and 12.5 trips / 100m^2 GFA. For the proposed PAK'nSAVE supermarket a peak hour trip generation rate of 12.5 trips per 100m^2 GFA, being the higher of the two Wainoni trip generation rates, has been adopted. It is further noted that this rate is based on a smaller supermarket (approx. 6,000 m2 GFA) than the proposed supermarket (approx. 8,000 m2 GFA), therefore the adopted trip rate is considered conservative considering the inverse relationship between trip rates and GFA illustrated in Figure 7.1.

The trip generation for the proposed PAK'nSAVE supermarket, based on 12.5 vehicle trips per 100m2 GFA, is 1,013 two-way trips in the evening peak hour. The Rolleston Transport Model has a two-hour demand so it has been assumed (for modelling purposes) that the trips rate leading up to and after the peak hour is 80% of the peak rate. The peak hour of generation has been assumed to be from 4:45pm to 5:45pm as this generally overlaps with some of the key peak hour activity of the Rolleston model. The all day traffic generation associated with the supermarket activity is estimated to be in the order of 10,000 vehicle movements per day.

7.5 Trip Distribution

Trip distribution will be informed by the matrices of the Rolleston model and by the type of trip that is being made. Weekday peak trading hour of supermarkets coinciding with the commuter peak period suggests that a majority of customers during this period comprises of commuters who are on their way back home from work including those returning from Christchurch. Accordingly, it is evident that a significant proportion of the trips associated with the supermarket are already present on the road network. These trips can be broken down into pass-by trips which are those currently on the road network that travel directly past the site, and diverted trips which are those already on the road network but will change their route to visit the site. The remaining trips are new to the road network. Based on these it is anticipated that:

- One third of the supermarket trips will be new trips on the road network – these have been modelled as trips between households in the model study area to and from the supermarket.
- One third of the trips to the supermarket will be pass by trips – these correspond to motorists already travelling past the site (i.e. already travelling on Levi Road (east of Masefield) or on Lincoln Rolleston Road (south of Levi) choosing to visit the supermarket on their way to and from another destination and have been identified in the model as those internal and external trips currently using Levi Road and Lincoln Rolleston Road using select link analysis. It is

reiterated that the modelling is conservative as it does not consider a potential reduction in travel between Rolleston and Christchurch with a new local supermarket offering to support Rolleston's future growth.

- The remaining third of trips to the supermarket will be diverted from elsewhere on the road network – these have been modelled as those internal and external trips which do not pass by the site as identified above.

The site has several access points proposed along each frontage road which will revolve around one on each frontage road being a main access point. On Levi Road the left-in access is primarily intended for service vehicles but will also provide for convenient customer trip interaction with the Click & Collect facility and adjacent parking on the north face of the building. For this analysis a small amount of traffic is modelled using the eastern entry only point on Levi Road and all other traffic that uses Levi Road is via the main access point such that a conservative assessment of the main access is provided. The exit only on Levi Road is also available for vehicles however for the purposes or robustly testing the main access on Levi Road, all entry and exit movements are consolidated at the main exit to further provide a conservative worst-case scenario for access performance.

7.6 Other Transport Modes

The TDB New Zealand and Australia online trip and parking database was examined to understand the likely pedestrian, cyclist and bus passenger trip generation of the development. The database included ten surveys of five supermarket sites in Christchurch[9] which presented an average of 83% car driver, 1% car passenger, 14% pedestrian, 2% cyclist and a 1% bus passenger mode share.

The supermarket is expected to generate 1,013 two-way vehicle trips in the evening peak hour which accounts for 83% mode share and applying the above mode share from TDB equates to approximately 166 pedestrian movements, 22 cycle movements and 11 bus passenger movements in the evening peak hour. The site is located with excellent pedestrian and cycle connections with a shared path on Lincoln Rolleston Road and future shared path planned for Levi Road. As part of the application, Foodstuffs intend to provide footpaths immediately outside the site on both Levi Road and Lincoln Rolleston Road, to integrate the site with the wider pedestrian network. It is concluded that the anticipated pedestrian and cycle volumes can be safely and efficiently accommodated.

The site is also serviced with regular public transport services as shown in **Figure 3.11**, with Service #5 passing the site at 30 minute intervals (in each direction) and the potential for Service #820 to be re-routed past the site in the future. A typical bus accommodates 50 patrons so there is ample capacity to accommodate public transport demands associated with the supermarket.

7.7 Intersection Performance

The key intersections adjacent to the proposed development include the Levi Road / Lowes Road / Masefield Drive / Lincoln Rolleston Road intersection which is currently a roundabout and proposed to be upgraded by Council to a signalised intersection in 2025/26, and the Levi Road / Beaumont Drive priority-controlled intersection. Also key to the analysis is the performance of the access points to the proposed supermarket site. A screen capture of the model in the vicinity of the site is shown in **Figure 7.5** which shows the setup of the model in this location. The primary modelling assessment focuses on a future year of 2033 to robustly assess the cumulative effects of proposed Private Plan Changes and the supermarket traffic.

Acknowledging that the supermarket may open prior to the Council installing signals at the Levi Road / Lowes Road / Masefield Drive / Lincoln Rolleston Road intersection, a sensitivity test has been run to assess the supermarket demands in 2024 assuming the current roundabout is retained. This is presented at the end of this section.

[9] Collected by University of Canterbury and includes Redcliffs New World, Richmond New World, Church Corner Countdown, Sydenham Countdown and Wainoni PAK.n SAVE

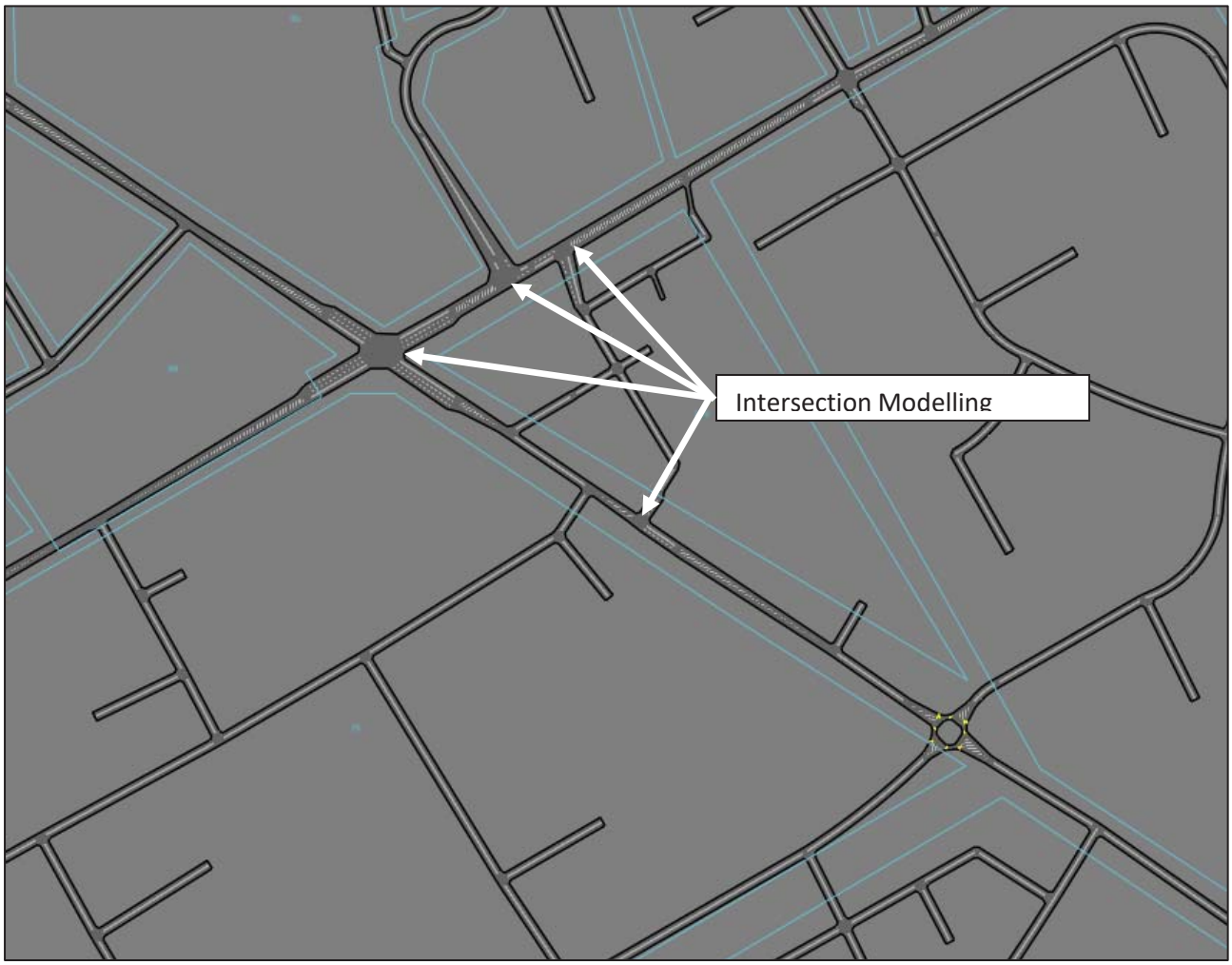

Figure 7.5 Modelled network near site with supermarket

The key metrics used to assess the performance of the intersections includes the average delay per vehicle and intersection level of service. A general description of level of service is shown in **Table 7.1**. The peak hour delays and associated Level of Service (LOS) by movement at these intersections are shown in subsequent tables.

Table 7.1 Level of Service (LOS) general descriptions

Level of Service Band	General Traffic Flow Description
LOS A	Primarily free-flow operation
LOS B	Reasonably unimpeded operation
LOS C	Stable operation
LOS D	A less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed
LOS E	Characterised by unstable operation and significant delay
LOS F	Characterised by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay

Typically, in assessments of intersections in peak demand periods for urban areas, the industry best practice is to keep the operation of an intersection at or below LOS E.

The performance of the Levi Road / Lowes Road / Masefield Drive / Lincoln Rolleston Road signalised intersection in 2033 with and without supermarket traffic is shown in **Table 7.2**. Overall, there are 274 extra vehicles per hour through the intersection, but the intersection level of service (LOS) is very similar to the baseline with average intersection delay increasing by only one second, remaining at LOS C. The worst movement is the right turn from Lincoln Rolleston Road into Levi Road which operates at LOS E. This is considered appropriate in the context of an urban area during the evening peak period and could be improved through signal optimisation by allocating additional green time to the right turn movements

Table 7.2 Levi Road / Lowes Road / Masefield Drive / Lincoln Rolleston Road intersection 2033 PM peak performance

Road		Baseline					With Development				
		Volume (veh/hr)	AvgDly (sec)	LOS	AppDly (sec)	App LOS	Volume (veh/hr)	AvgDly (sec)	LOS	AppDly (sec)	App LOS
Masefield Drive North	L	92	29	C	31	C	114	32	C	33	C
	T	400	31	C			446	33	C		
	R	30	37	D			30	37	D		
Levi Road East	L	229	21	C	22	C	250	20	B	20	C
	T	455	23	C			486	23	C		
	R	121	16	B			214	17	B		
Lincoln Rolleston Road South	L	53	21	C	28	C	58	22	C	35	D
	T	353	26	C			320	27	C		
	R	66	47	D			79	79	E		
Lowes Road West	L	64	25	C	28	C	54	21	C	27	C
	T	248	30	C			298	29	C		
	R	80	24	C			116	26	C		
Intersection	All	2190			26	C	2464			27	C

A sensitivity test has been undertaken to demonstrate the performance of the intersection should the supermarket open prior to the Council installing signals. An indicative assessment year of 2024 has been selected by interpolating the base year and 2033 models, to represent traffic demands on the local network prior to the scheduled upgrade to signals in 2025/26. The results with and without the supermarket traffic are shown in **Table 7.3**.

The intersection performance changes from LOS B to C with the supermarket with the worst approach being the Levi Road approach which reaches LOS E in the evening peak with supermarket traffic. This is considered to be acceptable in the context of an urban intersection during peak hour. Regardless it is noted that this only occurs for a short period of time until the SH1 Flyover and Safety Improvements and new signals are installed at the intersection in 2025/26.

Table 7.3 Levi Road / Lowes Road / Masefield Drive / Lincoln Rolleston Road intersection (existing roundabout) 2024 PM peak performance

Road		Baseline					With Development				
		Volume (veh/hr)	AvgDly (sec)	LOS	AppDly (sec)	App LOS	Volume (veh/hr)	AvgDly (sec)	LOS	AppDly (sec)	App LOS
Masefield Drive North	L	82	4	A	4	A	114	8	A	8	A
	T	218	5	A			296	8	A		
	R	45	4	A			54	7	A		
Levi Road East	L	193	21	C	23	C	162	69	E	73	E
	T	455	23	C			377	72	E		
	R	66	25	C			115	79	E		
Lincoln Rolleston Road South	L	78	14	B	14	B	89	16	B	17	B
	T	227	14	B			252	17	B		
	R	71	14	B			85	18	B		
Lowes Road West	L	43	13	B	10	B	43	15	B	15	B
	T	211	10	B			217	16	B		
	R	37	9	A			84	15	B		
Intersection	All	1726			15	B	1887			34	C

The performance of the Levi Road / Beaumont Drive intersection is shown in **Table 7.4**. Overall, there are 276 extra vehicles per hour through the intersection as a result of increased through traffic on Levi Road due to the supermarket, and the LOS is unchanged and demonstrates excellent performance at LOS B.

Table 7.4 Levi Road / Beaumont Drive intersection 2033 PM peak performance

Road		Baseline					With Development				
Approach/Turn		Volume (veh/hr)	AvgDly (sec)	LOS	AppDly (sec)	App LOS	Volume (veh/hr)	AvgDly (sec)	LOS	AppDly (sec)	App LOS
Levi Road East	T	689	9	A	9	A	838	5	A	5	A
	R	26	4	A			50	5	A		
Levi Road West	L	131	1	A	1	A	129	0	A	1	A
	T	275	1	A			362	1	A		
Beaumont Drive North	L	21	2	A	12	B	40	2	A	11	B
	R	115	13	B			113	14	B		
Intersection	All	1256			12	B	1532			11	B

The performance of the main site accesses on Levi Road and Lincoln Rolleston Road are shown in **Table 7.5** and **Table 7.6** respectively. Both accesses are anticipated to operate well during the peak period. Overall performance is LOS C or better, with the worst performing movement being the low volume right turn out of the Lincoln Rolleston Road access at LOS D. This is considered to be appropriate in the context of an urban evening peak period and equates to delays in the order of 30 seconds per vehicle. Vehicles exiting the site also have the opportunity to use the exits on Levi Road during the evening peak which have lower delays, so in reality there would likely be some balancing of use of the exits which makes this result conservatively high. It is reiterated that the modelling is conservative as the left turn exit onto Levi Road (Access C) has not been modelled. This provides additional confidence that the accesses will work well when the supermarket is operating at peak levels of activity.

Table 7.5 Levi Road site access intersection 2033 PM peak performance

Road		**With Development**				
Approach/Turn		Volume (veh/hr)	AvgDly (sec)	LOS	AppDly (sec)	App LOS
Levi Road East	L	88	1	A	2	A
	T	718	2	A		
Site Access	L	169	18	C	17	C
	R	52	15	B		
Levi Road West	T	325	1	A	4	A
	R	79	15	C		
Intersection	All	1431			17	C

Table 7.6 Lincoln Rolleston Road site access intersection 2033 PM peak performance

Road		**With Development**				
Approach/Turn		Volume (veh/hr)	AvgDly (sec)	LOS	AppDly (sec)	App LOS
Site Access	L	123	6	A	14	B
	R	50	33	D		
Lincoln Rolleston Road South	T	417	1	A	3	A
	R	175	8	A		
Lincoln Rolleston Road North	L	7	0	A	0	A
	T	563	0	A		
Intersection	All	1333			14	B

The movements in and out of the site at the secondary access points on Levi Road and Lincoln Rolleston Road are shown in **Table 7.7** for completeness and demonstrate very low delays and excellent LOS for all vehicles.

Table 7.7 Other access point movement performance in 2033 PM Peak

Access Point		With Development		
Access/Movement		Volume (veh/hr)	AvgDly (sec)	LOS
Lincoln Rolleston Road LILO	Left in	130	2	A
	Left out	84	13	B
Levi Road Slip	Left in	14	2	A

The spreadsheets for output generation of the Rolleston Model include many other intersections and these were monitored for any major changes in intersection performance. It is confirmed that there was no noticeable deterioration in performance elsewhere on the network.

The traffic generated by the proposed supermarket can be efficiently accommodated within the Rolleston transport network and can therefore be supported from a network efficiency perspective. Furthermore, all accesses on Levi Road and Lincoln Rolleston Road operate well and efficiently distributes traffic accessing and exiting the supermarket onto the local network.

It is concluded based on the modelling assessment that the supermarket site:

- is located to attract pass by trips between Rolleston and Christchurch, Prebbleton and Lincoln minimising effects on the road network;
- reduces reliance on Christchurch by Rolleston residents for supermarket shopping so has the potential to reduce traffic volumes and corresponding vehicle-related emissions on the wider network,
- integrates well with future growth areas and planned infrastructure upgrades that are anticipated and planned for by Council; and
- does not result in any adverse effects on the transport network.

7.8 Vehicle Tracking

The proposed supermarket will be reliant on heavy vehicles undertaking loading and unloading operations within the site. Therefore, vehicle tracking has been conducted to ensure heavy vehicle turning movements to/from the site, and manoeuvring within the site, can be accommodated. Additionally, it is confirmed that the carpark has been designed to cater for a 99th percentile car to access and manoeuvre throughout.

The parking aisle widths are 7m which is generous and provides for efficient two-way movement of vehicles in all aisles. The widths of circulating areas at the ends of aisles are similarly at least 7m as are those leading to and from the vehicle accesses. These have been considered and it is confirmed they the efficient accommodate two-way movement of vehicles.

The tracking of delivery vehicles has been considered separately as below

Loading Vehicles

The delivery vehicle movements are limited to the eastern edge of the site behind the supermarket to separate out customer vehicle movements from delivery vehicle movements as far as practicable. This means that the potential for conflicts are well managed and there is no requirement to limit delivery times on this basis. **Figure 7.6** and **Figure 7.7** show the vehicle tracking for a 19m semi-trailer truck and 11.5m rigid truck using the yard area where loading operations will occur.

Figure 7.6 Vehicle tracking for a 19m semi-trailer truck within the yard area

Figure 7.7 Vehicle tracking for a 11.5m rigid truck within the yard area

Larger trucks such as the 19m semi-trailer truck will be required to use the easternmost access on Levi Road (Access E) to access the site. Semi-trailer trucks will be able to enter the canopy and yard area through the provided sliding gates to enter and exit and will exit the site using Access A onto Lincoln Rolleston Road.

Large rigid trucks will be able to access the yard area via Levi Road Access E (as with the semi-trailers shown in **Figure 7.6**) or Lincoln Rolleston Road Access A as shown in **Figure 7.7**. They will be able to manoeuvre within the yard area and will exit the site using the Access A on Lincoln-Rolleston Road.

All manoeuvres for semi-trailer and large rigid trucks can be comfortably accommodated throughout the site.

7.9 Consideration of Changes in Planning Environment

This section of the report considers the application in the context of recent and future changes in the wider planning context in New Zealand.

The National Policy Statement on Urban Development 2020 (NPS-UD)[10]

The Proposal supports Objective 6 and Policy 10 of the NPS-UD based on the location of the supermarket site due to the transportation infrastructure planned for in the Selwyn District Council Long Term Plan 2021-31 in the vicinity of the supermarket site. This includes the signalisation of the adjacent Lowes / Levi / Lincoln Rolleston / Masefield intersection and continued investment in walking and cycling infrastructure. On this basis the Proposal integrates well with infrastructure planning in the District.

The development of an additional supermarket in Rolleston also supports Objective 8 and Policy 1 as it will reduce longer distance travel to Christchurch by Rolleston residents to meet shopping needs with a subsequent reduction in vehicle-related greenhouse gas emissions. For those residents already travelling to or from Christchurch, Prebbleton or Lincoln, the supermarket is strategically located on key arterial corridors serving these centres such that no additional travel is required by pass by traffic to visit the supermarket.

Selwyn District Plan Change 71

Plan Change 71 (PC71) to the Selwyn District Plan has been lodged, seeks to establish residential zoning and is located adjacent to the supermarket site. At the time of preparing this ITA has not been heard. If PC71 were to come into law, there would be a larger residential catchment directly adjacent to the supermarket site. This further supports my assessment that the supermarket is well-located from a transport perspective and given its close proximity many of these potential trips to the supermarket from Plan Change 71 could be undertaken by walking and cycling modes. By having a supermarket located close to the Plan Change site, the residents would not need to travel into the Rolleston town centre, Hornby or elsewhere for their supermarket shopping needs, further reducing vehicle-related travel on the transportation network and corresponding vehicle-related emissions.

Resource Management (Enabling Housing Supply and Other Matters) Amendment Bill

The Resource Management (Enabling Housing Supply and Other Matters) Amendment Bill includes provision for increasing density of residential areas with up to three lots of up to three storeys without requiring resource consent. Given that the supermarket site is located within a current and likely future residential area (and is especially the case if PC71 were approved), the effect of changing the receiving residential environment to include medium density residential housing has the potential to increase the number of households within close proximity to the site. This would strengthen my support for the Proposal, as a larger number of supermarket shoppers will reside within walking or cycling distance from the supermarket.

The higher densities would provide a larger adjacent catchment which would not need to travel into the Rolleston town centre, Hornby or elsewhere for their supermarket shopping needs, further reducing vehicle-related travel on the transportation network and corresponding vehicle-related emissions.

- [10] https://environment.govt.nz/assets/Publications/Files/AA-Gazetted-NPSUD-17.07.2020-pdf.pdf

8. Assessment of District Plan Non-Compliances

8.1 Rule 5.2.1.2

Any site with more than one road frontage to a road that is formed and maintained by Council, shall have access to the formed and maintained (and legal) road with the lowest classification, except that where a site has frontage to a collector and a local road access may be obtained to either road.

Given the nature and the scale of the activity, and the extensive site frontage on both roads, providing access to both roads is supported and indeed considered necessary to integrate the activity with the wider transport network. Approximately one third of supermarket trips are pass-by trips which means they are undertaken by vehicles which already use the one or other frontage road. By providing access from both Levi and Lincoln Rolleston Roads, the pass-by vehicles do not need to deviate off their chosen route which would place additional demands on the Levi / Lowes / Masefield intersection.

This non-compliance is considered acceptable in the context of the proposed activity and the receiving transport environment.

8.2 Rule 5.3.1.4

A site is only permitted to have access directly onto an arterial road where it generates less than 100 equivalent car movements per day.

The site is proposed to have access to Lincoln Rolleston Road and Levi Road, both of which are classified as arterial roads. Arterial roads are designed to accommodate higher volumes of traffic and can (and in this case do) accommodate the flows that are generated by the supermarket. The modelling undertaken in **Section 7.6** has demonstrated that the network will operate safely and efficiently in the short and long term including both arterial corridors. The modelling has also considered the cumulative effect of supermarket traffic and potential urban development promoted by current Private Plan Changes, so provides a robust assessment of the impact of trips generated by the supermarket on these corridors and the wider network.

All vehicle accesses to the site are located at least 50m apart reducing any conflict between adjacent accesses. The accesses have been designed to integrate well with the surrounding transport network including future planned infrastructure. The operation of the accesses has been extensively tested in the transport modelling assessment. The modelling demonstrated that the number and location of accesses has been designed such that they operate with good level of service and integrate well with the function of the frontage road corridors and the wider network. The assessment concluded that there is sufficient capacity to comfortably accommodate the traffic generated by the supermarket both before or after the planned and Council-funded upgrade of the adjacent Levi / Lincoln Rolleston / Lowes / Masefield intersection.

The supermarket proposal will promote active travel modes by providing high quality infrastructure. New footpaths are proposed and designed on the site frontages to link the development to footpaths and shared paths on the surrounding road network. On site customer and staff cycle parking provisions will appeal to prospective users.

Importantly, as noted in the rule 5.2.1.2 assessment a high proportion of supermarket trips are pass by trips and with the supermarket being located on two arterial roads, the pass by trips are able to access the supermarket without any additional diversions or travel on the transport network. This means that locating a supermarket on Arterial roads supports efficient use of the transportation network.

This non-compliance is considered acceptable based on the extensive modelling undertaken and in the context of the proposed activity and current and future receiving transport environment.

8.3 Rule E13.2.4.2

For all sites in a Living Zone there shall be a maximum of one vehicle crossing per site.

Given the nature and the scale of the activity, and the extensive site frontage on both roads, it is considered appropriate that several accesses are available to provide maximum flexibility to integrate the activity with the wider transport network. It is noted that this rule is prepared with residential activity in mind and supermarket activities typically have two or more accesses along site frontages.

The modelling assessment demonstrates the benefits of spreading the traffic generated by the supermarket across several accesses and this is evident from the good level of service at the accesses and at the Levi / Lincoln Rolleston / Lowes / Masefield intersection. A demonstrable benefit of multiple accesses is that pass by traffic on one of the frontage roads does not need to deviate off the corridor they are travelling on. Multiple accesses also reduce any additional traffic movements through the Levi / Lincoln Rolleston / Lowes / Masefield intersection which would otherwise occur if the supermarket were only accessed at one location or off one of the two frontage roads.

The design of the site including accesses has been undertaken to ensure the accesses are sufficiently separated (including from adjacent intersections) to ensure the safe and efficient operation of the local network. Consideration has also gone into the design of the accesses to manage conflicts with pedestrians and cyclists passing the accesses, by adopting markings on the footpath for Accesses C and E and installing a pedestrian refuge island within the site for Access D.

Other than the two main accesses, the secondary accesses have limited vehicle movements including a left in only access on Levi Road, a left out only egress on Levi Road, and a left in and left out only access on Lincoln Rolleston Road. This ensures that the conflict between pedestrians and turning vehicles is lesser than a full movement intersection. To ensure that pedestrian safety is not compromised, no vegetation greater than 0.5m in height or permanent structures will be located within the 2.5m x 5m pedestrian visibility splays at all vehicle crossings.

Additionally, the sightlines from each access are excellent as both road frontages have straight horizontal and vertical alignment with generous and unobstructed sight distances in all directions.

This non-compliance is considered acceptable in the context of the proposed activity and the receiving transport environment.

8.4 Rule E13.2.4.5

The maximum spacing and width of any vehicle crossing shall comply with Table E13.7 which states that for the Living Zone vehicle crossings should have a minimum width of 4m and a maximum width of 7m.

All accesses exceed 7m except Access C. As above the rule anticipates residential activity, and as such is not necessarily appropriate for a supermarket activity. The accesses have been designed to provide a sufficient standard based on the usage of the site and to accommodate design vehicles as appropriate using vehicle tracking.

The key issue with vehicle crossings that may be perceived to have excess width relates to pedestrian safety. It is noted that currently there are no footpaths across the site frontages, however these are proposed as part of the application. As these are yet to be designed and implemented, the footpaths would be subject to a series of safety audits that would ensure that the safety of all road users including pedestrians is assured.

As noted under the rule E13.2.4.2 assessment, other than the two main accesses, the secondary accesses have limited vehicle movements including a left in only access on Levi Road, a left out only egress on Levi Road, and a left in and left out only access on Lincoln Rolleston Road. This ensures that the conflict between pedestrians and turning vehicles is lesser than a full movement intersection. To ensure that pedestrian safety is not compromised, no vegetation greater than 0.5m in height or permanent structures will be located within the 2.5m x 5m pedestrian visibility splays at all vehicle crossings.

Additionally, markings will be installed on the footpaths for Accesses B, C and E to clearly mark the intended use of this space and a pedestrian refuge island is proposed between the ingress and egress lanes for Access D to reduce the crossing distance required in a single movement. This is a standard treatment which has been successfully installed

elsewhere by Foodstuffs including at New World Prestons on Prestons Road. There is no pedestrian facility located to the south of Access A on Lincoln Rolleston Road such that there is no requirement for pedestrians to cross this access.

It is concluded that the safety of pedestrians will not be compromised by the width of the crossings. This non-compliance is considered acceptable in the context of the design treatments proposed to mitigate any safety concerns.

8.5 Rule 10.8.1.3

More than 40 vehicle movements plus four heavy vehicle movements will be generated by the site. Any non-residential activity in the Living Z Zone that does not comply with this rule is a discretionary activity.

The trip generation of the site has been assessed within Section 7 and it is confirmed that these thresholds will be exceeded. An extensive transportation modelling assessment has been undertaken to provide a robust assessment of the effects of the development on the local and wider transport network.

This assessment has concluded that the current and future transport network has sufficient capacity to comfortably accommodate traffic associated with the supermarket. The assessment includes consideration of the cumulative effects of potential urban development promoted by current Private Plan Changes in Rolleston so provides a conservative and robust assessment to demonstrate the efficient operation of the local network.

This non-compliance is considered acceptable in the context of the outcome of the extensive transportation modelling assessment.

8.6 Rule 10.9.1.2

The supermarket opening hours are 7am to 10pm which means that the supermarket will be closed outside of these hours and not generating customer traffic. The overwhelming majority of vehicles movements will be within these times and are therefore complaint with this rule. There will be a small number of vehicle movements just before and after these times as staff arrive and leave for the early and late shifts respectively. There will also be a small number of delivery vehicle movements, specifically one bread truck and one refrigerated semi-trailer per day. As such the occurrence of vehicle movements outside of these hours is very limited.

Staff and visitors to the site will be advised to reduce speeds outside of supermarket operating hours to minimise noise that may affect residents in the vicinity of the supermarket. This will be supported by installing speed limit roundels on each access to limit the speed of vehicles on site to 10 kph.

Staff and delivery vehicles will be advised to use the Lincoln Rolleston Road main access (where there is rural residential development and a hedge opposite to block light) outside of supermarket opening hours to reduce any light spill onto residential properties outside of 7am-10pm. The only exceptions will be the refrigerated semi-trailer which will access via Levi Road (Access E) which will result in no light spill as all residential properties are on the opposite side of Levi Road.

This non-compliance is considered acceptable in the context of the low number of vehicle movements, speed restrictions and access arrangements associated with the site.

9. Conclusions

Foodstuffs propose to establish, operate and maintain a supermarket and associated click and collect facility, car parking, access, signage and landscaping at 157 Levi Road in Rolleston, Canterbury. Being located on the corner of Levi Road and Lincoln Rolleston Road, the site presents an optimal location for vehicles travelling between Rolleston and Christchurch (on Levi Road) and between Rolleston and Prebbleton / Lincoln (on Lincoln Rolleston Road) to drop in on their way past the site. Furthermore, based on the economic assessment prepared by Insight Economics the additional supermarket in Rolleston will reduce the current and future reliance on Christchurch for supermarket shopping. This reduction will also reduce traffic volumes between Rolleston and Christchurch, and consequent vehicle-related emissions.

The proposal includes the following transport-related features:

- 517 car parks designed for efficient two-way vehicle movement throughout the site;
- 24 cycle parks including secure staff parking to encourage uptake of cycling to access the supermarket;
- Multiple accesses onto Levi Road and Lincoln Rolleston Road to efficiently distribute traffic across the local network;
- Legible pedestrian connections through the site to provide for safe movement and support uptake of active modes;
- Installation of footpaths along the site frontages on Levi Road and Lincoln Rolleston Road to integrate with the external pedestrian and cycle networks;
- Access to public transport 200 metres from the site with likely improved public transport connectivity in the future delivered through the Christchurch PT Futures Combined Business Case;
- Separated delivery vehicle routes through the site supported by wayfinding to minimise conflicts with supermarket customers.

An assessment of the transportation effects of the proposed development has been undertaken, including transportation modelling using the Rolleston Traffic Model. The assessment has several conservative assumptions but concludes that the local network and accesses all operate well during the evening peak hour which is the period with highest network demands and levels of activity at the supermarket. Notably, the Levi Road / Lowes Road / Masefield Drive / Lincoln Rolleston Road intersection in its current form operates well out to 2024, after which it is programmed to be signalised by Selwyn District Council. The modelling has considered the cumulative effect of supermarket traffic with potential urban development promoted by current Private Plan Changes, so provides a robust assessment of the long-term performance of the network, demonstrating that the network will operate safely and efficiently.

The relevant transport-related rules of the operative Selwyn District Plan have been assessed and six non-compliances identified relating to the site accesses and rules relating to the current underlying residential zoning of the site. These have been assessed and are considered acceptable in the context of the proposed supermarket activity, the receiving transport environment, modelling assessment undertaken and other design and mitigation measures associated with the proposal.

On the basis of this assessment, it is concluded that the proposed supermarket development integrates well with the transportation networks and future growth of Rolleston township and can be fully supported on transportation grounds.

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