

Faringdon Oval Woolworths, Rolleston Integrated Transport Assessment



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PREPARED FOR:

General Distributors Limited

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1. Introduction

Woolworths proposes to develop a supermarket plus modest complementary retail on a site in the Faringdon Oval residential development, in the southwest of Rolleston. The Faringdon Oval residential subdivision has recently been approved as part of a fast track consenting process administered by the Environmental Protection Agency.

The supermarket will be located in the northeastern corner of the Faringdon Oval development, adjacent to Goulds Road and the planned extension of Shillingford Boulevard.

The proposed development is a Non-Complying activity under the Selwyn District Plan and therefore the Council has full discretion to consider potential effects. This integrated transport assessment report provides assessment of the proposed development from a transport perspective. It includes the following:

- description of the existing and future transport environments surrounding the site;
- description of the transport elements of the proposed development;
- assessment of potential traffic generation and effects using a transport modelling approach;
- assessment of the suitability of the proposed vehicle access arrangements;
- assessment of the changes required to the frontage roads to support the supermarket activity;
- assessment of the accessibility of the development by non-car travel modes; and
- assessment against relevant District Plan (both Operative and Partially Operative) standards.



2. Site Location

2.1 Location in Road Network

The location of the site within the wider arterial and collector road network of Rolleston is shown in **Figure 2-1**. The figure shows the road classification included in the Partially Operative District Plan Appeals Version (PODP). The site is located in the south-west of Rolleston, at the intersection of Goulds Road and Shillingford Boulevard. Both roads are classified as collector roads in the PODP.

Goulds Road connects to two arterial roads, Selwyn Road and Dunns Crossing Road, at its southern end, while at its northern end it connects to the arterials Lowes Road and Springston Rolleston Road.

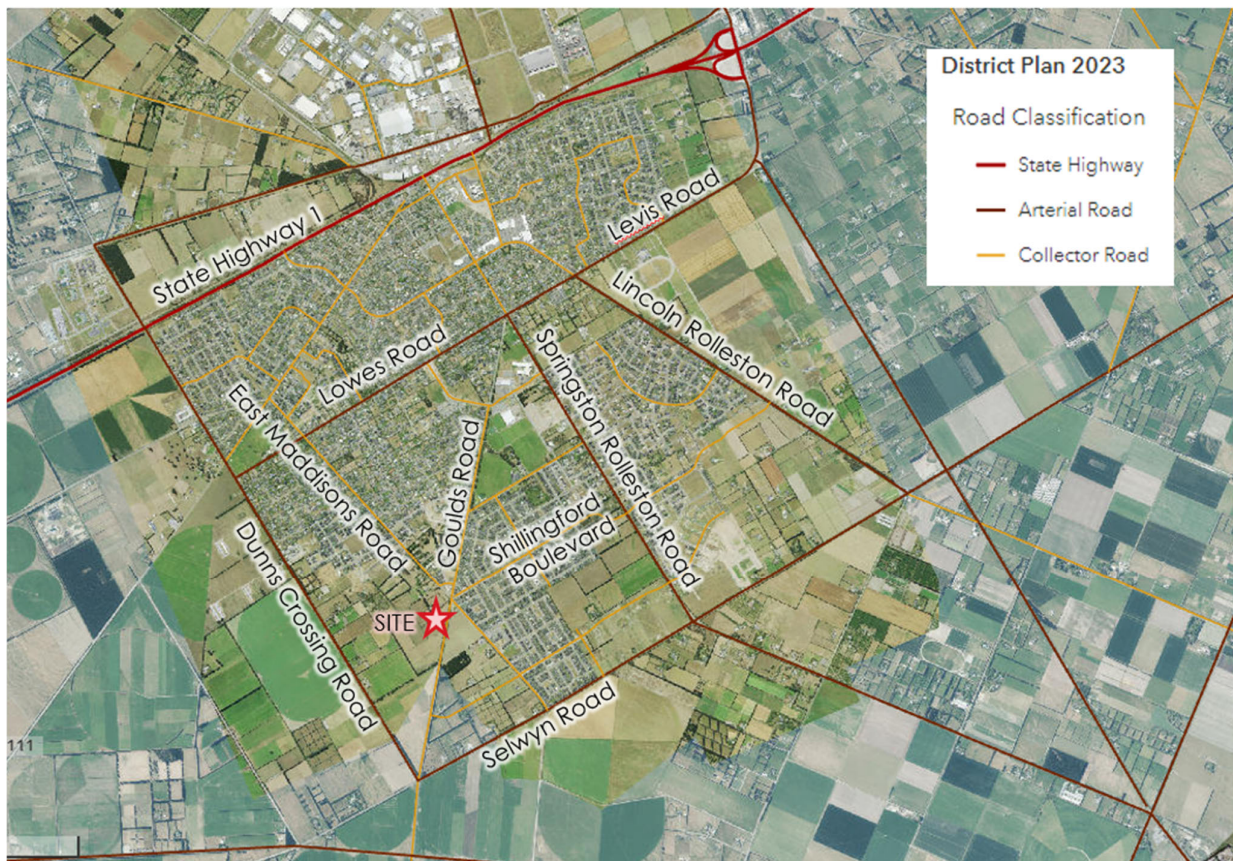


Figure 2-1: Site Location in Rolleston Road Network

Figure 2-2 shows the outline of the site in the context of the local area. The aerial image is outdated, with a roundabout recently constructed at the Goulds Road / Shillingford Boulevard intersection. Shillingford Boulevard is being extended to the west to serve future residential land. East Maddisons Road no longer meets the eastern side of Goulds Road, with its eastern section having been realigned to meet Goulds Road as Edgar Way.





Figure 2-2: Site Location in Local Context (Canterbury Maps)

2.2 District Plan Zoning

The site has an underlying General Rural zoning in the PODP, as shown in **Figure 2-3**, with an “Urban Growth Overlay”. Land on the eastern side of Goulds Road is zoned Medium Density Residential Zone.



Figure 2-3: Partially Operative District Plan Zoning

In the Operative District Plan the site is zoned Rural Inner Plains.



3. Existing Transport Network

3.1 Existing Road Infrastructure

The site will be accessed via a network of collector roads, including Goulds Road and Shillingford Boulevard. These roads have been or are planned to be developed with reference to the residential zoning context adjacent.

3.1.1 Goulds Road

The section of Goulds Road adjacent to the site, which operates with a 60km/h speed limit currently, is shown in **Figure 3-1**. The road has a carriageway width of 11m, with a footpath on the eastern side of the road adjacent to the residential development.



Figure 3-1: Goulds Road looking North on Site Frontage

3.1.2 Shillingford Boulevard

The section of Shillingford Boulevard to the east of Goulds Road has a solid median, as shown in **Figure 3-2**. Carriageway widths of 6m are provided, allowing for kerbside car parking as is visible in the figure.





Figure 3-2: Shillingford Boulevard East of Goulds Road

3.1.3 Goulds Road / Shillingford Boulevard Intersection

The intersection of Goulds Road and Shillingford Boulevard has recently been developed with a single lane roundabout, as shown in Error! Reference source not found.. Raised tables with pedestrian crossing facilities are provided on all legs for traffic calming.



Figure 3-3: Goulds Road Southern Approach to Shillingford Boulevard

3.1.4 Edgar Way

Edgar Way is a new section of road between East Maddisons Road and Goulds Road. It has a wide carriageway with a shared path on the western side of the road and a footpath on the eastern side of the road, as shown in **Figure 3-4**.





Figure 3-4: Edgar Way

The Goulds Road / Edgar Way intersection, approximately 150m south of the Goulds Road/ East Maddisons Road roundabout and shown in **Figure 3-5**, is a basic T-intersection with Give Way controls on Edgar Way.



Figure 3-5: Edgar Way Approach to Goulds Road

3.2 Public Transport Network

Figure 3-6 shows the existing Rolleston public bus routes in relation to the site. The existing public bus network includes a service that passes the site on Goulds Road, connecting Lincoln to Rolleston and Burnham at approximately 1 hour frequency. The nearest bus stops are near the East Maddisons Road / Ledbury Avenue intersection. A peak period express service to Christchurch terminates in the middle of Faringdon.



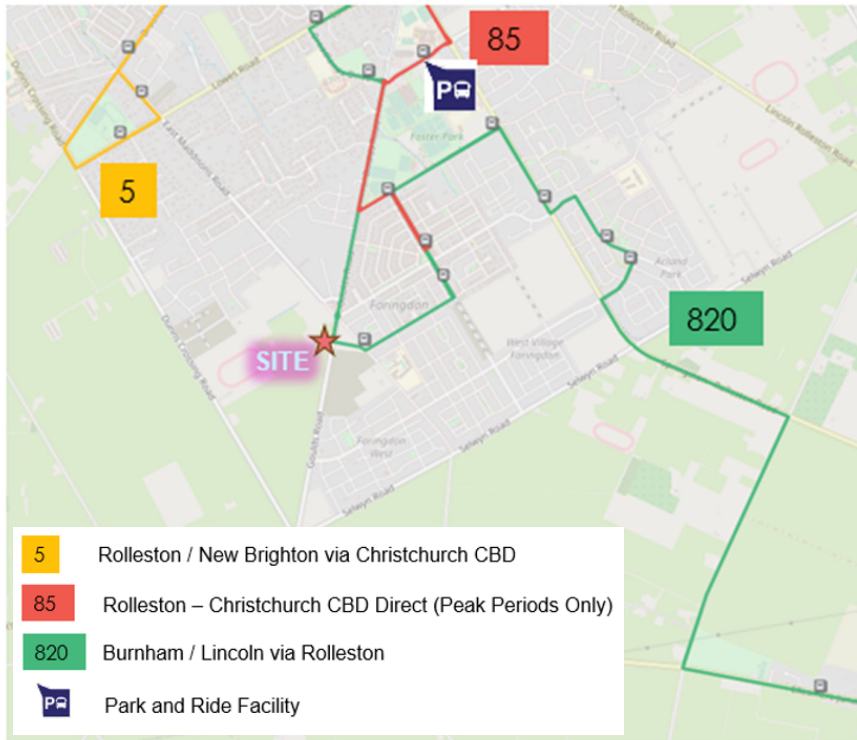


Figure 3-6: Rolleston Bus Routes

3.3 Active Modes Network

All roads in the area have at least one footpath, with footpaths tending to be installed at the time of development of adjacent land.

The Goulds Road / Shillingford Boulevard roundabout has been constructed with shared pedestrian / cycle paths on all corners so that cyclists can bypass the roundabout.



4. Existing Traffic Environment

4.1 Traffic Volumes

According to the Selwyn District Council (SDC) traffic count data, roads in the vicinity of the site carry traffic volumes as shown in **Table 4-1**.

Table 4-1: Existing Traffic Volumes

Road	Location	Average Traffic Volume	Count Date
Goulds Road	North of East Maddisons Road	2,271vpd	August 2022
East Maddisons Road	East of Goulds Road	2,565vpd	August 2022
Shillingford Boulevard	East of Faringdon Boulevard	575vpd	October 2022

The recorded traffic volumes are not significant for urban roads. However, traffic volumes in Rolleston are changing reasonably rapidly as significant development has occurred since the traffic counts were carried out.

4.2 Road Crash History

The road network surrounding the site is evolving, and in recent years there have been various changes on the adjacent roads including the roundabout at Goulds Road / Shillingford Boulevard, realignment of the southern part of East Maddisons Road into Goulds Road south of Shillingford Boulevard, urbanisation of Goulds, residential development, and reductions in speed limits. However, as a baseline, a crash search has been carried out investigating reported crashes on the roads adjacent to the site using the NZTA 'Crash Analysis System' database.

The search area included:

- Goulds Road from Maltby Drive to Langore Way;
- East Maddisons Road from Rangatira Street to Lemonwood Drive; and
- Shillingford Boulevard from Goulds Road to Charlbury Drive.

The search was completed for the most recent 5-year period of 2019-2023 (based on data available January 2024).

There was only one non-injury crash recorded. It occurred at the intersection of Charlbury Drive / Shillingford Boulevard (which is approximately 270m east of Goulds Road) when a crossing Shillingford Boulevard driver failed to give way to an oncoming vehicle. No other crashes were reported in the search area. No safety concerns with the existing road network have been identified from the crash search, again noting that the road network continues to evolve in this part of Rolleston.



5. Future Transport Network Changes

5.1 Road Network Changes

A range of intersection improvement projects are planned for the Rolleston road network by Selwyn District Council in their Long Term Plan, as well as by NZTA through its Rolleston Transport Improvements project. It is noted that timings of projects may be subject to change with development patterns influencing timing and funding. Additional privately funded intersection improvements can also be expected as part of requirements to progress development and make connections with the existing road network. Project locations and timing for the public funded works are shown in **Figure 5-1**.

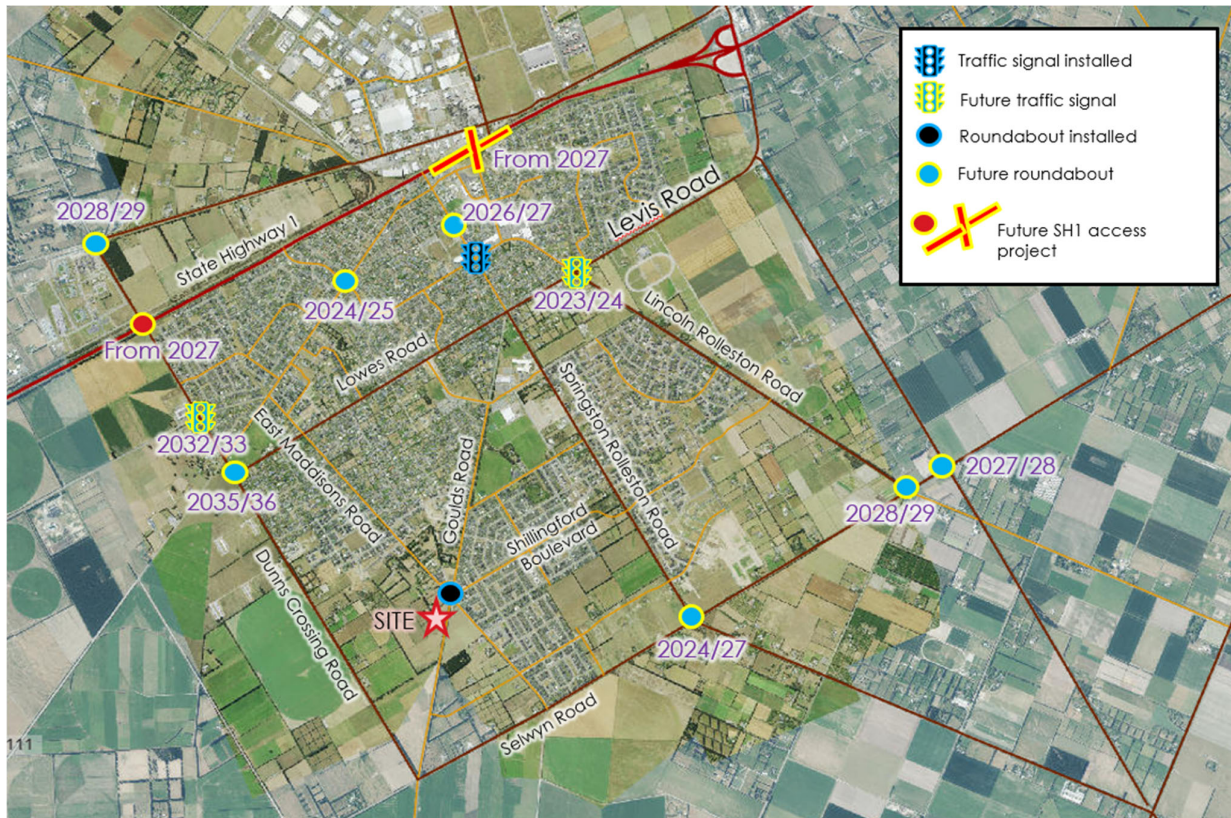


Figure 5-1: Council and NZTA Planned Projects

Of relevance to the site is the potential improvement of access to and from Dunns Crossing Road to the west of Rolleston, and along the Selwyn Road corridor. These changes may alter travel patterns for those accessing the southwest of Rolleston.

5.2 ECAN Public Transport Improvements

Over time the public bus service is likely to respond to changes in demand, such as the increasing residential development in the southwest of Rolleston. This could influence the location of bus routes, and improve frequency of services. At this stage there are no firm plans for a future Rolleston bus network.

The Canterbury Regional Public Transport Plan 2018-2028 anticipates improvements to the core public transport routes, with increased frequency and more direct routing of core services. In the long-term rapid transit is signalled from Rolleston to Christchurch.

As shown in **Figure 5-2**, within Selwyn the improvements will include improved connectivity within and between townships. Policy 1.12 "Services to areas of new development" describes how services to new developments will be considered, with



the policy seeking timely and cost-effective public transport provision to new areas of urban development in accordance with a range of criteria.

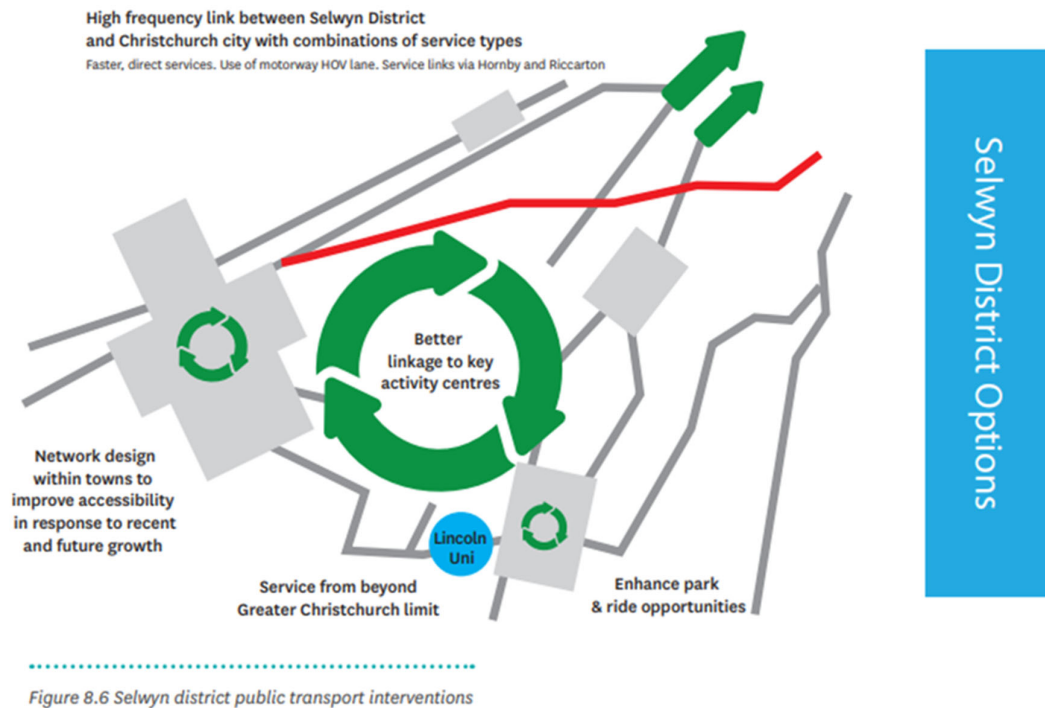


Figure 5-2: Regional Public Transport Plan

The NZTA Rolleston Transport Improvements project has also identified the potential for Park n Ride expansion around Kidman Drive near the town centre.



6. Planned Landuse Changes

6.1 Faringdon Oval Subdivision

Faringdon Oval is a residential subdivision recently consented. The subdivision, shown below in **Figure 6-1**, is a 684 lot subdivision between Goulds Road and Dunns Crossing Road, and includes the proposed supermarket site. The plan below also shows the road hierarchy of the subdivision, with the Shillingford Boulevard extension indicated as a primary road within the residential development.

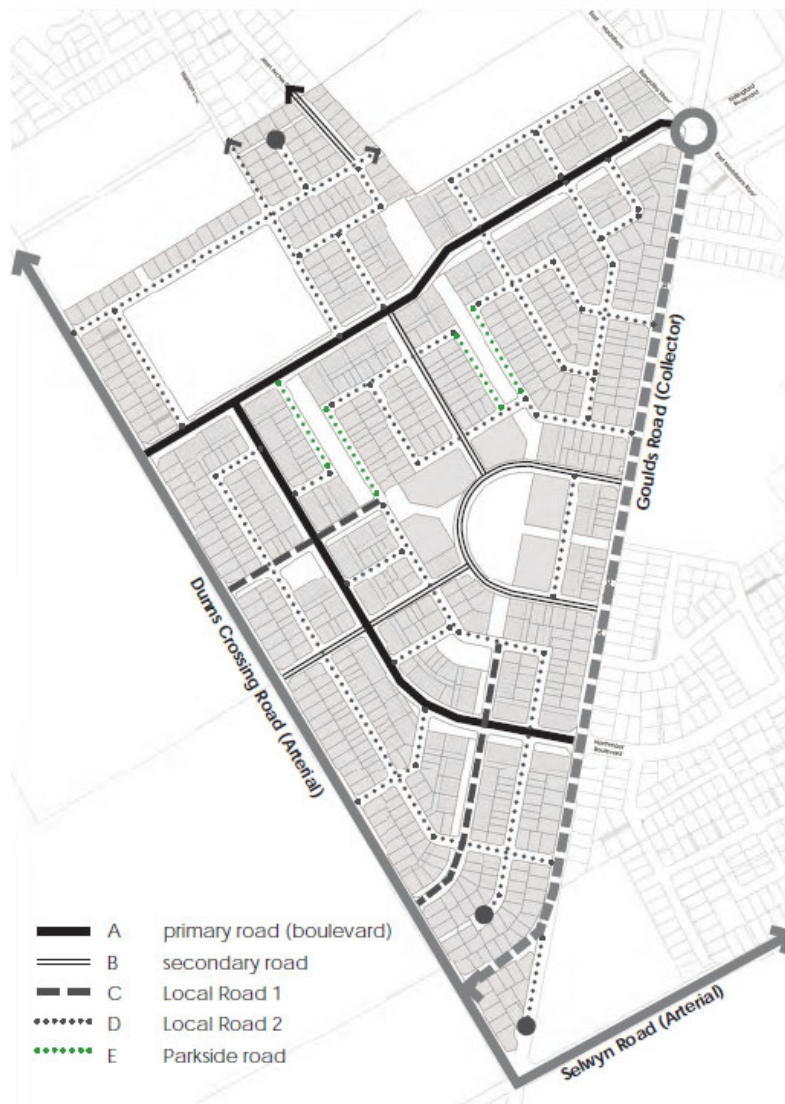


Figure 6-1 Faringdon Oval Subdivision Layout

Figure 6-2 shows the consented road layout for the Shillingford Boulevard extension, west of Goulds Road, with the supermarket site generally shown as Stage 11. The Shillingford Boulevard extension as indicated is broadly consistent with the existing section of Shillingford Boulevard, with 6m carriageways each side of a 3m solid median.

On the western side of the Stage 11 site is a local road indicated with an 8m wide carriageway within a 17m wide reserve running south from the Shillingford Boulevard extension. The latest Davie Lovell Smith (**DLS**) plan is for this road to have a 7m wide carriageway with indented parking bays beyond this on both sides of the road. The proposed supermarket site



(Stage 11) has an approximately 30m long frontage to this road. The local road meets the Shillingford Boulevard intersection at a crossroad intersection, with the local road continuing to the north. Stage 11 is consented to accommodate 18 residential lots with some lots fronting Goulds Road, and a right of way out to Goulds Road.

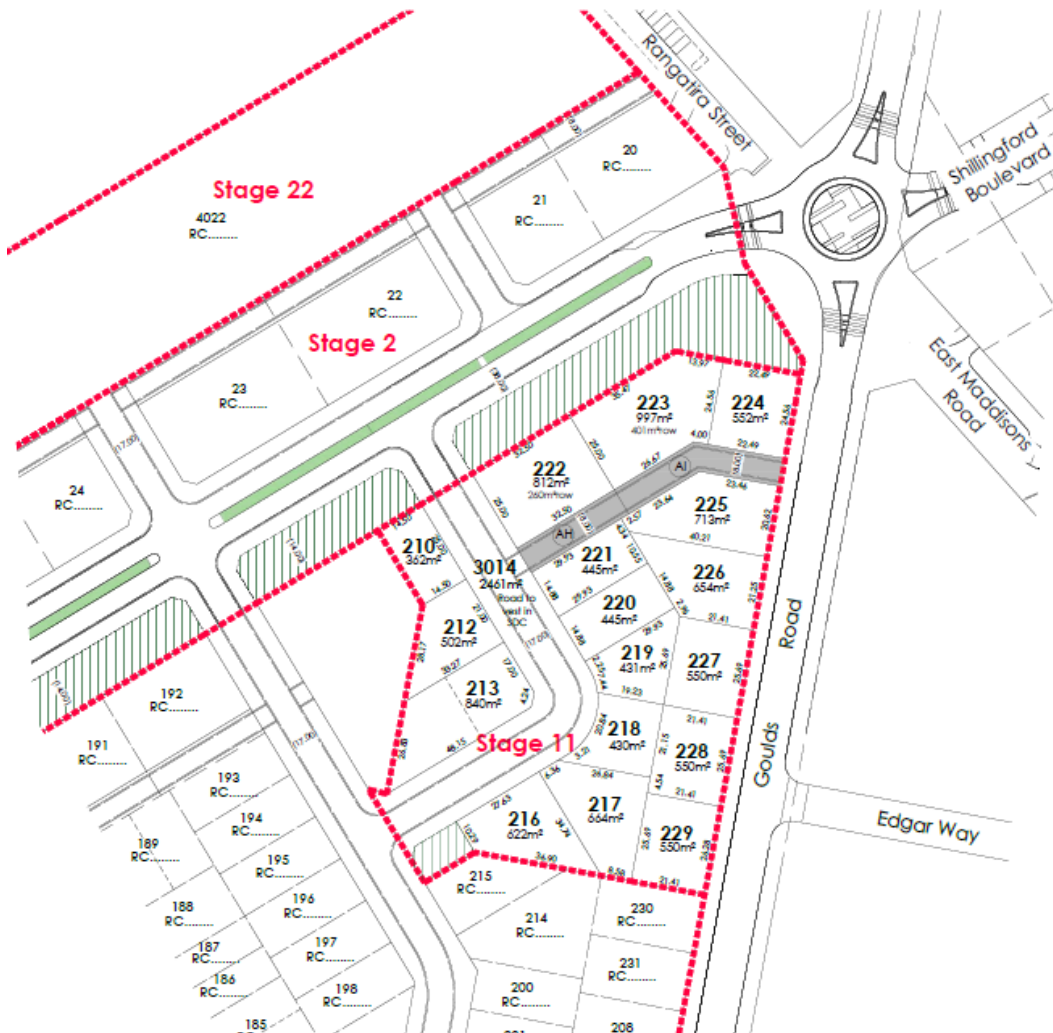


Figure 6-2: Stage 11 Subdivision

The subdivision consent provides for shared pedestrian / cycle paths on the western side of Goulds Road and the southern side of the Shillingford Boulevard extension, as part of a wider shared path network that is indicated in **Figure 6-3**.



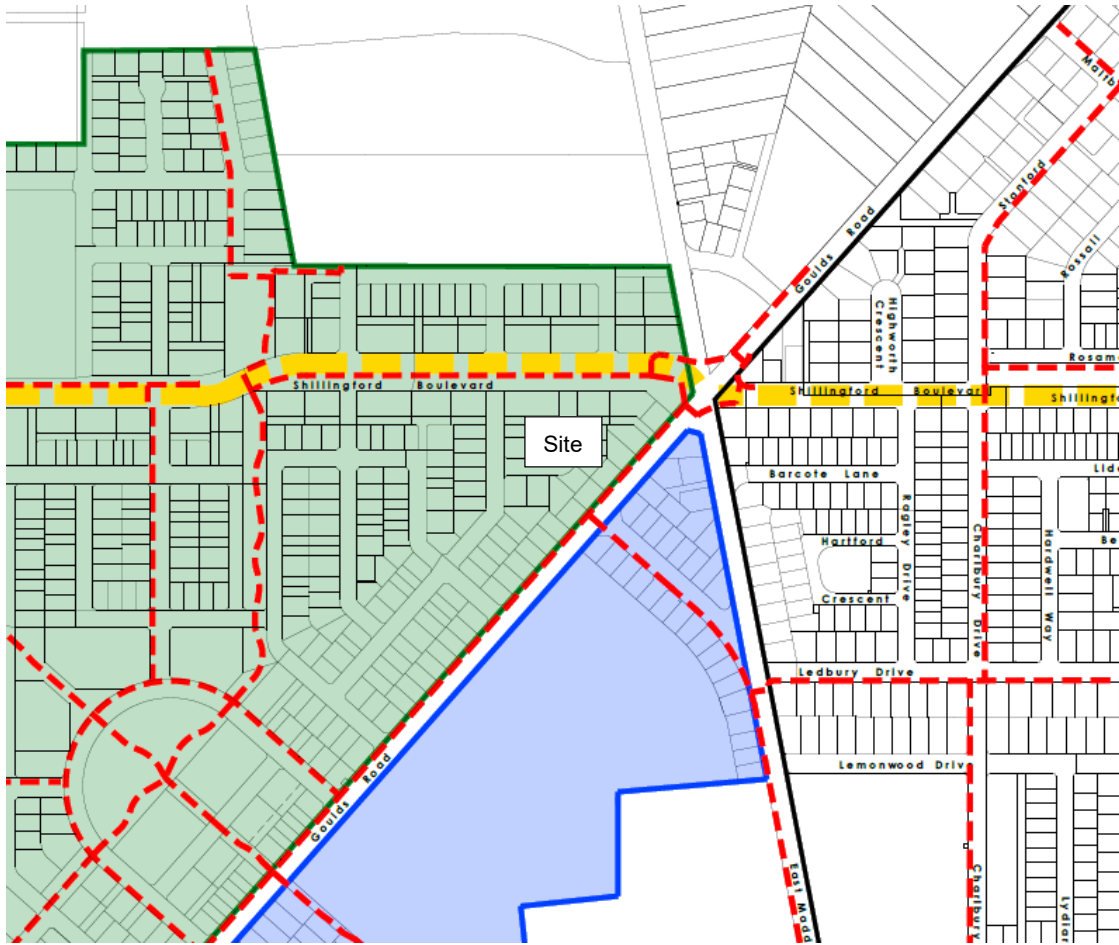


Figure 6-3: Proposed Shared Path Network

The latest DLS roading plans being developed for engineering approval are shown in **Figure 6-4**. The road design plan has been prepared to coordinate with the planned supermarket in terms of vehicle crossing provision, and pedestrian infrastructure. Shillingford Boulevard will include kerb extensions along the road to narrow the carriageway in locations to support a lower speed environment, minimise pedestrian crossing distances, and to formalise car parking bays. A reserve is proposed along the southern side of Shillingford Boulevard. There is one local road intersection opposite the site which will have a closed median and left-in / left-out treatment. Road 7 to the west will have indented parking bays.



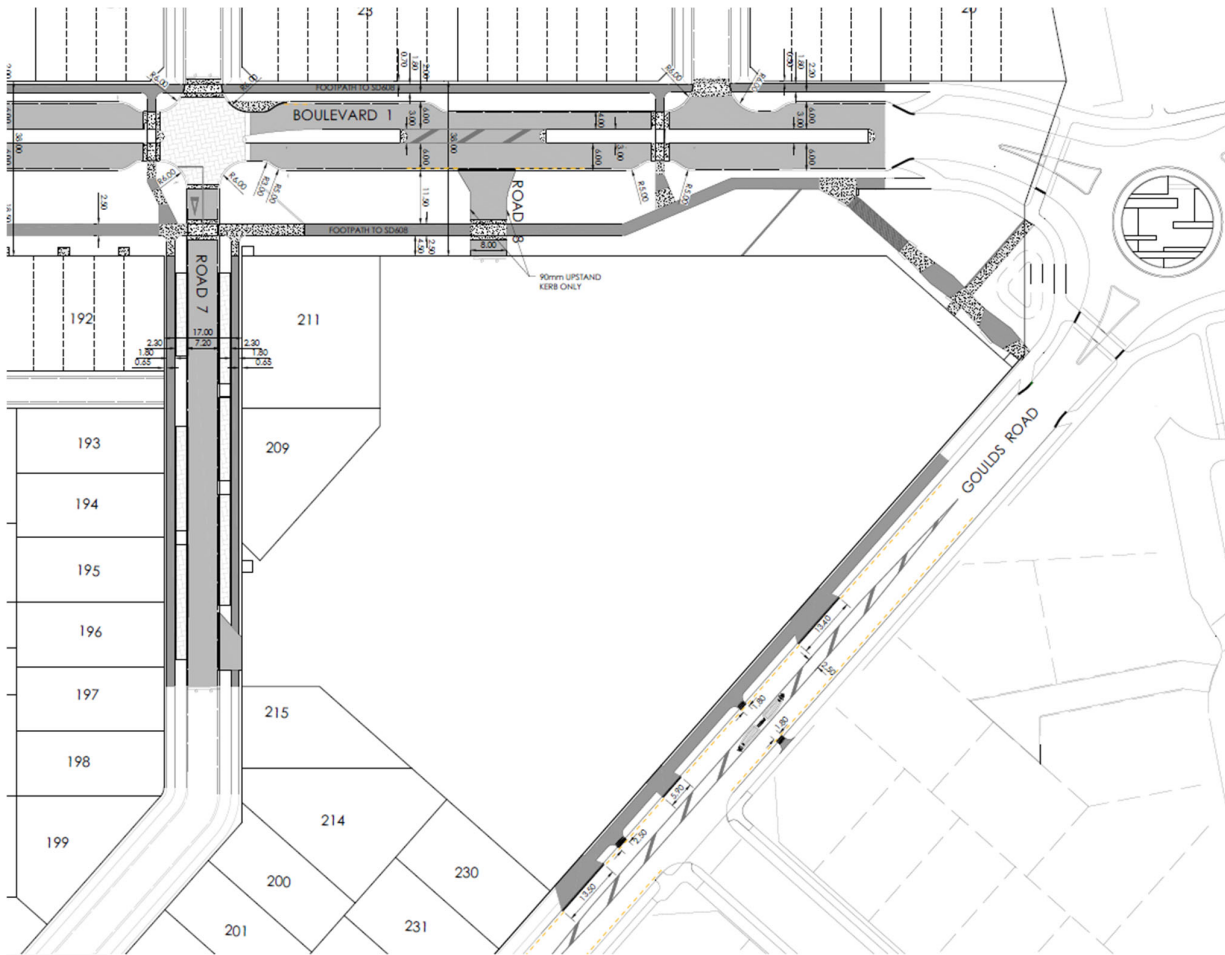


Figure 6-4: Indicative Road Layout Plans (Work in Progress)

6.2 District Plan Greenfield Development

As highlighted earlier, there is undeveloped land to the north and the south-east of the site which is subject to Medium Density Residential zoning in the PODP. There are also several Development Areas with outline development plans in the PODP, as described below:

- DEV-RO3: north of the site between Goulds Road and East Maddisons Road. The road realignment closest to the site from East Maddisons Road into Goulds Road has been completed.
- DEV-RO13 area, is southeast of the site in the triangular area between Goulds Road, East Maddisons Road and Selwyn Road. This area has been developed in the southern and northern parts and includes the Edgar Way connection between East Maddisons Road and Goulds Road.
- DEV-RO9, shown in **Figure 6-5**, is north of the site on East Maddisons Road and sits immediately north of the Faringdon Oval site. It is undeveloped and will provide connectivity towards roads on the north side of Shillingford Boulevard. It includes an indicative road connecting into the Faringdon Oval Stage 2 road that is immediately west of the Stage 11 (supermarket) site.



Rolleston 9 Development Area



Figure 6-5: Development Area provision DEV-RO9

6.3 Rolleston Structure Plan

The Rolleston Structure Plan (2009) as summarised in **Figure 6-6** has set out a potential plan for the long-term Rolleston area that encapsulates the site, and generally all land in the Future Infrastructure Boundary defined in the Canterbury Regional Policy Statement (CRPS). It provides a strategic plan into where landuse activities were planned and potential for long term connections for the road network, public transport, and cycling.



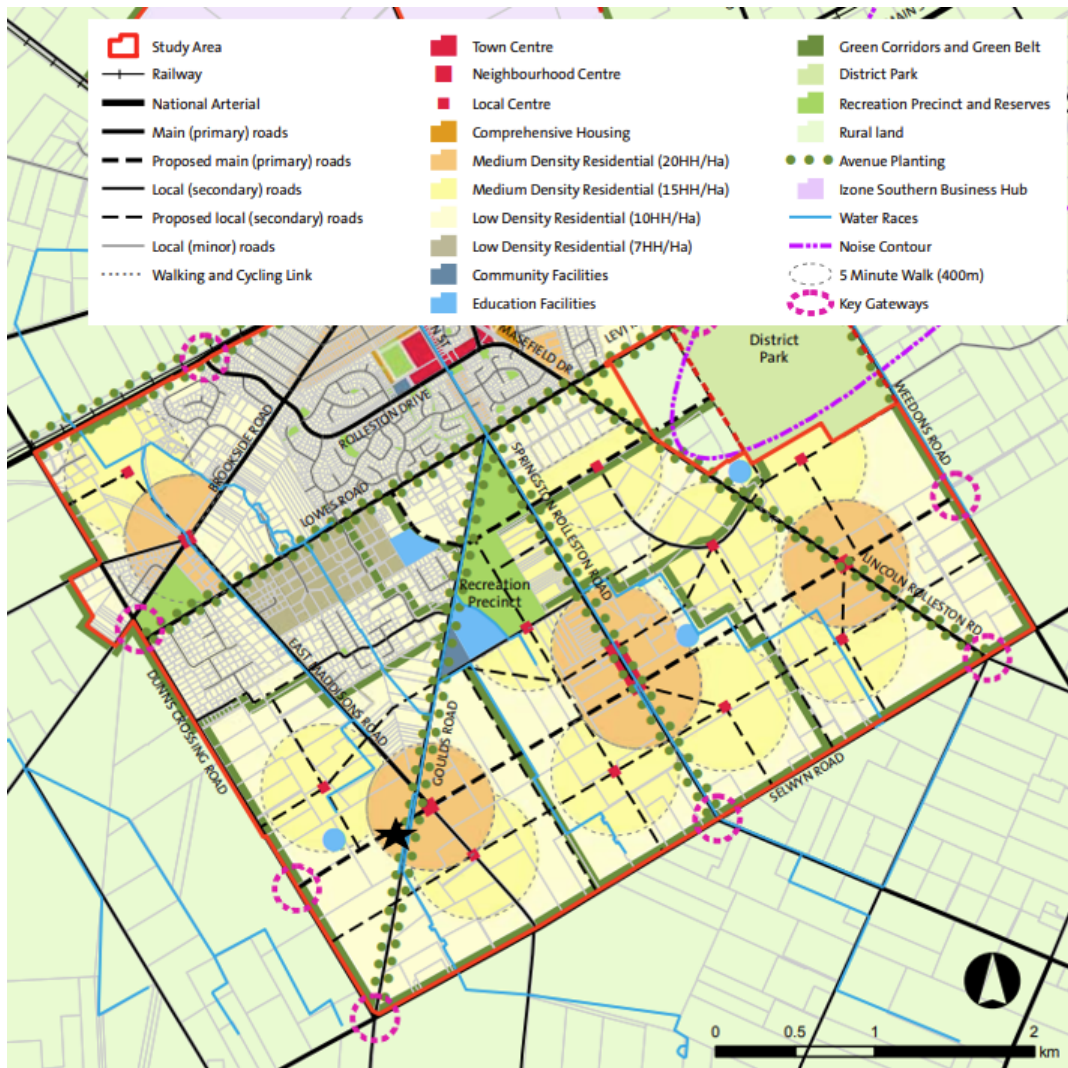


Figure 6-6: Rolleston Structure Plan (Site: Black Star)

As a reference for considering the long-term development of Rolleston, in the vicinity of the proposed development, the Structure Plan provisions indicate:

- The continuation of Shillingford Boulevard west to Dunns Crossing Road, as proposed by the Faringdon Oval consent.
- A neighbourhood centre in the general location of the site (indicated at the intersection of East Maddisons Road and Shillingford Boulevard. However, the road network in the Structure Plan at the intersection does not reflect the actual road layout adopted).
- Future bus services are indicated on East Maddisons Road and Shillingford Boulevard.

It is important to note that the high-level transport planning provided for in the Rolleston Structure Plan requires on-going reconsideration as development of Rolleston progresses, also taking account of localised constraints.

7. Future Traffic Environment

The Rolleston Paramics Micro-simulation model includes allowance for traffic generated by land that is zoned under the Partially Operative District Plan as well as consented subdivisions including the Faringdon Oval residential development. The model assumes full development of those areas, with the landuse approximating Long Term Plan growth forecasts for 2040. Various road network improvements anticipated over the next ten-year period are included in the model, with most of those either already provisioned in the Long Term Plan, or expected to be required as development occurs (such as for access to new developments). It is understood that development sites are subject to development contributions which assist Council deliver the major projects of a wide community benefit.

The “base” year 2040 weekday evening peak period traffic volume forecasts for the roads immediately adjacent to the site are shown in **Figure 7-1**. The weekday evening peak hour will be the busiest period of the road network when the supermarket will also be at its peak traffic generating levels.

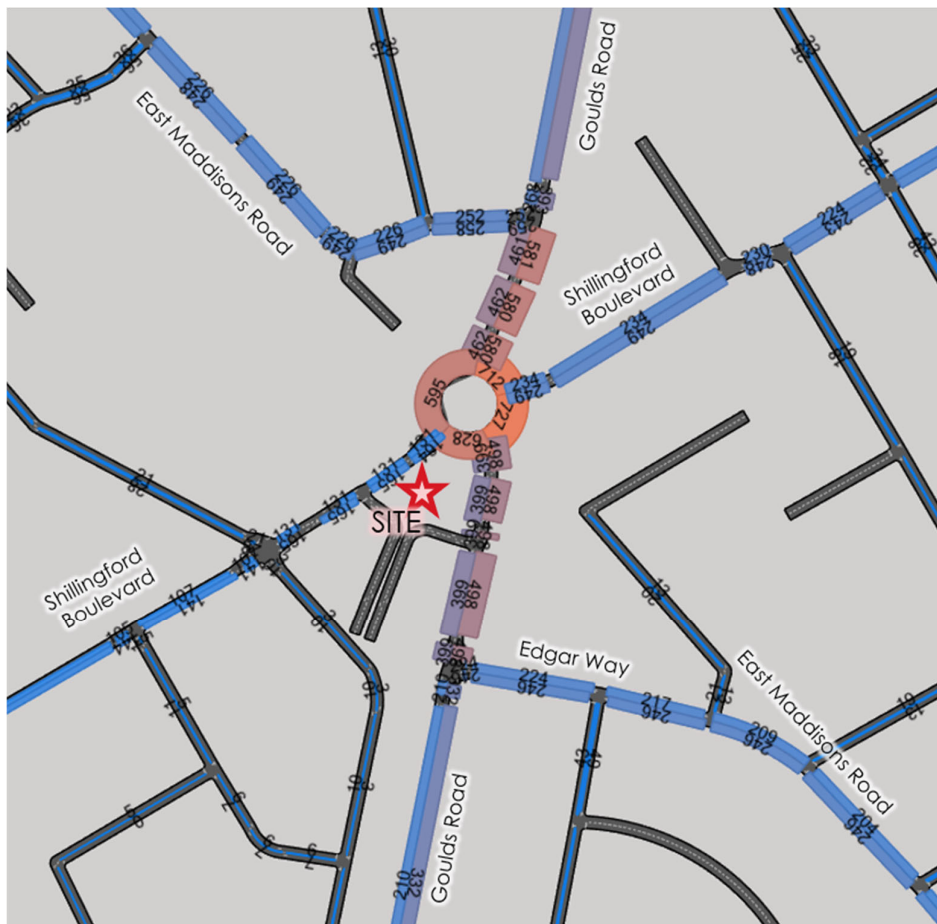


Figure 7-1: 2040 PM Peak Hour Traffic Volumes Base (without supermarket)

Traffic volumes on Goulds Road between Edgar Way and East Maddisons Road are indicated to be approximately 900-1,000 vehicles per hour in the evening peak, which would be at the higher end of what would typically be expected on a collector road.

Traffic volumes on Shillingford Boulevard are indicated to be approximately 300 vehicles per hour in the evening peak. Traffic volumes on Edgar Way are indicated to be approximately 470 vehicles per hour in the evening peak. Based on these volumes, both roads would carry traffic volumes typical for a residential collector road.



8. Proposed Site Layout

8.1 Overview

The proposed supermarket site layout is shown in **Figure 8-1**, and shown in detail in **Appendix A**. The development comprises:

- A 3,528m² GFA supermarket, including an upstairs 200m² GFA staff amenity area;
- A 324m² GFA online shopping pick area; and
- Two complementary retail areas, with a combined 374m² GFA, and 14m² SVR room.

For the purpose of assessment, this totals 4,240m² GFA.

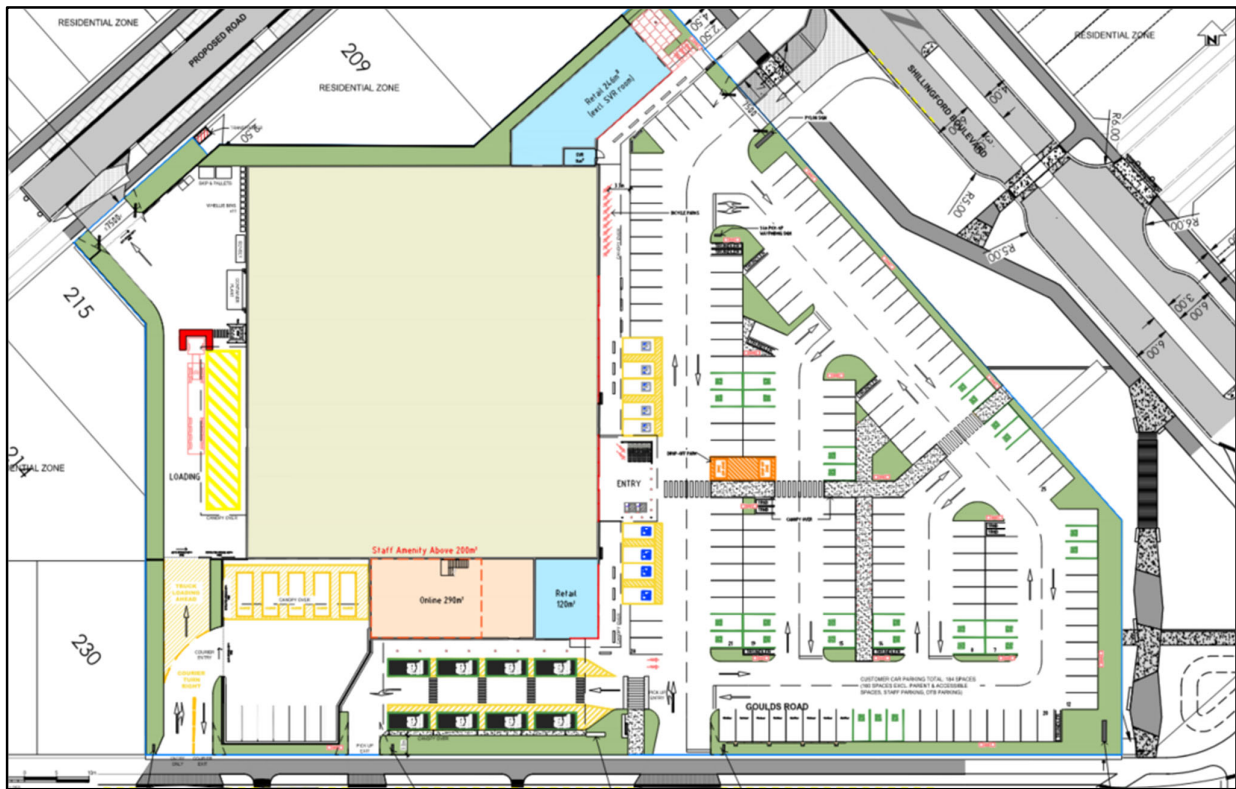


Figure 8-1: Proposed Supermarket Layout

8.2 Vehicle Access

Vehicle access to and from the site is proposed by way of five vehicle crossings; three on Goulds Road, one on the Shillingford Boulevard extension and one on the local residential road to the west of the site. All vehicle crossings are proposed with cut-down kerbs and continuous path surfaces providing cycle / pedestrian priority across the driveways. Limit lines are proposed within the site to highlight the need to give way to path users.

A 2.5m wide flush median past the three vehicle access points on Goulds Road is proposed to support safe and efficient vehicle access. No-stopping lines will be required along both sides of the road over the length of the flush median given there will only be 4.25m wide traffic lanes on each side.



The Goulds Road vehicle crossing serving the main car park is proposed approximately 90m south of the Goulds Road / Shillingford Boulevard roundabout. The vehicle crossing is proposed approximately 9.0m wide at the boundary to accommodate a medium rigid truck left turn in clear of the exit lane, as demonstrated in **Figure 8-2**. Two-way vehicle movement will also be possible as demonstrated in **Figure 8-3**.

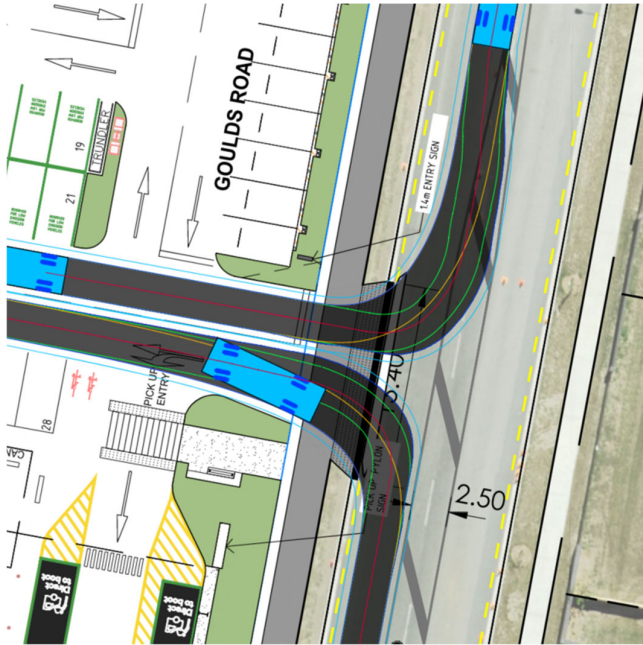


Figure 8-2: Medium Rigid Truck Entry and Exit at Goulds Road Car Park Access Point

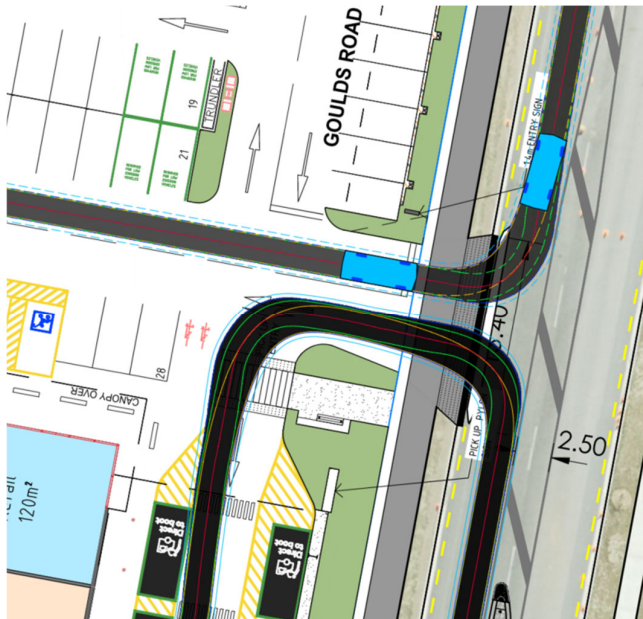


Figure 8-3: Two-Way 99th Percentile Car Movements at Goulds Road Car Park Access Point

A 4.9m wide vehicle crossing accommodating exit movements from the online shopping pick-up area is proposed opposite Edgar Way. The vehicle crossing has been lined up to support a standard crossroad priority arrangement with those turning from Edgar Road. It will be able to accommodate left turn and right turn exit movements as demonstrated in **Figure 8-4**.



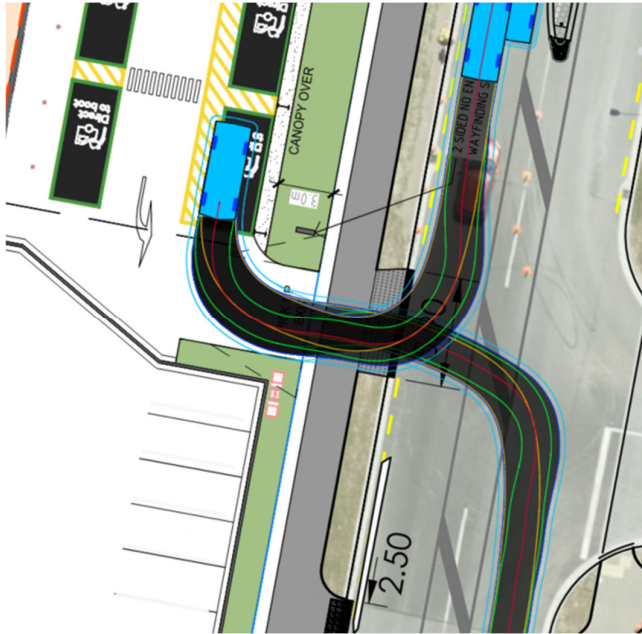


Figure 8-4: 99th Percentile Car Exit from Online Shopping Pick-Up Area

The third vehicle crossing proposed on Goulds Road is the loading dock vehicle crossing at the southern end of the site frontage. This will be entry-only for vehicles using the loading dock, while it will operate two-way for courier vehicles doing online shopping deliveries. The vehicle crossing is proposed with an approximately 8.9m width at the boundary to accommodate entry movements by large service vehicles, such as semi-trailers (**Figure 8-5**), and two-way movements by courier vehicles (small trucks) (**Figure 8-6**). The no-stopping lines south of the vehicle crossing will ensure there is adequate space for the left turn in by the large vehicle.



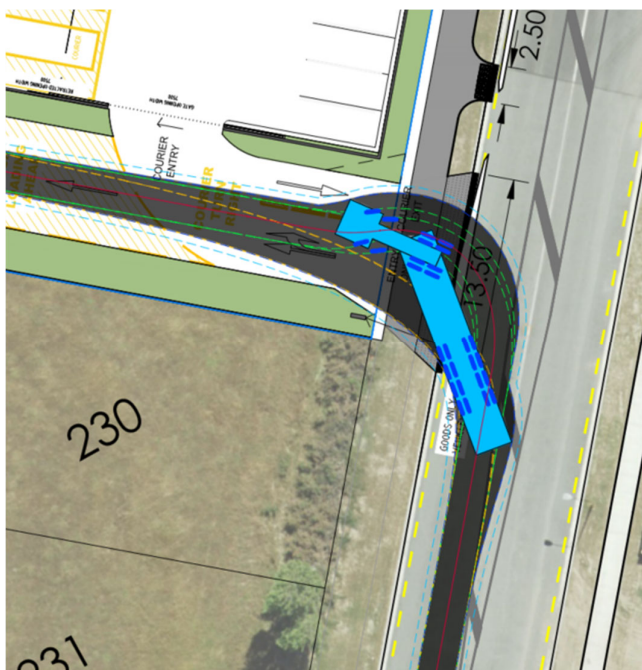


Figure 8-5: Semi-Trailer Entry to Loading Dock

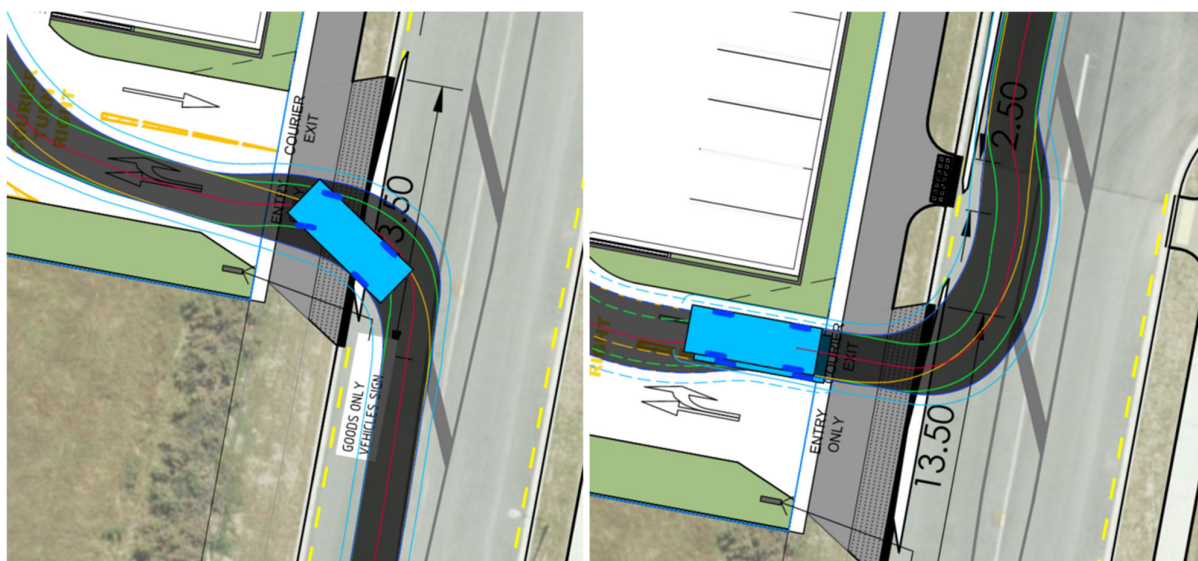


Figure 8-6: Small Rigid Truck Entry (Left) and Exit (Right)

The second vehicle crossing serving the main car park will be on the Shillingford Boulevard extension. A break in the median is proposed to allow right turns into and out of the car park. As shown in **Figure 8-7**, the vehicle crossing and the break in the median have been designed to accommodate medium rigid truck movements. The break in the median is proposed to allow a small amount of queuing space for any vehicles turning right into the car park. The vehicle crossing is proposed with an approximately 7.5m width at the boundary.

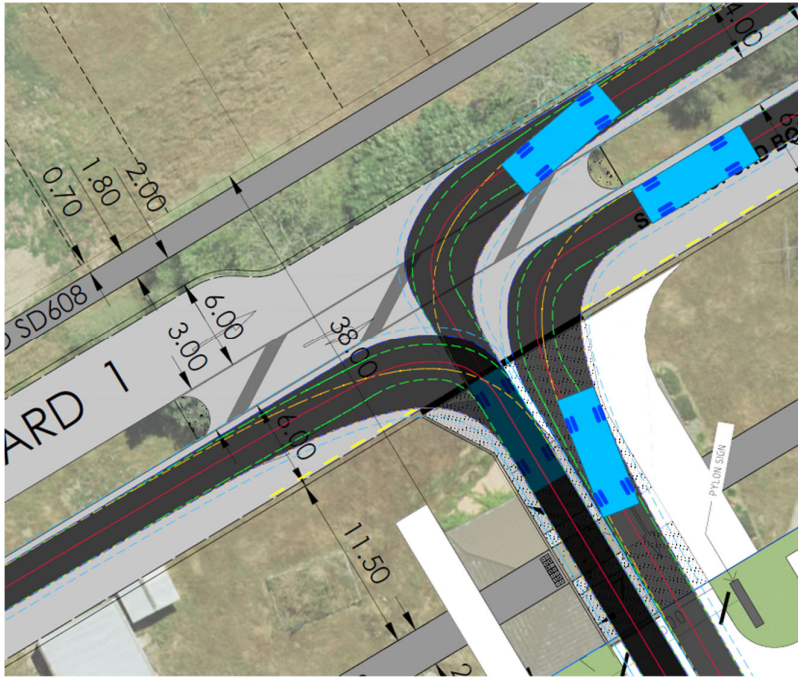


Figure 8-7: Medium Rigid Truck Manoeuvring at Shillingford Boulevard Extension Access Point

Trucks exiting the loading dock will make use of the vehicle crossing on the local road to the west of the site. **Figure 8-8** shows that this has been designed to accommodate a right turn out by a semi-trailer. The vehicle crossing will be approximately 7.5m wide at the boundary.

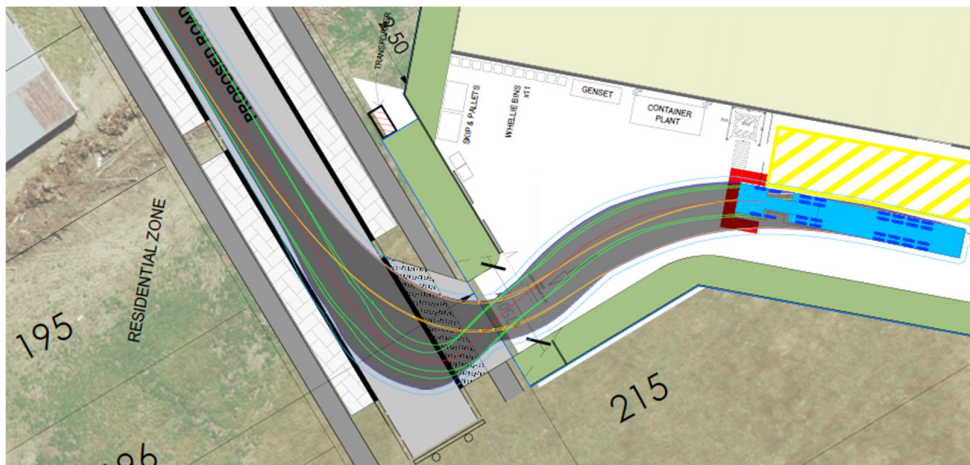


Figure 8-8: Semi-Trailer Exit to Local Road

8.3 Car Parking

A total of 184 car parking spaces are proposed on the site. Included in these are five mobility spaces, four parent parking spaces, eight online shopping pick-up spaces, eight electric vehicle spaces, a number of low-emission vehicle spaces and seven staff car parking spaces within the separate courier delivery area.

90-degree spaces are proposed to be 2.6m wide and 5m long. The 7.5m aisle widths proposed are adopted by Woolworths at their stores acknowledging that high levels of pedestrian activity occur throughout their car parks, with people often pushing trolleys and loading their cars from within the aisles.



The online shopping pick-up area is proposed with a drive-through arrangement and parallel parking spaces. Spaces are proposed with effective lengths of 7.6m, widths of 2.6m and an aisle of 5.7m to allow generous space for loading vehicles.

8.4 Loading

The main loading dock is proposed as a drive-through area to the rear of the store. Trucks will enter from Goulds Road and exit to the local road to the west of the site.

The courier area at the south-eastern corner of the store will include five courier bays to be used by small trucks delivering online orders. **Figure 8-9** shows that there will be sufficient space for these vehicles to reverse into the courier bays.

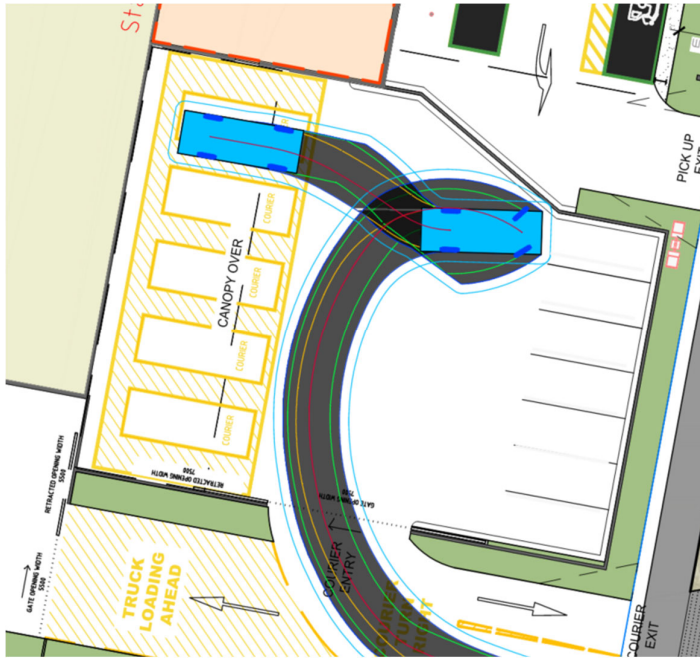


Figure 8-9: Small Rigid Truck Manoeuvring in Courier Area

The small complementary retail tenancies will likely be serviced from within the car park. This would likely involve small delivery vehicles, such as vans or small trucks, and likely occur outside of peak times for convenience.

8.5 Pedestrian Provision

A network of footpaths is proposed within the site, with a footpath along the front of the buildings and footpaths connecting through the car park and to the frontage roads. Zebra crossings will be provided where walking routes cross vehicle aisles. The footpaths will connect to the frontage road shared paths in three locations; next to the Goulds Road car park access, next to the Shillingford Boulevard car park access and to Shillingford Boulevard near the roundabout.

External to the site, a pedestrian refuge is proposed within the Goulds Road flush median, midway between the main car park access point and Edgar Way, as shown in **Figure 8-10**. This will serve the crossing desire line between Edgar Way and the store. The 11m carriageway width will allow a 2m wide island to be installed, with 4.5m widths retained each side between kerbs.

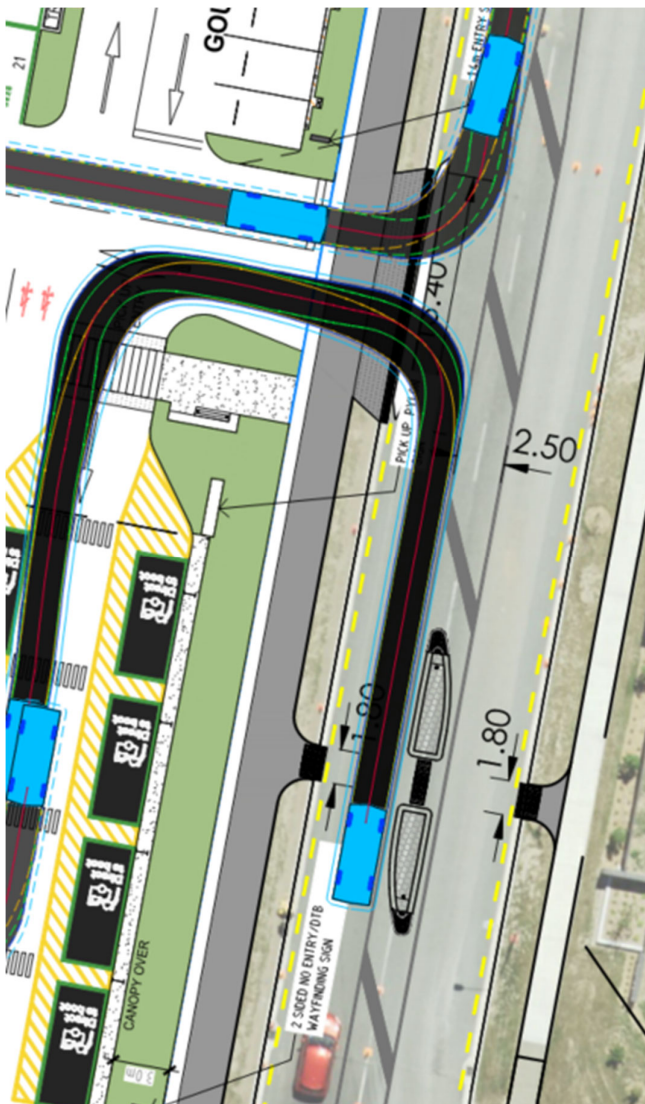


Figure 8-10: Proposed Pedestrian Crossing Point

8.6 Cycle Provision

38 cycle parking spaces for staff and customers will be provided by way of 19 cycle rails on the site. These are proposed in multiple locations including near the supermarket entrance and near the two complementary retail tenancies. Cycle rails will be set out in accordance with District Plan standards to ensure their usability.



9. Traffic Generation

9.1 Traffic Generation

Traffic generation associated with supermarkets is typically assessed for the weekday evening peak hour, as it is a period where both the peak supermarket and peak road network traffic levels occur. Other periods will have better performance and/or less influence from supermarket trip generation.

Traffic generation surveys were carried out at the Countdown Mosgiel store, a similar sized store to that proposed in Rolleston, in September 2017. Across the two weekdays surveyed, the average evening peak period traffic generation was approximately 415 vehicle movements per hour (vph) which represented a traffic generation rate of 12.4vph/100m² GFA. This rate has been adopted in this assessment, and has been applied to all retail activity on the site for a conservative assessment. Based on a total GFA of 4,240m², a peak hour traffic generation of 526vph could be expected.

20vph-30vph (10-15 in and 10-15 out) will be truck delivery vehicle movements. Six of these (three in and three out) will be made by 23m truck and trailers or similar large vehicles from the distribution centre. Truck deliveries will be made within the 7:00am to 4:00pm window.

In terms of courier movements, two small trucks are expected to make three deliveries each per day, representing 12vph, initially. Longer term, there will be capacity for five courier vehicles. If each made three deliveries per day, this would represent 30vph.

9.2 Trip Types

While the supermarket is likely to generate some new trips on the road network (primary trips), many shoppers will be drawn from traffic already travelling on nearby roads. The three trip types assessed are:

- Primary trips – trips that are new to the road network, with the specific purpose of visiting the site. The distribution of the primary trips has been determined based on household distribution in Rolleston, with weighting to the expected core catchment area being the southwest quadrant of Rolleston¹.
- Pass-by trips – trips being made by drivers passing the site on Goulds Road or Shillingford Boulevard, where the driver then chooses to access the site. These add trips to the site access points, but result in minimal changes in traffic volumes on nearby roads or at intersections. An analysis of model outputs (a “skim matrix”) from the “base” 2040 scenario has been used to inform the origins and destinations of pass-by trips.
- Diverted trips – trips being made by drivers on roads further from the site, where the driver then diverts to the site. These adds trips to the site access points, and potentially nearby roads and intersections, but remove movements elsewhere in the road network. It has been assumed that a trip with an origin or a destination in the southwestern quadrant of Rolleston (and excluding those passing the site) could be treated as a diverted trip.

To determine the percentage of trips that will be primary, pass-by and diverted, reference to relevant research has been made. A comprehensive research assessment for supermarkets relates to an Auckland supermarket² which indicates the following rates could be considered for primary, pass-by and diverted trips:

Table 9-1: Trip Types from Harries et al

Period	Primary	Pass-by	Diverted
Thursday PM	35-40%	20-25%	40%
Saturday Midday	40-50%	10-20%	40%

¹ Property Economics Faringdon Woolworths Economic Assessment

² Harries et al: *Trip Generation Characteristics of Large-Format Retail Development Sites in Auckland* (2011)



Given the location of the site in the south-western corner of Rolleston, where passing traffic volumes will not be especially high, the proportion of pass-by trips is expected to be at the lower end of the scale, and primary trips at the upper end of the scale.

The rates conservatively adopted in terms of higher primary trip generation for the weekday PM peak traffic modelling assessment are as follows:

- Primary 40%
- Pass-by 20%
- Diverted 40%

It is noted that whilst the methodology allows for splitting of trip types, no additional allowance has been made in traffic modelling for a possible reduction in trips to and from existing or planned supermarkets in the northwest of Rolleston. In practice, it is likely that trips currently anticipated to occur between the southwest and existing/planned supermarkets in the northwest will also be reduced, such that the primary trips are not entirely new to the road network, and there will be corresponding reductions in travel to and from the town centre.



10. External Traffic Effects

10.1 Traffic Distribution

The traffic generation and trip types have been represented in the Rolleston microsimulation model by manipulating the base matrix for the PM peak year 2040 traffic demands, to account for the different trip types. This produced a “with supermarket” traffic demand.

The modelled origins and destinations of traffic entering / exiting the supermarket are shown in **Figure 10-1** below.

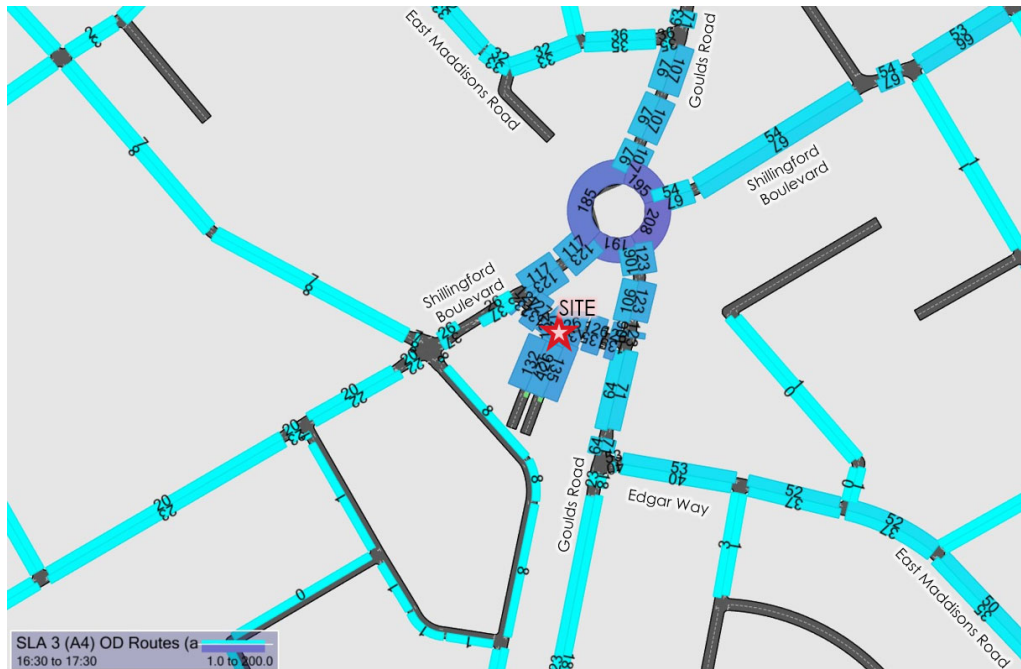


Figure 10-1: 2040 PM Peak Supermarket Traffic Distribution

The distribution is summarised in **Table 10-1** to show the roads used by traffic accessing the site.

Table 10-1: Supermarket Traffic Distribution

Road	Traffic volume entering/exiting supermarket	% of Traffic Generation
Goulds Road north of East Maddisons Road	134vph	25%
East Maddisons Road north of Goulds Road	71vph	14%
Shillingford Boulevard east	121vph	23%
Edgar Way	93vph	18%
Goulds Road south	41vph	8%
Shillingford Boulevard west	63vph	12%
Total	523vph³	

³ The total differs from 526vph due to rounding



This indicates the supermarket traffic distribution is well spread, with a slight preference to those making trips to and from the north and east. It is important to note that the traffic volumes are not all new to the road network. As set out earlier, a high proportion are already passing-by, or using the wider area road network and diverting to the supermarket. The actual change can be considered by comparing the forecast traffic volumes on the road network without and with the supermarket.

The modelling methodology has not specifically allowed for reductions in trips to and from the town centre as a result of the retail redistribution effects. It is likely that if that was accounted for, the primary trips will include reductions in movement to and from the town centre in the trip demand matrices. That will have a corresponding positive influence on shortening trip lengths and overall vehicle travel as the residential area of the southwest becomes more self-sufficient with respect to supermarket shopping needs.

10.2 Change in Traffic Patterns with Supermarket

The total traffic volumes on the adjacent road network with the supermarket are shown in **Figure 10-2**, which can be compared with the traffic volumes shown previously in Figure 7-1.

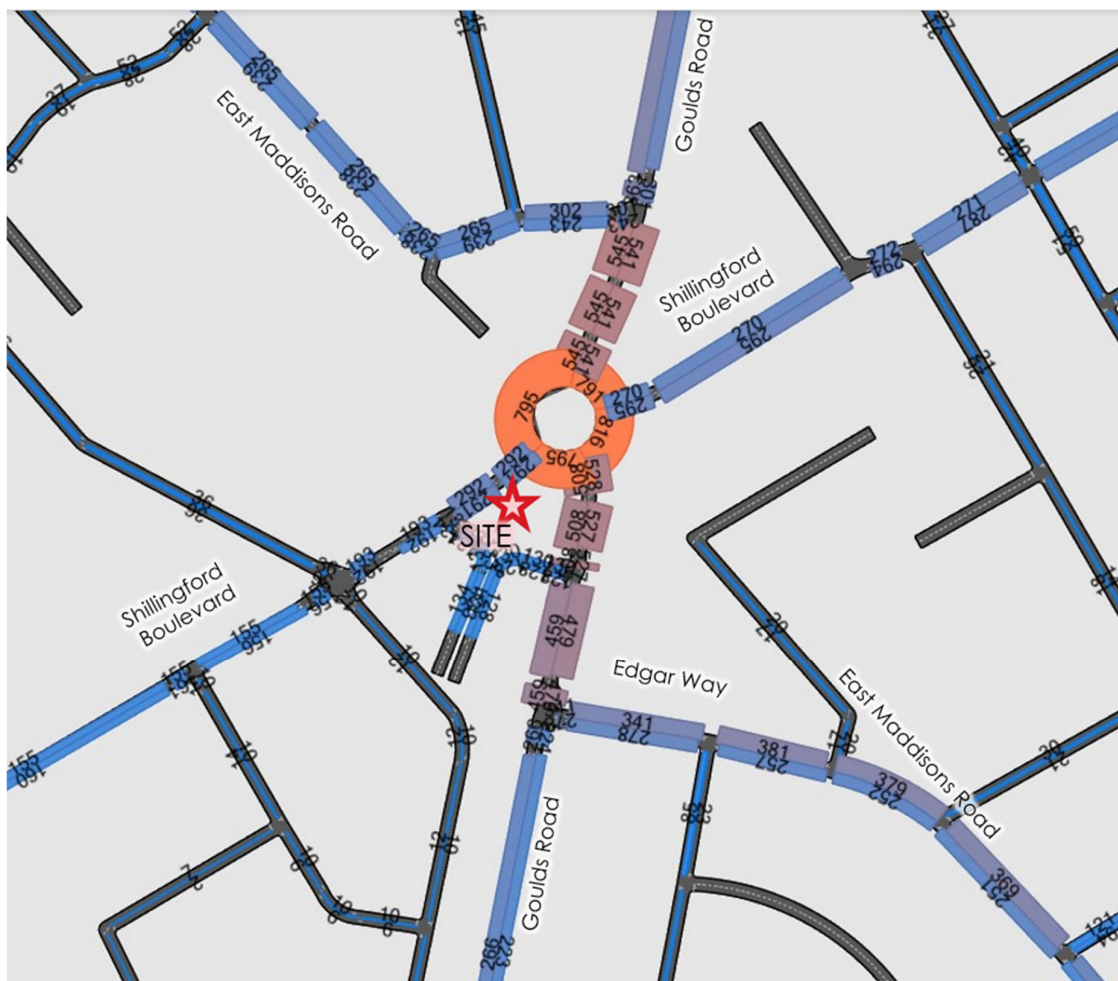


Figure 10-2: 2040 PM Peak Traffic Volumes with Supermarket

The forecast traffic volumes show the following changes in traffic volumes on the road network.



Table 10-2: Supermarket Traffic Distribution

Road	Base ⁴ Traffic volume (vph)	With Supermarket Traffic Volume (vph)	Change (vph)
Goulds Road north of East Maddisons Road	662	664	+2
East Maddisons Road north of Goulds Road	510	545	+35
Shillingford Boulevard east	483	565	+82
Edgar Way	470	619	+149
Goulds Road south	542	489	-53
Shillingford Boulevard west	296	385	+89

The total change in traffic volume across these roads is an increase of 304vph (compared with total generation of 526vph), representing the effect of the pass-by and diverted trips. This is likely to be a worst case as no allowance has been made in the model for the likely response that those making a trip to or from other supermarkets in the northeast of Rolleston will now make a shorter trip to the Faringdon Oval supermarket.

10.3 Transport Network Performance

Transport network performance statistics have been extracted for accesses and intersections in the vicinity of the site. The relative performance statistics are included in **Appendix B** and summarised in **Table 10-3** below.

Table 10-3: Intersection and Access Performance Summary

Intersection / Access	Intersection Type	Level of Service ⁵		Comment
		Base Development	With Supermarket	
Goulds Road / Shillingford Boulevard	Roundabout	LOS A	LOS A	Negligible change in performance, roundabout continues to operate with spare traffic carrying capacity
Goulds Road / Edgar Way	Sign controlled	LOS A	LOS B	Minimal delay, change in delay is 1s/veh for right turning vehicles
Goulds Road supermarket carpark access	Sign controlled	N/A	LOS A	Minimal delay
Shillingford Blvd supermarket carpark access	Sign controlled	N/A	LOS A	Minimal delay

The results show that the performance of the road network with the supermarket will be relatively unchanged when compared to the base, and that this part of the road network will operate with very good levels of service. No specific changes to traffic controls are necessary.

⁴ The Base traffic includes a small amount of traffic generated by the consented residential development that would not occur with the supermarket. This is sufficiently small that no adjustments were made.

⁵ Level of Service (LOS) is a measure of performance based on average delay to vehicles. The LOS ranges from LOS A (essentially free flow/ minimal delay) to LOS F (higher delay / congested).



11. Vehicle Access Assessment

11.1 Goulds Road Car Park Access Point

Goulds Road has a straight and flat alignment, meaning that good visibility will be available at this access point and the other access points along this frontage. Kerbside parking restrictions associated with the proposed flush median will help to ensure driver sightlines are available.

The approximately 40m separation to Edgar Way and 90m from Shillingford Boulevard roundabout are sufficient to ensure that turning vehicle movements are sufficiently separated from intersections to avoid driver confusion.

The vehicle crossing has been designed to accommodate two-way vehicle movements, including by small service vehicles. This means that vehicles will be able to turn into the site when another vehicle is waiting to turn out, limiting effects on through traffic on Goulds Road. The vehicle crossing formation with a cut down kerb and a continuous shared path surface, supplemented by a limit line painted on the driveway, will ensure priority for shared path users which improves both safety and convenience for them. The separation between the path and the parking spaces on the site means that drivers exiting the site will be able to see along the path to give way to pedestrians and cyclists. The lower part of any signage close to the driveway and the road reserve should be kept open so it does not obstruct visibility to the shared path. This applies to all of the vehicle access points on Goulds Road and Shillingford Boulevard.

The traffic modelling indicates that the vehicle access point will operate efficiently into the future based on expected traffic volumes on Goulds Road. The flush median will allow a vehicle turning right into the site to wait without obstructing southbound vehicles, although it is noted that any delays for the right turn movement into the site will be only momentary.

11.2 Online Shopping Pick-Up Exit

The online shopping pick-up exit vehicle crossing is proposed directly opposite the eastbound traffic lane on Edgar Way. In this location, drivers exiting the site will treat the intersection as if it is a standard priority crossroad intersection. Similarly for drivers turning into Goulds Road from Edgar Way, it will not be unusual to have a vehicle waiting in the location of the exit vehicle crossing, being opposite them and to the right.

As outlined earlier, it is assessed that there could be approximately 10vph exiting the online shopping pick-up area at peak times. This volume represents an average of one vehicle movement every six minutes. This is a low volume of movements and given the Goulds Road / Edgar Way intersection is forecast to operate efficiently with low delays and minimal queuing, it is assessed that it will be able to be accommodated safely and efficiently, with a negligible effect on the operation of the intersection.

The no-stopping lines proposed with the flush median will mean unobstructed visibility will be available from the exit vehicle crossing in both directions.

11.3 Service Vehicle Access Point

As presented earlier, the service vehicle access point has been designed to accommodate two-way vehicle movements by courier vehicles (small trucks). Larger vehicles, such as truck and trailers, will require much of the driveway width when turning into the site. Given there will only be three of these vehicles entering the site per day, and low volumes of exiting vehicles meaning any conflicts will be infrequent, this is considered acceptable. The alternative of having a wider driveway would increase the area of potential conflicts, including for shared path users, and would not be appropriate in the local residential environment.

The no-stopping lines proposed with the flush median will mean that good sightlines will be available for courier drivers exiting in this location.

The volume of vehicle movements at the loading dock vehicle crossing will be low (approximately 10-15 trucks entering the loading dock per day and expected to be 12vph made by couriers). With the forecast passing traffic volumes on Goulds Road in this location, service vehicles will be able to turn to and from the site in this location with minimal delays and impact on the safe and efficient operation of the road.



11.4 Shillingford Boulevard Car Park Access Point

The traffic modelling carried out indicates that the car park access point will operate efficiently with minimal delays or queuing. Based on this, it is considered that right turns into and out of the site in this location are supportable and accordingly a break in the median is proposed to accommodate these as outlined earlier.

The vehicle crossing and the median island east of the vehicle access point have been designed to accommodate manoeuvring by a medium rigid truck, which is considered an appropriate design vehicle given the small size of the two complementary retail tenancies. The median island break is proposed to extend a short distance to the west of the access point to allow for a small amount of queuing space for any vehicles waiting to turn right in, noting that minimal delays will be expected for this movement.

The road has a straight and flat alignment, meaning that good driver sightlines can be achieved. No-stopping lines (15m to the east and 12m to the west) are proposed to ensure that drivers exiting have clear visibility to approaching traffic and there is adequate space for vehicle manoeuvring.

The Shillingford Boulevard shared path is proposed within the reserve between the road and the site, where there will be good visibility between drivers entering and exiting the site and users of the shared path. A raised platform treatment is proposed where the path crosses the driveway, providing a safe and convenient crossing for shared path users.

11.5 Local Road Service Vehicle Exit

The local road service vehicle exit has been designed to accommodate a right turn out by a large vehicle such as a semi-trailer. The design is based on the vehicle using the full width of the road when turning out, with 0.5m clearance to the indented parking bay opposite.

Unrestricted visibility is available to the right for drivers exiting the site in this location, while visibility is restricted to the left due to the presence of a curve in the road alignment. A sightline of approximately 60m will be available in this direction. RTS 6 'Guidelines for Visibility at Driveways' recommends a sightline of at least 30m for a low volume driveway (less than 200 vehicle movements per day) on a local road with an operating speed of 40km/h. Based on the slow vehicle speeds expected around the small radius curve, it is concluded that this sightline will be more than adequate to ensure drivers can safely turn out of the site.

A sliding gate is proposed at the exit, and visibility will be available through this and the fence to ensure that drivers exiting the site have visibility to any pedestrians on the footpath, noting that pedestrian volumes will be expected to be low on this local road.

11.6 Vehicle Access Assessment Summary

The traffic modelling indicates that the vehicle access points will operate efficiently, with minimal delays and queuing expected. Based on this, right turn movements into the site will have a minimal impact on the frontage roads and can be supported, noting that space will be available within the flush median on Goulds Road and the median on Shillingford Boulevard for one or two vehicles to wait clear of through traffic. Similarly, right turn movements out will be able to be made safely and efficiently with the moderate passing traffic volumes.

The proposed vehicle crossing designs will provide priority for pedestrians and cyclists which is considered appropriate in the residential setting, with good visibility to the paths ensuring interactions can be managed safely. The designs will be capable of accommodating manoeuvring by appropriately sized design vehicles.



12. Service Vehicle Access

As described earlier, the 19.6m long, quad-axle semi-trailer, is a worst-case Woolworths delivery vehicle from a design perspective (vehicle tracking for longer truck and trailer units will be within the quad axle semi-trailer modelled).

The arterial road and collector road network, including the Goulds Road / Shillingford Boulevard roundabout, will be able to accommodate movements by this vehicle.

As already presented, the two vehicle crossings which will accommodate the largest design vehicle have been designed appropriately with adequate manoeuvring space.

Beyond the exit vehicle crossing on the local road, the 7.2m carriageway with indented parking outside of that will be able to accommodate heavy vehicle movements towards the Shillingford Boulevard extension.

At the local road intersection with the Shillingford Boulevard extension, large delivery vehicles will be required to turn right out. As indicated in **Figure 12-1**, the median to the east of the intersection has been shaped to accommodate this movement by a semi-trailer. The vehicle tracks over the kerb extension indicated on the north-eastern corner of the intersection and this area is being specially designed to accommodate this infrequent movement with a flush or mountable kerb planned. A short section of no-stopping lines is indicated east of this location so that there is adequate manoeuvring space for the large vehicle.

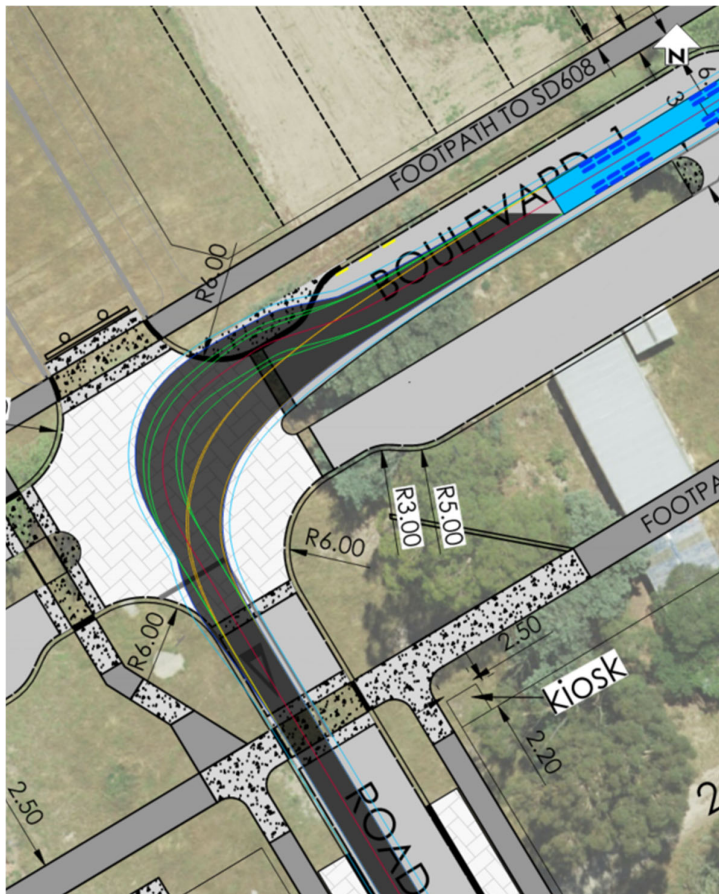


Figure 12-1: Semi-Trailer Right Turn into Shillingford Boulevard Extension

It is concluded that with the changes to the local road / Shillingford Boulevard intersection outlined, the low volume of service vehicles, including large delivery vehicles, will be safely and efficiently accommodated on the surrounding road network.



13. Car Parking Assessment

Woolworths develops supermarkets with sufficient car parking supply to meet parking demands on site throughout most of the year, to ensure a good customer experience and minimise potential for off-site effects. The proposed parking supply of 184 spaces, equates to 4.3 spaces per 100m² GFA, which aligns with a typical standalone supermarket provision. That will be sufficient to cover almost all peak parking demand periods without reliance on the on-street parking resource. This means that under typical trading conditions, parking demand will also readily be accommodated on-site.



14. Vehicle Distance Travelled

In response to the Emissions Reduction Plan developed by the Ministry for the Environment, Greater Christchurch is required to develop an urban vehicle kilometres travelled (VKT) reduction programme, in partnership with Waka Kotahi, by 2024⁶. It is considered the supermarket at the location proposed can support a reduction in urban vehicle kilometres travelled as described in this section of the report.

The growing southwest of Rolleston has no comparable supermarket offering, which requires residents of dwellings in the area to travel from the southwest to the town centre in the northwest of the town. The proposed supermarket will be closer than the town centre for a large part of the southwest of Rolleston. Those making a “primary” trip to the supermarket will travel shorter distances noting the core catchment for the supermarket is expected to be in the southwest of Rolleston. This will reduce some travel distance for that portion of trip making. It also reduces reliance on the more congested road network around the town centre for shopping trips. The separate location away from the town centre also provides a walkable and cyclable supermarket within a greater proportion of Rolleston households.

A broad assessment of distance isochrones and walking times has been carried out to demonstrate the positive travel benefits of locating a supermarket in the southwest.

Travel distance isochrones for the town centre and supermarket are shown in **Figure 14-1**.



Figure 14-1: Travel Distance Isochrones

The travel distance isochrones indicate that the supermarket in the southwest will reduce vehicle travel distances for those in the southwest of Rolleston, with those generally located south of Foster Park being located closer to the proposed supermarket than the town centre. The travel distance isochrones are also a useful consideration for cycle distances, with cycle distances for those in the southwest being reduced from 1.5km-5km to 0-2km. From the southwest, it is likely that the reduced cycling distance will support increased cycling for trips to the supermarket and local retail than the trip to and from the town centre.

Walk time isochrones for the town centre and proposed supermarket are shown in **Figure 14-2**.

⁶ Draft Canterbury Regional Land Transport Plan 2024-34



Figure 14-2: Walk Distance Isochrones

The isochrones indicate that the proposed supermarket location is well placed to cover the southwest walk catchment so that those in the southwest corner can walk to a supermarket. They indicate that there would be no more than 25 minutes walk from either the town centre or the proposed site. The walking watershed is at approximately the Goulds Road / Broadlands Drive intersection (ie those south of Broadlands Drive will have a shorter walk to the proposed supermarket than the town centre). The area surrounding the proposed supermarket is recent development so at a higher density than other parts of Rolleston so will support short walking distances from a large residential catchment, that is otherwise not achieved with reliance on the town centre.

The supermarket is proposed to be located within accessible walking distance of bus stops on Goulds Road. The bus route currently connects to the town centre, supporting employee and customer travel by public transport.

Overall, it is considered that the proposed supermarket location can support a local servicing of the residential catchment by a range of travel modes. That will reduce vehicle travel compared to reliance on town centre supermarket offerings.

15. Assessment of Accessibility by Non-Car Travel

15.1 Public Transport

The 820 Burnham / Lincoln via Rolleston bus service runs past the site, with the nearest bus stops approximately 200m from the site near the East Maddison Road / Ledbury Drive intersection. While these bus stops are within a walking distance of the proposed supermarket, the existing bus service runs infrequently and will not provide an especially convenient service for shoppers living within the supermarket's catchment.

Public transport services typically respond to demand, and with the level of residential development that has occurred and continues to occur in the south-west of Rolleston, changes to bus services can be expected. Both Goulds Road and Shillingford Boulevard will be able to accommodate bus stops within their existing / planned carriageways, and it would likely be desirable to have bus stops outside the supermarket if a service(s) runs past the site in the future.

On Goulds Road, there will be approximately 25m between the end of the flush median and where the road narrows on approach to the roundabout, within which bus stops may be able to be located. The 11m carriageway width would be suitable for bus stops to be provided without any carriageway widening. Similarly, the 6m carriageway widths on Shillingford Boulevard will be sufficient to accommodate a bus stop and a traffic lane.

The exact locations of bus stops would need to be confirmed by the Selwyn District Council when services are confirmed, with proximity to pedestrian crossing facilities a consideration.

15.2 Cycling

Many of the new roads in the south-west of Rolleston are being developed with shared paths to cater to safe cycling as well as pedestrian movements. As presented earlier, shared paths are being provided on Goulds Road, the Shillingford Boulevard extension and Edgar Way in the vicinity of the site. Shared path crossing points have been provided at the Goulds Road / Shillingford Boulevard roundabout for cyclists to connect to wider cycling infrastructure. It is considered that the existing and planned shared path network means that the site is in a location accessible by cycling from the surrounding residential neighbourhoods.

On site, the driveways will be suitable for shared use by cyclists in a slow-speed environment.

Supermarkets would not typically be expected to have high cycle parking demands due to the nature of the activity where people have groceries to take away. However, being located in a residential area, it is possible that a relatively high number of local trips to and from the supermarket are made for smaller quantities, and these could be made by bicycle. The level of cycle parking proposed for staff and customers, in accordance with District Plan minimum provision requirements for retail activities, is considered a high level of cycle parking for the supermarket which will encourage cycling as a feasible travel mode. Similarly, the cycle parking being provided in convenient locations and to an appropriate design standard will contribute to making cycling feasible for staff and customers.

15.3 Walking

The shared path and footpath network on the surrounding roads, including crossing points on Shillingford Boulevard, at the Goulds Road / Shillingford Boulevard roundabout and on Goulds Road, mean that the site will be accessible for pedestrians. These could be people walking to and from the surrounding residential neighbourhoods as well as bus passengers making use of existing (or future) bus services.

Within the site, the series of footpaths proposed, including the footpath along the front of the building connecting to the two main frontage roads and the secondary connection through the car park to near the Goulds Road / Shillingford Boulevard roundabout, will offer safe and convenient walking connections for customers and staff. Shared use of vehicle aisles by customers on foot, including those pushing trolleys, will be expected and this is typical in a supermarket environment where vehicle speeds are slow.



16. District Plan Compliance

Compliance assessments have been carried out against transport rules in both the Operative District Plan (ODP) Rural and Township Volumes, and Partially Operative District Plan (Decisions Version August 2023) (PODP).

The Inner Plains in the ODP and GRUZ in the PODP apply to the site. Technically, these are the rules that apply to the site. For this reason, a compliance assessment has been carried out against the ODP Inner Plains and PODP GRUZ rules in order that the Council has the benefit of understanding all the consent triggers that apply to the proposal. These are summarised in Section 16.1 of this report. These rules assessment identify that the transport rules trigger a Discretionary Activity Status under the ODP, and GRUZ under the PODP. However, it is understood that the outcome of this transport compliance assessment does not impact on the overall activity status of the proposal given the proposal is a Non-Complying activity for reasons that are not transport related.

The consented residential environment of the site and the commercial zoning and development near the Site means that in the true environment of the Site for the purposes of the Council's effects assessment the Site is not rural, rather it is one of residential and commercial nature. Given this, the residential transport rules (LZ in the ODP and RESZ in the PODP) are considered more helpful for the purposes of the Council's effects assessment. For this reason an assessment of the proposal has also been carried against the transport rules applicable in residential zones (LZ in the ODP and RESZ in the PODP) to assist with the Council's effects assessment. Rules applicable in business zones (B1 in the ODP and CMUZ in the PODP) have been considered where that may be suitable. These assessments are described in Section 16.2 of this report, and

16.1 Rural District Plan Assessments

16.1.1 ODP Rural Zone Assessment

A detailed review of the ODP rural zone transport rules is included in **Appendix C**. A summary of the identified areas of transport related non-compliance under the Operative District Plan Rural Volume is set out and briefly discussed below.

- Rule 4.5.4 triggers Discretionary Status as a result of non-compliance with:
 - 4.5.1.2 Access Design Standard - the vehicle crossings are to be formed to an urban standard, reflective of the existing and planned urban road frontage. This is considered a technical non-compliance and the assessment of the vehicle crossings in the urban environment are addressed in the alternative urban rules assessments
 - 4.5.1.3 Access Separation – four of the five vehicle crossings do not satisfy the requirements for vehicle access separation in a 60km/h speed limit environment. If the speed limit was at 50km/h it is noted only the online vehicle exit on Goulds Road opposite Edgar Way would trigger the non-compliance. The accesses are assessed in detail through this ITA.
- Rule 4.6.4 triggers Controlled Activity status as a result of the number of parking spaces, with control in respect to safety, circulation and access for pedestrians within the site and moving past vehicle crossings. This is addressed throughout this ITA.
- Rule 4.6.7 triggers Discretionary Status as a result of non-compliance with:
 - 4.6.1.4 Car Parking Dimensions – the parking stall depths are 5.0m, whereas 5.4m is required. Overall depth of stall and aisle well exceeds the minimum requirements. The width of disabled parking spaces is also non-compliant, as a shared space is used between spaces to achieve the overall width consistent with NZS4121
- Rule 9.13.2 triggers Discretionary Status due to the number of vehicle movements exceeding 60ecm/day. The supermarket traffic effects are assessed through this ITA.

16.1.2 PODP GRUZ Assessment

The detailed assessment of compliance for the PODP GRUZ provisions is included in **Appendix D**. The proposed development has the following non-compliances that affect the activity status:



- TRAN R4 – vehicle crossings located on local roads will generate more than 40vm/d, triggering restricted discretion (TRAN-MAT2).

TRANS-REQ3 – three vehicle crossings are proposed on the Goulds Road frontage, whereas two are permitted in the GRUZ. This also triggers Restricted Discretion under TRAN R4 (TRAN-MAT2). The vehicle crossings are addressed in the ITA, and the urban vehicle crossing rules assessment.

TRAN-REQ4 – Goulds Road online access does not satisfy intersection separation distance requirement from Edgar Way, and the sightline at the service access to the new road will not satisfy the 140m requirement if assessed against a 60km/h speed limit. This triggers Restricted Discretion (TRAN-MAT1 and TRAN-MAT2). Access separation is assessed in the urban rules assessment, the sightline assessed at 60km/h speed limit is unrealistic for the nature of the local road, which is likely to have an operating speed of approximately 40km/h, and 50km/h sight distance requirements are satisfied.

TRAN-REQ5 – The design of all accesses will not satisfy the rural design requirements, as an urban vehicle crossing design will be implemented to tie into the urban road frontage. This triggers Restricted Discretion (TRAN-MAT1.7 and TRAN-MAT2). Access design is discussed in detail in this ITA, and assessed under the urban rule provisions.

- TRAN R8 – As a high trip generating activity, a full Integrated Transport Assessment is required with Restricted Discretion status (TRAN-MAT8A). This ITA addresses requirements of the full ITA.

16.2 Alternative Urban District Plan Assessments

For both alternative Urban District Plan assessments, Goulds Road, Edgar Way and the Shillingford Boulevard extension have been treated as collector roads (as opposed to local roads as per the ODP road hierarchy) as this is considered their appropriate classification. All frontage roads have been assumed to have 50km/h speed limits based on their planned residential nature.

Compliance assessments for the ODP are included in **Appendix E**, and the PODP compliance assessment is included in **Appendix F**. Non-compliance with standards from both District Plans relate to the number of vehicle crossings, proximity of vehicle crossings to the Goulds Road / Edgar Way intersection, vehicle crossing widths, queuing space at the Goulds Road car park access point and traffic generation. These have been assessed and are commented on in the following sections of this report.

16.2.1 Number of Vehicle Crossings

E13.2.4.4 of the ODP allows one vehicle crossing per site in a residential zone and three vehicle crossings per site with a road frontage longer than 100m in a business zone. TRAN-REQ3 of the PODP allows three vehicle crossings per site with a road frontage longer than 100m in business and residential zones. The five vehicle crossings proposed exceeds both standards.

The site has an approximately 150m long frontage to Goulds Road, an approximately 110m frontage to Shillingford Boulevard and an approximately 30m frontage to the local road to the west.

It has been assessed earlier that the individual vehicle crossings will all be expected to operate safely and efficiently. Only single vehicle crossings are proposed on the Shillingford Boulevard extension and the local road to the west of the site and these have been assessed as appropriately located and designed.

Three vehicle crossings are proposed on Goulds Road over a relatively short distance. However, only the main car park vehicle crossing will carry high traffic volumes, with the other two only serving the online shopping pick-up area exits and service vehicles respectively. The online shopping pick-up area exit is forecast to only carry low traffic volumes (approximately 10vph) and it has been assessed that these vehicle movements will have a negligible effect on the safe and efficient operation of the Goulds Road / Edgar Way intersection. The service vehicle access point will also carry low traffic volumes and has been appropriately located and designed.

Three vehicle crossings on a 150m long frontage is not considered a high density of vehicle crossings and the spacings of the vehicle crossings are sufficient to ensure turning movements at each are well separated. Also, three vehicle crossings



on the Goulds Road frontage would be permitted under the PODP rule if the site only had frontage to Goulds Road. It is considered that the other two vehicle crossings (on the Shillingford Boulevard extension and the local road) will have no impact on the operation of the Goulds Road vehicle access arrangements.

Based on the above, it is concluded that there will be no adverse effects arising from the non-compliance with the rules related to the number of vehicle crossings.

It is noted that there could have been six vehicle crossings within the 150m length under the consented subdivision scenario, albeit these would have been low-volume residential vehicle crossings.

16.2.2 Proximity of Access Points to Goulds Road / Edgar Way Intersection

Both E13.2.2 of the ODP and TRAN-REQ4 of the PODP require vehicle crossings on collector roads with 50km/h speed limits to be at least 30m from collector road intersections, with small differences in how the separation distances are to be measured. The online shopping pick-up exit vehicle crossing and the loading dock vehicle crossing on Goulds Road are within 30m of the Goulds Road / Edgar Way intersection, regardless of how the separation distances are measured.

The performance of the two low-volume vehicle crossings close to the intersection was assessed earlier. It was concluded that they will both operate safely and efficiently, with negligible effects on the safe and efficient operation of the Goulds Road / Edgar Way intersection.

16.2.3 Vehicle Crossing Widths

Both E13.2.4.5 of the ODP and TRAN-REQ5 of the PODP require maximum vehicle crossing widths of 7m (or 8m for shared vehicle crossings in business zones). The ODP specifies widths are to be measured at the kerb whereas the PODP specifies widths are to be measured at the road boundary. Regardless of which way the vehicle crossing widths are measured, the Goulds Road car park vehicle crossing, the Goulds Road loading dock vehicle crossing, the Shillingford Boulevard car park vehicle crossing and the local road vehicle crossing are wider than the 7m maximum.

As outlined earlier, the various vehicle crossings have been designed to accommodate the appropriate design vehicle paths and they will all operate safely and efficiently, including for pedestrians and cyclists on the footpaths or shared paths along the site frontages. Vehicle crossing widths are no wider than 9m at the boundary and are considered appropriate for the activity. Path users will have priority across driveways, mitigating any concerns with crossing distances being longer than 7m. Based on the above, it is considered that there will be negligible effects on the safe operation of the frontage roads or their footpaths / shared paths arising from the vehicle crossings being wider than 7m at the boundary.

16.2.4 Goulds Road Car Park Access Point Queuing Space

E13.1.10 of the ODP requires 25.5m queuing space to be provided for more than 150 car parking spaces while the corresponding TRAN-REQ15 requirement is for 24m queuing space. Both standards allow the queuing space requirement to be apportioned between multiple vehicle access points based on their expected usage.

Almost all vehicle movements into the supermarket will be via the two car park access points on the Shillingford Boulevard extension and Goulds Road. It is considered appropriate to split the queuing space requirement evenly across these two access points. Approximately 15m queuing space will be available from the Shillingford Boulevard extension boundary through the reserve to the first car parking spaces within the site, meeting queuing space requirements. Only approximately 7m will be available from the Goulds Road boundary to the internal intersection, which is less than would be required under both the ODP and PODP requirements.

Having an internal intersection this distance into a site is not uncommon. Entering vehicles will be able to travel straight through to the front of the store or left into the online shopping pick-up area with priority, while right turns into the car parking aisle will be required to give way to opposing straight-through vehicles. Giving way to a straight through vehicle would only result in a momentary delay. If the car park area generates approximately 500vph at peak times, there would be approximately 250vph into the site and possibly 125vph into the site at each of the two main entrances. This volume would equate to approximately two vehicles per minute on average entering in each location, so any momentary delays would not be expected to result in queuing back out of the site towards Goulds Road.

The exit movement onto Goulds Road is forecast to operate efficiently so minimal queuing back into the site, with the potential to block the first aisle, would be expected.



Any delay while a vehicle reverses out of one of the car parking spaces close to the internal intersection will be momentary and as above, will be unlikely to result in queuing back out onto Goulds Road.

Based on the above assessment, it is considered that any adverse effects arising from the queuing space being 7m instead of 12m at the Goulds Road access point will be negligible.

16.2.5 High Trip Generator

A full ITA is warranted under the high trip generator rule in the PODP based on the proposed GFA, while there is a living zone traffic generation threshold in the ODP which is also exceeded. The matters of discretion relating to the PODP high trip generator rule are set out below, with comment on these.

1. *Whether the provision of access and on-site manoeuvring areas associated with the activity, including vehicle loading and servicing deliveries, affects the safety, efficiency, accessibility (including for people whose mobility is restricted) of the site, and the land transport network (including considering the network classification of the frontage road).*

Access and on-site manoeuvring areas have been assessed as suitable in this ITA.

2. *Whether the design and layout of the proposed activity promotes opportunities for travel other than private cars, including by providing safe and convenient access for travel using more active modes.*

It has been assessed that the site will be accessible by a range of non-car travel modes, and the design of the site appropriately caters to pedestrians and cyclists.

3. *Having particular regard to the level of additional traffic generated by the activity and whether measures are proposed to adequately mitigate the actual or potential effects from the anticipated trip generation (for all transport modes) from the proposed activity, including consideration of cumulative effects with other activities in the vicinity, proposed infrastructure and construction work associated with the activity.*

The traffic modelling exercise carried out indicates that the additional traffic that could be generated by the supermarket will readily be able to be accommodated on the surrounding road network, with negligible effects on its operation. Further to this, a supermarket in this location will reduce the need for vehicle trips from the south-west of Rolleston to supermarkets nearer the town centre, while the large residential catchment surrounding the site means that travel by non-car travel modes, particularly active modes, will be possible. This will reduce vehicle kilometres travelled compared to a scenario without a supermarket in the southwest of Rolleston.



17. Conclusion

The location of the supermarket, within a developing residential area with good walking and cycling infrastructure, means that it will be well-located for local trips to be made by active travel modes. The location also means that there will be reduced demand for vehicle travel from the south-west of Rolleston towards the town centre.

The traffic modelling exercise carried out showed that the roads surrounding the site will readily be able to accommodate any traffic volume increases resulting from the development of the supermarket, with negligible effects on the performance of nearby key intersections.

The vehicle access arrangements are appropriately designed to accommodate vehicle tracking requirements, while providing priority to pedestrians and cyclists on the paths fronting the site. It has been assessed that all vehicle access points will operate safely and efficiently, with negligible effects on the frontage roads resulting from traffic turning to and from the site.

The on-site layout is appropriately designed to accommodate convenient vehicle manoeuvring and access throughout the car park and loading areas. The design also provides appropriately for pedestrians walking through the site and connecting to the frontage road paths, as well as for cyclists with a good level of appropriately designed and located cycle parking proposed.

It is concluded that the proposed supermarket is well-designed and located and there are no transport-related reasons that consent should not be granted.





Appendices

Appendix A Site Layout Plan





1 PROPOSED SITE PLAN
1200 - A1, 1500 - A3

Appendix B Traffic Model Performance Outputs



Intersection										
	Base 2040					With Supermarket 2040				
	Approach	Movement	Vol	Delay	LOS	Approach	Movement	Vol	Delay	LOS
Goulds Rd & Shillingford Blvd RDBT	Goulds Rd north	L	122	4	A	Goulds Rd north	L	112	7	A
		T	407	4	A		T	358	7	A
		R	51	3	A		R	76	6	A
	N Appr Total		580	4	A	N Appr Total		546	6	A
	Shillingford Blvd east	L	71	5	A	Shillingford Blvd east	L	86	7	A
		T	72	5	A		T	121	7	A
		R	105	5	A		R	87	7	A
	E Appr Total		248	5	A	E Appr Total		294	7	A
	Goulds Rd south	L	41	2	A	Goulds Rd south	L	84	3	A
		T	305	3	A		T	288	3	A
		R	53	2	A		R	43	3	A
	S Appr Total		399	2	A	S Appr Total		414	3	A
	Shillingford Blvd west	L	52	3	A	Shillingford Blvd west	L	110	5	A
		T	58	3	A		T	90	5	A
		R	21	3	A		R	89	5	A
	W Appr Total		131	3	A	W Appr Total		289	5	A
	Intersection Total		1,358	3	A	Intersection Total		1,544	5	A
Goulds Rd & Edgar Way	Goulds Rd north	L	199	0	A	Goulds Rd north	L	253	1	A
		T	299	0	A		T	186	0	A
	N Appr Total		498	0	A	N Appr Total		439	1	A
	East Maddisons Rd	L	33	5	A	East Maddisons Rd	L	25	5	A
		R	187	9	A		R	218	9	A
	E Appr Total		220	9	A	E Appr Total		243	9	A
	Goulds Rd south	T	187	1	A	Goulds Rd south	T	202	1	A
		R	24	8	A		R	57	11	B
	S Appr Total		210	8	A	S Appr Total		259	11	B
	Intersection Total		929	9	A	Intersection Total		941	11	B
Shillingford Rd & SubDiv 1	Subdivision Rd north	L	19	2	A	Subdivision Rd north	L	32	2	A
		T	2	2	A		T	3	1	A
		R	0	-	-		R	1	2	A
	N Appr Total		21	2	A	N Appr Total		35	2	A
	Shillingford Blvd east	L	0	1	A	Shillingford Blvd east	L	6	1	A
		T	140	0	A		T	154	0	A
		R	24	2	A		R	33	2	A
	E Appr Total		165	2	A	E Appr Total		192	2	A
	Subdivision Rd south	L	0	1	A	Subdivision Rd south	L	2	1	A
		T	2	2	A		T	2	2	A
		R	8	2	A		R	7	3	A
	S Appr Total		10	2	A	S Appr Total		11	3	A
	Shillingford Blvd west	L	1	0	A	Shillingford Blvd west	L	2	1	A
		T	105	1	A		T	149	1	A
		R	1	1	A		R	1	1	A
	W Appr Total		107	1	A	W Appr Total		153	1	A
	Intersection Total		303	2	A	Intersection Total		391	3	A
Woolworths East Access	Goulds Rd north	T	498	0	A	Goulds Rd north	T	439	0	A
		R	0	-	-		R	94	5	A
	N Appr Total		498	0	A	N Appr Total		533	5	A
	Supermarket	L	0	-	-	Supermarket	L	39	1	A
		T	399	1	A		T	415	1	A
	S Appr Total		399	1	A	S Appr Total		454	1	A
	Goulds Rd west	L	0	-	-	Goulds Rd west	L	86	5	A
		R	0	-	-		R	43	9	A
	W Appr Total		0	0	A	W Appr Total		129	9	A
	Intersection Total		897	1	A	Intersection Total		1,116	9	A
Woolworths West Access	Shillingford Blvd east	L	0	-	-	Shillingford Blvd east	L	121	0	A
		T	164	0	A		T	171	0	A
	E Appr Total		164	0	A	E Appr Total		293	0	A
	Supermarket	L	0	-	-	Supermarket	L	21	1	A
		R	0	-	-		R	114	3	A
	S Appr Total		0	0	A	S Appr Total		135	3	A
	Shillingford Blvd west	T	131	1	A	Shillingford Blvd west	T	176	1	A
		R	0	-	-		R	13	2	A
	W Appr Total		131	1	A	W Appr Total		189	2	A
	Intersection Total		296	1	A	Intersection Total		616	3	A



Appendix C Operative District Plan (Rural) Assessment

Assessed as existing rural zoned, all existing and future frontage roads in site vicinity are classified as local roads

Speed limits are assessed at 60km/h for existing and future roads (based on existing speed limits)

Rule	Requirement	Provided	Compliance
Rule 4 - Roading			
4.4.1	Road and Engineering Standards The forming, installation, upgrading, maintenance or replacement of any road shall be a permitted activity if the following standards are met: 4.4.1.1 Any part of any road does not have a gradient greater than: (a) 1:6 vertical; or (b) 1:20 horizontal. 4.4.1.2 Any road is formed to the relevant standards set out in Appendix E10.3, except that E10.3.1 shall not apply to works to existing roads undertaken by Council pursuant to the Local Government Act.	Not applicable – roads being constructed to accommodate a supermarket	Yes
4.5.1.1	Access Gradient Any part of any vehicular accessway does not have a gradient greater than: (a) 1:6 vertical; or (b) 1:20 horizontal.	Topography is flat	Yes
4.5.1.2	Access Design Standard Any vehicular accessway is formed to the relevant design and formation standards set out in Appendix 10.	See Appendix 10 standards below	No , urban vehicle crossing proposed rather than rural crossings. Discretionary Activity Rule 4.5.4
4.5.1.3	Access Separation and Sight Distance Any vehicular accessway complies with the relevant separation and sight distance standards set out in Appendix 10.	See Appendix 10 standards below	No , access separation requirements not satisfied. Discretionary Activity Rule 4.5.4
4.5.1.4	Gate Position Any vehicle crossing which has a gate positioned across the vehicle crossing, has the gate either opening inwards towards the property and away from the road; or setback a minimum distance of 10 metres from the road boundary.	All fixed gates are sliding, so do not open towards the road	Yes
4.5.1.5	Vehicle Crossing Vehicle crossings providing vehicle access to a sealed road is sealed: (a) For the full length of the vehicle crossing; and (b) From the edge of the carriageway to the property entrance or for the first 10 metres.	Fully sealed access and site	Yes
4.5.1.6	Any access to a State Highway or Arterial Road complies with the following:	Access is to local roads	Not Applicable



Rule	Requirement	Provided	Compliance
	<p>(a) No legal access is available from another lower classification road;</p> <p>(c) The vehicle accessway or vehicle crossing complies with the performance criteria given in Appendix E10.2.2, 10.2.3 and E10.2.4;</p> <p>(d) Provision is made for manoeuvring on site, so that reverse manoeuvring onto the State Highway or Arterial Road is not required.</p>		
4.5.1.7	Shared access to more than six sites shall be by formed and vested legal road and not by a private accessway	The supermarket is treated as a single site	Yes
4.5.1.8	<p>Site Access Preferences</p> <p>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.</p>	Access is to local roads	Yes
4.6.1.3	<p>Parking</p> <p>(a) all car parking associated with an activity must be located either on-site or on land adjoining the site and not on the road reserve; and</p> <p>(b) all loading (including unloading) associated with an activity must be undertaken on-site or on land adjoining the site and not within the road reserve</p>	All loading spaces and parking spaces provided on-site	Yes
4.6.1.4	<p>Car Parking Dimensions</p> <p>All car parking and loading spaces shall be formed to the relevant standard set out in Appendix 10.</p>	See Appendix 10 standards below	<p>No, dimensions of parking stall depth and disabled parking width technically non-compliant.</p> <p>Discretionary Activity 4.6.7</p>
4.6.2.1	<p>Vehicle Manoeuvring</p> <p>Any other activity [other than residential] is a permitted activity if, all vehicle manoeuvring area is of sufficient size to enable any vehicle to turn on the site and not have to reverse onto the road.</p>	On-site manoeuvring provided	Yes
4.6.3	<p>Disabled Car Parking</p> <p>Any activity which involves the provision of goods or services to the general public shall be a permitted activity if the following conditions are met:</p> <p>4.6.3.1</p> <p>One disabled carpark is provided with the first 10 carparking spaces; and one additional disabled carpark space for every additional 50 carparking spaces provided.</p> <p>4.6.3.2</p> <p>The disabled carparks are:</p> <p>(a) Located as close to the entrance to the building or the site of the activity as practical;</p> <p>(b) Sited on a level surface; and</p> <p>(c) Clearly marked as being for mobility-impaired persons.</p>	<p>184 parking spaces requires 5 spaces</p> <p>5 spaces provided, and will be located adjacent the building entrance, on a level surface and clearly marked</p>	Yes
4.6.4	Any development of a parking area with a total of 40 or more parking spaces shall be a controlled activity, in respect to safety, circulation and access for pedestrians within the site and moving past vehicle crossings.	184 spaces provided exceeds 40 parking spaces, controlled activity	Controlled Activity



Rule	Requirement	Provided	Compliance
Rule 9 – Activities			
9.13.1.2 (a)	The maximum no. of vehicle movements for a permitted activity is 60ecm/d when accessed from a formed and sealed Local Road (averaged over any one-week period).	Greater than 60ecm/d	Discretionary Activity at 9.13.2
Appendix E10 – Transport			
E10.1.1	Minimum car park dimensions: Long term: 2.4m by 5.4m, aisle of 6.2m Short term: 2.6m by 5.4m, aisle of 5.4m Disabled Parking: 3.2m by 5.4m, aisle of 6.2m (long term) or 5.8m (medium term).	Stall depth to be marked at 5.0m (overall depth plus aisle exceeds requirement). Dimensions achieved for standard short stay and staff parking spaces. Disabled parking width provided by way of shared area between spaces.	No, Technical Non Compliances
E10.1.2.1	Any area for on-site parking or loading shall be available at all times for staff and visitors during the hours of operation and shall not be diminished by any subsequent erection of any structure, storage of goods, or any other use.	Can be provided in compliance	Yes
E10.1.4.1	The gradient of any on-site parking or loading area for any non-residential activity, shall be no more than: (a) At 90° to the angle of parking – 1:16; or (b) Parallel to the angle of parking – 1:20	Can be provided in compliance	Yes
E10.1.5.1	The manoeuvring area to and from any parking space shall accommodate at least the design motor car.	Parking dimensions exceed District Plan module requirements, and provided with standard module layouts	Yes
E10.1.5.2	The manoeuvring area to and from any loading space shall accommodate at least the design truck.	Accommodating truck and trailers, refer report	Yes
E10.1.5.3	No loading space shall obstruct any on-site car parking space or any vehicle or pedestrian access.	Some informal loading (not specifically marked) expected in the car park, but will be managed to ensure it is available at all times (there is a good parking supply)	Yes
E10.1.5.4	No vehicle shall be required to reverse out of any site onto a road.	Can be provided in compliance	Yes



Rule	Requirement	Provided	Compliance
E10.2.2.1	The required minimum distance from the site accesses to any local road intersection is 60m (with speed limit of 60km/h).	Goulds Road: Service access 24m from Edgar Way Online access 3m from Edgar Way Car park access 53m from Edgar Way Shillingford Boulevard access 49m from new road to north, 61m from new road to south New local road access 110m from Shillingford Boulevard	No, 4 of the 5 accesses do not satisfy requirements with existing 60km/h speed limit
E10.2.2.2	No part of any vehicle crossing shall be located closer than 30m to the intersection of any railway line.	Not applicable	Yes
E10.2.2.4	Any activity which generates more than 40 vehicle movements in any one day, no part of any vehicle crossing onto any arterial road shall be located closer than 60m to the departure side of any intersection; and/or 30m to the approach side of any intersection.	Local road accessed, not applicable	Yes
E10.2.3.1	Vehicle crossings onto classified roads must provide the required minimum sight distance of 140m in 60km/h speed limit area.	Local roads, not applicable	Yes
E10.2.4.4.1	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 the developer's expense	Will be constructed at Applicant's expense	Yes
E10.2.4.4.5	Vehicle crossings to any site shall be constructed in accordance with Diagram E10.D if the crossing is to provide access to a commercial activity or is a heavy vehicle access.	Bespoke urban vehicle crossings proposed based on road carriageway, speed and function. Not compliant.	No, Restricted Discretionary Activity (See 4.5.1.6)



Appendix D Partially Operative District Plan Assessment (GRUZ Assessment)

Rule	Requirement	Provided	Compliance
TRAN Chapter Rules			
TRAN-R4	<p>Vehicle Crossings GRUZ 1</p> <p>a)The vehicle crossing is located no closer to an intersection with a State Highway or arterial road than;</p> <ul style="list-style-type: none"> i. 60m to the departure side of any intersection; and ii. 30m to the approach side of any intersection; and <p>b)The vehicle crossing does not service any:</p> <ul style="list-style-type: none"> i. Service station; ii. Truck stop; or iii. Activity that generates more than 40vm/d. <p>And this activity complies with the following rule requirements: TRAN-REQ2 Access restrictions TRAN-REQ3 Number of vehicle crossings TRAN-REQ4 Siting of vehicle crossings TRAN-REQ5 Vehicle crossing design and construction TRAN-REQ6 Vehicle crossing surface</p>	<p>Vehicle crossings on local roads, activity generates more than 40vm/d</p> <p>Refer to assessment of TRAN-REQ2 to REQ6</p>	<p>RDIS (TRAN-MAT2)</p>
TRAN-REQ2	<p>Crossing Access Restrictions GRUZ 10. Where a vehicle crossing is formed within an arterial road it shall comply with the following:</p> <p>a)No alternative legal access is available from a collector road or local road; and</p> <p>b)Sufficient on-site manoeuvring is available so reversing onto the arterial road shall not occur.</p>	<p>No vehicle crossings onto arterial roads</p>	<p>Yes</p>
TRAN-REQ3	<p>Number of vehicle crossings GRUZ 7. There are no more than two vehicle crossings per road frontage per site.</p>	<p>Three vehicle crossings proposed to Goulds Road One vehicle crossing to Shillingford Boulevard One vehicle crossing to new local road</p>	<p>RDIS (TRAN-MAT2)</p>
TRAN-REQ4	<p>Siting of vehicle crossings All zones 1. Vehicle crossing(s) shall:</p> <ul style="list-style-type: none"> a. comply with TRAN-TABLE4 Vehicle crossing distances from intersections as illustrated in TRAN-DIAGRAM1 Accessway separation from intersections (with speed limit of 60km/h or less, 30m requirement on collector roads and 20m requirement on local roads); and b. be located a minimum distance of 10m from the end of any splitter or approach island to a roundabout; and c. comply with TRAN-TABLE5 Vehicle crossing sight distances as illustrated in TRAN-DIAGRAM2 Sight distance 	<ul style="list-style-type: none"> a. 30m separation to nearest intersections achieved at Shillingford Boulevard vehicle crossing. Goulds Road car park vehicle crossing more than 30m from Edgar Way and roundabout. Online exit and service vehicle access point within 30m of Edgar Way intersection. Local road service vehicle exit more than 20m from any intersection. b. No vehicle crossings within 10m of a roundabout island. c. 140m sightlines available at all access points, except new local road service exit access. 	<p>No, re proximity of Goulds Road access points to Edgar Way intersection</p> <p>Sightline at new local access road will not be 140m</p> <p>RDIS TRAN-MAT1 and TRAN MAT2</p>

Rule	Requirement	Provided	Compliance
	measurement and values (with existing speed limit of 60km/h, 140m requirement on collector and local roads; and d) not be formed within a State Highway.	d. No State Highways fronting site	
	5. Vehicle crossing(s) shall be no closer than 30m to the intersection of any railway line when measured from the nearest edge of the vehicle crossing to the limit line at the level rail crossing.	No railway level crossings near the site	Yes
	7. Where a vehicle crossing(s) is to be formed it shall comply with the minimum access separation distances listed in TRAN-TABLE6A - Accessway separation from other accessways	Not applicable as frontage road speed limits less than 70km/h	N/A
TRAN-REQ5	Vehicle Crossing Design and Construction GRUZ 5. Vehicle crossing(s) (excluding those on a State Highway) shall comply with the following standards: b. TRAN-DIAGRAM6 - Vehicle crossing design standards - Arterial and Collector roads where the vehicle crossing provides access to either: i. a residential unit not on a local road; or ii. any other activity on a local road, arterial road, or collector road.	TRAN-DIAGRAM6 is a rural vehicle crossing design, not suitable for the proposed environment.	RDIS B. TRAN-MAT1.7 Characteristics of the site or use a. TRAN-MAT2 Vehicle crossings and access
TRAN-REQ6	Vehicle Crossing Surface- All zones 1. Vehicle crossings where they adjoin a sealed carriageway shall be sealed for the full width and length of the vehicle crossing between the carriageway and the site boundary.	All vehicle crossings will be sealed	Yes
TRAN-R5	Vehicle accessways Assessed as not applicable as there are no vehicle accessways proposed between any of the frontage roads and the site.		
TRAN-R6	Parking, manoeuvring and loading areas (Non-residential activity, all zones) 3. Any parking, manoeuvring and loading areas associated with any activity that is not a residential activity. Where the activity complies with the following rule requirements (for GRUZ): TRAN-REQ8 Location of parking spaces TRAN-REQ9 On-site parking TRAN-REQ10 Mobility parks TRAN-REQ11 Cycle parks and facilities TRAN-REQ12 Vehicle loading areas TRAN-REQ13 Parking and loading gradients TRAN-REQ14 Access gradients TRAN-REQ15 Queuing spaces TRAN-REQ16 Vehicle manoeuvring TRAN-REQ17 Surface of parking and loading areas TRAN-REQ28 Landscape Strip for Parking Areas (N/A)		Yes
TRAN-REQ8	Location of Parking Spaces 7. All car parking associated with any activity shall be wholly on the same site where the activity operates, or on an adjoining site..	Parking will be on-site	Yes



Rule	Requirement	Provided	Compliance
TRAN-REQ9	On-Site Parking- Not applicable in GRUZ	Not Applicable	Not Applicable
TRAN-REQ10	Mobility Parking- All zones 1. All activities shall provide the following number of mobility parking spaces: a. One mobility parking space is provided with the first 20 vehicle parking spaces; b. Not less than two mobility parking spaces is provided for up to 49 vehicle parking spaces; and c. One additional mobility park space for every additional 50 parking spaces is provided Five mobility spaces required for 184 spaces. 2. All mobility parks shall comply with the design requirements listed in TRAN-TABLE10 - Minimum parking area dimensions and illustrated in TRAN-DIAGRAM13 - Parking area formation dimensions (3.6m wide x 6.1m deep)	Five mobility spaces proposed. Mobility parking spaces 3.7m wide by 6.1m deep allowing for shared spaces.	Yes
TRAN-REQ11	Cycle parks and facilities Not Applicable in GRUZ	Not Applicable	Not Applicable
TRAN-REQ12	Vehicle loading areas Not Applicable in GRUZ	Not Applicable	Not Applicable
TRAN-REQ13 and 14	Parking and loading area gradients and Maximum access gradients to parking areas	Flat site means compliance will be achieved with gradient standards.	Yes
TRAN-REQ15	Queueing Spaces Not Applicable in GRUZ	Not Applicable	Not Applicable
TRAN-REQ16	Vehicle manoeuvring- All zones 1. All activities shall provide sufficient on-site manoeuvring to ensure that vehicles do not reverse either onto or off a site which has access: c. To an accessway that serves a site with six or more vehicle parking spaces. 2. Parking and loading areas are formed so that vehicle operators do not need to undertake more than one reverse manoeuvre to exit the parking space or loading area	No reverse manoeuvring onto or off the site will be necessary. No more than one reverse required when exiting spaces.	Yes
TRAN-REQ17	Surface of vehicle parks and loading areas- 6. Any vehicle parking or loading areas expected to be used by vehicles accessing the educational facility or activity involving the retailing of goods and services to the public shall be either metalled or sealed	All parking, loading and access areas will be formed, sealed and drained.	Yes
TRAN-R8	High trip generating activities Full ITA threshold: 900m ² GLFA	4,240m ² GFA warrants a full ITA.	RDIS TRAN-MAT8A assessment matters.



Appendix E Operative District Plan (Township) Assessment

DP Rule	DP Requirement	Proposed Provision	Compliance
5.2 Vehicle Accessways- assessed as not applicable as no vehicle accessways proposed between frontage roads and site.			
5.3 Vehicle Crossings			
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	<p>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.</p> <p>For a vehicle crossing on a collector road with a 50km/h speed limit, 30m separation to a collector road intersection and 25m separation to a local road intersection required.</p> <p>For a vehicle crossing on a local road with a 50km/h speed limit, 25m separation to a collector road intersection required.</p>	<p>Goulds Road car park vehicle crossing approx. 38m from Edgar Way and 91m from Shillingford Boulevard.</p> <p>Online shopping pick-up exit opposite Edgar Way.</p> <p>Loading dock vehicle crossing approx. 11m from Edgar Way intersection.</p> <p>Shillingford Boulevard vehicle crossing approx. 50m from local road intersection to west and approx. 38m from local road intersection to east.</p> <p>Local road vehicle crossing approx. 95m from Shillingford Boulevard extension.</p>	No, see Section 15.2 re location of two vehicle crossings on Goulds Road relative to Edgar Way intersection.
E13.2.4.2 and E13.2.4.4	For all sites in a Living Zone there shall be a maximum of one vehicle crossing per site. For sites in Business zones (excluding B2A zone) there shall be a maximum of one vehicle crossing per site, except where the site has a road frontage or more than 100m in length where there may be three vehicle crossings per site.	Five accesses proposed	No, see Section 15.1 re number of vehicle crossings.
E13.2.4.5	<p>The maximum spacing and width of any vehicle crossing shall comply with Table E13.7.</p> <p>LZ: 7m minimum spacing between vehicle crossings and 4m-7m widths for non-residential activities.</p> <p>B1: 7m minimum spacing between vehicle crossings and 5m-7m widths (or 8m for shared crossings)</p>	<p>Minimum spacing of 18m between vehicle crossings on Goulds Road.</p> <p>Four of the vehicle crossings have widths greater than 7m.</p>	No, see Section 15.3 re widths of vehicle crossings.
E13.2.5	Heavy duty vehicle crossing required for sites which generate more than 100vpd	Heavy duty vehicle crossings will be provided.	Yes
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	Vehicle crossing will be sealed	Yes
5.3.1.3	The vehicle crossing complies with the relevant standards in Appendix E13.2.3		
E13.2.3	LZ: 45m sight distances required for vehicle crossing on a collector road or local road with 50km/h speed limit	45m sightlines available at all access points. 113m sightlines	Yes



DP Rule	DP Requirement	Proposed Provision	Compliance
	B1: 113m sight distances required for vehicle crossing on a collector road or local road with 50km/h speed limit	available on Goulds Road and Shillingford Boulevard.	
5.3.1.4	The site does not have access directly on to a State Highway or arterial road listed in Appendix 7	Access to collector roads / local road only	Yes
5.5 Vehicle Parking and Cycle Parking			
5.5.1.1	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 E13.1.11		
E13.1.5.2	No loading zone shall obstruct any on-site car parking space or any vehicle or pedestrian access	Loading area will not obstruct parking or access	Yes
E13.1.6	Relates to garage dimensions and manoeuvring.	Not Applicable	N/A
E13.1.7	The gradient for any on-site parking surface for any non-residential activity, shall be no more than 1:16 at 90 degrees to the angle of parking and 1:20 parallel to the angle of parking.	Site is flat and parking areas will comply	Yes
E13.1.8	The maximum average gradient of any access shall be 1 in 6. The maximum gradient shall be 1 in 4 on any straight section and 1 in 6 around curves.	Site is flat and access gradients will comply	Yes
E13.1.9	On-site manoeuvring shall be provided to ensure that no vehicle is required to reverse either onto or off a site for any access to a site that serves six or more parking spaces. 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. Vehicles shall not be required to undertake more than one reverse manoeuvre when manoeuvring out of any required parking or loading space.	No reversing onto or off site required. No reversing into parking spaces (other than parallel spaces) required. Only a single reverse manoeuvre will be required when exiting a parking space.	Yes
E13.1.10	A queuing space shall be provided on-site for all vehicles entering or exiting a parking or loading area. For more than 150 spaces, 25.5m queuing space required, which can be apportioned between the accesses in accordance with their potential usage.	Approximately 15m available at Shillingford Boulevard access point. Approximately 7m available at Goulds Road car park access point.	No, see Section 15.4 re queuing space at the Goulds Road car park access point.
E13.1.11	Any parking and loading areas which are required at night shall be illuminated to a minimum maintained level of 2 lux, with high uniformity, during the hours of operation	Car park will be illuminated as required.	Yes
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.		
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 Engineering Code of Practice.	All loading will be carried out on site. Loading area and access routes can accommodate a 19.6m semi-trailer.	Yes
E13.1.5.2	No loading zone shall obstruct any on-site car parking space or any vehicle or pedestrian access	Loading area will not obstruct parking or access	Yes
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	Five disabled spaces proposed	Yes



DP Rule	DP Requirement	Proposed Provision	Compliance
	there-of. For 184 parking spaces, five disabled spaces required.		
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.	Disabled spaces are proposed as close to the building entrance as possible, on a level surface and clearly marked for exclusive use	Yes
5.5.1.6	Cycle parking spaces are provided in accordance with the standards in Appendix E13.1.4		
E13.1.4	Any activity, other than residential activities, is to provide cycle parking at a minimum of 2 spaces and then a rate of 1 cycle space for every 5 car parking spaces required , to a maximum of 10 cycle spaces. No car parking spaces required by District Plan. Based on 184 provided car parking spaces, the maximum 10 cycle parking spaces would be required. All cycle parking required shall be provided on the same site as the activity and 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.	38 cycle parking spaces are proposed. Cycle parking is proposed near the main building entrance. Stands can comply with the Code of Practice standards	Yes
LZ Activities and Scale of Activities			
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. Local Roads: 20 per day plus 2 heavy vehicle movements per day.	Traffic generation will exceed thresholds	No, see discussion in Section 15.5.
Relevant B1 standards not applicable in residential zone			
E13.1.12	The surface of any parking, loading and associated access areas shall be formed, sealed and drained with the parking spaces permanently marked.	Parking, loading and access areas will be formed, sealed and drained with parking spaces permanently marked.	Yes
Car parking dimension requirements not referenced in rules			
E13.1.1	For any new activity, any provision made for on-site vehicle parking must be in compliance with the car park dimensions in Table E13.2. For short term 90-degree parking: 2.6m x 5.4m with a 5.4m aisle width. Disabled parking: 3.2 x 5.4m with a 5.4m aisle. Parallel parking: 2.5 x 5.4 with a 5.5m aisle width (two-way).	90-degree spaces 5.0 x 2.6m with 7.5m aisle (overall depth plus aisle exceeds requirement) Disabled spaces 3.7m x 6.1m (including shares spaces) with 7.5m aisle. Parallel parking: 2.6m wide x 6.4m deep with 5.7m wide aisle.	Yes



Appendix F Partially Operative District Plan Assessment (Urban Assessment)

Rule	Requirement	Provided	Compliance
TRAN Chapter Rules			
TRAN-R4 RESZ / CMUZ	Vehicle Crossings The vehicle crossing: <ol style="list-style-type: none"> is located in PREC6 – Rolleston Industrial Precinct and generates no more than 250vm/d; or provides shared access to sites which cumulatively generate no more than 250vm/d; or otherwise provides access to a single site. And this activity complies with the following rule requirements: TRAN-REQ2 Access restrictions TRAN-REQ3 Number of vehicle crossings TRAN-REQ4 Siting of vehicle crossings TRAN-REQ5 Vehicle crossing design and construction TRAN-REQ6 Vehicle crossing surface	Vehicle crossings provide access to a single site. Refer to assessment of TRAN-REQ2 to REQ6	
TRAN-REQ2	Crossing Access Restrictions RESZ and CMUZ: 1. A vehicle crossing shall not be formed on an arterial road where the posted speed limit is 60km/hr or more.	No vehicle crossings onto arterial roads	Yes
TRAN-REQ3	Number of vehicle crossings RESZ and CMUZ: 1. There is no more than one vehicle crossing per site, except where: <ol style="list-style-type: none"> The site has frontage to a collector road or local road, there may be a maximum of two vehicle crossings per site if each vehicle crossing is a single exit or entry (one-way flow); or The site has a road frontage of more than 100m in length, there may be a maximum of three vehicle crossings per site; or Access can be obtained to either road where the site accesses a collector road or local road, but not both; and The road is maintained by a road controlling authority. 	Five vehicle crossings proposed	No, see discussion in Section 15.1
TRAN-REQ4	Siting of vehicle crossings All zones 1. Vehicle crossing(s) shall: <ol style="list-style-type: none"> comply with TRAN-TABLE4 Vehicle crossing distances from intersections as illustrated in TRAN-DIAGRAM1 Accessway separation from intersections (with speed limit of 60km/h or less, 30m requirement on collector roads and 20m requirement on local roads); and be located a minimum distance of 10m from the end of any splitter or approach island to a roundabout; and comply with TRAN-TABLE5 Vehicle crossing sight distances as illustrated in 	<ol style="list-style-type: none"> 30m separation to nearest intersections achieved at Shillingford Boulevard vehicle crossing. Goulds Road car park vehicle crossing more than 30m from Edgar Way and roundabout. Online exit and service vehicle access point within 30m of Edgar Way intersection. Local road service vehicle exit more than 20m from any intersection. No vehicle crossings within 10m of a roundabout island. 	No, see Section 15.2 re proximity of Goulds Road access points to Edgar Way intersection



Rule	Requirement	Provided	Compliance
	TRAN-DIAGRAM2 Sight distance measurement and values (with speed limit of 50km/h, 45m requirement on collector and local roads in RESZ, 113m in CMUZ); and d) not be formed within a State Highway.	c. 45m sightlines available at all access points. 113m sightlines available on Goulds Road and Shillingford Boulevard. d. No State Highways fronting site	
	5. Vehicle crossing(s) shall be no closer than 30m to the intersection of any railway line when measured from the nearest edge of the vehicle crossing to the limit line at the level rail crossing.	No railway level crossings near the site	Yes
	7. Where a vehicle crossing(s) is to be formed it shall comply with the minimum access separation distances listed in TRAN-TABLE6A - Accessway separation from other accessways	Not applicable as frontage road speed limits less than 70km/h	N/A
TRAN-REQ5	Vehicle Crossing Design and Construction RESZ and CMUZ: 1. Vehicle crossing design and construction shall comply with TRAN-TABLE6 - Vehicle crossing width requirements and illustrated in TRAN-DIAGRAM3 - Vehicle crossing widths and separation distances. RESZ: TRAN-TABLE6 requires crossing width between 4m and 7m for non-residential activities CMUZ: TRAN-TABLE6 requires crossing width between 5m and 7m, or 8m for shared crossings	Goulds Road vehicle crossings 9.0m, 4.9m and 8.9m wide at the boundary. Shillingford Boulevard vehicle crossing 7.5m wide at the boundary. Local road vehicle crossing 7.5m wide at the boundary	No, see Section 15.3 re vehicle crossing widths
TRAN-REQ6	Vehicle Crossing Surface- All zones 1. Vehicle crossings where they adjoin a sealed carriageway shall be sealed for the full width and length of the vehicle crossing between the carriageway and the site boundary.	All vehicle crossings will be sealed	Yes
TRAN-R5	Vehicle accessways Assessed as not applicable as there are no vehicle accessways proposed between any of the frontage roads and the site.		
TRAN-R6	Parking, manoeuvring and loading areas (Non-residential activity, all zones) 3. Any parking, manoeuvring and loading areas associated with any activity that is not a residential activity. Where the activity complies with the following rule requirements (for GRUZ): TRAN-REQ8 Location of parking spaces TRAN-REQ9 On-site parking TRAN-REQ10 Mobility parks TRAN-REQ11 Cycle parks and facilities TRAN-REQ12 Vehicle loading areas TRAN-REQ13 Parking and loading gradients TRAN-REQ14 Access gradients TRAN-REQ15 Queuing spaces TRAN-REQ16 Vehicle manoeuvring TRAN-REQ17 Surface of parking and loading areas		Yes



Rule	Requirement	Provided	Compliance
	TRAN-REQ28 Landscape Strip for Parking Areas (N/A)		
TRAN-REQ8	Location of Parking Spaces RESZ: 1. All parking areas shall be on the same site from where the activity operates.	Parking will be on-site	Yes
TRAN-REQ9	On-Site Parking- RESZ and CMUZ 1. On-site parking spaces are formed to comply with the minimum dimensions listed in TRAN-TABLE10 - Minimum parking area dimensions and illustrated in TRAN-DIAGRAM13 - Parking area formation dimensions. Short term 90-degree parking: 2.6m x 5.4m with 5.8m aisle. Parallel spaces: 2.5m x 6.1m with 3.3m aisle. Mobility spaces: 3.6m x 6.1m with 5.8m aisle.	90-degree parking: 2.6m wide x 5.0m deep with 7.5m minimum aisle width (assessed as compliant since combined stall depth and aisle width greater than minimum combined required. Parallel parking: 2.6m wide x 6.4m deep with 5.7m wide aisle. Mobility spaces: 3.7m wide x 6.1m deep with 7.5m wide aisle.	Yes
TRAN-REQ10	Mobility Parking- All zones 1. All activities shall provide the following number of mobility parking spaces: a. One mobility parking space is provided with the first 20 vehicle parking spaces; b. Not less than two mobility parking spaces is provided for up to 49 vehicle parking spaces; and c. One additional mobility park space for every additional 50 parking spaces is provided Five mobility spaces required for 184 spaces. 2. All mobility parks shall comply with the design requirements listed in TRAN-TABLE10 - Minimum parking area dimensions and illustrated in TRAN-DIAGRAM13 - Parking area formation dimensions (3.6m wide x 6.1m deep)	Five mobility spaces proposed. Mobility parking spaces 3.7m wide by 6.1m deep allowing for shared spaces.	Yes
TRAN-REQ11	Cycle parks and facilities RESZ and CMUZ: 1. All activities shall comply with: a. the cycle space rates listed in TRAN-TABLE9 - Number of cycle spaces in all zones. For retail activities, 1 per 150m ² GFA for visitors and 1 per 500m ² GFA for staff. For 4,240m ² GFA, 28 visitor and 8 staff spaces required; and b. each space shall have a cycle stand or parking rack system which complies with TRAN-DIAGRAM14 - Cycle stands and parking rack systems; and c. all spaces, stands, and racks shall be: i. Established on the same site as the activity; ii. Located as close as practicable to the building's main entrance; iii. Clearly visible to cyclists entering the site; and iv. Well-lit and secure.	38 cycle spaces proposed. Cycle rails proposed in accordance with standards in several locations, including close to building entrances.	Yes
TRAN-REQ12	Vehicle loading areas- RESZ and CMUZ: 1. Each site that is used for a non-residential	Site has a dedicated loading area that does not obstruct on-	Yes



Rule	Requirement	Provided	Compliance
	<p>activity that generates more than 4hvm/d shall provide one on-site loading space.</p> <p>2. No loading area shall obstruct any on-site parking area or any vehicle or pedestrian access.</p>	site parking, vehicles or pedestrian access.	
TRAN-REQ13 and 14	Parking and loading area gradients and Maximum access gradients to parking areas	Flat site means compliance will be achieved with gradient standards.	Yes
TRAN-REQ15	<p>Queueing Spaces- RESZ and CMUZ:</p> <p>1. An on-site queueing space is provided for all vehicles entering or exiting any parking or loading area.</p> <p>2. The length of the queueing space shall comply with the dimensions listed in TRAN-TABLE12 - Parking and loading area queueing space lengths</p> <p>For 151+ spaces, 24m required. 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.</p>	<p>Approximately 15m available at Shillingford Boulevard access point.</p> <p>Approximately 7m available at Goulds Road car park access point.</p>	No, see Section 15.4 re queueing space at the Goulds Road car park access point.
TRAN-REQ16	<p>Vehicle manoeuvring- All zones</p> <p>1. All activities shall provide sufficient on-site manoeuvring to ensure that vehicles do not reverse either onto or off a site which has access:</p> <p>c. To an accessway that serves a site with six or more vehicle parking spaces.</p> <p>2. Parking and loading areas are formed so that vehicle operators do not need to undertake more than one reverse manoeuvre to exit the parking space or loading area</p>	<p>No reverse manoeuvring onto or off the site will be necessary.</p> <p>No more than one reverse required when exiting spaces.</p>	Yes
TRAN-REQ17	<p>Surface of vehicle parks and loading areas- CMUZ (No RESZ requirement)</p> <p>1. All vehicle parking, loading and associated access provided for non-residential activities shall be formed, sealed and drained.</p>	All parking, loading and access areas will be formed, sealed and drained.	Yes
TRAN-R8	<p>High trip generating activities</p> <p>Full ITA threshold: 900m² GLFA</p>	4,240m ² GFA warrants a full ITA.	See Section 15.5 for discussion on TRAN-MAT8A assessment matters.





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