

APPENDIX D TRAFFIC REPORT

Prepared by

TTM



Traffic Engineering Report

Proposed Mixed Use Development

At 157 Abbotsford Road, Bowen Hills

On behalf of Thallon Mole Group Pty Ltd



About TTM

For 30 years, we've been at the centre of the Australian development and infrastructure industry. Our unique combination of acoustics, data, traffic and waste services is fundamental to the success of any architectural or development project.

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1 Introduction

1.1 Purpose

TTM Consulting has been engaged by Thallon Mole Group Pty Ltd to prepare a traffic engineering report investigating a proposed mixed-use development located at 157 Abbotsford Road, Bowen Hills.

It is understood that a Development Application will be lodged with Economic Development Queensland (EDQ).

1.2 Scope

This report investigates the transport aspects associated with the proposed development. The scope of the transport aspects investigated includes:

- Parking supply required to cater for development demand
- Parking layout to provide efficient and safe internal manoeuvring
- Access configuration to provide efficient and safe manoeuvring between the site and the public road network
- Service vehicles provision and onsite manoeuvring
- Suitability of internal pedestrian and cyclist operation
- Access to a suitable level of public transport
- Identification of likely traffic volumes and traffic distribution from the future development
- Identification of likely traffic impact of development on the public road network

To assess the proposed transport arrangements, the development plans have been assessed against the following guidelines and planning documents:

- Bowen Hills PDA Development Scheme
- Brisbane City Council Planning Scheme, specifically:
 - Transport, Access, Parking and Servicing Code
 - Transport, Access, Parking and Servicing Planning Scheme Policy
 - Bowen Hills neighbourhood plan
- Australian Standard (AS) 2890 Series

1.3 Site Location

The development will include the sites of 157 Abbotsford Road and 49 Allison Street. As shown in Figure 1-1, these sites are located within Precinct 1 of the Bowen Hills Priory Development Area (PDA) Development Scheme.



Figure 1-1: Bowen Hills PDA Development Scheme Precinct Boundaries

As shown in Figure 1-2, the site is situated on the north-eastern corner of the Abbotsford Road / Allison Street intersection. The property descriptions are Lot 1 on RP165998 and Lot 219 on RP9371.



Figure 1-2: Site location (Source: Nearmap)

1.4 Current Site Use

The site is currently occupied by two-storey and three-storey commercial buildings. As illustrated in Figure 1-3, vehicular access for each site is achieved via a crossover to Allison Street.



Figure 1-3: Existing Access Arrangements (Source: Nearmap)

As shown in Figure 1-4, parking spaces directly front Allison Street. This results in vehicles reversing across a pedestrian path in order to exit these spaces.



Figure 1-4: Existing Parking Provisions (Source: Nearmap)

2 Site Travel Environment

2.1 Road Hierarchy

The roads in the immediate vicinity of the site are administered by BCC. The hierarchy and characteristics of roads in the immediate vicinity of the site are shown below in Table 2-1.

Table 2-1: Local Road Hierarchy

Road	Speed Limit	Lanes	Classification	Road Authority
Abbotsford Road	60kph	6 (undivided)	Arterial Road	BCC
Allison Street	50kph*	2 (undivided, plus kerbside parking)	District Road	BCC
Thompson Street	50kph*	2 (undivided, plus kerbside parking)	District Road	BCC
Inner City Bypass	70kph	4 (divided)	Motorway	BCC

*Default speed limit on unsigned roads is 50 kph in built-up areas in Queensland

A summary of the key intersection treatments of the roads surrounding the site is shown in Figure 2.1.

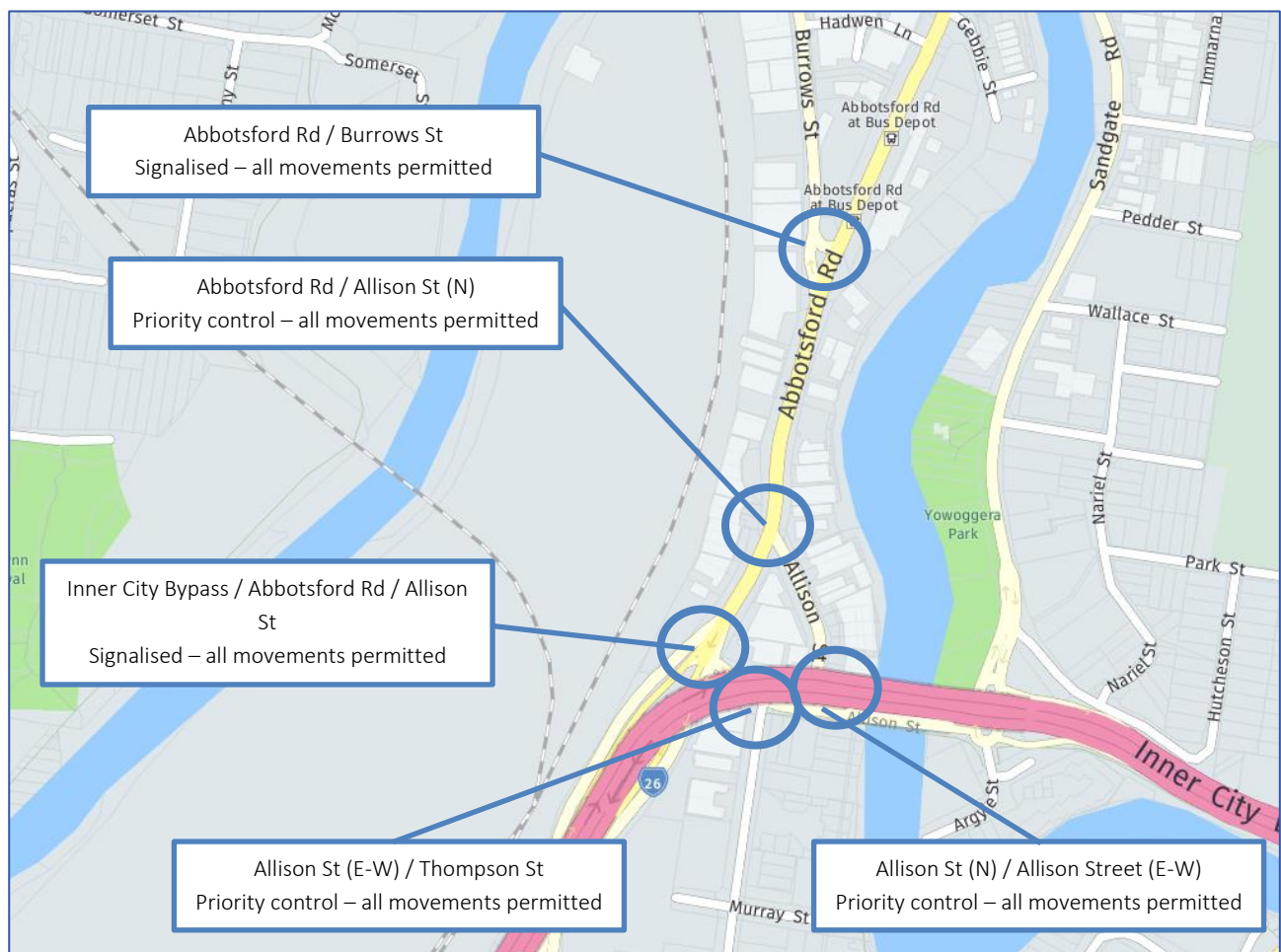


Figure 2-1: Intersection Treatments

2.2 Road Planning

Inspection of BCC's Local Government Infrastructure Plan (LGIP) indicates that there are plans to upgrade the road corridor along Abbotsford Road from Burrows Street to Allison Street. The project is projected to be completed by the end of 2021 and cost a total of \$2,104,228. The LGIP ID of the project is BOH-RC-001 and the extent of the corridor upgrade is illustrated in Figure 2-2.

TTM have reviewed aerial imagery which indicates that the works are yet to be completed. TTM have also contacted BCC to confirm the extent of works. However, no information has been provided to date.

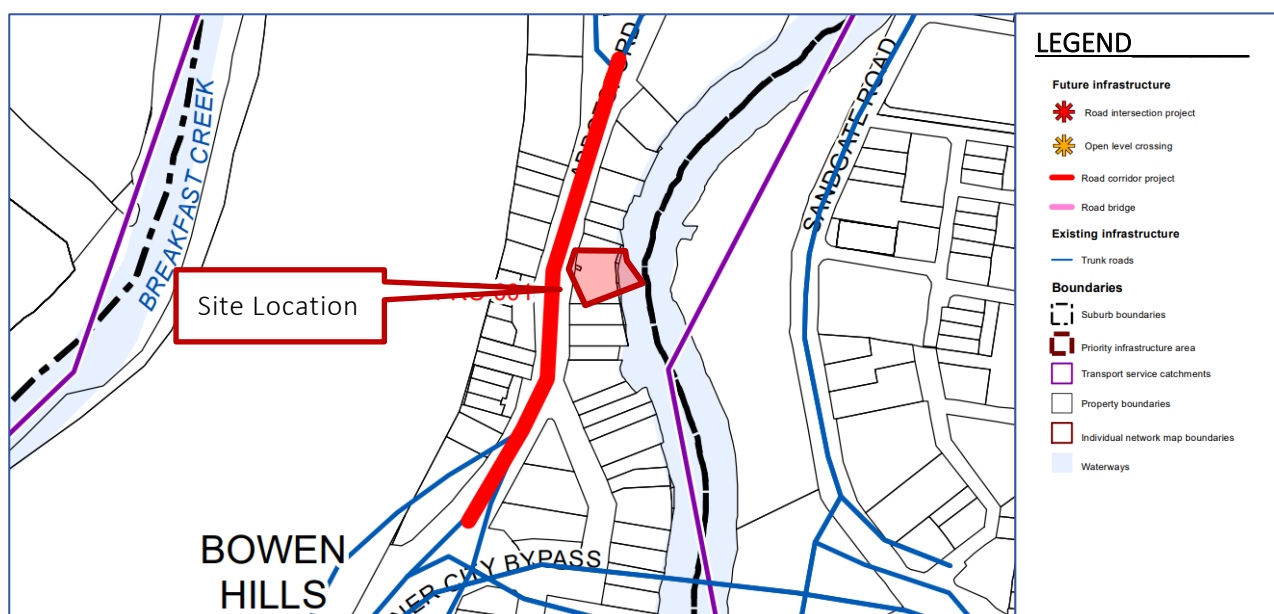


Figure 2-2: Road works (Source: BCC's Plans for Trunk Infrastructure Road Network)

A standard condition of approval will be the repair and reinstatement of pedestrian footpaths across the frontage of the site subsequent to construction activity on the site.

2.3 Kerbside Space Allocation and Demand Capacity

Within the vicinity of the subject site, kerbside parking is allocated along both sides of the Allison Street frontage. Kerbside parking along the eastern side of Allison Street is unrestricted while parking along the western side is 12P metered parking from Monday – Friday during the hours of 7AM – 7PM. A breakdown of nearby kerbside allocation within the surrounding streets is illustrated in Figure 2.2.



Figure 2-3: Allison Kerbside Allocation

2.4 Public Transport and Other Users

2.4.1 Trains

Bowen Hills train station is located approximately 700m (9 minutes) from the subject site. The station services the Sunshine Coast, Ipswich, Rosewood, Springfield, Gold Coast, Beenleigh, Cleveland, Ferny Grove, Cleveland, Doomben, Airport, Shorncliffe, Redcliffe Peninsula and Nambour-Caboolture lines. The station generally caters for approximately 750 trains on a typical weekday (two-way), with average peak hour frequencies of 1 train every minute.

2.4.2 Buses

There are several bus stops located within the vicinity of the development site on Abbotsford Road, Sandgate Road and Edmondstone Road. The nearest bus stop is Stop 16 Abbotsford Road, at Allison Street which is located approximately 63m (1 minute) from the subject site. The bus routes operating from this stop are shown in Table 2.2 below.

Table 2-2: Bus Route Summary

Bus Routes	Servicing	Operating Times	Frequency (Approx.)
301	Cultural Centre, City, Valley, Ascot, Hendra, Toombul	5:55am-10:25pm (Weekdays) 7:23am-10:23pm (Saturday) 8:35am-7:30pm (Sunday & Public Holidays)	20-40 mins during peak and 60 mins during off-peak periods
320	Chermside, Wavell Heights, Woolloowin, Clayfield, Bowen Hills, Fortitude Valley, City	5:15am-7:45pm (Weekdays) 7:06am-5:36pm (Saturday) 10:04am-4:44pm (Sunday & Public Holidays)	10-20 mins during peak and 30 mins during off-peak periods
393	Teneriffe Ferry Terminal, Kelvin Grove, RBWH	6:26am-6:10pm (Weekdays)	15-20 mins during peak and off-peak periods
306	Nudgee to City servicing Nudgee, Banyo, Virginia, Northgate, Nundah, Toombul, Clayfield, Fortitude Valley and City	5:52am-7:07pm (Weekdays) 6:39am-5:21pm (Saturday) 9:36am-3:36pm (Sunday & Public Holidays)	10-20 mins during peak and off-peak periods
322	Chermside to City servicing Chermside, Wavell Heights, Nundah, Toombul, Clayfield, Fortitude Valley & City.	6:14am-8:39pm (Weekdays) 7:30am-6:36pm (Saturday) 8:30am-6:30pm (Sunday & Public Holidays)	25-30 mins during peak periods and 1 hour during off-peak periods

2.4.3 Pedestrians

Formal pedestrian paths are provided along both sides of Allison Street and Abbotsford Road. The nearest formal pedestrian crossing is provided at Abbotsford Road/Allison Street signalised intersection. Kerb ramps are provided on along Abbotsford Road and Allison Street to assist pedestrian crossing. Overall, there are ample pedestrian paths and facilities within the vicinity of the development site.

2.4.4 Cyclists

There are no dedicated on or off-road cycle lanes located within the vicinity of the site. However, BCC's 'Bicycle Network Overlay Code' identifies Abbotsford Road, Allison Street and Sandgate Road as Secondary Cycle Routes. A summary of the cycle routes in the vicinity of the subject site are provided in Figure 2.3.

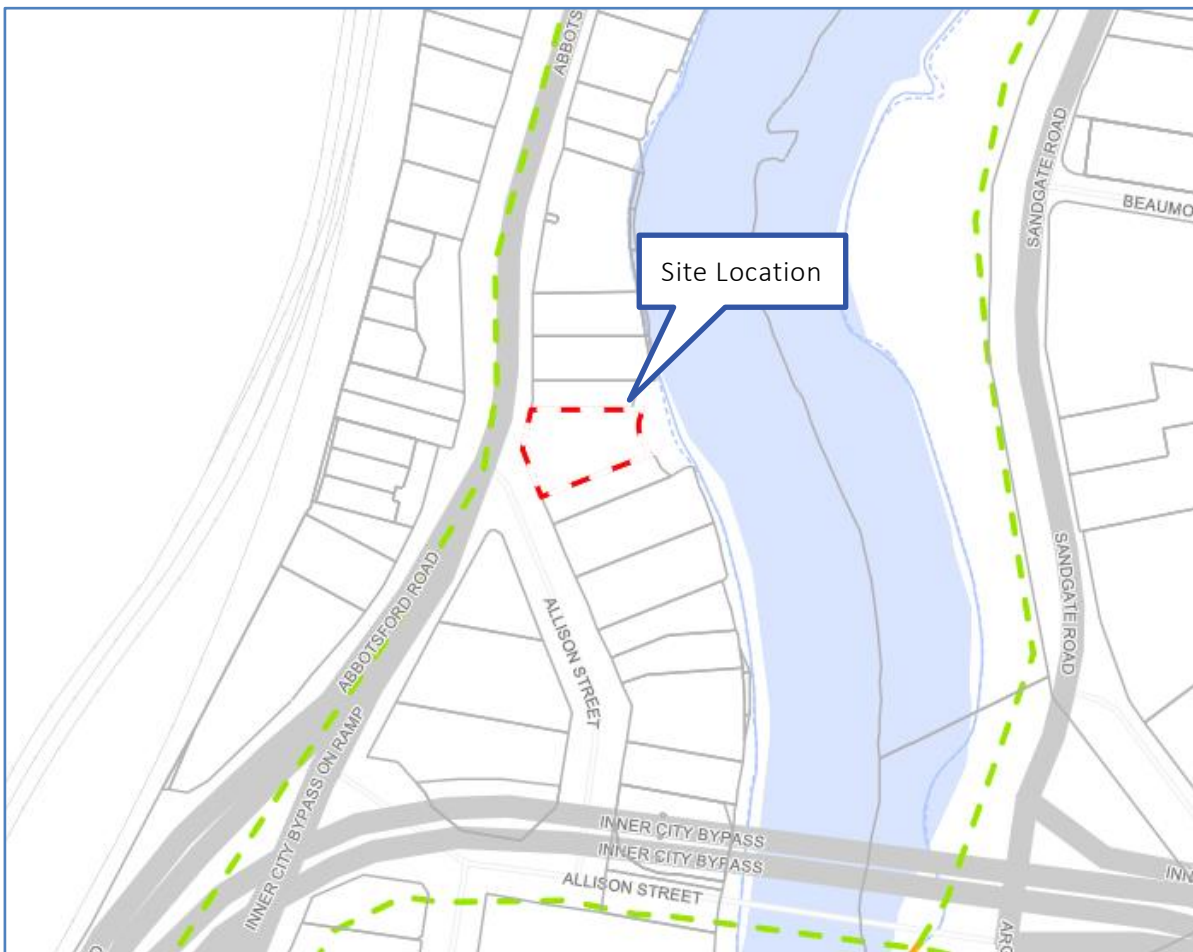


Figure 2-4: BCC Interactive Mapping Bicycle Hierarchy Overlay (Source: BCC Interactive Mapping)

3 The Proposed Development

3.1 Development Profile

The applicant seeks approval for a commercial office building, which is comprised of eight levels. A summary of the proposed land-uses and yields for the scheme are summarised in Table 3-1.

Table 3-1: Proposed Land Uses

Use	GFA
Commercial	4,478m ²
Food and Drink Outlet (Café)	51m ²
Total	4,529m ²

The ground floor is comprised of the food and drink outlet (café) and an office tenancy. Car parking is provided on levels 2 and 3. The remaining levels (4 - 8) will be commercial tenancies.

Given the scale of the Food and Drink Outlet (café), majority of patrons are expected to be building tenants. As such, it is considered to be ancillary in nature.

A copy of the development plans, prepared by Husband Architects, is included in **Appendix A**.

3.2 Parking

The development scheme proposes car parking across levels 2 and 3, with bicycle parking provided on level 1. In total, the scheme provides:

- 74 car parking spaces (including 2 PWD spaces)
- 5 Motorcycle Spaces
- 28 bicycle parking spaces (including 8 visitor parking spaces)

Further details regarding the proposed car parking provisions are included in **Section 4**.

3.3 Access

As illustrated in Figure 1-3, vehicular access is provided from Allison Street via a combination of driveway and driveway easements. The development seeks to consolidate vehicular access to a single crossover. The access arrangements are described as follows:

- 9.8m wide, modified Type B2 crossover
- All turns permitted

Pedestrian and Cyclist access will be facilitated via entries on both Abbotsford Road and Allison Street.

Further details in relation to the proposed access arrangements are included in **Section 5**.

3.4 Servicing

A shared RCV/MRV loading bay is located on the ground floor. Access to the bay is directly via Allison Street.

Three additional van bays are located on Level 2.

It is envisaged that shared use of the service bays will be managed by the dock manager via a service vehicle management plan.

Further details in relation to the proposed service vehicle arrangements are included in **Section 6**.

4 Car Parking Arrangements

4.1 EDQ Requirements

4.1.1 Car Parking

The development site is within EDQ zoning and therefore adheres to the Bowen Hills Priority Development Area Development Scheme (Development Scheme). Schedule 3 of the development scheme defers to BCC's City Plan, specifically the TAPS PSP, for car parking rates.

As the site is within the city frame, parking requirements are based on Table 13 of 'TAPS PSP'. A maximum rate is applicable for all non-residential uses within the City Frame.

Table 4-1 outlines the maximum provision of parking on this basis in line with 'TAPS PSP' requirements. The

Table 4-1: 'TAPS PSP' Car Parking Supply Requirement

Land Use	'TAPS PSP' Provision	Extent	Requirement
Non-Residential	1 space per 100m ² GFA	4,529m ² *	46 spaces (max)

*Includes Ancillary Food and Drink Outlet and excludes EOT/ Store/Amenities GFA

4.1.2 PWD Parking

In addition to the above, the 'TAPS PSP' stipulates the following requirements for PWD parking:

- A provision rate of 1 PWD space for every 50 'ordinary' spaces
- PWD spaces are provided as close as possible to the main building entrance.

Based on an overall provision of 79 spaces, a minimum of 2 PWD spaces are required.

4.1.3 Motorcycle Parking

Per the TAPS PSP, where more than 50 spaces are provided, 2% of spaces are to be provided in the form of motorcycle spaces at a minimum. Based on an overall provision of 79 spaces, a minimum of 2 motorcycle spaces are required.

Parking Provision

4.2 Car Parking

As noted above, the site is subject to a maximum parking rate of 1 space per 100m² GFA.

If the scheme were to comply with BCC requirements, a maximum 46 spaces would be applicable. The development is to provide a total of 79 parking spaces, including 2 PWD spaces and 5 motorcycle spaces. This equates to a parking rate of 1 space per 57.3m² GFA.

The proposed parking rate is considered suitable given the following:

- As illustrated in Figure 4-1, the site is located at the northern end of the City Frame., Application of BCC's standard rates (i.e. outside the City Frame) to the proposed scheme would require 136 parking spaces. The proposed 79 spaces equates to 58% of this requirement. The proposed provision is considered a suitable compromise between the City Frame rates and the standard 'TAPS PSP' minimum rate.
- Performance outcome (PO) 12 of the TAPS code states 'car parking is provided at a rate to discourage private vehicle use and encourage walking, cycling and the use of public transport'. The development is classified as a destination land-use, as it is a place of employment. As such, majority of trips will be between the place of residence and the subject site.

Whilst the site is adequately serviced by public transport, the demand for walking, cycling will be minimal given that:

- No formal bicycle infrastructure is provided along any of the surrounding roads.
- The amount of pedestrians walking to work will be minimal given the proximity of the site to any major residential catchment

Based on the above, the proposed provision is considered necessary to cater for the practical demands of the development.

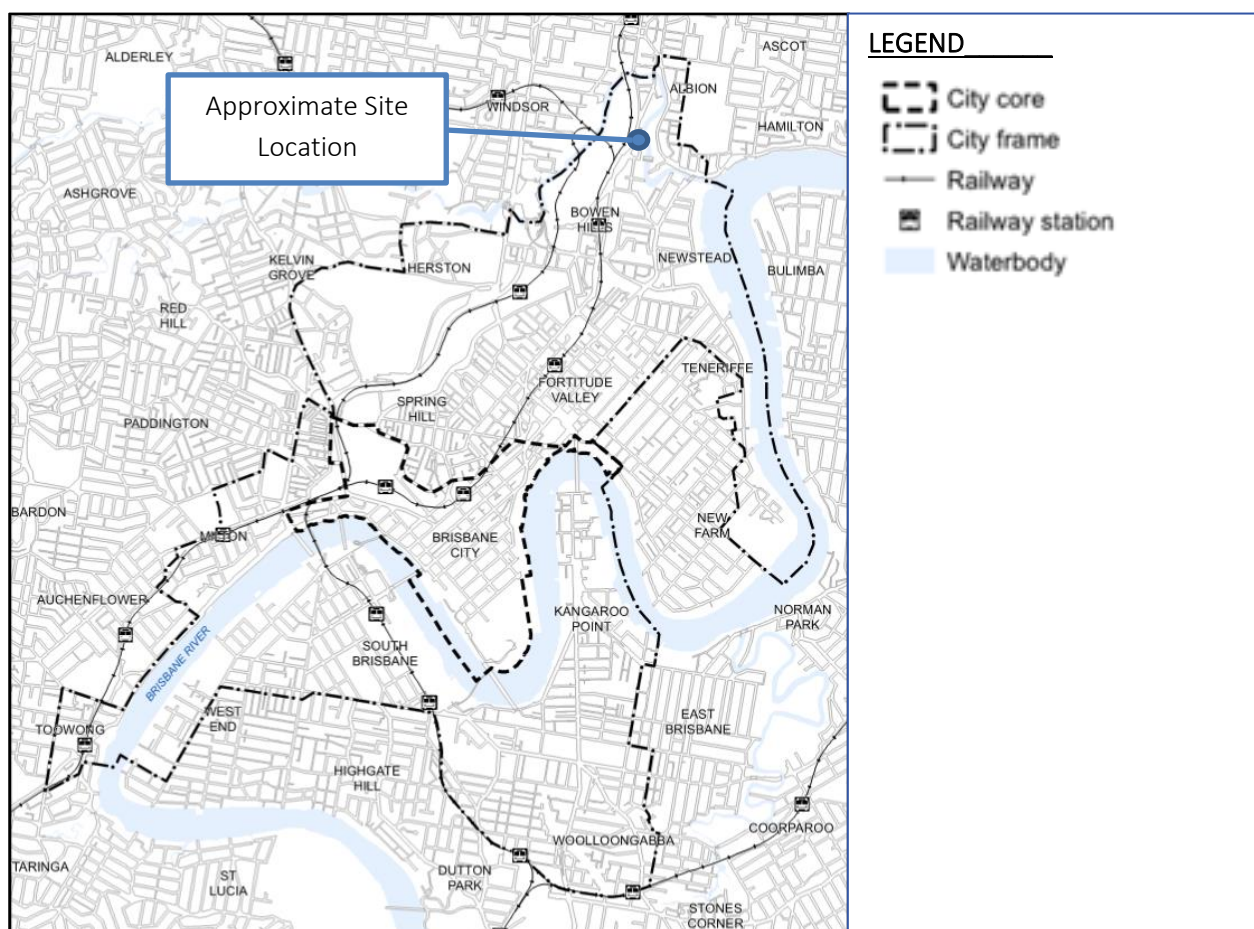


Figure 4-1: Reproduction of Figure A – City Core and City Frame

4.2.1 PWD Parking

Consistent with BCC's 'TAPS PSP' parking requirements, two PWD parking spaces have been provided. These are located on Level 2, opposite the lift core.

4.2.2 Motorcycle Parking

A total of 79 parking spaces are proposed, with 5 of these provided as motorcycle parking. This is equivalent to approximately 6% of parking spaces, which satisfies the minimum requirements outlined in the 'TAPS PSP'.

4.3 Car Park Layout

4.3.1 EDQ Requirements

The development site is within EDQ zoning and therefore adheres to the Bowen Hills Priority Development Area Development Scheme (Development Scheme). Schedule 3 of the development scheme provides requirements regarding transport, access, parking and servicing. Driveway crossovers and site access are to be located and designed in accordance with the relevant requirements set out in BCC's 'TAPS PSP'.

Table 4-2 identifies the characteristics of the proposed parking area with respect to the BCC's 'TAPS PSP' requirements. The last column identifies the compliance of each design aspect. Where compliance with Council is not achieved, further information is provided below.

Table 4-2: Parking Design Requirements

Design Aspect	'TAPS PSP' Provision	Proposed Provision	Compliance
Parking space length: - Standard space - PWD space - Motorcycle space	5.4m (min) 5.4m (min) 2.5m (min)	5.4m 5.4m 2.5m	'TAPS PSP' Compliant 'TAPS PSP' Compliant 'TAPS PSP' Compliant
Parking space width: - Standard space - PWD space - Motorcycle space	2.4m (min) 2.4m (min) + 2.4m 'Shared Area' 1.35m (min)	2.4 (min) 2.4m (min) + 2.4m 'Shared Area' 1.2m	'TAPS PSP' Compliant 'TAPS PSP' Compliant Performance Solution
Aisle Width: - Parking aisle - Circulation road/ramp (two-way) - Circulation road/ramp (curved)	6.2m (min) 6.2m (min) As per AS2890.1:2004, Figure 2.9	6.2m (min) 6.2m (min) As per AS2890.1:2004, Figure 2.9	'TAPS PSP' Compliant 'TAPS PSP' Compliant 'TAPS PSP' Compliant
Parking envelope clearance – space adjacent to wall	Space 0.3m clear of wall	Space 0.3m clear of wall	'TAPS PSP' Compliant
Maximum Gradient: - PWD parking - Parking aisle - Ramp	1:40 (2.5%) 1:20 (5.0%) 1:6 (16.7%)	Flat 1:16 (6.25%) 1:5 (20%)	'TAPS PSP' Compliant Performance Solution Performance Solution
Maximum Change in Grade	1:8 (12.5%) summit* 1:6.67 (15.0%) sag*	1:8 (12.5%) summit* 1:8 (12.5%) sag*	'TAPS PSP' Compliant 'TAPS PSP' Compliant
Height Clearance - General Min. - Over PWD bay	2.3m 2.5m	2.3m (min) 2.5m (min)	'TAPS PSP' Compliant 'TAPS PSP' Compliant

*'TAPS PSP' is silent with regards to this matter, so revert to AS2890.1:2004 as per Section 1.2 of the 'TAPS PSP'.

** With respect to height clearances, the car park complies with the minimum BCC requirement of 2.3m, however, services may be typically designed to intrude into car parking spaces at various locations throughout the car park. The acceptable intrusion zones are shown in Figure 3.1 based on AS2890.6.

The development proposal generally complies with BCC / EDQ requirements; however, the following aspects of the car park design have been resolved with alternative solutions:

Motorcycle Space Width

The 'TAPS PSP' details that motorcycle spaces are required to be provided at 1.35m width. The proposed car park layout provides a performance solution with regards to this motorcycle space width, with 1.2m minimum spaces widths. These motorcycle space widths satisfy the requirements per 'AS2890.1:2004' for motorcycle parking.

As the widths comply with AS2890.1, the proposed widths is considered an acceptable performance design solution.

Maximum Parking Aisle Gradient

The podium parking levels have been designed for a 1:16 (6.25%) maximum parking aisle gradient. Although this is steeper than the 'TAPS PSP' maximum of 1:20 (5%), it is considered acceptable for the following reasons:

- 'AS2890.1' stipulates that parking aisles may be provided at a maximum gradient of 1:16 (6.25%).
- The site is predominantly a commercial use, therefore the majority of users accessing the carparking area are employees and will do so on a regular basis, thus becoming familiar with the increased gradient.
- A portion of the parking spaces are provided on a flat gradient, including the PWD parking bays and shared area. This provides the opportunity for vulnerable users to park clear of the 1:16 gradient.

Based on the above, the proposed parking aisle gradient is considered a suitable performance solution.

Maximum Ramp Gradient

The ramp leading down to the Basement 1 has been designed for a 1:5 (20%) maximum gradient. Although it is steeper than the 'TAPS PSP' maximum of 1:6, it satisfies 'AS2890.1:2004'. The top and bottom of the ramp are designed as 2m wide 1:8 (12.5%) transitions to ensure that the change in gradient does not exceed 1:8 (12.5%) between transitions.

Given the nature of the land-uses under consideration, majority of users accessing the carparking area will do so on a regular basis and thus become familiar with the increased gradient.

As the maximum design gradient satisfies the requirements outlined in 'AS2890.1:2004' it is considered a suitable performance solution.

4.3.2 Conclusion

Based on the information provided above, TTM considers the proposed car parking layout acceptable and 'fit for purpose' through compliance with a combination of design aspects from BCC's 'TAPS PSP' and 'AS2890.1:2004'.

4.4 Parking Control

Access to the podium parking levels will be restricted by boom gate control. The control is required given the nature of the development. It is proposed that employees will swipe into the site. The indicative boom gate locations are shown on the development plans included as **Appendix A**.

The queueing area prior to the boom gate control is flat and allows for three vehicles to queue within the property boundary. The suitability of the queueing provision is addressed in **Section 5**.

5 Site Access Arrangements

5.1 General Arrangements

The development site is within EDQ zoning and therefore adheres to the Bowen Hills Priority Development Area Development Scheme (Development Scheme). Schedule 3 of the development scheme provides requirements regarding transport, access, parking and servicing. Driveway crossovers and site access are to be located and designed in accordance with the relevant requirements set out in BCC's 'TAPS PSP'.

Vehicular access to the site is currently achieved via two crossovers to Allison Street. These crossovers achieve approximately 5m and 22m separation from the Abbotsford Road / Allison Street intersection, respectively.

The development seeks to modify these existing crossovers to provide a single driveway crossover access to the site. The consolidation to a single crossover, located further from the intersection, is considered to be a significant improvement. The proposal will also resolve the current safety issue where vehicles are reversing across the pedestrian footpath.

5.2 EDQ / BCC Requirements

Table 5-1 identifies the characteristics of the proposed access arrangements to Allison Street with respect to BCC's 'TAPS PSP' requirements. The last column identifies the compliance of each design aspect. Where compliance with BCC is not achieved, further information is provided below.

Table 5-1: Typical Driveway Requirements for the Access Arrangements to Allison Street

Design Aspect	'TAPS PSP' Provision	Proposed Provision	Compliance
Width / Crossover Type	7.0m / Type B2	9.8m / Modified Type B2	Performance Solution
Distance from: - Major road intersection - Adjacent driveway	20m (min) 3m (min)	14m 6m	Performance Solution 'TAPS PSP' Compliant
Sight Distance	90m (desirable) or 70m (abs. minimum)	>90m towards Allison Street intersection 12m towards Abbotsford Road / Allison Street intersection	'TAPS PSP' Compliant
Driveway Sight Splays	2.0m wide x 5.0m deep	2.0m wide x 2.5m deep	Performance Solution
Minimum Queuing Provisions	4 vehicles / 24m	3 vehicles / 22m	Performance Solution
Maximum Driveway grade	1:20 (5%) maximum within first 6m	1:20 (5%) maximum within first 22m	'TAPS PSP' Compliant

The proposed access crossover to Allison Street is generally consistent with BCC's 'TAPS PSP' requirements; however, the following issues have been resolved with performance solutions.

Intersection Separation

BCC's 'TAPS PSP' states that a crossover to a major road is to achieve 20m separation from any major intersection. The development has frontages to Abbotsford Road (Arterial) and Allison Street (District), which are both major roads.

The proposed crossover is located as far as practical from the intersection. This includes the removal of the southern splay, which is discussed below. The driveway to the site is 6.3m wide and located at the southern boundary. The loading bay, which is low turnover, is located 14m from the intersection. Whilst a combined crossover is proposed, the higher turnover access is 17m from the intersection.

Driveway Width

Access is proposed via Allison Street, which is the lower order fronting road. A combined crossover providing access to the loading bay and main driveway is proposed. The crossover is to be provided as a modified 9.8m wide Type B2 driveway crossover, with the southern splay removed.

Whilst the proposed width of 9.8m exceeds the 7.0m outlined in BCC's 'TAPS PSP', it is considered acceptable for the following reasons:

- The crossover is to facilitate service vehicle access to the site. The purpose of the increased width is to allow service vehicles to stand clear of the entry and exit lanes. The width of the driveway is 6.3m wide
- The carpark will be tidal in nature, with majority of motorists entering the site in the AM and exiting the PM. To avoid the congestion on the external network, it is expected that majority of deliveries will be undertaken outside of these peak hour periods. As such, the effective pedestrian crossing width will be 6.3m in the peak and 3.5m outside of the peak, which is comparable to the 7.0m permitted under the 'TAPS PSP'.

Based on the above, the driveway width is considered to be acceptable

Driveway Type

Access to the site is to be achieved via a modified 9.8m wide Type B2 driveway crossover. The northern splay is consistent with the Type B2 requirements outlined in BCC's 'TAPS PSP'. However, the southern splay has been removed to maximise separation from the Abbotsford Road / Allison Street (N) intersection. The removal of the southern splay is considered acceptable given the following:

- The length between the proposed crossover and the access for the development to the south is insufficient for parking. As such, TTM propose to extent the yellow 'No Parking' zone beyond the adjacent crossover.
- The southbound lane on Allison Street is 5.0m wide, where parking is not permitted. This exceeds the minimum 3.5m lane width required under Table 3.2.3.A of BCC's 'Infrastructure Design Planning Scheme Policy (Infrastructure PSP)' for a District Road. This additional width affords drivers a wider turning arc, reducing the reliance on a dedicated splay. TTM Drawing 21BRT0201-02A, included as **Appendix B**,

confirms that the proposed splay is sufficient to accommodate passenger vehicles exiting the site to the south and as such, are considered acceptable.

Based on the above, the driveway type is considered to be acceptable.

Driveway Sight Splays

The development plan includes an allowance for a minimum 2.0m wide x 2.5m deep sight splay on the eastern (exit) side of the driveway. Whilst this does not strictly satisfy the requirement of the 'TAPS PSP', it is considered acceptable for the following reasons:

- The provision is consistent with the requirements of 'AS2890.1'.
- The building is set back 6m from the edge of the carriageway. The 'Infrastructure PSP' states that the minimum verge for a District Road is 4.25m. This additional distance allows for vehicles to stop clear of the pedestrian path before exiting the site.
- The car park will typically be accessed by regular users who will become accustomed to slowing at the exit to check for pedestrians on the footpath.
- TTM recommend that signage and line marking are implemented on exit to highlight to drivers the need to slow and watch for pedestrians on the footpath.

On this basis, provision for an 'AS2890.1' compliant sight splay arrangement is considered an acceptable performance solution.

Minimum Queuing Provisions

The proposal provides queuing for 3 vehicles prior to the first control point – the access boom gate. This is below the 4 vehicle provision required under the 'TAPS PSP'. It should be noted that the queuing provision requirements outlined in 'TAPS PSP' are based on the number of carparks and does not take into account the land use or development traffic generation/ space turnover. The car parking areas accessed from this driveway comprises of low-turnover staff parking spaces, which will typically operate on a tidal basis; inbound in the AM and outbound in the PM. Staff parking spaces typically only turn over 1-2 times a day.

As detailed further in Section 8, it is expected that the peak vehicle movements into the site in the AM peak hour period is 28vph. The probability (using the Poisson distribution method) of more than 1 vehicle entering the site at the same time (or say within a 20 second period whilst a car is using the access intercom) and all requiring queueing in advance of the boomgate, extending back onto Allison Street, is less than 1%. As such, the proposed internal queuing capacity of 1 vehicle is sufficient to cater for the 99th percentile entry queue of the site and is therefore considered acceptable.

5.3 Conclusion

Overall, TTM considers the design of the access at Allison Street to be acceptable and 'fit for purpose' through compliance with a combination of design aspects from BCC's 'TAPS PSP' and 'AS2890.1:2004'.

6 Service Vehicle Arrangements

6.1 EDQ Requirements

The development site is within EDQ zoning and therefore adheres to the Bowen Hills Priority Development Area Development Scheme (Development Scheme). Schedule 3 of the development scheme provides requirements regarding Transport, Access, Parking and Servicing. Servicing for the development is to be in accordance with the requirements set out in BCC's 'TAPS PSP'.

The provisions of Table 2 of the 'TAPS PSP' in relation to the design service vehicle and loading bay requirements for commercial office use is summarised in Table 6-1.

Table 6-1: 'TAPS PSP' Service Vehicle Requirements

Land Use	Extent	Design Vehicles	Loading Bay Requirements			
			Van	SRV	MRV	LRV
Commercial	4,529m ² *	RCV (Occasional Access) MRV (Regular Access) SRV (Regular Access)	3	1	1	-

Van = BCC Van (AS2890.1 B99 equivalent) | SRV = 6.4m Small Rigid Vehicle | MRV = 8.3m Medium Rigid Vehicle | LRV = 10.7m Large Rigid Vehicle
RCV = Refuse Collection Vehicle

* Includes Ancillary Food and Drink Outlet and excludes EOT/ Store/Amenities GFA

6.2 Proposed Service Vehicle Arrangements

6.2.1 Design Vehicle

The development scheme proposes to adopt a 10.3m BCC Rear Lift Refuse Collection Vehicle (RCV) as the 'occasional access' vehicle, with a Medium Rigid Vehicle (MRV) nominated as the 'regular access' vehicle.

The proposed servicing arrangements satisfy the requirements set out in BCC's 'TAPS PSP' with respect to provision for regular and occasional access vehicles.

6.2.2 Servicing Provision

The development provides the following loading provisions:

- A consolidated loading bay suitable for vehicles up to the size of a RCV, located on the Ground Floor
- Three VAN bays, located on Level 2

Whilst this provision represents a shortfall of one SRV bay compared to 'TAPS PSP' requirements, it is proposed that a loading dock manager is employed at the facility and a comprehensive Service Vehicle Management Plan is adopted to assist the efficient servicing of the development. The management of the loading facilities will improve the efficiency of servicing, reducing the overall number required. Whilst it is anticipated that the Service Vehicle Management Plan will be further developed as part of the detailed design stage, key aspects of the plan are outlined in **Appendix C**.

It should be noted that the strategies outlined Service Vehicle Management Plan are consistent with that successfully implemented at other commercial office towers of a similar scale within the CBD/fringe area.

It is noted that the consolidated loading bay requires larger service vehicles to reverse into the site from a major road. TTM have been informed that facilitating turnaround for a 10.3m RCV within the site is not financially viable as the extent of room required would significantly impact the extent of Ground Floor GFA and the EOTF area. It would also create complications with the proposed boom gate arrangements.

The development intends for all larger vehicle servicing to be undertaken from this loading bay, rather than providing multiple ground floor loading bays. A single consolidated bay is considered to simplify the access arrangements for the site. Three VAN bays have been provided to facilitate the bulk of deliveries for the development.

It is proposed that servicing will occur outside of peak hours, so to avoid conflict or external queuing whilst the vehicle undertakes this reverse-in manoeuvre. This is to be enforced by way of the Service Vehicle Management Plan.

6.2.3 Refuse Collection

As noted above, refuse collection is proposed to be undertaken from the ground-floor loading bay. This refuse collection is likely to occur off peak, allowing full utilisation of the service vehicle area for standing and manoeuvring. The loading bay is adequate to allow for a 10.3m BCC Rear Lift RCV to load and unload with no impact on the operation of the internal and external road network.

In general, the proposed development will employ bulk 1100L bins which will be collected by a commercial waste contractor, with the use of rear-loading RCV's. Rear-loading RCV's operated by most commercial waste contractors are similar in size to a MRV (if not smaller). Due to the limited capacity of the service vehicle area, the refuse collection function will be undertaken by a private contractor outside office opening hours when the remainder of the service vehicle area is not in use. Hence the refuse collection vehicle (RCV) will be able to utilise the full extent of the service vehicle area.

A bin storage area is provided at ground level for the various building and tenancy uses.

6.2.4 Design of Service Vehicle Area

The portion of the driveway where vehicles will unload/load is generally flat. The dimensions of the RCV/LRV loading bay are 11m in length and 3.5m in width. The height clearance achieved above the loading bay is 4.5m.

Overall, these provisions comply with BCC's 'TAPS PSP' requirements and are considered suitable.

6.2.5 Vehicle Manoeuvrability

As noted in Section 6.2.2, larger service vehicles are required to reverse into the site in order to access the ground floor loading bay. The vehicles will egress the site in a forward direction. TTM Drawing 21BRT0201-01A illustrates that a 10.3m BCC Rear Lift RCV, the largest design vehicle, is able to access the site via a reverse-in/forward-out manoeuvre; this has been included as **Appendix B**.

6.3 Conclusion

Overall, TTM considers that the proposed on-site servicing provisions are sufficient to cater for the expected demands generated by the development.

7 Development Transport Demands

7.1 Estimated Development Traffic Generation

To assess the impact of the proposed development on the adjacent road network, it is necessary to predict the likely volume of vehicles that will be generated by the proposal. The RMS' 'Guide to Traffic Generation Developments (Updated Traffic Surveys)' documents traffic generation expectations for commercial/office developments on a per space basis. Table 7-1 details the development's estimated traffic generating potential based on these rates.

Table 7-1: Estimated Development Traffic Generation

Land-Use	Yield	Generation Rate	Peak Hour Generation
Office	77 spaces	0.4vph per space	31vph

7.2 Estimated Development Traffic Distribution

Based on the surveys undertaken by the RMS, it is estimated that 90% of generated traffic in the AM peak-hour will be inbound with the remaining 10% outbound. With respect to the PM peak-hour, it is assumed that 10% of generated traffic will be inbound with the remaining 90% outbound.

The estimated distribution of traffic generated by the development has been based on that surveyed at the Abbotsford Road / Allison Street (N) and Alliston Street (N) / Alliston Street (E-W) intersections; see **Section 8**. The surveys indicate that a large portion of Allison Street traffic access the corridor via the Abbotsford Road / Allison Street intersection, ultimately egressing via Allison Street. This distribution is due to the restriction of right-turns of the Abbotsford Road and Allison Street approaches in the AM peak hours. The signage is illustrated in Figure 7-1 and Figure 7-2.

A review of the survey data indicates that no vehicles turn right out of Allison Street in the PM peak hour period either. Instead, motorists wishing to travel north do so by turning left onto Allison Street (E-W) and left onto Argyle Street. This route avoids the large bi-directional flows facilitated on the 6-lane Abbotsford Road.



Figure 7-1: 'No Right Turns Between 4am-7am' Signage on Allison Street (N) approach



Figure 7-2: 'No Right Turns Between 4am-7am' Signage on Abbotsford Road approach

The adopted distribution is illustrated in Figure 7-3.

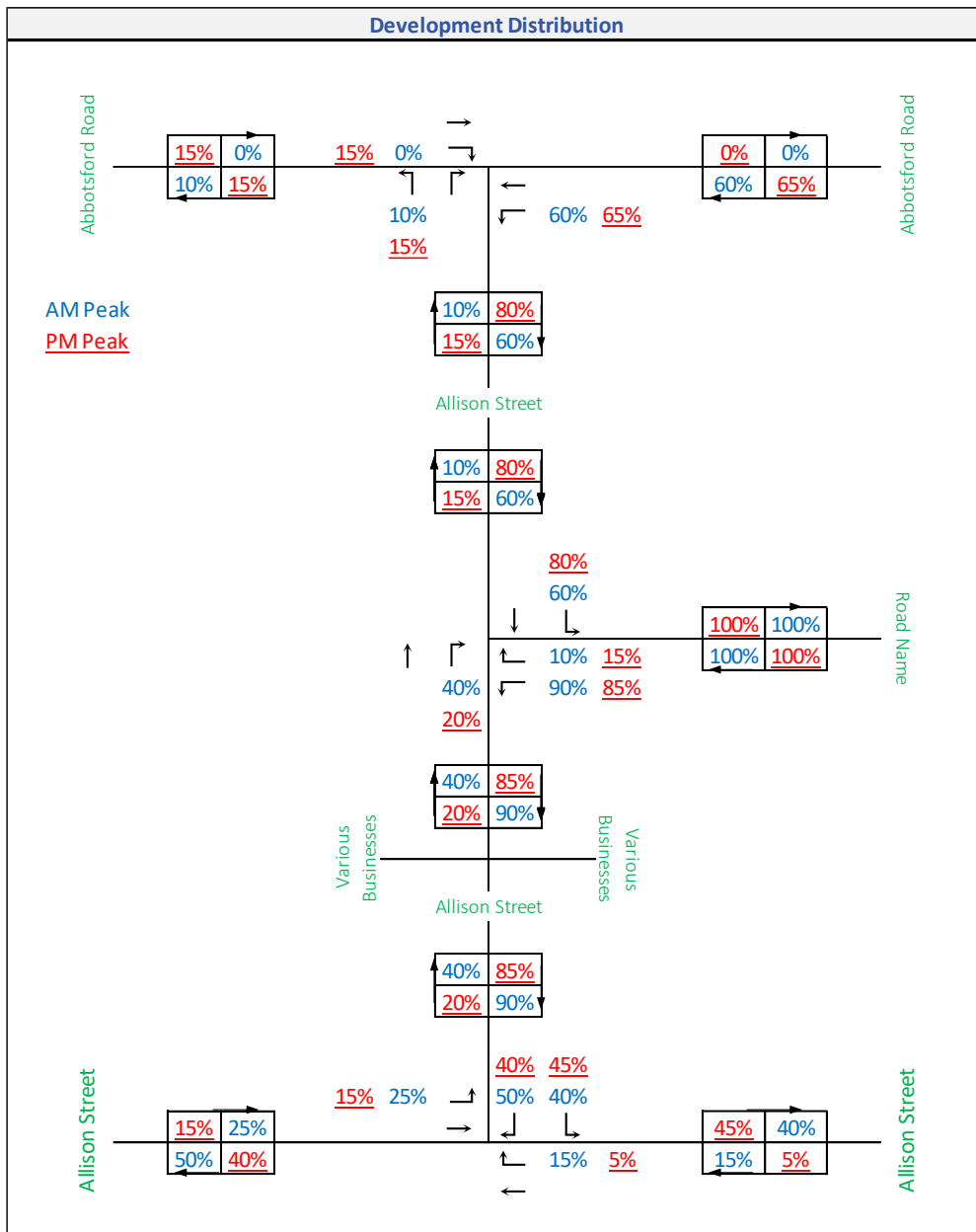


Figure 7-3: Estimated Distribution of Development Generated Traffic

Application of the above-mentioned traffic generation and distribution assumptions results in the development traffic volumes shown in Figure 7-4.

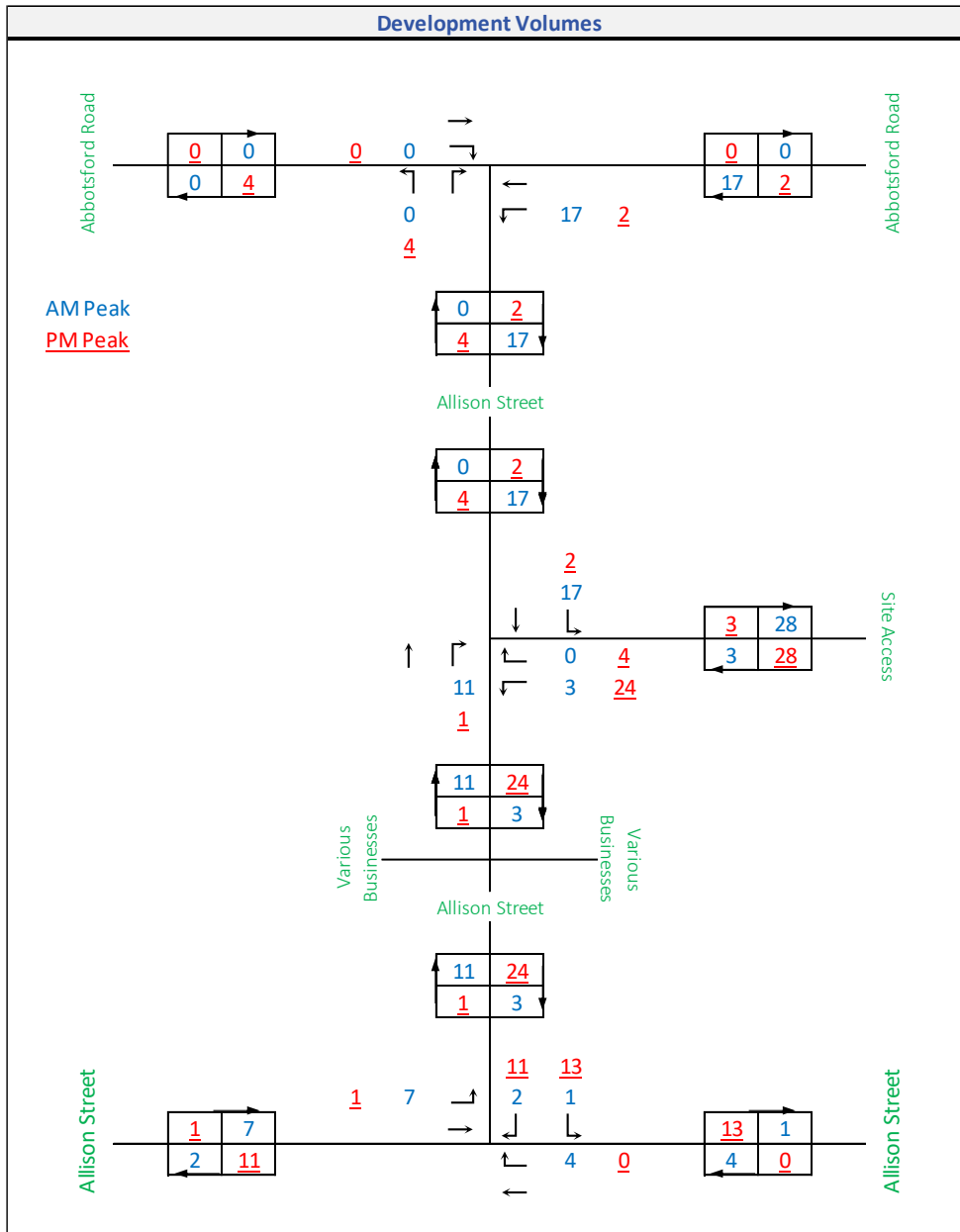


Figure 7-4: Estimated Development Traffic Generation

7.3 Warrant for Detailed Traffic Impact Assessment

Acceptable Solution A02 of the Road Hierarchy Overlay Code details that the development traffic impacts be quantified and mitigated for an 'assessable development for a material change of use' which meets any of the following triggers:

- is classified as a major development; or
- involves an access driveway to a major road; or
- involves an access driveway within 100m of a signalised intersection.

Note: The 'TAPS PSP' defines a 'major development' as one with a total peak hour vehicle generation rate greater than 25vph.

Given that the redevelopment of the subject site will result in an increase in traffic generation of more than 25vph, the proposed development is considered a major development. Additionally, the site achieves access via a Major Road. As such, a detailed traffic impact assessment is warranted.

8 Base Traffic Demands

8.1 Existing Road Volumes

On Tuesday the 25th of May 2021, TTM conducted traffic surveys of the surrounding road network to establish base traffic conditions. The intersections surveyed included:

- Abbotsford Road / Allison Street (N) priority-controlled intersection
- Allison Street (N) / Allison Street (E-W) priority-controlled intersection

The survey times for all counts were 6:00am – 9:00am and 4:00 – 6:00pm. The peak hours for each of the surveyed intersections were found to be 7:30-8:30am and 4:30-5:30pm.

Detailed network diagrams showing traffic movement splits at the above intersections is included in **Appendix C**.

9 Future Traffic Demands

9.1 Traffic Growth

For the purposes of assessing future traffic demands on the external road network, BCC Local Government Infrastructure Plan (LGIP) within Part 4 of the Brisbane City Plan 2014 provides guidance on future traffic growth expectations. The “Existing and projected demand for the transport network (road network)” table (Table SC3.1.7) indicates assumed future transport demands within each of the Service Catchments of the BCC area; which is used for the purposes of determining trunk works in the LGIP. The subject site is located within Catchment 8.

By comparing future traffic demand expectations up to 2031 (total vehicle trips per day) in Catchment 8 to base 2021 volumes, an equivalent growth rate of 1.4% p.a. has been determined. On this basis, a conservative growth rate of 1.5% p.a. has been adopted to account for background traffic growth.

9.2 Assessment Years

The applicant has indicated that the targeted completion date for the development is 2023. On this basis, the following assessment years have been considered:

- Opening Year (All Stages) 2023
- Design Horizon (Opening + 10 years) 2033

To assess future traffic demands at 2023 and 2033, a 1.5% p.a. growth rate has been applied to all through movements along Abbotsford Road and Allison Street (East and West). This is a conservative growth rate based on historical data within the area. As Allison Street (North) is fully developed, significant growth is not expected.

9.3 Future Year Scenarios

The following future year scenarios have been derived for the purposes of the TIA:

- 2020 Survey Scenario: To establish base operations of surrounding road network, based on the existing road configuration, to compare future operations against.
- 2023/2033 Base Case Scenario: To establish base operations at opening year and the design horizon, considering base traffic growth, and any changes to the road network. This will be used to compare the net impact of the proposed development traffic demands against. For these purposes, no changes are proposed to the existing road network configuration.
- 2023/2033 Base + Development Case Scenario: This will be used to determine road network operations with inclusion of the proposed development at opening year and the design horizon. Comparison against the Base Case scenarios will determine the overall impact of the proposed development and any necessary mitigation works required.

Based on the development transport demand estimates (Section 8), base traffic growth (Section 9.1), traffic network diagrams have been prepared. These diagrams indicate the traffic movements on the roads/intersections surrounding the development site for each of the above scenarios. These diagrams are included as **Appendix D**.

10 Traffic Impact Assessment

10.1 Extent of Assessment

Based on the expected distribution of development traffic, the extent of this impact assessment has been limited to the following intersections:

- Abbotsford Road / Allison Street (N) priority-controlled intersection
- Allison Street (N) / Allison Street (E-W) priority-controlled intersection

Once traffic arrives at the Abbotsford Road / Allison Street (N) or Allison Street (N) / Allison Street (E-W) intersections, it will disperse between all directions. As such, the impact of development traffic on the external network beyond these intersections is expected to be minimal, with no particular road or movement significantly impacted by the development.

This rationale is supported by reviewing the traffic distribution network diagrams (refer to **Appendix D**), where the net increase in traffic volumes beyond these intersections is recognised as being low, typically below 5% of existing volumes.

10.2 SIDRA Assessment

10.2.1 Abbotsford Road / Allison Street (N) Intersection

As noted in Section 7.2.2, right-turns are restricted on the Abbotsford Road and Allison Street approaches in the AM peak hours. The survey data also indicates that no vehicles turn right out of Allison Street in the PM peak hour period either.

Accordingly, the Abbotsford Road / Allison Street (N) intersection has been modelled with Allison Street (N) movements restricted to left-in and left-out in the AM peak hour and left-in, right-in left-out in the PM peak hour.

The proximity of the Inner City Bypass / Abbotsford Road / Allison Street (100m south) and Abbotsford Road / Burrows Street (200m to the north) signalised intersections to the subject intersection creates additional opportunity for drivers to undertake opposing manoeuvres (i.e. turn right into Allison Street). As such, a bunching factor of 25% has been applied to the southern approach and 15% applied to the north in accordance with Table 5.2.1 of the 'SIDRA Intersection 9 User Guide'.

Figure 10-1 shows the modelled intersection configuration for the AM Peak Hour. The modelled intersection configuration for the PM Peak Hour is illustrated in Figure 10-2. Table 10-1 summarises the analysis outputs for both peak hours. Detailed analysis output summaries are included in **Appendix D**.

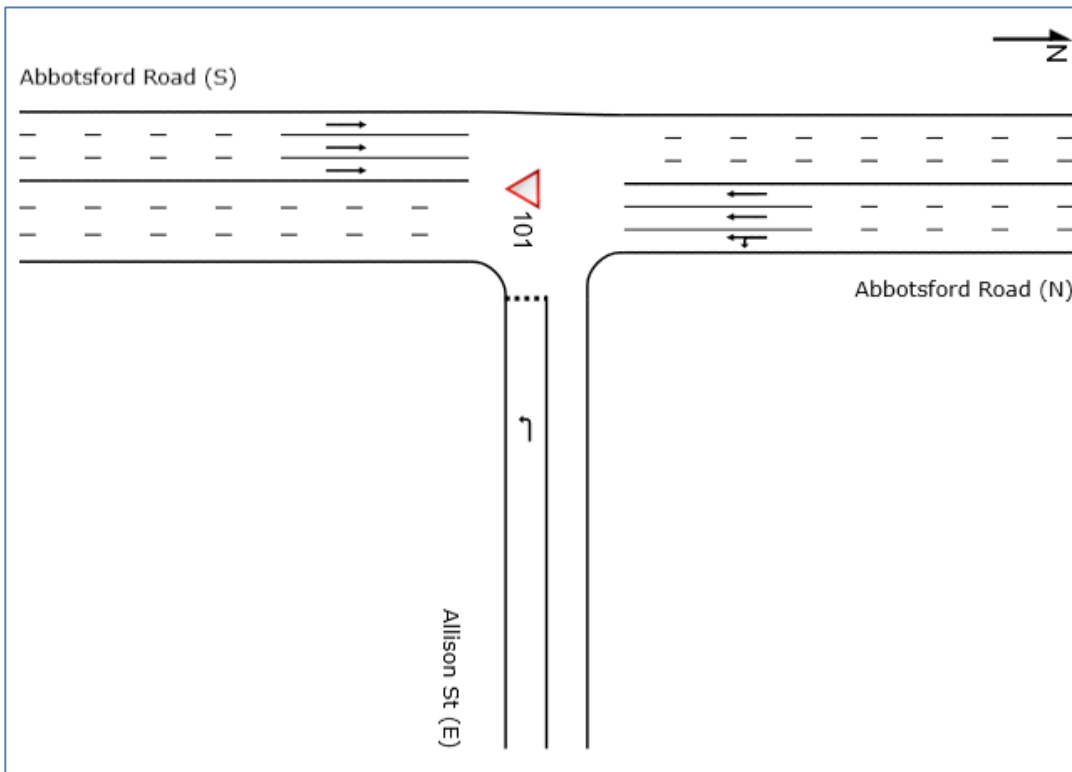


Figure 10-1: Modelled Abbotsford Road / Allison Street (N) Intersection – AM Peak Hour

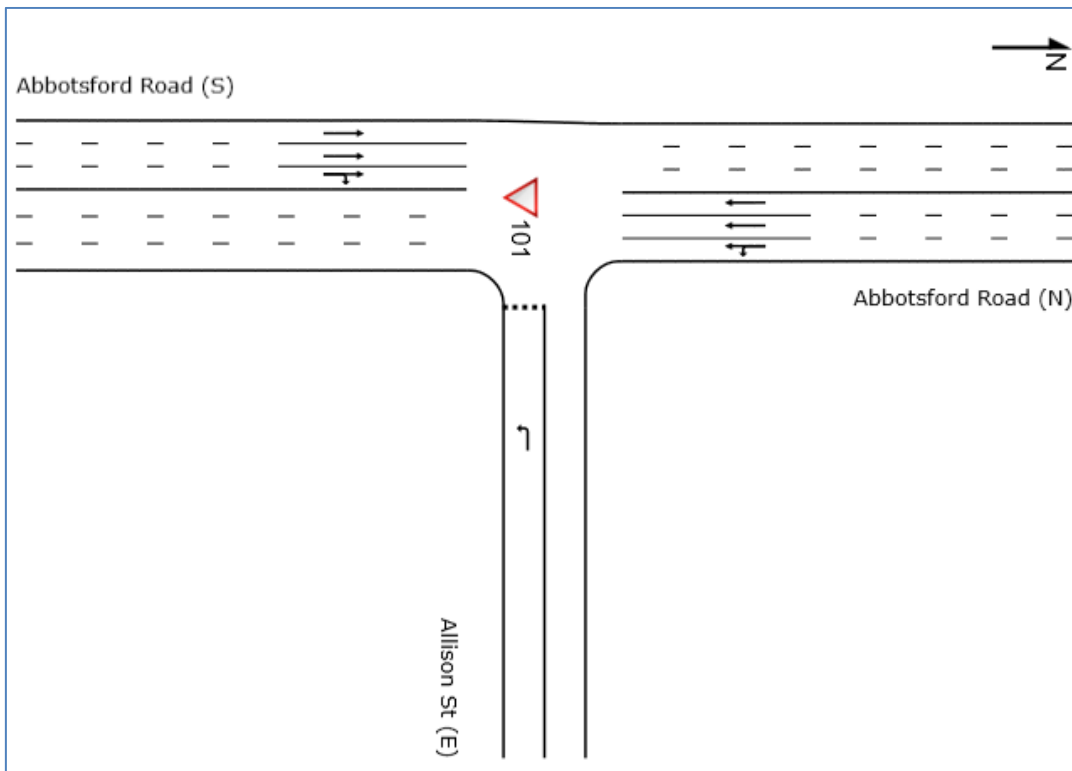


Figure 10-2: Modelled Abbotsford Road / Allison Street (N) Intersection – PM Peak Hour

Table 10-1: Summary of Sidra Outputs (Abbotsford Road / Allison Street (N) Intersection)

Case	Degree of Saturation	Average/ Worst Delay	Worst Level of Service	95th Percentile Critical Queue (m)		
				South	East	North
AM Peak						
Survey Case 2021	52.6	0.2 / 11.8	B	0	0.5	0
Base Case 2023	54.1	0.2 / 12.3	B	0	0.6	0
Dev Case 2023	54.5	0.2 / 12.1	B	0	0.6	0
Base Case 2033	62.5	0.2 / 15.5	C	0	0.7	0
Dev Case 2033	62.9	0.3 / 15.2	C	0	0.7	0
PM Peak						
Survey Case 2021	60.6	3.8 / 86.0	F	175.2	0.8	0
Base Case 2023	63.0	4.4 / 95.1	F	193.3	0.8	0
Dev Case 2023	63.0	4.4 / 95.4	F	193.7	0.9	0
Base Case 2033	78.6	9.1 / 162.2	F	316.4	0.9	0
Dev Case 2033	78.6	9.1 / 162.7	F	316.9	1.0	0

The above analysis confirms that the intersection operates within the maximum threshold for priority-controlled intersections (80%) in each of the 2033 10-year design horizon scenarios. The highest degree of saturation experienced in the PM Peak hour is 78.6%

The assessment indicates that major delays are currently experienced by vehicles attempting to turn right into Allison Street in the PM peak hour; note this is banned in the AM. As reflected in the assessment, the queuing exponentially grows and the through volumes are increased over the 10-year design horizon. Importantly, the development does not result in an increase in the number of vehicles undertaking this manoeuvre as vehicles are predominantly outbound in the PM peak hour.

It is TTM's recommendation that BCC investigate if 'No Right Turns Permitted' restrictions are extended to the PM peak hour period as well.

10.2.2 Allison Street (N) / Allison Street (E-W) Intersection

The Allison Street (N) / Allison Street (E-W) intersection has been assessed for morning and afternoon peak hour periods. The intersection has been analysed for the survey (2021), opening year (2023) and 10-year design horizon (2033) traffic volume scenarios.

Figure 10-3 shows the modelled existing intersection configuration. Table 10-2 summarises the analysis outputs. Detailed analysis output summaries are included in **Appendix D**.

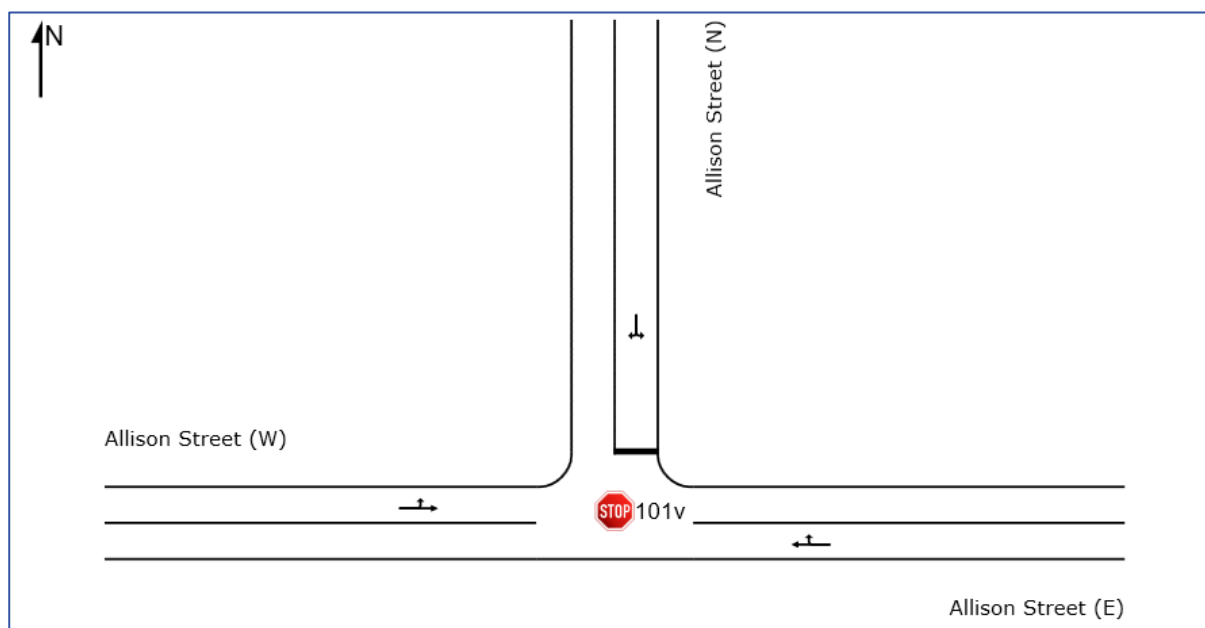


Figure 10-3: Modelled Allison Street (N) / Allison Street (E-W) Intersection

Table 10-2: Summary of Sidra Outputs (Allison Street (N) / Allison Street (E-W) Intersection)

Case	Degree of Saturation	Average/ Worst Delay	Worst Level of Service	95th Percentile Critical Queue (m)		
				East	North	West
AM Peak						
Survey Case 2021	33.0	2.1 / 17.1	C	1.8	6.3	0
Base Case 2023	33.9	2.1 / 17.7	C	1.8	6.6	0
Dev Case 2023	34.2	2.2 / 18.0	C	2.1	7.0	0
Base Case 2033	39.2	2.2 / 22.3	C	2.1	8.7	0
Dev Case 2033	39.2	2.3 / 22.6	C	2.1	9.1	0
PM Peak						
Survey Case 2021	17.3	2.4 / 11.2	B	0.4	4.2	0
Base Case 2023	17.8	2.3 / 11.3	B	0.4	4.2	0
Dev Case 2023	18.9	2.6 / 11.4	B	0.4	5.1	0
Base Case 2033	20.6	2.2 / 12.1	B	0.4	4.5	0
Dev Case 2033	20.6	2.4 / 12.3	B	0.4	5.4	0

The above analysis confirms that the intersection currently operates within the maximum threshold for priority-controlled intersections in each of the 2033 10-year design horizon scenarios. The highest degree of saturation experienced is 39.2% in the AM peak hour period. The additional of the development traffic has minimal impacts on average delay and 95th percentile queue lengths.

11 Public and Active Transport

11.1 Public Transport

Overall, the site is located in close proximity to a high level of public transport provisions. This will allow easy and convenient access for users of the site.

11.2 Pedestrian and Cyclist Access

Pedestrian access to the site will be facilitated via both Abbotsford Road and Allison Street.

Bicycle access to the site will be facilitated via Allison Street via vehicle ramp facilitating access to the bicycle parking and EOTF area. A summary of the cyclist requirements for the proposed development in accordance with the Bowen Hills PDA Development Scheme is provided in Table 11-1. The development scheme delivers the cycling parking spaces at rates set out in BCC's 'TAPS PSP'.

Table 11-1: Bicycle Parking Provisions

Bicycle Parking Component	'TAPS PSP' Provision	Proposed Extent	'TAPS PSP' Requirements	Provision
Office/Food & Drink Outlet (Employee)	1 bicycle space per 200m ² GFA* 2 lockers per space* 2 showers + 1 shower per 10 bicycle spaces*	4,529m ² GFA**	23 bicycle spaces 46 lockers 5 showers	20 bicycle spaces 40 lockers 8 showers
Office (Visitor)	1 space per 500m ² GFA*		10 bicycle spaces	8 bicycle spaces
Total			33 bicycle spaces 46 lockers 5 showers	28 bicycle spaces 40 lockers 8 showers

*Where total floor space exceeds 2,500m² GFA.

**Excludes EOT/Gym/Store/Amenities GFA

The development provides a total of 28 bicycle spaces, with twenty bicycle spaces provided for employees and 8 for visitors. Whilst this represents a minor shortfall with respect to 'TAPS PSP', it is understood that the layout will be refined as part of the detailed design phase as to achieve the bicycle and locker provisions required under the 'TAPS PSP'.

Signage is to be installed to direct visitors to the bicycle parking area located at the rear of the site.

The development provides a total of 8 shower cubicles, with three showers provided within the EOTF area on the ground floor and one shower provided on each office level.

12 Summary and Conclusions

12.1 Car Parking Arrangements

The scheme proposes to provide 77 parking spaces which is not consistent with the maximum provision. Performance solutions have been provided regarding this. Consequently, the parking supply for the proposed development is considered acceptable.

Overall, the parking and design provisions adopted for the car parking areas generally comply with BCC requirements.

12.2 Access Arrangements

The development intends to achieve access via a 9.8m Modified Type B2 crossover to Allison Street. Performance solutions are proposed with respect to driveway separation, type, width, sight splay and queuing. Overall, TTM considers the design of the access at Allison Street to be acceptable and 'fit for purpose' through compliance with a combination of design aspects from BCC's 'TAPS PSP' and 'AS2890.1:2004'.

Pedestrian and Cyclist access to the site will be provided via an entry on both Abbotsford Road and Allison Street.

12.3 Service Vehicle Arrangements

Overall, the proposed service vehicle arrangements are considered adequate to meet the needs of the proposed development based on the employment of a loading dock manager and the implementation of a comprehensive Service Vehicle Management Plan.

12.4 Public Transport & Other Users

The development is within close proximity to a number of public transport facilities and provides adequate pedestrian and cyclist facilities. Overall, the current public transport infrastructure and proposed provisions for pedestrian and cyclists are considered adequate.

12.5 Traffic Impact

The redevelopment of the subject site is likely to result in a net increase of 31vph during the weekday AM and PM peak-hour periods. The undertaken Traffic Impact Assessment concludes that the impact of the development on the safety and operation of the external network is negligible.

12.6 Conclusion

Based on the assessment contained within this report, TTM see no traffic engineering reason why the relevant approvals should not be granted.

Appendix A Proposed Site Plan

DEVELOPMENT APPLICATION

157 ABBOTSFORD ROAD BOWEN HILLS QLD 4006



DA DRAWING LIST	
DA00	COVER SHEET
DA10	SITE PLAN
DA200	LEVEL 1/GROUND PLAN
DA201	MEZZANINE PLAN
DA202	LEVEL 2 PLAN
DA203	LEVEL 3 PLAN
DA204	LEVEL 4 PLAN
DA205	LEVEL 5 PLAN
DA206	LEVEL 6 PLAN
DA207	LEVEL 7 PLAN
DA208	LEVEL 8 PLAN
DA209	ROOF TERRACE PLAN
DA210	ROOF PLAN
DA30	PROPOSED SECTION A
DA31	PROPOSED SECTION B
DA40	NORTH ELEVATION
DA41	SOUTH ELEVATION
DA42	EAST ELEVATION
DA43	WEST ELEVATION
DA50	ABBOTSFORD RD PERSPECTIVE 1
DA51	ABBOTSFORD RD PERSPECTIVE 2
DA52	ALLISON ST PERSPECTIVE
DA53	STREET INTERFACE PERSPECTIVE
DA54	BREAKFAST CK PERSPECTIVE 1
DA55	BREAKFAST CK PERSPECTIVE 2
DA56	BREAKFAST CK PERSPECTIVE 3



DEVELOPMENT SCHEDULE

ADDRESS: 157 ABBOTSFORD ROAD
BOWEN HILLS QLD 4006
RPD: LOT 1 RP165998 & LOT 219 RP9371
SITE AREA: 1,392m²
SITE COVER: 1,320m² (95%)

GFA CALCULATIONS

FLOOR	TOTAL
LEVEL 1/GROUND	611
LEVEL 4	1,077
LEVEL 5	696
LEVEL 6	696
LEVEL 7	696
LEVEL 8	696
ROOF TCE	57
	4,529 m ²

PLOT RATIO ALLOWED: 3xSITE
GFA ALLOWED: 4176m²

TRANSPORT SCHEDULE

PARKING REQUIRED: 46 (MAX)
PARKING PROVIDED: 77
STAFF BICYCLES: 20
VISITOR BICYCLES: 8

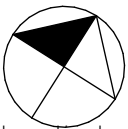
END OF TRIP FACILITIES

SHOWER & CHANGE FACILITIES: 3
LOCKERS 28

1 LOCALITY PLAN
SCALE: 1:500

PROJECT ABBOTSFORD RD COMMERCIAL DEVELOPMENT
LOCATION 157 ABBOTSFORD ROAD BOWEN HILLS QLD 4006
CLIENT THALLON MOLE GROUP
TITLE SITE PLAN

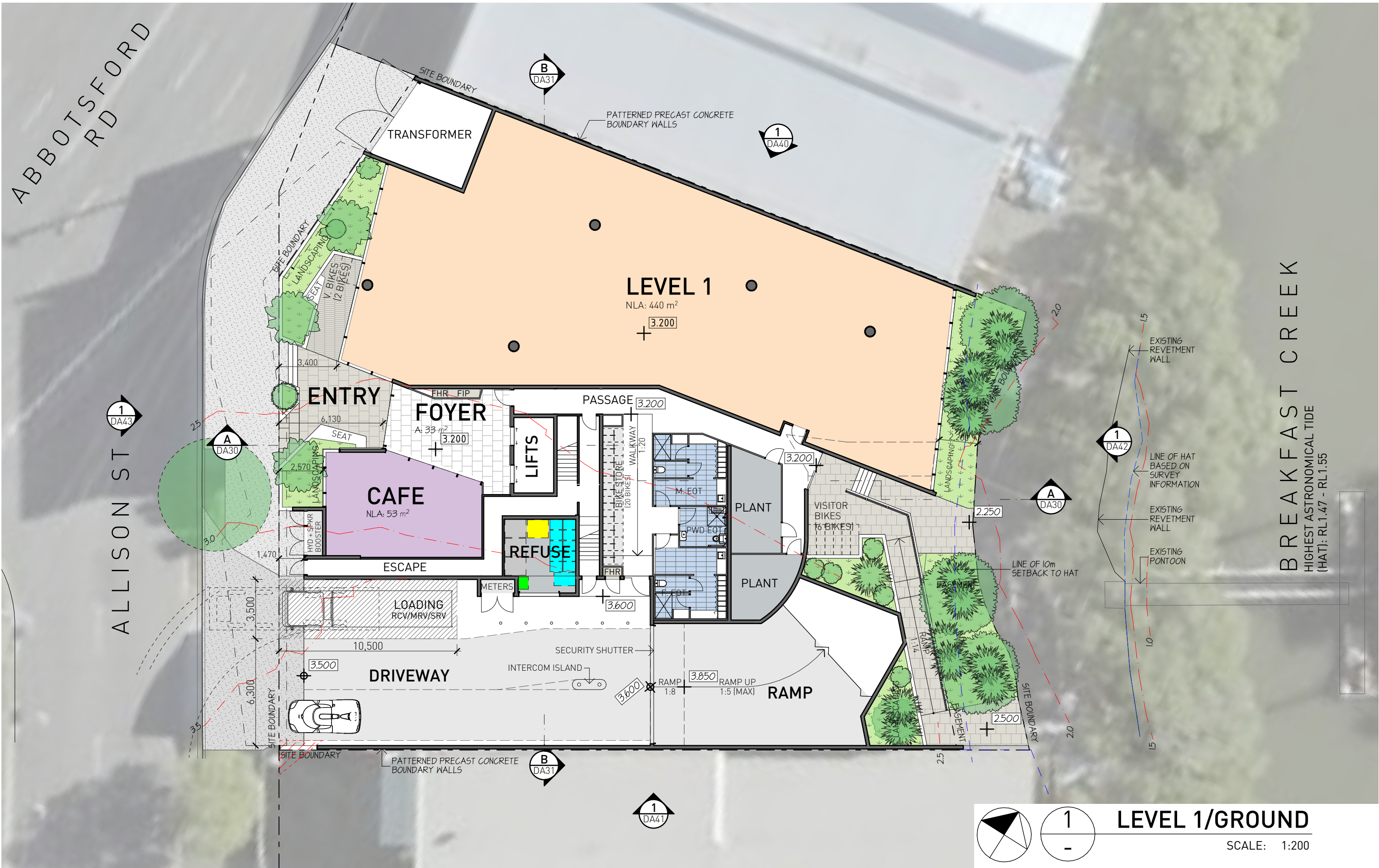
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A	ISSUE FOR DA	SM	26/07/2021
P1	COORDINATION ISSUE	SM	2/07/2021
REV.	DETAILS	INT	DATE

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SCALE: 1:100A3
DRAWN BY:
ISSUE DATE 26/07/2021
JOB No. 1758
DWG No. DA10
ISSUE A



LEVEL 1/GROUND
SCALE: 1:200

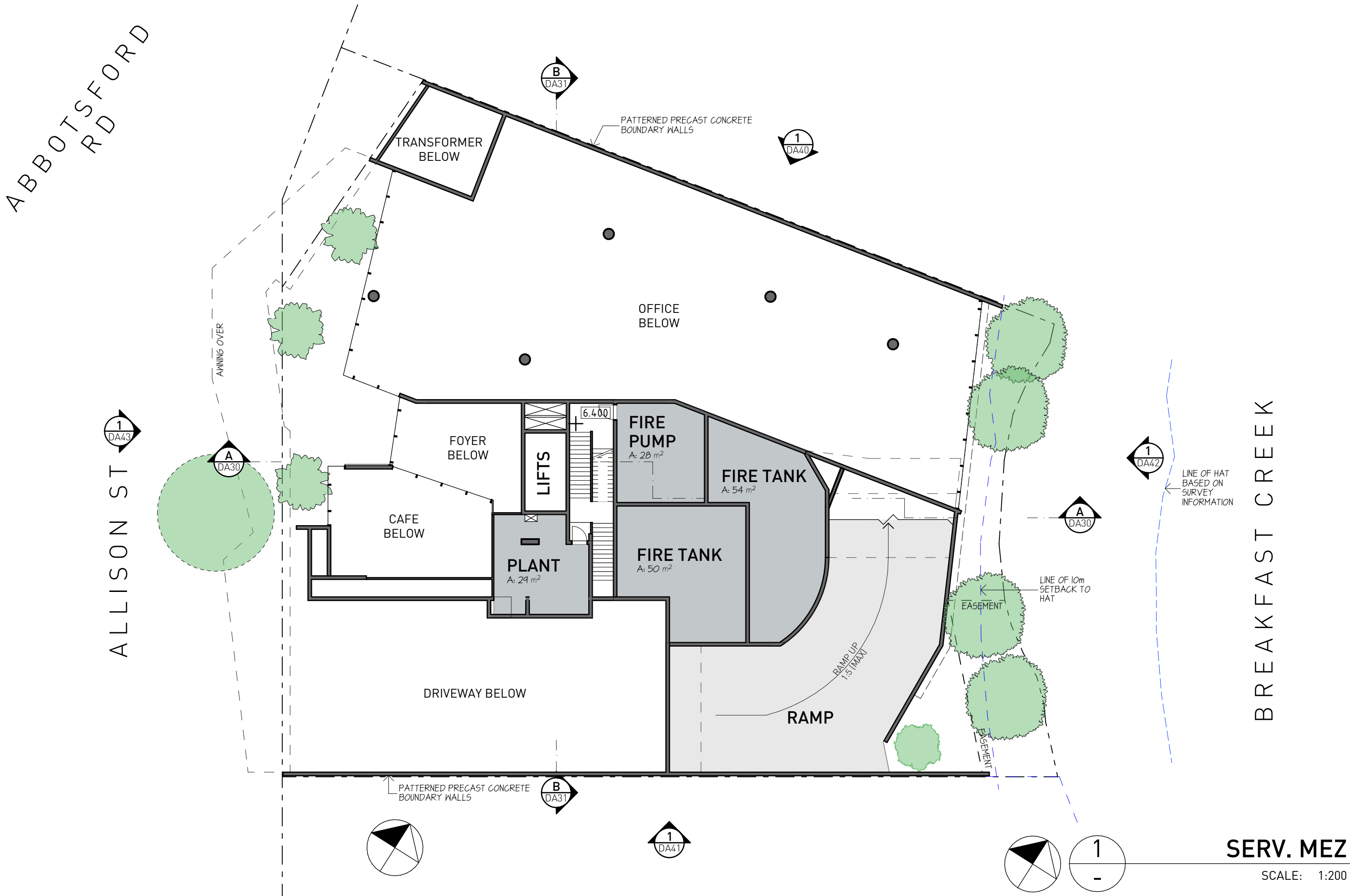
PROJECT **ABBOTSFORD RD COMMERCIAL DEVELOPMENT**
LOCATION **157 ABBOTSFORD ROAD BOWEN HILLS QLD 4006**
CLIENT **THALLON MOLE GROUP**
TITLE **LEVEL 1/GROUND PLAN**

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A	ISSUE FOR DA	SM	26/07/2021
P2	COORDINATION ISSUE	SM	2/07/2021
P1	PRELIMINARY ISSUE,	SM	21/05/2021
REV.	COORDINATION ISSUE	INT	DATE
	DETAILS		

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SCALE: 1:200
DRAWN BY: SM
ISSUE DATE: 26/07/2021
JOB No. 1758
DWG No. DA200
ISSUE A



SERV. MEZ

SCALE: 1:200

PROJECT **ABBOTSFORD RD COMMERCIAL DEVELOPMENT**
LOCATION **157 ABBOTSFORD ROAD BOWEN HILLS QLD 4006**
CLIENT **THALLON MOLE GROUP**
TITLE **MEZZANINE PLAN**

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P2	COORDINATION ISSUE	SM	2/07/2021
P1	PRELIMINARY ISSUE, COORDINATION ISSUE	SM	21/05/2021
REV.	DETAILS	INT	DATE

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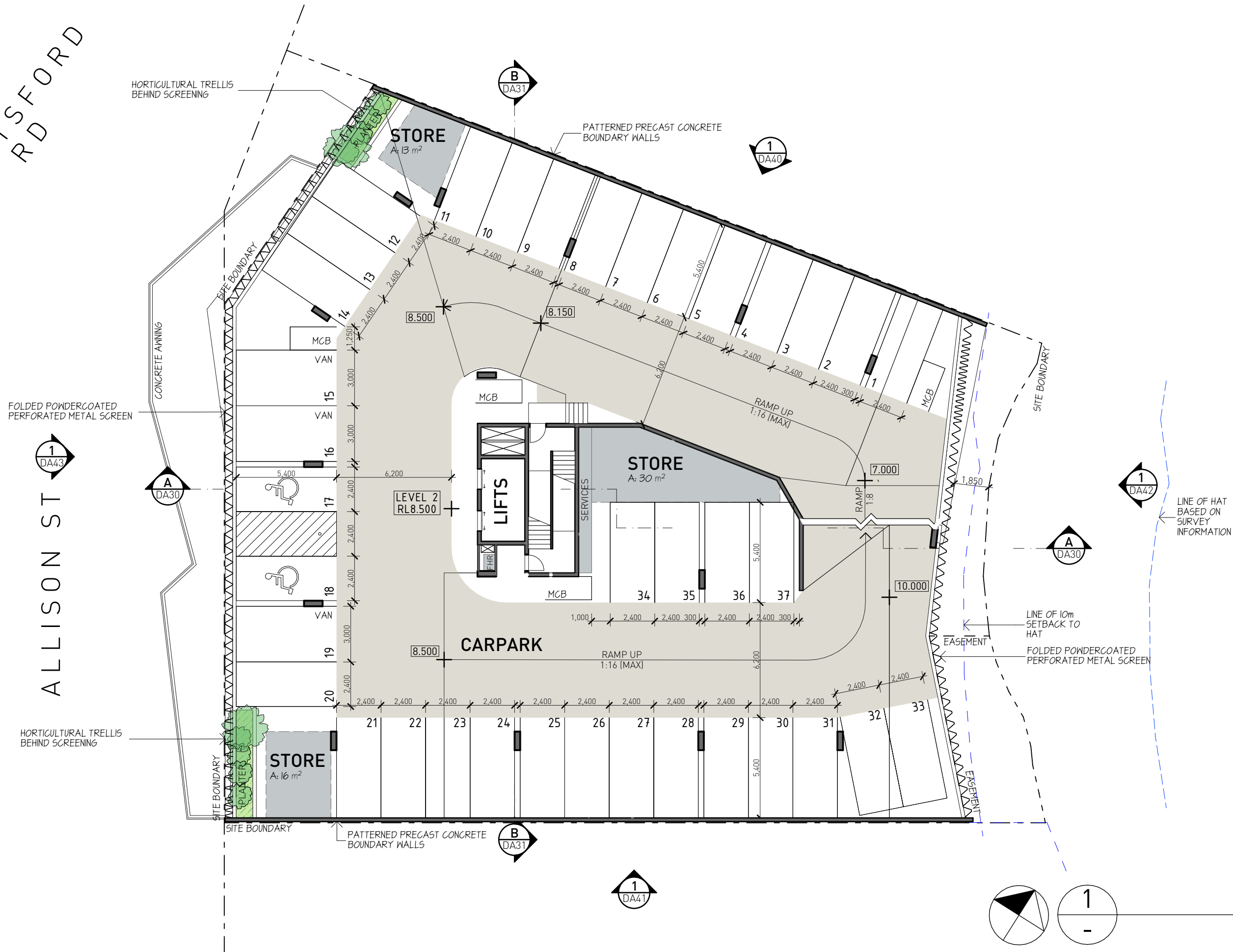
SCALE: 1:200
DRAWN BY: SM
ISSUE DATE: 26/07/2021

JOB No. 1758
DWG No. DA201
ISSUE A

ABBOTSFORD RD

ALLISON ST

BREAKFAST CREEK



PROJECT **ABBOTSFORD RD COMMERCIAL DEVELOPMENT**
LOCATION **157 ABBOTSFORD ROAD BOWEN HILLS QLD 4006**
CLIENT **THALLON MOLE GROUP**
TITLE **LEVEL 2 PLAN**

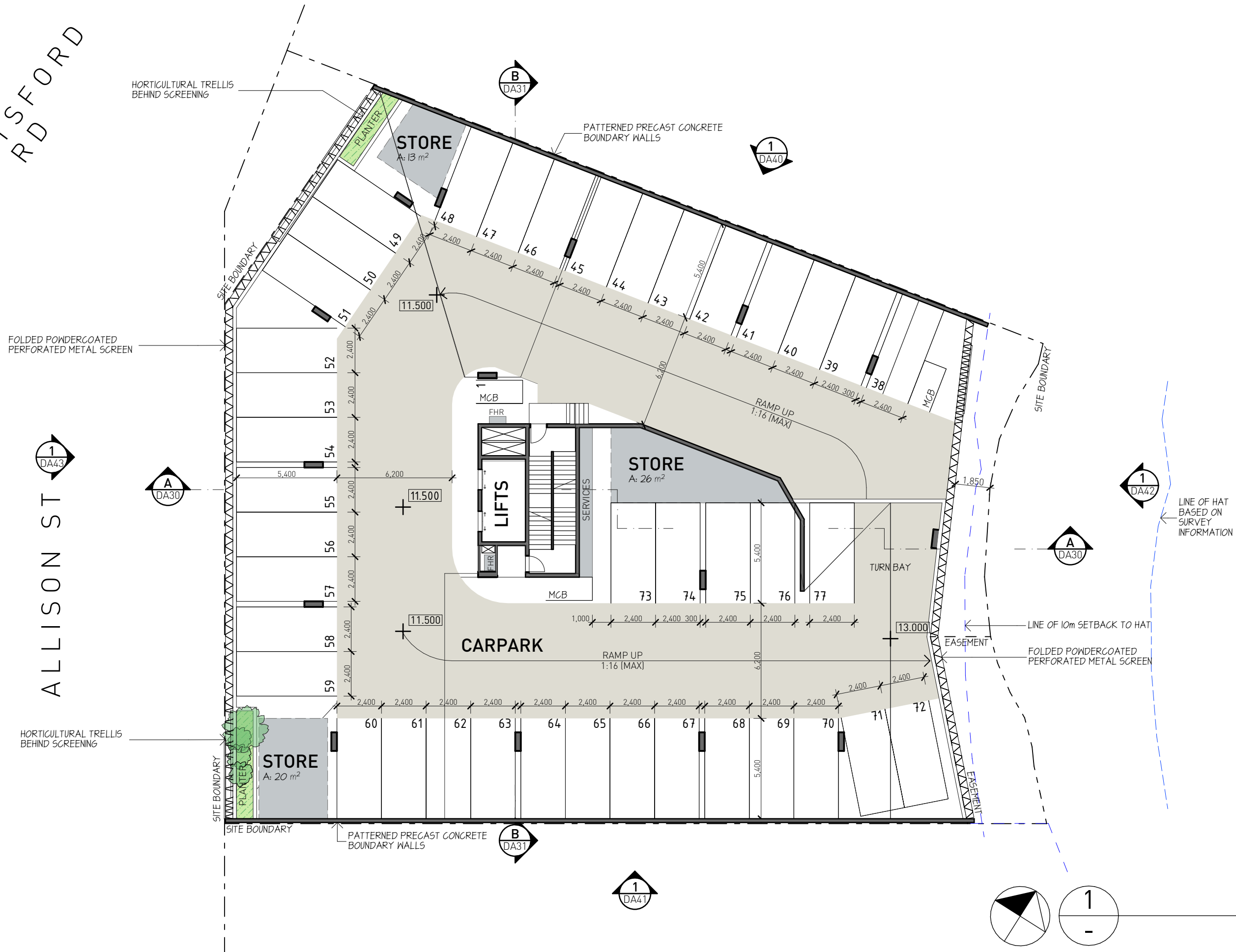
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A	ISSUE FOR DA	SM	26/07/2021
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REV.	COORDINATION ISSUE	INT	DATE
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JOB No. **1758**
DRAWN BY: **DA3**
DWG No. **DA202**
ISSUE DATE **26/07/2021**
ISSUE **A**

ABBOTSFORD RD



BREAKFAST CREEK

LEVEL 3

SCALE: 1:200

PROJECT **ABBOTSFORD RD COMMERCIAL DEVELOPMENT**
LOCATION **157 ABBOTSFORD ROAD BOWEN HILLS QLD 4006**
CLIENT **THALLON MOLE GROUP**
TITLE **LEVEL 3 PLAN**

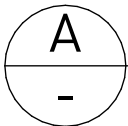
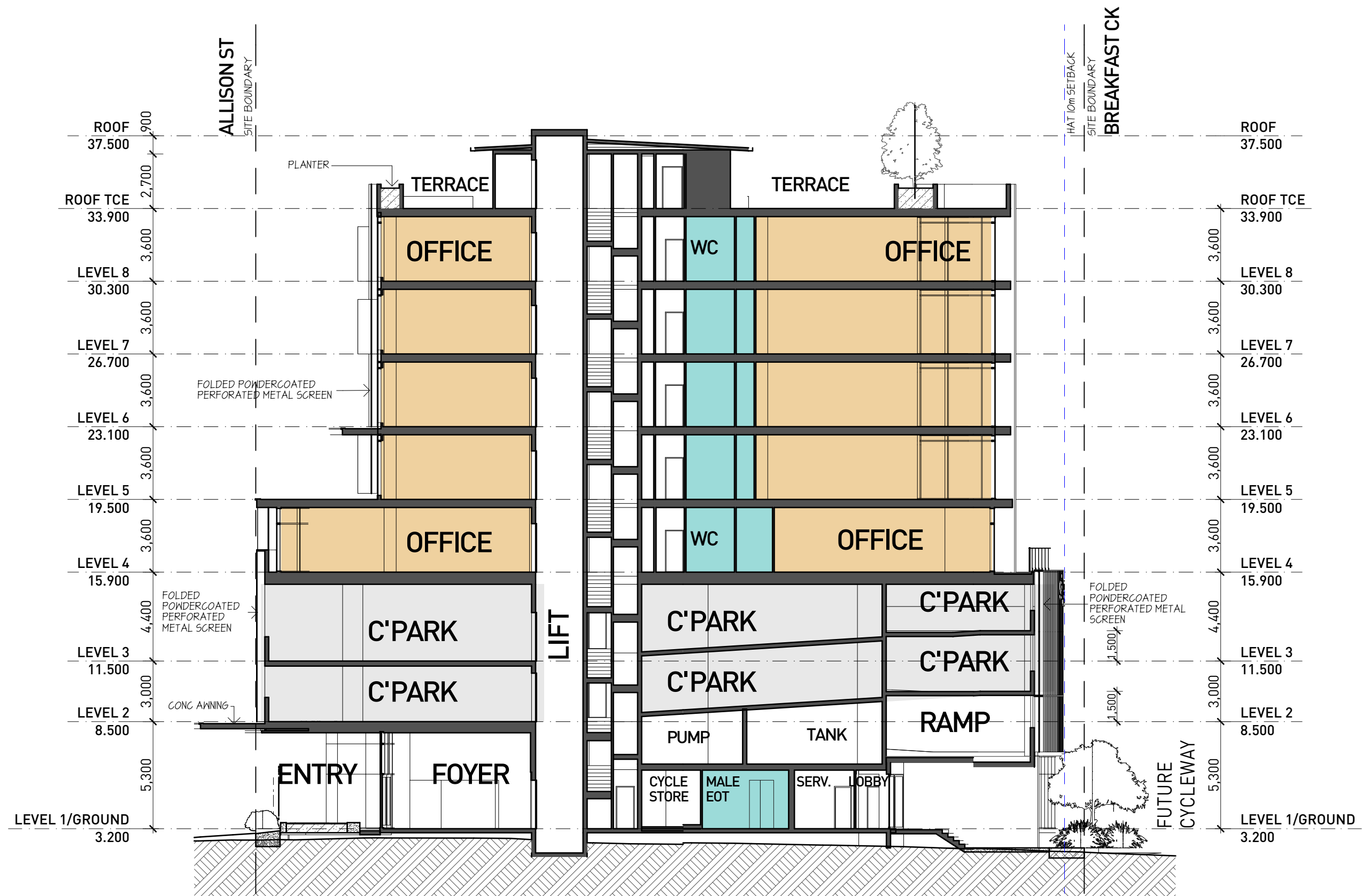
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A	ISSUE FOR DA	SM	26/07/2021
P2	COORDINATION ISSUE	SM	2/07/2021
P1	PRELIMINARY ISSUE, COORDINATION ISSUE	SM	21/05/2021
REV.	DETAILS	INT	DATE



SCALE: 1:200@A3
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ISSUE DATE 26/07/2021

JOB No. 1758
DWG No. DA203
ISSUE A



SECTION A

SCALE: 1:200

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Architectural documentation to be read in conjunction with other consultant documentation. Contractors to verify coordination on site prior to commencing work or making shop drawings. Discrepancies to be brought to the attention of the architect.

A	ISSUE FOR DA	SM	26/07/2021
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PROJECT
**ABBOTSFORD RD
COMMERCIAL DEVELOPMENT**
LOCATION
**157 ABBOTSFORD ROAD
BOWEN HILLS QLD 4006**
CLIENT
THALLON MOLE GROUP

TITLE
PROPOSED SECTION A

SCALE: 1:200@A3	JOB No. 1758
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ISSUE DATE 26/07/2021	ISSUE A

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Architectural documentation to be read in conjunction with other consultant documentation. Contractors to verify coordination on site prior to commencing work or making shop drawings. Discrepancies to be brought to the attention of the architect.

A	ISSUE FOR DA	SM	26/07/2021
P2	COORDINATION ISSUE	SM	2/07/2021
P1	PRELIMINARY ISSUE, COORDINATION ISSUE	SM	21/05/2021
REV.	DETAILS	INT	DATE

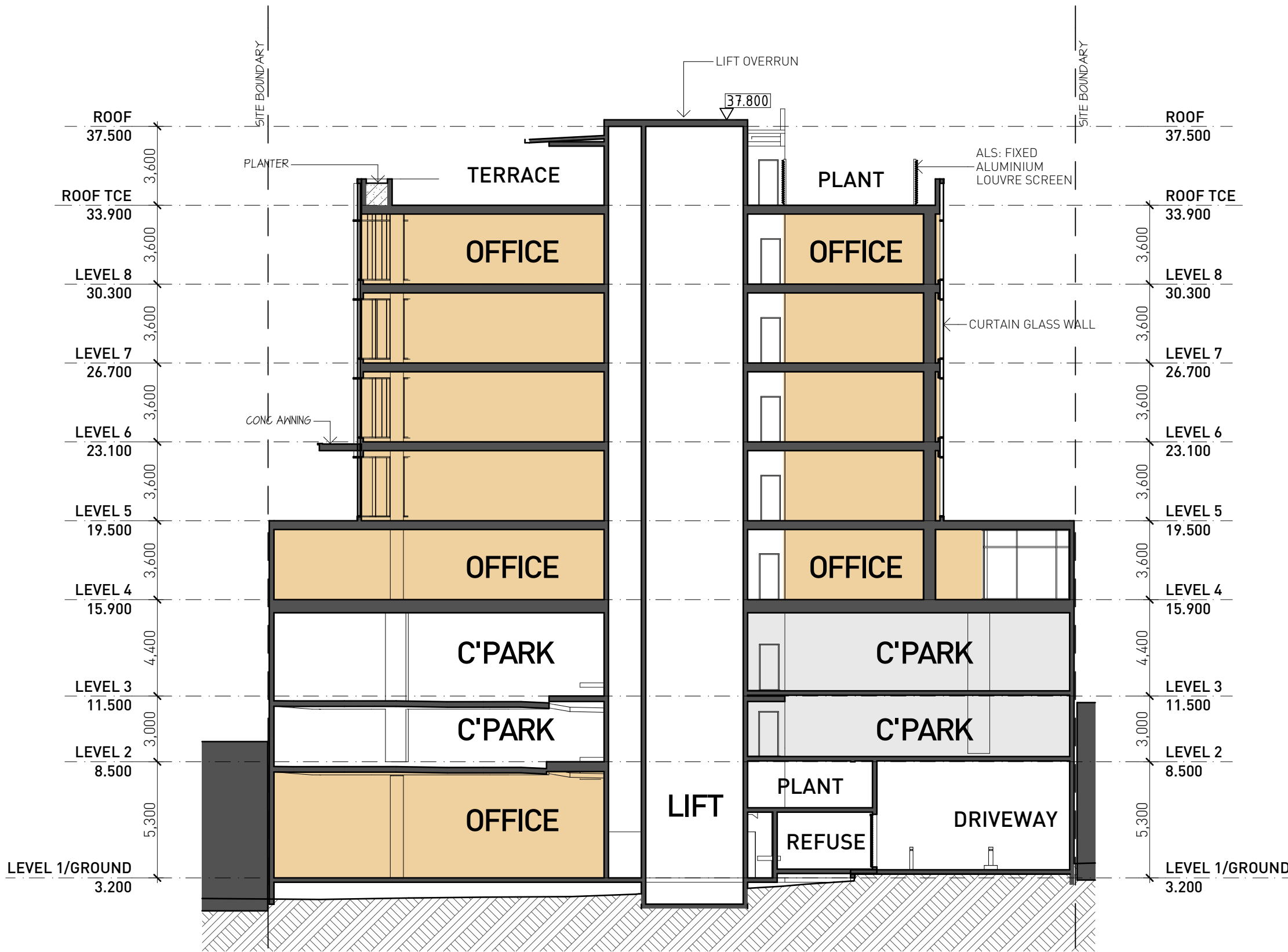


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PROJECT
**ABBOTSFORD RD
COMMERCIAL DEVELOPMENT**
LOCATION
**157 ABBOTSFORD ROAD
BOWEN HILLS QLD 4006**
CLIENT
THALLON MOLE GROUP

TITLE
PROPOSED SECTION B

SCALE: 1:200 @ A3
DRAWN BY:
ISSUE DATE 26/07/2021
JOB No. 1758
DWG No. DA31
ISSUE A

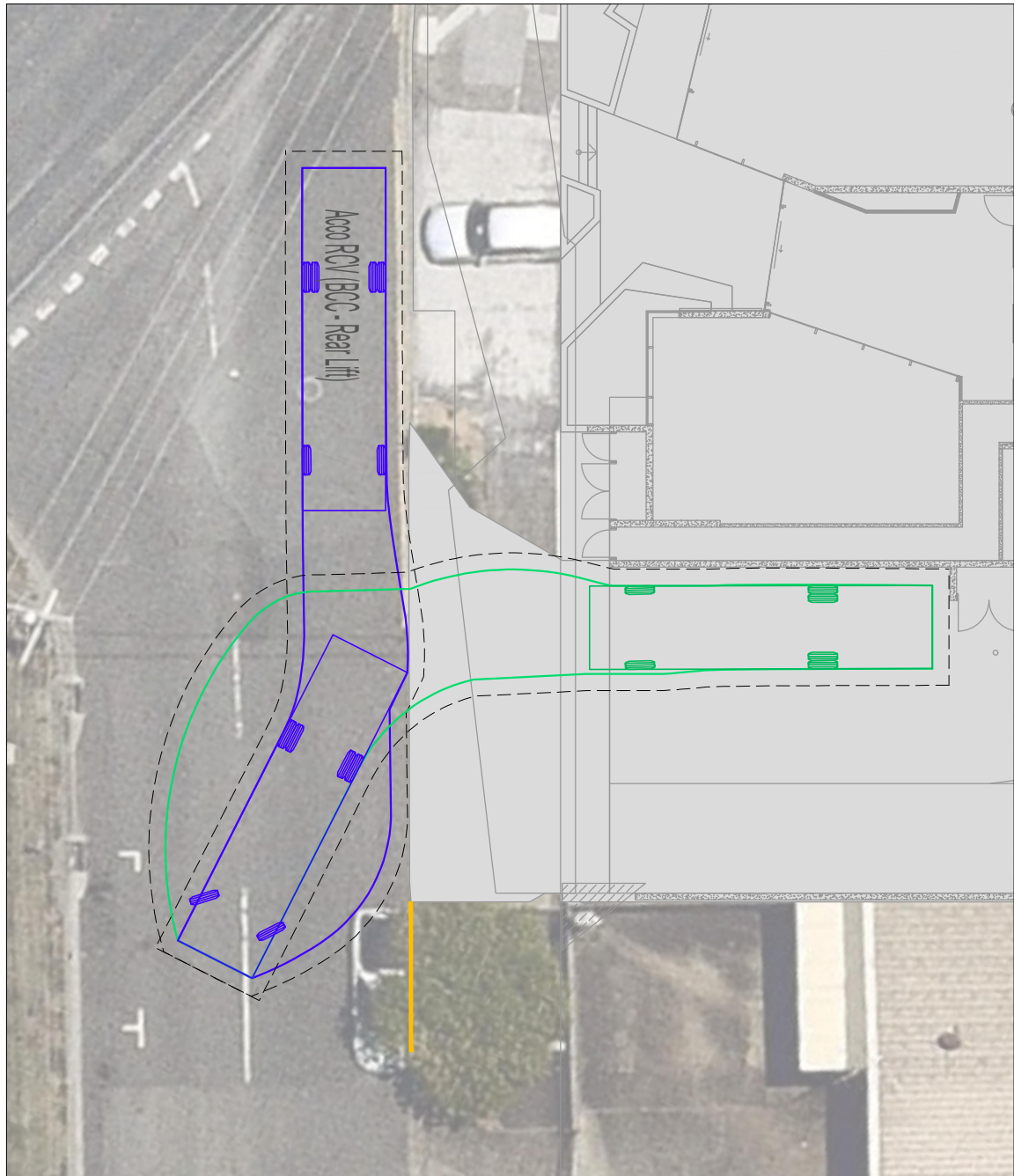


B
-

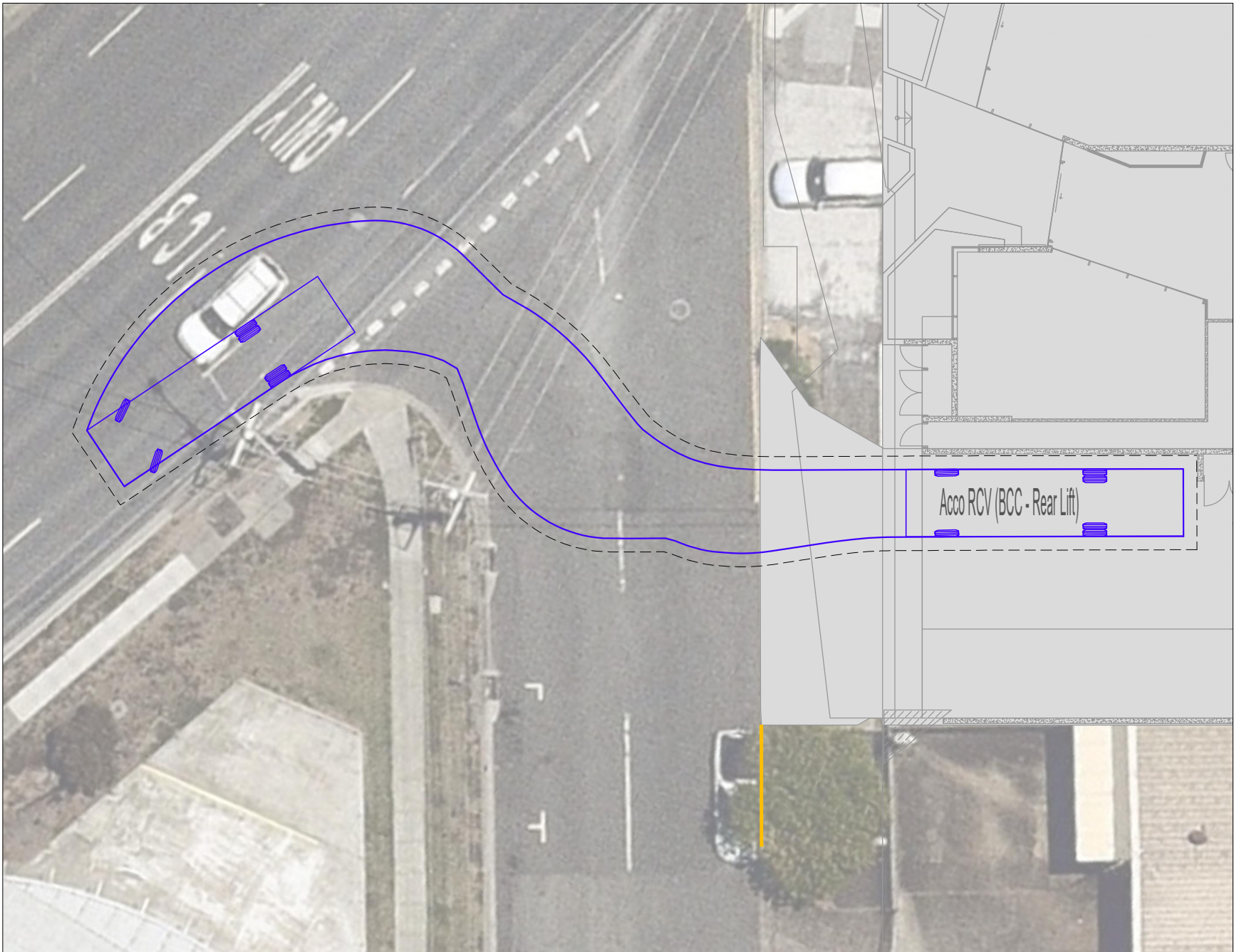
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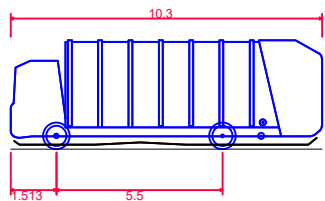
Appendix B Swept Path Analysis



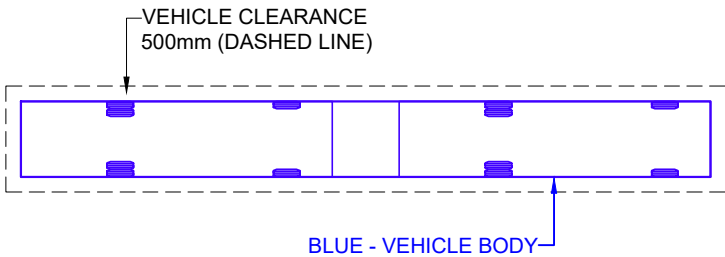
RCV (REAR LIFT) - LOADING BAY ENTRY



RCV (REAR LIFT) - LOADING BAY EXIT



Acco RCV (BCC - Rear Lift)
Overall Length 10.300m
Overall Width 2.500m
Overall Body Height 3.600m
Min Body Ground Clearance 0.150m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 9.500m



REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	04-08-21	ORIGINAL ISSUE	LD	NG	JB

SCALE
0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

NORTH

CLIENT
THALLON MOLE GROUP
PTY LTD

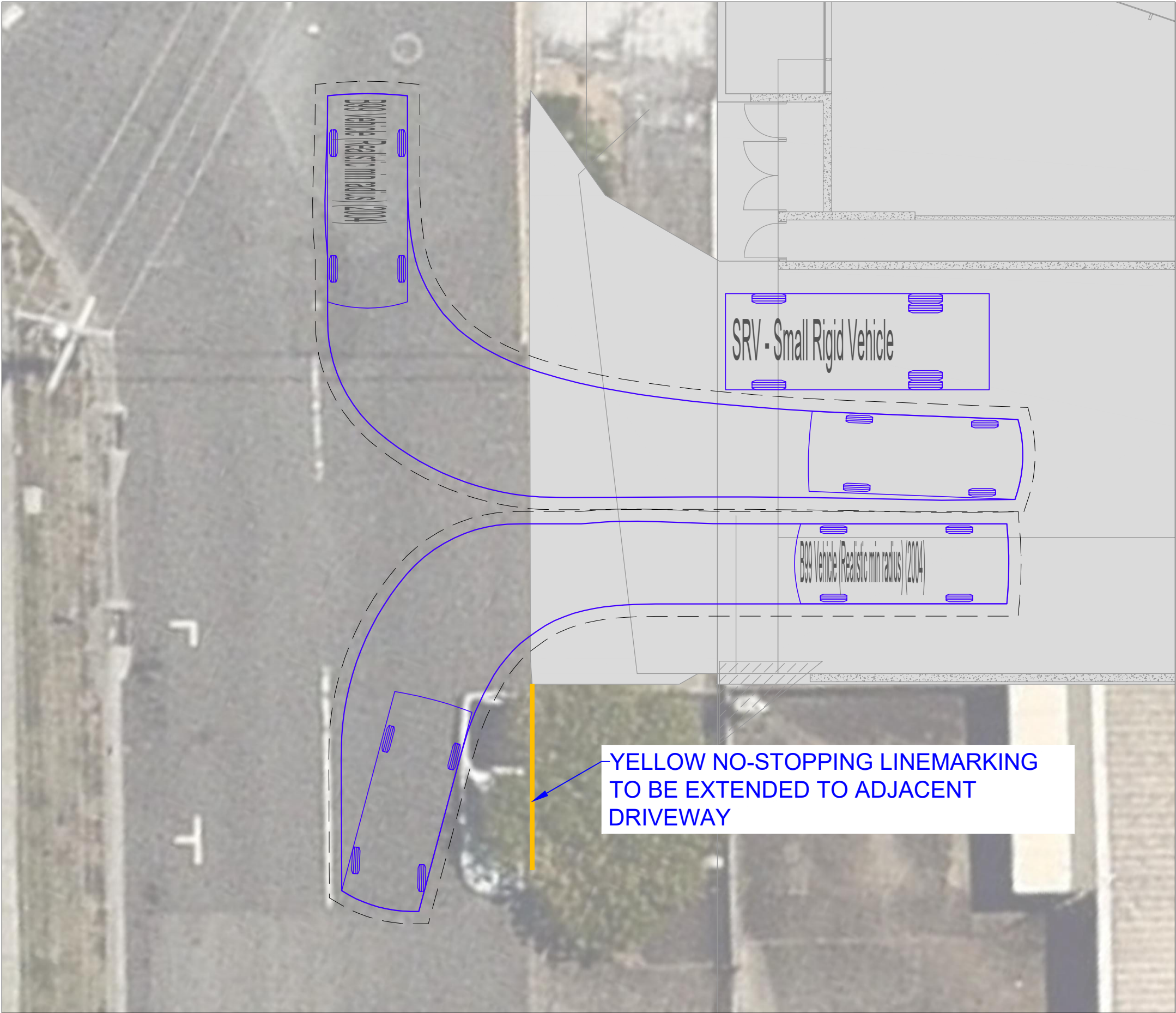


TTM CONSULTING PTY LTD
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LEVEL 8, 369 Ann Street, BRISBANE, QLD, 4000
P.O. BOX 12015, BRISBANE, QLD, 4003
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E: ttmbri@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT 157 ABBOTSFORD ROAD, ALBION	PROJECT NUMBER 21BRT0201
DRAWING TITLE SERVICE VEHICLE SWEEP PATH ANALYSIS DESIGN VEHICLE - RCV (REAR LIFT)	DRAWING NUMBER 21BRT0201-01
	DATE 4 Aug 2021

ORIGINAL SIZE A3	REVISION A
SHEET 1 OF 1	

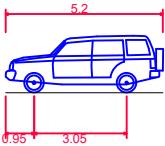
I:\synergy\projects\21btr\21btr0201 157 abbotsford road, albion\3 - plans\ttm\21 08 03 - ac04\21btr0201 ac04.dwg



VEHICLE CLEARANCE
300mm (DASHED LINE)



BLUE - VEHICLE BODY



B99 Vehicle (Realistic min radius) (2004)
Overall Length 5.200m
Overall Width 1.940m
Overall Body Height 1.878m
Min Body Ground Clearance 0.272m
Track Width 1.840m
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 6.250m

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	04-08-21	ORIGINAL ISSUE	LD	NG	JB

SCALE 0 1 2 3 4 5m SCALE 1:100 AT ORIGINAL SIZE	NORTH 	CLIENT THALLON MOLE GROUP PTY LTD
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PROJECT 157 ABBOTSFORD ROAD, ALBION	PROJECT NUMBER 21BRT0201
DRAWING TITLE VEHICLE SWEEP PATH ANALYSIS - SITE ACCESS DESIGN VEHICLE - B99	DRAWING NUMBER 21BRT0201-02
	DATE 4 Aug 2021

ORIGINAL SIZE A3	REVISION A
SHEET 1 OF 1	

Appendix C Service Vehicle Management Plan

Service Vehicle Management Plan

Whilst it is expected that the Plan will be further developed through negotiations and discussions with the various tenants of the building, key aspects will potentially include:

Loading Dock Delivery Times

- Outside of normal business hours, deliveries will only be permitted if prior written approval is obtained at least 24 hours in advance, or on an ongoing basis if agreed with the loading dock manager (i.e. refuse collection contractors).
- The dock manager will reserve the right to temporarily close the loading dock, without warning, due to specific operational requirements or during times of peak demands/congestion. During these times, the dock manager has the power to turn away vehicles.
- To reduce the risk of delivery vehicles being denied access to the loading dock, it is recommended that tenants inform delivery contractors to schedule deliveries outside of the peak periods of operation.

Vehicle Size Restrictions

- The operational height clearance within the loading dock is 4.5m.
- Other than refuse collection vehicles (RCVs), access to the loading dock is only permitted for vehicles up to the size of an 8.3m long MRV.

Use of Loading Dock

- Access by larger service vehicles (up to the size of a MRV) is restricted to outside the weekday AM and PM peak-hour periods on the adjacent road network;
- The dock manager reserves the right to turn away any vehicles on arrival if no prior notice has been given.
- All vehicles are to report to the dock manager on arrival for instructions on which loading bay to park in.
- In general, all vehicles will be assigned a loading bay in order of arrival.
- Vehicles are only permitted to park within designated loading bays, unless otherwise instructed by the dock manager.
- All drivers are to provide the loading dock manager with an approximate duration of stay. Durations of stay will typically be restricted to 20 minutes, unless otherwise approved by the dock manager.
- All drivers are to follow instructions of the dock manager.
- No deliveries and/or removal of large quantities of furniture, etc. and no tenancy moves in and out of the development or delivery of fit-out materials are permitted during business hours.

- Outside normal business hours, large deliveries are permitted only if prior written approval is obtained, upon a period of at least 24 hours written notice.
- Any maintenance/services contractors visiting the site and wishing to utilise the loading dock for the purposes of pick-up/drop-off of equipment may do so, as long as the vehicle is unloaded immediately and then removed from the loading dock. Contractors are not to leave vehicles parked within the loading dock unless agreed with the dock manager.
- Any delivery or contractors parking within the loading dock are to leave keys with the dock manager to allow for vehicles to be moved as required and provide an appropriate contact phone number.
- Contractors are not permitted to work from their vehicles within the loading dock, unless agreed with the dock manager.

Miscellaneous

- Storage of goods and/or materials within the loading dock is prohibited, unless agreed with the dock manager
- Delivery drivers are responsible for disposal of any rubbish and materials created whilst on-site.
- No rubbish is to be deposited within the bins located in the loading dock without approval from the dock manger.

Loading Dock Manager

- The loading dock manager shall be present (at the dock) at all times during normal business hours.

Agreement with Above Conditions

- All users of the loading dock are expected to have read and agreed to the above information upon presenting themselves on site.
- If there is any uncertainty in relation to the meaning of or compliance with the above conditions, consult the dock manger.
- Failure to comply with the above terms may result in removal from site by the dock manager. Repeat non-conformance may also result in future access to the loading dock by individuals (or the companies they represent) being prohibited.

Dock Manager Details

Name:

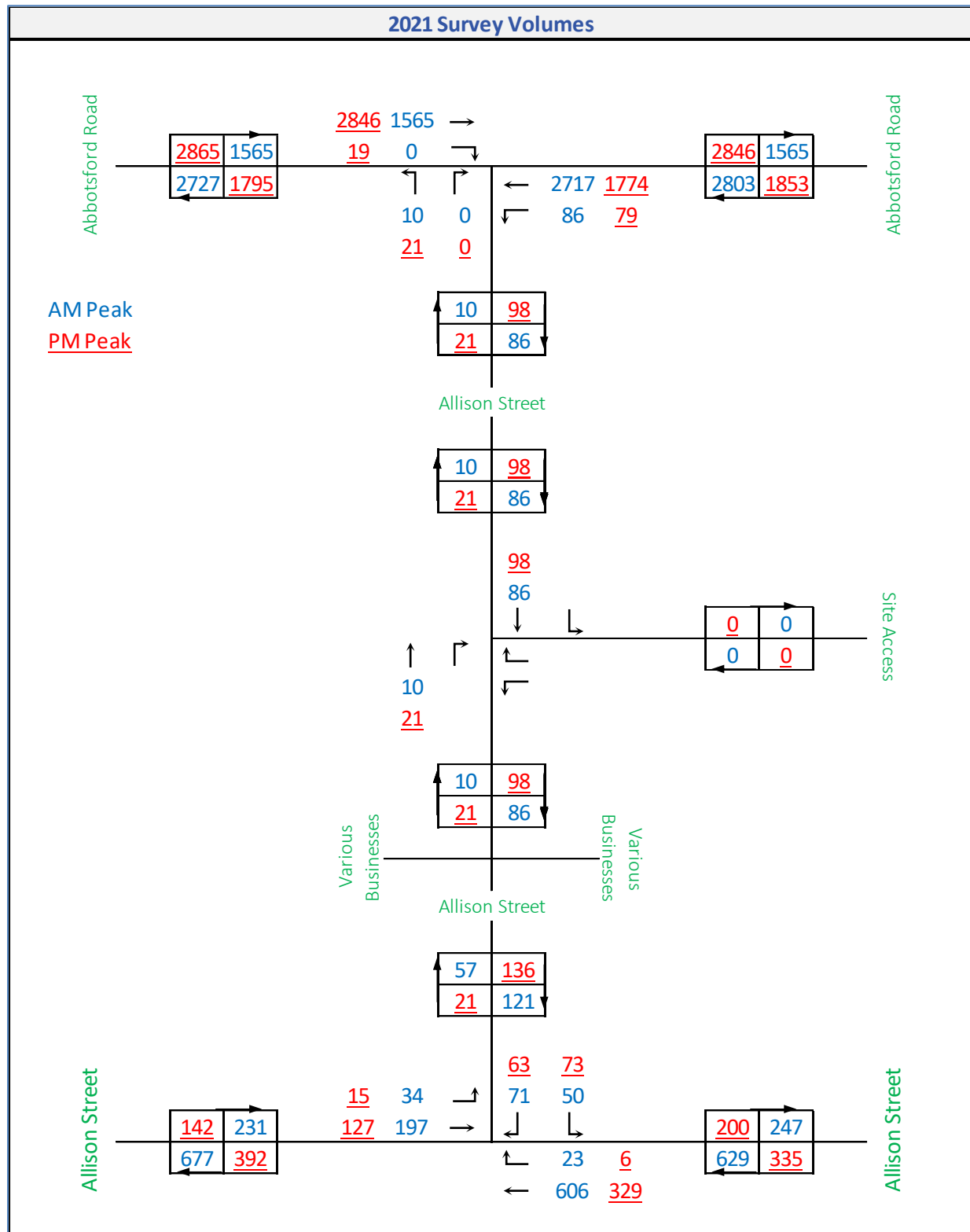
Contact Number:

Email:

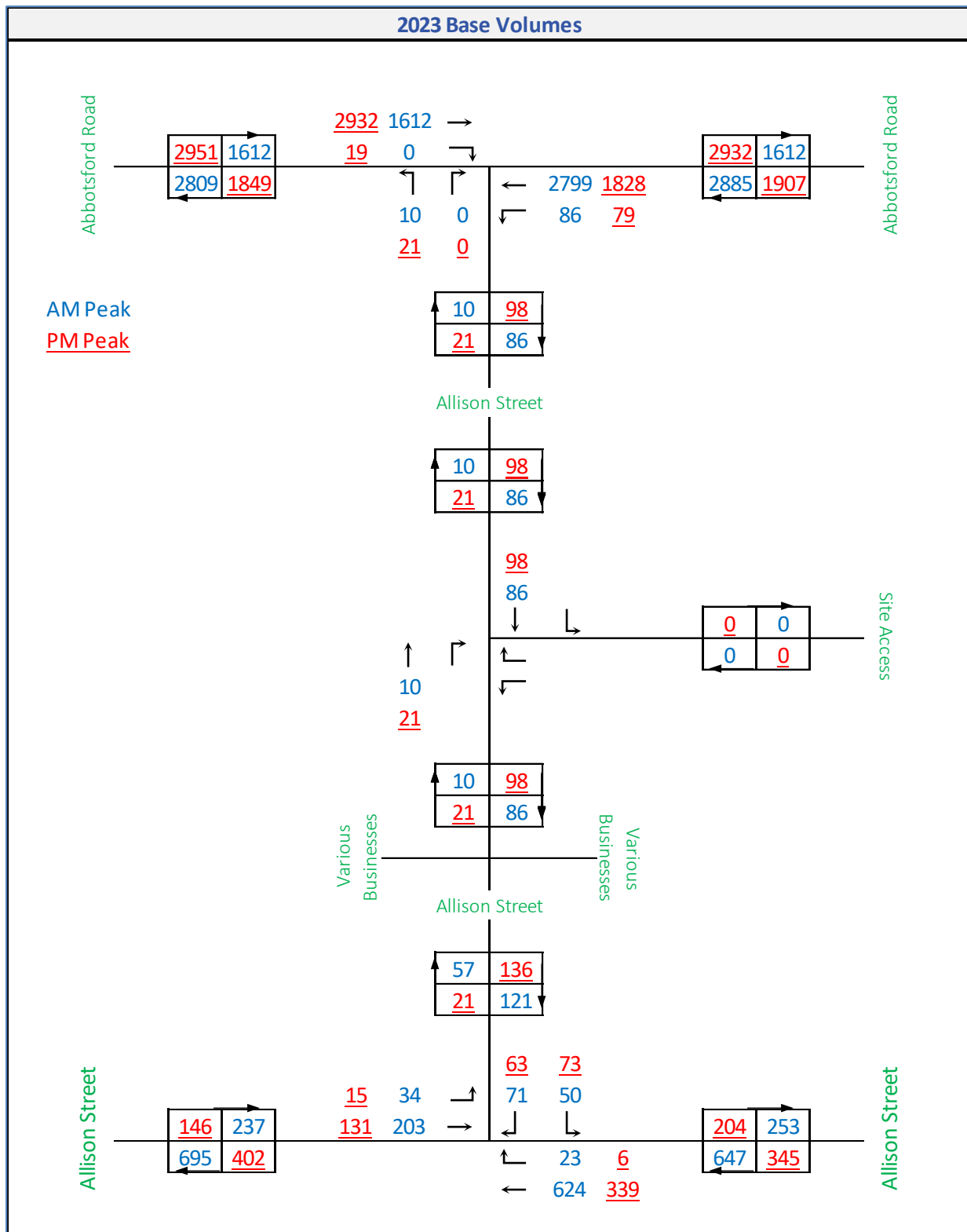
Appendix D Traffic Volume Diagrams

Traffic Impact Assessment

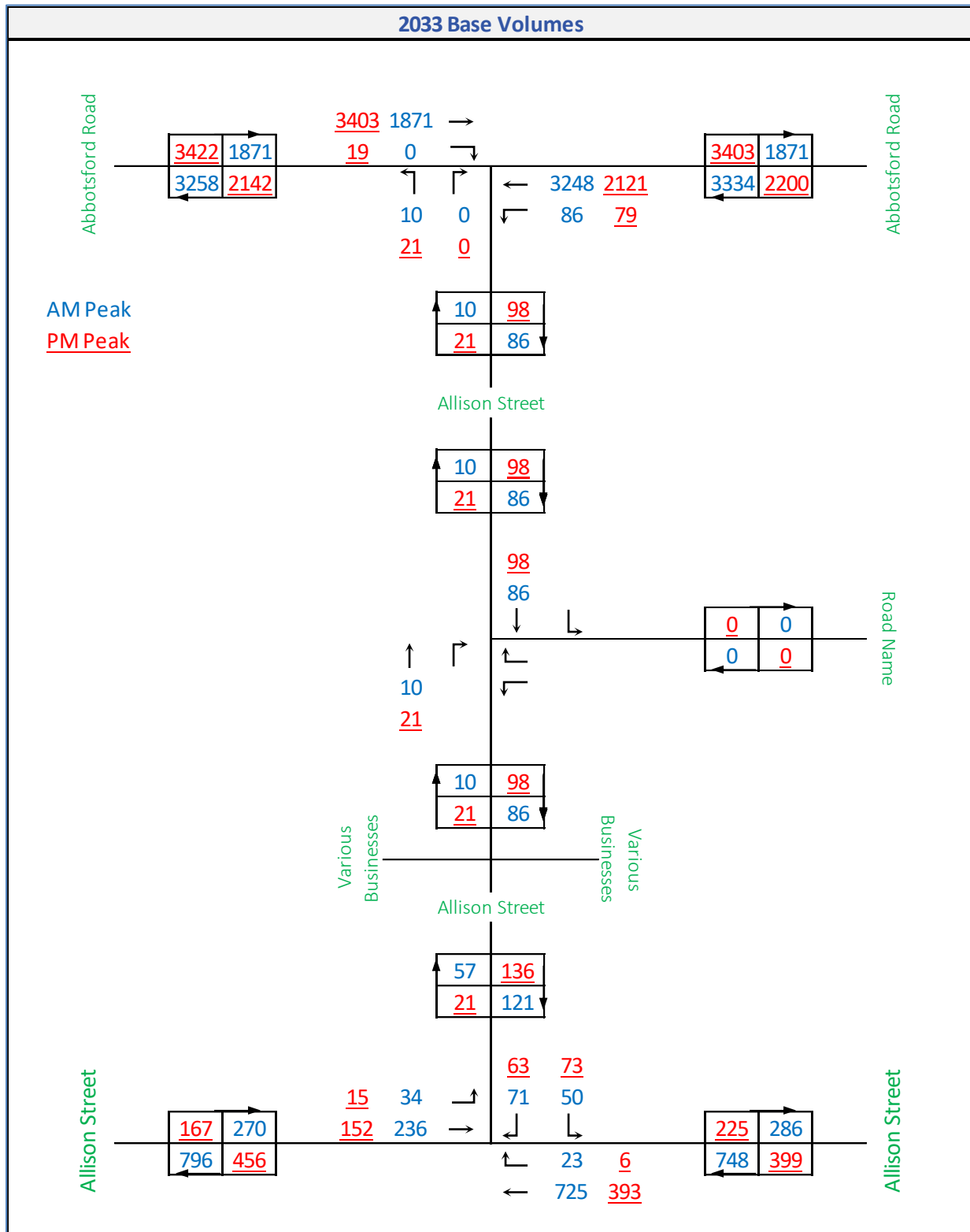
Surveyed Volumes - 2021



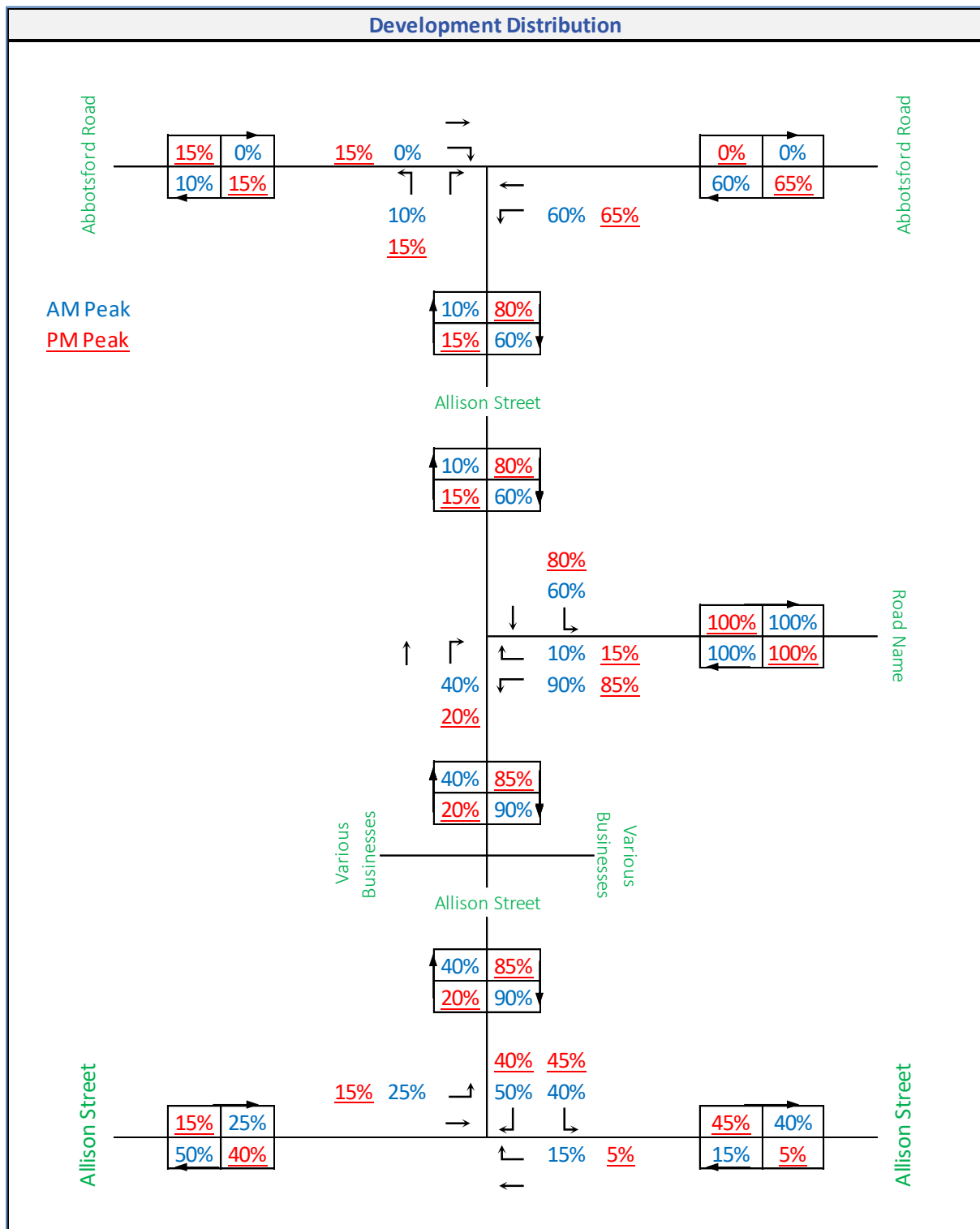
Base Traffic Scenarios – 2023



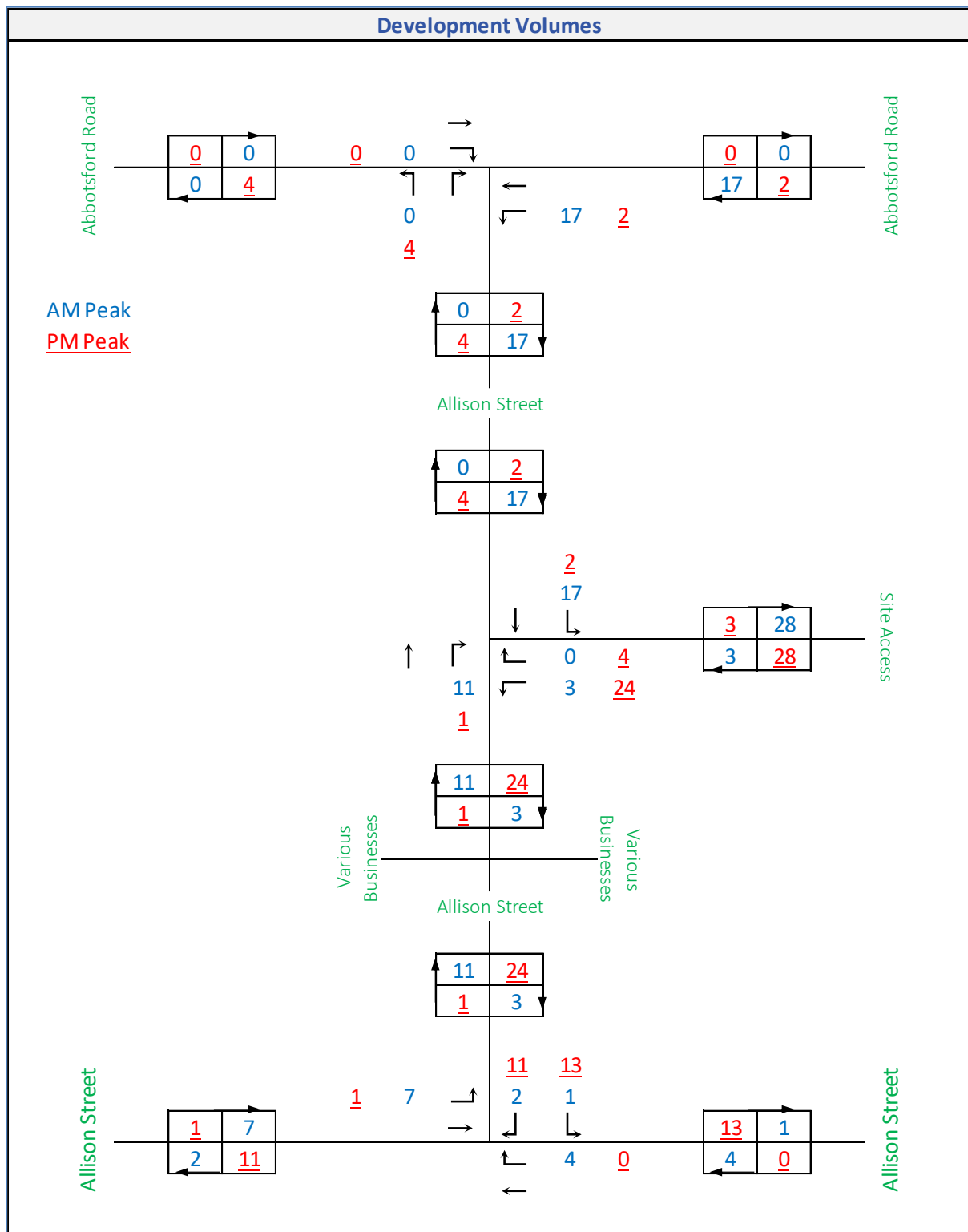
Base Traffic Scenarios – 2033



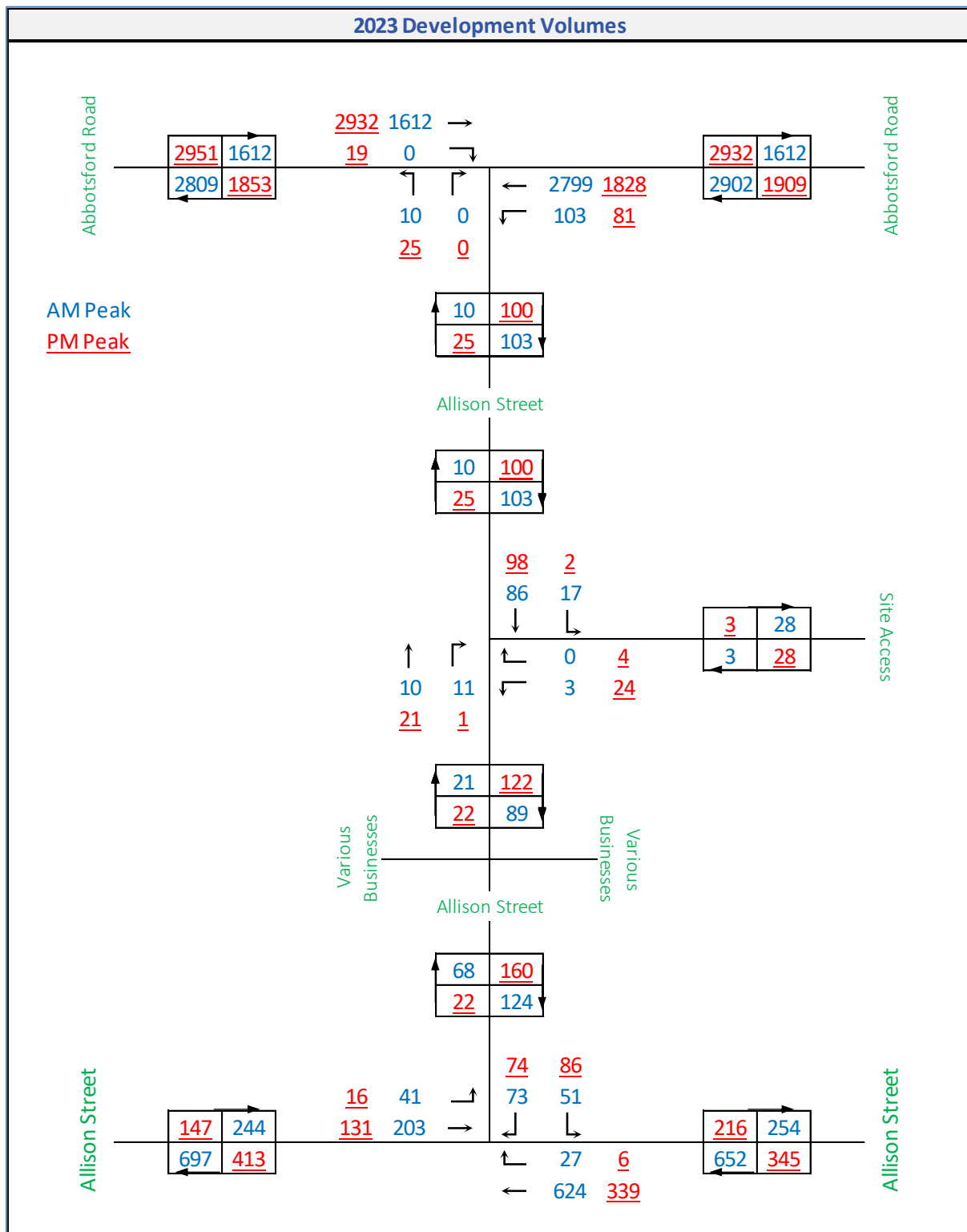
Development Traffic Distribution (%)



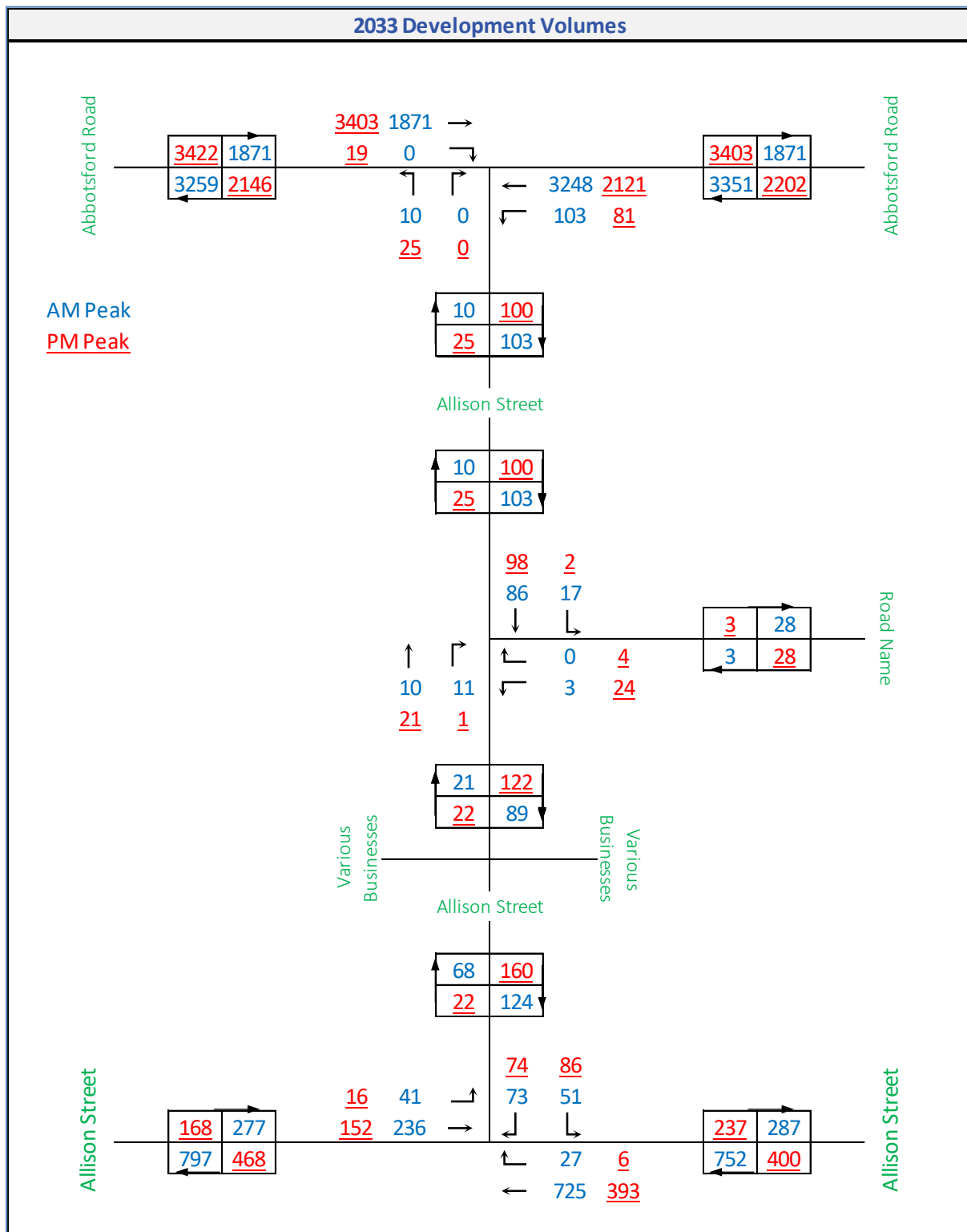
Development Traffic Distribution (vol)



Development Traffic Scenarios – 2023



Development Traffic Scenarios – 2033



Appendix E SIDRA Analysis Outputs

SITE LAYOUT

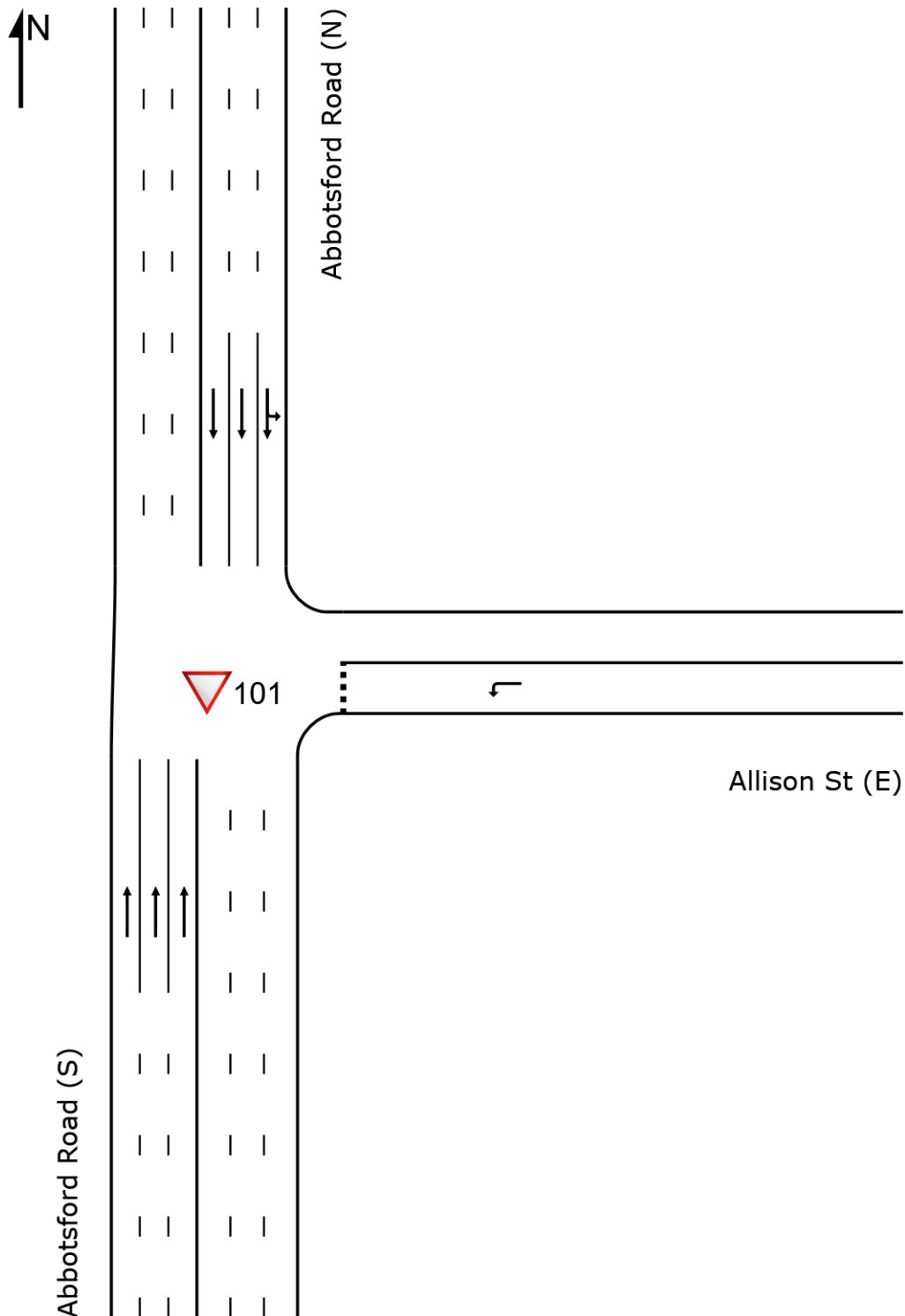
▽ Site: 101 [2021 Survey AM (Site Folder: Abbotsford Rd/
Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

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



MOVEMENT SUMMARY

Site: 101 [2021 Survey AM (Site Folder: Abbotsford Rd/
Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Abbotsford Road (S)														
2	T1	1565	2.0	1647	2.0	0.293	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach		1565	2.0	1647	2.0	0.293	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
East: Allison St (E)														
4	L2	10	0.0	11	0.0	0.023	11.8	LOS B	0.1	0.5	0.66	0.79	0.66	30.6
Approach		10	0.0	11	0.0	0.023	11.8	LOS B	0.1	0.5	0.66	0.79	0.66	30.6
North: Abbotsford Road (N)														
7	L2	86	7.0	91	7.0	0.526	5.7	LOS A	0.0	0.0	0.00	0.05	0.00	53.2
8	T1	2717	2.0	2860	2.0	0.526	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.1
Approach		2803	2.2	2951	2.2	0.526	0.3	NA	0.0	0.0	0.00	0.02	0.00	58.9
All Vehicles		4378	2.1	4608	2.1	0.526	0.2	NA	0.1	0.5	0.00	0.01	0.00	59.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: L:\Synergy\Projects\21BRT\21BRT0201 157 Abbotsford Road, Albion\6 - Analysis\Abbotsford Rd - Allison St Intersection B.sip9

MOVEMENT SUMMARY

▽ Site: 101 [2023 Base AM (Site Folder: Abbotsford Rd/Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Abbotsford Road (S)														
2	T1	1612	2.0	1697	2.0	0.302	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach		1612	2.0	1697	2.0	0.302	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
East: Allison St (E)														
4	L2	10	0.0	11	0.0	0.024	12.3	LOS B	0.1	0.6	0.67	0.81	0.67	30.1
Approach		10	0.0	11	0.0	0.024	12.3	LOS B	0.1	0.6	0.67	0.81	0.67	30.1
North: Abbotsford Road (N)														
7	L2	86	7.0	91	7.0	0.541	5.7	LOS A	0.0	0.0	0.00	0.05	0.00	53.3
8	T1	2799	2.0	2946	2.0	0.541	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.1
Approach		2885	2.1	3037	2.1	0.541	0.3	NA	0.0	0.0	0.00	0.02	0.00	58.9
All Vehicles		4507	2.1	4744	2.1	0.541	0.2	NA	0.1	0.6	0.00	0.01	0.00	59.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

▼ Site: 101 [2023 Dev AM (Site Folder: Abbotsford Rd/Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES [Total HV] veh/h %		DEMAND FLOWS [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. Dist] veh m		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Abbotsford Road (S)														
2	T1	1612	2.0	1697	2.0	0.302	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach		1612	2.0	1697	2.0	0.302	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
East: Allison St (E)														
4	L2	10	0.0	11	0.0	0.023	12.1	LOS B	0.1	0.6	0.67	0.80	0.67	30.3
Approach		10	0.0	11	0.0	0.023	12.1	LOS B	0.1	0.6	0.67	0.80	0.67	30.3
North: Abbotsford Road (N)														
7	L2	103	7.0	108	7.0	0.545	5.7	LOS A	0.0	0.0	0.00	0.06	0.00	53.1
8	T1	2799	2.0	2946	2.0	0.545	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.0
Approach		2902	2.2	3055	2.2	0.545	0.3	NA	0.0	0.0	0.00	0.02	0.00	58.7
All Vehicles		4524	2.1	4762	2.1	0.545	0.2	NA	0.1	0.6	0.00	0.02	0.00	59.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

▽ Site: 101 [2033 Base AM (Site Folder: Abbotsford Rd/Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES [Total HV] veh/h %		DEMAND FLOWS [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. Dist] veh m		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Abbotsford Road (S)														
2	T1	1871	2.0	1969	2.0	0.350	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach		1871	2.0	1969	2.0	0.350	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
East: Allison St (E)														
4	L2	10	0.0	11	0.0	0.032	15.5	LOS C	0.1	0.7	0.76	0.90	0.76	27.2
Approach		10	0.0	11	0.0	0.032	15.5	LOS C	0.1	0.7	0.76	0.90	0.76	27.2
North: Abbotsford Road (N)														
7	L2	86	7.0	91	7.0	0.625	5.7	LOS A	0.0	0.0	0.00	0.05	0.00	53.3
8	T1	3248	2.0	3419	2.0	0.625	0.2	LOS A	0.0	0.0	0.00	0.01	0.00	58.9
Approach		3334	2.1	3509	2.1	0.625	0.3	NA	0.0	0.0	0.00	0.02	0.00	58.7
All Vehicles		5215	2.1	5489	2.1	0.625	0.2	NA	0.1	0.7	0.00	0.01	0.00	59.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: L:\Synergy\Projects\21BRT\21BRT0201 157 Abbotsford Road, Albion\6 - Analysis\Abbotsford Rd - Allison St Intersection B.sip9

MOVEMENT SUMMARY

▼ Site: 101 [2033 Dev AM (Site Folder: Abbotsford Rd/Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Abbotsford Road (S)														
2	T1	1871	2.0	1969	2.0	0.350	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach		1871	2.0	1969	2.0	0.350	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
East: Allison St (E)														
4	L2	10	0.0	11	0.0	0.031	15.2	LOS C	0.1	0.7	0.75	0.90	0.75	27.5
Approach		10	0.0	11	0.0	0.031	15.2	LOS C	0.1	0.7	0.75	0.90	0.75	27.5
North: Abbotsford Road (N)														
7	L2	103	7.0	108	7.0	0.629	5.7	LOS A	0.0	0.0	0.00	0.05	0.00	53.1
8	T1	3248	2.0	3419	2.0	0.629	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	58.9
Approach		3351	2.2	3527	2.2	0.629	0.3	NA	0.0	0.0	0.00	0.02	0.00	58.6
All Vehicles		5232	2.1	5507	2.1	0.629	0.3	NA	0.1	0.7	0.00	0.01	0.00	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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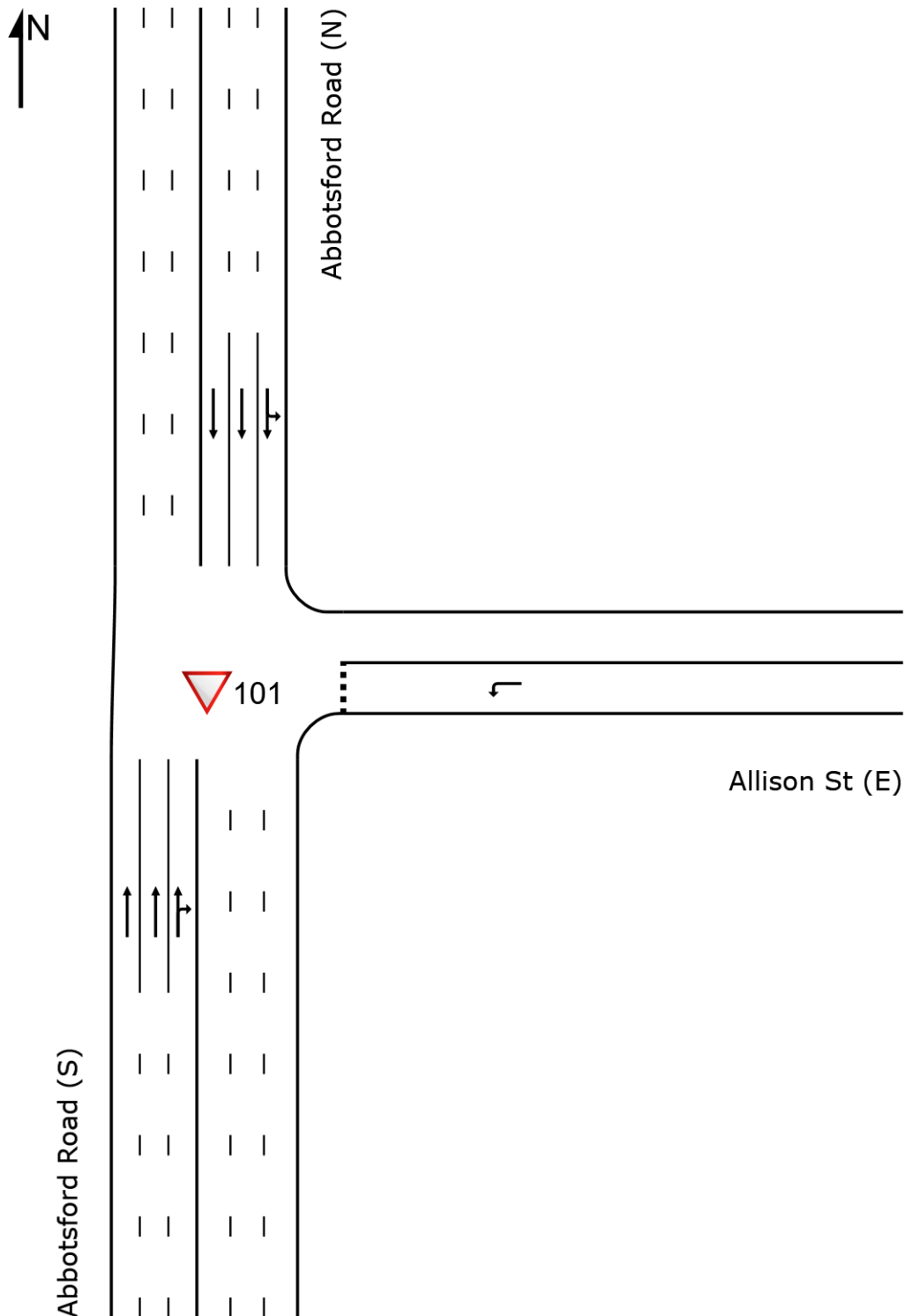
Project: L:\Synergy\Projects\21BRT\21BRT0201 157 Abbotsford Road, Albion\6 - Analysis\Abbotsford Rd - Allison St Intersection B.sip9

SITE LAYOUT

▽ Site: 101 [2021 Survey PM (Site Folder: Abbotsford Rd/
Allison St - Exist)]

New Site
Site Category: (None)
Give-Way (Two-Way)

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



MOVEMENT SUMMARY

▼ Site: 101 [2021 Survey PM (Site Folder: Abbotsford Rd/
Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Abbotsford Road (S)														
2	T1	2846	1.0	2996	1.0	0.606	5.5	LOS A	24.8	175.2	0.24	0.01	0.28	46.2
3	R2	19	0.0	20	0.0	0.606	86.0	LOS F	24.8	175.2	1.00	0.03	1.21	21.8
Approach		2865	1.0	3016	1.0	0.606	6.0	NA	24.8	175.2	0.24	0.01	0.29	45.9
East: Allison St (E)														
4	L2	21	0.0	22	0.0	0.030	8.4	LOS A	0.1	0.8	0.50	0.68	0.50	34.6
Approach		21	0.0	22	0.0	0.030	8.4	LOS A	0.1	0.8	0.50	0.68	0.50	34.6
North: Abbotsford Road (N)														
7	L2	79	1.0	83	1.0	0.347	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	53.9
8	T1	1774	2.0	1867	2.0	0.347	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.1
Approach		1853	2.0	1951	2.0	0.347	0.3	NA	0.0	0.0	0.00	0.03	0.00	58.9
All Vehicles		4739	1.4	4988	1.4	0.606	3.8	NA	24.8	175.2	0.15	0.02	0.18	50.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

▽ Site: 101 [2023 Base PM (Site Folder: Abbotsford Rd/Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Abbotsford Road (S)														
2	T1	2932	1.0	3086	1.0	0.630	6.4	LOS A	27.4	193.3	0.23	0.01	0.28	44.6
3	R2	19	0.0	20	0.0	0.630	95.1	LOS F	27.4	193.3	1.00	0.03	1.23	19.6
Approach		2951	1.0	3106	1.0	0.630	7.0	NA	27.4	193.3	0.23	0.01	0.29	44.3
East: Allison St (E)														
4	L2	21	0.0	22	0.0	0.030	8.6	LOS A	0.1	0.8	0.51	0.68	0.51	34.4
Approach		21	0.0	22	0.0	0.030	8.6	LOS A	0.1	0.8	0.51	0.68	0.51	34.4
North: Abbotsford Road (N)														
7	L2	79	1.0	83	1.0	0.358	5.6	LOS A	0.0	0.0	0.00	0.07	0.00	53.9
8	T1	1828	2.0	1924	2.0	0.358	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.1
Approach		1907	2.0	2007	2.0	0.358	0.3	NA	0.0	0.0	0.00	0.02	0.00	58.9
All Vehicles		4879	1.4	5136	1.4	0.630	4.4	NA	27.4	193.3	0.14	0.02	0.18	49.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

▽ Site: 101 [2023 Dev PM (Site Folder: Abbotsford Rd/Allison St - Exist)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Abbotsford Road (S)														
2	T1	2932	1.0	3086	1.0	0.630	6.4	LOS A	27.4	193.7	0.23	0.01	0.28	44.5
3	R2	19	0.0	20	0.0	0.630	95.4	LOS F	27.4	193.7	1.00	0.03	1.23	19.5
Approach		2951	1.0	3106	1.0	0.630	7.0	NA	27.4	193.7	0.23	0.01	0.29	44.3
East: Allison St (E)														
4	L2	25	0.0	26	0.0	0.036	8.6	LOS A	0.1	0.9	0.51	0.69	0.51	34.4
Approach		25	0.0	26	0.0	0.036	8.6	LOS A	0.1	0.9	0.51	0.69	0.51	34.4
North: Abbotsford Road (N)														
7	L2	81	1.0	85	1.0	0.358	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	53.9
8	T1	1828	2.0	1924	2.0	0.358	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.1
Approach		1909	2.0	2009	2.0	0.358	0.3	NA	0.0	0.0	0.00	0.03	0.00	58.8
All Vehicles		4885	1.4	5142	1.4	0.630	4.4	NA	27.4	193.7	0.14	0.02	0.18	49.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 101 [2033 Base PM (Site Folder: Abbotsford Rd/Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Abbotsford Road (S)														
2	T1	3403	1.0	3582	1.0	0.786	13.9	LOS B	44.8	316.4	0.17	0.01	0.27	34.7
3	R2	19	0.0	20	0.0	0.786	162.2	LOS F	44.8	316.4	1.00	0.04	1.54	9.0
Approach		3422	1.0	3602	1.0	0.786	14.8	NA	44.8	316.4	0.18	0.01	0.27	34.3
East: Allison St (E)														
4	L2	21	0.0	22	0.0	0.035	9.5	LOS A	0.1	0.9	0.55	0.73	0.55	33.2
Approach		21	0.0	22	0.0	0.035	9.5	LOS A	0.1	0.9	0.55	0.73	0.55	33.2
North: Abbotsford Road (N)														
7	L2	79	1.0	83	1.0	0.412	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	54.1
8	T1	2121	2.0	2233	2.0	0.412	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.2
Approach		2200	2.0	2316	2.0	0.412	0.3	NA	0.0	0.0	0.00	0.02	0.00	58.9
All Vehicles		5643	1.4	5940	1.4	0.786	9.1	NA	44.8	316.4	0.11	0.01	0.17	41.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

▽ Site: 101 [2033 Dev PM (Site Folder: Abbotsford Rd/Allison St - Exist)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Abbotsford Road (S)														
2	T1	3403	1.0	3582	1.0	0.786	14.0	LOS B	44.9	316.9	0.17	0.01	0.27	34.6
3	R2	19	0.0	20	0.0	0.786	162.7	LOS F	44.9	316.9	1.00	0.04	1.55	9.0
Approach		3422	1.0	3602	1.0	0.786	14.8	NA	44.9	316.9	0.18	0.01	0.27	34.2
East: Allison St (E)														
4	L2	25	0.0	26	0.0	0.041	9.5	LOS A	0.1	1.0	0.55	0.74	0.55	33.2
Approach		25	0.0	26	0.0	0.041	9.5	LOS A	0.1	1.0	0.55	0.74	0.55	33.2
North: Abbotsford Road (N)														
7	L2	81	1.0	85	1.0	0.413	5.6	LOS A	0.0	0.0	0.00	0.07	0.00	54.0
8	T1	2121	2.0	2233	2.0	0.413	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.1
Approach		2202	2.0	2318	2.0	0.413	0.3	NA	0.0	0.0	0.00	0.02	0.00	58.9
All Vehicles		5649	1.4	5946	1.4	0.786	9.1	NA	44.9	316.9	0.11	0.02	0.17	40.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Appendix F TAPS Code response

Performance Outcomes	Acceptable Outcomes	COMMENTS
PO1 Development is designed: (a) to include a technically competent and accurate response to the transport and traffic elements of the development; (b) in accordance with the standards in the Transport, access, parking and servicing planning scheme policy; (c) to ensure the efficient operation and safety of the development and its surrounds. Note—The acceptable outcome and performance outcome can be demonstrated through a development application that: • is accompanied by sufficient information, including computer modelling input and output data, to allow the proposed development to be properly assessed against the requirements of this code and the standards and guidelines of the Transport, access, parking and servicing planning scheme policy; • is certified by a Registered Professional Engineer Queensland that all plans, documents and dimensioned drawings comply with the requirements of this code and the standards and guidelines of the Transport, access, parking and servicing planning scheme policy; • ensures that any computer modelling input and output data are accurate, reasonable and carried out in accordance with sound traffic engineering practices.	AO1 Development complies with the standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Performance Outcome / Acceptable Outcome Refer to the attached Traffic Impact Assessment Report prepared by TTM Consulting Pty Ltd (TTM TIA), for a detailed assessment of the traffic and transport elements of the proposed development in accordance with the Council Transport, access, parking and servicing planning scheme policy (TAPS Policy). Where compliance is not achieved, acceptable performance solutions have been proposed and supported. See revision record for certification.

Performance Outcomes	Acceptable Outcomes	COMMENTS
PO2 Development of a major size incorporates on-site provision for integration with the public transport network and the management of vehicles, public transport, pedestrians and cyclists, including providing appropriate pedestrian and cyclist linkages to adjoining uses, public areas and the transport network consistent with the planning by the Queensland Government and Council.	AO2 No acceptable outcome is prescribed.	Not Applicable The development is not considered of large enough scale to warrant integration with public transport provisions.
PO3 Development provides vehicle access that is located and designed so as to have no significant impact on the safety, efficiency, function, convenience of use or capacity of the road network.	AO3.1 Development provides site access that is located and designed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Performance Outcome The development proposes access to Allison Street via a single crossover. The crossover is located and designed generally in accordance with the standards of the TAPS Policy. Where compliance is not achieved, acceptable performance solutions have been proposed and supported. Refer to Section 5 of the TTM TIA for further details to this accord.
	AO3.2 Development provides an easement for a vehicular access benefiting all adjoining landowners and the Council if the vehicular access services more than an individual development or premises.	Not Applicable The vehicular access does not service more than an individual development or premises.
PO4 Development provides walking and cycle routes through the site which: (a) link to the external network and pedestrian and cyclist destinations such as schools, shopping centres, open space, public transport stations, shops and local activity centres along the safest, most direct and convenient routes; (b) encourage walking and cycling;	AO4.1 Development provides walking and cycle routes which are constructed on the carriageway or through the site to: (a) create a walking or cycle route along the full frontage of the site; (b) connect to public transport and existing cycle and walking routes at the frontage or boundary of the site.	Complies with Performance Outcome Formal pedestrian footpaths are located on both sides of all roads surrounding the subject site. A pedestrian and bicycle access, separate from the site's vehicular access, is provided on both Abbotsford Road and Allison Street. Furthermore, Abbotsford Road and Allison Street are designated as 'Secondary Cycle Routes' under the 'Bicycle Network Overlay Code'. The development is considered to provide adequate and safe walking and cycle routes through the site. Refer to Section 10 of the TTM TIA for further details to this accord.

Performance Outcomes	Acceptable Outcomes	COMMENTS
(c) ensure pedestrian and cyclist safety; (d) provide a direct and legible network. Note—The Infrastructure design planning scheme policy provides additional guidance on how to comply with this performance outcome.	AO4.2 Development provides walking and cycle routes that are constructed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy.	Complies with Performance Outcome Formal pedestrian footpaths are located on both sides of all roads surrounding the subject site. A pedestrian and bicycle access, separate from the site's vehicular access, is provided on both Abbotsford Road and Allison Street. Furthermore, Abbotsford Road and Allison Street are designated as 'Secondary Cycle Routes' under the 'Bicycle Network Overlay Code'. The development is considered to provide adequate and safe walking and cycle routes through the site. Refer to Section 10 of the TTM TIA for further details to this accord.
	AO4.3 Development provides walking and cycle routes which do not include a potential entrapment area, blind corner or sudden change in level that restrict sightlines.	Complies with Performance Outcome Formal pedestrian footpaths are located on both sides of all roads surrounding the subject site. A pedestrian and bicycle access, separate from the site's vehicular access, is provided on both Abbotsford Road and Allison Street. Furthermore, Abbotsford Road and Allison Street are designated as 'Secondary Cycle Routes' under the 'Bicycle Network Overlay Code'. The development is considered to provide adequate and safe walking and cycle routes through the site. Refer to Section 10 of the TTM TIA for further details to this accord.
PO5 Development provides secure and convenient bicycle parking which: (a) for visitors is obvious and located close to the building's main entrance; (b) for employees is conveniently located to provide secure and convenient access between the bicycle storage area, end-of-trip facilities and the main area of the building; (c) is easily and safely accessible from outside the site;	AO5.1 Development provides on-site bicycle parking spaces in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Acceptable Outcome The development will provide on-site bicycle parking spaces in compliance with the standards in the Transport, access, parking and servicing planning scheme policy. Refer to Section 10 of the TTM TIA for further details to this accord.
	AO5.2 Development provides bicycle parking spaces for employees which are co-located with end-of-trip facilities (shower cubicles and lockers) in compliance with the Transport, access, parking and servicing	Complies with Acceptable Outcome The bicycle parking and end-of-trip facilities are located on Ground Floor. Refer to Section 10 of the TTM TIA for further details to this accord.

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(d) does not impact adversely on visual amenity; (e) does not impede the movement of pedestrians or other vehicles; (f) is designed to comply with a recognised standard for the construction of bicycle facilities. Note—For a performance outcome relating to the number of bicycle parking spaces provided, the application must demonstrate how the needs of the intended users of the site differ from the standard rates in the Transport, access, parking and servicing planning scheme policy.	planning scheme policy and AS 2890.3-1993 Bicycle parking facilities.	
	A05.3 Development ensures that the location of visitor bicycle parking is discernible either by direct view or using signs from the street.	Complies with Acceptable Outcome The visitor bicycle parking and end-of-trip facilities are located on Ground Floor. Signage is to be installed to direct visitors to the bicycle parking area. Refer to Section 10 of the TTM TIA for further details to this accord.
	A05.4 Development provides visitor bicycle parking which does not impede pedestrian movement.	Complies with Acceptable Outcome The visitor bicycle parking area and end-of-trip facilities does not impede pedestrian movement Refer to Section 10 of the TTM TIA for further details to this accord.
	A05.5 Development provides bicycle parking which is constructed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Acceptable Outcome The bicycle parking and end-of-trip facilities are designed in accordance with the TAPS Policy Refer to Section 10 of the TTM TIA for further details to this accord.
PO6 Development provides shower cubicles and lockers in sufficient numbers to meet the needs and volume of predicted pedestrian and cyclist users. Note—For a performance outcome the application must demonstrate how the needs of the intended users of the site differ from the standard rates in the Transport, access, parking and servicing planning scheme policy.	A06 Development provides shower cubicles and lockers for pedestrians and cyclists in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Acceptable Outcome Development provides shower cubicles and lockers for pedestrians and cyclists in compliance with the standards in the Transport, access, parking and servicing planning scheme policy. Refer to Section 10 of the TTM TIA for further details to this accord.
PO7 Development provides pedestrian and cyclist access to the site which is designed to provide safe movement and avoid unnecessary conflict between pedestrians, cyclists and motor vehicles.	A07 Development provides pedestrian and cycle access that is designed and constructed in compliance with the site access design guidelines, pedestrian facilities standards and cyclist facilities standards in the	Complies with Performance Outcome The bicycle parking and end-of-trip facilities are located on the Ground Floor and accessed via a pedestrian access point to both Abbotsford Road and Allison Street. This access provides safe movement and avoid unnecessary conflict between pedestrians, cyclists and motor vehicles

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	Transport, access, parking and servicing planning scheme policy.	Refer to Section 10 of the TTM TIA for further details to this accord.
PO8 Development provides pedestrian and cyclist access to and from the site which is located to take advantage of safe crossing points of the adjacent road system, key destinations and public transport facilities.	AO8 No acceptable outcome is prescribed.	Complies with Performance Outcome Pedestrian and cyclist to the site will be achieved via a pedestrian access on Ground Floor. This access links to the established walking and cycling routes within the vicinity of the area. Refer to Section 10 of the TTM TIA for further details to this accord.
PO9 Development provides access driveways in the road area that are located, designed and controlled to: (a) minimise adverse impacts on the safety and operation of the transport network, including the movement of pedestrians and cyclists; (b) ensure the amenity of adjacent premises, from impacts such as noise and light.	AO9.1 No acceptable outcome for access is prescribed, for a major development (as described in the Transport, access, parking and servicing planning scheme policy).	Complies with Performance Outcome The development is accessed via a singular crossover to Allison Street. The access arrangements have been designed to minimise adverse impacts on the safety and operation of the transport network.
	AO9.2 Development which is not a major development (as described in the Transport, access, parking and servicing planning scheme policy) provides a single site access driveway in the road area to the lowest order road to which the site has frontage.	Not Applicable The development is a major development
	AO9.3 Development ensures that sight distances to and from all proposed access driveways in the road area and intersections are in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Acceptable Outcome The development proposes access to Allison Street via a single crossover. The crossover is located and designed generally in accordance with the standards of the TAPS Policy. Where compliance is not achieved, acceptable performance solutions have been proposed and supported. Refer to Section 5 of the TTM TIA for further details to this accord
	AO9.4 Development provides access driveways in the road area which:	Complies with Acceptable Outcome The development proposes access to Allison Street via a single crossover, which is not provided through a bus stop, taxi rank or pedestrian crossing or

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	(a) are located, designed and controlled in compliance with the standards in the Transport, access, parking and servicing planning scheme policy; (b) (b) are not provided through a bus stop, taxi rank or pedestrian crossing or refuge.	refuge The crossover is located and designed generally in accordance with the standards of the TAPS Policy. Where compliance is not achieved, acceptable performance solutions have been proposed and supported. Refer to Section 5 of the TTM TIA for further details to this accord
	AO9.5 Development makes provision for shared access arrangements particularly where it is necessary to limit access points to a major road.	Not Applicable None of the abutting sites have only road frontage to major roads.
PO10 Redevelopment provides for: (a) the closure of all access driveways in the road area that no longer comply with the standards in the Transport, access, parking and servicing planning scheme policy; (b) the reinstatement of adjacent footpaths.	AO10 No acceptable outcome is prescribed.	Complies with Performance Outcome All redundant access driveways will be removed and footpaths reinstated to Council standards.
PO11 Development provides that an internal approach to an access driveway in the road area is designed and located to provide for the safety of pedestrians and cyclists using paths adjacent to the frontage of the site, and motorists.	AO11.1 Development provides sight distances to and from all proposed access driveways in the road area and intersections which are in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Acceptable Outcome The development proposes access to Allison Street via a single crossover. The crossover has been provided on the south-western side of the site's frontage, maximising separation to the Abbotsford Road / Allison Street crossover. Refer to Section 5 of the TTM TIA for further details to this accord

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	AO11.2 Development ensures that convex mirrors are only used in a site: (a) as a secondary support at access driveways; (b) in addition to acceptable sight splays that comply with the sight distances standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Acceptable Outcome The development does not rely on the use of convex mirrors.
PO12 Development in the City core and City frame as identified in Figure a provides car parking spaces at rates to discourage private car use and encourage walking, cycling and the use of public transport.	AO12 Development in the City core and City frame as identified in Figure a provides maximum car-parking rates in compliance with the standards in the Transport, access, parking and servicing planning scheme policy. Note—For accepted development subject to compliance with identified requirements including an existing premises, no reduction to existing car parking is required to comply with a maximum car-parking rate in the Transport, access, parking and servicing planning scheme policy.	Complies with Performance Outcome A maximum supply of 46 parking spaces would be permitted under the 'TAPS PSP' for the proposed development. The scheme proposes to provide 77 parking spaces which is not consistent with the maximum provision. Performance solutions have been provided regarding this. Consequently, the parking supply for the proposed development is considered acceptable. Refer to Section 4 of the TTM TIA for further details to this accord.
PO13 Development outside of the City core and City frame as identified in Figure a provides on-site car parking spaces to accommodate the design peak parking demand without any overflow of car parking to an adjacent premises or adjacent street.	AO13 Development outside of the City core and City frame as identified in Figure a: (a) provides on-site car parking spaces in compliance with the standards in the Transport, access, parking and	Not Applicable The site is located within the City frame

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	servicing planning scheme policy; or (b) for accepted development subject to compliance with identified requirements, does not result in on-street car parking if no parking standard is identified in the Transport, access, parking and servicing planning scheme policy Note—For accepted development subject to compliance with identified requirements including an existing premises, no reduction to existing car parking is required to comply with a maximum car-parking rate in the Transport, access, parking and servicing planning scheme policy.	
PO14 Development ensures that the number of car parking spaces and design of the car parking area: (a) meet the combined design peak parking demand for residential, visitor and business parking; (b) allow for the temporal sharing of car-parking spaces for uses with different peak parking demands. Note—In order to demonstrate that adequate car parking is provided, a traffic impact assessment prepared in compliance with the Transport, access, parking and servicing planning scheme policy is to identify the appropriate number of car parking spaces to be provided.	AO14.1 Development provides a number of car parking spaces on site equalling the sum of the maximum design peak parking demand for the individual uses at any point in time.	Complies with Performance Outcome A maximum supply of 46 parking spaces would be permitted under the 'TAPS PSP' for the proposed development. The scheme proposes to provide 77 parking spaces which is not consistent with the maximum provision. Performance solutions have been provided regarding this. Consequently, the parking supply for the proposed development is considered acceptable. Refer to Section 4 of the TTM TIA for further details to this accord.
	AO14.2 Development involving mixed use provides a non-residential car parking area with shared parking for all the businesses in the development.	Not Applicable The development is not a mixed-use development.
PO15 Development provides a car park layout which allows for on-site vehicle parking that: (a) is clearly defined, safe and easily accessible;	AO15 Development provides parking bays, queue areas and manoeuvring areas which are designed for the design service vehicle to the	Complies with Performance Outcome The development car park is designed generally in accordance with the requirements of the TAPS Policy. Where compliance is not achieved, acceptable performance solutions have been proposed and supported. Refer to Section 4 of the TTM TIA for further details to this accord.

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(b) is designed to contain potential adverse impacts within the site; (c) does not detract from the aesthetics or amenity of an area; (d) discourages on-street parking if parking has an adverse traffic management safety or amenity impact; (e) is consistent with safe and convenient pedestrian and cyclist movement.	standards in the Transport, access, parking and servicing planning scheme policy.	
PO16 Development creates a safe environment by incorporating the key elements of crime prevention through environmental design.	AO16 Development incorporates the key elements of crime prevention through environmental design in its layout, building and structure design and landscaping by: (a) facilitating casual surveillance opportunities and including good sightlines to publicly accessible areas such as car parks, pathways, public toilets and communal areas; (b) defining different uses and ownerships through design and restricting access from non-residential uses into private residential dwellings; (c) promoting safety and minimising opportunities for graffiti and vandalism through exterior building design and orientation of buildings and use of active frontages; (d) ensuring publicly accessible areas such as car parks, pathways, public	Refer to Town Planning Report and/or Architectural Plans/Report.

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	toilets and communal areas are well lit; (e) including way-finding cues; (f) minimising predictable routes and entrapment locations near public spaces such as car parks, public toilets, ATMs and communal areas.	
PO17 Development minimises the potential for graffiti and vandalism through access control, canvas reduction and easy maintenance selection.	AO17 Development incorporates graffiti and vandalism prevention techniques in its layout, building and structure design and landscaping, by: (a) denying access to potential canvas through access control techniques; (b) reducing potential canvases through canvas reduction techniques; (c) (c) ensuring graffiti can be readily and quickly removed through easy maintenance selection techniques.	Refer to Town Planning Report and/or Architectural Plans/Report.
PO18 Development is serviced by an adequate number and size of service vehicles.	AO18 Development ensures that the number and size of design service vehicles selected for the site is in compliance with the standards	Complies with Performance Outcome The development includes allowance for on-site access for vehicles up to the size of an RCV. A formal centralised loading area has been provided capable of accommodating the maximum number of service vehicles that will

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	in the Transport, access, parking and servicing planning scheme policy.	be on-site at any one time. Given the provision of the centralised service vehicle area, it is proposed that a loading dock manager is employed at the facility and a comprehensive Service Vehicle Management Plan is adopted to assist the efficient servicing of the development. Refer to Section 6 of the TTM TIA for further details to this accord.
PO19 Development layout provides for services which: (a) are wholly within the site, other than service vehicle manoeuvring areas which may overhang the verge on a minor road where use of the footpath is not adversely affected; (b) are clearly defined, safe and easily accessible; (c) are designed to contain potential adverse impacts of servicing within the site; (d) do not detract from the aesthetics or amenity of the surrounding area.	AO19.1 Development ensures that a service bay provided on site: (a) is provided and designed to comply with the design vehicle table and service area design standards in the Transport, access, parking and servicing planning scheme policy; (b) is located away from street frontages and screened from adjoining premises.	Complies with Performance Outcome The development includes allowance for on-site access for vehicles up to the size of an RCV. A formal centralised loading area has been provided capable of accommodating the maximum number of service vehicles that will be on-site at any one time. Given the provision of the centralised service vehicle area, it is proposed that a loading dock manager is employed at the facility and a comprehensive Service Vehicle Management Plan is adopted to assist the efficient servicing of the development. Refer to Section 6 of the TTM TIA for further details to this accord.
	AO19.2 Development provides on-site servicing facilities and associated on-site vehicle manoeuvring areas which are designed in compliance with the service area design standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Performance Outcome The development includes allowance for on-site access for vehicles up to the size of an RCV. A formal centralised loading area has been provided capable of accommodating the maximum number of service vehicles that will be on-site at any one time. Refer to Section 6 of the TTM TIA for further details to this accord.
	AO19.3 Development provides service areas for refuse collection in compliance with the standards in the Refuse planning scheme policy, Transport, access, parking and	Complies with Performance Outcome The development includes allowance for on-site access for vehicles up to the size of an RCV. A formal centralised loading area has been provided capable of accommodating the maximum number of service vehicles that will be on-site at any one time.

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	servicing planning scheme policy and the Infrastructure design planning scheme policy.	Refer to Section 6 of the TTM TIA for further details to this accord.
PO20 Development provides service vehicle access routes to and from the site which minimise the impact on: (a) amenity and safety in residential areas; (b) streets not constructed to a standard that accommodate increased heavy vehicle movements.	AO20 Development ensures that service vehicles use the shortest and most direct route to the major road network in compliance with the heavy vehicle standards in the Transport, access, parking and servicing planning scheme policy.	Complies with Acceptable Outcome Access to the major road network is achieved via the access to Allison Street.
If for development which is required to be serviced by a b-double (Austroad class 10 vehicle), multi-combination vehicle, over-dimensioned vehicle or any on vehicle identified by the Queensland Government as requiring a permit to operate on the road (freight-dependent development)		
PO21 Development which is freight-dependent development ensures that the traffic generated by the development does not impact on: (a) the operation of the transport network; (b) the safety and amenity of a residential area; (c) a road not constructed to accommodate a non-standard vehicle such as a road only constructed to accommodate a vehicle that has a legal right of access to all roads including Austroads vehicles classes 1–9.	AO21.1 Development which is freight-dependent development is located on a site which: (a) has frontage to or direct access to the freight network in the Road hierarchy overlay via roads in a zone in the Industry zones category; or (b) can be serviced by a route that can act as a primary freight access route and connect to an existing primary freight route without impacting on the safe operation of the road network in compliance with the heavy vehicle standards in the Transport, access, parking and servicing planning scheme policy.	Not Applicable The development will not be serviced by any vehicles that require a permit to operate on the road

	AO21.2 Development which is freight-dependent development provides any necessary upgrade to a road used as an access route in compliance with the Infrastructure design planning scheme policy.	Not Applicable The development will not be serviced by any vehicles that require a permit to operate on the road
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