Client	Date
Woolworths Group	13 May 2026

Transport Impact Assessment

Proposed Mixed-Use Development

17-23 Apsley Street, 19-23 Apsley Lane and 39 Blucher Street, Strathfieldsaye

ratio:

Project
17-23 Apsley Street, 19-23 Apsley Lane and 39 Blucher Street, Strathfieldsaye

Prepared for
Woolworths Group

Our reference
22929T

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F01	17/09/2025	Final	K. Bullock	C. Greenland
F02	06/02/2026	Amended Final	K. Bullock	C. Greenland
F03	13/05/2026	Amended Final	K. Bullock	C. Greenland

Acknowledgement of Country

We acknowledge the Traditional Owners of the land we work, live and travel on, and appreciate the rich cultures of the Aboriginal and Torres Strait Islander Peoples and their enduring connection to country.

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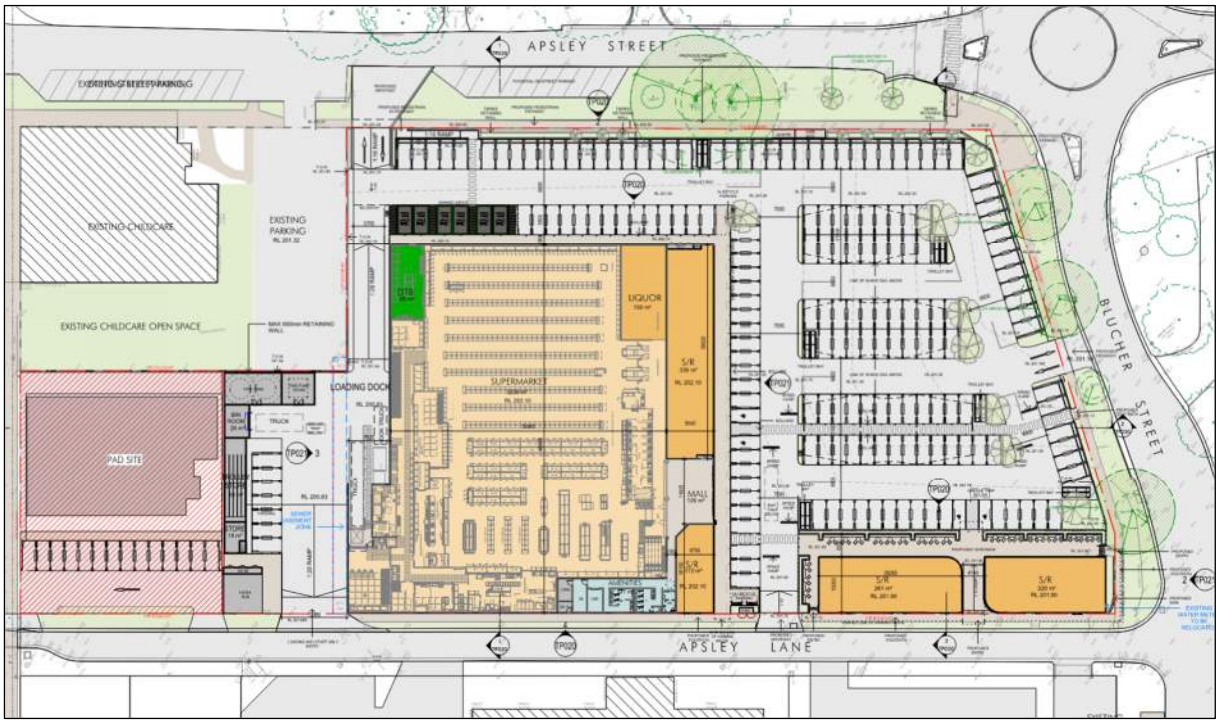
1. Introduction

1.1. Introduction

A Planning Permit is being sought for the proposed development of land addressed as 17-23 Apsley Lane and 39 Blucher Street in Strathfieldsaye for the purpose of a mixed-use development.

An excerpt of the site plan is provided in Figure 1-1, with a copy of the development plans also attached at Appendix A.

Figure 1-1: Proposed Development Plan



The proposal comprises a supermarket and specialty retail, and is supported by the following transport infrastructure items:

- A total of 189 on-site car parking spaces, including 179 standard car parking spaces, 4 disabled parking spaces and 6 'Direct to Boot' bays.
- A total of 17 on-site bicycle parking spaces, including 8 staff spaces and 9 customer spaces.
- A new all movements connection to Blucher Street, two new all-movements connections to Apsley Lane, and a new all-movements connection to Apsley Street, which will provide vehicular access to the on-site car park. It is noted that the Apsley Lane connections may be restricted to right-in/right-out only in the event that Apsley Lane is restricted to one-way traffic only as part of potential future streetscape works. This matter is further described within this report.

- The western connection to Apsley Lane and the new connection to Apsley Street will operate as loading entry and exit connections, respectively.
- Proposed upgrades to the existing Wellington Street / Blucher Street intersection to accommodate traffic signals to adequately manage vehicular movements.
- Proposed modification to the Apsley Street / Blucher Street roundabout intersection to provide a semi-mountable area to cater for the semi-trailer turning movement.
- Proposed modification to the Blucher Street / Apsley Lane intersection to cater for the turning semi-trailer turning movement.
- Construction of a pedestrian path generally abutting the boundary of the site which will connect to the existing path network.

1.2. Purpose and Structure of this Report

This report sets out an assessment of the anticipated parking, traffic and transport implications of the proposed development, including consideration of the:

- Existing traffic conditions surrounding the site.
- Parking demand likely to be generated by the proposed development.
- Suitability of the proposed parking in terms of supply and layout.
- Traffic generation characteristics of the proposed development.
- Proposed access arrangements for the site.
- Transport impact of the development proposal on the surrounding road network.

1.3. References

In preparing this report, reference has been made to the following:

- Plans for the proposed development prepared by Nettleton Tribe, Rev. C, dated 07/05/2026.
- Greater Bendigo Planning Scheme.
- Australian/New Zealand Standard, Parking Facilities Part 1: Off-Street Car Parking (AS2890.1:2004).
- Australian Standard, Parking Facilities Part 2: Off-Street Commercial Vehicle Facilities (AS2890.1:2018).
- Australian/New Zealand Standard, Parking Facilities Part 6: Off-Street Parking for People with Disabilities (AS/NZS 2890.6:2009).
- Strathfieldsaye Town Centre Urban Design Framework (UDF), Greater Bendigo City Council (February 2017).
- Existing conditions traffic data as referenced within this report.
- A desktop inspection of the subject site and its surrounds.
- Other documents as nominated.

2. Existing Conditions

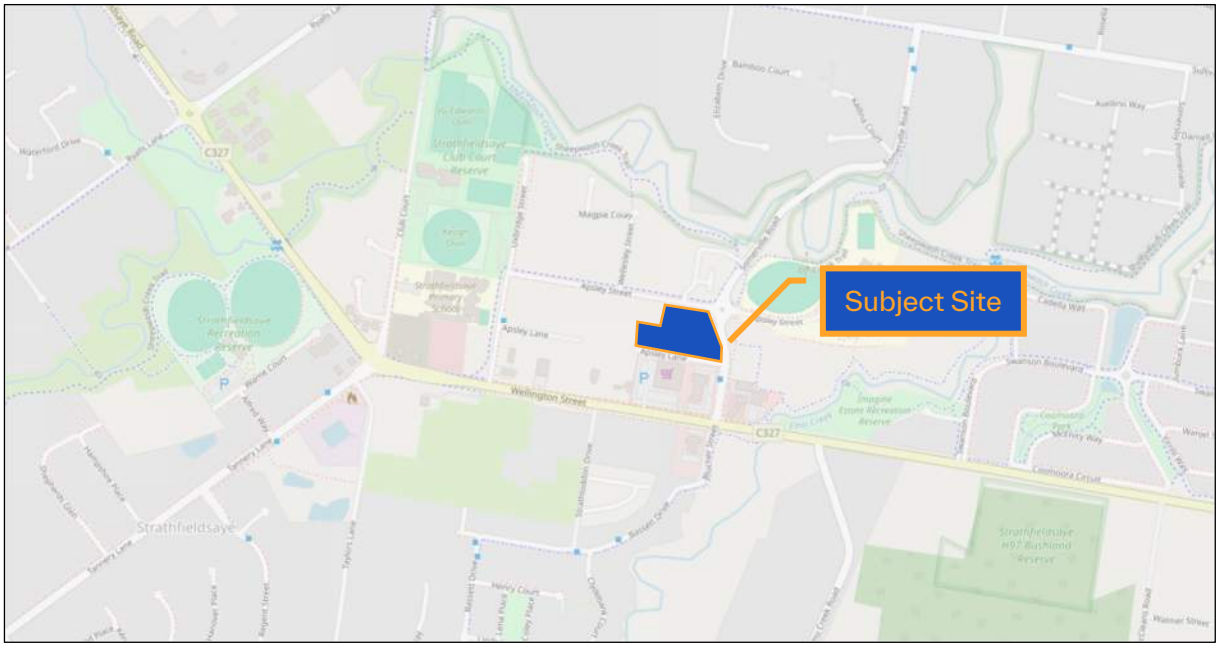
2.1. Site Location

The subject site is bound by Apsley Street (to the north), Blucher Street (to the east) and Apsley Lane (to the south) in Strathfieldsaye.

The overall site is irregular in shape and provides a frontage to Apsley Street of 202.2m, a frontage to Blucher Street of 93.42m, and a frontage to Apsley Lane of 119.0m, with an overall site area of approximately 1.46ha.

The subject site in context of the existing road network is shown in Figure 2-1.

Figure 2-1: Site Locality



(Source: Melway)

The subject site comprises three parcels of land, addressed as 39 Blucher Street, 17-23 Apsley Street and 19-23 Apsley Lane. 39 Blucher Street is currently occupied by a bus depot, with the balance of land on the site generally free from structures.

Vehicular access for the site is currently provided via one connection to Blucher Street, two connections to Apsley Street and two connections to Apsley Lane (one formal connection and one informal connection).

Key land uses in the vicinity of the site include the following:

— An IGA supermarket and associated retail uses located immediately south of the site;

— Various child care centres located immediately east and west of the site;

— A BP service station located approximately 75m southeast of the site; and

— St Francis of the Fields Primary School located approximately 250m to the east of the site.

The remaining land in the vicinity of the site is generally residential in nature. An aerial image of the subject site in context of the surrounding road network is provided at Figure 2-2.

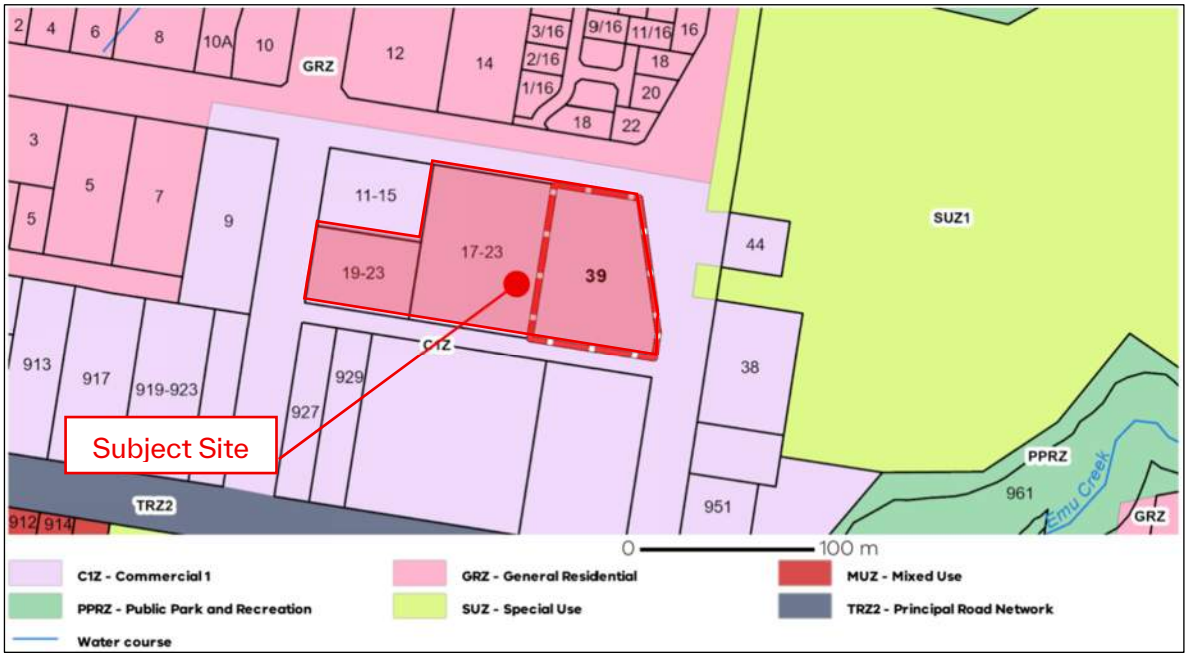
Figure 2-2: Aerial Photograph

Source: Nearmap (August 2025)

2.2. Zoning

The subject site is zoned 'Commercial 1 Zone (C2Z)' under the Greater Bendigo Planning Scheme, as shown at Figure 2-3.

Figure 2-3: Land Use Zoning Map



(Source: VicPlan)

2.3. Road Network

Blucher Street is classified as a connector street under Council's road register. In the vicinity of the site, Blucher Street accommodates a single traffic lane and kerbside parallel parking lane in each direction.

Two bus routes operate on Blucher Street past the site, with a bus stop provided immediately south of the site.

Pedestrian infrastructure is provided in the vicinity of the bus stop, including formal pedestrian paths on both sides of the road and a zebra crossing. An informal gravel path is currently provided along the frontage of the site.

A posted speed limit of 40km/hr applies to Blucher Street past the site and is shown at Figure 2-4 and Figure 2-5.

Figure 2-4: Blucher Street - View North

Source: Google Maps Streetview (December 2024)

Figure 2-5: Blucher Street - View South

Source: Google Maps Streetview (December 2024)

Apsley Street is classified as a local road under Council's road register.

In the vicinity of the site, it generally accommodates a single carriageway that is sufficient to accommodate simultaneous two-way traffic. Immediately west of the site, on-street angled parking is available on the south side of Apsley Street, which appears to have been provided with the development of a childcare centre.

A footpath is provided on the north side of Apsley Street near its intersection with Blucher Street.

A posted speed limit of 40km/hr applies to Apsley Street past the site and is shown at Figure 2-6 and Figure 2-7.

Figure 2-6: Apsley Street - View East

Source: Google Maps Streetview (June 2023)

Figure 2-7: Apsley Street - View West

Source: Google Maps Streetview (June 2023)

Apsley Lane is classified as a local road under Council's road register.

In the vicinity of the site, Apsley Lane provides an approximately 5.5m wide carriageway which is sufficient to accommodate simultaneous two-way traffic (or one traffic lane with informal kerbside parallel parking).

As part of Council's Strathfieldsaye Town Square project, Apsley Lane narrows to a single-width section immediately west of the site, where it terminates. It continues as a two-way section further west where it intersects with Uxbridge Street.

No footpaths are currently provided on either side of Apsley Lane.

Apsley Lane, in the vicinity of the site, is shown at Figure 2-8.

Figure 2-8: Apsley Lane - View West

Source: Google Maps Streetview (December 2024)

Wellington Street (Strathfieldsaye Road) is a Department of Transport and Planning (DTP) declared arterial road that is located within a 'Principal Road Network (TRZ2)' under the Greater Bendigo Planning Scheme.

In the vicinity of the site, it provides an undivided carriageway with one traffic lane and an on-road bicycle lane in each direction. An off-road shared path is provided on the south side of the road.

A posted speed limit of 60km/hr applies to Wellington Street in the vicinity of the site. A 40km/hr School Zone applies to Wellington Street immediately west of Blucher Street.

The intersection of Wellington Street and Blucher Street is a sign-controlled cross intersection. Left-turn and right-turn deceleration lanes are provided on each of the Wellington Street approach legs.

Wellington Street, in the vicinity of Blucher Street, is shown at Figure 2-9 and Figure 2-10.

Figure 2-9: Wellington Street - View West

Source: Google Maps Streetview (December 2024)

Figure 2-10: Wellington Street - View East

Source: Google Maps Streetview (December 2024)

2.4. Public Transport

The site has moderate access to existing public transport infrastructure with the nearest bus stop located immediately south of the subject site on Blucher Street.

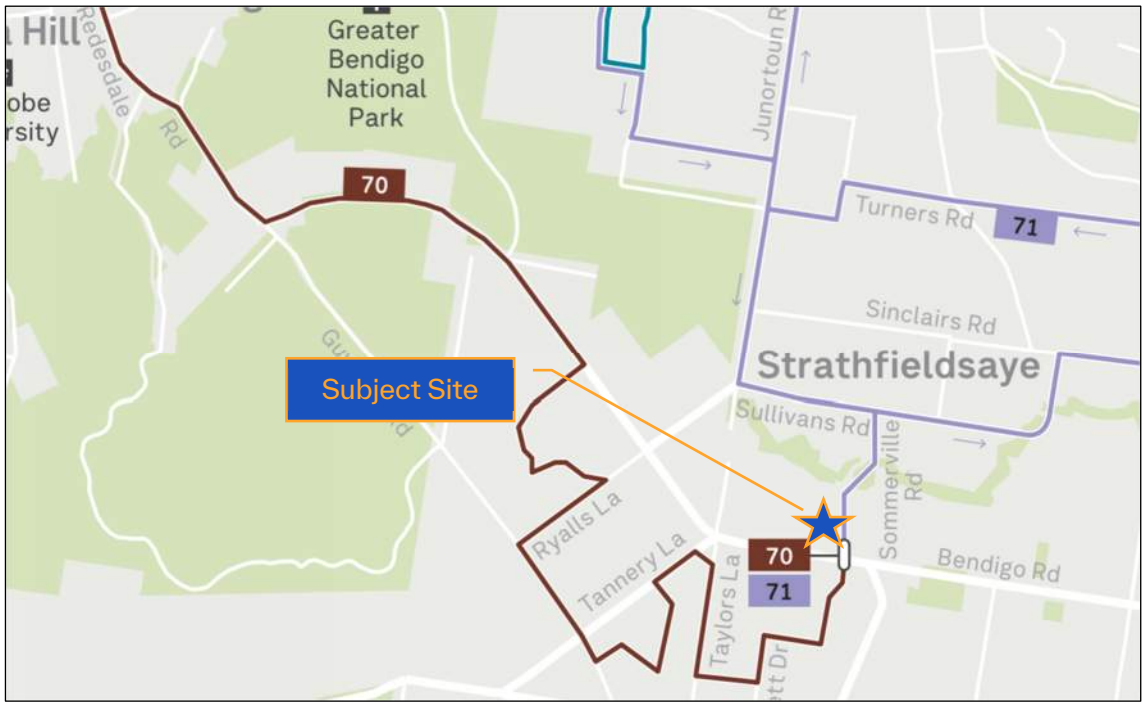
The bus stop is serviced by the following services:

- **Bus Route 70**, which provides services between Bendigo Railway Station and Strathfieldsaye via Kennington.

— **Bus Route 71**, which provides services on a Strathfieldsaye Shopping Centre loop, operating between Strathfieldsaye and Junortoun.

A map of the surrounding public transport network is provided at Figure 2-11.

Figure 2-11: Greater Bendigo Public Transport Map



Source: Public Transport Victoria

2.5. Existing Traffic Volumes

Ratio Consultants commissioned turning movement counts at the following intersections in the vicinity of the site:

— Wellington Street / Blucher Street, between 7:00am-10:00am and 3:00pm-6:00pm on Thursday 24 July 2025 and 11:00am-1:00pm on Saturday 26 July 2025.

— Blucher Street / Apsley Street, between 7:00am-9:00am and 3:00pm-6:00pm on Thursday 7 August 2025 and 11:00am-1:00pm on Saturday 9 August 2025.

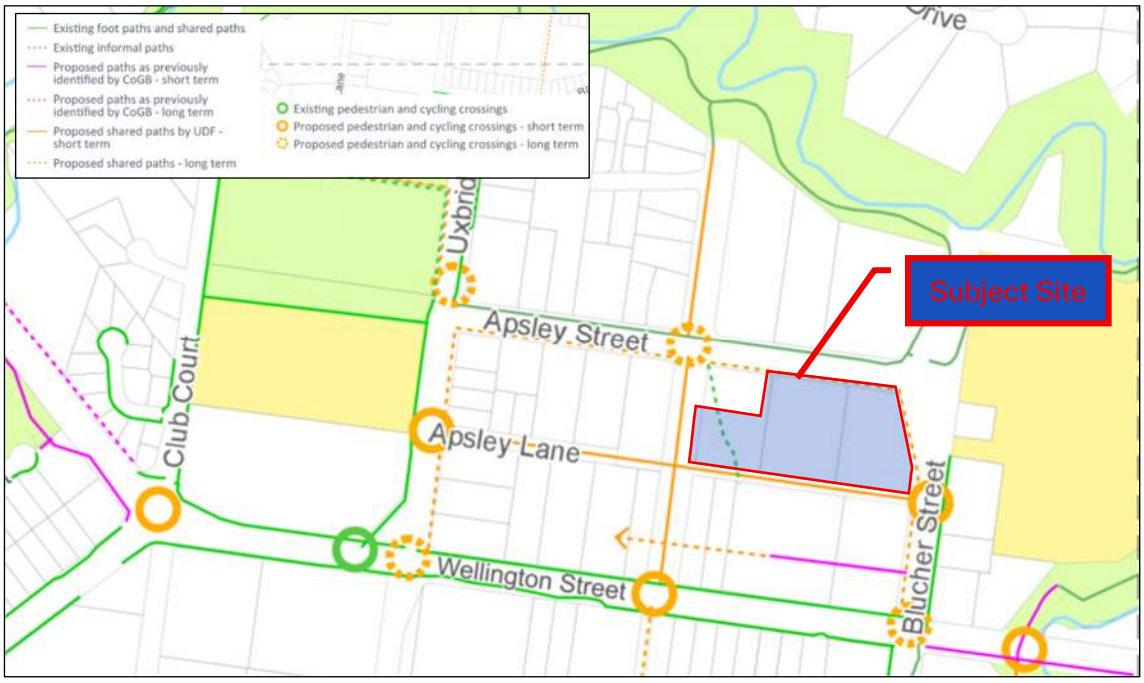
The turning movement counts identified that the road network peak hours occurred between 8:00am-9:00am and 3:00pm-4:00pm during the weekday surveys, and between 11:00am-12:00pm during the weekend surveys.

The turning movement count data is attached at Appendix B of this report.

3. Strathfieldsaye Town Centre UDF

The Strathfieldsaye Town Centre Urban Design Framework (UDF) was prepared by Greater Bendigo City Council in February 2017 to inform the future development of the Strathfieldsaye Town Centre. An excerpt of the UDF Walking and Cycling Infrastructure plan is presented at Figure 3-1.

Figure 3-1: Strathfieldsaye Town Centre UDF – Walking and Cycling Path Plan



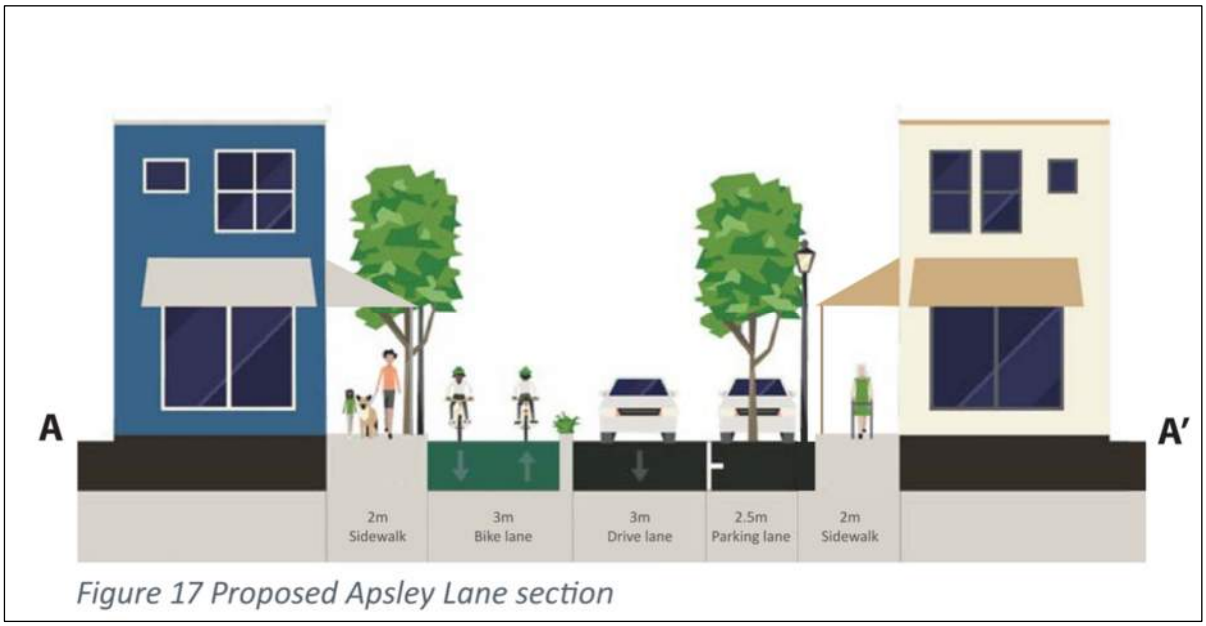
Source: Strathfieldsaye Town Centre UDF (February 2017)

A 'Town Square' is currently being constructed immediately west of the site which will provide a continuation of Apsley Lane, in addition to north-south pedestrian and bicycle links from Wellington Street to Apsley Street.

Other relevant upgrades to the surrounding transport infrastructure include:

— Apsley Lane is identified as a one-way road with a two-way bicycle lane and kerbside parallel parking lane. An indicative cross section of Apsley Lane is provided at Figure 3-2.

Figure 3-2: Potential Apsley Lane One-Way Cross Section



Source: Strathfieldsaye Town Centre UDF (February 2017)

— A pedestrian and cycling crossing on Blucher Street, noting this was constructed in 2020.

— Pedestrian and cycling crossings on Apsley Street and Wellington Street to the north and south of the Town Square, respectively.

4. Proposal

4.1. General

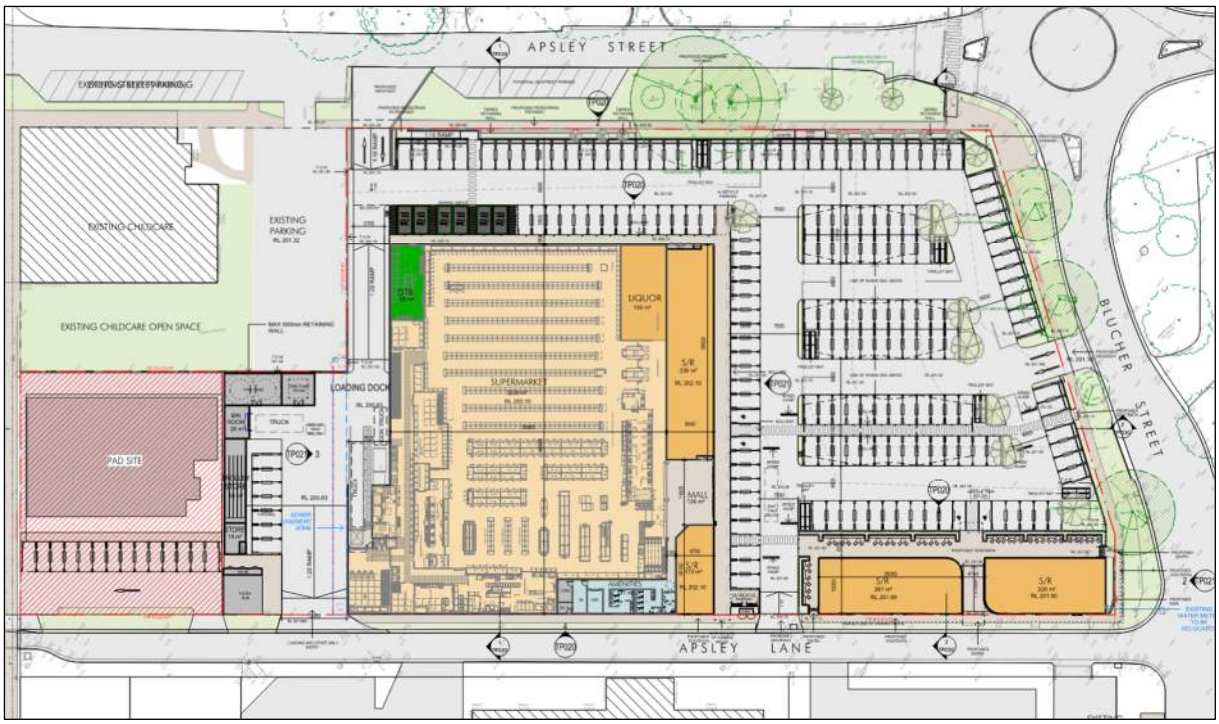
The proposal is to develop the land at 17-23 Apsley Street, 19-23 Apsley Lane and 39 Blucher Street, Strathfieldsaye for the purpose of a supermarket development, which will also include four specialty retail tenancies.

It is noted that a pad site is located at the western side of the overall site which will be subject to a separate future application(s).

The development will include an associated car parking area to cater for car and bicycle parking, as well as a separate loading and waste collection area.

For reference, a copy of the proposed site plan is provided in Figure 4-1, with the full set of architectural plans attached at Appendix A.

Figure 4-1: Site Layout Plan



A summary of the proposed development and associated transport infrastructure is detailed at Table 4-1.

Table 4-1 - Development Summary

Proposed Development Summary		
Description		**Size / Number**
Supermarket		3,473 sqm
Shop		1,077 sqm
Proposed Transport Infrastructure		
Parking	Car Parking	189 spaces
	Bicycle Parking	17 spaces, plus one shower and changeroom
Vehicle Access	Blucher Street	A new all movements connection for the main car park
	Apsley Lane	A new all movements connection which will provide access to the main car park and entry for the Direct to Boot bays A new all movements connection which will provide access to the staff car park and ingress movements for supermarket loading vehicles.
	Apsley Street	A new all movements connection which will provide access to the main car park and egress movements for supermarket loading vehicles.
Pedestrian Facilities	External Facilities	New pedestrian paths to be provided along the Blucher Street, Apsley Lane and Apsley Street frontages.
	Internal Facilities	Extensive pedestrian provisions throughout the site, including connections to the existing and proposed path network abutting the site.
Loading Facilities	All supermarket loading activities to occur within a back of house loading area that will require trucks to enter via a right in on Apsley Lane (consistent with IGA loading) and exit to turn right out only at Apsley Street. All specialty retail loading activities to occur within the main car park.	
External Road Works	Signalisation of the Wellington Street / Blucher Street intersection. Provision of a 1.5m wide footpath on the west side of Blucher Street along the frontage of the site, on the north side of Apsley Lane between Blucher Street and immediately east of the staff car park	

	access point, and on the south side of Apsley Street between Blucher Street and the car park access. Modifications to the existing roundabout island at Blucher Street / Apsley Street to be semi-mountable. Modifications to the existing Blucher Street / Apsley Lane intersection.

4.2. Key Transport Components

A summary of the key transport components of the proposal is provided as follows:

Car Parking

— It is proposed to provide a total of 189 car parking spaces on the site, including 179 standard car parking spaces, 6 'Direct to Boot' spaces, 4 disabled parking spaces.

Further discussion regarding the car parking provision is provided in Section 5 of this report.

Vehicle Access Arrangements

Vehicle access to/from the subject site is proposed as follows:

— A new all movements connection to Blucher Street, providing access to/from the main on-site car park.

— A new all movements connection to Apsley Lane, providing access to/from the main on-site car park;

— A new all movements connection to Apsley Lane, providing access to/from the staff car park and ingress for the supermarket loading area;

— A new all movements connection to Apsley Street, providing access to/from the main on-site car park and egress for the supermarket loading area.

Bicycle Parking

— A total of 17 bicycle parking spaces will be provided on the site, including 14 spaces near the supermarket entrance and 3 spaces at the northern end of the car park.

— A shower and changeroom facility will also be provided for staff.

Pedestrian Access

— New pedestrian paths will be constructed along each frontage of the site. Pedestrian access will be available via Apsley Lane and Blucher Street.

Loading

— A dedicated on-site loading dock will be provided on the west side of the proposed supermarket, capable of catering vehicles up to the size of a 19m Articulated Vehicle in the eastern dock, and vehicles up to the size of a 9.8m waste collection vehicle in the western dock.

- Loading and deliveries associated with the specialty retail tenancies will occur from within the main car park using predominantly smaller trucks and vans.
- Access to the on-site supermarket loading facilities must be managed via a Loading Management Plan given these facilities cannot be accessed independently. This document can be conditioned by way of a carefully worded Condition of Permit, should a Permit be granted.

4.3. External Transport Infrastructure Works

Wellington Street / Blucher Street Intersection

The development proposal will include the signalisation of the intersection of Wellington Street and Blucher Street, to accommodate the additional level of traffic expected to be generated by the site. The signalisation of this intersection will also provide for an improved safety outcome compared to existing conditions given the introduction of controlled turning movements.

A concept layout plan of the proposed signalised intersection is attached at Appendix C of this report.

In addition to the above, DTP has issued an 'in-principle approval' for the proposed signalised intersection treatment and design of the Wellington Street/Blucher Street signalised intersection, which is provided in Appendix D of this report.

Blucher Street / Apsley Street

The development proposal will amend the existing roundabout island at Blucher Street / Apsley Street to provide a semi-mountable island that can facilitate the turning movements of the loading vehicle required for the supermarket.

A concept layout plan of the proposed roundabout modification is attached at Appendix C of this report.

Blucher Street / Apsley Lane

The development proposal will amend the southwest corner of the Blucher Street / Apsley Lane intersection to permit semi-trailer movements for the supermarket.

A concept layout plan of the proposed intersection modifications are attached at Appendix C of this report.

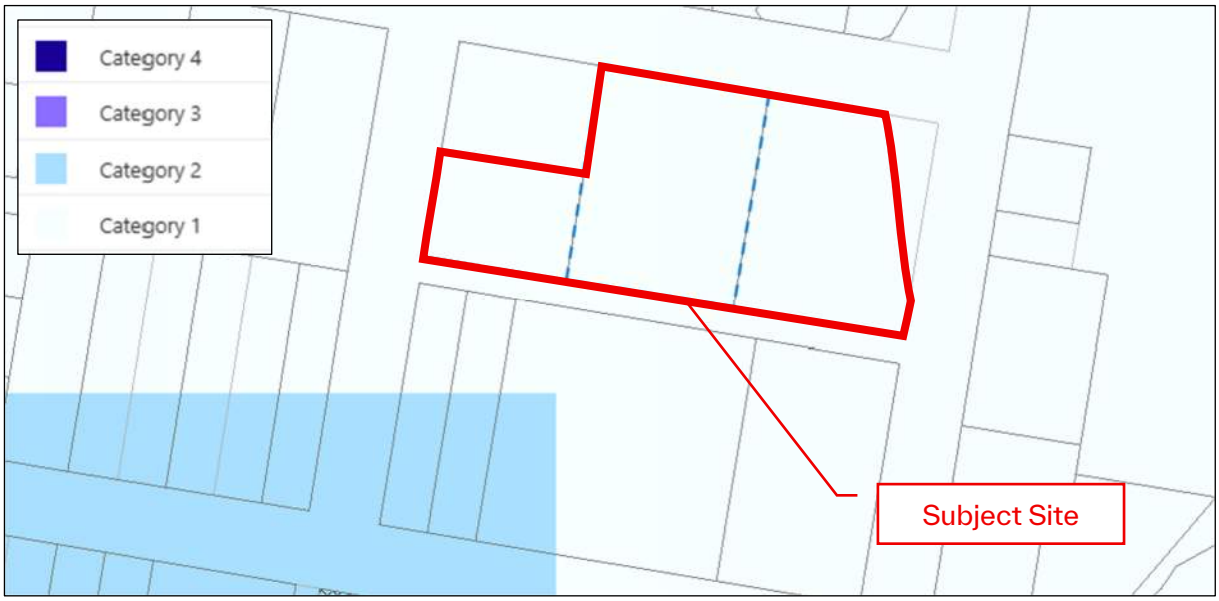
5. Car Parking Assessment

5.1. Statutory Car Parking Requirement

Car parking requirements for a range of uses are set out under Clause 52.06 of the Greater Bendigo Planning Scheme. Table 1 of Clause 52.06 sets out the car parking requirement that applies to uses listed in the Table.

Car parking requirements are determined by the site's location on the Car Parking Requirements Map (CPR Map), reproduced at Figure 5-1.

Figure 5-1: Car Parking Requirements Map



Source: VicPlan

The subject site is located within a 'Category 1' car parking area. Accordingly, the statutory car parking requirement for the proposed development has been assessed against the Category 1 rates and is summarised in Table 5-1.

Table 5-1: Statutory Car Parking Requirement (Clause 52.06)

Use	Size	Statutory Car Parking Rate (Column A)	Requirement
Supermarket	3,473 sqm	5 spaces per 100 sqm leasable floor area	173 spaces
Shop	1,077 sqm	4 spaces per 100 sqm leasable floor area	43 spaces
		Total	***216 spaces***

The above assessment indicates that the development proposal has a statutory requirement to

provide a minimum of 216 car parking spaces. The proposed provision of 189 car parking spaces on the site results in a shortfall of 27 car parking spaces from the statutory requirement.

An application to reduce the number of car parking spaces required under Clause 52.06-7 must be accompanied by a Car Parking Demand Assessment.

A Car Parking Demand Assessment and the appropriateness of allowing a reduction of on-site parking for the proposed development are discussed following.

5.2. Car Parking Demand Assessment

Clause 52.06-7 of the Greater Bendigo Planning Scheme states that a Car Parking Demand Assessment must address the following matters, as relevant:

- *The likelihood of multi-purposes trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.*
- *The variation of car parking demand likely to be generated by the proposed use over time.*
- *The short-stay and long-stay car parking demands likely to be generated by the proposed use.*
- *The availability of public transport in the locality of the land.*
- *The convenience of pedestrian and cyclist access to the land.*
- *The provision of bicycle parking and end of trip facilities in the locality of the land.*
- *The anticipated car ownership rates of likely or proposed visitors to or occupants (residents or employees) of the land.*
- *Any empirical assessment or case study.*

In this instance, an empirical assessment is considered to be the most applicable matter, as presented below.

Empirical Assessment

Supermarket

Car parking surveys were undertaken for a Woolworths supermarket in Wonthaggi (34 Murray Street, Wonthaggi), to ascertain the existing car parking demand of a regional supermarket from a major chain.

The Woolworths supermarket in Wonthaggi provides a floor area of approximately 4,066sqm, and also includes a 'bottle shop' component. These characteristics provide a similar comparison and estimate of car parking demands.

Having regard to the above characteristics, the Wonthaggi site is considered to be an applicable case study for the proposed development. It is noted that the Wonthaggi site did not include 'Direct to Boot' bays which likely provide a more conservative car parking rate than what is expected of the proposed site, which provides six Direct to Boot bays.

The peak weekday and weekend car parking demands that were recorded during the surveys were 3.88 spaces per 100sqm and 3.78 spaces per 100sqm, respectively.

Application of these rates to the proposed 3,473 sqm supermarket equates to a peak car parking demand of 134 car parking spaces.

Shop

Given the nature of the proposed development, it is envisaged that the smaller 'specialty retail' tenancies will predominantly operate as subsidiary uses to the remainder of the site.

Notwithstanding, for the purposes of this assessment, it is conservatively assumed that these tenancies will generate car parking as per the statutory requirement, equating to 43 spaces.

Total

Based on the above assessments, the proposed development is expected to generate a peak car parking demand of 177 car parking spaces.

5.3. Adequacy of Car Parking Provision

Based on the car parking demand assessment presented above, the provision of 189 car parking spaces on the site is anticipated to provide more than sufficient car parking to accommodate the peak demand generated by the site.

Accordingly, the proposed car parking provision is considered to be acceptable.

5.4. DDA Car Parking

In addition to the statutory car parking requirements set out in Clause 52.06 of the Planning Scheme, the National Construction Code (NCC) outlines the requirements for the provision of car parking for people with disabilities.

An assessment of the NCC disabled car parking requirements for the development proposal is outlined in Table 5-2.

Table 5-2: NCC Disabled Parking Requirement

Description	Building Class	NCC Disabled Parking Requirement
Supermarket, Shop	6	1 disabled space per 50 car parking spaces, or part thereof

The overall provision of 189 car parking spaces has a requirement to provide four (4) parking spaces for people with disabilities. The provision of four (4) disabled parking spaces meets the parking requirement for people with disabilities.

6. Access and Car Parking Layout

6.1. Clause 52.06-9 Assessment

An assessment of the proposed car parking layout and access arrangements against the relevant design standards of Clause 52.06-9 of the Greater Bendigo Planning Scheme is provided below.

Design Standard 1 – Accessways

Table 6-1: 'Design Standard 1 - Accessways' Assessment

Requirement	Comments
Must be at least 3m wide.	Satisfied – All accessways are provided in excess of 3m wide.
Have an internal radius of at least 4m at changes of direction or intersection or be at least 4.2m wide.	Satisfied – All internal accessway intersections are at least 4.2 metres wide at all changes of direction.
Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forward direction with one manoeuvre.	Satisfied – The staff car park is designed to permit a three-point turn manoeuvre using the B99 design vehicle.
Provide at least 2.1m headroom beneath overhead obstructions, calculated for a vehicle with a wheelbase of 2.8m.	N/A – No overhead obstructions are proposed throughout the site.
If the accessway serves four or more car spaces or connects to a road in a Transport Zone 2 or Transport Zone 3, the accessway must be designed so that cars can exit the site in a forward direction.	Satisfied – The internal layout allows all vehicles to enter and exit the site in a forward direction.
Provide a passing area at the entrance at least 6.1m wide and 7m long if the accessway serves ten or more car parking spaces and is either more than 50m long or connects to a road in a Transport Zone 2 or Transport Zone 3.	Satisfied – All external connections for the on-site car park have been designed in excess of 6.1m wide to provide opportunities for passing.
Have a corner splay or area at least 50% clear of visual obstructions extending at least 2m along the frontage road from the edge of an exit lane and 2.5m along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry	Satisfied - Pedestrian sight triangles can be provided on both sides of all of the vehicle access points, in accordance with the requirements of the Greater Bendigo Planning Scheme.

or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height.	
If an accessway to four or more car parking spaces is from land in a Transport Zone 2 or Transport Zone 3, the access to the car spaces must be at least 6m from the road carriageway.	N/A – Access is not proposed from land in a Transport Zone.

Design Standard 2 – Car Parking Spaces

Table 6-2: 'Design Standard 2 - Car Parking Spaces' Assessment

Requirement	Comments
Car parking spaces and accessways must have the minimum dimensions as outlined in Table 2 of Design Standard 2.	Satisfied – All standard car parking spaces are provided in excess of the minimum dimensions set out in Table 2 of Design Standard 2. The accessible spaces meet the dimensional requirements of AS2890.6:2022.
A wall, fence, column, tree, tree guard or any other structure that abuts a car space must not encroach into the area marked 'clearance required' on Diagram 1 of Design Standard 2, other than: - A column, tree or tree guard, which may project into a space if it is within the area marked 'tree or column permitted' on Diagram 1. - A structure, which may project into the space if it is at least 2.1m above the space.	Satisfied – The car parking spaces have been designed to accord with Diagram 1 of Design Standard 2.
Car spaces in garages or carports must be at least 6m long and 3.5m wide for a single space and 5.5m wide for a double space measured inside the garage or carport.	N/A – No garage car parking spaces are proposed.
Where parking spaces are provided in tandem (one space behind the other) an additional 500mm in length must be provided between each space.	N/A – No tandem car parking spaces are proposed.
Where two or more car parking spaces are provided for a dwelling, at least one space must be under cover.	N/A – No dwellings are proposed as part of the development.

6.2. Direct to Boot Facility

Six 'Direct to Boot' spaces are proposed on the north side of the supermarket. The use of online services to complete shopping activities provides an alternative to the traditional means of on-site car parking usage.

The location of the Direct to Boot bays has been dictated by the internal layout of the building and provides the safest and most efficient route for staff to delivery Direct to Boot groceries. Motorists will be able to access the Direct to Boot bays from the main car park and exit towards the staff car park.

The Click & Collect bays will be 3m wide and 5.5m long, with a dedicated pedestrian pathway line marked around each of the bays to allow for safe movement of people and goods. This design is in accordance with the minimum dimensional requirements set out in the Australian Standard for Off-Street Car Parking (AS/NZS 2890.1:2004) and is also consistent with Woolworths design brief requirements.

6.3. Electronic Swept Path Assessment

An assessment of critical movements to, from and throughout the on-site car park using the 'Autodesk Vehicle Tracking' software is attached at Appendix E.

In particular, simultaneous vehicle movement is available at all changes of direction throughout the car park, due to the generous design of the car parking accessways.

6.4. Summary

Based on the above, the car parking layout and access arrangements of the proposed development are in accordance with the requirements of the Greater Bendigo Planning Scheme and relevant standards and are considered satisfactory.

7. Sustainable Transport Assessment

7.1. Clause 52.34 – Bicycle Facilities

Clause 52.34 of the Planning Scheme sets out the statutory bicycle parking requirement for new developments. Table 1 of Clause 52.34-5 provides bicycle parking rates that are applicable to the development proposal.

For the purposes of this assessment, the supermarket land use is nested under the broader land use category of 'shop' under Clause 73.04 of the Planning Scheme.

The statutory bicycle parking requirement of the proposed development is summarised at Table 7-1.

Table 7-1: Statutory Bicycle Parking Requirement (Clause 52.34)

Use	Size	Bicycle Parking Rate	Requirement
Shop	4,550 sqm	1 staff space per 600sqm of leasable floor area	8 staff spaces
		1 customer space per 500sqm of leasable floor area	9 customer space

Based on the above, the proposed development has a statutory requirement to provide 8 staff bicycle parking spaces and 9 customer bicycle parking spaces.

In addition to the requirement for bicycle parking spaces, Clause 52.34-5 of the Planning Scheme also requires one shower for the first 5 employee spaces, plus one additional shower per 10 employee bicycle parking spaces thereafter. Furthermore, 1 changeroom is required for each shower.

Application of this rate to the bicycle parking requirement results in the requirement for one shower and an associated changeroom.

7.2. Adequacy of Bicycle Parking Provision

The proposed development includes a total of 17 bicycle parking spaces, which includes 14 spaces located near the main supermarket entrance and a further 3 spaces towards the northern end of the car park.

The location of all bicycle parking spaces achieves an adequate level of passive surveillance, given all spaces are located in proximity to the main car park, such that they would be considered secure and sufficient for use by staff or customers.

Additionally, the proposed development will provide one shower and an associated changeroom for staff within the building.

Accordingly, the statutory bicycle parking requirement is exceeded by the proposed provision and is considered satisfactory.

7.3. Bicycle Parking Design

Bicycle parking spaces will be provided via the following systems:

— Cora EXPO 7510 (2 units, accommodating 14 spaces)

— Cora EXPO 2704 (1 unit, accommodating 3 spaces).

Specification sheets of the above systems are attached at Appendix F, which demonstrate that the bicycle parking design is generally in accordance with the requirements of AS2890.3:2015, accommodating a 1.8m long x 0.5m wide envelope, with an adjacent 1.5m wide accessway for the majority of spaces.

It is noted that the EXPO 7510 system provides a more compact bicycle parking design which falls short of the AS2890.3:2015 requirements. Notwithstanding, the use of this system is considered appropriate, with sufficient space available on the broader site to provide additional bicycle parking (formally or informally) should this be required.

Based on the above, the design of the proposed bicycle parking is appropriate.

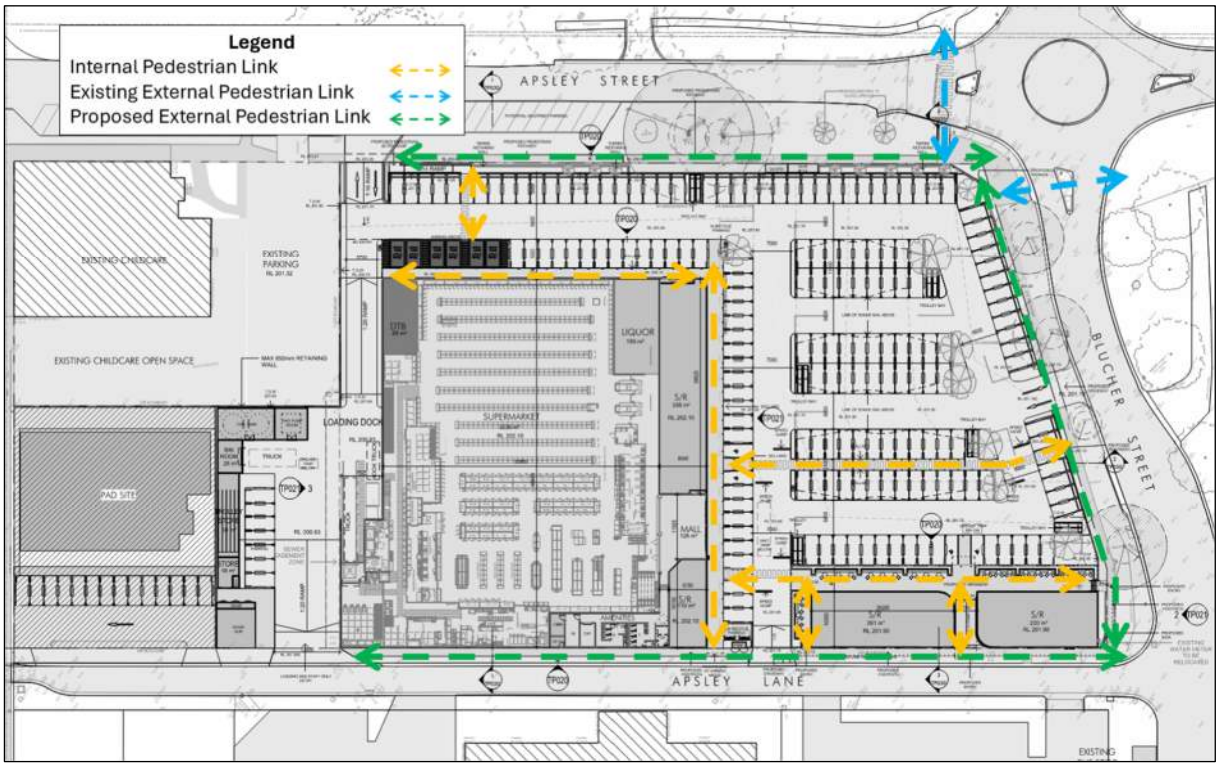
7.4. Pedestrian Facilities

The proposed development includes an excellent level of pedestrian connectivity throughout the site, as illustrated at Figure 7-1.

This includes a pedestrian path along the frontage of the building, a formal crossing point at the Direct to Boot entry point, and connections to the path network abutting the site.

In addition to the above internal pedestrian connections, the development proposal will include the construction of a footpath along the entire Blucher Street frontage, the Apsley Lane frontage between the eastern site access and Blucher Street, and the Apsley Street frontage, between Blucher Street and the loading egress connection.

Figure 7-1: Post Development Pedestrian Facilities



Based on the above, the proposed pedestrian provisions to be delivered with the development proposal are satisfactory.

8. Loading Assessment

8.1. Loading Arrangements

Clause 65.01 of the Greater Bendigo Planning Scheme states the following with respect to the loading activities of a development application:

"Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate:

The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts."

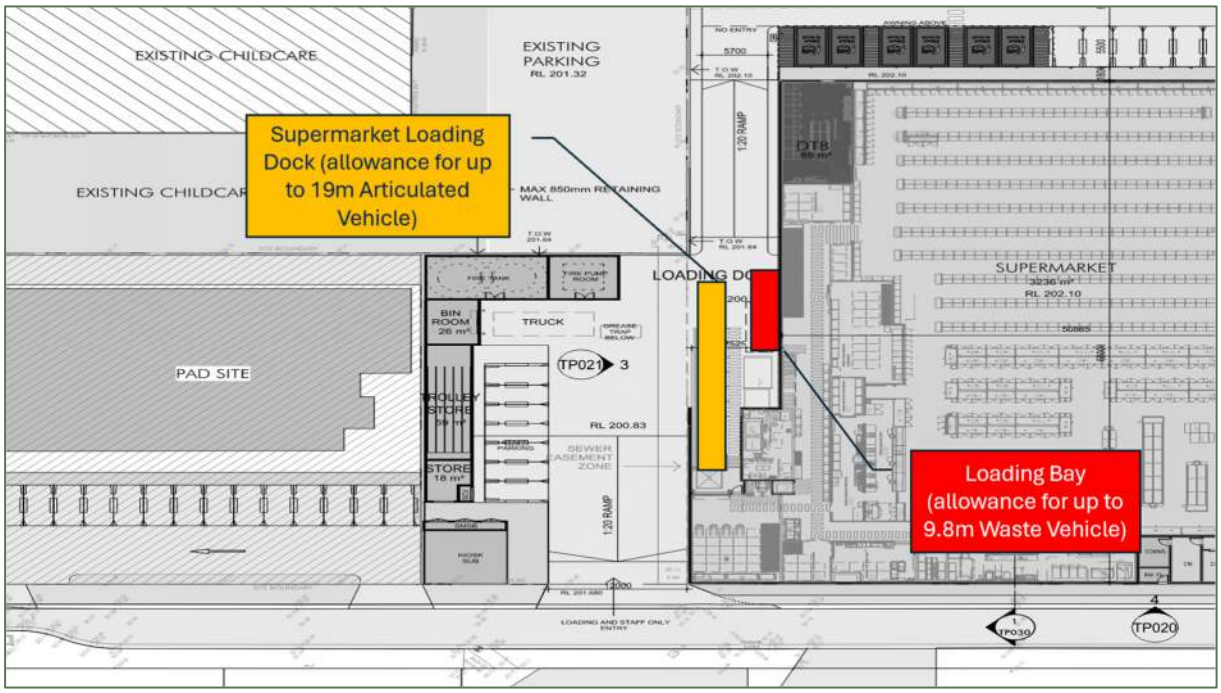
Supermarket

The proposal will include a loading area for the supermarket that is located at the west side of the building and will provide the following facilities:

- A loading dock for the supermarket tenancy which will cater for vehicles up to a 19m Articulated Vehicle; and
- A loading dock for the supermarket tenancy which will cater for vehicles up to a 9.8m waste collection vehicle.

Figure 8-1 illustrates the location of the proposed loading facilities on the site.

Figure 8-1: Supermarket Loading Locations

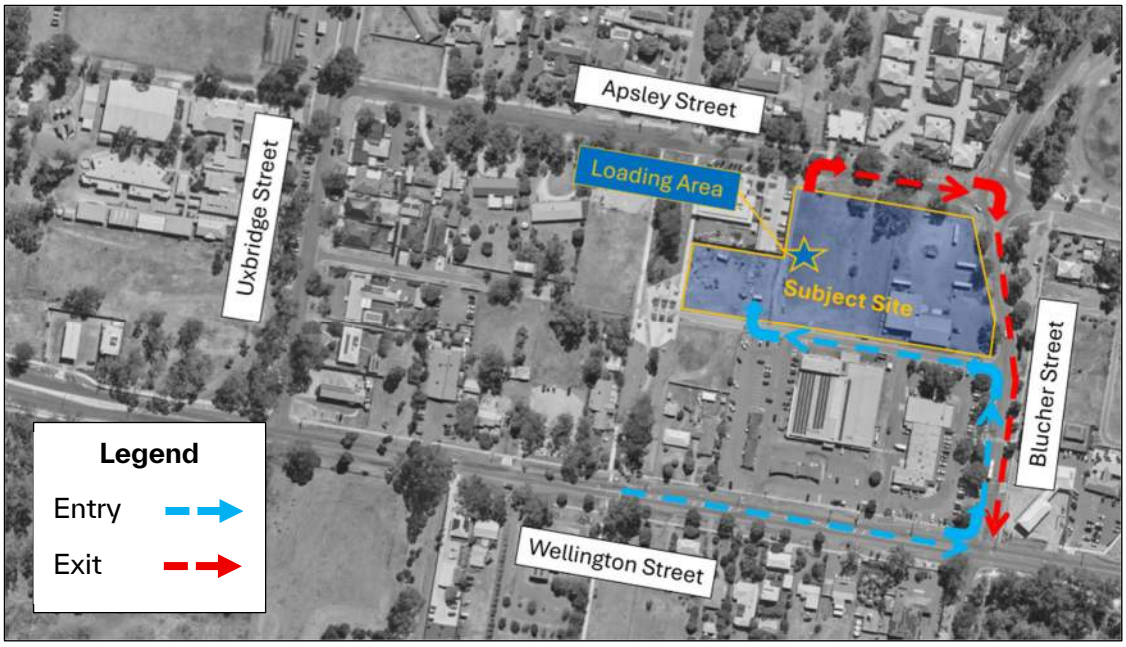


All supermarket loading vehicles will be required to enter the site via Apsley Lane (to the east) and exit the site via Apsley Street (to the east) as illustrated at Figure 8-2, with the following key aspects noted:

— Loading vehicles enter the site via the same arrangement as the IGA supermarket to the south of the site through a westbound movement on Apsley Lane.

— Loading vehicles exit the site via Apsley Street and then turn right to exit the area via Blucker Street and then the new signalised intersection proposal. As such, there are no impacts to surrounding residential properties on Apsley Street to the north-west of the site.

Figure 8-2: Loading Access Strategy



Source: Landchecker (March 2025)

Swept path diagrams are attached at Appendix D which demonstrate access to/from the loading facility, including the critical movements throughout the broader route on the surrounding local road network, using a 19m articulated vehicle. It is also important to note that this route was considered to minimise the impact of loading vehicles on the surrounding residential street network.

It is highlighted that a portion of the roundabout island at the intersection of Blucher Street / Apsley Street will require minor works to be made semi-mountable. Additionally, a minor increase to the existing intersection splay at Blicher Street / Apsley Lane is required to permit semi-trailer access. No further external works are required to facilitate access using the nominated loading vehicles, noting that the intersection of Wellington Street / Blucher Street will adequately facilitate the turning movements of 19m articulated vehicles as part of the proposed signalisation works discussed in Section 4.3.

The loading facilities have been designed to cater for dependent access (i.e. in order to access one bay, the other bay must be vacant). It is recommended that a Loading Management Plan be prepared as part of a Condition of Permit which sets out the specific loading requirements for the site to ensure the loading facility operates in a safe and efficient manner.

Specialty Retail

The specialty retail tenancies are expected to undertake loading and delivery activities using smaller trucks or vans, which could be accommodated within the on-site car parking supply when required. This arrangement is consistent with typical practice in developments of this scale.

8.2. Waste Collection Arrangements

Waste collection activities for the supermarket will occur via the following arrangements:

— Within the western supermarket loading dock via a private contractor using a hook-lift waste collection vehicle (nominal length of 9.8m). The vehicle will be required to enter the site via Apsley Lane and exit the site via Apsley Street.

— Adjacent to the west side of the supermarket loading dock via a private contractor using a front-lift waste collection vehicle (nominal length of 10.2m). The vehicle will be required to enter and exit the site via Apsley Lane.

Waste collection activities for the specialty retail tenancies will occur from within the staff car park to the west of the supermarket tenancy using an 8.8m long waste collection vehicle. The vehicle will be required to enter and exit the site via the Apsley Lane connection.

Swept path diagrams demonstrating waste collection vehicle movements for the supermarket

8.3. Adequacy of Loading and Waste Collection Arrangements

Based on the above, the proposed loading and waste collection arrangements of the site are considered to be satisfactory.

9. Traffic Assessment

9.1. Overview

The following assessment has been prepared to determine the impact of future traffic generated by the proposed development on the intersections of Wellington Street / Blucher Street and Blucher Street / Apsley Street.

The assessment has been completed for the weekday AM, weekday PM, and Saturday midday peak hours.

9.2. Traffic Generation

Supermarket

In order to determine the likely traffic generation of the proposed development in this location, guidance has been sought from traffic survey information of an existing supermarket.

This analysis involves traffic generation data from an operational Woolworths supermarket in Echuca (31-41 Murray Valley Highway, Echuca). The Woolworths in Echuca West has a total floor area of 4,021 sqm, which is comparable in size to the proposed supermarket (3,473 sqm).

Application of the traffic generation rates from this case study have also been agreed with DTP in previous supermarket developments within Regional Victoria and are considered appropriate for this location.

The existing Echuca West Woolworths generated a total of 456 vehicle movements during the weekday PM peak hour and 351 vehicle movements during the Saturday peak hour, resulting in the following peak hour traffic generation rates:

— Weekday PM peak hour: 11.3 vph / 100sqm

— Saturday peak hour: 8.7 vph / 100sqm.

Whilst the case study did not include surveys during the weekday AM peak hour, it has been assumed that the weekday AM peak hour traffic generation rate equates to 25% of the weekday PM peak hour traffic generation rate (i.e. 2.8 vph / 100sqm).

Supermarket traffic is typically split between evenly between inbound and outbound movements during each peak period (i.e. 50% inbound and 50% outbound).

Specialty Retail

Based on surveys conducted by Ratio Consultants and other consultants, specialty retail tenancies generate peak hour traffic at a rate up to 2.07 vehicle trips per 100sqm in the early evening and at a rate of up to 3.27 vehicle trips per 100sqm on a Saturday.

It has been assumed that the weekday AM peak hour traffic generation rate equates to 25% of the weekday PM peak hour traffic generation rate (i.e. 0.52 vph / 100sqm).

Typically, these land uses are supporting to the predominant supermarket land use and generally do not generate 'new' vehicle trips to the site, but rather multi-purpose trips for customers already within the shopping centre.

Specialty retail tenancy traffic is typically split evenly between inbound and outbound movements during each peak hour (i.e. 50% inbound and 50% outbound).

Total

Application of the preceding assumptions to the proposed development results in the following traffic movements during each peak hour, as summarised at Table 9-1.

Table 9-1: Development Traffic Generation

Period	Direction	Traffic Generation
Weekday AM Peak Hour	Inbound	52 vehicle trips
	Outbound	52 vehicle trips
Weekday PM Peak Hour	Inbound	208 vehicle trips
	Outbound	208 vehicle trips
Saturday Peak Hour	Inbound	169 vehicle trips
	Outbound	169 vehicle trips

In addition to the above, allowance has also been made for 'undiverted drop-in trips' for motorists travelling eastbound and westbound on Wellington Street, as specified under the *Austroads Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments (2020)*. Undiverted drop-in trips represent trips that are already present on the adjacent road network, which generate a turning movement into the site, however, do not constitute a 'new' trip on the network.

The relevant Austroads Guide indicates that 28% of trips for shopping centres with a floor area between 3,000sqm and 20,000sqm are undiverted drop-in trips. This has been accounted for in the analysis by subtracting the proportion of undiverted drop-in trips from the equivalent through movement (i.e. left-turn and right-turn entry movements on Wellington Street have been subtracted from the eastbound and westbound through movements during each period).

9.3. Traffic Distribution

Based on the configuration of the surrounding road network and location of nearby residential catchments, the following broader distribution of trips has been adopted for site generated traffic:

— 25% of trips will occur via Wellington Street to/from the east.

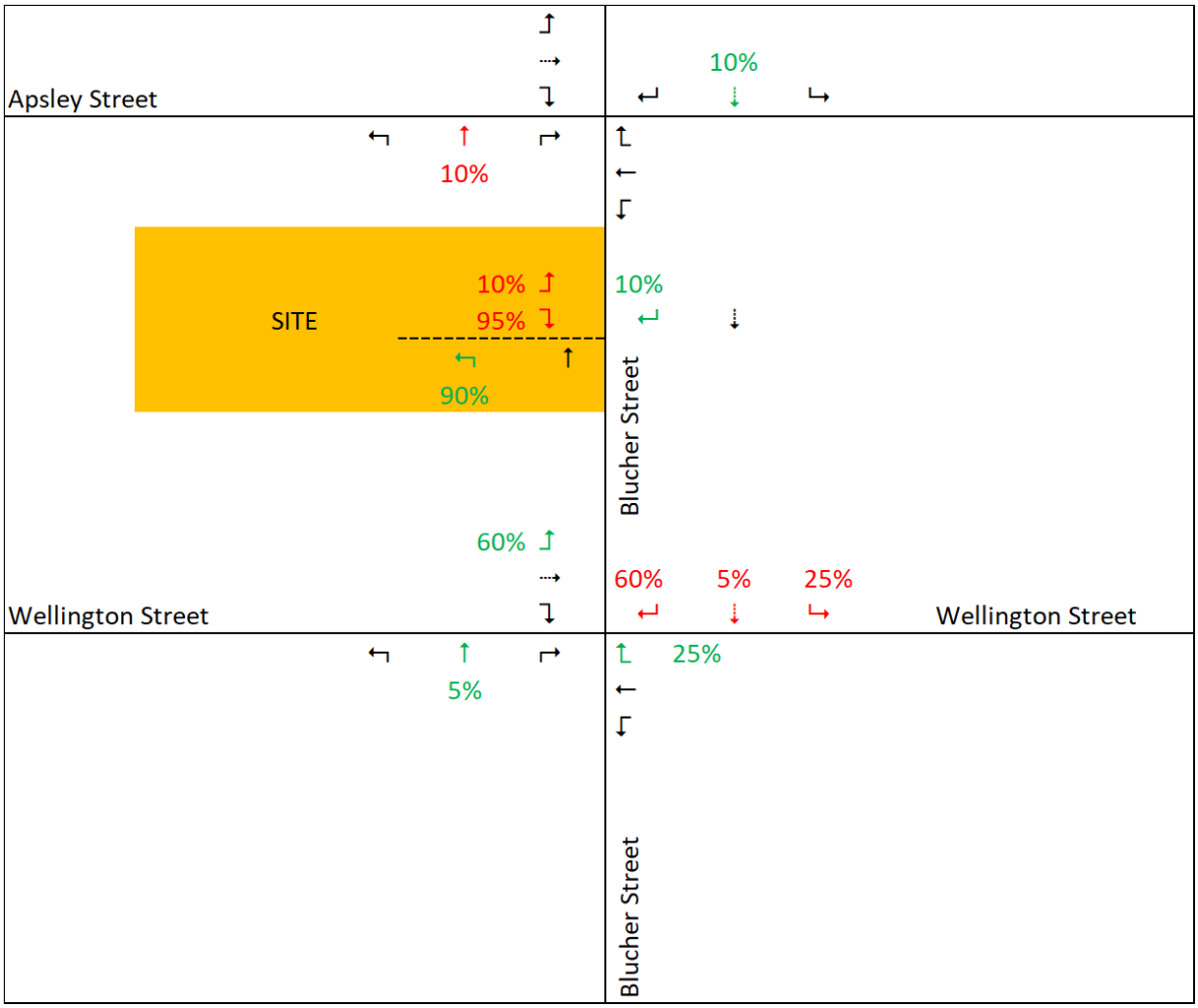
— 60% of trips will occur via Wellington Street to/from the west.

— 5% of trips will occur via Blucher Street to/from the south.

— 10% of trips will occur via Blucher Street to/from the north.

Figure 9-1 summarises the directional distribution of site generated traffic.

Figure 9-1: Development Traffic Distribution



9.4. Base Case

A 'base case' scenario has been factored into the traffic assessment to allow for natural growth of traffic on the network, associated with the development of the surrounding area.

The base case scenario has assumed a 20% increase to through traffic volumes in each direction on Wellington Street (i.e. 2% per annum for 10 years).

9.5. Post Development Traffic

The summation of base case traffic and site generated traffic for each peak period provides post development traffic volumes as shown at Figure 9-2 to Figure 9-4.

It is noted that the weekday PM peak hour has been assessed based on the anticipated site peak hour (4:30pm-5:30pm), rather than the road network peak hour.

Figure 9-2: Post Development Traffic Volumes – Weekday AM Peak Hour

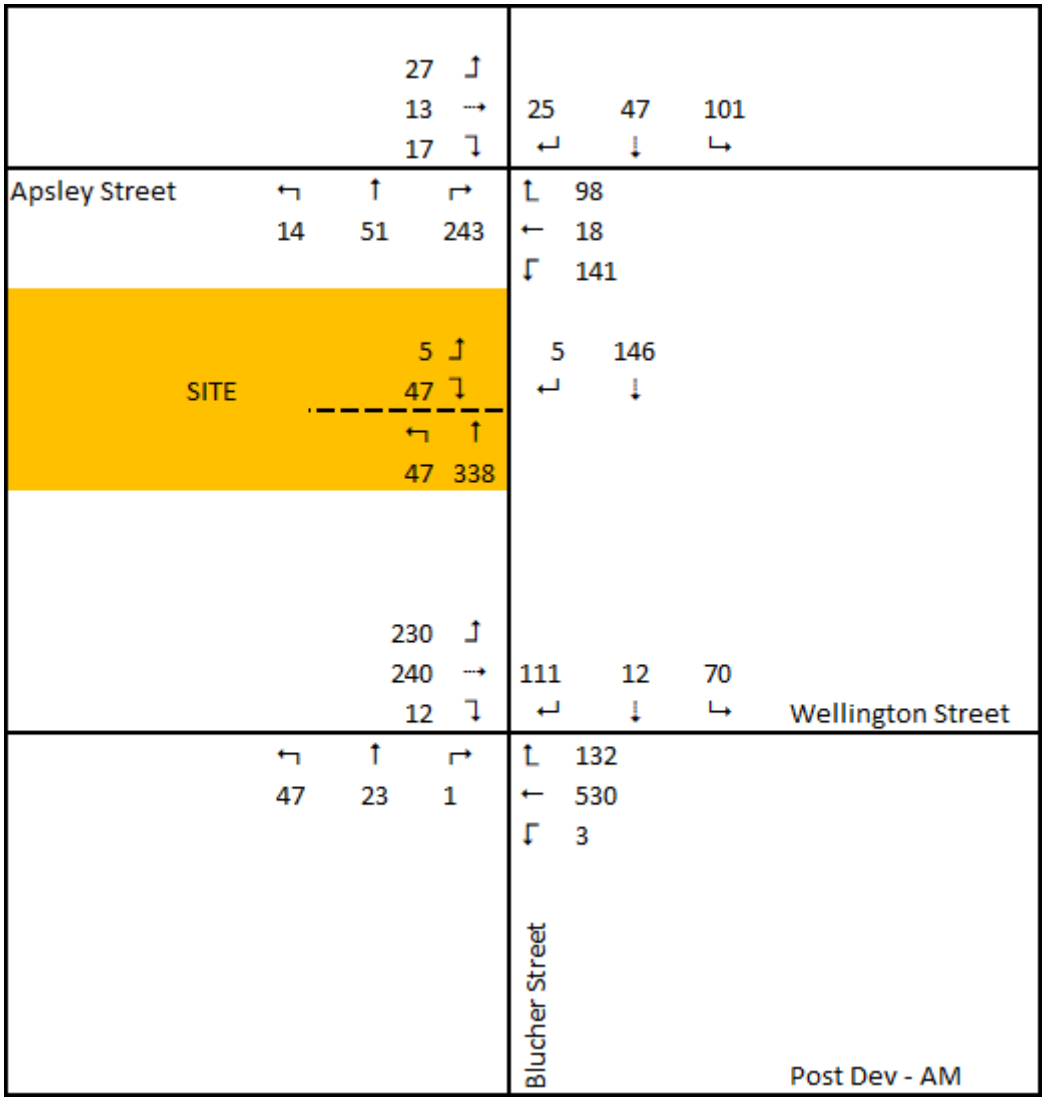


Figure 9-3: Post Development Traffic Volumes – Weekday PM Peak Hour

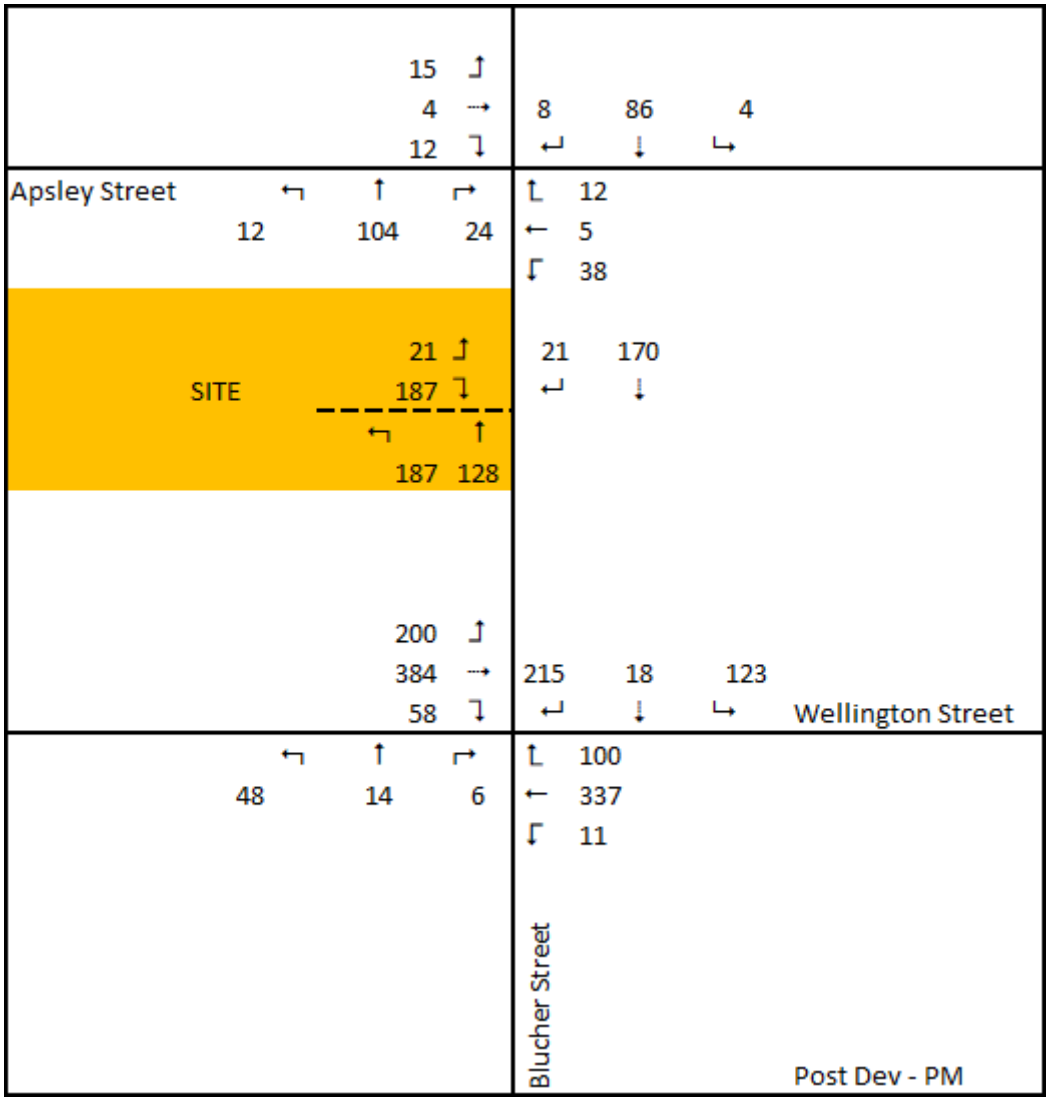
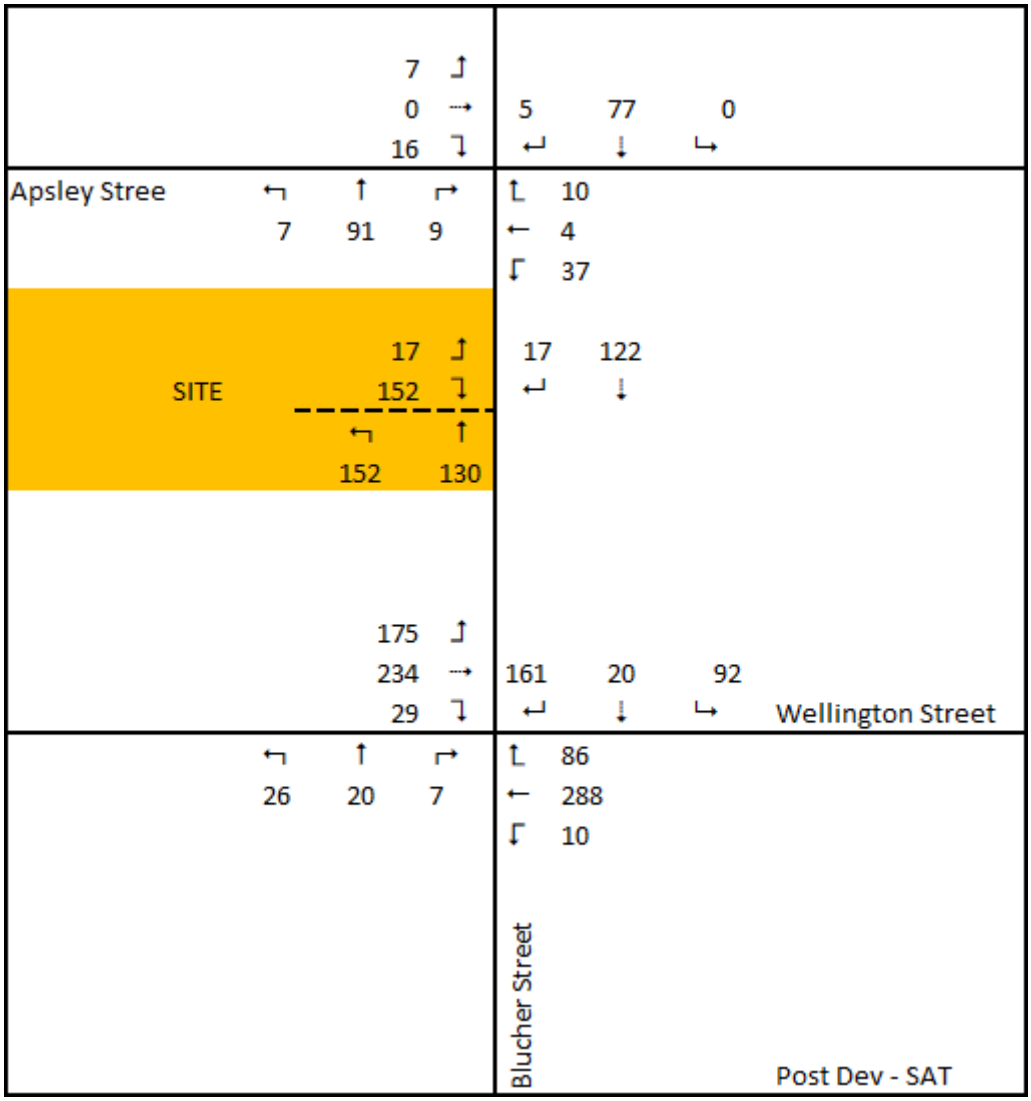


Figure 9-4: Post Development Traffic Volumes - Saturday Peak Hour



9.6. Intersection Analysis

SIDRA Intersection 10 has been used to model the post development operating conditions of the Wellington Street / Blucher Street and Blucher Street / Apsley Street intersections.

The key parameters that are used to determine the operational capacity of an intersection are the 95th percentile queue length, average delay and degree of saturation (volume to capacity ratio).

A summary of the relevant parameters is as follows:

— Degree of Saturation (DOS) is a ratio of arrival (or demand) flow to capacity. The operational rating associated with the DOS is summarised at Table 9-2.

Table 9-2: Rating of Degree of Saturation (DoS)

Degree of Saturation (DOS)	Rating
Up to 0.6	Excellent
0.61 – 0.70	Very Good
0.71 – 0.80	Good
0.81 – 0.90	Fair
0.91 – 1.00	Poor
Greater than 1.00	Very Poor

— The 95th percentile queue length is the value below which 95 percent of all queue lengths fall for a particular intersection leg, or 5 percent of all observed queue lengths exceed.

— Average Delay is the average time, in seconds, that all vehicles making a particular movement can expect to wait at an intersection.

A split phasing has been adopted at the proposed traffic signals at Wellington Street / Blucher Street. A cycle time of 80 seconds has been adopted for all periods.

The results of the intersection analysis for the post development scenario are presented at Table 9-3 to Table 9-5, with detailed outputs provided within Appendix G.

It is noted that no other scenarios have been assessed given the extent of works proposed by the Applicant to upgrade Wellington Street / Blucher Street do not provide a meaningful basis for comparison between existing conditions.

Table 9-3: Intersection Analysis Summary - Weekday AM Peak Hour

Intersection Leg		DOS	Average Delay (s)	95th Percentile Queue (m)
Wellington Street / Blucher Street				
Blucher Street (south)	Left	0.25	35	19
	Through	0.25	40	19
	Right	0.25	46	19
Wellington Street (east)	Left	0.75	30	141
	Through	0.75	24	141
	Right	0.86	53	44
Blucher Street (north)	Left	0.17	21	12
	Through	0.49	36	35
	Right	0.49	41	35
Wellington Street (west)	Left	0.34	24	48
	Through	0.34	19	51
	Right	0.34	43	3
Blucher Street / Apsley Street				
Blucher Street (south)	Left	0.27	5	12
	Through	0.27	5	12
	Right	0.27	9	12
Apsley Street (east)	Left	0.21	5	9
	Through	0.21	5	9
	Right	0.21	9	9
Blucher Street (north)	Left	0.18	6	7
	Through	0.18	6	7
	Right	0.18	10	7
Apsley Street (west)	Left	0.07	6	3
	Through	0.07	6	3
	Right	0.07	11	3

Table 9-4: Intersection Analysis Summary - Weekday PM Peak Hour

Intersection Leg		DOS	Average Delay (s)	95th Percentile Queue (m)
Wellington Street / Blucher Street				
Blucher Street (south)	Left	0.21	33	17
	Through	0.21	38	17
	Right	0.21	43	17
Wellington Street (east)	Left	0.63	32	89
	Through	0.63	27	89
	Right	0.77	50	33
Blucher Street (north)	Left	0.24	18	17
	Through	0.63	32	64
	Right	0.63	37	64
Wellington Street (west)	Left	0.38	37	46
	Through	0.82	42	118
	Right	0.44	54	17
Blucher Street / Apsley Street				
Blucher Street (south)	Left	0.10	4	4
	Through	0.10	4	4
	Right	0.10	9	4
Apsley Street (east)	Left	0.05	5	2
	Through	0.05	5	2
	Right	0.05	9	2
Blucher Street (north)	Left	0.08	4	3
	Through	0.08	5	3
	Right	0.08	9	3
Apsley Street (west)	Left	0.03	5	1
	Through	0.03	5	1
	Right	0.03	9	1

Table 9-5: Intersection Analysis Summary - Saturday Peak Hour

Intersection Leg		DOS	Average Delay (s)	95th Percentile Queue (m)
Wellington Street / Blucher Street				
Blucher Street (south)	Left	0.19	38	14
	Through	0.19	33	14
	Right	0.19	38	14
Wellington Street (east)	Left	0.58	33	76
	Through	0.58	27	76
	Right	0.58	47	26
Blucher Street (north)	Left	0.29	37	24
	Through	0.58	34	50
	Right	0.58	39	50
Wellington Street (west)	Left	0.35	31	41
	Through	0.45	26	57
	Right	0.19	44	8
Blucher Street / Apsley Street				
Blucher Street (south)	Left	0.08	4	3
	Through	0.08	4	3
	Right	0.08	9	3
Apsley Street (east)	Left	0.04	5	1
	Through	0.04	5	1
	Right	0.04	9	1
Blucher Street (north)	Left	0.06	4	2
	Through	0.06	5	2
	Right	0.06	9	2
Apsley Street (west)	Left	0.02	5	1
	Through	0.02	5	1
	Right	0.02	9	1

Based on the preceding results, it is evident that Wellington Street / Blucher Street and Blucher Street / Apsley Street intersections are expected to operate well within acceptable limits and will provide an overall improvement on the safety and operation of the surrounding road network.

Accordingly, the impact of site generated traffic on the surrounding road network and intersections is considered appropriate having regard to the external mitigation works proposed to be provided in conjunction with the proposed development, along with noting the DTP in-principle approval for the proposed intersection upgrade provided in Appendix D of this report.

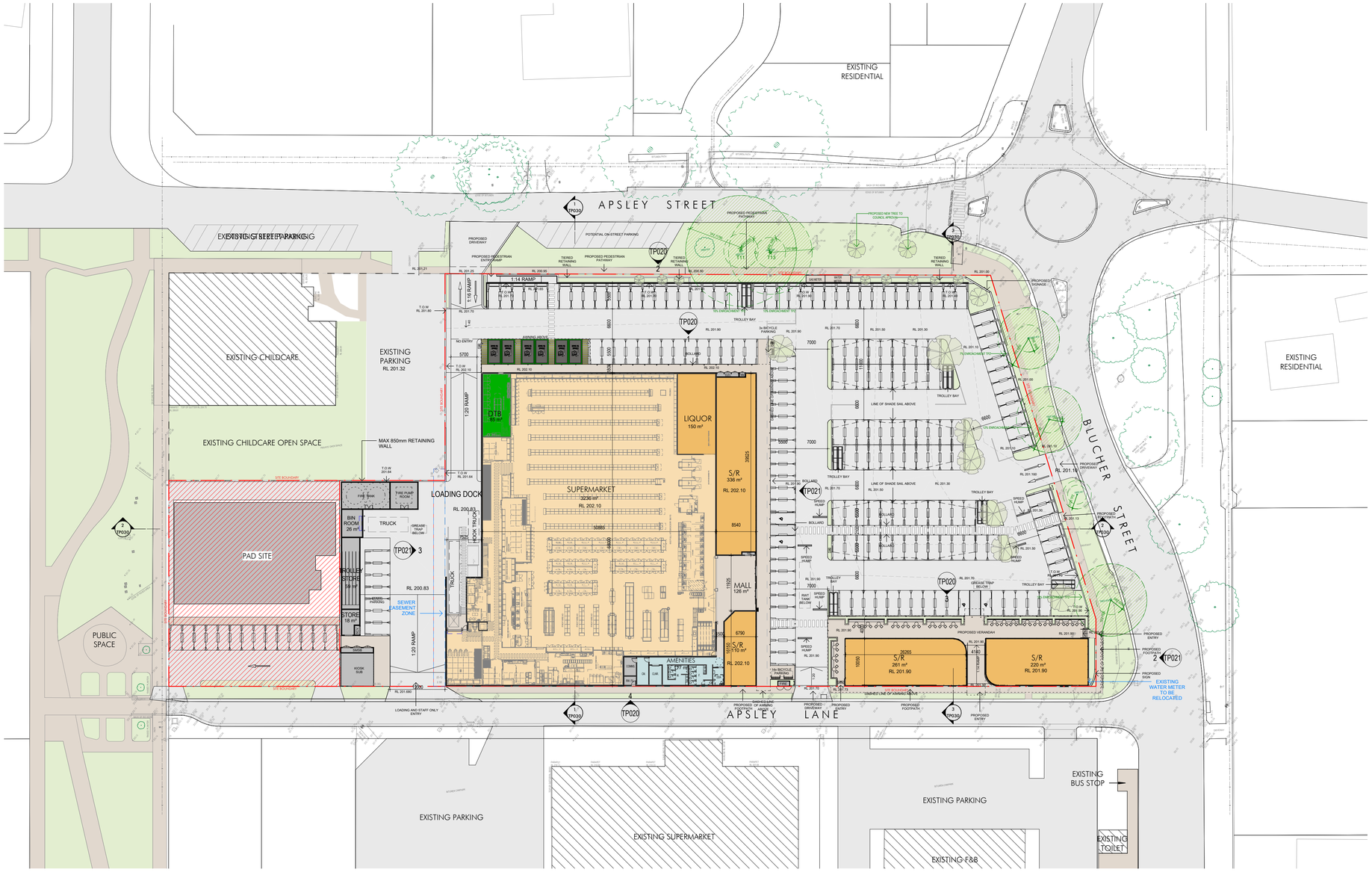
10. Conclusion

Based on the analysis and discussion presented within this report, the following is noted:

- A Planning Permit is currently being sought for the development of a supermarket with supplementary specialty retail on land located at 17-23 Apsley Street, 19-23 Apsley Lane and 39 Blucher Street in Strathfieldsaye.
- The proposed development has a statutory requirement to provide 216 car parking spaces.
- The proposed on-site car parking provision of 189 car parking spaces results in a shortfall in the statutory car parking requirement and therefore a permit is sought to reduce this requirement.
- Empirical case study data indicates that the peak car parking demand of the proposed development will be in the order of 177 car parking spaces. The proposed provision of 189 car parking spaces on the site exceeds this peak demand and is considered to be satisfactory.
- The proposed car parking layout and access arrangements of the site are consistent with the requirements set out in the Greater Bendigo Planning Scheme and relevant Australian Standards.
- CAD-based swept path assessments have confirmed that key vehicle movements can be adequately completed throughout the site.
- The proposed development has a statutory requirement to provide 17 bicycle parking spaces, plus one shower and changeroom facility for staff. The provision of 17 bicycle parking spaces, one shower and an associated changeroom is satisfactory.
- The proposed loading and waste collection arrangements are appropriate, subject to the preparation of a Loading Management Plan which can be implemented by way of a Condition of Permit, should a Permit be issued.
- The following external works are proposed to facilitate access to the development:
    - Signalisation of the Wellington Street / Blucher Street intersection.
    - Modifications to the roundabout island at Blucher Street / Apsley Street to provide a semi-mountable island.
    - Modifications to the kerb at Blucher Street / Apsley Lane to permit semi-trailer access.
    - Construction of a 1.5m wide footpath on each frontage of the site.
    - Construction of new site access connections to Blucher Street (one connection), Apsley Street (two connections) and Apsley Lane (two connections).
- The surrounding road network is expected to operate well within acceptable operating limits during all peak periods following the development of the site and associated signalisation of Wellington Street / Blucher Street.

Overall, there are no traffic or transport engineering reasons why a Planning Permit should not be issued for the proposed development.

Appendix A – Development Plans



1 / TP020 GROUND FLOOR PLAN
1 : 500

DEVELOPMENT SUMMARY

PROPOSED AREA GFA	SITE AREA	PROPOSED FSR
4988m²	14642m²	0.34:1

GFA AREA BY USAGE:

USAGE	LEVEL	AREA
SUPERMARKET	GROUND	3236m²
MEZZ BOH	MEZZ	237m²
LIQUOR	GROUND	150m ²
SPECIALTY RETAIL	GROUND	927m²
DTB	GROUND	85m²
AMENITIES & MALL	GROUND	243m²
BIN ROOM	GROUND	26m²
TROLLEY STORE	GROUND	77m²
	TOTAL	4981m ²

USAGE	LEVEL	AREA
SUPERMARKET	GROUND+MEZZ	3473m²
SPECIALTY RETAIL +LIQUOR	GROUND	1077m²
	TOTAL	4550m ²

CAR PARKING:

CAR SPACES REQUIRED:

4550m² excl. DTB/ 100 x 5 = 228 CAR SPACES

PROPOSED CAR SPACES

STANDARD	172
DTB	6
ACCESSIBLE	4
STAFF	7
TOTAL PROPOSED	189

BICYCLE PARKING:

STAFF	8
VISITOR	9
TOTAL PROPOSED	17

Client: Woolworths Group

Issue	Description	Date
C	ISSUE FOR TOWN PLANNING APPLICATION	07.05.26
B	ISSUE FOR TOWN PLANNING APPLICATION	06.02.26
3	ISSUE FOR INFORMATION	04.02.26
A	ISSUE FOR TOWN PLANNING APPLICATION	16.09.25
2	WORK IN PROGRESS	01.09.25
1	DRAFT ISSUE	27.08.25

TOWN PLANNING
NOT FOR
CONSTRUCTION

Builder

Project Name
WOOLWORTHS STRATHFIELDSAYE

Project Address
17-23 Apsley Lane & 39 Blucher Street, Strathfieldsaye 3551 VIC.

Key Plan
0 10000 25000

Drawing Title:
GROUND FLOOR PLAN

Author:	Checker:	Sheet Size:	Scale:
NT	NT	A1	1:500

Drawing Number: **14473_TP010** Issue: **C**

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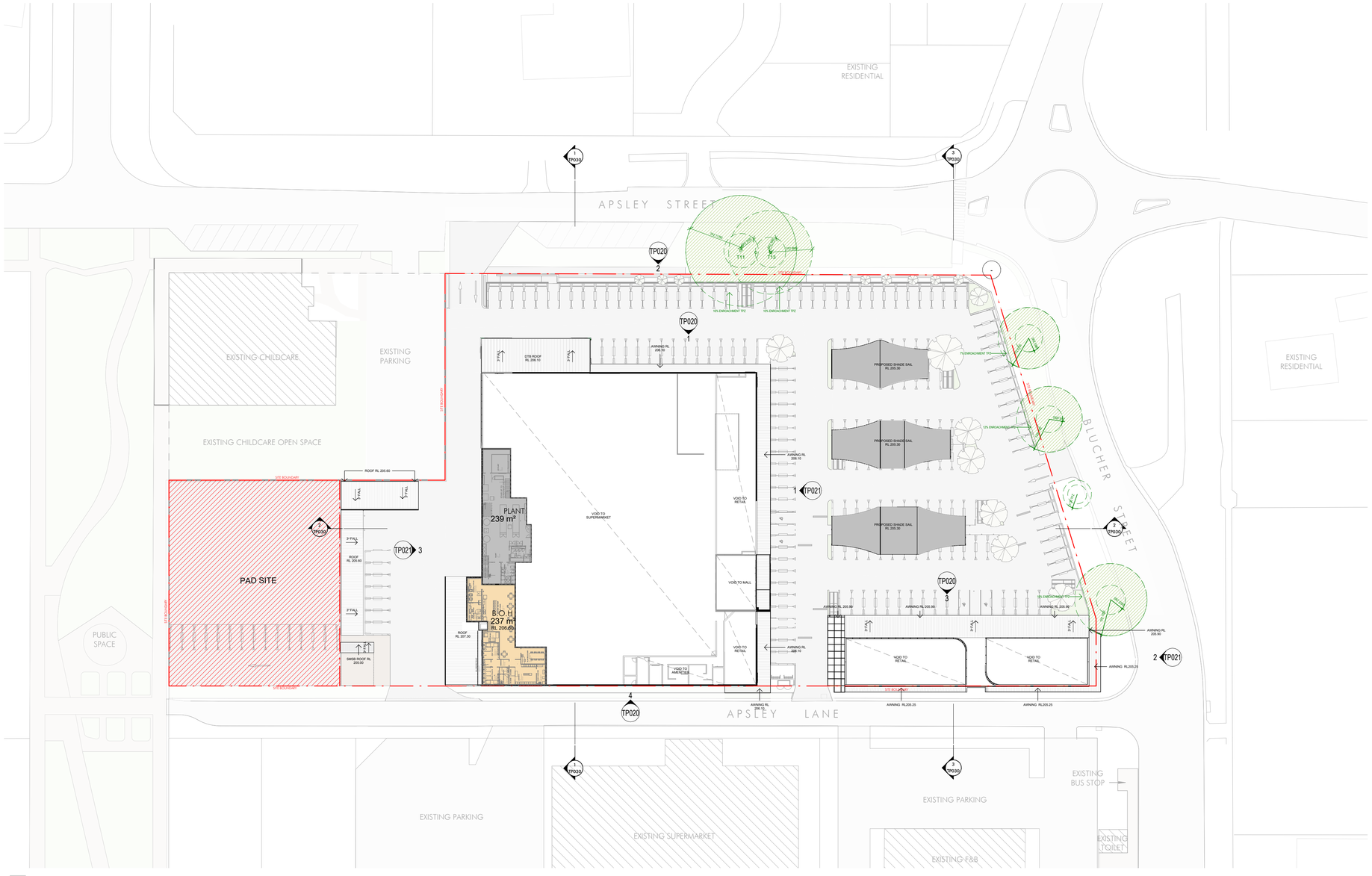

1 MEZZANINE FLOOR PLAN
TP020 1 : 500

Client

Woolworths Group

Issue	Description	Date
C	ISSUE FOR TOWN PLANNING APPLICATION	07.05.26
B	ISSUE FOR TOWN PLANNING APPLICATION	06.02.26
A	ISSUE FOR TOWN PLANNING APPLICATION	16.09.25
2	WORK IN PROGRESS	01.09.25
1	DRAFT ISSUE	27.08.25

TOWN PLANNING
NOT FOR
CONSTRUCTION

Builder

Project Name
WOOLWORTHS STRATHFIELDSAYE

Project Address
17-23 Apsley Lane & 39 Blucher Street, Strathfieldsaye 3551 VIC.

Key Plan
0 10000 25000

Drawing Title:
MEZZANINE FLOOR PLAN

Author:	Checker:	Sheet Size:	Scale:
NT	NT	A1	1:500

Drawing Number: **14473_TP011**
Issue: **C**

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Appendix B – Turning Movement Count Data

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

TURNING MOVEMENT SURVEY

Intersection of Wellington St and Blucher St, Strathfieldsaye

GPS *-36.806652, 144.358233*

Date:	Thu 24/07/25
Weather:	Fine
Suburban:	Strathfieldsaye
Customer:	Ratio

North:	Blucher St
East:	Wellington St
South:	Blucher St
West:	Wellington St

Survey	AM:	7:00 AM-9:00 AM
Period	PM:	3:00 PM-6:00 PM
Traffic	AM:	8:00 AM-9:00 AM
Peak	PM:	3:00 PM-4:00 PM

All Vehicles

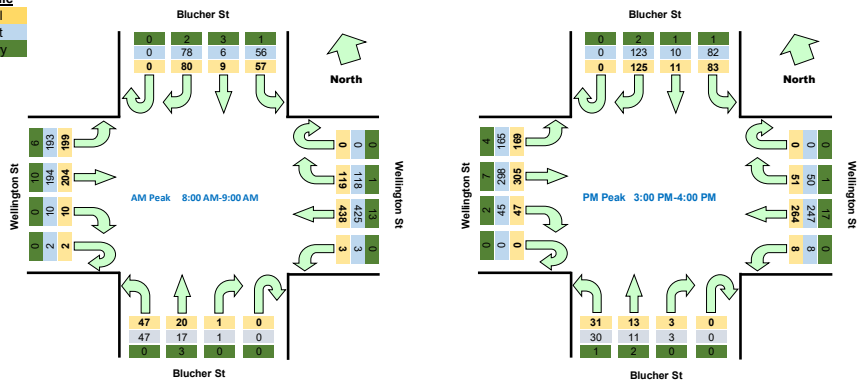
Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St				Hourly Total		
Period Start	**Period End**	**U**	**R**	**SB**	**L**	**U**	**R**	**WB**	**L**	**U**	**R**	**NB**	**L**	**U**	**R**	**EB**	**L**	**Hour**	**Peak**	
7:00	7:15	0	1	1	3	0	8	41	0	0	0	1	2	0	2	23	8	518		90
7:15	7:30	0	2	1	8	0	5	53	0	0	0	1	5	0	3	31	9	654		118
7:30	7:45	0	2	2	4	0	12	57	1	0	2	3	10	0	2	36	8	823		139
7:45	8:00	0	4	0	3	0	15	70	2	0	0	3	6	1	2	42	23	1044		171
8:00	8:15	0	8	2	8	0	26	103	1	0	1	9	8	0	1	33	26	1189	Peak	226
8:15	8:30	0	14	0	14	0	23	120	0	0	0	3	14	1	5	47	46			287
8:30	8:45	0	21	4	13	0	48	130	1	0	0	4	12	0	2	43	82			360
8:45	9:00	0	37	3	22	0	22	85	1	0	0	4	13	1	2	81	45			316
15:00	15:15	0	12	1	8	0	18	69	3	0	1	7	12	0	7	59	68	1110	Peak	265
15:15	15:30	0	23	1	24	0	9	81	2	0	1	1	9	0	8	74	44	1095		277
15:30	15:45	0	46	8	29	0	15	65	0	0	0	2	4	0	20	83	34	1050		306
15:45	16:00	0	44	1	22	0	9	49	3	0	1	3	6	0	12	89	23	1007		262
16:00	16:15	0	23	3	23	0	12	61	1	0	1	2	6	0	18	79	21	1004		250
16:15	16:30	0	22	2	14	0	9	53	3	0	2	2	3	0	14	84	24	1033		232
16:30	16:45	0	23	1	19	0	12	66	3	0	3	0	13	0	11	88	24	1053		263
16:45	17:00	0	20	1	18	0	10	78	2	0	1	3	11	0	13	81	21	998		259
17:00	17:15	0	32	3	19	0	16	71	4	0	0	1	11	0	17	85	20	975		279
17:15	17:30	0	16	3	15	0	10	73	2	0	2	0	13	0	17	90	11			252
17:30	17:45	0	10	2	15	0	4	56	6	0	0	0	3	0	21	76	15			208
17:45	18:00	0	11	2	16	0	7	63	2	0	1	3	11	0	25	87	8			

Peak Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St				Peak
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	**total**
8:00	9:00	0	80	9	57	0	119	438	3	0	1	20	47	2	10	204	199	1189
15:00	16:00	0	125	11	83	0	51	264	8	0	3	13	31	0	47	305	169	1110
16:30	17:30	0	91	8	71	0	48	288	11	0	6	4	48	0	58	344	76	1053

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St			
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	1	0	3	0	7	40	0	0	0	1	2	0	2	22	8
7:15	7:30	0	2	1	6	0	5	51	0	0	0	1	5	0	3	30	6
7:30	7:45	0	1	1	4	0	12	57	1	0	2	2	10	0	2	33	7
7:45	8:00	0	4	0	3	0	15	68	2	0	0	3	6	1	2	36	20
8:00	8:15	0	8	0	8	0	26	96	1	0	1	8	8	0	1	31	25
8:15	8:30	0	13	0	14	0	22	119	0	0	0	3	14	1	5	43	45
8:30	8:45	0	21	4	12	0	48	127	1	0	0	3	12	0	2	41	80
8:45	9:00	0	36	2	22	0	22	83	1	0	0	3	13	1	2	79	43
15:00	15:15	0	11	1	8	0	17	62	3	0	1	7	12	0	6	58	67
15:15	15:30	0	22	1	23	0	9	77	2	0	1	1	8	0	8	71	44
15:30	15:45	0	46	8	29	0	15	63	0	0	0	2	4	0	19	81	33
15:45	16:00	0	44	0	22	0	9	45	3	0	1	1	6	0	12	88	21
16:00	16:15	0	23	3	21	0	12	60	1	0	1	2	6	0	18	78	20
16:15	16:30	0	19	1	14	0	9	52	2	0	2	1	3	0	14	81	24
16:30	16:45	0	23	1	19	0	10	65	3	0	3	0	13	0	11	86	23
16:45	17:00	0	20	0	18	0	10	76	2	0	1	2	11	0	13	81	21
17:00	17:15	0	32	3	19	0	15	71	4	0	0	1	11	0	17	84	20
17:15	17:30	0	16	3	15	0	10	70	2	0	2	0	13	0	17	88	11
17:30	17:45	0	10	2	15	0	4	56	6	0	0	0	3	0	21	75	15

17:45	18:00	0	11	1	16	0	7	63	2	0	1	2	11	0	25	87	7

Peak Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	78	6	56	0	118	425	3	0	1	17	47	2	10	194	193	1150
15:00	16:00	0	123	10	82	0	50	247	8	0	3	11	30	0	45	298	165	1072

Heavy Vehicles

Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0
7:15	7:30	0	0	0	2	0	0	2	0	0	0	0	0	0	0	1	3
7:30	7:45	0	1	1	0	0	0	0	0	0	0	1	0	0	0	3	1
7:45	8:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	3
8:00	8:15	0	0	2	0	0	0	7	0	0	0	1	0	0	0	2	1
8:15	8:30	0	1	0	0	0	1	1	0	0	0	0	0	0	0	4	1
8:30	8:45	0	0	0	1	0	0	3	0	0	0	1	0	0	0	2	2
8:45	9:00	0	1	1	0	0	0	2	0	0	0	1	0	0	0	2	2
15:00	15:15	0	1	0	0	0	1	7	0	0	0	0	0	0	1	1	1
15:15	15:30	0	1	0	1	0	0	4	0	0	0	0	1	0	0	3	0
15:30	15:45	0	0	0	0	0	0	2	0	0	0	0	0	0	1	2	1
15:45	16:00	0	0	1	0	0	0	4	0	0	0	2	0	0	0	1	2
16:00	16:15	0	0	0	2	0	0	1	0	0	0	0	0	0	0	1	1
16:15	16:30	0	3	1	0	0	0	1	1	0	0	1	0	0	0	3	0
16:30	16:45	0	0	0	0	0	2	1	0	0	0	0	0	0	0	2	1
16:45	17:00	0	0	1	0	0	0	2	0	0	0	1	0	0	0	0	0
17:00	17:15	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
17:15	17:30	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0
17:30	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	18:00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1
		0	0	1	0	0	3	6	0	0	0	1	0	0	0	5	1

Peak Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	2	3	1	0	1	13	0	0	0	3	0	0	0	10	6	39
15:00	16:00	0	2	1	1	0	1	17	0	0	0	2	1	0	2	7	4	38

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

TURNING MOVEMENT SURVEY

Intersection of Apsley St and Somerville Rd, Strathfieldsaye

GPS *-36.804543, 144.358395*

Date:	Thu 07/08/25
Weather:	Overcast
Suburban:	Strathfieldsaye
Customer:	Ratio

North:	Somerville Rd
East:	Apsley St
South:	Blucher St
West:	Apsley St

Survey Period	AM:	7:00 AM-9:00 AM
	PM:	3:00 PM-6:00 PM
Traffic Peak	AM:	8:00 AM-9:00 AM
	PM:	3:00 PM-4:00 PM

All Vehicles

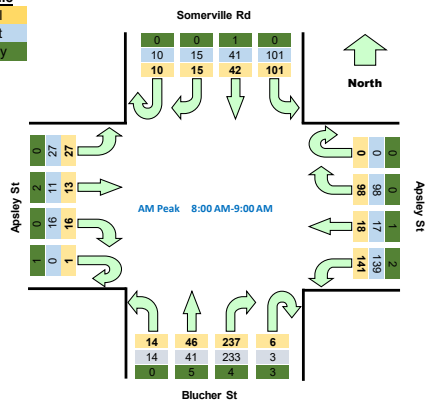
Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:00	7:15	0	0	5	0	0	0	0	0	1	0	6	2	0	0	0	1	102	
7:15	7:30	0	0	5	0	0	0	0	0	0	2	3	1	0	0	1	0	167	
7:30	7:45	0	1	7	1	0	0	0	0	1	2	5	2	1	1	0	0	351	
7:45	8:00	0	1	9	5	0	1	0	0	1	16	12	5	0	2	1	1	604	
8:00	8:15	0	2	12	6	0	4	1	6	2	34	7	2	1	2	1	0	785	Peak
8:15	8:30	5	4	11	27	0	19	8	28	1	66	10	6	0	4	4	3		
8:30	8:45	5	4	12	41	0	45	5	46	0	82	13	2	0	5	4	10		
8:45	9:00	0	5	7	27	0	30	4	61	3	55	16	4	0	5	4	14		
15:00	15:15	3	6	5	14	1	3	1	4	1	55	14	6	1	0	4	2	604	Peak
15:15	15:30	0	1	7	9	0	24	4	26	0	20	2	5	0	2	1	2	564	
15:30	15:45	2	3	21	12	0	43	7	44	0	29	34	7	0	16	5	39	539	
15:45	16:00	0	1	7	3	0	15	7	36	1	5	29	6	0	5	1	3	348	
16:00	16:15	0	1	19	3	0	3	3	14	0	2	25	5	0	2	1	2	304	
16:15	16:30	0	3	20	4	0	2	1	8	2	6	20	4	0	5	0	3	294	
16:30	16:45	0	3	18	0	0	2	1	9	2	7	17	4	0	4	2	2	282	
16:45	17:00	0	2	15	3	0	1	1	13	2	5	22	2	0	3	0	6	264	
17:00	17:15	0	1	18	1	0	5	2	9	0	3	19	5	0	3	0	4	240	
17:15	17:30	0	2	14	0	0	4	1	7	0	5	25	1	0	2	2	3		
17:30	17:45	0	4	9	0	0	0	0	3	1	3	22	4	0	2	0	5		
17:45	18:00	0	1	21	1	0	0	0	2	0	3	16	1	0	5	0	1		

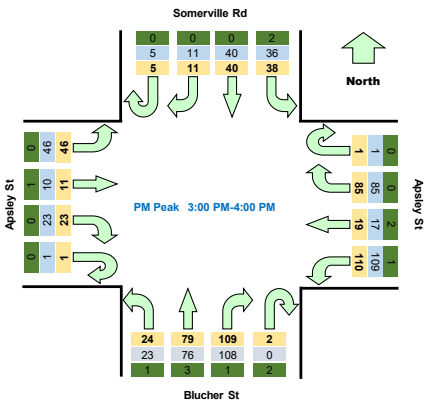
Peak Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	10	15	42	101	0	98	18	141	6	237	46	14	1	16	13	27	785
15:00	16:00	5	11	40	38	1	85	19	110	2	109	79	24	1	23	11	46	604
16:30	17:30	0	8	65	4	0	12	5	38	4	20	83	12	0	12	4	15	

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy





Light Vehicles

Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	5	0	0	0	0	0	0	0	6	2	0	0	0	1
7:15	7:30	0	0	5	0	0	0	0	0	0	2	3	1	0	0	1	0
7:30	7:45	0	1	6	1	0	0	0	0	0	2	4	2	0	1	0	0
7:45	8:00	0	1	9	5	0	1	0	0	0	16	12	4	0	2	1	1
8:00	8:15	0	2	12	6	0	4	0	6	0	33	4	2	0	2	1	0
8:15	8:30	5	4	11	27	0	19	8	28	1	65	9	6	0	4	4	3
8:30	8:45	5	4	12	41	0	45	5	44	0	81	12	2	0	5	3	10
8:45	9:00	0	5	6	27	0	30	4	61	2	54	16	4	0	5	3	14
15:00	15:15	3	6	5	14	1	3	0	4	0	54	14	6	1	0	4	2
15:15	15:30	0	1	7	9	0	24	4	26	0	20	1	5	0	2	1	2
15:30	15:45	2	3	21	11	0	43	7	44	0	29	34	7	0	16	5	39
15:45	16:00	0	1	7	2	0	15	6	35	0	5	27	5	0	5	0	3
16:00	16:15	0	1	19	3	0	3	2	14	0	2	25	5	0	2	0	2
16:15	16:30	0	3	16	4	0	2	1	8	1	6	20	4	0	5	0	3

16:30	16:45	0	3	17	0	0	2	1	9	2	7	17	4	0	4	2	2
16:45	17:00	0	2	15	3	0	1	1	13	1	5	21	2	0	3	0	6
17:00	17:15	0	1	18	1	0	5	2	9	0	3	19	5	0	3	0	4
17:15	17:30	0	2	14	0	0	4	1	7	0	5	25	1	0	2	2	3
17:30	17:45	0	4	9	0	0	0	0	3	0	3	22	4	0	2	0	5
17:45	18:00	0	1	21	1	0	0	0	2	0	3	16	1	0	5	0	1

Peak Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	10	15	41	101	0	98	17	139	3	233	41	14	0	16	11	27	766
15:00	16:00	5	11	40	36	1	85	17	109	0	108	76	23	1	23	10	46	591

Heavy Vehicles

Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:15	7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	7:45	0	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0
7:45	8:00	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
8:00	8:15	0	0	0	0	0	0	1	0	2	1	3	0	1	0	0	0
8:15	8:30	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
8:30	8:45	0	0	0	0	0	0	0	2	0	1	1	0	0	0	1	0
8:45	9:00	0	0	1	0	0	0	0	0	1	1	0	0	0	0	1	0
15:00	15:15	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
15:30	15:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
15:45	16:00	0	0	0	1	0	0	1	1	1	0	2	1	0	0	1	0
16:00	16:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:15	16:30	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0
16:30	16:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	1	0	0	0	1	2	3	4	5	0	1	0	2	0	19
15:00	16:00	0	0	0	2	0	0	2	1	2	1	3	1	0	0	1	0	13
		0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

TURNING MOVEMENT SURVEY

Intersection of Wellington St and Blucher St, Strathfieldsaye

GPS -36.806652, 144.358233

Date:	Sat 26/07/25
Weather:	Fine
Suburban:	Strathfieldsaye
Customer:	Ratio

North:	Blucher St
East:	Wellington St
South:	Blucher St
West:	Wellington St

Survey Period	AM:	11:00 AM-12:00 PM
	PM:	12:00 PM-1:00 PM
Traffic Peak	AM:	11:00 AM-12:00 PM
	PM:	12:00 PM-1:00 PM

All Vehicles

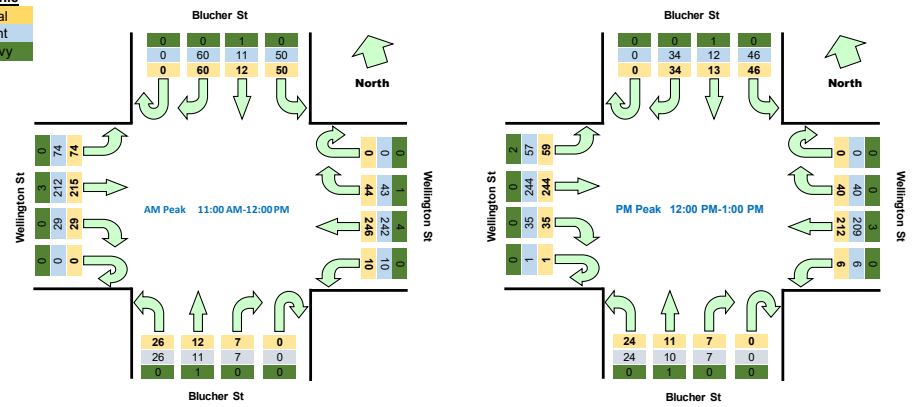
Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
11:00	11:15	0	11	3	12	0	14	78	1	0	1	3	7	0	4	50	20	785	Peak
11:15	11:30	0	26	1	10	0	11	60	2	0	2	1	7	0	4	56	19		
11:30	11:45	0	4	3	16	0	9	52	2	0	2	2	8	0	10	58	20		
11:45	12:00	0	19	5	12	0	10	56	5	0	2	6	4	0	11	51	15		
12:00	12:15	0	12	6	11	0	10	48	1	0	3	3	6	1	11	60	12	732	Peak
12:15	12:30	0	8	1	9	0	8	51	4	0	1	3	8	0	12	54	16		
12:30	12:45	0	6	3	12	0	9	55	1	0	1	4	6	0	7	58	16		
12:45	13:00	0	8	3	14	0	13	58	0	0	2	1	4	0	5	72	15		

Peak Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
11:00	12:00	0	60	12	50	0	44	246	10	0	7	12	26	0	29	215	74	785
12:00	13:00	0	34	13	46	0	40	212	6	0	7	11	24	1	35	244	59	732

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
11:00	11:15	0	11	3	12	0	13	77	1	0	1	3	7	0	4	50	20
11:15	11:30	0	26	1	10	0	11	58	2	0	2	1	7	0	4	54	19
11:30	11:45	0	4	3	16	0	9	51	2	0	2	2	8	0	10	58	20
11:45	12:00	0	19	4	12	0	10	56	5	0	2	5	4	0	11	50	15
12:00	12:15	0	12	6	11	0	10	48	1	0	3	3	6	1	11	60	12
12:15	12:30	0	8	1	9	0	8	49	4	0	1	3	8	0	12	54	15
12:30	12:45	0	6	3	12	0	9	54	1	0	1	4	6	0	7	58	15
12:45	13:00	0	8	2	14	0	13	58	0	0	2	0	4	0	5	72	15

Peak Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
11:00	12:00	0	60	11	50	0	43	242	10	0	7	11	26	0	29	212	74	775
12:00	13:00	0	34	12	46	0	40	209	6	0	7	10	24	1	35	244	57	725

Heavy Vehicles

Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
11:00	11:15	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0
11:30	11:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0
12:00	12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1
12:30	12:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
12:45	13:00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0

Peak Time		North Approach Blucher St				East Approach Wellington St				South Approach Blucher St				West Approach Wellington St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
11:00	12:00	0	0	1	0	0	1	4	0	0	0	1	0	0	0	3	0	10
12:00	13:00	0	0	1	0	0	0	3	0	0	0	1	0	0	0	0	2	7

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

TURNING MOVEMENT SURVEY

Intersection of Apsley St and Somerville Rd, Strathfieldsaye

GPS -36.804543, 144.358395

Date:	Sat 09/08/25
Weather:	Overcast
Suburban:	Strathfieldsaye
Customer:	Ratio

North:	Somerville Rd
East:	Apsley St
South:	Blucher St
West:	Apsley St

Survey Period	AM:	11:00 AM-12:00 PM
	PM:	12:00 PM-1:00 PM
Traffic Peak	AM:	11:00 AM-12:00 PM
	PM:	12:00 PM-1:00 PM

All Vehicles

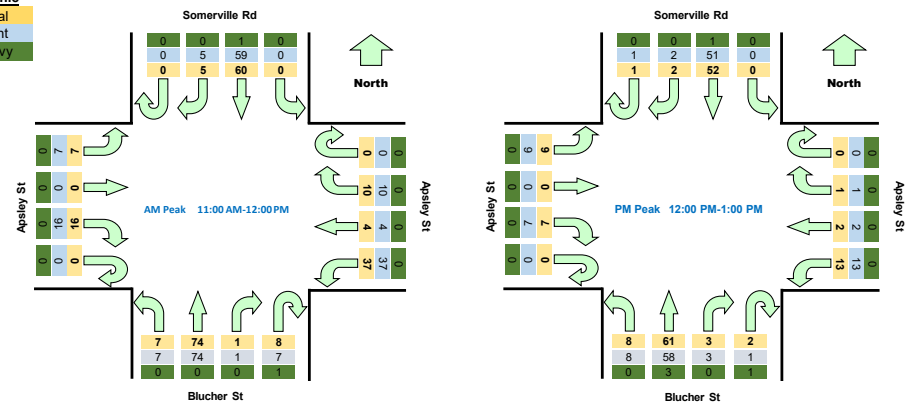
Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
11:00	11:15	0	2	16	0	0	0	0	0	4	0	19	1	0	4	0	2	229	Peak
11:15	11:30	0	1	18	0	0	3	1	13	1	0	23	2	0	3	0	0		
11:30	11:45	0	2	14	0	0	7	1	17	1	0	21	3	0	0	0	1		
11:45	12:00	0	0	12	0	0	0	2	7	2	1	11	1	0	9	0	4		
12:00	12:15	0	1	14	0	0	0	1	8	0	2	16	3	0	4	0	1	158	Peak
12:15	12:30	0	0	20	0	0	1	1	2	1	1	19	1	0	1	0	1		
12:30	12:45	1	1	11	0	0	0	0	3	0	0	15	3	0	0	0	2		
12:45	13:00	0	0	7	0	0	0	0	0	1	0	11	1	0	2	0	2		

Peak Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
11:00	12:00	0	5	60	0	0	10	4	37	8	1	74	7	0	16	0	7	229
12:00	13:00	1	2	52	0	0	1	2	13	2	3	61	8	0	7	0	6	158

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
11:00	11:15	0	2	16	0	0	0	0	0	4	0	19	1	0	4	0	2
11:15	11:30	0	1	18	0	0	3	1	13	1	0	23	2	0	3	0	0
11:30	11:45	0	2	14	0	0	7	1	17	1	0	21	3	0	0	0	1
11:45	12:00	0	0	11	0	0	0	2	7	1	1	11	1	0	9	0	4
12:00	12:15	0	1	14	0	0	0	1	8	0	2	16	3	0	4	0	1
12:15	12:30	0	0	20	0	0	1	1	2	1	1	17	1	0	1	0	1
12:30	12:45	1	1	10	0	0	0	0	3	0	0	15	3	0	0	0	2
12:45	13:00	0	0	7	0	0	0	0	0	0	0	10	1	0	2	0	2

Peak Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
11:00	12:00	0	5	59	0	0	10	4	37	7	1	74	7	0	16	0	7	227
12:00	13:00	1	2	51	0	0	1	2	13	1	3	58	8	0	7	0	6	153

Heavy Vehicles

Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
11:00	11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
12:30	12:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0

Peak Time		North Approach Somerville Rd				East Approach Apsley St				South Approach Blucher St				West Approach Apsley St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
11:00	12:00	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
12:00	13:00	0	0	1	0	0	0	0	0	1	0	3	0	0	0	0	0	5

Appendix C – Concept Layout Plan

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

UNFINISHED DRAWING
SUBJECT TO FURTHER AMENDMENT
FOR DISCUSSION PURPOSES ONLY
INFORMATION SHOWN IS CURRENT AS AT
DATE : * / * / *
CONTACT : *

CAD File: 22929-CLP-001-01.dgn

ISSUE	APP'D	DATE	COMMENTS
A	C.G.	12.08.25	INITIAL ISSUE

GENERAL NOTES

1. AERIAL IMAGE OBTAINED FROM LANDCHECKER DATED 11/08/2025.
2. ALL DIMENSIONS ARE IN METRES AND MEASURED TO THE INVERT OF KERB AND CHANNEL
3. DECLARED ROAD - WELLINGTON STREET (SPEED ZONE 60KM/H)
4. LOCAL ROAD - BLUCHER STREET (SPEED ZONE 50KM/H)

DESIGNED	B. KORASANI
CHECKED	S. McKENZIE
APPROVED	C. GREENLAND
SCALE 1: 500 @ A3	0 5 10

ratio:
RATIO CONSULTANTS PTY LTD
https://ratio.com.au/

WELLINGTON STREET / BLUCHER STREET
Greater Bendigo City Council
PROPOSED SIGNALISED INTERSECTION
CONCEPT LAYOUT

DATE	SHEET NO.	DRAWING NO.	ISSUE
12.08.25	1 of 7	22929-CLP-001-01	A

BLUCHER STREET

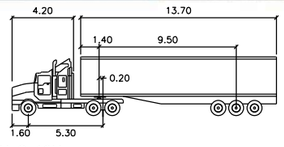
WELLINGTON STREET

KEEP CLEAR

0 4 8

ratio:

RATIO CONSULTANTS PTY LTD
https://ratio.com.au/



PM S 19M

meters

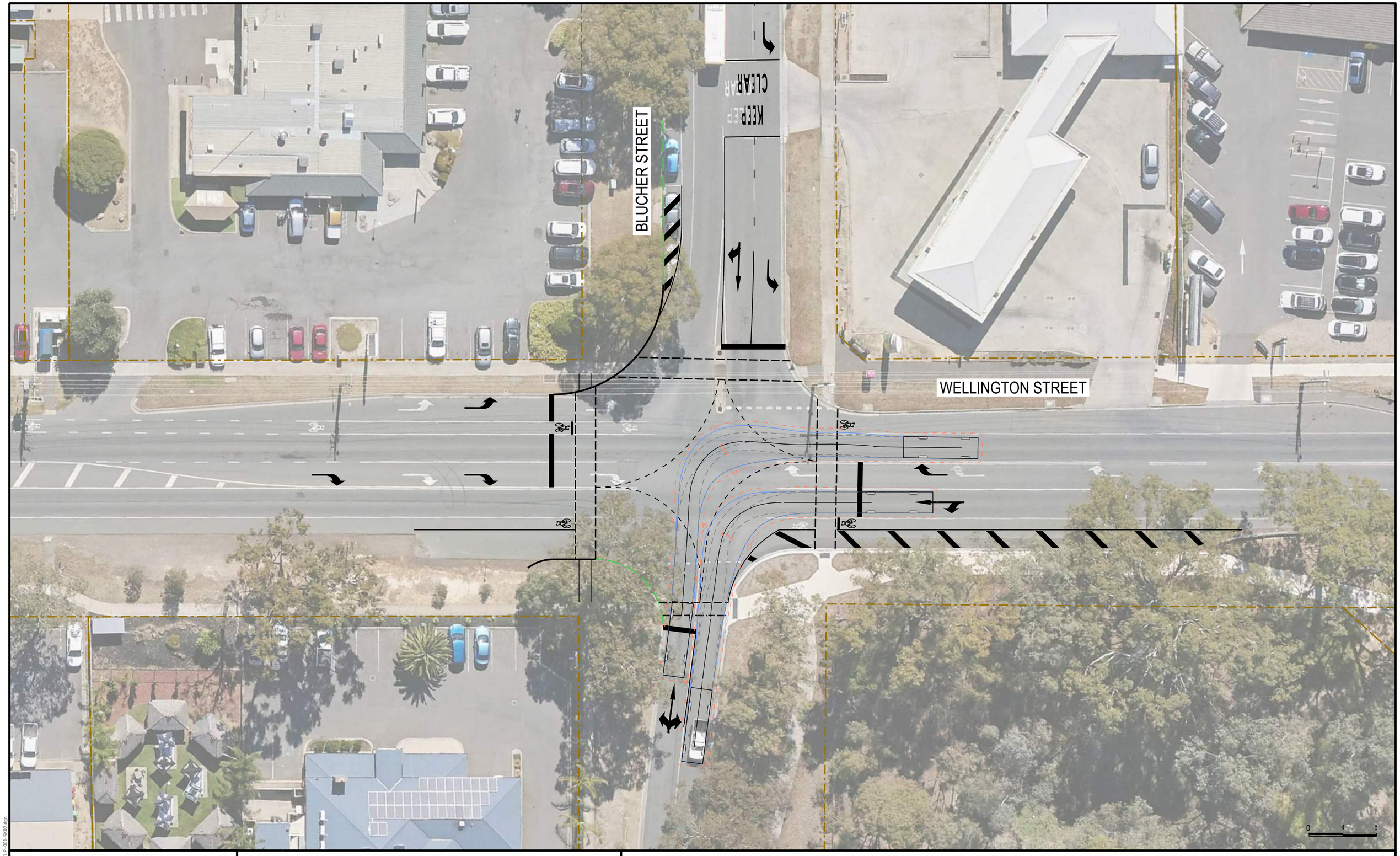
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

Proposed Signalised Intersection
Wellington Street / Blucher Street, Strathfieldsaye
Design Vehicle - Swept Path Assessment

NOTE:
1) Aerial Image from Landchecker Database
2) Swept Path Design Speed 5km/h

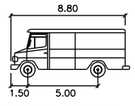
PREPARED BY	DATE	SCALE	SHEET No.	SKETCH NO.	ISSUE
BK	12.08.25	1: 400 @A3	2 of 7	22929-CLP-001-SK01	A

20/08/2025 12:31:34 PM 22929-CLP-001-SK01.dgn



ratio:

RATIO CONSULTANTS PTY LTD
https://ratio.com.au/



SERVICE VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

Proposed Signalised Intersection
Wellington Street / Blucher Street, Strathfieldsaye
Design Vehicle - Swept Path Assessment

NOTE:
1) Aerial Image from Landchecker Database
2) Swept Path Design Speed 10km/h

PREPARED BY	DATE	SCALE	SHEET No.	SKETCH NO.	ISSUE
BK	12.08.25	1: 400 @A3	3 of 7	22929-CLP-001-SK02	A

20/08/2025 12:31:35 PM 22929-CLP-001-SK02.dgn

BLUCHER STREET

WELLINGTON STREET

KEEP CLEAR

0 4 8

ratio:

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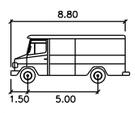
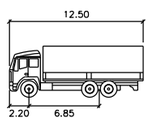


SERVICE VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7



SU TRUCK

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

Proposed Signalised Intersection
Wellington Street / Blucher Street, Strathfieldsaye
Design Vehicle - Swept Path Assessment

NOTE:
1) Aerial Image from Landchecker Database
2) Swept Path Design Speed 10km/h

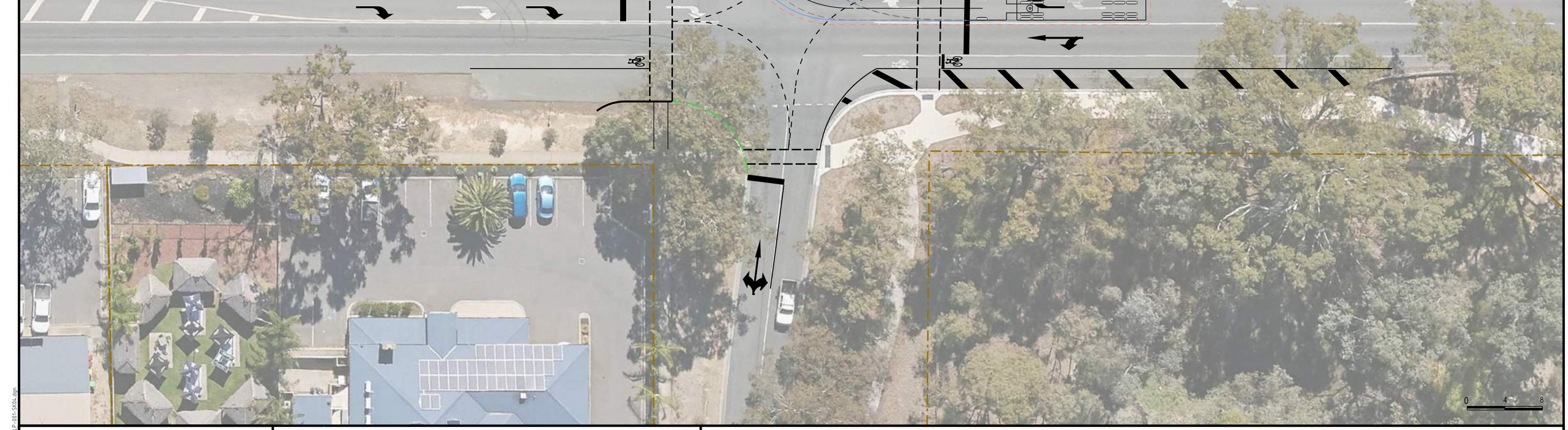
PREPARED BY	DATE	SCALE	SHEET No.	SKETCH NO.	ISSUE
BK	12.08.25	1: 400 @A3	4 of 7	22929-CLP-001-SK03	A

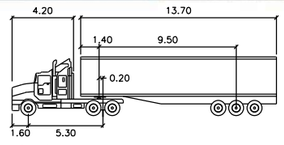
22929-CLP-001-SK03.dgn
20/08/2025 12:31:36 PM

BLUCHER STREET

WELLINGTON STREET

KEEP CLEAR





PM S 19M

meters

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

ratio:

RATIO CONSULTANTS PTY LTD
https://ratio.com.au/

Proposed Signalised Intersection
Wellington Street / Blucher Street, Strathfieldsaye
Checking Vehicle - Swept Path Assessment

NOTE:
1) Aerial Image from Landchecker Database
2) Swept Path Design Speed 5km/h

PREPARED BY	DATE	SCALE	SHEET No.	SKETCH NO.	ISSUE
BK	12.08.25	1: 400 @A3	5 of 7	22929-CLP-001-SK04	A

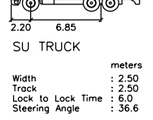
20/08/2025 12:31:38 PM 22929-CLP-001-SK04.dgn

BLUCHER STREET

KEEP CLEAR

WELLINGTON STREET

0 4 8



SU TRUCK

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

ratio:

RATIO CONSULTANTS PTY LTD
https://ratio.com.au/

Proposed Signalised Intersection
Wellington Street / Blucher Street, Strathfieldsaye
Checking Vehicle - Swept Path Assessment

NOTE:
1) Aerial Image from Landchecker Database
2) Swept Path Design Speed 5km/h

PREPARED BY	DATE	SCALE	SHEET No.	SKETCH NO.	ISSUE
BK	12.08.25	1: 400 @A3	6 of 7	22929-CLP-001-SK05	A

20/08/2025 12:31:39 PM 22929-CLP-001-SK05.dgn

BLUCHER STREET

KEEP CLEAR

WELLINGTON STREET

0 4 8

ratio:

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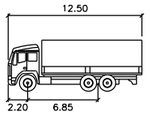
https://ratio.com.au/



SU TRUCK

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

Proposed Signalised Intersection
Wellington Street / Blucher Street, Strathfieldsaye
Checking Vehicle - Swept Path Assessment

NOTE:
1) Aerial Image from Landchecker Database
2) Swept Path Design Speed 5km/h

PREPARED BY	DATE	SCALE	SHEET No.	SKETCH NO.	ISSUE
BK	12.08.25	1: 400 @A3	7 of 7	22929-CLP-001-SK06	A

20/08/2025 12:31:40 PM 22929-CLP-001-SK06.dgn

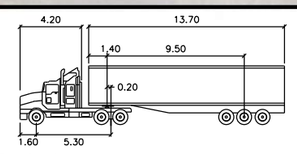
SOMMERVILLE ROAD

APSLEY STREET

PROPOSED SEMI-MOUNTABLE CONCRETE APRON

BLUCHER STREET

0 4 8



PM S 19M

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

ratio:
RATIO CONSULTANTS PTY LTD
https://ratio.com.au/

Proposed Concrete Apron
Apsley Street / Blucher Street, Strathfieldsaye
Design Vehicle - Swept Path Assessment

NOTE:
1) Aerial Image from Landchecker Database
2) Swept Path Design Speed 10km/h

PREPARED BY	DATE	SCALE	SHEET No.	SKETCH NO.	ISSUE
BK	12.08.25	1: 400 @A3	1 of 1	22929-CLP-002-SK01	A

22929-CLP-002-SK01.dgn
15:54:28
08/12/25

Appendix D – DTP In-Principle Approval

Department of Transport and Planning

GPO Box 2392
Melbourne, VIC 3001 Australia
www.transport.vic.gov.au

Ref: ENQ 4561/25

Attention: Anthony Corbett

Dear Anthony

DEPARTMENT REFERENCE NO:	**ENQ 4561/25**
PROPERTY ADDRESS:	**17 APSLEY STREET, STRATHFIELDSAYE VIC 3551**

Thank you for your request to provide preliminary feedback on the Neighbourhood Shopping Centre proposal in Strathfieldsaye.

The following comments are provided based on the documents submitted as part of this proposal. Please note that the below comments do not negate the need to make a formal planning application for the future use or development of the subject land.

The Department of Transport and Planning (DTP) under delegation of the Head, Transport for Victoria (Head, TfV) has reviewed the documentation and makes the following comments for your consideration.

Comments

1. The Head, TfV is generally comfortable with signalisation of the Wellington St/Blucher St intersection and the justification provided in the proponent's letter dated 17 November 2025 in response to concerns raised by Head, TfV dated 30 October 2025.

2. Should a planning permit application be submitted for this proposal, The Head, TfV encourages the following matters to be addressed:
    a) It is noted that alternative layouts are being considered for the site. Any changes to the layout should include a review of the traffic distribution and justification should be provided regarding the likelihood of the Uxbridge Street/Wellington Street intersection being used for access.
    b) Consideration should be given to making walking and cycling a viable method of accessing the shopping centre.
    c) SIDRA electronic files should be provided with any planning permit application.

3. Please note that during the planning permit stage, the requirement for a functional layout plan for the Wellington St/Blucher St intersection will be conditioned. Further details regarding the intersection will be determined at the functional layout plan and detailed design stage.

4. The Head, TfV reserves the right to raise additional concerns at planning permit application stage.

VICTORIA State Government

Please note that any information contained in this correspondence is provided by the Department of Transport and Planning (DTP) for information purposes only. No information provided by DTP constitutes legal or other professional advice and you may wish to consider obtaining independent advice.

DTP makes no warranties or representations whatsoever about the accuracy, completeness, relevance or reliability of any information provided by DTP. DTP excludes, to the maximum extent permitted by law, any liability for loss of any kind arising directly or indirectly from any inaccuracy, incompleteness or other defect in any information provided by DTP, or any negligence or lack of care in relation to the preparation or provision of the information. DTP accepts no responsibility to update any information provided in this correspondence.

Should you have any enquiries regarding this matter, please contact Lara Edwards on LMH.Statutory.Planning@transport.vic.gov.au

Yours sincerely

Martin Ireland

Martin Ireland
Manager Statutory Planning
Under delegation from the Head, Transport for Victoria

15/12/2025

Cc: Permit applicant

Appendix E – Swept Path Diagrams

EXISTING PARKING

SITE BOUNDARY

DTB
85 m²

SUPERMARKET
3236 m²

LOADING DOCK

26 m²

TROLLEY STORE
59 m²

STORE
18 m²

SEWER EASEMENT ZONE

PROP BREAD

652 FULL HT GROCERY BAYS

APSLEY STREET

LIQUOR
150 m²

S/R
336 m²

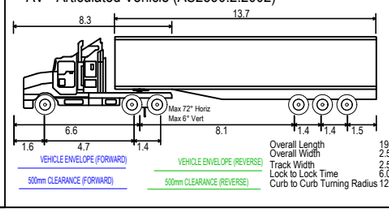
0 4000 8000

C:\USERS\BRYAN.I\ONEDRIVE - RATIO CONSULTANTS\22929T - DOCUMENTS\DESIGN\DESIGN\SKETCH\SK02\22929T-SK02D.DWG
13/05/2026 12:56 PM

ratio:

RATIO CONSULTANTS PTY LTD
ABN 005 422 104
LEVEL 5, 65 DOVER STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

AV - Articulated Vehicle (AS2890.2:2002)



Proposed Supermarket Development
11-23 Apsley Street, 19-23 Apsley Lane and 39 Blucher Street, Strathfieldsaye
19m AV Swept Path Diagrams

NOTE:
1) Base Plan Supplied By Nettleton Tribe (received 23/01/26)
2) Maximum Design Speed 5km/h

RATIO REFERENCE	SHEET No.	PREPARED BY	SCALE	DATE
22929T-SK02D	1 of 5	K. Bullock	Custom @A3	13/05/26

EXISTING
WATER METER
TO BE
RELOCATED

Apsley Lane

Blucher Street

Amended Kerb line
shown in red

EXISTING
BUS
STOP

EXISTING PARKING

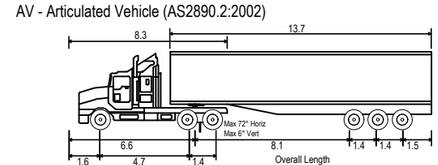
EXISTING

0 1500 3000

ratio:

RATIO CONSULTANTS PTY LTD
ABN 005 422 104
LEVEL 5, 65 DOVER STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

AV - Articulated Vehicle (AS2890.2:2002)

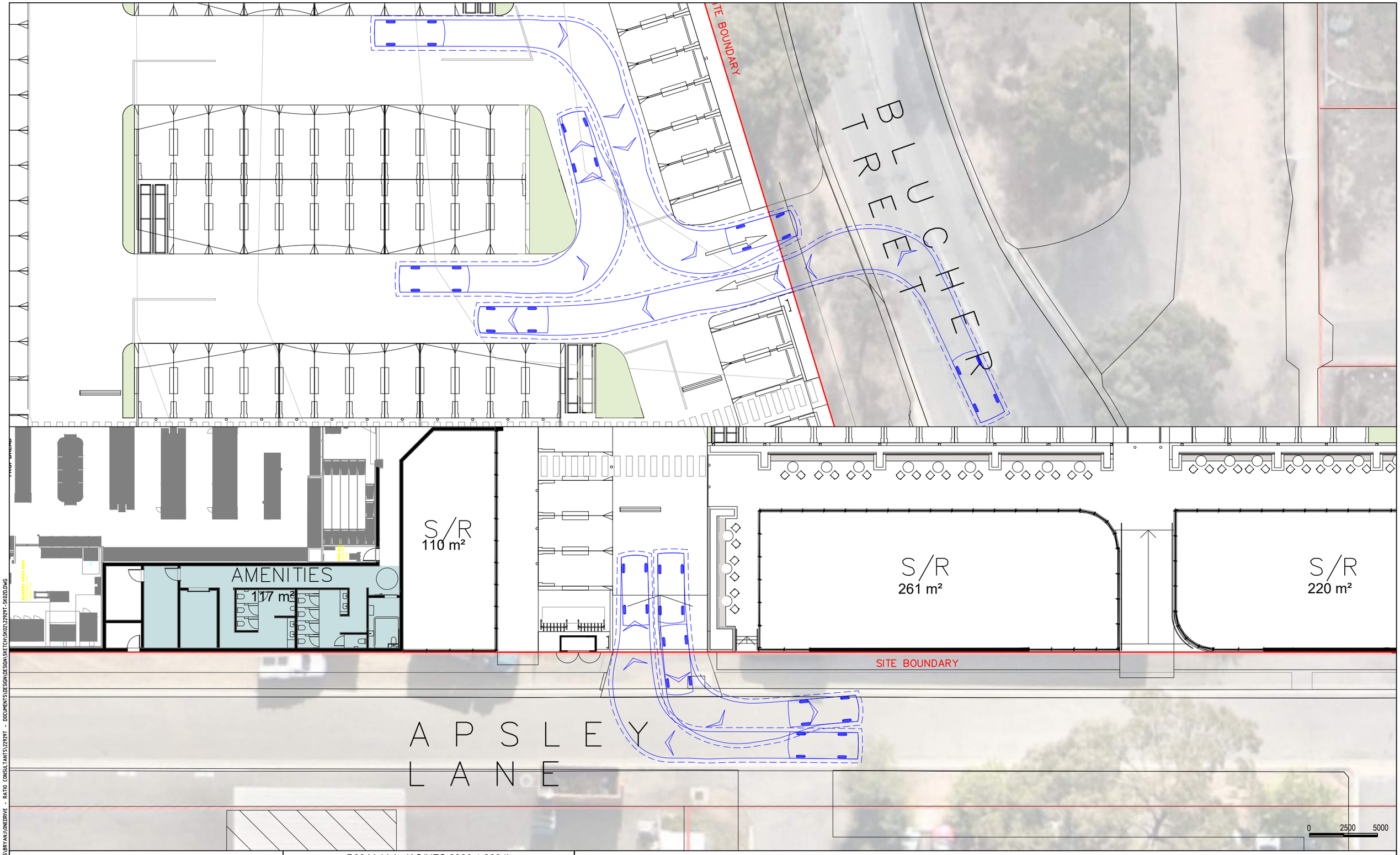


Overall Length	19.000m
Overall Width	2.500m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

Proposed Supermarket Development
11-23 Apsley Street, 19-23 Apsley Lane and 39 Blucher Street, Strathfieldsaye
19m Articulated Vehicle Swept Paths

NOTE:
1) Base Plan Supplied By Nettleton Tribe (received 17/09/25)
2) Maximum Design Speed 5km/h

RATIO REFERENCE	SHEET No.	PREPARED BY	SCALE	DATE
22929T-SK02D	2 of 5	K. Bullock	Custom @A3	13/05/26



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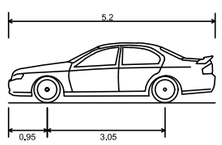
ratio:
RATIO CONSULTANTS PTY LTD
ABN 005 422 104
LEVEL 5, 65 DOVER STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

B99 Vehicle (AS/NZS 2890.1:2004)

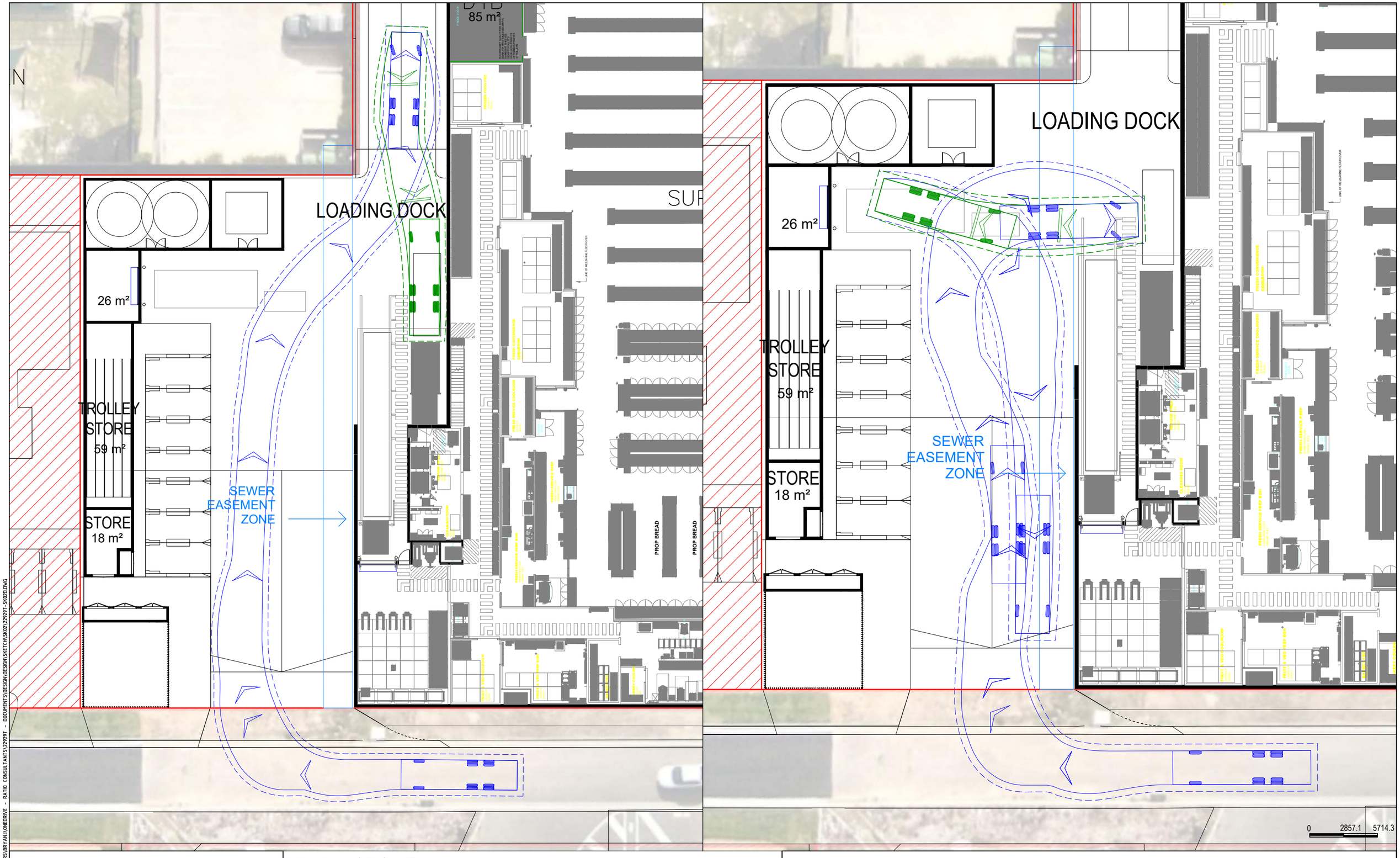


VEHICLE ENVELOPE (FORWARD)	
300mm CLEARANCE (FORWARD)	
VEHICLE ENVELOPE (REVERSE)	
300mm CLEARANCE (REVERSE)	
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	2.200m
Min Body Ground Clearance	0.312m
Track Width	1.840m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	6.30m

Proposed Supermarket Development
11-23 Apsley Street, 19-23 Apsley Lane and 39 Blucher Street, Strathfieldsaye
B99 Design Vehicle Swept Paths

NOTE:
1) Base Plan Supplied By Nettleton Tribe (received 23/01/26)
2) Maximum Design Speed 5km/h

RATIO REFERENCE	SHEET No.	PREPARED BY	SCALE	DATE
22929T-SK02D	3 of 5	K. Bullock	Custom@A3	13/05/26



ratio:

RATIO CONSULTANTS PTY LTD
ABN 005 422 104
LEVEL 5, 65 DOVER STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

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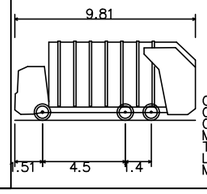
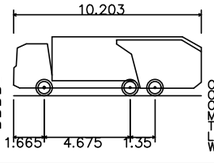
9.8m Hook Lift Refuse Truck



VEHICLE ENVELOPE (FORWARD)
500mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
500mm CLEARANCE (REVERSE)

Overall Length	9.810m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	40.00°

Front Loading Refuse Truck



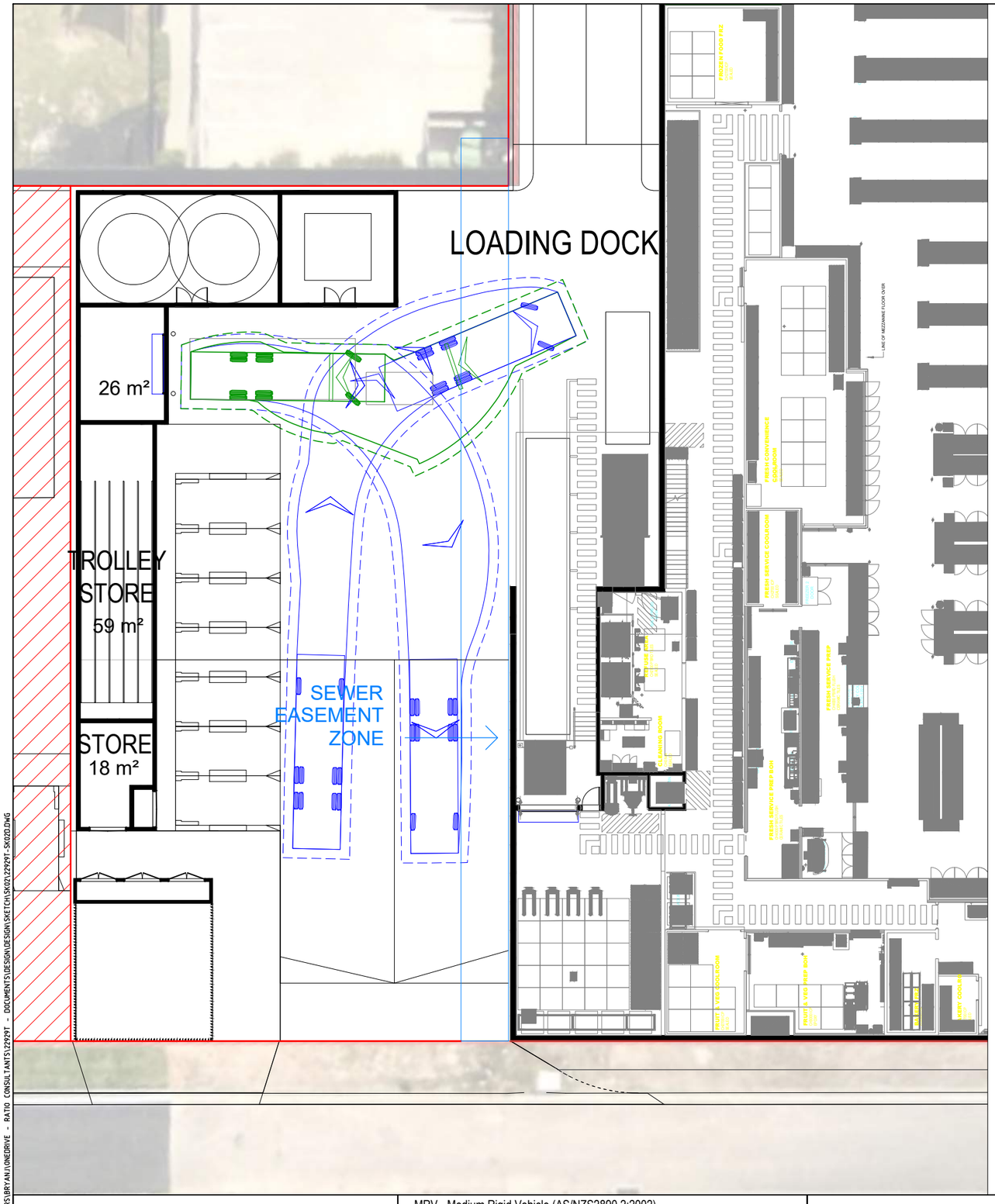
VEHICLE ENVELOPE (FORWARD)
500mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
500mm CLEARANCE (REVERSE)

Overall Length	10.203m
Overall Width	2.500m
Overall Body Height	3.205m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	9.450m

Proposed Supermarket Development
11-23 Apsley Street, 19-23 Apsley Lane and 39 Blucher Street, Strathfieldsaye
Waste Collection Vehicle Swept Paths

NOTE:
1) Base Plan Supplied By Nettleton Tribe (received 23/01/26)
2) Maximum Design Speed 5km/h

RATIO REFERENCE	SHEET No.	PREPARED BY	SCALE	DATE
22929T-SK02D	4 of 5	K. Bullock	Custom@A3	13/05/26



0 2500 5000

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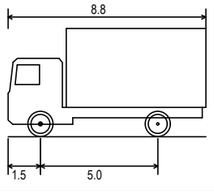
ratio:
RATIO CONSULTANTS PTY LTD
ABN 005 422 104
LEVEL 5, 65 DOVER STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

MRV - Medium Rigid Vehicle (AS/NZS2890.2:2002)



VEHICLE ENVELOPE (FORWARD)
500mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
500mm CLEARANCE (REVERSE)

Overall Length	8.800m
Overall Width	2.500m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	10.000m

Proposed Supermarket Development
11-23 Apsley Street, 19-23 Apsley Lane and 39 Blucher Street, Strathfieldsaye
Waste Collection Vehicle Swept Paths

NOTE:
1) Base Plan Supplied By Nettleton Tribe (received 23/01/26)
2) Maximum Design Speed 5km/h

RATIO REFERENCE	SHEET No.	PREPARED BY	SCALE	DATE
22929T-SK02D	5 of 5	K. Bullock	Custom@A3	13/05/26

Appendix F – Bicycle Parking Specification Sheets

CORA BIKE RACK

PRODUCT SPECIFICATION SHEET

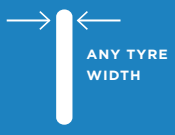
EXPO 7510

- The EXPO 7510 is a rack with compact spacing that can be installed for single or double sided access for maximum capacity
- Shipped fully welded for vandal resistance with no assembly required, includes stainless steel tamper resistant fixings

COMPACT SPACING OPTION FOR **MAXIMUM** CAPACITY

DESIGNED FOR BIKES WITH

A WHEEL DIAMETER OF = 24-29”



ANY TYRE WIDTH

FENDERS / MUDGUARDS

SPECIFICATIONS

Capacity	Finish	Fixings	Assembly	Construction	Compliance
Single Side: 7 bikes Double Side: 10 bikes	- Galvanised - 316 stainless - Cora ceramic or powder colour range	2 x M12 x 120mm anchor bolts with tamper resistant fasteners included	Supplied fully welded and assembled	Mainframe: 60.3 OD x 3.2 MD Hangers: 20mm round bar	Not compliant with AS2890.3 (2015) spacings

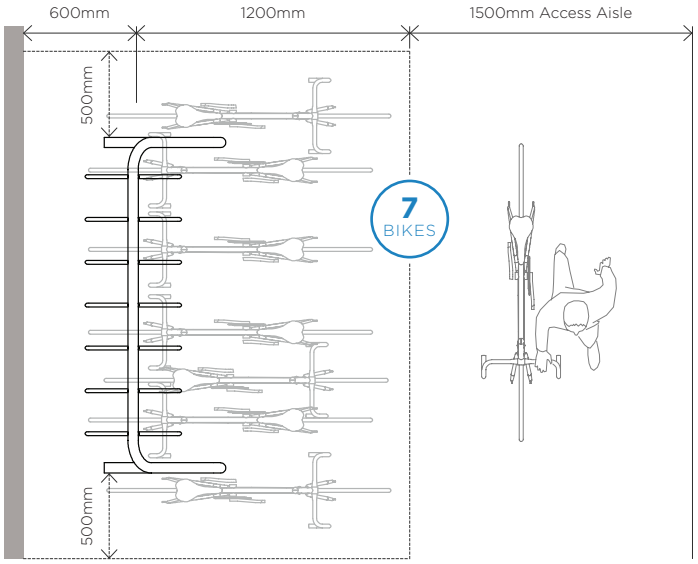
CORA BIKE RACK

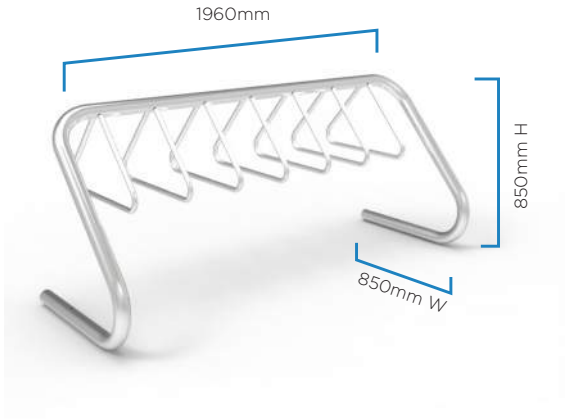
PRODUCT SPECIFICATION SHEET

EXPO 7510

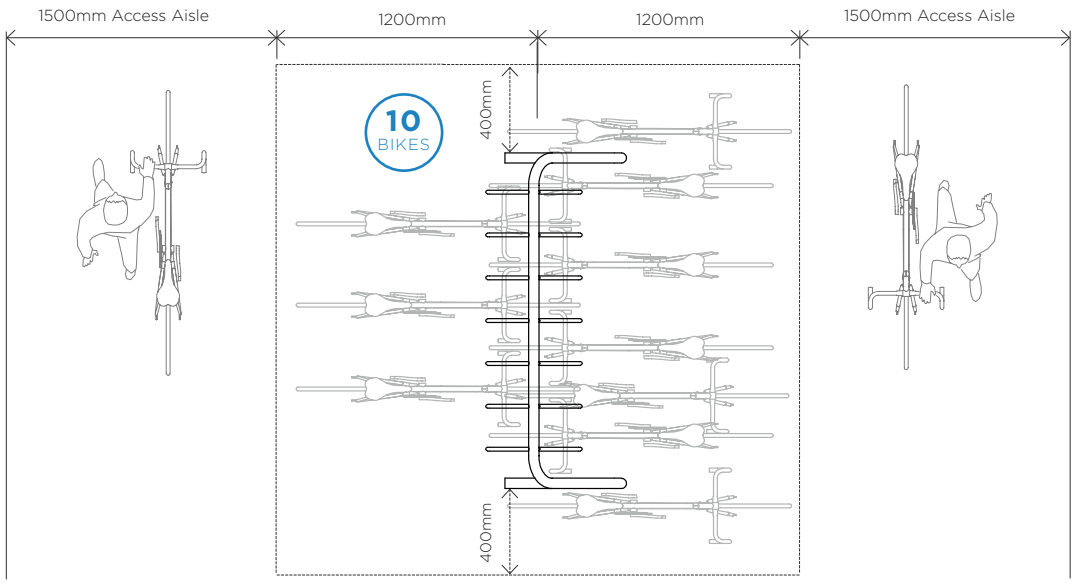
LAYOUT GUIDE

SINGLE RACK MAXIMUM CAPACITY





TOP VIEW - SINGLE SIDE ACCESS



TOP VIEW - DOUBLE SIDE ACCESS

Refer to Installation Instructions sheet for specific installation and assembly guidelines. Racks should NOT be installed based on this sheet alone.

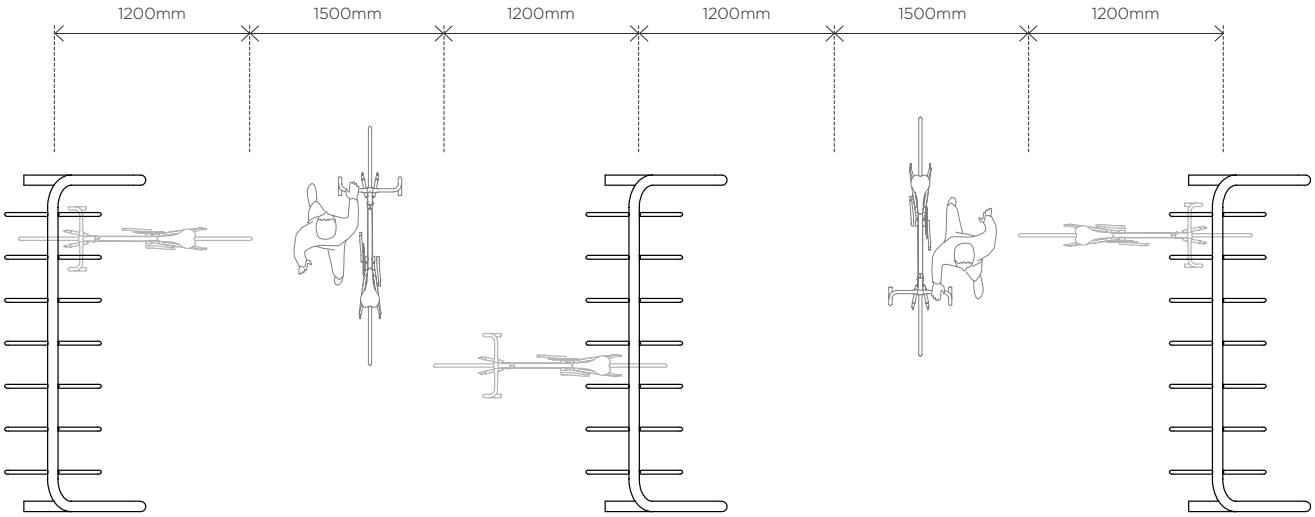
CORA BIKE RACK

PRODUCT SPECIFICATION SHEET

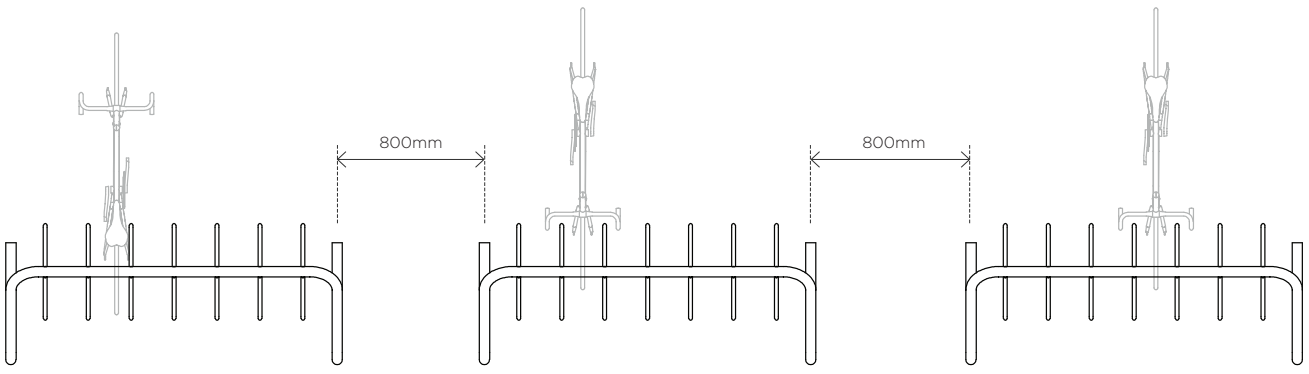
EXPO 7510

LAYOUT GUIDE

MULTIPLE RACKS IN CLUSTER LAYOUT



IN LINE CLUSTER



PARALLEL CLUSTER

Refer to Installation Instructions sheet for specific installation and assembly guidelines. Racks should NOT be installed based on this sheet alone.

sales@cora.com.au
www.cora.com.au

CORA BIKE RACK

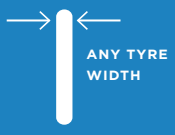
PRODUCT SPECIFICATION SHEET

EXPO 2704

- The EXPO 2704 is a rack with compact spacing that can be installed for single or double sided access for maximum capacity
- Shipped fully welded for vandal resistance with no assembly required, includes stainless steel tamper resistant fixings

COMPACT SPACING OPTION FOR **MAXIMUM** CAPACITY

DESIGNED FOR BIKES WITH



FENDERS / MUDGUARDS

SPECIFICATIONS

Capacity	Finish	Fixings	Assembly	Construction	Compliance
Single Side: 3 bikes Double Side: 5 bikes	- Galvanised - 316 stainless - Cora ceramic or powder colour range	2 x M12 x 120mm anchor bolts with tamper resistant fasteners included	Supplied fully welded and assembled	Mainframe: 60.3 OD x 3.2 MD Hangers: 20mm round bar	Not compliant with AS2890.3 (2015) spacings

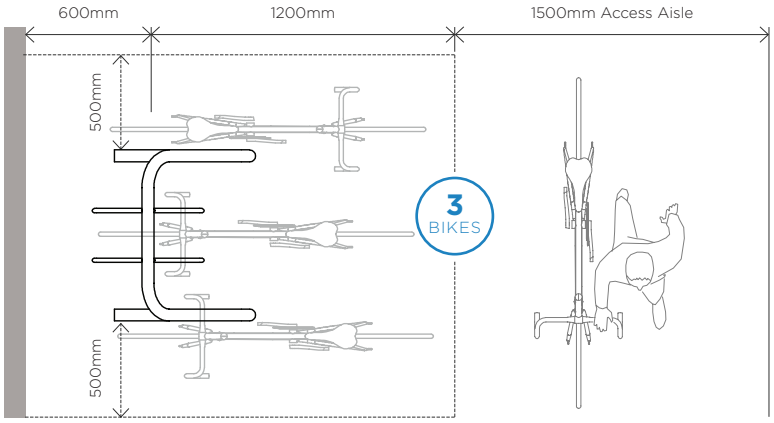
CORA BIKE RACK

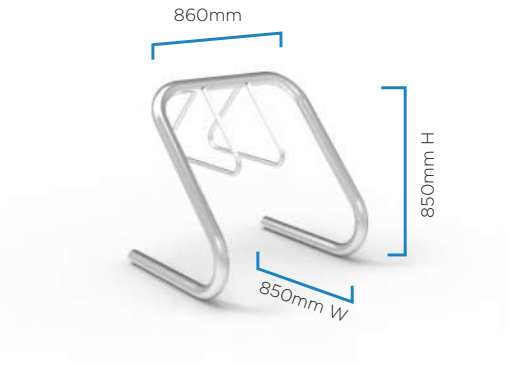
PRODUCT SPECIFICATION SHEET

EXPO 2704

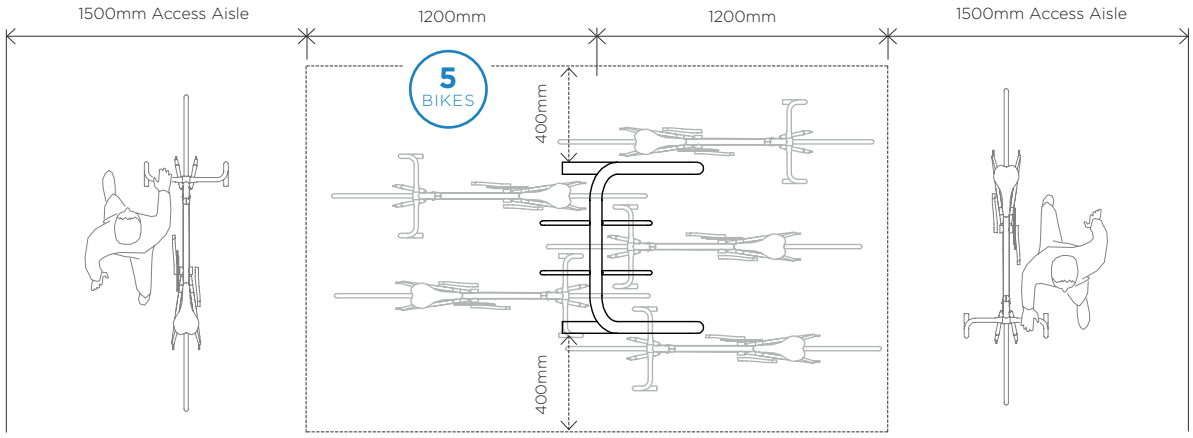
LAYOUT GUIDE

SINGLE RACK MAXIMUM CAPACITY





TOP VIEW - SINGLE SIDE ACCESS



TOP VIEW - DOUBLE SIDE ACCESS

Refer to Installation Instructions sheet for specific installation and assembly guidelines. Racks should NOT be installed based on this sheet alone.

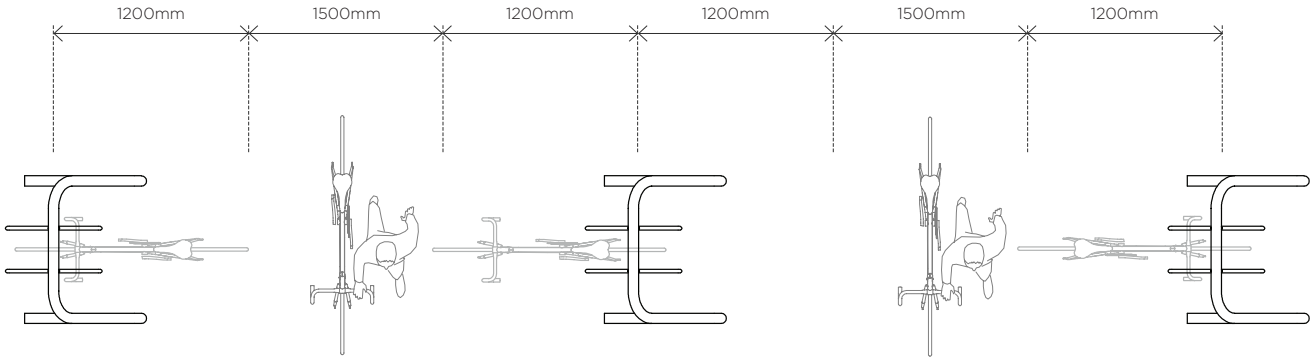
CORA BIKE RACK

PRODUCT SPECIFICATION SHEET

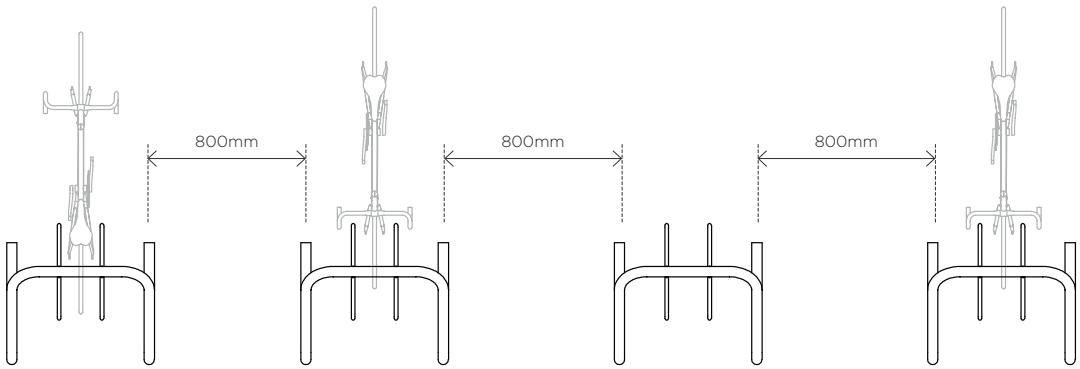
EXPO 2704

LAYOUT GUIDE

MULTIPLE RACKS IN CLUSTER LAYOUT



IN LINE CLUSTER



PARALLEL CLUSTER

Refer to Installation Instructions sheet for specific installation and assembly guidelines. Racks should NOT be installed based on this sheet alone.

sales@cora.com.au
www.cora.com.au

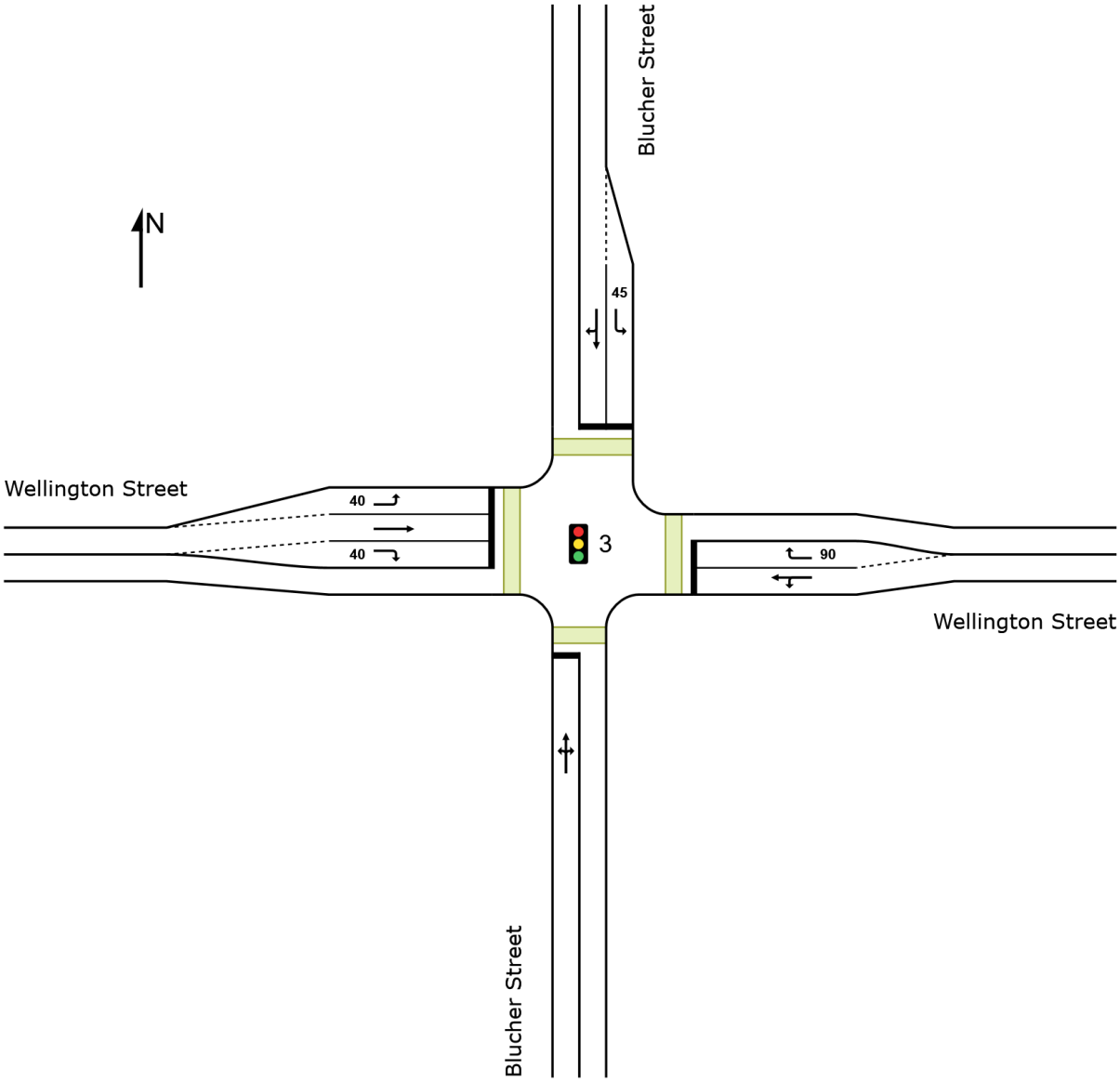
Appendix G – SIDRA Outputs

SITE LAYOUT

Site: [3] AM Peak Hour (Wellington-Blucher)

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: RATIO CONSULTANTS PTY LTD | Licence: NETWORK / 1PC | Created: Tuesday, 12 May 2026 11:43:18 AM
Project: C:\Users\bryan.i\OneDrive - Ratio Consultants\22929T - Documents\Work\Analysis\SIDRA\22929T-SID01C.sipx

MOVEMENT SUMMARY

Site: [3] AM Peak Hour (Wellington-Blucher)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80.0 seconds (Site User-Given Phase Times)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Blucher Street															
1	L2	All MCs	49	0.0	49	0.0	0.254	34.5	LOS C	2.6	19.2	0.91	0.74	0.91	36.5
2	T1	All MCs	24	13.0	24	13.0	* 0.254	40.1	LOS D	2.6	19.2	0.91	0.74	0.91	37.5
3	R2	All MCs	1	0.0	1	0.0	0.254	45.6	LOS D	2.6	19.2	0.91	0.74	0.91	36.4
Approach			75	4.2	75	4.2	0.254	36.5	LOS D	2.6	19.2	0.91	0.74	0.91	36.8
East: Wellington Street															
4	L2	All MCs	3	0.0	3	0.0	0.754	29.9	LOS C	19.8	141.4	0.93	0.85	0.97	41.5
5	T1	All MCs	558	2.5	558	2.5	* 0.754	24.4	LOS C	19.8	141.4	0.93	0.85	0.97	42.8
6	R2	All MCs	139	0.8	139	0.8	* 0.860	52.6	LOS D	6.2	44.0	1.00	0.96	1.37	31.4
Approach			700	2.1	700	2.1	0.860	30.0	LOS C	19.8	141.4	0.94	0.87	1.05	39.9
North: Blucher Street															
7	L2	All MCs	74	1.4	74	1.4	0.172	21.1	LOS C	1.6	11.6	0.84	1.09	0.84	31.7
8	T1	All MCs	13	25.0	13	25.0	* 0.491	35.5	LOS D	4.9	35.3	0.97	0.79	0.97	36.0
9	R2	All MCs	117	1.8	117	1.8	0.491	41.0	LOS D	4.9	35.3	0.97	0.79	0.97	35.1
Approach			203	3.1	203	3.1	0.491	33.5	LOS C	4.9	35.3	0.92	0.90	0.92	33.8
West: Wellington Street															
10	L2	All MCs	242	2.6	242	2.6	0.343	24.3	LOS C	6.7	48.0	0.75	0.78	0.75	41.6
11	T1	All MCs	253	4.2	253	4.2	0.343	18.7	LOS B	7.0	50.7	0.75	0.63	0.75	45.9
12	R2	All MCs	13	0.0	13	0.0	0.078	43.3	LOS D	0.5	3.3	0.95	0.68	0.95	34.0
Approach			507	3.3	507	3.3	0.343	22.0	LOS C	7.0	50.7	0.75	0.70	0.75	43.3
All Vehicles			1485	2.8	1485	2.8	0.860	28.1	LOS C	19.8	141.4	0.87	0.81	0.92	39.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Blucher Street												

P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Wellington Street												
P2	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Blucher Street												
P3	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Wellington Street												
P4	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians		200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: [3 (2)] PM Peak Hour (Wellington-Blucher)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80.0 seconds (Site User-Given Phase Times)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Blucher Street															
1	L2	All MCs	51	0.0	51	0.0	0.209	33.1	LOS C	2.4	17.2	0.89	0.74	0.89	37.1
2	T1	All MCs	15	7.1	15	7.1	* 0.209	37.8	LOS D	2.4	17.2	0.89	0.74	0.89	38.1
3	R2	All MCs	6	0.0	6	0.0	0.209	43.3	LOS D	2.4	17.2	0.89	0.74	0.89	37.0
Approach			72	1.5	72	1.5	0.209	35.0	LOS C	2.4	17.2	0.89	0.74	0.89	37.3
East: Wellington Street															
4	L2	All MCs	12	0.0	12	0.0	0.634	32.0	LOS C	12.6	89.3	0.92	0.79	0.92	40.5
5	T1	All MCs	355	1.8	355	1.8	0.634	26.5	LOS C	12.6	89.3	0.92	0.79	0.92	41.7
6	R2	All MCs	105	3.0	105	3.0	* 0.772	50.4	LOS D	4.6	32.7	1.00	0.90	1.29	32.0
Approach			472	2.0	472	2.0	0.772	32.0	LOS C	12.6	89.3	0.94	0.82	1.00	39.0
North: Blucher Street															
7	L2	All MCs	129	0.0	129	0.0	0.242	18.3	LOS B	2.5	17.3	0.81	1.11	0.81	32.4
8	T1	All MCs	19	5.6	19	5.6	* 0.629	31.9	LOS C	9.1	64.1	0.96	0.83	0.97	37.3
9	R2	All MCs	229	0.0	229	0.0	0.629	37.4	LOS D	9.1	64.1	0.96	0.83	0.97	36.4
Approach			378	0.3	378	0.3	0.629	30.6	LOS C	9.1	64.1	0.91	0.92	0.91	34.9
West: Wellington Street															
10	L2	All MCs	211	0.5	211	0.5	0.379	37.2	LOS D	6.6	46.3	0.84	0.79	0.84	39.2
11	T1	All MCs	404	1.3	404	1.3	* 0.819	41.5	LOS D	16.7	118.1	0.99	0.97	1.17	38.5
12	R2	All MCs	61	0.0	61	0.0	0.438	53.8	LOS D	2.5	17.2	0.99	0.75	0.99	33.0
Approach			676	0.9	676	0.9	0.819	41.3	LOS D	16.7	118.1	0.94	0.89	1.05	35.4
All Vehicles			1597	1.1	1597	1.1	0.819	35.7	LOS D	16.7	118.1	0.93	0.87	1.00	36.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Blucher Street												

P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Wellington Street												
P2	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Blucher Street												
P3	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Wellington Street												
P4	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians		200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: [3 (3)] SAT Peak Hour (Wellington-Blucher)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80.0 seconds (Site User-Given Cycle Time)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Blucher Street															
1	L2	All MCs	27	0.0	27	0.0	0.192	38.2	LOS D	2.0	13.9	0.91	0.72	0.91	36.7
2	T1	All MCs	21	5.0	21	5.0	*0.192	32.7	LOS C	2.0	13.9	0.91	0.72	0.91	37.6
3	R2	All MCs	7	0.0	7	0.0	0.192	38.2	LOS D	2.0	13.9	0.91	0.72	0.91	36.6
Approach			56	1.9	56	1.9	0.192	36.1	LOS D	2.0	13.9	0.91	0.72	0.91	37.0
East: Wellington Street															
4	L2	All MCs	11	0.0	11	0.0	0.577	32.5	LOS C	10.7	75.7	0.91	0.77	0.91	40.3
5	T1	All MCs	303	1.4	303	1.4	*0.577	27.0	LOS C	10.7	75.7	0.91	0.77	0.91	41.5
6	R2	All MCs	91	1.2	91	1.2	*0.577	46.5	LOS D	3.7	26.0	1.00	0.79	1.05	33.1
Approach			404	1.3	404	1.3	0.577	31.5	LOS C	10.7	75.7	0.93	0.78	0.94	39.2
North: Blucher Street															
7	L2	All MCs	97	0.0	97	0.0	0.294	37.2	LOS D	3.4	23.7	0.91	0.77	0.91	36.3
8	T1	All MCs	21	5.0	21	5.0	*0.577	33.7	LOS C	7.1	49.8	0.97	0.81	0.97	36.7
9	R2	All MCs	169	0.0	169	0.0	0.577	39.2	LOS D	7.1	49.8	0.97	0.81	0.97	35.8
Approach			287	0.4	287	0.4	0.577	38.2	LOS D	7.1	49.8	0.95	0.79	0.95	36.0
West: Wellington Street															
10	L2	All MCs	184	0.0	184	0.0	0.352	30.6	LOS C	5.8	40.8	0.84	0.78	0.84	38.8
11	T1	All MCs	246	1.3	246	1.3	0.452	25.9	LOS C	8.0	56.9	0.87	0.73	0.87	42.1
12	R2	All MCs	31	0.0	31	0.0	0.193	44.3	LOS D	1.2	8.2	0.96	0.72	0.96	33.7
Approach			461	0.7	461	0.7	0.452	29.0	LOS C	8.0	56.9	0.87	0.75	0.87	40.1
All Vehicles			1208	0.9	1208	0.9	0.577	32.3	LOS C	10.7	75.7	0.91	0.77	0.91	38.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Blucher Street												

P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Wellington Street												
P2	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Blucher Street												
P3	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Wellington Street												
P4	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians		200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

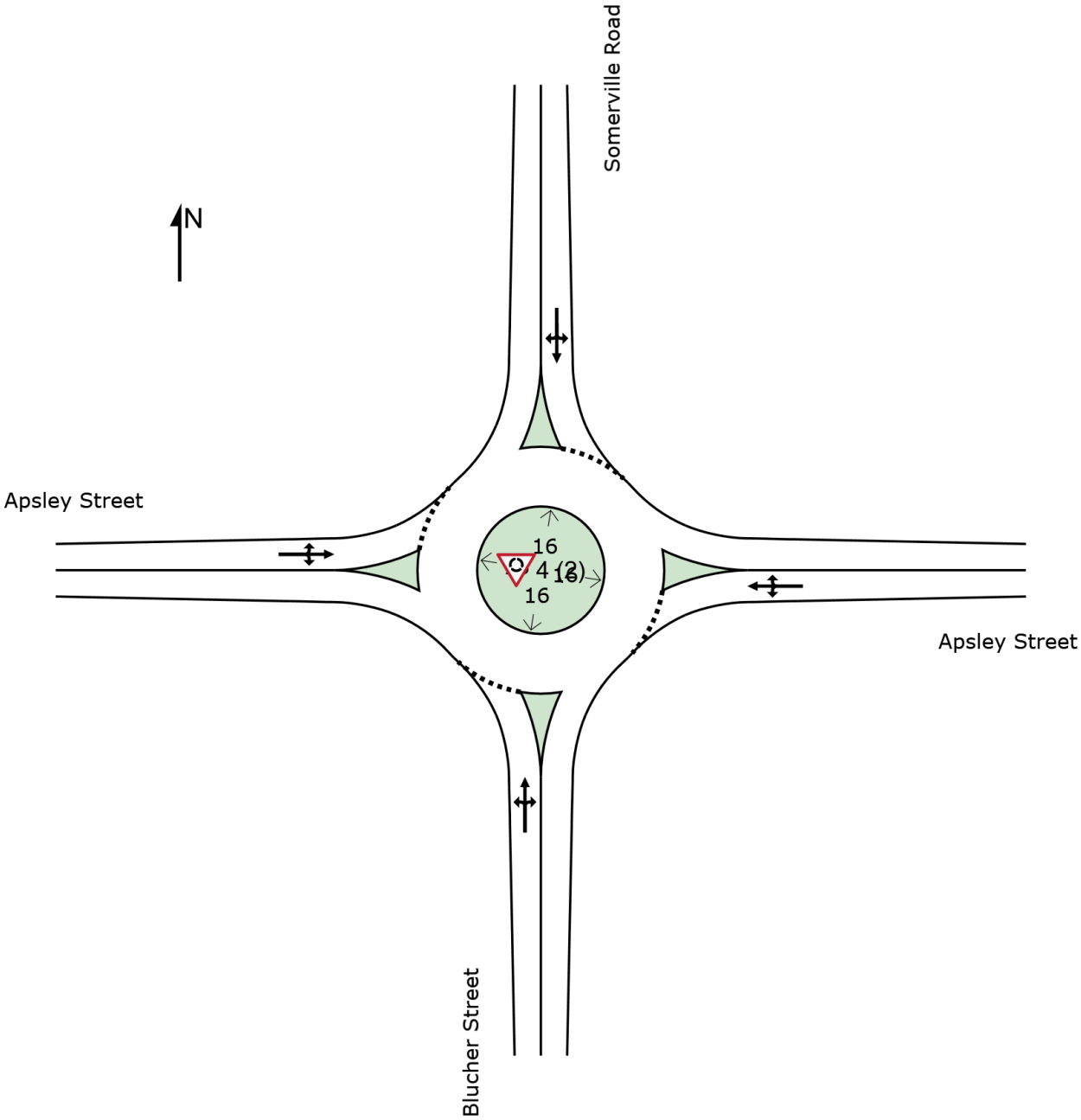
Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

Site: [4 (2)] PM Peak Hour (Apsley / Blucher)

New Site
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: [4] AM Peak Hour (Apsley / Blucher)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Blucher Street															
1	L2	All MCs	15	0.0	15	0.0	0.270	4.9	LOS A	1.6	11.6	0.37	0.59	0.37	51.0
2	T1	All MCs	54	9.8	54	9.8	0.270	5.4	LOS A	1.6	11.6	0.37	0.59	0.37	51.1
3	R2	All MCs	256	2.9	256	2.9	0.270	9.4	LOS A	1.6	11.6	0.37	0.59	0.37	50.4
Approach			324	3.9	324	3.9	0.270	8.5	LOS A	1.6	11.6	0.37	0.59	0.37	50.6
East: Apsley Street															
4	L2	All MCs	148	1.4	148	1.4	0.210	4.6	LOS A	1.2	8.8	0.29	0.54	0.29	52.4
5	T1	All MCs	19	5.6	19	5.6	0.210	4.9	LOS A	1.2	8.8	0.29	0.54	0.29	52.7
6	R2	All MCs	103	0.0	103	0.0	0.210	8.9	LOS A	1.2	8.8	0.29	0.54	0.29	52.0
Approach			271	1.2	271	1.2	0.210	6.3	LOS A	1.2	8.8	0.29	0.54	0.29	52.3
North: Somerville Road															
7	L2	All MCs	106	0.0	106	0.0	0.175	5.7	LOS A	1.0	6.8	0.48	0.57	0.48	52.5
8	T1	All MCs	49	2.1	49	2.1	0.175	6.0	LOS A	1.0	6.8	0.48	0.57	0.48	52.8
9	R2	All MCs	26	0.0	26	0.0	0.175	10.0	LOS B	1.0	6.8	0.48	0.57	0.48	52.0
Approach			182	0.6	182	0.6	0.175	6.4	LOS A	1.0	6.8	0.48	0.57	0.48	52.5
West: Apsley Street															
10	L2	All MCs	28	0.0	28	0.0	0.066	6.2	LOS A	0.3	2.5	0.53	0.63	0.53	51.8
11	T1	All MCs	14	15.4	14	15.4	0.066	6.9	LOS A	0.3	2.5	0.53	0.63	0.53	51.7
12	R2	All MCs	18	5.9	18	5.9	0.066	10.7	LOS B	0.3	2.5	0.53	0.63	0.53	51.1
Approach			60	5.3	60	5.3	0.066	7.7	LOS A	0.3	2.5	0.53	0.63	0.53	51.6
All Vehicles			837	2.4	837	2.4	0.270	7.3	LOS A	1.6	11.6	0.38	0.57	0.38	51.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [4 (2)] PM Peak Hour (Apsley / Blucher)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Blucher Street															
1	L2	All MCs	13	0.0	13	0.0	0.103	4.2	LOS A	0.5	3.7	0.12	0.47	0.12	53.5
2	T1	All MCs	109	1.0	109	1.0	0.103	4.4	LOS A	0.5	3.7	0.12	0.47	0.12	53.8
3	R2	All MCs	25	4.2	25	4.2	0.103	8.6	LOS A	0.5	3.7	0.12	0.47	0.12	52.8
Approach			147	1.4	147	1.4	0.103	5.1	LOS A	0.5	3.7	0.12	0.47	0.12	53.6
East: Apsley Street															
4	L2	All MCs	40	0.0	40	0.0	0.047	4.6	LOS A	0.2	1.6	0.26	0.52	0.26	53.0
5	T1	All MCs	5	0.0	5	0.0	0.047	4.8	LOS A	0.2	1.6	0.26	0.52	0.26	53.4
6	R2	All MCs	13	0.0	13	0.0	0.047	9.0	LOS A	0.2	1.6	0.26	0.52	0.26	52.6
Approach			58	0.0	58	0.0	0.047	5.6	LOS A	0.2	1.6	0.26	0.52	0.26	53.0
North: Somerville Road															
7	L2	All MCs	4	0.0	4	0.0	0.076	4.3	LOS A	0.4	2.6	0.15	0.44	0.15	53.6
8	T1	All MCs	91	1.2	91	1.2	0.076	4.5	LOS A	0.4	2.6	0.15	0.44	0.15	53.9
9	R2	All MCs	8	0.0	8	0.0	0.076	8.6	LOS A	0.4	2.6	0.15	0.44	0.15	53.1
Approach			103	1.0	103	1.0	0.076	4.8	LOS A	0.4	2.6	0.15	0.44	0.15	53.8
West: Apsley Street															
10	L2	All MCs	16	0.0	16	0.0	0.027	4.7	LOS A	0.1	0.9	0.29	0.55	0.29	52.4
11	T1	All MCs	4	0.0	4	0.0	0.027	5.0	LOS A	0.1	0.9	0.29	0.55	0.29	52.8
12	R2	All MCs	13	0.0	13	0.0	0.027	9.1	LOS A	0.1	0.9	0.29	0.55	0.29	52.0
Approach			33	0.0	33	0.0	0.027	6.5	LOS A	0.1	0.9	0.29	0.55	0.29	52.3
All Vehicles			341	0.9	341	0.9	0.103	5.2	LOS A	0.5	3.7	0.17	0.48	0.17	53.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [4 (3)] SAT Peak Hour (Apsley / Blucher)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Blucher Street															
1	L2	All MCs	7	0.0	7	0.0	0.078	4.2	LOS A	0.4	2.8	0.10	0.44	0.10	53.8
2	T1	All MCs	96	1.1	96	1.1	0.078	4.4	LOS A	0.4	2.8	0.10	0.44	0.10	54.2
3	R2	All MCs	9	11.1	9	11.1	0.078	8.7	LOS A	0.4	2.8	0.10	0.44	0.10	52.9
Approach			113	1.9	113	1.9	0.078	4.8	LOS A	0.4	2.8	0.10	0.44	0.10	54.0
East: Apsley Street															
4	L2	All MCs	39	0.0	39	0.0	0.044	4.6	LOS A	0.2	1.4	0.24	0.52	0.24	53.2
5	T1	All MCs	4	0.0	4	0.0	0.044	4.8	LOS A	0.2	1.4	0.24	0.52	0.24	53.5
6	R2	All MCs	11	0.0	11	0.0	0.044	8.9	LOS A	0.2	1.4	0.24	0.52	0.24	52.7
Approach			54	0.0	54	0.0	0.044	5.4	LOS A	0.2	1.4	0.24	0.52	0.24	53.1
North: Somerville Road															
7	L2	All MCs	1	0.0	1	0.0	0.063	4.2	LOS A	0.3	2.2	0.12	0.43	0.12	53.8
8	T1	All MCs	81	1.3	81	1.3	0.063	4.5	LOS A	0.3	2.2	0.12	0.43	0.12	54.1
9	R2	All MCs	5	0.0	5	0.0	0.063	8.6	LOS A	0.3	2.2	0.12	0.43	0.12	53.3
Approach			87	1.2	87	1.2	0.063	4.7	LOS A	0.3	2.2	0.12	0.43	0.12	54.0
West: Apsley Street															
10	L2	All MCs	7	0.0	7	0.0	0.021	4.6	LOS A	0.1	0.7	0.26	0.58	0.26	51.7
11	T1	All MCs	1	0.0	1	0.0	0.021	4.8	LOS A	0.1	0.7	0.26	0.58	0.26	52.1
12	R2	All MCs	17	0.0	17	0.0	0.021	9.0	LOS A	0.1	0.7	0.26	0.58	0.26	51.3
Approach			25	0.0	25	0.0	0.021	7.5	LOS A	0.1	0.7	0.26	0.58	0.26	51.4
All Vehicles			279	1.1	279	1.1	0.078	5.1	LOS A	0.4	2.8	0.15	0.47	0.15	53.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.