Trinity Point, Lake Macquarie
Traffic Impact Assessment

Prepared for:

Johnson Property Group

29 May 2022

The Transport Planning Partnership

Trinity Point, Lake Macquarie
Traffic Impact Assessment

Client: Johnson Property Group

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V01	15/03/22	Jason Huang, Santi Botross	Santi Botross, Ken Hollyoak	Ken Hollyoak	
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Executive Summary

This Traffic Impact Assessment has been prepared by The Transport Planning Partnership (TTPP) on behalf of Johnson Property Group Pty Ltd (JPG) (the Proponent) to support the preparation of an Environmental Impact Statement (EIS) for a State Significant Development (SSD-27028161) at Trinity Point Lake Macquarie.

The application to be submitted will be a concept development application as provided for under Division 4.4 of the Act, and will set out concept proposals for the development of the site.

The proposed development is for a mixed-use tourist, hospitality, and residential outcome. Uses include a 300-seat function centre, 600 m^2 of restaurant space, 224 hotel rooms/suites and 180 residential apartments.

Purpose of this Assessment

This traffic impact assessment has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) as they relate to traffic and transport, including:

- Details of traffic types and volumes likely to be generated during operation
- An assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model
- Plans of the proposed layout of the internal road and pedestrian network and parking on site in accordance with the relevant Australian Standards and Council's DCP
- Plans demonstrating how all vehicles associated with operation awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network
- Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site for both heavy and light vehicles.

Findings of Traffic Impact Assessment

SIDRA Intersection modelling analysis has been carried out for the surrounding road network to determine the impacts arising from the Proposal in future study years. The key findings of the traffic modelling analysis and this traffic impact assessment are that:

- Compared to the 2024 and 2034 background growth only scenarios, development traffic generated in Case A2 (the Approved Concept Plan with new rates) and Case A3 (the Proposed Development with new rates) would result in minimal impacts to the road network operation. Overall, the road network conditions with the development traffic would be comparable to base case conditions.

- Comparing scenarios containing A2 and A3 development traffic, there would be no significant difference in the intersection level of service rating and average delay across the modelled network.
- Across all future modelled scenarios, all intersections would operate at an acceptable LoS C or better during the road network peak periods.

Findings of the Parking Assessment

- The proposed development generates a statutory parking requirement of 604 car parking spaces, which would be fully accommodated on-site. Motorcycle and bicycle parking is also proposed on-site.
- The proposed parking layout is generally consistent with the dimensional requirements as set out in the relevant Australian Standards.
- A loading dock is proposed within the basement level, which would accommodate two loading bays for vehicles up to and including an 8.8 m medium rigid vehicle.

1 Introduction

1.1 Background

This Traffic Impact Assessment has been prepared by The Transport Planning Partnership (TTPP) on behalf of Johnson Property Group Pty Ltd (JPG) (the Proponent) to support the preparation of an Environmental Impact Statement (EIS) for a State Significant Development (SSD-27028161) at Trinity Point Lake Macquarie.

The application to be submitted will be a concept development application as provided for under Division 4.4 of the Act, and will set out concept proposals for the development of the site.

The proposed development is for a mixed-use tourist, hospitality, and residential outcome. Uses include a 300-seat function centre, 600 m^2 of restaurant space, 224 hotel rooms/suites and 180 residential apartments.

The hotel component of the proposed development triggers State Significant Development under Clause 13(2)(b) of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD) given that it is located within a sensitive coastal location, and the CIV for this component exceeds the $10 million CIV threshold (QS estimate for the hotel component is $190,417,920).

It is noted that Clause 8(2) of SEPP SRD provides that if part of a single development is only partly SSD, the remainder is also SSD, unless the Director-General determines it is not sufficiently related to SSD. Given that the project is integrated in ownership, architectural theming and design philosophy and public domain outcomes the total project is sufficiently related and required to be assessed as SSD.

On 5 September 2009, a Concept Plan (MP06_0309) was granted to JPG under the former Part 3A Section of the Environmental Planning and Assessment Act 1979 (EPA Act) for a marina, tourist and residential accommodation, a restaurant, café, function centre and associated works at Trinity Point. The Concept Approval has been modified numerous times.

The associated development applications for the Tourism and Hospitality components (DA/1731/2014) and Serviced and Residential Apartments (DA/496/2015) (which relates to 4 of the 8 apartment buildings) were both approved by the Hunter and Central Coast Joint Regional Planning Panel on 5th May, 2016 (not constructed).

A marina (Stage 1 of 94 berths constructed and operational) and helipad (not constructed) have also been granted development consent and a separate development application has been proposed for the second stage of the Marina (final 94 berths).

A temporary restaurant (8@Trinity) has been established on the site to aid early activation of the precinct and has been serving over 1,200 patron sittings across a weekend.

The proposed new development (proposed development) is different from that approved under the Concept Plan and it cannot be dealt with as a modification to the Concept Plan, noting the need to satisfy the "substantially the same" test.

Given the history of development assessment and approvals issued for similar land uses on the site, a level of traffic impact on the local and state road networks has already been assessed as part of the previous proposals. The latest approved TIA prepared by SECA Solution for the project, *Traffic Impact Assessment (Modification 5 to MP06-0309)* (October 2014), forms the basis of this report's comparative study between the previously assessed and currently approved development and the proposed development under this SSD application.

1.2 Report Structure

The report assesses the traffic and parking implications of the proposed development and is set out as follows:

- Chapter 2 discusses the existing conditions including a description of the subject site.
- Chapter 3 provides a brief description of the proposed development.
- Chapter 4 examines the traffic generation and its impact.
- Chapter 5 assesses the proposed on-site parking provision and internal layout.
- Chapter 6 reviews the servicing and loading requirements for the future development.
- Chapter 7 presents the conclusions of the assessment.

1.3 Purpose of this Report

This Traffic Impact Assessment (TIA) supports the EIS for the Proposal and has been prepared as part of an SSD Application for which approval is sought under Part 4, Division 4.4 of the EP&A Act.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) (SSD- 27028161) for the Proposal, issued by the NSW Department of Planning and Environment (DPE) on 24 September 2021. Table 1.1 provides a summary of the relevant SEARs which relate to transport and accessibility, and where these have been addressed in this report.

Notably, Transport for NSW (TfNSW) and Lake Macquarie Council (Council) were consulted by DPE for their input into the SEARs. Each agency's input into the SEARs has been included in Table 1.2.

Table 1.1: Secretary's Environmental Assessment Requirements

SEARs Requirement	Addressed In:
• an analysis of the existing transport network and connectivity to the site from Morisset, including the road hierarchy and any pedestrian, bicycle or public transport infrastructure	Chapter 2
• current daily and peak hour vehicle movements, and existing performance levels of nearby intersections.	Sections 2.3 & 4.5.3.1
• details of the proposed development, including pedestrian and vehicular access arrangements (including swept path analysis of the largest vehicle and height clearances), parking arrangements and rates (including bicycle, end-of-trip facilities and bus/coach facilities), drop-off/pick-up-zone(s) and bus bays (if applicable), and provisions for servicing and loading/unloading	Chapter 3
• analysis of the impacts of the proposed development (including justification for the methodology used), including predicted modal split, a forecast of additional daily and peak hour multimodal network flows as a result of the development (using industry standard modelling) and peak movements during events (if relevant), identification of potential traffic impacts on road capacity, intersection performance and road safety (including pedestrian and cyclist conflict) and any cumulative impact from surrounding approved developments	Chapter 4
• consideration of the traffic impacts on existing and proposed intersections, in particular, the following intersections of: - Fishery Point Road and Macquarie Street, - Mandalong Road, Wyee Road, Dora Street and Freemans Drive, - Dora Street & Ourimbah St, and - any other impacted intersections along Macquarie Road such as Campview Road, Wyee Street and Bridge Street	Section 4.5
• measures to mitigate any traffic impacts, including details of any new or upgraded infrastructure to achieve acceptable performance and safety, and the timing, viability and mechanisms of delivery (including proposed arrangements with local councils or government agencies) of any infrastructure improvements in accordance with relevant standards.	Section 4.5.4.4
• measures to promote sustainable travel choices for employees, guests and visitors, such as connections into existing walking and cycling networks, minimising car parking provision, encouraging car share and public transport, providing adequate bicycle parking and high quality end-of-trip facilities, and implementing a Green Travel Plan.	Chapter 7
• additional matters identified by Transport for NSW at Attachment B.	Table 1.2

Table 1.2: Additional Agency Requirements

Requirements	Addressed In:
Transport for NSW	
• Transport for NSW	
• A map of the surrounding road network identifying the site access, relevant traffic route/s and connections to the classified (State) road network	Section 2.2
• Assessment of all relevant vehicular traffic routes and intersections for access to/ from the subject properties.	Section 2.2
• Current traffic counts for all relevant traffic routes and relevant intersections, including connections to the classified (State) road network	Section 2.3
• The anticipated additional vehicular traffic generated from both the construction and operational stages of the project	Sections 4.1, 4.2 & 4.7

Requirements	Addressed In:
• The distribution on the road network of the trips generated by the proposed development. It is requested that the predicted traffic flows are shown diagrammatically to a level of detail sufficient for easy interpretation	Sections 4.3 & 4.4
• An assessment of turn treatment warrants in accordance with the Austroads Guide to Traffic Management Part 6 and Austroads Guide to Road Design Part 4A for relevant intersections along the identified transport route/s, including connections to the classified (State) road network.	No turn treatments proposed, therefore N/A
• Consideration of the traffic impacts on existing and proposed intersections, in particular the following intersections of: - Fishery Point Road and Macquarie Street, - Mandalong Road, Wyee Road, Dora Street and Freenmans Drive - Dora Street & Ourimbah Street, and; - any other impacted intersections along Macquarie Street such as Campview Road, Wyee Street and Bridge Street Consideration shall also include access to the site, and the capacity of the local and classified road network to safely and efficiently cater for the additional vehicular traffic generated by the proposed development during both the construction and operational stages. The traffic impact shall also include the cumulative traffic impact of other proposed developments in the area.	Section 4.5
• Traffic analysis of any major/ relevant intersections impacted, using SIDRA or similar traffic models, including: - Current traffic counts and 10-year traffic growth projections - With and without development scenarios - 95th percentile back of queue lengths - Delays and level of service on all legs for the relevant intersections - Electronic data for TfNSW review	Section 4.5
• Relevant swept path analysis for the largest design vehicle accessing the site	Sections 5.6 & 6.2, Appendix H
• Any other impacts to the road network including consideration of active transport and public transport facilities	Section 4.6
• Identification of necessary road upgrades that are required to mitigate the impacts of the development. Preliminary concept drawings for any road upgrades shall be designed in accordance with Austroads Guidelines, Australian Standards and TfNSW Supplements and be submitted with the EIS. Road upgrades shall be to the satisfaction of TfNSW and/ or Council in accordance with the relevant Roads Act functions.	Sections 4.5.4.4
• Details of any Traffic Management Plan (TMP) proposed to address the construction phase of the proposed development. The TMP and associated Traffic Control Plans (TCPs) should be prepared by suitably qualified persons in accordance with the *TfNSW Traffic Control at Work Sites Manual.*	Section 4.7
Lake Macquarie Council Requirements	
The analysis of the existing transport network to be included in the EIS should consider the existing regional and cycling network and connectivity to the site from Morisset. Council also acknowledge and support the proponent's engagement with Transport for NSW.	Section 4.6

1.4 Consultation with Agencies

The Proponent has consulted with both Council and TfNSW during the preparation of this TIA. Following consultation between JPG, Council and TfNSW, it has been determined that a monetary contribution will replace the need for traffic modelling of roundabouts along the State road network through Morisset as part of this SSD. The roundabout intersections that were initially required to be assessed by the SEARs, which have since been excluded from this assessment, are as follows:

- Mandalong Road, Wyee Road, Dora Street and Freemans Drive.
- Dora Street and Ourimbah Street.

It is noted that Council also required this development to contribute towards the Mandalong Road and Gateway Boulevard roundabout intersection. This intersection was not identified as an intersection to be assessed as part of the SEARs. However, as per the supporting letter from both the Proponent and Council, Council and the Proponent have agreed that the Proponent will also contribute to this intersection.

The supporting letter from the Proponent addressed to Council, and Council's letter of concurrence is contained in Appendix A.

2 Existing Conditions

2.1 Site Location

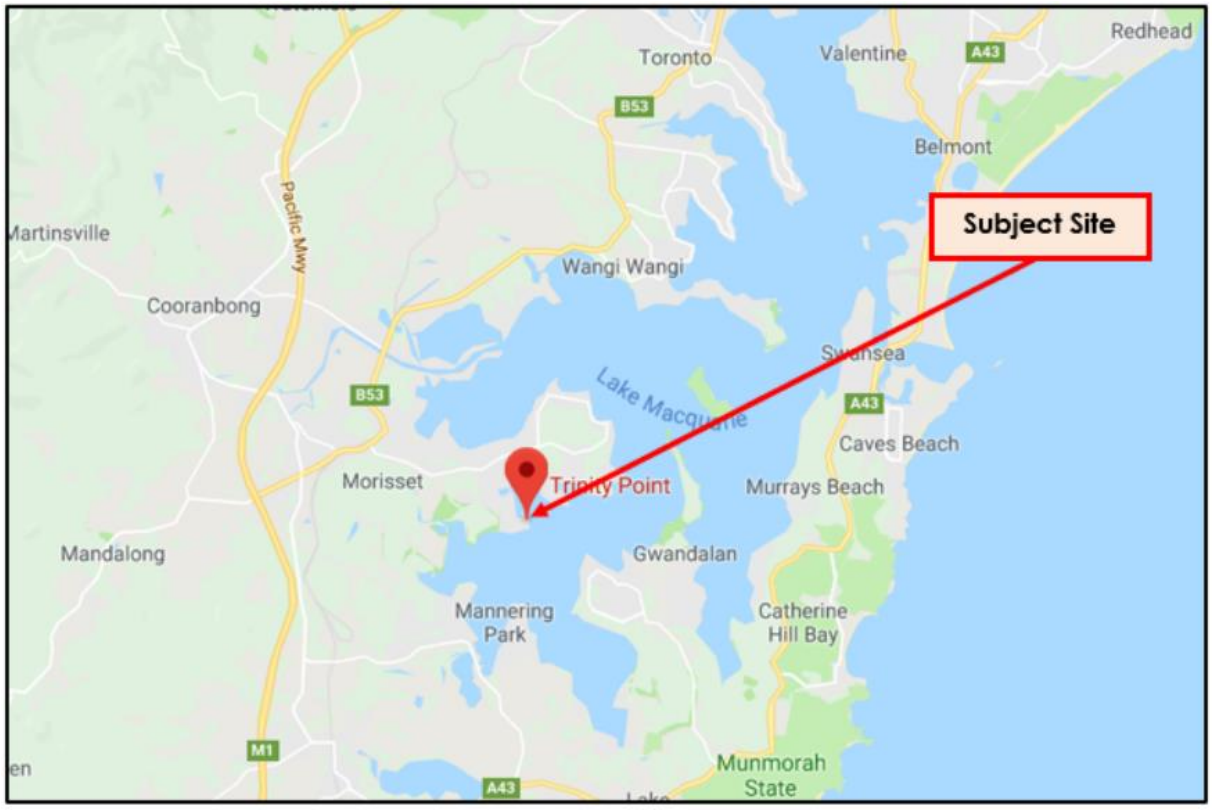
The subject site is located at Trinity Point Lake Macquarie (in the suburb of Morisset Park). The site is identified as Lots 101 and 102 DP 1256630, and Lot 32 DP 1117408, with a physical address of 49, 81 and 85 Trinity Point Drive, Morisset Park.

Trinity Point is located 5 km east of the Morisset town centre and 8 km from the M1 Pacific Highway. Figure 2.1 shows the location of the subject site within in the broader context of Lake Macquarie while Figure 2.2 shows the site location within Morisset Park.

Currently, the site is largely undeveloped, with the exception of a temporary at-grade car park which has been constructed recently to serve the existing temporary restaurant. Directly north of the subject site is the Trinity Point Marina (Stage 1) and temporary restaurant. The surrounding properties predominantly include low-density residential dwellings.

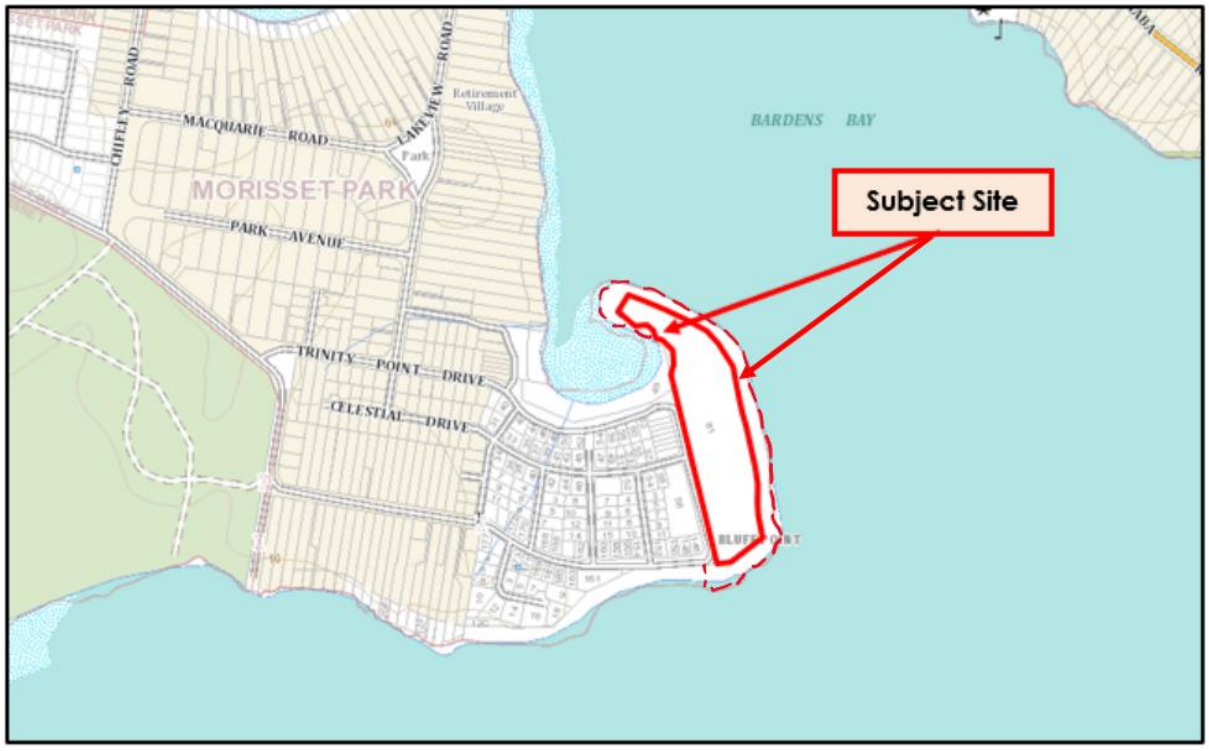
The location of the subject site and its surrounding environs is shown in Figure 2.1.

Figure 2.1: Site Location in Context of Morisset Park



Source: SSD Scoping Report & Request for Secretary's Environmental Assessment Requirements Concept DA for proposed Mixed Use Development (Tourism, Hospitality & Residential)

Figure 2.2: Site Location in Context of Morisset Park



Source: SSD Scoping Report & Request for Secretary's Environmental Assessment Requirements Concept DA for proposed Mixed Use Development (Tourism, Hospitality & Residential)
Note: Figure includes public foreshore reserve adjoining the site (Lot 32).

2.2 Transport Network

2.2.1 Road Hierarchy

Roads are classified according to the functions they perform. The main purpose of defining a road's functional class is to provide a basis for establishing the policies which guide the management of the road according to their intended service or qualities.

In terms of functional road classification, State roads are strategically important as they form the primary network used for the movement of people and goods between regions, and throughout the State. TfNSW is responsible for funding, prioritising, and carrying out works on State roads. State roads generally include roads classified as freeways, state highways, and main roads under the Roads Act 1993, and the regulation to manage the road system is stated in the Australian Road Rules, most recently amended on 19 March 2018.

TfNSW defines four levels in a typical functional road hierarchy, namely:

- Arterial Roads – Controlled by TfNSW, typically no limit in flow and designed to carry vehicles long distance between regional centres.
- Sub-Arterial Roads – Managed by either Council or TfNSW under a joint agreement. Typically, their operating capacity ranges between 10,000 and 20,000 vehicles per day, and their aim is to carry through traffic between specific areas in a sub region or provide connectivity from arterial road routes (regional links).
- Collector Roads – Provide connectivity between local sites and the sub-arterial road network, and typically carry between 2,000 and 10,000 vehicles per day.
- Local Roads – Provide direct access to properties and the collector road system and typically carry between 500 and 4,000 vehicles per day.

2.2.2 Surrounding Road Network

A schedule of the surrounding road network is presented in Table 2.1.

Table 2.1: Road Schedule

Road	Classification	Description	Peak Hour Volume (vehicles per hour)
Macquarie St/ Dora St	Sub-Arterial Road	• East-west connector between Morisset (town centre) and other upstream regional town centres, and the Pacific Motorway. • 60 km/h speed zoning. • Two-lane, two-way road. • Parking is not permitted either side of the road.	1,734 vph (AM) 1790 vph (PM), west of Fishery Point Rd
Fishery Point Rd	Collector Road	• East-west connector between Morriset East and Macquarie Street/ Dora Street. • 60 km/h speed zoning. • Two-lane, two-way road. • Parking is not permitted either side of the road.	1,211 vph (AM) 1,282 vph (PM), south of Macquarie St/ Dora St
Morisset Park Rd	Local Road	• East-west connector between Trinity Point Drive and Fishery Point Road. • 70 km/h speed zoning. • Two-lane, two-way road. • Parking is not permitted either side of the road, except in front of Bonnells Bay Public School.	106 vph (AM) 129 vph (PM), north of Trinity Point Dr
Trinity Point Dr	Local Road	• Through-way connecting the non-residential components of the site to Morisset Park Road. • Two-lane, two-way road. • Parking is permitted either side of the road. • 'Built-up area' default speed limit of 50 km/h applies.	86 vph (AM) 86 vph (PM), south of Morisset Park Rd
Henry Rd/ Charles Ave	Local Road	• Through-way connection the residential components of the site to Trinity Point Drive. • Two-lane, two-way road. • Parking is not permitted on either side of the road. • Built-up area' default speed limit of 50 km/h applies.	20 vph (AM) 43 vph (PM), south of Morisset Park Rd

2.3 Traffic Volumes

Traffic and pedestrian surveys have been undertaken of key intersections within the State road network and local road network surrounding the site. The location of the surveyed intersections and survey dates are listed in Table 2.2. Traffic surveys were undertaken avoiding school holiday periods and public holidays.

Table 2.2: Existing Intersection Volumes

Site No.	Intersection	Control	Survey Date
1	Macquarie St/ Fishery Point Rd	Signalised	Tuesday 23 November 2021
2	Morisset Park Rd/ Trinity Point Dr/ Charles Ave	Roundabout	Tuesday 23 November 2021
3	Fishery Point Rd/ Morisset Park Rd	Priority (give-way)	Thursday 17 February 2022
4	Fishery Point Rd/ Station St	Priority (give-way)	Thursday 17 February 2022

As explained in Section 1.4, there are two roundabouts that were initially required to be assessed by the SEARs which have since been excluded from this assessment (replaced with a monetary contribution in consultation with Council and TfNSW). These intersections as follows:

- Mandalong Road, Wyee Road, Dora Street and Freemans Drive.
- Dora Street and Ourimbah Street.

Surveys were carried out during the morning and afternoon periods as follows:

- 7:00am - 10:00am
- 2:00pm - 6:00pm.

Based on the traffic survey data, the road network peak periods have been identified as:

- AM peak hour: 8:15am - 9:15am.
- PM peak hour: 3:00pm - 4:00pm.

Peak hourly traffic volumes are presented in Table 2.3 while the raw survey data is contained in Appendix B.

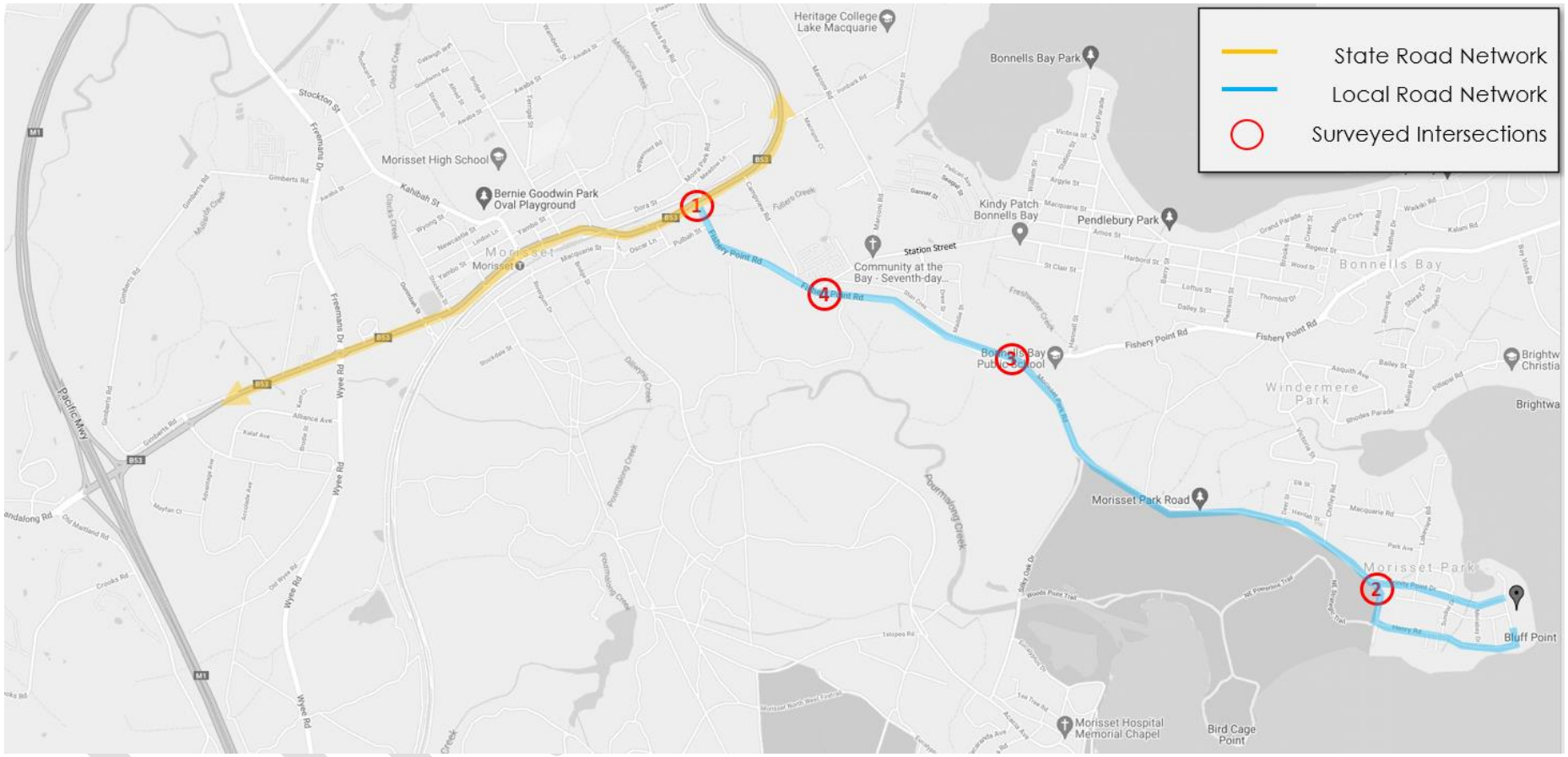
Table 2.3: Existing Intersection Volumes

Site No.	Intersection	Approach	Traffic Volume (AM Peak Hour)	Traffic Volume (PM Peak Hour)
1	Macquarie St/ Fishery Point Rd	South	457	738
		East	509	499
		West	1059	807
2	Morisset Park Rd/ Trinity Point Dr/ Charles Ave	South	14	19
		East	51	31
		North	44	81
3	Fishery Point Rd/ Morisset Park Rd	East	204	235
		North	452	280
		West	381	684
4	Fishery Point Rd/ Station St	East	558	408
		North	252	145
		West	456	852

It is noted that Lake Macquarie City Council's Section 7.11 Contributions Plan for the Morisset Catchments area identifies the intersection of Fishery Point Road and Morisset Park Road as a key intersection with intent to be upgraded. This has been taken into consideration as part of the traffic modelling of future conditions at this intersection (further detail is given in Section 4.5).

Figure 2.3 shows the location of surveyed intersections within the context of the surrounding State road network and local road network.

Figure 2.3: Surrounding Road Network



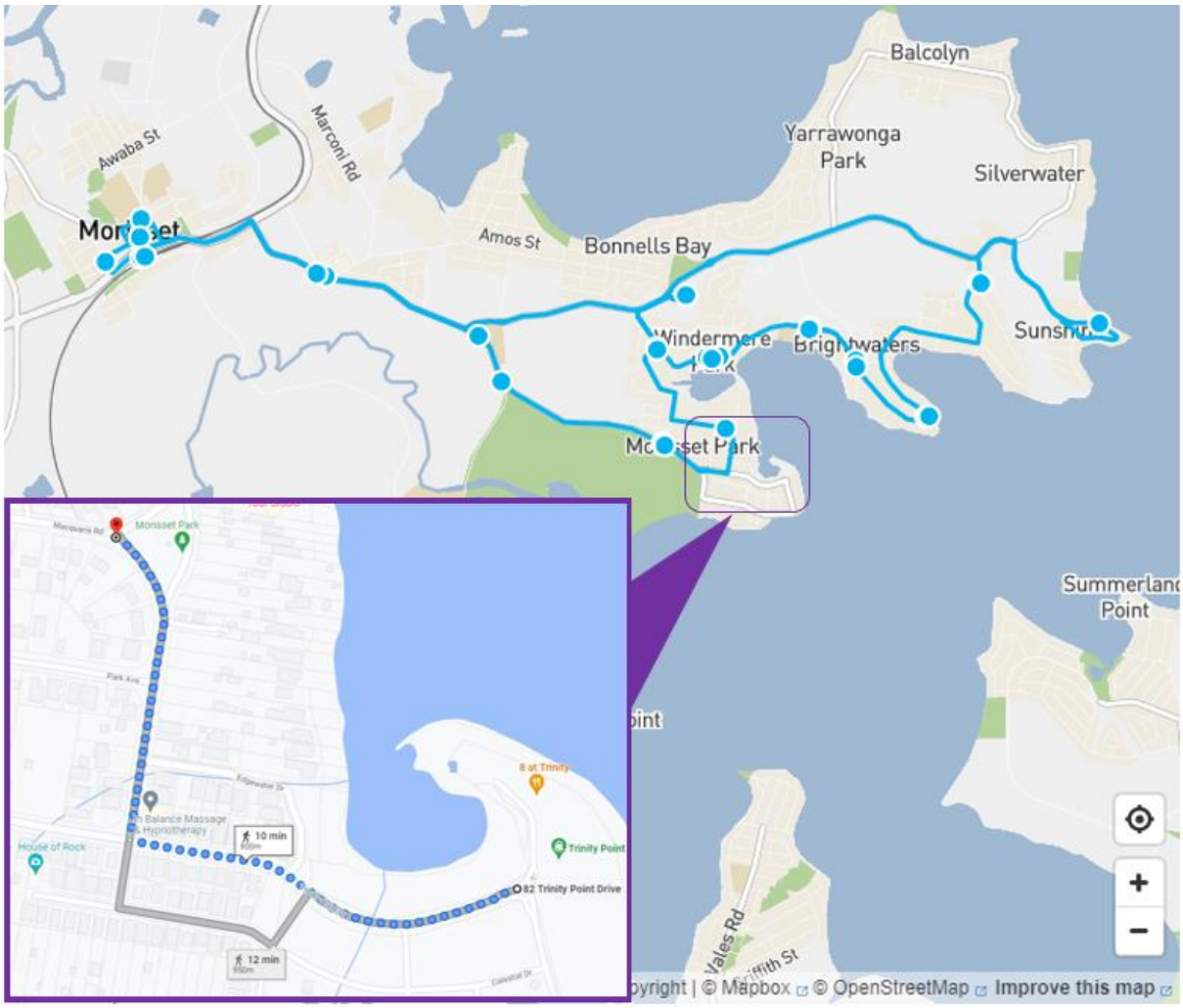
Basemap Source: Google Maps (accessed February 2022)

2.4 Public Transport

Bus route 279 services the Trinity Point peninsula, which has a frequency of one bus every 30 minutes during weekday commuter peak periods. The bus stop is located approximately an 800 m walking distance (10-minute walk) from the site on Lakeview Road, as shown in Figure 2.4.

It is noted that Trinity Point Drive, Henry Road, and Charles Avenue are also required to enable an extension to the bus route, with additional stops required to be installed along Trinity Point Drive.

Figure 2.4: Bus Route 279



Basemap Source: Transport for NSW, viewed online on 19 January 2021.
Inset Source: Google Maps, viewed online on 19 January 2021.

2.5 Walking and Cycling Infrastructure

In the vicinity of the subject site, there is a pedestrian pathway which runs along the west side of the Marina accessway (access road). The pathway, which is 2.5m in width, is grade separated from the road level. The pathway links to the surrounding footpath network via kerb ramps at the roundabout on Trinity Point Drive.

Lake Macquarie City Council's Section 7.11 contributions plan references intent to construct pedestrian pathways in the wider vicinity, such as along Morisset Point Road.

There are no marked bicycle lanes in the immediate vicinity of the subject site. However, given the nature the local road nature of the surrounding streets, cycling on the roadway would be considered acceptable. Further from the site, there is an off-road shared path along Fishery Point Road.

2.6 Crash History

Historic crash data has been obtained from TfNSW's website and assessed for incidents on the local road network, specifically between the development site and the State Road network. Crash data has been reviewed for the most recent five-year period for data collated and published by TfNSW. This period is between 1 January 2016 and 31 December 2020 (5-year confirmed dataset).

Within the local streets immediately surrounding the development site, there have been no reported incidents in the past five years. Along Fishery Point Road, there have been 12 incidents recorded; 2 fatalities, 3 serious injuries, 1 moderate injury, and 6 tow-aways. Half the number of crashes have resulted in a non-causality/ vehicle tow-away. The most common type of crash has been the result of a vehicle running off the carriageway and colliding with an object (4 crashes total) or a rear-end collision (4 incidents). There was one incident with a pedestrian which resulted in a fatality, and one head-on collision that resulted in a moderate injury.

The majority of crashes occurred during the daytime (8 incidents) while the remining crashes occurred at dusk or night-time.

A summary of the historic crash is provided in Table 2.4 while the location of crashes is shown in Figure 2.5. Further detail of each incident is provided in Appendix C.

Table 2.4: Crash Type and Severity

RUM Code	Crash Type	Crash Severity (No. of Crashes)				
		Fatality	Serious Injury	Moderate Injury	Minor Injury	Tow-away
0	Pedestrian nearside	1				
87	Off road left on left bend into object	1				
71	Left off road into object		1			
81	Off road left on right bend into object		1			1
83	Off road right on right bend into object		1			
20	Head on (not overtaking)			1		
49	Other manoeuvring					1
30	Rear end					3
32	Right rear					1
TOTAL		**2**	**3**	**1**	**0**	**6**

Figure 2.5: Crash Map

3 Development Proposal

3.1 Proposal Schedule

The Proposal includes the construction of a mixed-use tourist, hospitality, and residential development with a development yield as follows:

- A 224-room hotel/ suites, and ancillary facilities as follows:
    - Hotel Manager office.
    - Wellness Centre, including a gym, day-spa, and hair salon for hotel guest use only.
    - Pool for hotel guest use only.
    - Retail space, such as a convenience store/ gift shop.
- Conference centre/ function room with capacity to seat up to 300 patrons.
- Business centre for use by on-site hotel guests and residents, and related external personnel.
- Retail space.
- Restaurant dining.
- 180 residential units, comprising:
    - 94 two-bedroom apartments.
    - 65 three-bedroom apartments.
    - 21 four-bedroom apartments.

The proposed development would comprise six buildings (Building A to F) and open green space between the buildings. Car parking would be provided across two basement levels, which would be primarily situated beneath the buildings. The existing at-grade carpark at the north of the site will remain. The site layout of the proposed development is illustrated in Figure 3.1.

Figure 3.1: Site Plan

Source: Koichi Takada Architects

The proposed development is different from that previously assessed and approved under the Concept Plan and subsequent Part 4 DA consents. Thus, a comparison of the development yield associated with the Approved Concept and proposed development is presented in Table 3.1.

It is noted that whilst the Marina has been included under the 'Approved Concept', the marina-generated trips and car parking demand have been assessed subject to separate DAs. A 188-berth marina was approved under the Concept Plan. However, under the proposed development (for which this SSD Application pertains) the Marina has been excluded on the basis that the first 94 berths were approved under the Stage 1 Marina DA, and approval is being sought for the further 94 berths under a separate DA.

Table 3.1: Approved Concept and Proposed Development Yields

Land Use	Component	Approved Concept	Proposed Development
Hotel		65 rooms, 4 staff	224 rooms, 83 staff
Hotel Manager Office		40 m², 2 staff	40 m², 2 staff
Wellness Centre	Gym	125 m², 2 staff	125 m², 2 staff
	Day-spa	323 m², 1 staff	203 m², 1 staff
	Hair Salon	29 m², 2 staff	29 m², 2 staff
Pool		2 staff	2 staff
Business Centre		64 m²,	215 m²
Retail		152 m², 4 staff	535 m², 4 staff
Restaurant	Indoor	676 m²	600 m²
	Outdoor	200 m²	Nil
	Cafe	91 m²	Nil.
Conference Centre/ Function Centre	Indoor	843 m², 300 seats	300 m², 300 seats
	Outdoor (lawn area)	200 m²	Nil.
Tourist Units		93 units, 20 staff	Nil.
Tourist Unit Office		100 m²	Nil.
Residential	2-bedroom unit	127 units	94 units
	3-bedroom unit	13 units	65 units
	4-bedroom unit	17 units	21 units
Marina [a]	Berths	188 berths	N/A [b]
	Sales Area	60 m²	
	Staff	5 staff	

Notes:
(a) Whilst the Marina has been included under the 'Approved Concept', it is noted that marina-generated trip generation and car parking demand have been assessed subject to separate DAs.
(b) A 188-berth marina was approved under the Concept Plan. However, under the proposed development (for which this SSD Application pertains) the Marina has been excluded on the basis that the first 94 berths were approved under the Stage 1 Marina DA, and approval is being sought for the further 94 berths under a separate DA.

3.2 Assessment Methodology

Given that the proposed development deviates from the Approved Concept Plan and development consents, so too will trip generation and parking provisions for the subject site.

Moreover, since the time that the Concept Plan was approved and DAs issued, there have been some revisions to trip generation and parking rates as a result of more recent data or application of more appropriate rates (for reasons as explained through this report). As such, the Approved Concept Plan has been reassessed in this TIA using the latest trip generation and parking rates to undertake a "like-for-like" assessment with the Proposal.

There are three distinct cases which have been assessed in this TIA; namely:

- Case A1: the Approved Concept Plan with historic rates
  - this is the Approved Concept Plan with trip generation and parking provision estimated using accepted/approved rates as per the TIA prepared by SECA Solution (October 2014).
- Case A2: the Approved Concept Plan with new rates
  - this is the Approved Concept Plan with trip generation and parking provision estimated using the revised rates.
- Case A3: the Proposed Development with new rates
  - this is the proposed development with trip generation and parking provision estimated using the revised rates.

In order to determine the net additional impacts of the proposed development (Case A3), this TIA assesses and compares Case A3 against Case A1, and Case A3 against Case A2.

A side-by-side comparison of historic rates and revised rates for trip generation and parking provision are provided in Chapter 4 and Chapter 5, respectively.

4 Traffic Impact Assessment

4.1 Trip Generation Rates

Trip generation rates for the proposed development have been sourced from the *RTA Guide to Traffic Generating Developments* (2002) and TfNSW *Technical Direction TDT 2013/ 04a*. Trip rates for some land uses, however, are not included in the RTA and TfNSW guidelines. As such, trip generation has been estimated using 'first principles'.

First principles have been used to estimate trip rates for components of the proposed development as follows:

- Hotel staff.
- Wellness centre staff.
- Office, in the morning peak period.
- Restaurant, in the morning peak period.

4.1.1 Ancillary Hotel Uses

The proposed development includes ancillary uses to the hotel, such as the pool, gym, and hair salon. These land uses will serve hotel guests only and would not generate external trips to/ from the development. Therefore, the trip generation estimates for such land uses consider staff trips only.

JPG has advised that visitation to the day spa is expected to be split evenly between hotel guests and external visitors. Accordingly, this has been factored into the trip generation estimates for the proposed development.

4.1.2 Trinity Point Marina

Related to the Trinity Point site, but separate to the SSD, is the marina which is subject to separate DAs. Trips associated with the Stage 1 Marina development (currently operating) have been considered as part of existing conditions while the Stage 2 Marina development (subject to Regional Planning Panel determination) has been considered in the cumulative traffic analysis of future conditions. Revised marina trip rates, based on survey data of comparable marina sites in NSW, have been used to re-estimate the trip generation of the marina.

4.1.3 Summary of Trip Rates

The trip rates that have been adopted as part of this analysis are presented in Table 4.1. Rates which have been revised are shown in **bold**.

Table 4.1: Trip Generation Rates

Land Use	Guests/ Staff	Historic Rates [b]		Revised Rates [b]	
		AM Peak Trip Rate	PM Peak Trip Rate	AM Peak Trip Rate	PM Peak Trip Rate
Hotel	Guests	N/A	0.4 trips per room	N/A	No change
	Staff	**N/A**	**N/A**	**1 trip per 2 staff**	**1 trip per 2 staff**
Hotel Manager Office	Staff	1 trip per staff	1 trip per staff	No change	No change
Gym	Staff	**1 trip per 25m²**	**1 trip per 25m²**	**1 trip per staff**	**1 trip per staff**
Day-spa	Staff	1 trip per staff	1 trip per staff	No change	No change
Hair Salon	Staff	1 trip per staff	1 trip per staff	No change	No change
Pool	Staff	1 trip per staff	1 trip per staff	No change	No change
Business Centre	Guests	**2 per 100m²**	**2 per 100m²**	**1 trip per staff**	**1 trip per staff**
Retail	Staff	1 trip per staff	1 trip per staff	No change	No change
Restaurant	Indoor	1 trip per staff	5 trips per 100m²	No change	No change
	Outdoor				
	Cafe				
Conference Centre	Indoor	1 trip per 2.5 patrons	1 trip per 2.5 patrons	No change	No change
	Outdoor (lawn area)	1 trip per 2.5 patrons	1 trip per 2.5 patrons	No change	No change
Tourist Units	Guests	0.11 trips per unit	0.4 trips per unit	0.4 trips per unit	0.4 trips per unit
	Staff	**N/A**	**N/A**	**1 trip per 2 staff**	**1 trip per 2 staff**
Tourist Unit Office	Staff	2 trips per 100m²	2 trips per 100m²	No change	No change
Residential	2-bedroom	0.4 trips per unit	0.4 trips per unit	No change	No change
	3-bedroom	0.5 trips per unit	0.5 trips per unit	No change	No change
	4-bedroom	0.65 trips per unit	0.65 trips per unit	No change	No change
Marina	Berths	**0.067 trips per berth**	**0.25 trips per berth**	**0.12 trips per berth**	**0.06 trips per berth**
	Sales Area	2 trips per 100m²	2 trips per 100m²	No change	No change
	Staff	1 trip per staff	1 trip per staff	No change	No change

Notes:
a) Rates adopted in Case A1.
b) Rates adopted in Case A2 and Case A3.

4.1.4 On-Site Containment Factor

When considering trip generation for the overall proposed development, the following operational characteristics will occur:

- For the conference centre/ function room operations, the patrons attending would likely be staying at the hotel on-site. It is expected that 20% of the conference centre/ function room will accommodate hotel guests in the morning (for a daytime event) and 40% of the conference centre/ function room will accommodate hotel guests in the evening (for a night-time event). Patrons will walk between the different facilities. Given the anticipated cross use, the number of vehicle trips generated by the development would be reduced.
- For the restaurant operations, the patrons attending would likely be staying at the hotel on-site, and residents living on-site or within walking distance of the development. It is expected that 40% of the restaurant will accommodate hotel guests and 10% would accommodate residents. Patrons will walk between the different facilities. Given the anticipated cross use, the number of vehicle trips generated by the development would be reduced.

As per the SECA Solution TIA (October 2014), the Approved Concept (Case A1) was estimated to generate 245 trips in the AM peak and 412 trips in the PM peak periods. This estimate took into consideration reduced trip rates due to on-site containment factors adopted at the time. This calculation included the 188-berth marina and associated uses. including the marina service area and boat sales area (i.e. collectively, 20 AM trips and 54 PM trips). By removing the marina and associated uses from the calculation, the trip generation would be 225 trips in the AM peak and 358 trips in the PM peak (for a like-for-like comparison with the proposed development).

The peak hourly trip generation in Case A2 and Case A3 are set out in Table 4.2, which also present the on-site containment factors (trip generation discounts) for the conference centre and restaurant uses.

Table 4.2: Traffic Generation Estimates

Land Use	Trip Generator Group (Guests or Staff)	Case A2		Case A3	
		AM Peak Hour Trips	PM Peak Hour Trips	AM Peak Hour Trips	PM Peak Hour Trips
Hotel	Guests	0	26	0	90
	Staff	2	2	42	42
Hotel Manager Office	Staff	2	2	2	2
Gym	Staff	2	2	2	2
Day-spa	Staff	2	2	2	2
Hair Salon	Staff	2	2	2	2
Pool	Staff	1	1	1	1
Business Centre	Guests	2	2	4	4
Retail	Staff	4	4	4	4
Restaurant	Guests	0	49	0	30
	Staff	9	0	2	0
	On-site Containment Reduction - Guests	***0***	***-20***	***0***	***-12***
Conference Centre/ Function Room (Indoor)	Guests	120	120	120	120
	On-site Containment Reduction - Guests	***-24***	***-48***	***-24***	***-48***
Conference Centre/ Function Room (lawn area)	Guests	0	40	0	0
Tourist Units	Guests	0	37	0	0
	Staff	10	0	0	0
Tourist Unit Office	Staff	2	2	0	0
Residential	2-bedroom	51	51	38	38
	3-bedroom	7	7	32	32
	4-bedroom	11	11	14	14
TOTAL		**203**	**292**	**241**	**323**

In summary:

- The number of trips generated by the Approved Concept using the revised trip rates (Case A2) would be expected to be 203 trips in the AM peak and 292 trips in the PM peak periods.
- The number of trips generated by the Proposed Development using the latest trip rates (Case A3) would be expected to be 241 trips in the AM peak and 323 trips in the PM peak period.
- It is noted that the Trinity Point Marina and associated uses are no longer part of the proposed development under this SSD. As such, these uses would not generate any trips under this assessment.

The net change in trips between Cases is summarised as follows:

- Compared to Case A1 (Approved Concept with historic rates), Case A2 (Approved Concept with revised rates) generates:
  - 22 less vehicle trips in the AM peak period.
  - 66 less vehicle trips in the PM peak period.
- Compared to Case A2 (Approved Concept new rates), Case A3 (Proposed Development with revised rates) generates:
  - 38 additional vehicle trips in the AM peak period.
  - 29 additional vehicle trips in the PM peak period.
- Compared to Case A1, Case A3 generates:
  - 16 additional vehicle trips in the AM peak period.
  - 35 less vehicle trips in the PM peak period.

4.2 Other Developments – Stage 2 Marina

Related to the Trinity Point site, but separate to this SSD, is the Stage 2 Marina development which is subject to determination under a separate DA. The Stage 2 Marina DA sought approval for the 94 berths in addition to the existing Stage 1 Marina comprising 94 berths, consistent with the Concept Plan approval.

Using the historic rates in Case A2, the Stage 2 Marina would have generated trips as follows:

- Whole Marina development (188 berth):
  - 30 trips in the AM peak period.
  - 17 trips in the PM peak period.
- Stage 2 Marina (94 berths):
  - 17 trips in the AM peak period.
  - 13 trips in the PM peak period.

TTPP prepared a Traffic Impact Assessment, dated 2 February 2022, to support the Stage 2 Marina DA which was based on recent trip generation survey data of comparable marina sites. The assessment estimated that the development would generate vehicle trips as follows:

- Case A3 (Stage 2 Marina which is 94 berths only):
  - 11 trips in the AM peak period.
  - 6 trips in the PM peak period.

The Stage 2 Marina vehicle trips have been considered in the cumulative traffic analysis of future conditions for all Cases.

4.3 Trip Distribution

4.3.1 Morisset Park Road/ Trinity Point Drive/ Charles Avenue Intersection

As detailed in Chapter 5, the layout of the development is proposed in a manner whereby car parking associated with non-residential uses would be accessed from a driveway located within the northern half of the site while resident parking would be accessed via a separate driveway located within the southern half of the site.

Therefore, it would be expected that non-residential trips to/from the development would occur via Trinity Point Drive (to the north), given these trips are from non-residents who may not be familiar with the local road network. Resident trips would predominantly occur via Henry Road and Charles Avenue (to the south), although Trinity Point Drive is also available for residents to use. This is depicted in Figure 4.1.

Figure 4.1: Trip Distribution - Morisset Park Road/ Trinity Point Drive/ Charles Avenue

4.3.2 Macquarie Street/ Fishery Point Road Intersection

To access the subject site from the arterial road network, vehicles would travel via the signalised intersection of Macquarie Street and Fishery Point Road. Whilst there could be some small number of trips undertaken via local side-streets, this study assesses a 'worst-case' scenario whereby all site-generated trips occur via the traffic signals.

The November 2021 traffic surveys show a directional split at the Macquarie Street/ Fishery Point Road intersection as shown in Figure 4.2. The future site-generated trips have been allocated to the intersection approaches based on the existing trip distribution.

Figure 4.2: Trip Distribution

4.4 Directional Split

The ratio between inbound and outbound vehicle movements during the road network peak periods is referred to as the directional split. The directional split differs between land uses as well as peak periods as it is dependent on the traffic generating characteristics of each land use.

For the Proposal, directional splits which have been adopted across the development are presented in Table 4.3.

Table 4.3: Directional Split of Trips

Land Use	AM Peak Period	PM Peak Period
Hotel patrons	50:50 Inbound: outbound	50:50 Inbound: outbound
Hotel staff	50:50 Inbound: outbound	50:50 Inbound: outbound
All other staff across proposed development	100:0 Inbound: outbound	0:100 Inbound: outbound
Conference centre/ Function room (Evening function)	-	100:0 Inbound: outbound
Restaurant patrons (Dinner seating)	-	100:0 Inbound: outbound
Restaurant staff	100:0 Inbound: outbound	-
Residential	20:80 Inbound: outbound	80:20 Inbound: outbound

4.5 Road Network Capacity

4.5.1 Midblock Environmental Capacity Assessment

The midblock environmental capacity performance of the surrounding road network has been undertaken in accordance with the RTA Guide to Traffic Generating Developments. The Guide outlines maximum peak hourly traffic volumes for residential streets, which have been used to assess nearby streets classed as "local" roads in Section 2.2.2. The environmental capacity performance standards on resident streets have been reproduced in Table 4.4.

Table 4.4: Environmental Capacity of Local Roads

Residential Street	Peak Hourly Vehicle Flow (Two-way)
Street with maximum speed of 25 km/h	100
Street with maximum speed of 40 km/h	200 environmental goal
	300 maximum
Street with maximum speed of 50 km/h	300 environmental goal
	500 maximum

Also, the RTA Guide specifies typical midblock capacities for urban roads with interrupted flow (i.e. traffic flow having traffic controls along the route, such as traffic signals). The midblock capacities have been reproduced in Table 4.5.

Table 4.5: Typical Capacity of Urban Roads with Interrupted Flow

Type of Urban Road	One-way Midblock Lane Capacity (Passenger Cars per Hour)	
Median or inner lane	Divided road	1,000
	Undivided road	900
Outer or kerb lane	With adjacent parking lane	900
	Clearway conditions	900
	Occasional parked cars	600
Four lane road	Divided, clearway conditions	1,900
	Undivided, clearway conditions	1,800
	Undivided, occasional parked cars	1,500

Future conditions have been assessed with consideration for background traffic growth only, and background traffic growth plus site-generated traffic.

As outlined in Section 4.5.3, SIDRA modelling of future scenarios has been undertaken to assess the likely traffic conditions in the development opening year and 10 years post opening year of the development. The opening year of the proposal is estimated to be in 2024, and therefore, "plus 10 years" scenarios reflect the traffic conditions in 2034.

The estimated traffic flows on the surrounding road network are presented in Table 4.6.

Table 4.6: Road Capacity

Road	Peak Hour Vehicle Flow (Two-way)				
	Existing Conditions	Future Conditions			
		Background Traffic Growth Only (2024)	With Whole of Development (2024)	Background Traffic Growth Only (2034)	With Whole of Development (2034)
Local Roads (assessed in-line with Table 4.4)					
Morisset Park Rd, north of Trinity Point Dr	106 (AM) 129 (PM)	106 (AM) 135 (PM)	336 (AM) 447 (PM)	114 (AM) 141 (PM)	447 (AM) 435 (PM)
Trinity Point Dr	86 (AM) 86 (PM)	85 (AM) 96 (PM)	247 (AM) 330 (PM)	99 (AM) 93 (PM)	330 (AM) 303 (PM)
Henry Rd/ Charles Ave	20 (AM) 43 (PM)	22 (AM) 49 (PM)	79 (AM) 122 (PM)	24 (AM) 47 (PM)	116 (AM) 131 (PM)
Urban Roads with Interrupted Flow (assessed in-line with Table 4.5)					
Fishery Point Rd, south of Macquarie St/ Dora St	1211 (AM) 1282 (PM)	1135 (AM) 1298 (PM)	1354 (AM) 1592 (PM)	1226 (AM) 1375 (PM)	1445 (AM) 1669 (PM)
Fishery Point Rd, north of Morisset Park Rd	968 (AM) 1143 (PM)	1111 (AM) 1181 (PM)	1246 (AM) 1416 (PM)	1105 (AM) 1161 (PM)	1354 (AM) 1434 (PM)
Fishery Point Rd, north of Station St	1227 (AM) 1055 (PM)	1345 (AM) 1138 (PM)	1497 (AM) 1373 (PM)	1142 (AM) 1136 (PM)	1589 (AM) 1373 (PM)

Based on the road configuration at the above-mentioned locations:

- Morisset Park Road, Trinity Point Drive and Henry Road/ Charles Avenue would remain within the acceptable environmental threshold range which is 300-500 vehicles per hour, two-way.
- Fishery Point Road would remain below the acceptable threshold, which is 7,600 vehicles per hour across four travel lanes, two-way.
- Fishery Point Road, north of Morisset Park Road, would remain below the acceptable threshold, which is 2,000 vehicles per hour across two travel lanes, two-way.
- Fishery Point Road, north of Station Street, would remain below the acceptable threshold, which is 3,000 vehicles per hour across three travel lanes, two-way.

As such, the environmental capacity of the surrounding road network would continue to operate at an acceptable level in future conditions.

4.5.2 Traffic Modelling and Intersection Performance

TfNSW uses level of service as a performance measure to indicate the operating efficiency of a given intersection. The level of service ranges from A to F. Levels of service between A and D indicate the intersection is operating within capacity, with LoS A providing exceptionally good performance to LoS D indicating satisfactory performance. LoS E and F indicate the intersection is operating at or near capacity and generally would require intersection improvement works to maintain reasonable performance.

The level of service is directly related to the average delay experienced by vehicles travelling through the intersection. At signalised intersections, the average delay is the volume weighted average delay over all movements. For roundabouts and priority (give way and stop sign) controlled intersections, the average delay relates to the movement with the highest average delay per vehicle.

Table 4.7 shows the criteria that is adopted by TfNSW in assessing intersection level of service.

Table 4.7: Intersection Level of Service Criteria

Level of Service (LoS)	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Near capacity	Near capacity, accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode.
F	Greater than 70	Unsatisfactory, requires additional capacity	Unsatisfactory, requires other control mode or major treatment

Source: TfNSW Traffic Modelling Guidelines 2013, Table 14.4

The operation of the key intersections within the study area have been assessed using SIDRA INTERSECTION, a computer-based modelling package which calculates intersection performance. SIDRA is used to model isolated sites, which are those not located along a coordinated traffic signal corridor or within 500 m of each other (for non-signalised intersections). Accordingly, the intersections have been modelled as isolated sites.

4.5.3 Modelling Scenarios

An analysis of existing and future intersection performance has been conducted to identify the traffic impacts arising from the Proposal.

The opening year of the proposal is estimated to be in 2024. Therefore, future conditions in the "plus 10 years" scenarios consider background traffic growth up to 2034.

The following scenarios have been assessed:

- S0 Existing conditions: 2021 base case.
- S1 Future conditions: existing conditions with background growth only (2024).
- S2 Future conditions: existing conditions with background growth plus the approved development (Case A2) (2024).
- S3 Future conditions: existing conditions with background growth plus the proposed development (Case A3) (2024).
- S4 Future conditions: existing conditions with background growth only (2034).
- S5 Future conditions: existing conditions with background growth plus the approved development (Case A2) (2034).
- S6 Future conditions: existing conditions with background growth plus the proposed development (Case A3) (2034).

4.5.3.1 Existing Conditions

Table 4.8 presents a summary of the SIDRA modelling results for existing intersection performance with respect to the following modelling parameters:

- Average delay per vehicle (average delay).
- Level of Service (LoS).

SIDRA models have been calibrated against queue lengths where appropriate.

The SIDRA modelling results indicate that the key nearby intersections operate at a level of service (LoS) rating A and B in the road network peak periods. According to the Level of Service Criteria by TfNSW (Table 4.7) these intersections are operating at a very good level of service currently.

A summary of the existing conditions traffic modelling results is presented in Table 4.8. The modelling results the various future condition scenarios (with and without the proposed development) are presented and discussed in Section 4.5.4.4. The full SIDRA Movement Summary Outputs are contained in Appendix E.

Table 4.8: SIDRA Results – Existing Conditions

Intersection	Control	Peak Period	Approach [a]	Ave Delay (s)	LoS
1. Macquarie St/ Fishery Point Rd	Signalised	AM	Overall	25	B
		PM	Overall	23	B
2. Morisset Park Rd/ Trinity Point Dr/ Charles Ave	Roundabout	AM	East	9	A
		PM	East	9	A
3. Fishery Point Rd/ Morisset Park Rd	Priority controlled	AM	North-East	10	B
		PM	North-East	11	A
4. Fishery Point Rd/ Station St	Signalised	AM	North-East	20	B
		PM	North-East	15	B

Notes:
(a) At signalised intersections, the average delay is the volume weighted average delay over all movements. For roundabouts and priority (give way and stop sign) controlled intersections, the average delay relates to the movement with the highest average delay per vehicle.

4.5.4 Future Conditions

4.5.4.1 Background Traffic Growth

Data from TfNSW's Strategic Travel Forecast Model (STFM) has been used to calculate background traffic growth on the surrounding road network. The data is provided for two periods, namely 2021-2026 and 2026-2036. The growth rates over these time periods have been adopted respectively in the traffic modelling for this study in the proposed development opening year and proposed development opening year plus 10 years.

A summary of the adopted growth rates and raw STFM traffic volume outputs have been included in Appendix D.

In addition, trips generated by the Trinity Point Marina have been considered in the background traffic. The Stage 1 Marina has been operational since 2019. Therefore, given the marina was operational at the time of the recent traffic surveys, the trips associated with this development have been considered under the S0 base case traffic modelling scenario.

The Stage 2 Marina DA has been accounted for in addition to background traffic growth across all traffic modelling scenarios. This assumes that the Stage 2 Marina DA would receive approval prior to this SSD.

Hence, all future traffic modelling scenarios have considered the Marina (Stages 1 and 2) site-generated trips under "existing conditions" and "background traffic growth".

4.5.4.2 Future Intersection Upgrade of Fishery Point Road/ Morisset Park Road

The *Morisset Contribution Catchment (2021)* Plan, Volume 2, indicates that an upgrade of the Fishery Point Road/ Morisset Park Road is proposed in the future. The concept design plan shows a new right-turn lane on the Morisset Road south-east approach and wide median on the opposite approach. On the Fishery Point Road north approach, there appears to be widening of the intersection which would accommodate greater queue storage length for the side-by-side left-turn and right-turn movements.

The concept plan of the future intersection layout has been adopted in the SIDRA modelling analysis of future scenarios at this junction.

An extract of the concept plan from the *Morisset Contribution Catchment (2021)* Plan, Volume 2, is contained in Appendix F.

4.5.4.3 Model Parameters

The intersection of Fishery Point Road/ Morisset Park Road has adopted the minimum critical gap and follow-up headway values as outlined in the *TfNSW Traffic Modelling Guidelines, Appendix E*. All other model parameters have been retained as per the SIDRA software defaults.

4.5.4.4 Future Conditions Modelling Results

Scenario 1 (2024, Background growth only)

All intersections operate at a good level of service rating of A or B in the AM peak and PM peak periods. The average delay per vehicle ("average delay") is minimal at all intersections, ranging between 9 seconds and 26 seconds.

Scenario 2 (2024, Background growth plus Case A2)

All intersections operate at a good level of service rating of A or B in the AM peak and PM peak periods. Generally, there is minimal change to the level of service and average delay across all intersections once traffic generated in Case A2 is added to the network.

At the intersection of Fishery Point Road/ Morisset Park Road, there would be an additional 8 seconds in average delay which causes the level of service rating to change from A to B during the PM peak period. However, this is minor and would not result in any noticeable impacts to the intersection operation.

At the Fishery Point Road/ Station Street signalised intersection, the average delay is reduced by 1 second once development traffic in Case A2 is added to the network. A reduction in average delay can occur when there is an increased number of vehicles on certain movements which have a lower degree of saturation (i.e. a lower level of utilisation). This means that more vehicles are able to pass through the intersection during the effective green time, and therefore, reduce the average delay across all movements at the intersection. As per the SIDRA Intersection Software User Guide, the average delay is considered in determining level of service for approaches and intersections. At this intersection, there are more vehicles passing through the junction in this scenario (compared to Scenario 2) which reduces average delay and improves the LoS rating (from B to A in the PM peak period).

Scenario 3 (2024, Background growth plus Case A3)

All intersections operate at a good level of service rating of C or better in the AM peak and PM peak periods. Generally, there is minimal change to the level of service and average delay across all intersections in comparison with Scenario 1 and Scenario 2.

Compared to Scenario 1, the Fishery Point Road/ Morisset Park Road intersection would experience the greatest increase in average delay (plus 6 seconds in the AM peak and plus 8 seconds in the PM peak). Notwithstanding, the operation would be almost identical to the conditions in Scenario 1 and Scenario 2.

At Macquarie Street/ Fishery Point Road signalised intersection, there is 1 second added to the average delay in the AM peak period. This causes the level of service rating to change from B to C. Generally, this is a minor impact given that the intersection operates with an average delay of 26 seconds in Scenario 1 and 28 seconds in Scenario 2, which are both towards the lower end of the LoS B range (15 to 29 seconds, as shown in Table 4.7).

Similarly, there is 1 second added to the average delay at the Fishery Point Road/ Station Street signalised intersection during the PM peak period. This causes the level of service rating to change from A to B.

Notwithstanding the above, operation of the Macquarie Street/ Fishery Point Road and Fishery Point Road/ Station Street intersection would be almost identical the conditions in Scenario 1 and Scenario 2.

Scenario 4 (2034, Background growth only)

With the addition of background traffic growth across a period of 10 years to the network, all intersections would continue to operate at a good level of service rating of C or better in the peak periods.

There would be a marginal increase in average delay (plus 4 seconds) at the Macquarie Street/ Fishery Point Road signalised intersection in the AM peak period compared with the same scenario in 2024 (Scenario 1).

Generally, all other intersections would operate in a similar condition to the 2024 background growth scenario (Scenario 1).

Scenario 5 (2034, Background growth plus Case A2)

All intersections operate at a good level of service rating of C or better in the year 2034. Generally, there is minimal change to the level of service and average delay across all intersections once traffic generated in Case A2 has been added to the network in 2034.

In comparison with Scenario 4, average delay would increase at the intersections of Macquarie Street/ Fishery Point Road (plus 5 seconds), and Fishery Point Road/ Morisset Park Road (plus 6 seconds in the AM peak and plus 9 seconds in the PM peak). Notwithstanding, this would not result in any noticeable impacts on the intersection performance.

Scenario 6 (2034, Background growth plus Case A3)

All intersections operate at a good level of service rating of C or better in the year 2034.

Site trips generated in Case A3 would change to the level of service rating at the intersection of Fishery Point Road/ Morisset Park Road from A to B. At this level, the intersection is performing very well already therefore this change in level of service would not result in any noticeable impacts.

At the Macquarie Street/ Fishery Point Road signalised intersection, average delay would increase by 3 seconds in comparison to Scenario 5. This would not result in any significant impacts to intersection performance, and the intersection is expected to operate fairly similarly to conditions in Scenario 4 and Scenario 5.

Given the minimal impact on the network operation, the proposed development traffic would not be expected to increase the likelihood or severity of crashes in the vicinity with other road users (including pedestrians and cyclists).

In summary:

- Compared to the 2024 and 2034 background growth only scenarios, development traffic generated in Case A2 (the Approved Concept Plan with new rates) and Case A3 (the Proposed Development with new rates) would result in minimal impacts to the road network operation. Overall, the road network conditions with the development traffic would be comparable to base case conditions.
- Comparing scenarios containing A2 and A3 development traffic, there would be no significant difference in the intersection level of service rating and average delay across the modelled network.
- Across all future modelled scenarios, all intersections would operate at an acceptable LoS C or better during the road network peak periods.

Notably, the signalised intersection of Macquarie Street/ Fishery Point Road operates well under existing conditions and all future condition scenarios. This intersection operates at a good level of service rating C or better in both the AM peak and PM peak periods. According to TfNSW's Level of Service Criteria, the intersection operates satisfactorily and would require no further upgrade. Therefore, the $764,494 monetary contribution that the Proponent is currently conditioned to contribute towards this intersection would no longer be necessary given that the upgrades undertaken since the previous DAs were determined.

A summary of the peak period traffic modelling results is presented in Table 4.9, while the full SIDRA Movement Summary Outputs are contained in Appendix E.

Table 4.9: SIDRA Results – Future Conditions

Intersection	Peak Period	S1 - 2024, Background growth only		S2 - 2024, Background growth plus Case A2		S3 - 2024, Background growth plus Case A3		S4 - 2034, Background growth only		S5 - 2034, Background growth plus Case A2		S6 - 2034, Background growth plus Case A3	
		Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS
1. Macquarie St/ Fishery Point Rd (signalised)	AM	26	B	28	B	29	C	30	C	35	C	38	C
	PM	23	B	24	B	24	B	23	B	24	B	24	B
2. Morisset Park Rd/ Trinity Point Dr/ Charles Ave (roundabout)	AM	12	A	12	A	12	A	12	A	12	A	12	A
	PM	11	A	11	A	11	A	12	A	12	A	12	A
3. Fishery Point Rd/ Morisset Park Rd (priority control)	AM	9	A	14	A	15	A	11	A	17	A	18	B
	PM	10	A	18	B	18	B	11	A	20	B	20	B
4. Fishery Point Rd/ Station St (signalised)	AM	20	B	19	B	19	B	20	B	20	B	20	B
	PM	15	B	14	A	14	B	16	B	15	B	15	A

4.6 Active Travel and Public Transport Impacts

Considering the site's proximity to public transport, the development would be expected to have a negligible impact on the public transport network. The nearest operating bus service, route 279, would have common routes with the development traffic along Morisset Park Road/ Fishery Point Road. Notwithstanding, the traffic modelling results indicate that the cumulative traffic impacts which consider background traffic and development traffic would not adversely impact the performance of the local network which is shared with buses.

Given that the site is a long walking distance away from the Morisset town centre and other attractors, it is likely that the site would generate local walking trips which would not significantly impact the surrounding pedestrian infrastructure. It is noted that the Lake Macquarie City Council's Section 94 contributions plan references intent to construct pedestrian pathways in the wider vicinity, such as along Morisset Point Road, which would support the necessary pedestrian connections to the broader area.

As part of the green travel initiatives (Chapter 7) sustainable travel would be encouraged. This could be in the form of commuter trips or recreational riding, which would be complementary to the proposed development and surrounds as they would promote active movement. The development would not be expected to cause any adverse impacts. However, if a mass-uptake of cycling is observed which impacts the surrounds, expansion of the surrounding bicycle network and infrastructure could be considered in collaboration with Council in the future.

4.7 Construction Traffic Impacts

At the Concept Approval stage, construction details of the development are not yet known. In due course as the details of the project are progressed, a Construction Traffic Management Plan would be prepared to assess the construction traffic impacts of the proposed development.

5 Parking Assessment

5.1 Car Parking Rates

The *State Environmental Planning Policy (State and Regional Development) 2011*, Part 2, Clause 11 stipulates that Council Development Control Plans do not apply to State Significant Developments. However, having due regard to the objectives and guidelines as set by Council for recreation developments, the provision for car parking of the proposed development has been assessed in accordance with Council guidelines.

The car parking rates applicable to the development site are set out in the *Lake Macquarie Council Development Control Plan (*DCP*) 2014 Part 6 Development in Recreation and Tourist Zones* (adopted 9 August 2021). The DCP rates have been used to estimate the parking requirements of the proposed development.

For some land uses parking rates are not contained in the DCP; as such, a first principles approach has been used to estimate the parking needs of these particular land uses. As mentioned in Section 3.2, since the time that the Concept Plan was approved there have been some revisions made to trip generation and parking rates as a result of more recent data becoming available or application of more appropriate rates. In particular, parking rates for the wellness centre's pool and gym, and restaurant and conference centre have been revised as part of this assessment. The changes are explained as follows:

- Wellness centre pool and gym: The DCP does not stipulate rates for these uses therefore car parking for these uses were not considered as part of the former assessment. Under this assessment, parking demand is calculated based on the number of staff present at any one time. These uses would be exclusive to hotel guests and therefore would not generate external visitation.
- Restaurant and conference centre: The previous TIA prepared by SECA Solution calculated parking demand for hospitality uses on-site using first principles on the basis of patronage. This took into consideration the scale of the former proposed development having extensive back of house and kitchen facilities and a generosity in space per patron as the design choice of the Architect at the time. Under the proposed development, both the restaurant and conference centre are based on standardised design principles and hence, DCP parking rates have been applied to estimate the parking demand.

Accordingly, the Approved Concept Plan has been reassessed using the latest (revised) parking rates for a "like-for-like" assessment with the proposed development. The parking rates used as part of the former assessment and the revised rates adopted under this assessment are presented side-by-side in Table 5.1. Rates which have been revised are shown in **bold** in Table 5.1.

Table 5.1: Car Parking Rates (Lake Macquarie DCP)

Land Use	Historic Rate (2014)	Revised Rate (2022)
Hotel	1 space per room, 1 space per 2 staff	No change
Business Centre	1 space per 40m^2	No change
Operations Manager	1 space per 40m^2	No change
Hair Salon	1 space per 2 staff	No change
Day-spa	1 space per 25m^2, 1 space per staff	No change
Pool	**None. Therefore, first principles based on number of staff at any one time (no external visitors parking generation)**	**1 space per 2 staff**
Gym	**None. Therefore, first principles based on number of staff at any one time (no external visitors parking generation)**	**1 space per 2 staff**
Shops	1 space per 2 staff	No change
Commercial (Sales Centre)	1 space per 40 m^2	N/A as land use has been removed from proposed development.
Restaurant	**1 space per 2.5 patrons**	**1 space per 25 m^2**
Conference Centre	**1 space per 2.5 patrons**	**1 space per 5 m^2**
Tourist Units	1 space per unit	N/A as land use has been removed from proposed development.
Tourist Unit Office	1 space per 40m^2	No change
Residential: (2-bedroom)	1 space per unit	No change
Residential (3+ bedroom)	1.5 spaces per unit	No change
Residential (Visitor)	1 space per 4 units	No change

5.2 Car Parking Provision

When estimating the parking demands for the overall proposed development, it is important to consider the cross use of facilities on-site. As explained Section 4.1.4, operational characteristics of the development would occur as follows:

- For the conference centre/ function room operations, the patrons attending would likely be staying at the hotel on-site. It is expected that 20% of the conference centre/ function room will accommodate hotel guests in the morning (for a daytime event) and 40% of the conference centre/ function room will accommodate hotel guests in the evening (for a night-time event). Patrons will walk between the different facilities. Given the anticipated cross use, part of the parking demand would be satisfied by the parking provided for the hotel.
- For the restaurant operations, the patrons attending would likely be staying at the hotel on-site, and residents living on-site or within walking distance of the development. It is expected that 40% of the restaurant will accommodate hotel guests and 10% would accommodate residents. Patrons will walk between the different facilities. Given the anticipated cross use, part of the parking demand would be satisfied by the parking provided for the hotel and residential apartments.

The Approved Concept included 677 car parking spaces for Case A1, however, the actual parking demand was calculated as 622 parking spaces. This calculation included the 188-berth marina and marina staff (i.e. 58 car parking spaces at the time). By removing the marina and marina staff from the calculation, the parking demand would be 564 spaces (for a like-for-like comparison with the proposed development).

The car parking requirements for Case A2 and Case A3 are summarised in Table 5.2. Case A2 would necessitate 575 car parking spaces while Case A3 would require 604 car parking spaces. Comparatively, the proposed development would generate a parking demand for 36 car parking spaces above the Approved Concept (using revised parking rates).

Table 5.2: Car Parking Requirements

Land Use		Case A2		Case A2	
		Development Yield	Car Parking Requirement (Spaces)	Development Yield	Car Parking Requirement (Spaces)
Hotel		65 rooms	65	224 rooms	224
		4 staff	2	83 staff	42
Hotel Manager Office		40 m², 2 staff	1	40 m², 2 staff	1
Wellness Centre	Gym	125 m², 2 staff	1	125 m², 2 staff	1
	Day-spa	323 m²	6	203 m²	4
		1 staff	1	1 staff	1
	Hair Salon	29 m², 2 staff	1	29 m², 2 staff	1
Pool		2 staff	1	2 staff	1
Business Centre		64 m²	2	215 m²	5
Retail		152 m², 4 staff	2	535 m², 4 staff	2
Restaurant	Indoor	676 m²	27	600 m²	24
	Outdoor	200 m²	8	Nil.	0
	Cafe	91 m²	4	Nil.	0
	On-site Containment Reduction	-	***-12***	**-**	***-7***
Conference Centre	Indoor	843 m2, 300 seats	169	300 m2, 300 seats	60
	Lawn	200 m2	40	Nil.	0
	On-site Containment Reduction	-	***-84***	**-**	***-24***
Tourist Units	Single key	93 rooms	93	Nil.	0
	Dual key	33 rooms	33	Nil.	0
	Office	100 m²	2	Nil.	0
Residential	2-bedroom	127 units	127	94 units	94
	3-bedroom	13 units	20	65 units	98
	4-bedroom	17 units	26	21 units	32
	Visitors	for 157 residential units	40	for 180 residential units	45
TOTAL		**-**	**575**	**-**	**604**

A total of 604 car parking spaces would be required as part of the proposed development. The split of car parking spaces required for residential and non-residential uses of the proposed development would be as follows:

- Resident and visitor uses: 269 spaces.
- Non-residential uses: 335 spaces.

The accessible parking rates applicable to the development site are set out in the *Lake Macquarie Council DCP 2014 Part* 6. It stipulates a rate of:

- 1 accessible space for every 50 car parking spaces.

For non-residential uses, there would be a requirement to provide seven (7) accessible spaces.

It is understood that there are no adaptable living units as part of the proposed development. Therefore, accessible parking for residential units have been excluded from the calculation.

For the resident visitor car parking of 45 spaces, it would be required to provide one (1) accessible space.

The proposed car parking supply for the development is presented in Table 5.3.

Table 5.3: Proposed Car Parking Supply

Use	Parking Provision
Residential – resident and visitor uses	269, including 1 accessible space
Non-Residential	335 spaces, including 7 accessible spaces
TOTAL	**604 spaces**

TTPP prepared a TIA for the Stage 2 Marina Development Application to Council (dated 2 February 2022). It was assessed that the existing on-site car parking provision is for 54 car parking spaces, of which four spaces are currently utilised as a temporary storage and service area for the Marina (approved by DA 1503/2014/D). Separate to the marina car park are 15 angled car parking spaces, constructed off the accessway to the marina car park, which were established by the existing temporary restaurant (DA 1494/2018/D). These spaces are located adjacent to the existing restaurant building. Of the 15 angled parking spaces, 10 spaces would be used by the Marina to accommodate the shortfall in parking within the on-site car park itself. Hence, the 60 parking spaces required by the Whole Marina development was proposed to be split as 50 spaces within the Marina car park and 10 spaces in the angled parking area (outside of the Marina car park).

However, the angled parking area would be demolished in the future in order to provide the proposed development as part of this SSD application. Therefore, the 10 Marina car parking spaces would be relocated to be within the basement car park of the proposed development.

The basement car park would accommodate 604 parking spaces as required by the proposed development plus the 10 parking spaces as required by the future Marina; namely, a total of 614 car parking spaces would be provided in the basement car park. Therefore, the car parking demand generated by the proposed development would be satisfactorily accommodated on-site.

The architectural plans (Appendix G) indicate a total of 614 car parking spaces in the basement car park. The breakdown of car parking spaces across the different uses and various basement levels is presented in Table 5.4.

Table 5.4: Car Parking Breakdown

Car Park Level	Residential	Non-residential	Marina (Stage 2)
Basement L1	270	244	10
Basement L2	0	90	0
SUB-TOTAL	**270**	**334**	**10**
TOTAL	**614**		

5.3 Motorcycle Parking

Motorcycle parking rates applicable to the development site are set out in the *Lake Macquarie Council* DCP *2014 Part* 6. It stipulates a rate of:

- 1 motorcycle space for every 20 car parking spaces.

Therefore, a total of 30 motorcycle spaces would be required. It is proposed to provide 45 motorcycle spaces, which satisfies the DCP requirement.

5.4 Bicycle Parking

The *Lake Macquarie Council* DCP *2014 Part* 6 provides bicycle parking rates for non-residential uses as follows:

- Customer and short-term users: 3 bike parking spaces or one bike parking space for each 20 car parking spaces, whichever is greater.
- Employees: 1 bike parking space for each 20 employees, or part thereof.

Bicycle parking for hotel guests has been excluded from the parking estimate as guests would not be expected to cycle to/ from the accommodation. Notwithstanding, parking requirements for hotel staff have been considered.

For the restaurant and conference centre, staff which will be on-site for evening dining sessions and night-time events are unlikely to cycle at night-time. Thus, bike parking for staff in the day-time has been considered.

The DCP does not contain resident bicycle parking rates. As such, the *Cycling Aspects of Austroads Guides (2017)* has been used to estimate the resident bike parking requirements. For residential flats, it provides a rate of:

- Residents: 1 bike space per 3 flats.
- Visitors: 1 bike space per 12 flats.

Bicycle parking estimates for the proposed development are presented in Table 5.5.

Table 5.5: Bicycle Parking Requirements

Use	Rate	Provision	Bicycle Parking Requirement
External customers of Non-Residential uses, excluding Hotel [a]	3 bike parking spaces or one bike parking space for each 20 car parking spaces, whichever is greater.	▪ 5 business centre spaces ▪ 4 day spa spaces ▪ 17 restaurant spaces ▪ 36 conference centre spaces ▪ **Total = 62 spaces**	3 spaces
Employees (Non-Residential uses)	1 bike parking space for each 20 employees, or part thereof.	▪ 83 hotel staff ▪ 6 Wellness Centre staff ▪ 2 pool staff ▪ 4 retail staff ▪ 2 restaurant staff [b] ▪ 3 conference centre staff [b] ▪ **Total = 100 staff**	5 spaces
Residential - Residents	1 bike space per 3 flats	180 apartments	60 spaces
Residential - Visitor	1 bike space per 12 flats	180 apartments	15 spaces
TOTAL			**83 spaces**

Notes
(a) Bicycle parking for hotel guests has been excluded from the parking estimate as guests would not be expected to cycle to/ from the accommodation. Notwithstanding, parking requirements for hotel staff have been considered.
(b) For the restaurant and conference centre, staff which will be on-site for evening dining sessions and night-time events are unlikely to cycle at night-time. Thus, bike parking for staff in the day-time has been considered.

Based on the above, the proposed development is required to provide a total of 83 bicycle spaces. The architectural plans make provision for 266 bicycle parking spaces. The oversupply in bicycle spaces would provide opportunity for bicycle hire facilities and/ or bike-share initiatives which would assist in achieving green-star requirements for the development.

5.5 End-of-trip Facilities

The *Lake Macquarie Council* DCP *2014 Part 6* stipulates requirements as follows:

- 1 personal locker per two employee parking spaces.

Based on a provision of five employee bike parking spaces (Table 5.5), it is required to provide three lockers.

Considering only one bicycle parking space, it is considered acceptable to provide one unisex end-of-trip facility for employee use.

End of trip facilities, including bathrooms, showers, and lockers, to comply with Green Star requirements would be proposed as part of the future development. The details of these facilities would include in future concept drawings as the project is further progress into the detailed design stages.

5.6 Waste Collection and Loading Dock

A loading dock comprising two (2) loading bays is proposed in the basement level beneath Building C. These bays would be used for receiving deliveries for all uses across the site. Routine services, such as waste collection, would also be carried out via this loading dock.

A summary of the expected waste collection frequency is presented in Table 5.6.

Table 5.6: Delivery and Collection Frequency

Delivery or Collection	Hotel and Restaurant	Residential
Deliveries	Hotel: 2-4 x per week Restaurant: once per day	-
General waste collection	9 x 1100 L MGBs, 3 x weekly	8 x 1100 L MGBs, 1 x weekly
Recycling collection	8 x 1100 L MGBs, 3 x weekly	28 x 1100 L MGBs, 1 x fortnightly
Food waste collection	25 x 240 L MGBs, 1 x weekly	-
Food organics and garden organics (FOGO) collection	-	21 x 240 L MGBs, 1 x weekly
Service bins collection	-	16 x 1100 L MGBs

Vehicles would enter the access driveway in a forward direction, and then undertake a 3-point-turn into the loading bays. Vehicles would exit the loading dock in a forward direction via the same driveway used to enter the basement.

The longest vehicle that the loading dock can accommodate would be an 8.8 m medium rigid vehicle (MRV). A swept path analysis has been undertaken which demonstrates adequate vehicle manoeuvrability on-site. The swept path analysis is provided in Appendix H.

6 Site Layout and Design Review

6.1 Site Access

Vehicular access to the development site is proposed via three points; namely:

- Porte cochere (containing 4 drop-off/ pick-up bays) and non-residential car park access will be off the Marina access road, adjacent to Building B.
    - The ingress would be off the Marina access road and the egress would form the western approach of the Trinity Point Drive roundabout. This access would be used by cars (up to a B99 vehicle) on a daily basis, with the occasionally 8.8 m MRV which require access to GTPs located on-site between Buildings A and B, and Building B and C.
- Delivery dock and waste collection access will be off Trinity Point Drive, adjacent to Building C.
    - A one lane, two-way ramp would be used by heavy vehicles to access the two-bay loading dock that is located beneath Building C. The loading dock and access ramp have been designed to accommodate up to an 8.8 m MRV.
- Residential car park access will be off Trinity Point Drive at two locations, adjacent to Building D and Building F.
    - A two lane, two-way ramp would be provided at each access point into the resident basement car park. This access would be used by cars (up to a B99 vehicle).

All vehicle movements at site access driveways would occur in a forward direction. This includes heavy vehicle travel to/from the waste collection and loading dock.

A pedestrian footpath is proposed alongside the western site boundary on Trinity Point Drive. Between Building C and Building D would be the main green space plaza which would link the footpath on Trinity Point Drive and surrounding areas to the foreshore. Also, there would be several other foot connections between the other development buildings which would link Trinity Point Drive and the foreshore.

An indicative map showing the above-described vehicle access points and pedestrian connections is provided in Figure 6.1.

Figure 6.1: Site Access (Indicative)

6.2 Parking Layout

The basement car park has generally been designed in compliance with *AS2890.1: 2004 Off- street car parking and AS2890.2:2018 Off-street commercial vehicle facilities.* Key design elements include:

Vehicle access and ramps

- Access to the basement car park is via a 3.0 m wide driveway (minimum) for one-way movements (Building B), and 6.0 m wide driveway (minimum) for two-way movements (Building D and Building F) to enable two vehicles passing each other. The proposed ramps comply with the design requirements in AS2890.1 and AS2890.2.
- Access to the waste collection and loading dock is via a 6.0 m wide driveway (minimum) to enable one-way movements by an 8.8m MRV. This ramp would carry ingress and egress movements, and as such, a Loading Dock Management Plan would be developed at a later stage of the project to demonstrate how two-way movements via the one lane ramp would be managed.

Parking Modules

- Car parking spaces have been designed with a minimum width of 2.4m and length of 5.4m. As the car park design is further developed, parking modules for employee and visitor parking classifications would be incorporated.
- Accessible parking spaces have not been shown on the concept drawings, however, will be designed in accordance with *AS2890.6:2009 Off-street parking for people with disabilities*. The minimum requirements for parking spaces are 2.4m width and 5.4m length, and adjacent shared area of the same dimensions to enable side access. A bollard would be placed in the shared areas as per AS2890.6.

Headroom clearance

- A minimum clear head height of 2.2m is to be provided for all circulation areas within the basement car park as required by AS2890.1. A clear head height of 2.5m is to be provided above all the accessible parking spaces as required by AS2890.6.
- A clear head height of 4.5m is to be provided for all circulation areas to/from the waste collection and loading dock.

Other Considerations

- All columns are to be located outside of the parking space design envelope as specified in Figure 5.2 of AS 2890.1.
- A minimum aisle width of 5.8m is to be provided. An additional 300mm would be provided in front of car spaces with columns or walls on the opposite side.
- Dead-end aisles are to provide the required 1.0m aisle extension in accordance with Figure 2.3 of AS2890.1, except for those aisles where accessible parking spaces are located at the end where a 1.0m extension is not required.

- Appropriate visual splays are provided in accordance with the requirements of Figure 3.3 of AS2890.1 at the access driveways.
- Pedestrian sight triangles are to be provided at egress driveway locations to the frontage road.
- Tandem car parking spaces are proposed as part of the hotel under a valet parking system. Of the 224 hotel parking spaces, 24 spaces would be tandem spaces.
- Tandem parking is also proposed for the residential apartments. A pair of tandem parking spaces would be allocated to the same apartment.

Generally, the vehicles access driveways, basement car park, and loading dock have been designed in accordance with the relevant Australian Standard yet are subject to refinement as the concept design is progressed.

A swept path analysis has been undertaken of a B99 at critical turning points within the car park. Swept paths of an 8.8m MRV have also been undertaken showing forward ingress and egress movements. Refer to Appendix H for the swept path assessment.

6.3 Coaches

An indented bus bay has been constructed on Trinity Point Drive, west of the development site, which is proposed to be utilised by a coach arriving to the development site. The indented bus bay is 40 m in length and could adequately accommodate one coach at a time. There is a paved pedestrian pathway linking the bus bay and the site. These expected are shown overlaid onto recent Nearmap aerial imagery in Figure 6.2.

Figure 6.2: New Bus Bay on Trinity Point Drive

7 Green Travel Plan

Travel demand management is a term for strategies to encourage a modal shift from single-occupant private vehicle trips and influence the way people move to/from a site to deliver better environmental outcomes to encourage sustainable travel and reduce traffic and parking impacts within communities.

A key element of travel demand management is the preparation of a Green Travel Plan (GTP). The primary purpose of GTPs is to encapsulate a strategy for managing travel demand that embraces the principles of sustainable transport. In its simplest form, GTPs encourage travel using transport modes that have low environmental impacts, for example active transport modes including public transport, walking and cycling, and encourages better management of car use.

7.1 Drivers of the Travel Plan

There are a number of social, environmental, and economic drivers for developing and implementing a GTP for developments as detailed below.

- Car Parking - Car parks utilise valuable land resources and impact amenity. If the area continues to grow and there is no modal shift towards non-car transport modes, the car parking demand could increase significantly. As such, the provision of car parking must reflect the site's proximity to public transport to influence a modal shift to sustainable transport modes.
- Environmental Impacts - The transport sector (road, rail, air and ship) is Australia's third largest source of greenhouse gas emissions (GHG), accounting for 18 % of emissions in Australia in 2015 (Climate Council of Australia, 2016). Mitigating this impact is a key driver of the GTP. Within Australia, the transport sector has the highest rate of growth of GHG emissions per year having risen by 51 % since 1990 with private vehicles responsible for almost half of transport emissions. In comparison, travel modes such as walking and cycling have the lowest emissions while public transportation has significantly lower impact than private vehicles.
- Health Benefits - The use of sustainable transport modes can have wide-ranging health benefits due to a corresponding reduction in greenhouse gas emissions and increase in physical activity from walking and cycling. The shift from private cars to sustainable transport "*can yield much greater immediate health "co-benefits" than improving fuel and vehicle efficiencies*" (World Health Organisation, 2011). The potential benefits can include reduced respiratory diseases from better air quality, prevention of heart disease, some cancers, type 2 diabetes, and obesity-related risks.
- Social Equity - Transport has a fundamental role in supporting social equity, that is the equitable distribution of services, amenities, and opportunities. The provision of sustainable transport modes can provide a more affordable alternative to car use.

7.2 Reducing Car Usage

The Proposal is for a development that contains many different facilities on-site which would serve the site itself as well as some of the surrounding local area. As explained in Chapter 4 and Chapter 5, there would be reduced trip generation and parking demand associated with the proposed development as a result of the many cross uses between facilities. This would largely be attributed to the cross use between the restaurant and conference centre facilities with hotel and residential uses. As explained in Section 4.1.4, on-site containment rates are expected for the development as follows:

- For the conference centre/ function room operations, the patrons attending would likely be staying at the hotel on-site. It is expected that 20% of the conference centre/ function room will accommodate hotel guests in the morning (for a daytime event) and 40% of the conference centre/ function room will accommodate hotel guests in the evening (for a night-time event). Patrons will walk between the different facilities. Given the anticipated cross use, the number of vehicle trips generated by the development would be reduced.
- For the restaurant operations, the patrons attending would likely be staying at the hotel on-site, and residents living on-site or within walking distance of the development. It is expected that 40% of the restaurant will accommodate hotel guests and 10% would accommodate residents. Patrons will walk between the different facilities. Given the anticipated cross use, the number of vehicle trips generated by the development would be reduced.

It has been estimated that there would be a reduction of 24 vehicle trips in the AM peak period and 60 vehicle trips in the PM peak period as a result of cross use of facilities on-site.

In terms of parking demand, there would be a reduction of 31 parking spaces (see Section 5.2 for further details).

7.3 Further Measures

Notwithstanding the above, further measures could be implemented at the future development to encourage more sustainable travel, including:

- Provision for bicycle hire facilities and/ or bike-share initiatives. This could be extended to push scooters, and e-scooters in the future (once they become legalised to use on footpaths by the NSW Government and provided that infrastructure is widened to provide safe use of these).
- Senior Management can help match employees living in the same area to travel together to/from work. Given there will be a small group of employees within each of the various uses (hotel, retail, restaurant, pool, gym, day-spa, hair salon), it may be acceptable to display a map of the general travel routes which staff use on the way to/from work to encourage carpooling.

- Implement a community-wide '10,000 steps per day initiative' which people living and working at the site could participate in.
- Provide timetables and route maps for shuttle car, water taxi and nearby bus services on noticeboards in the various workplaces (for employees), and common areas across the residential buildings, such as the foyer.
- Provide a direct shuttle bus service from Trinity Point to the Morisset Town Centre and Morisset train station. This service could be provided at certain times of the day, such as during commuter peak periods, so that people who do not want or need to drive to work/university/school, have access to an alternative and convenient mode of transport.

  In turn, this could provide employees at the development site and hotel guests an alternative method of travel other than by car.

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8 Summary and Conclusion

This report examines the traffic and parking implications of the Trinity Point development in Lake Macquarie (SSD-27028161). The key findings of the report are presented below.

- The proposed development is estimated to generate around 241 and 292 vehicle trips in the AM peak and PM peak periods, respectively. Compared the Approved Concept, the proposed development would generate 16 additional vehicle trips in the AM peak period and 37 less vehicle trips in the PM peak period.
- Site generated trips, along with trips generated from the Trinity Point Marina, and background growth, have been assessed cumulatively using SIDRA Intersection software to determine the road network performance in the years 2024 (anticipated development opening year) and 2034 (plus 10 years post-opening).
- Traffic modelling results indicate that the proposed development would result in minimal impacts to the road network operation. Overall, the road network conditions with the development traffic would be comparable to base case conditions in the respective study years (2024 and 2034). Across all future modelled scenarios, all intersections would operate at an acceptable LoS C or better during the road network peak periods.
- There is adequate capacity in the surrounding road network to cater for the traffic generated by the proposed development.
- The proposed development generates a statutory parking requirement of 604 car parking spaces, which would be fully accommodated on-site. Motorcycle and bicycle parking is also proposed on-site.
- The proposed parking layout is generally consistent with the dimensional requirements as set out in the relevant Australian Standards.
- A waste collection and loading dock is proposed within the basement level, which would accommodate two loading bays for vehicles up to and including an 8.8 m medium rigid vehicle.
- The Proponent and Council have identified impacts on the State Road network and have agreed that a proportionate contribution, as determined by Council, be paid which will be pooled by Council with contributions from other developments to deliver the State Road upgrade works.

Appendix A

Lake Macquarie Council Letter of Concurrence

22 March 2022

Lake Macquarie City Council

PO Box 1906

Hunter Region Mail Centre

Attention: Mr David Antcliff

Dear David,

Trinity Point Mixed Use Tourism and Residential Development
Contributions to Morisset Road Improvement Works

I write as a follow up to:

1. our recent discussions regarding traffic impacts on Mandalong Road,
2. your email to me of 10 February 2022,
3. your email to me on 21 March 2022, and
4. our State Significant Development proposal for hotel and residential accommodation at Trinity Point

We understand that Council (in consultation with Transport for NSW) has taken the lead on undertaking a transportation analysis of new development occurring in and around the Morisset Planning catchment and have identified a suite of new developments that will increase traffic movements on Mandalong Road and in particular through these intersections:

- Mandalong Road and Gateway Boulevarde Roundabout
- Mandalong, Wyee Road, Freemans Drive and Dora Street Roundabout
- Dora Street and Ourimbah Street Roundabout

Given the location of Trinity Point relative to these intersections and given the scale of the proposed SSD Development at Trinity Point (being a 218 room hotel, 6 serviced apartments and 180 residential apartments) we are deemed to have a minor impact on these three above mentioned intersections. As discussed, we are prepared to accept a condition imposed on a future development consent by Council (or the Department of Planning in the case of the current SSD proposal) that requires a monetary contribution to be provided to Council for Council to facilitate the road improvement works at these three intersections, in the event the upgrades are scheduled to occur prior to the expiration of the development consent and unless alternative funding arrangements are agreed to with Council.

We understand the contribution sought by Council from the Trinity Point SSD project, relating to the Mandalong Road and Gateway Boulevarde Roundabout and the Mandalong, Wyee Road, Freemans Drive and Dora Street Roundabout is $393,000 with a further $170,000 contribution toward the Dora

27 Patrick Drive,
Cooranbong NSW 2264

PO Box 288
Morisset NSW 2265

1300 888 888
johnsonpropertygroup.com.au

Street and Ourimbah Street Roundabout. The total contribution sought from the Trinity Point Development for the three roundabouts mentioned is $563,000.

It would be appreciated if Council could please respond in writing to advise Council's acceptance of this offer, including any terms or conditions, so that we may include Council's written response in our EIS documentation (and to assist in completing part of our Secretary Environmental Assessment Requirements) scheduled to be lodged with the Department on 31 March 2022.

Should you have any questions please do not hesitate to contact me.

Regards,

Bryan Garland
Chief Development Officer

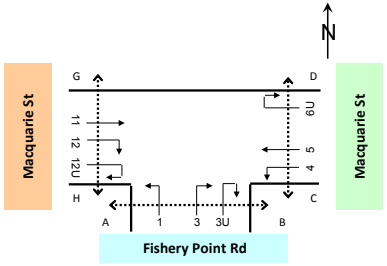
Cc Glenn Bunny (LMCC)

Appendix B

Turning Movement Count and Queue Length Surveys

Job No.	: AUNSW2341
Client	: The Transport Planning Partnership Pty Ltd
Suburb	: Morisset
Location	: 5. Macquarie St / Fishery Point Rd
Day/Date	: Tue, 23rd Nov 2021
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

Classifications	**Class 1**	**Class 2**
	Lights	Heavies

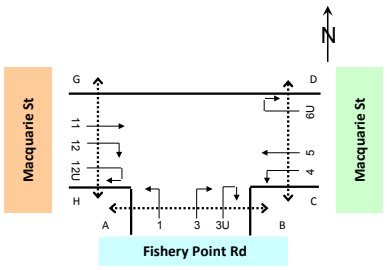


Approach	**Fishery Point Rd**									**Macquarie St**									
Direction	**Direction 1 (Left Turn)**				**Direction 3 (Right Turn)**			**Direction 3U (U Turn)**			**Direction 4 (Left Turn)**			**Direction 5 (Through)**				**Direction 6U (U Turn)**		
Time Period	**Lights**	**Heavies**	**Total**		**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**		**Lights**	**Heavies**	**Total**
7:00 to 7:15	118	4	**122**		17	0	**17**	0	0	**0**	9	0	**9**	66	5	**71**		0	0	**0**
7:15 to 7:30	137	4	**141**		21	2	**23**	0	0	**0**	7	2	**9**	79	6	**85**		0	0	**0**
7:30 to 7:45	157	3	**160**		30	2	**32**	0	0	**0**	8	1	**9**	73	6	**79**		0	0	**0**
7:45 to 8:00	155	3	**158**		27	3	**30**	0	0	**0**	16	0	**16**	109	5	**114**		0	0	**0**
8:00 to 8:15	131	10	**141**		38	2	**40**	0	0	**0**	17	2	**19**	88	5	**93**		0	0	**0**
8:15 to 8:30	155	10	**165**		26	0	**26**	0	0	**0**	13	1	**14**	88	7	**95**		0	0	**0**
8:30 to 8:45	157	4	**161**		37	2	**39**	0	0	**0**	24	2	**26**	116	4	**120**		0	0	**0**
8:45 to 9:00	150	2	**152**		21	2	**23**	0	0	**0**	26	0	**26**	103	5	**108**		0	0	**0**
9:00 to 9:15	149	6	**155**		28	5	**33**	0	0	**0**	17	0	**17**	88	15	**103**		0	0	**0**
9:15 to 9:30	137	5	**142**		27	0	**27**	0	0	**0**	22	0	**22**	85	7	**92**		0	0	**0**
9:30 to 9:45	105	3	**108**		19	0	**19**	0	0	**0**	19	3	**22**	89	8	**97**		0	0	**0**
9:45 to 10:00	105	3	**108**		21	1	**22**	0	0	**0**	9	1	**10**	83	5	**88**		0	0	**0**
AM Totals	**1,656**	**57**	**1,713**		**312**	**19**	**331**	**0**	**0**	**0**	**187**	**12**	**199**	**1,067**	**78**	**1,145**		**0**	**0**	**0**
14:00 to 14:15	109	2	**111**		21	0	**21**	0	0	**0**	24	2	**26**	64	6	**70**		0	0	**0**
14:15 to 14:30	87	2	**89**		20	2	**22**	0	0	**0**	21	1	**22**	71	2	**73**		0	0	**0**
14:30 to 14:45	97	3	**100**		22	1	**23**	0	0	**0**	29	1	**30**	82	8	**90**		0	0	**0**
14:45 to 15:00	96	6	**102**		29	1	**30**	0	0	**0**	26	1	**27**	106	7	**113**		0	0	**0**
15:00 to 15:15	107	6	**113**		27	4	**31**	0	0	**0**	35	0	**35**	75	11	**86**		0	0	**0**
15:15 to 15:30	88	4	**92**		21	1	**22**	0	0	**0**	29	0	**29**	98	2	**100**		0	0	**0**
15:30 to 15:45	130	3	**133**		30	0	**30**	0	0	**0**	36	1	**37**	85	7	**92**		0	0	**0**
15:45 to 16:00	95	6	**101**		22	0	**22**	0	0	**0**	30	0	**30**	85	5	**90**		0	0	**0**
16:00 to 16:15	78	4	**82**		16	0	**16**	0	0	**0**	25	2	**27**	79	4	**83**		0	0	**0**
16:15 to 16:30	91	7	**98**		12	0	**12**	0	0	**0**	30	0	**30**	70	5	**75**		0	0	**0**
16:30 to 16:45	88	0	**88**		21	0	**21**	0	0	**0**	25	1	**26**	60	1	**61**		0	0	**0**
16:45 to 17:00	81	2	**83**		13	0	**13**	0	0	**0**	29	1	**30**	66	4	**70**		0	0	**0**
17:00 to 17:15	72	4	**76**		17	0	**17**	0	0	**0**	26	0	**26**	95	5	**100**		0	0	**0**
17:15 to 17:30	78	2	**80**		24	0	**24**	0	0	**0**	25	0	**25**	70	1	**71**		0	0	**0**
17:30 to 17:45	72	2	**74**		18	0	**18**	0	0	**0**	22	0	**22**	58	0	**58**		0	0	**0**
17:45 to 18:00	67	4	**71**		9	0	**9**	0	0	**0**	22	0	**22**	52	4	**56**		0	0	**0**
PM Totals	**1,436**	**57**	**1,493**		**322**	**9**	**331**	**0**	**0**	**0**	**434**	**10**	**444**	**1,216**	**72**	**1,288**		**0**	**0**	**0**

Approach		Macquarie St									Crossing Pedestrians						
Direction		Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)									
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	B to A	A to B	D to C	C to D	H to G	G to H	Total
7:00 to 7:15		52	7	**59**	33	8	**41**	0	0	**0**	0	0	0	0	0	0	**0**
7:15 to 7:30		54	6	**60**	36	6	**42**	0	0	**0**	0	0	0	0	0	0	**0**
7:30 to 7:45		63	7	**70**	58	8	**66**	0	0	**0**	0	0	0	0	0	0	**0**
7:45 to 8:00		57	10	**67**	74	4	**78**	0	0	**0**	0	0	0	0	0	0	**0**
8:00 to 8:15		57	6	**63**	61	7	**68**	0	0	**0**	0	0	0	0	0	0	**0**
8:15 to 8:30		55	4	**59**	77	7	**84**	0	0	**0**	0	0	0	0	0	0	**0**
8:30 to 8:45		81	3	**84**	76	7	**83**	0	0	**0**	0	0	0	0	0	0	**0**
8:45 to 9:00		72	7	**79**	113	8	**121**	0	0	**0**	0	0	0	0	0	0	**0**
9:00 to 9:15		70	9	**79**	82	4	**86**	0	0	**0**	0	0	0	0	0	0	**0**
9:15 to 9:30		63	9	**72**	79	5	**84**	0	0	**0**	0	0	0	0	0	0	**0**
9:30 to 9:45		64	5	**69**	78	2	**80**	0	0	**0**	0	0	0	0	0	0	**0**
9:45 to 10:00		59	4	**63**	96	4	**100**	0	0	**0**	0	0	0	0	0	0	**0**
AM Totals		**747**	**77**	**824**	**863**	**70**	**933**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
14:00 to 14:15		65	6	**71**	93	3	**96**	0	0	**0**	0	0	0	0	0	0	**0**
14:15 to 14:30		82	8	**90**	108	6	**114**	0	0	**0**	0	0	0	0	0	0	**0**
14:30 to 14:45		88	6	**94**	130	2	**132**	0	0	**0**	0	0	0	0	0	0	**0**
14:45 to 15:00		80	6	**86**	120	4	**124**	0	0	**0**	0	0	0	0	0	0	**0**
15:00 to 15:15		93	4	**97**	142	6	**148**	0	0	**0**	0	0	0	0	0	0	**0**
15:15 to 15:30		81	4	**85**	135	7	**142**	0	0	**0**	0	0	0	0	0	0	**0**
15:30 to 15:45		88	7	**95**	158	4	**162**	0	0	**0**	0	0	0	0	0	0	**0**
15:45 to 16:00		96	3	**99**	147	8	**155**	0	0	**0**	0	0	0	0	0	0	**0**
16:00 to 16:15		82	5	**87**	148	1	**149**	0	0	**0**	0	0	0	0	0	0	**0**
16:15 to 16:30		96	3	**99**	153	2	**155**	0	0	**0**	0	0	0	0	0	0	**0**
16:30 to 16:45		85	7	**92**	165	3	**168**	0	0	**0**	0	0	0	0	0	0	**0**
16:45 to 17:00		82	2	**84**	185	8	**193**	0	0	**0**	0	0	1	0	0	0	**1**
17:00 to 17:15		85	2	**87**	164	2	**166**	0	0	**0**	0	0	0	0	0	0	**0**
17:15 to 17:30		86	3	**89**	169	3	**172**	0	0	**0**	0	0	0	0	0	0	**0**
17:30 to 17:45		86	1	**87**	165	3	**168**	0	0	**0**	0	0	0	0	0	0	**0**
17:45 to 18:00		86	0	**86**	163	2	**165**	0	0	**0**	0	0	0	0	0	0	**0**
PM Totals		**1,361**	**67**	**1,428**	**2,345**	**64**	**2,409**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**

Job No. : AUNSW2341
Client : The Transport Planning Partnership Pty Ltd
Suburb : Morisset
Location : 5. Macquarie St / Fishery Point Rd

Day/Date : Tue, 23rd Nov 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



MATRIX Traffic and Transport Data

Approach	Fishery Point Rd	Macquarie St

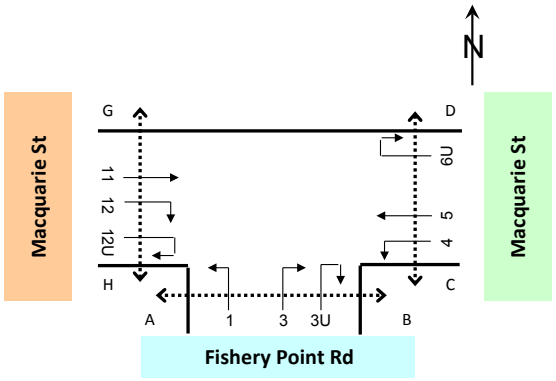
Direction	Direction 1 (Left Turn)				Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)				Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total
7:00 to 8:00	567	14	**581**		95	7	**102**	0	0	**0**	40	3	**43**	327	22	**349**		0	0	**0**
7:15 to 8:15	580	20	**600**		116	9	**125**	0	0	**0**	48	5	**53**	349	22	**371**		0	0	**0**
7:30 to 8:30	598	26	**624**		121	7	**128**	0	0	**0**	54	4	**58**	358	23	**381**		0	0	**0**
7:45 to 8:45	598	27	**625**		128	7	**135**	0	0	**0**	70	5	**75**	401	21	**422**		0	0	**0**
8:00 to 9:00	593	26	**619**		122	6	**128**	0	0	**0**	80	5	**85**	395	21	**416**		0	0	**0**
8:15 to 9:15	611	22	**633**		112	9	**121**	0	0	**0**	80	3	**83**	395	31	**426**		0	0	**0**
8:30 to 9:30	593	17	**610**		113	9	**122**	0	0	**0**	89	2	**91**	392	31	**423**		0	0	**0**
8:45 to 9:45	541	16	**557**		95	7	**102**	0	0	**0**	84	3	**87**	365	35	**400**		0	0	**0**
9:00 to 10:00	496	17	**513**		95	6	**101**	0	0	**0**	67	4	**71**	345	35	**380**		0	0	**0**
AM Totals	**1,656**	**57**	**1,713**		**312**	**19**	**331**	**0**	**0**	**0**	**187**	**12**	**199**	**1,067**	**78**	**1,145**		**0**	**0**	**0**
14:00 to 15:00	389	13	**402**		92	4	**96**	0	0	**0**	100	5	**105**	323	23	**346**		0	0	**0**
14:15 to 15:15	387	17	**404**		98	8	**106**	0	0	**0**	111	3	**114**	334	28	**362**		0	0	**0**
14:30 to 15:30	388	19	**407**		99	7	**106**	0	0	**0**	119	2	**121**	361	28	**389**		0	0	**0**
14:45 to 15:45	421	19	**440**		107	6	**113**	0	0	**0**	126	2	**128**	364	27	**391**		0	0	**0**
15:00 to 16:00	420	19	**439**		100	5	**105**	0	0	**0**	130	1	**131**	343	25	**368**		0	0	**0**
15:15 to 16:15	391	17	**408**		89	1	**90**	0	0	**0**	120	3	**123**	347	18	**365**		0	0	**0**
15:30 to 16:30	394	20	**414**		80	0	**80**	0	0	**0**	121	3	**124**	319	21	**340**		0	0	**0**
15:45 to 16:45	352	17	**369**		71	0	**71**	0	0	**0**	110	3	**113**	294	15	**309**		0	0	**0**
16:00 to 17:00	338	13	**351**		62	0	**62**	0	0	**0**	109	4	**113**	275	14	**289**		0	0	**0**
16:15 to 17:15	332	13	**345**		63	0	**63**	0	0	**0**	110	2	**112**	291	15	**306**		0	0	**0**
16:30 to 17:30	319	8	**327**		75	0	**75**	0	0	**0**	105	2	**107**	291	11	**302**		0	0	**0**
16:45 to 17:45	303	10	**313**		72	0	**72**	0	0	**0**	102	1	**103**	289	10	**299**		0	0	**0**
17:00 to 18:00	289	12	**301**		68	0	**68**	0	0	**0**	95	0	**95**	275	10	**285**		0	0	**0**
PM Totals	**1,436**	**57**	**1,493**		**322**	**9**	**331**	**0**	**0**	**0**	**434**	**10**	**444**	**1,216**	**72**	**1,288**		**0**	**0**	**0**

Approach	Macquarie St									Crossing Pedestrians						
Direction	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)									
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	B to A	A to B	D to C	C to D	H to G	G to H	Total
7:00 to 8:00	226	30	**256**	201	26	**227**	0	0	**0**	0	0	0	0	0	0	**0**
7:15 to 8:15	231	29	**260**	229	25	**254**	0	0	**0**	0	0	0	0	0	0	**0**
7:30 to 8:30	232	27	**259**	270	26	**296**	0	0	**0**	0	0	0	0	0	0	**0**
7:45 to 8:45	250	23	**273**	288	25	**313**	0	0	**0**	0	0	0	0	0	0	**0**
8:00 to 9:00	265	20	**285**	327	29	**356**	0	0	**0**	0	0	0	0	0	0	**0**
8:15 to 9:15	278	23	**301**	348	26	**374**	0	0	**0**	0	0	0	0	0	0	**0**
8:30 to 9:30	286	28	**314**	350	24	**374**	0	0	**0**	0	0	0	0	0	0	**0**
8:45 to 9:45	269	30	**299**	352	19	**371**	0	0	**0**	0	0	0	0	0	0	**0**
9:00 to 10:00	256	27	**283**	335	15	**350**	0	0	**0**	0	0	0	0	0	0	**0**
AM Totals	**747**	**77**	**824**	**863**	**70**	**933**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
14:00 to 15:00	315	26	**341**	451	15	**466**	0	0	**0**	0	0	0	0	0	0	**0**
14:15 to 15:15	343	24	**367**	500	18	**518**	0	0	**0**	0	0	0	0	0	0	**0**
14:30 to 15:30	342	20	**362**	527	19	**546**	0	0	**0**	0	0	0	0	0	0	**0**
14:45 to 15:45	342	21	**363**	555	21	**576**	0	0	**0**	0	0	0	0	0	0	**0**
15:00 to 16:00	358	18	**376**	582	25	**607**	0	0	**0**	0	0	0	0	0	0	**0**
15:15 to 16:15	347	19	**366**	588	20	**608**	0	0	**0**	0	0	0	0	0	0	**0**
15:30 to 16:30	362	18	**380**	606	15	**621**	0	0	**0**	0	0	0	0	0	0	**0**

15:45	to	16:45			359	18	**377**	613	14	**627**	0	0	**0**	0	0	0	0		0	0	**0**
16:00	to	17:00			345	17	**362**	651	14	**665**	0	0	**0**	0	0	1	0		0	0	**1**
16:15	to	17:15			348	14	**362**	667	15	**682**	0	0	**0**	0	0	1	0		0	0	**1**
16:30	to	17:30			338	14	**352**	683	16	**699**	0	0	**0**	0	0	1	0		0	0	**1**
16:45	to	17:45			339	8	**347**	683	16	**699**	0	0	**0**	0	0	1	0		0	0	**1**
17:00	to	18:00			343	6	**349**	661	10	**671**	0	0	**0**	0	0	0	0		0	0	**0**
PM Totals					**1,361**	**67**	**1,428**	**2,345**	**64**	**2,409**	**0**	**0**	**0**	**0**	**0**	**1**	**0**		**0**	**0**	**1**

Job No. : AUNSW2341
Client : The Transport Planning Partnership Pty Ltd
Suburb : Morisset
Location : 5. Macquarie St / Fishery Point Rd

Day/Date : Tue, 23rd Nov 2021
Weather : Fine
Description : Classified Intersection Count
: Pedestrian Data

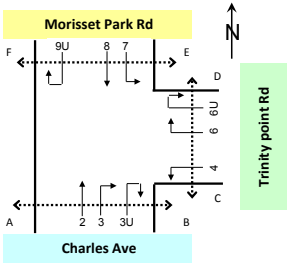


Direction			Pedestrians					
Time Period			B to A	A to B	D to C	C to D	H to G	G to H
7:00	to	7:15	0	0	0	0	0	0
7:15	to	7:30	0	0	0	0	0	0
7:30	to	7:45	0	0	0	0	0	0
7:45	to	8:00	0	0	0	0	0	0
8:00	to	8:15	0	0	0	0	0	0
8:15	to	8:30	0	0	0	0	0	0
8:30	to	8:45	0	0	0	0	0	0
8:45	to	9:00	0	0	0	0	0	0
9:00	to	9:15	0	0	0	0	0	0
9:15	to	9:30	0	0	0	0	0	0
9:30	to	9:45	0	0	0	0	0	0
9:45	to	10:00	0	0	0	0	0	0
AM Totals			**0**	**0**	**0**	**0**	**0**	**0**
14:00	to	14:15	0	0	0	0	0	0
14:15	to	14:30	0	0	0	0	0	0
14:30	to	14:45	0	0	0	0	0	0
14:45	to	15:00	0	0	0	0	0	0
15:00	to	15:15	0	0	0	0	0	0
15:15	to	15:30	0	0	0	0	0	0
15:30	to	15:45	0	0	0	0	0	0

15:45	to	16:00	0	0	0	0	0	0
16:00	to	16:15	0	0	0	0	0	0
16:15	to	16:30	0	0	0	0	0	0
16:30	to	16:45	0	0	0	0	0	0
16:45	to	17:00	0	0	1	0	0	0
17:00	to	17:15	0	0	0	0	0	0
17:15	to	17:30	0	0	0	0	0	0
17:30	to	17:45	0	0	0	0	0	0
17:45	to	18:00	0	0	0	0	0	0
PM Totals			**0**	**0**	**1**	**0**	**0**	**0**

Job No.	: AUNSW2341
Client	: The Transport Planning Partnership Pty Ltd
Suburb	: Morisset
Location	: 8. Morisset Park Rd / Trinity point Rd / Charles Ave
Day/Date	: Tue, 23rd Nov 2021
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

	Class 1	Class 2
Classifications	Lights	Heavies



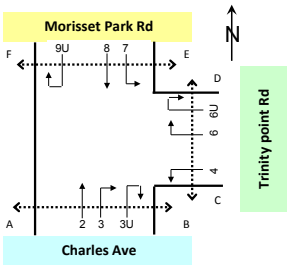
MATRIX Traffic and Transport Data

Approach	Charles Ave									Trinity point Rd								
Direction		Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)				Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total
7:00 to 7:15		3	0	**3**	0	0	**0**	0	0	**0**	0	0	**0**		7	1	**8**	0	0	**0**
7:15 to 7:30		5	0	**5**	0	0	**0**	0	0	**0**	0	0	**0**		6	0	**6**	0	0	**0**
7:30 to 7:45		2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**		13	2	**15**	0	0	**0**
7:45 to 8:00		8	0	**8**	1	0	**1**	0	0	**0**	0	0	**0**		15	1	**16**	1	0	**1**
8:00 to 8:15		5	0	**5**	0	0	**0**	0	0	**0**	0	0	**0**		7	1	**8**	1	0	**1**
8:15 to 8:30		4	0	**4**	0	0	**0**	0	0	**0**	0	0	**0**		12	1	**13**	0	0	**0**
8:30 to 8:45		5	1	**6**	0	0	**0**	0	0	**0**	0	0	**0**		12	0	**12**	0	0	**0**
8:45 to 9:00		2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**		16	1	**17**	1	0	**1**
9:00 to 9:15		2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**		8	0	**8**	0	0	**0**
9:15 to 9:30		0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**		10	0	**10**	0	0	**0**
9:30 to 9:45		2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**		9	1	**10**	0	0	**0**
9:45 to 10:00		3	0	**3**	0	0	**0**	0	0	**0**	0	0	**0**		7	0	**7**	0	0	**0**
AM Totals		**41**	**2**	**43**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**122**	**8**	**130**	**3**	**0**	**3**
14:00 to 14:15		2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**		7	0	**7**	0	0	**0**
14:15 to 14:30		1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**		3	0	**3**	0	0	**0**
14:30 to 14:45		1	2	**3**	0	0	**0**	0	0	**0**	0	0	**0**		12	0	**12**	0	0	**0**
14:45 to 15:00		3	0	**3**	0	0	**0**	0	0	**0**	0	0	**0**		8	0	**8**	0	0	**0**
15:00 to 15:15		4	1	**5**	0	0	**0**	0	0	**0**	0	0	**0**		4	1	**5**	0	0	**0**
15:15 to 15:30		6	1	**7**	0	0	**0**	0	0	**0**	0	0	**0**		6	3	**9**	0	0	**0**
15:30 to 15:45		3	0	**3**	0	0	**0**	0	0	**0**	0	0	**0**		12	1	**13**	0	0	**0**
15:45 to 16:00		7	1	**8**	0	0	**0**	0	0	**0**	0	0	**0**		4	0	**4**	0	0	**0**
16:00 to 16:15		1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**		5	0	**5**	0	0	**0**
16:15 to 16:30		2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**		5	0	**5**	0	0	**0**
16:30 to 16:45		4	0	**4**	0	0	**0**	0	0	**0**	0	0	**0**		13	0	**13**	0	0	**0**
16:45 to 17:00		1	1	**2**	0	0	**0**	0	0	**0**	0	0	**0**		5	0	**5**	0	0	**0**
17:00 to 17:15		3	0	**3**	0	0	**0**	0	0	**0**	0	0	**0**		3	1	**4**	0	0	**0**
17:15 to 17:30		2	0	**2**	1	0	**1**	0	0	**0**	0	0	**0**		8	0	**8**	0	0	**0**
17:30 to 17:45		1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**		5	1	**6**	0	0	**0**
17:45 to 18:00		4	0	**4**	0	0	**0**	0	0	**0**	0	0	**0**		2	0	**2**	0	0	**0**
PM Totals		**45**	**6**	**51**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**102**	**7**	**109**	**0**	**0**	**0**

Approach	Morisset Park Rd									Crossing Pedestrians						
Direction	Direction 7 (Left Turn)			Direction 8 (Through)				Direction 9U (U Turn)								
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	B to A	A to B	D to C	C to D	F to E	E to F	Total
7:00 to 7:15	4	1	5	0	0	0		0	0	0	0	0	0	0	0	0	0
7:15 to 7:30	5	0	5	1	1	2		0	0	0	0	0	0	0	0	0	0
7:30 to 7:45	2	2	4	1	1	2		1	0	1	0	0	0	0	0	0	0
7:45 to 8:00	1	1	2	5	0	5		0	0	0	0	0	0	0	0	0	0
8:00 to 8:15	4	1	5	0	0	0		0	0	0	0	0	0	1	0	0	1
8:15 to 8:30	7	3	10	1	0	1		0	0	0	0	0	0	0	0	0	0
8:30 to 8:45	8	0	8	1	0	1		0	0	0	0	0	0	0	0	0	0
8:45 to 9:00	7	0	7	2	0	2		0	1	1	0	0	0	0	0	0	0
9:00 to 9:15	10	1	11	2	0	2		0	1	1	0	0	0	0	0	0	0
9:15 to 9:30	7	1	8	1	0	1		0	2	2	0	0	0	0	0	0	0
9:30 to 9:45	6	0	6	0	0	0		0	0	0	0	0	0	0	0	0	0
9:45 to 10:00	13	0	13	0	0	0		0	0	0	0	0	0	0	0	0	0
AM Totals	**74**	**10**	**84**	**14**	**2**	**16**		**1**	**4**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
14:00 to 14:15	11	0	11	0	1	1		1	0	1	0	0	0	0	0	0	0
14:15 to 14:30	4	1	5	1	0	1		0	0	0	0	0	0	0	0	0	0
14:30 to 14:45	4	0	4	3	0	3		0	0	0	0	0	0	0	0	0	0
14:45 to 15:00	11	1	12	2	0	2		0	0	0	0	0	0	0	0	0	0
15:00 to 15:15	6	2	8	3	0	3		0	0	0	0	0	0	0	0	0	0
15:15 to 15:30	14	1	15	4	0	4		1	0	1	0	0	0	0	0	0	0
15:30 to 15:45	15	1	16	7	0	7		0	1	1	0	0	1	0	0	0	1
15:45 to 16:00	12	2	14	2	0	2		0	0	0	0	0	0	2	0	0	2
16:00 to 16:15	10	0	10	11	0	11		0	0	0	1	0	0	0	0	0	1
16:15 to 16:30	8	0	8	4	0	4		0	0	0	0	0	0	0	0	0	0
16:30 to 16:45	12	1	13	4	1	5		0	0	0	0	0	0	0	0	0	0
16:45 to 17:00	9	0	9	3	0	3		2	0	2	0	0	0	2	0	0	2
17:00 to 17:15	13	1	14	3	0	3		0	0	0	0	0	0	0	0	0	0
17:15 to 17:30	23	1	24	4	0	4		0	0	0	0	0	1	0	0	0	1
17:30 to 17:45	13	0	13	1	0	1		0	0	0	0	0	0	1	0	0	1
17:45 to 18:00	10	1	11	2	0	2		0	0	0	0	0	0	0	0	0	0
PM Totals	**175**	**12**	**187**	**54**	**2**	**56**		**4**	**1**	**5**	**1**	**0**	**2**	**5**	**0**	**0**	**8**

Job No. : AUNSW2341
Client : The Transport Planning Partnership Pty Ltd
Suburb : Morisset
Location : 8. Morisset Park Rd / Trinity point Rd / Charles Ave

Day/Date : Tue, 23rd Nov 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



Approach	Charles Ave	Trinity point Rd

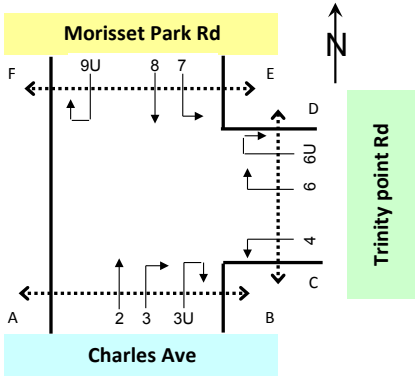
Direction		Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)				Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total
7:00 to 8:00		18	0	**18**	1	0	**1**	0	0	**0**	0	0	**0**		41	4	**45**	1	0	**1**
7:15 to 8:15		20	0	**20**	1	0	**1**	0	0	**0**	0	0	**0**		41	4	**45**	2	0	**2**
7:30 to 8:30		19	0	**19**	1	0	**1**	0	0	**0**	0	0	**0**		47	5	**52**	2	0	**2**
7:45 to 8:45		22	1	**23**	1	0	**1**	0	0	**0**	0	0	**0**		46	3	**49**	2	0	**2**
8:00 to 9:00		16	1	**17**	0	0	**0**	0	0	**0**	0	0	**0**		47	3	**50**	2	0	**2**
8:15 to 9:15		13	1	**14**	0	0	**0**	0	0	**0**	0	0	**0**		48	2	**50**	1	0	**1**
8:30 to 9:30		9	2	**11**	0	0	**0**	0	0	**0**	0	0	**0**		46	1	**47**	1	0	**1**
8:45 to 9:45		6	1	**7**	0	0	**0**	0	0	**0**	0	0	**0**		43	2	**45**	1	0	**1**
9:00 to 10:00		7	1	**8**	0	0	**0**	0	0	**0**	0	0	**0**		34	1	**35**	0	0	**0**
AM Totals		**41**	**2**	**43**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**122**	**8**	**130**	**3**	**0**	**3**
14:00 to 15:00		7	2	**9**	0	0	**0**	0	0	**0**	0	0	**0**		30	0	**30**	0	0	**0**
14:15 to 15:15		9	3	**12**	0	0	**0**	0	0	**0**	0	0	**0**		27	1	**28**	0	0	**0**
14:30 to 15:30		14	4	**18**	0	0	**0**	0	0	**0**	0	0	**0**		30	4	**34**	0	0	**0**
14:45 to 15:45		16	2	**18**	0	0	**0**	0	0	**0**	0	0	**0**		30	5	**35**	0	0	**0**
15:00 to 16:00		20	3	**23**	0	0	**0**	0	0	**0**	0	0	**0**		26	5	**31**	0	0	**0**
15:15 to 16:15		17	2	**19**	0	0	**0**	0	0	**0**	0	0	**0**		27	4	**31**	0	0	**0**
15:30 to 16:30		13	1	**14**	0	0	**0**	0	0	**0**	0	0	**0**		26	1	**27**	0	0	**0**
15:45 to 16:45		14	1	**15**	0	0	**0**	0	0	**0**	0	0	**0**		27	0	**27**	0	0	**0**
16:00 to 17:00		8	1	**9**	0	0	**0**	0	0	**0**	0	0	**0**		28	0	**28**	0	0	**0**
16:15 to 17:15		10	1	**11**	0	0	**0**	0	0	**0**	0	0	**0**		26	1	**27**	0	0	**0**
16:30 to 17:30		10	1	**11**	1	0	**1**	0	0	**0**	0	0	**0**		29	1	**30**	0	0	**0**
16:45 to 17:45		7	1	**8**	1	0	**1**	0	0	**0**	0	0	**0**		21	2	**23**	0	0	**0**
17:00 to 18:00		10	0	**10**	1	0	**1**	0	0	**0**	0	0	**0**		18	2	**20**	0	0	**0**
PM Totals		**45**	**6**	**51**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**102**	**7**	**109**	**0**	**0**	**0**

Approach		Morisset Park Rd									Crossing Pedestrians						
Direction		Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9U (U Turn)									
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	B to A	A to B	D to C	C to D	F to E	E to F	Total
7:00 to 8:00		12	4	**16**	7	2	**9**	1	0	**1**	0	0	0	0	0	0	**0**
7:15 to 8:15		12	4	**16**	7	2	**9**	1	0	**1**	0	0	0	1	0	0	**1**
7:30 to 8:30		14	7	**21**	7	1	**8**	1	0	**1**	0	0	0	1	0	0	**1**
7:45 to 8:45		20	5	**25**	7	0	**7**	0	0	**0**	0	0	0	1	0	0	**1**
8:00 to 9:00		26	4	**30**	4	0	**4**	0	1	**1**	0	0	0	1	0	0	**1**
8:15 to 9:15		32	4	**36**	6	0	**6**	0	2	**2**	0	0	0	0	0	0	**0**
8:30 to 9:30		32	2	**34**	6	0	**6**	0	4	**4**	0	0	0	0	0	0	**0**
8:45 to 9:45		30	2	**32**	5	0	**5**	0	4	**4**	0	0	0	0	0	0	**0**
9:00 to 10:00		36	2	**38**	3	0	**3**	0	3	**3**	0	0	0	0	0	0	**0**
AM Totals		**74**	**10**	**84**	**14**	**2**	**16**	**1**	**4**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
14:00 to 15:00		30	2	**32**	6	1	**7**	1	0	**1**	0	0	0	0	0	0	**0**
14:15 to 15:15		25	4	**29**	9	0	**9**	0	0	**0**	0	0	0	0	0	0	**0**
14:30 to 15:30		35	4	**39**	12	0	**12**	1	0	**1**	0	0	0	0	0	0	**0**
14:45 to 15:45		46	5	**51**	16	0	**16**	1	1	**2**	0	0	1	0	0	0	**1**
15:00 to 16:00		47	6	**53**	16	0	**16**	1	1	**2**	0	0	1	2	0	0	**3**
15:15 to 16:15		51	4	**55**	24	0	**24**	1	1	**2**	1	0	1	2	0	0	**4**
15:30 to 16:30		45	3	**48**	24	0	**24**	0	1	**1**	1	0	1	2	0	0	**4**

15:45 to 16:45	42	3	**45**	21	1	**22**	0	0	**0**	1	0	0	2	0	0	**3**
16:00 to 17:00	39	1	**40**	22	1	**23**	2	0	**2**	1	0	0	2	0	0	**3**
16:15 to 17:15	42	2	**44**	14	1	**15**	2	0	**2**	0	0	0	2	0	0	**2**
16:30 to 17:30	57	3	**60**	14	1	**15**	2	0	**2**	0	0	1	2	0	0	**3**
16:45 to 17:45	58	2	**60**	11	0	**11**	2	0	**2**	0	0	1	3	0	0	**4**
17:00 to 18:00	59	3	**62**	10	0	**10**	0	0	**0**	0	0	1	1	0	0	**2**
PM Totals	**175**	**12**	**187**	**54**	**2**	**56**	**4**	**1**	**5**	**1**	**0**	**2**	**5**	**0**	**0**	**8**

Job No. : AUNSW2341
Client : The Transport Planning Partnership Pty Ltd
Suburb : Morisset
Location : 8. Morisset Park Rd / Trinity point Rd / Charles Ave

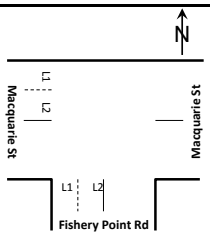
Day/Date : Tue, 23rd Nov 2021
Weather : Fine
Description : Classified Intersection Count
: Pedestrian Data



Direction			Pedestrians					
Time Period			B to A	A to B	D to C	C to D	F to E	E to F
7:00	to	7:15	0	0	0	0	0	0
7:15	to	7:30	0	0	0	0	0	0
7:30	to	7:45	0	0	0	0	0	0
7:45	to	8:00	0	0	0	0	0	0
8:00	to	8:15	0	0	0	1	0	0
8:15	to	8:30	0	0	0	0	0	0
8:30	to	8:45	0	0	0	0	0	0
8:45	to	9:00	0	0	0	0	0	0
9:00	to	9:15	0	0	0	0	0	0
9:15	to	9:30	0	0	0	0	0	0
9:30	to	9:45	0	0	0	0	0	0
9:45	to	10:00	0	0	0	0	0	0
AM Totals			**0**	**0**	**0**	**1**	**0**	**0**
14:00	to	14:15	0	0	0	0	0	0
14:15	to	14:30	0	0	0	0	0	0
14:30	to	14:45	0	0	0	0	0	0
14:45	to	15:00	0	0	0	0	0	0
15:00	to	15:15	0	0	0	0	0	0
15:15	to	15:30	0	0	0	0	0	0
15:30	to	15:45	0	0	1	0	0	0

15:45 to 16:00	0	0	0	2	0	0	
16:00 to 16:15	1	0	0	0	0	0	
16:15 to 16:30	0	0	0	0	0	0	
16:30 to 16:45	0	0	0	0	0	0	
16:45 to 17:00	0	0	0	2	0	0	
17:00 to 17:15	0	0	0	0	0	0	
17:15 to 17:30	0	0	1	0	0	0	
17:30 to 17:45	0	0	0	1	0	0	
17:45 to 18:00	0	0	0	0	0	0	
PM Totals	**1**	**0**	**2**	**5**	**0**	**0**	

Client The Transport Planning Partnership Pty Ltd
Location 5. Macquarie St / Fishery Point Rd
Date Tue, 23rd Nov 2021
Survey Time 07:00-10:00 & 14:00-18:00 (7hrs)
Description Queue Length Survey



MATRIX Traffic and Transport Data

South Leg (Fishery Point Rd)						West Leg (Macquarie St)					South Leg (Fishery Point Rd)						West Leg (Macquarie St)				
AM	Lane 1		AM	Lane 2		AM	Lane 1		Lane 2		PM	Lane 1		PM	Lane 2		PM	Lane 1		Lane 2	
	Lights	Heavies		Lights	Heavies		Lights	Heavies	Lights	Heavies		Lights	Heavies		Lights	Heavies		Lights	Heavies	Lights	Heavies
7:00:48	6	1	7:00:48	5	0	7:01:07	1	0	2	0	14:00:45	2	0	14:00:45	0	0	14:00:44	1	0	0	0
7:02:07	4	0	7:02:07	0	0	7:02:09	0	0	3	0	14:01:21	3	1	14:02:29	3	0	14:02:46	4	0	2	0
7:03:01	3	0	7:03:01	0	0	7:03:01	0	0	1	0	14:02:29	3	0	14:04:30	4	0	14:03:39	5	0	0	0
7:03:42	1	0	7:03:42	1	0	7:03:52	0	0	1	0	14:03:38	1	1	14:05:41	1	0	14:04:52	1	0	1	0
7:04:33	7	0	7:04:33	0	0	7:04:32	0	0	1	0	14:04:30	3	0	14:07:23	1	0	14:05:53	3	0	1	0
7:05:18	4	0	7:05:18	2	0	7:05:33	0	0	1	1	14:05:41	6	0	14:08:18	2	0	14:06:36	2	0	1	0
7:06:24	6	0	7:06:24	1	0	7:06:35	0	0	1	0	14:06:36	4	0	14:09:29	3	0	14:07:36	2	2	0	1
7:07:19	6	0	7:07:19	0	0	7:07:18	0	0	1	0	14:07:23	2	0	14:10:53	1	0	14:08:33	4	0	1	0
7:08:26	6	1	7:08:26	2	0	7:08:39	0	0	1	0	14:08:18	6	0	14:11:54	1	0	14:09:46	9	0	2	0
7:09:22	5	0	7:09:22	0	0	7:09:21	0	0	0	0	14:09:29	4	0	14:12:49	3	0	14:11:04	6	0	2	1
7:10:34	8	0	7:10:34	2	0	7:10:50	0	1	1	0	14:10:53	4	0	14:13:55	1	0	14:12:07	3	0	0	0
7:11:35	6	0	7:11:35	4	0	7:11:53	2	3	0	0	14:11:54	2	0	14:15:02	2	0	14:13:05	6	0	2	0
7:12:45	1	1	7:12:45	0	0	7:12:37	0	0	1	0	14:12:49	3	0	14:16:02	1	0	14:14:07	3	7	0	0
7:13:34	1	0	7:13:34	0	0	7:13:32	0	1	1	0	14:13:55	10	0	14:17:14	1	0	14:15:16	2	1	3	0
7:14:14	3	0	7:14:14	1	0	7:14:25	0	0	2	0	14:15:02	5	0	14:18:23	4	0	14:16:13	6	0	1	0
7:15:08	2	0	7:15:08	0	0	7:15:04	0	0	0	0	14:16:02	2	0	14:19:39	1	0	14:17:25	3	0	0	0
7:15:58	0	0	7:15:58	1	0	7:16:08	0	0	0	0	14:17:14	5	0	14:20:58	2	1	14:18:40	8	1	0	0
7:17:27	5	0	7:17:27	2	0	7:16:29	0	0	2	0	14:18:23	3	1	14:22:26	1	0	14:19:50	3	0	1	0
7:18:22	3	0	7:18:22	1	0	7:17:40	0	1	0	0	14:19:39	6	0	14:23:35	0	0	14:21:18	2	0	0	1
7:19:19	6	0	7:19:19	2	1	7:18:31	0	0	1	0	14:20:58	1	0	14:24:07	0	0	14:22:37	7	0	0	0
7:20:25	6	2	7:20:25	2	0	7:19:35	1	0	2	0	14:22:26	5	0	14:25:08	3	1	14:23:33	2	0	1	0
7:21:44	8	0	7:21:44	1	0	7:20:37	0	0	1	0	14:23:35	2	0	14:26:23	1	0	14:25:28	6	0	1	0
7:22:56	5	0	7:22:56	4	0	7:21:55	0	0	5	0	14:24:07	1	0	14:27:17	1	0	14:26:39	2	0	0	0
7:24:10	6	0	7:24:10	1	0	7:23:13	1	0	5	0	14:25:08	1	0	14:28:05	1	0	14:27:16	6	0	1	0
7:25:44	10	0	7:25:44	1	1	7:24:23	1	0	0	1	14:26:23	2	0	14:29:12	2	0	14:28:17	3	1	1	0
7:27:08	7	0	7:27:08	3	0	7:25:58	1	0	2	1	14:27:17	1	0	14:30:22	4	1	14:29:29	2	0	0	0
7:28:19	10	0	7:28:19	1	0	7:27:23	0	0	0	0	14:28:05	2	0	14:31:48	2	0	14:30:45	4	0	1	0
7:29:23	2	0	7:29:23	0	0	7:28:33	0	0	0	0	14:29:12	1	0	14:32:50	3	0	14:32:00	6	0	1	0
7:30:03	7	0	7:30:03	1	0	7:30:18	2	0	5	0	14:30:22	2	0	14:34:17	3	0	14:33:07	5	0	0	1
7:31:18	6	0	7:31:18	1	0	7:31:29	0	1	1	0	14:31:48	2	0	14:36:33	2	0	14:34:34	6	0	5	0
7:32:13	5	0	7:32:13	2	1	7:32:32	0	0	1	0	14:32:50	1	0	14:37:41	2	0	14:35:31	2	0	1	0
7:33:32	3	0	7:34:28	2	0	7:33:31	0	0	2	0	14:34:17	2	0	14:38:48	2	0	14:36:47	6	0	3	0
7:34:28	8	0	7:35:33	1	0	7:34:41	1	1	2	0	14:35:32	5	0	14:40:08	0	0	14:37:55	4	0	4	0
7:35:33	5	0	7:36:42	2	0	7:35:44	0	1	2	0	14:36:33	7	1	14:41:10	2	0	14:39:02	9	0	3	0
7:36:42	4	0	7:37:41	2	0	7:36:56	0	0	1	0	14:37:41	1	0	14:42:28	0	0	14:40:06	3	0	2	0
7:37:41	4	0	7:39:01	3	1	7:37:54	2	0	7	1	14:38:48	7	0	14:43:28	1	0	14:41:23	12	0	3	0
7:39:01	8	0	7:40:33	6	0	7:39:18	1	0	7	0	14:40:08	6	0	14:44:29	0	0	14:42:26	2	0	1	0
7:40:33	10	0	7:42:12	3	0	7:40:56	0	1	0	1	14:41:10	2	0	14:45:43	5	1	14:43:39	2	0	1	0
7:42:12	1	0	7:43:17	4	0	7:42:25	0	2	6	0	14:42:28	4	0	14:47:21	2	0	14:44:27	2	0	0	0
7:43:17	9	0	7:44:33	0	0	7:43:34	0	0	4	0	14:43:28	6	0	14:47:54	0	0	14:46:07	7	0	1	0
7:44:33	2	0	7:45:42	4	0	7:44:30	0	0	2	0	14:44:29	3	0	14:49:00	2	0	14:47:39	8	0	3	0
7:45:42	5	0	7:47:04	1	0	7:45:59	1	0	3	0	14:45:43	6	1	14:50:26	4	0	14:49:15	3	0	7	0
7:47:04	11	1	7:48:35	1	2	7:47:14	1	0	6	0	14:47:21	4	1	14:51:36	1	0	14:50:42	8	0	4	0
7:48:35	10	0	7:51:01	3	0	7:48:53	4	0	5	0	14:47:54	2	0	14:52:31	0	0	14:51:51	3	0	1	0
7:49:48	3	0	7:52:46	3	1	7:49:46	2	0	4	0	14:49:00	5	0	14:53:31	4	0	14:52:30	3	0	0	1
7:51:01	11	1	7:54:36	5	0	7:51:16	2	0	6	0	14:50:26	7	0	14:55:08	1	0	14:53:50	2	0	4	1
7:52:46	11	0	7:56:10	5	0	7:53:04	2	0	5	0	14:51:36	2	0	14:56:15	4	0	14:55:20	5	0	1	1
7:54:36	8	0	7:57:33	4	0	7:54:56	0	1	8	0	14:52:31	4	0	14:58:03	2	0	14:56:35	4	0	2	0
7:56:10	5	0	7:59:02	1	0	7:56:29	1	0	8	0	14:53:31	6	0	14:59:21	0	0	14:58:21	8	0	1	0
7:57:33	10	0	8:00:11	5	0	7:57:49	1	0	3	0	14:55:08	3	0	15:00:07	2	0	14:59:20	1	0	2	0
7:59:02	12	1	8:01:27	1	0	7:59:12	1	0	2	0	14:56:15	4	0	15:01:28	1	0	15:00:18	1	0	1	0
8:00:11	5	0	8:02:43	1	0	8:00:33	1	0	3	0	14:58:03	2	0	15:03:07	1	0	15:01:40	11	0	3	1
8:01:27	3	0	8:03:40	5	0	8:01:37	1	0	3	0	14:59:21	6	0	15:04:18	0	0	15:03:18	7	0	1	0
8:02:43	5	0	8:05:12	3	0	8:02:53	0	0	5	1	15:00:07	2	0	15:05:17	3	0	15:05:34	4	0	2	0
8:03:40	2	1	8:06:53	1	1	8:04:03	2	0	7	0	15:01:28	8	0	15:06:48	1	0	15:06:58	1	0	1	0
8:05:12	5	1	8:07:56	3	0	8:05:27	0	2	7	0	15:03:07	8	1	15:08:18	5	0	15:08:41	6	0	4	0
8:06:53	9	0	8:09:08	3	0	8:07:07	0	0	3	0	15:04:18	4	0	15:09:25	0	0	15:09:24	3	1	0	0
8:07:56	6	0	8:10:19	2	0	8:08:14	0	0	2	1	15:05:17	4	0	15:10:16	3	0	15:10:31	1	0	0	0
8:09:08	3	0	8:11:34	0	1	8:09:26	0	0	4	0	15:06:48	4	1	15:11:14	3	1	15:11:31	7	0	2	0
8:10:19	2	1	8:13:06	5	0	8:10:31	0	0	3	0	15:08:18	5	0	15:12:32	4	1	15:12:56	10	0	8	0
8:11:34	8	0	8:14:37	6	0	8:11:45	2	0	3	0	15:09:25	1	0	15:14:00	3	0	15:14:19	1	0	4	0
8:13:06	8	0	8:16:09	3	0	8:13:25	0	0	4	0	15:10:16	3	0	15:15:19	3	0	15:15:34	1	0	2	0
8:14:37	9	1	8:17:47	3	0	8:14:59	6	0	2	0	15:11:14	3	0	15:16:36	1	0	15:16:47	1	0	0	0
8:16:09	6	0	8:19:28	2	0	8:16:25	1	0	3	0	15:12:32	7	0	15:18:22	0	0	15:17:28	5	0	3	0
8:17:47	7	1	8:20:56	3	0	8:18:03	0	0	4	0	15:14:00	8	1	15:19:23	1	0	15:18:18	1	0	1	0
8:19:28	6	1	8:22:07	2	0	8:19:42	0	1	3	0	15:15:19	4	0	15:20:35	1	0	15:19:33	5	0	2	0
8:20:56	7	2	8:23:53	3	0	8:21:11	0	1	3	0	15:16:36	2	0	15:21:54	3	0	15:20:46	12	0	4	0
8:22:07	10	1	8:25:04	1	0	8:22:20	1	0	3	0	15:18:22	3	0	15:23:10	5	0	15:22:10	8	0	2	1
8:23:53	9	0	8:26:40	3	0	8:24:09	1	0	6	0	15:19:23	4	0	15:24:47	1	0	15:23:30	9	0	1	0
8:25:04	6	2	8:28:09	2	0	8:25:18	1	0	2	0	15:20:35	3	0	15:26:15	0	0	15:24:59	3	0	1	1
8:26:40	12	0	8:29:11	4	0	8:26:55	4	0	8	0	15:21:54	1	1	15:27:03	1	0	15:26:13	2	0	0	1
8:28:09	3	1	8:30:40	3	0	8:28:22	0	1	0	0	15:23:10	10	0	15:28:14	1	0	15:27:14	5	0	2	0
8:29:11	2	0	8:32:16	4	0	8:29:29	0	1	5	0	15:24:47	6	0	15:29:43	1	0	15:28:26	5	0	3	0
8:30:40	10	0	8:34:51	5	0	8:30:56	0	0	5	0	15:26:15	4	0	15:31:03	1	0	15:29:54	2	0	0	0
8:32:16	7	0	8:36:27	2	0	8:32:36	0	1	7	1	15:27:03	1	1	15:32:14	3	0	15:31:16	8	0	1	0
8:33:45	2	1	8:38:14	7	0	8:33:45	0	0	5	0	15:28:14	2	0	15:33:33	1	0	15:32:30	4	0	1	0
8:34:51	4	0	8:39:56	3	0	8:35:18	0	0	3	0	15:29:43	3	0	15:35:11	5	0	15:33:44	6	0	3	1
8:36:27	12	0	8:41:15	2	0	8:36:42	0	1	5	0	15:31:03	2	0	15:36:38	0	0	15:35:31	10	0	4	0

8:38:14	9	0
8:39:56	9	0
8:41:15	9	0
8:42:55	16	0
8:44:37	9	0
8:46:25	7	0
8:47:48	7	0
8:49:31	7	0
8:51:15	15	0
8:52:45	19	0
8:54:12	11	0
8:55:29	5	0
8:56:52	9	1
8:58:21	3	0
8:59:13	4	0
9:00:46	12	0
9:02:26	1	0
9:03:45	8	0
9:05:02	7	1
9:06:46	10	0
9:08:09	9	0
9:09:44	12	1
9:11:24	7	1
9:12:30	0	0
9:13:29	5	1
9:14:39	4	0
9:15:33	2	0
9:16:53	6	0
9:18:18	6	0
9:19:15	3	0
9:20:03	5	0
9:21:26	8	1
9:22:54	6	0
9:23:22	6	1
9:24:41	2	0
9:25:15	4	1
9:26:19	4	0
9:27:46	13	0
9:29:19	2	0
9:30:47	4	1
9:31:57	1	1
9:33:14	9	0
9:34:55	7	0
9:36:09	10	0
9:37:25	9	0
9:38:31	4	0
9:39:32	3	0
9:40:32	2	0
9:41:40	5	0
9:42:53	6	0
9:44:16	2	0
9:45:20	1	0
9:47:45	2	0
9:48:44	2	1
9:49:54	2	0
9:51:17	5	0
9:52:35	7	1
9:53:56	7	1
9:55:16	4	0
9:56:28	2	0
9:57:23	1	0
9:58:23	5	0
9:59:33	0	0
MAX	19	2
MIN	0	0

8:42:55	2	0
8:44:37	6	0
8:46:25	4	0
8:47:48	4	1
8:49:31	2	0
8:52:45	5	0
8:55:29	3	0
8:56:52	3	0
8:58:21	0	0
8:59:13	1	1
9:00:46	4	0
9:02:26	2	0
9:03:45	1	0
9:05:02	1	0
9:06:46	5	2
9:08:09	5	0
9:09:44	1	0
9:11:24	3	1
9:12:30	0	2
9:13:29	2	0
9:14:39	1	0
9:15:33	4	0
9:16:53	1	0
9:18:18	2	0
9:19:15	0	0
9:20:03	0	0
9:21:26	3	0
9:22:54	6	0
9:23:22	0	0
9:25:15	2	0
9:26:19	3	0
9:27:46	1	0
9:29:19	5	0
9:30:47	2	0
9:31:57	1	0
9:33:14	1	0
9:34:55	1	0
9:36:09	2	0
9:38:31	1	0
9:39:32	1	0
9:40:32	1	0
9:41:40	2	0
9:42:53	3	0
9:44:16	2	0
9:45:20	1	0
9:47:45	2	0
9:48:44	2	0
9:49:54	3	0
9:51:17	1	0
9:52:35	2	0
9:55:16	2	1
9:57:23	3	0
9:58:23	3	0
9:59:33	2	0
MAX	7	2
MIN	0	0

8:38:38	0	2	7	0
8:40:17	0	1	5	1
8:41:28	0	0	4	1
8:43:09	0	0	13	0
8:45:03	3	1	10	0
8:46:42	0	1	11	0
8:48:07	1	1	4	0
8:49:52	3	0	11	0
8:51:15	1	0	9	1
8:53:06	1	1	7	0
8:54:11	0	0	0	0
8:55:45	0	0	6	0
8:57:08	3	0	7	0
8:58:21	0	0	4	0
8:59:27	3	0	7	1
9:01:04	0	0	9	1
9:02:39	2	0	3	0
9:03:56	1	0	6	1
9:05:13	2	0	6	0
9:07:13	3	0	7	0
9:08:29	3	0	7	0
9:10:00	2	0	9	0
9:11:42	0	0	4	0
9:12:48	0	0	2	0
9:13:41	0	0	3	0
9:14:49	0	0	6	0
9:15:52	0	0	4	0
9:17:06	1	0	5	0
9:18:30	0	0	0	0
9:19:17	0	0	1	0
9:20:02	0	0	3	0
9:21:42	2	0	6	0
9:23:18	2	0	5	0
9:24:40	1	0	1	0
9:25:28	2	0	5	0
9:26:34	1	0	3	0
9:27:57	0	0	8	2
9:29:42	3	1	5	1
9:31:01	1	1	8	0
9:32:08	2	0	4	0
9:33:25	0	0	1	0
9:35:06	3	0	3	1
9:36:22	3	0	8	0
9:37:23	0	0	1	0
9:38:41	2	0	2	0
9:39:42	0	0	1	0
9:40:46	3	0	9	0
9:41:55	2	0	5	0
9:43:11	1	0	4	0
9:44:28	0	0	2	0
9:45:29	0	0	6	0
9:46:38	1	0	3	0
9:47:58	2	0	6	0
9:48:58	1	0	5	0
9:50:12	0	0	8	0
9:51:28	3	0	6	0
9:52:47	2	0	4	0
9:53:53	0	0	2	1
9:55:32	1	0	7	0
9:56:27	0	0	7	0
9:57:39	0	0	5	0
9:58:37	1	0	4	0
9:59:46	0	1	5	1
MAX	6	3	13	2
MIN	0	0	0	0

15:32:14	5	0	15:37:48	0	0	15:36:51	3	0	2	0
15:33:33	5	1	15:38:33	3	0	15:37:46	1	0	1	0
15:35:11	8	0	15:39:54	3	0	15:38:49	11	0	3	0
15:36:38	9	0	15:41:28	4	0	15:40:16	8	0	4	0
15:37:48	3	0	15:42:59	3	0	15:41:49	9	0	3	1
15:38:33	7	0	15:44:25	3	0	15:43:15	3	0	4	0
15:39:54	8	0	15:46:04	1	0	15:44:40	6	0	6	0
15:41:28	7	2	15:47:27	0	0	15:46:16	3	0	4	0
15:42:59	7	0	15:48:20	1	0	15:47:28	1	0	0	0
15:44:25	7	0	15:49:28	1	0	15:48:32	5	0	0	0
15:46:04	12	2	15:50:40	2	0	15:49:38	8	0	1	0
15:47:27	1	0	15:52:06	6	0	15:50:57	1	0	1	0
15:48:20	2	0	15:53:57	1	0	15:52:35	12	0	8	1
15:49:28	4	2	15:55:05	2	0	15:54:09	9	0	1	2
15:50:40	4	0	15:57:03	1	0	15:55:20	4	0	0	1
15:52:06	7	0	15:58:13	3	0	15:55:59	1	0	0	0
15:53:57	4	0	15:59:31	0	0	15:57:14	2	0	3	0
15:55:05	5	0	16:00:22	2	0	15:58:32	10	1	3	0
15:56:01	3	1	16:02:16	2	0	15:59:23	1	0	0	0
15:57:03	4	0	16:03:26	2	0	16:00:35	8	0	4	0
15:58:13	3	0	16:05:35	4	0	16:01:19	2	0	0	0
15:59:31	2	0	16:06:49	0	0	16:02:33	8	0	2	0
16:00:22	4	0	16:07:35	0	0	16:03:40	1	0	2	0
16:01:20	1	0	16:08:47	1	0	16:04:33	2	0	1	0
16:02:16	0	0	16:09:52	0	0	16:05:54	5	0	2	0
16:03:26	0	0	16:11:29	1	0	16:07:32	2	0	1	1
16:04:34	5	0	16:12:41	1	0	16:08:59	3	0	0	0
16:05:35	6	0	16:13:49	1	0	16:09:50	1	0	1	0
16:06:49	1	0	16:15:16	1	0	16:10:37	0	0	1	0
16:07:35	4	0	16:16:12	0	0	16:11:39	1	0	2	0
16:08:47	5	0	16:17:07	1	0	16:12:51	6	0	1	0
16:09:52	3	0	16:19:05	1	0	16:13:58	8	0	3	0
16:11:29	7	0	16:20:22	0	0	16:15:25	5	0	1	0
16:12:41	2	0	16:21:33	2	0	16:16:10	3	0	1	0
16:13:49	3	0	16:22:47	0	0	16:17:19	3	0	0	0
16:15:16	3	0	16:23:30	1	0	16:18:12	3	0	2	0
16:16:12	1	0	16:24:33	1	0	16:19:19	6	0	2	0
16:17:07	5	1	16:26:03	1	0	16:20:19	1	0	1	0
16:18:16	2	1	16:27:22	1	0	16:21:45	12	0	2	0
16:19:05	2	0	16:28:22	1	0	16:23:41	5	0	3	0
16:20:22	4	0	16:30:01	0	0	16:24:43	0	1	1	0
16:21:33	4	0	16:30:53	3	0	16:26:14	6	0	1	0
16:22:47	1	0	16:32:08	2	0	16:27:32	7	0	4	0
16:23:30	7	0	16:33:04	1	0	16:28:33	1	0	1	0
16:24:33	8	0	16:34:12	1	0	16:29:14	4	0	2	0
16:26:03	2	0	16:35:33	2	0	16:30:00	2	0	0	0
16:27:22	3	1	16:36:34	0	0	16:31:08	5	0	1	0
16:28:22	2	0	16:37:17	0	0	16:32:21	4	0	2	0
16:30:01	2	0	16:38:31	5	0	16:33:14	3	0	0	1
16:30:53	9	0	16:38:57	0	0	16:34:26	3	0	5	0
16:32:08	1	0	16:39:48	2	0	16:35:46	8	0	1	1
16:33:04	1	0	16:42:04	2	0	16:36:32	2	0	2	0
16:34:12	3	0	16:43:28	2	0	16:37:15	1	0	2	0
16:35:33	1	0	16:44:54	0	0	16:38:52	2	0	4	0
16:36:34	2	0	16:45:51	1	0	16:40:01	3	0	3	0
16:37:17	4	0	16:47:06	0	0	16:41:04	1	0	0	0
16:38:31	2	0	16:47:48	1	0	16:42:18	2	0	1	0
16:38:57	0	0	16:48:56	1	0	16:43:45	9	0	2	0
16:39:48	3	0	16:50:21	1	0	16:44:51	2	0	1	0
16:41:06	2	0	16:51:38	2	0	16:46:03	4	1	5	0
16:42:04	2	0	16:53:02	2	0	16:47:03	4	0	0	0
16:43:28	1	0	16:54:31	0	0	16:47:59	2	0	2	0
16:44:54	4	0	16:55:28	0	0	16:49:07	7	0	4	0
16:45:51	1	0	16:56:33	1	0	16:50:30	8	0	1	0
16:47:06	4	0	16:57:36	1	0	16:51:51	3	1	2	0
16:47:48	3	0	16:58:46	1	0	16:53:20	5	0	5	0
16:48:56	1	0	16:59:47	2	0	16:54:29	9	0	3	0
16:50:21	4	0	17:00:54	1	0	16:55:26	1	1	1	0
16:51:38	1	0	17:02:12	1	0	16:56:45	3	0	4	0
16:53:02	2	0	17:03:29	3	0	16:57:47	1	1	3	0
16:54:31	2	0	17:05:06	4	0	16:58:56	9	0	5	0
16:55:28	4	0	17:06:33	0	0	17:00:00	7	1	1	0
16:56:33	1	0	17:08:15	4	0	17:01:05	4	0	5	1
16:57:36	2	0	17:09:24	0	0	17:02:22	4	0	3	0
16:58:46	1	0	17:10:13	1	0	17:03:45	11	0	4	0
16:59:47	1	0	17:11:13	1	0	17:05:23	4	0	4	0
17:00:54	2	0	17:12:20	1	0	17:06:31	2	0	0	0
17:02:12	3	0	17:13:35	1	0	17:07:28	3	0	3	0
17:03:29	2	0	17:15:05	0	0	17:08:34	3	0	1	0
17:05:06	3	0	17:15:51	0	0	17:09:18	5	0	2	0
17:06:33	6	0	17:16:44	0	0	17:10:25	5	0	1	0
17:07:30	2	0	17:18:15	3	0	17:11:26	5	0	2	0
17:08:15	1	0	17:19:42	1	0	17:12:31	8	0	5	0
17:09:24	1	0	17:21:02	3	0	17:13:45	7	0	3	0
17:10:13	4	0	17:22:20	1	0	17:15:03	5	0	1	0
17:11:13	4	0	17:23:23	2	0	17:15:44	3	0	0	0
17:12:20	3	0	17:24:43	1	0	17:16:41	3	0	2	0
17:13:35	2	0	17:25:49	4	0	17:17:21	6	0	0	0
17:15:05	2	0	17:27:12	3	0	17:18:33	5	0	2	0
17:15:51	4	0	17:28:30	2	0	17:19:54	8	0	4	0
17:16:44	3	0	17:29:43	1	0	17:21:18	3	0	6	0
17:17:25	2	0	17:30:44	0	0	17:22:32	10	0	4	0
17:18:15	0	0	17:31:32	2	0	17:23:37	2	0	0	1
17:19:42	2	1	14:32:42	3	0	17:24:58	2	0	3	1
17:21:02	0	0	17:33:47	2	0	17:26:06	5	0	3	0
17:22:20	2	0	17:35:01	1	0	17:27:26	2	0	3	0
17:23:23	5	0	17:35:57	0	0	17:28:43	5	0	4	0
17:24:43	5	0	17:37:26	1	0	17:29:55	9	0	0	0

17:25:49	2	0
17:27:12	2	0
17:28:30	3	0
17:29:43	5	1
17:30:44	1	0
17:31:32	1	0
14:32:42	1	0
17:33:47	3	0
17:35:01	5	1
17:35:57	3	0
17:37:26	0	0
17:38:28	2	0
17:39:37	4	0
17:40:45	4	0
17:41:36	1	0
17:42:44	5	1
17:44:09	3	0
17:44:53	5	0
17:45:56	1	0
17:46:46	1	0
17:48:01	6	0
17:49:00	1	0
17:49:32	1	0
17:50:30	1	0
17:51:27	0	0
17:52:37	2	0
17:53:18	2	0
17:54:01	4	0
17:55:28	5	1
17:56:34	1	0
17:57:32	3	2
17:58:38	1	1
MAX	12	2
MIN	0	0

17:38:28	2	0
17:39:37	0	0
17:40:45	0	0
17:41:36	2	0
17:42:44	2	0
17:44:09	2	0
17:44:53	0	0
17:45:56	0	0
17:46:46	1	0
17:48:01	1	0
17:49:00	0	0
17:49:32	0	0
17:50:30	1	0
17:51:27	1	0
17:52:37	0	0
17:53:18	1	0
17:54:01	0	0
17:55:28	0	0
17:56:34	1	0
17:57:32	1	0
17:58:38	0	0
MAX	6	1
MIN	0	0

17:30:44	3	0	1	0
17:31:47	5	0	2	0
17:33:03	5	0	1	0
17:34:03	3	0	2	1
17:35:13	3	0	1	0
17:35:58	3	0	1	0
17:36:38	2	0	0	0
17:38:39	3	0	0	0
17:38:41	1	0	0	0
17:39:36	5	0	2	0
17:40:43	4	0	1	0
17:41:50	7	1	3	0
17:43:02	2	0	6	0
17:44:05	2	0	5	0
17:45:07	2	0	6	0
17:45:55	1	0	0	0
17:46:59	2	0	1	0
17:48:13	4	0	4	0
17:48:57	2	0	1	0
17:49:32	2	0	0	0
17:50:41	3	0	1	0
17:51:38	5	0	1	1
17:52:37	7	0	1	0
17:53:29	2	0	0	0
17:54:00	1	0	0	0
17:54:42	3	0	1	0
17:55:26	2	0	1	0
17:56:45	2	0	3	0
17:57:45	1	0	1	0
17:58:37	4	0	1	0
17:59:24	1	0	1	0
MAX	12	7	8	2
MIN	0	0	0	0

R.O.A.R. DATA

Reliable, Original & Authentic Results

Mobile.0418239019

Client : T.T.P.P
Job No/Name : 7613 MORISSET Fishery Point Rd
Day/Date : Thursday / 17th February 2022

PEDS	WEST	NORTH	EAST	
Time Per	Fishery Point	Fishery Point	Morisset Park	TOT
0700 - 0715	0	0	0	0
0715 - 0730	0	0	0	0
0730 - 0745	0	0	0	0
0745 - 0800	0	0	0	0
0800 - 0815	0	2	0	2
0815 - 0830	0	0	0	0
0830 - 0845	0	0	0	0
0845 - 0900	0	0	0	0
0900 - 0915	0	3	0	3
0915 - 0930	0	3	0	3
0930 - 0945	0	1	0	1
0945 - 1000	0	1	0	1
Per End	0	10	0	10

PEDS	WEST	NORTH	EAST	
Peak Per	Fishery Point	Fishery Point	Morisset Park	TOT
0700 - 0800	0	0	0	0
0715 - 0815	0	2	0	2
0730 - 0830	0	2	0	2
0745 - 0845	0	2	0	2
0800 - 0900	0	2	0	2
0815 - 0915	0	3	0	3
0830 - 0930	0	6	0	6
0845 - 0945	0	7	0	7
0900 - 1000	0	8	0	8
PEAK HR	0	6	0	6

Lights	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Time Per	T	L	R	L	R	T	TOT
0700 - 0715	19	29	98	3	0	20	169
0715 - 0730	11	33	109	2	2	35	192
0730 - 0745	16	42	115	3	0	36	212
0745 - 0800	29	45	105	6	0	39	224
0800 - 0815	21	45	99	6	1	43	215
0815 - 0830	22	53	105	7	4	45	236
0830 - 0845	21	44	126	5	1	39	236
0845 - 0900	42	74	97	4	7	37	261
0900 - 0915	42	75	71	25	13	56	282
0915 - 0930	43	69	84	37	15	54	302
0930 - 0945	26	64	89	10	8	37	234
0945 - 1000	23	64	96	5	4	18	210
Per End	315	637	1194	113	55	459	2773

Heavies	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Time Per	T	L	R	L	R	T	TOT
0700 - 0715	0	2	0	0	0	0	2
0715 - 0730	2	3	2	0	0	2	9
0730 - 0745	0	2	0	0	0	3	5
0745 - 0800	1	2	1	0	0	0	4
0800 - 0815	0	5	2	0	0	0	7
0815 - 0830	1	1	5	0	0	0	7
0830 - 0845	0	3	2	0	0	0	5
0845 - 0900	0	2	1	1	0	1	5
0900 - 0915	0	1	1	2	0	1	5
0915 - 0930	0	0	0	2	0	1	3
0930 - 0945	0	1	0	0	0	0	1
0945 - 1000	1	0	0	0	0	1	2
Per End	5	22	14	5	0	9	55

Combined	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Time Per	T	L	R	L	R	T	TOT
0700 - 0715	19	31	98	3	0	20	171
0715 - 0730	13	36	111	2	2	37	201
0730 - 0745	16	44	115	3	0	39	217
0745 - 0800	30	47	106	6	0	39	228
0800 - 0815	21	50	101	6	1	43	222
0815 - 0830	23	54	110	7	4	45	243
0830 - 0845	21	47	128	5	1	39	241
0845 - 0900	42	76	98	5	7	38	266
0900 - 0915	42	76	72	27	13	57	287
0915 - 0930	43	69	84	39	15	55	305
0930 - 0945	26	65	89	10	8	37	235
0945 - 1000	24	64	96	5	4	19	212
Per End	320	659	1208	118	55	468	2828

Lights	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Peak Per	T	L	R	L	R	T	TOT
0700 - 0800	75	149	427	14	2	130	797
0715 - 0815	77	165	428	17	3	153	843
0730 - 0830	88	185	424	22	5	163	887
0745 - 0845	93	187	435	24	6	166	911
0800 - 0900	106	216	427	22	13	164	948
0815 - 0915	127	246	399	41	25	177	1015
0830 - 0930	148	262	378	71	36	186	1081
0845 - 0945	153	282	341	76	43	184	1079
0900 - 1000	134	272	340	77	40	165	1028
PEAK HR	148	262	378	71	36	186	1081

Heavies	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Peak Per	T	L	R	L	R	T	TOT
0700 - 0800	3	9	3	0	0	5	20
0715 - 0815	3	12	5	0	0	5	25
0730 - 0830	2	10	8	0	0	3	23
0745 - 0845	2	11	10	0	0	0	23
0800 - 0900	1	11	10	1	0	1	24
0815 - 0915	1	7	9	3	0	2	22
0830 - 0930	0	6	4	5	0	3	18
0845 - 0945	0	4	2	5	0	3	14
0900 - 1000	1	2	1	4	0	3	11
PEAK HR	0	6	4	5	0	3	18

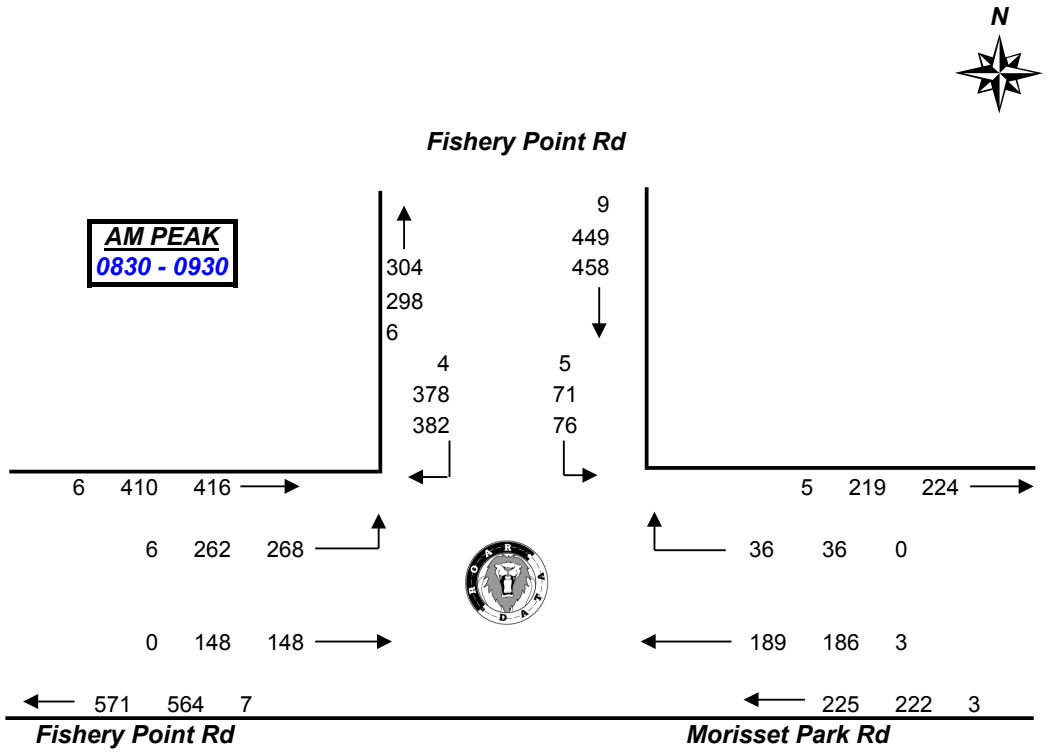
Combined	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Peak Per	T	L	R	L	R	T	TOT
0700 - 0800	78	158	430	14	2	135	817
0715 - 0815	80	177	433	17	3	158	868
0730 - 0830	90	195	432	22	5	166	910
0745 - 0845	95	198	445	24	6	166	934
0800 - 0900	107	227	437	23	13	165	972
0815 - 0915	128	253	408	44	25	179	1037
0830 - 0930	148	268	382	76	36	189	1099
0845 - 0945	153	286	343	81	43	187	1093
0900 - 1000	135	274	341	81	40	168	1039
PEAK HR	148	268	382	76	36	189	1099

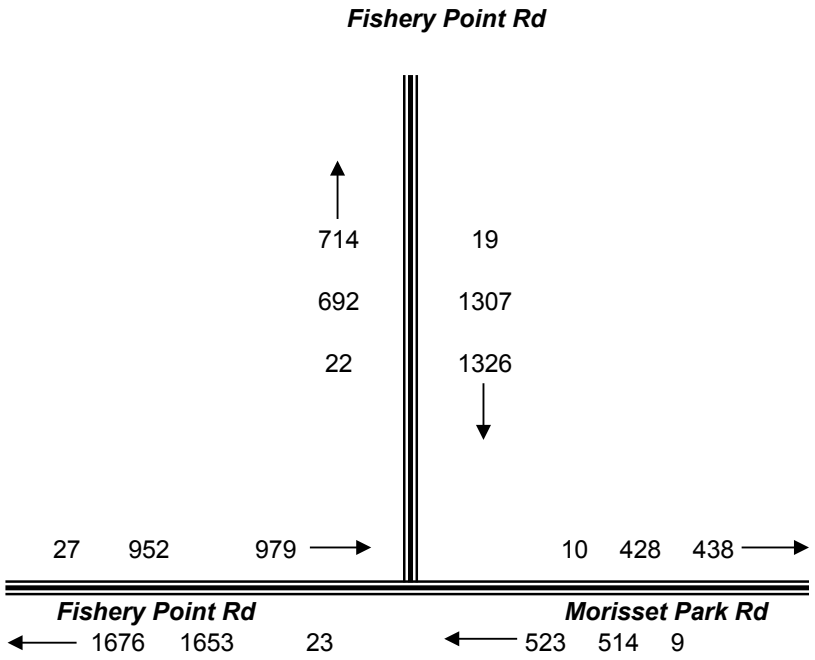
R.O.A.R. DATA

Reliable, Original & Authentic Results

Mob.0418-239019

Client : T.T.P.P
Job No/Name : 7613 MORISSET Fishery Point Rd
Day/Date : Thursday / 17th February 2022





R.O.A.R. DATA

Reliable, Original & Authentic Results

Mobile.0418239019

Client : T.T.P.P
Job No/Name : 7613 MORISSET Fishery Point Rd
Day/Date : Thursday / 17th February 2022

PEDS	WEST	NORTH	EAST	
Time Per	Fishery Point	Fishery Point	Morisset Park	TOT
1400 - 1415	0	0	0	**0**
1415 - 1430	0	0	0	**0**
1430 - 1445	0	0	0	**0**
1445 - 1500	0	0	0	**0**
1500 - 1515	0	1	0	**1**
1515 - 1530	0	12	0	**12**
1530 - 1545	0	24	0	**24**
1545 - 1600	0	1	0	**1**
1600 - 1615	0	0	0	**0**
1615 - 1630	0	0	0	**0**
1630 - 1645	0	0	0	**0**
1645 - 1700	0	0	0	**0**
Per End	**0**	**38**	**0**	**38**

PEDS	WEST	NORTH	EAST	
Peak Per	Fishery Point	Fishery Point	Morisset Park	TOT
1400 - 1500	0	0	0	**0**
1415 - 1515	0	1	0	**1**
1430 - 1530	0	13	0	**13**
1445 - 1545	0	37	0	**37**
1500 - 1600	0	38	0	**38**
1515 - 1615	0	37	0	**37**
1530 - 1630	0	25	0	**25**
1545 - 1645	0	1	0	**1**
1600 - 1700	0	0	0	**0**
PEAK HR	**0**	**25**	**0**	**25**

Lights	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Time Per	T	L	R	L	R	T	TOT
1400 - 1415	22	87	73	1	1	26	**210**
1415 - 1430	26	66	87	2	1	25	**207**
1430 - 1445	27	83	75	4	5	33	**227**
1445 - 1500	28	99	77	6	1	33	**244**
1500 - 1515	23	106	75	12	1	35	**252**
1515 - 1530	60	106	54	13	0	28	**261**
1530 - 1545	57	135	50	13	34	73	**362**
1545 - 1600	30	120	70	1	9	48	**278**
1600 - 1615	39	127	67	1	4	37	**275**
1615 - 1630	40	116	83	0	3	29	**271**
1630 - 1645	37	127	84	2	1	29	**280**
1645 - 1700	44	142	66	1	2	24	**279**
Per End	**433**	**1314**	**861**	**56**	**62**	**420**	**3146**

Heavies	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Time Per	T	L	R	L	R	T	TOT
1400 - 1415	0	0	0	0	0	0	**0**
1415 - 1430	0	0	0	0	0	0	**0**
1430 - 1445	0	0	0	0	0	0	**0**
1445 - 1500	0	0	0	0	0	0	**0**
1500 - 1515	0	2	0	0	0	1	**3**
1515 - 1530	0	3	0	0	0	0	**3**
1530 - 1545	1	3	0	1	0	0	**5**
1545 - 1600	0	0	4	4	0	2	**10**
1600 - 1615	1	2	2	0	0	0	**5**
1615 - 1630	0	0	5	0	0	0	**5**
1630 - 1645	1	0	0	0	0	0	**1**
1645 - 1700	1	0	0	0	0	0	**1**
Per End	**4**	**10**	**11**	**5**	**0**	**3**	**33**

Combined	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Time Per	T	L	R	L	R	T	TOT
1400 - 1415	22	87	73	1	1	26	**210**
1415 - 1430	26	66	87	2	1	25	**207**
1430 - 1445	27	83	75	4	5	33	**227**
1445 - 1500	28	99	77	6	1	33	**244**
1500 - 1515	23	108	75	12	1	36	**255**
1515 - 1530	60	109	54	13	0	28	**264**
1530 - 1545	58	138	50	14	34	73	**367**
1545 - 1600	30	120	74	5	9	50	**288**
1600 - 1615	40	129	69	1	4	37	**280**
1615 - 1630	40	116	88	0	3	29	**276**
1630 - 1645	38	127	84	2	1	29	**281**
1645 - 1700	45	142	66	1	2	24	**280**
Per End	**437**	**1324**	**872**	**61**	**62**	**423**	**3179**

Lights	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Peak Per	T	L	R	L	R	T	TOT
1400 - 1500	103	335	312	13	8	117	**888**
1415 - 1515	104	354	314	24	8	126	**930**
1430 - 1530	138	394	281	35	7	129	**984**
1445 - 1545	168	446	256	44	36	169	**1119**
1500 - 1600	170	467	249	39	44	184	**1153**
1515 - 1615	186	488	241	28	47	186	**1176**
1530 - 1630	166	498	270	15	50	187	**1186**
1545 - 1645	146	490	304	4	17	143	**1104**
1600 - 1700	160	512	300	4	10	119	**1105**
PEAK HR	**166**	**498**	**270**	**15**	**50**	**187**	**1186**

Heavies	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Peak Per	T	L	R	L	R	T	TOT
1400 - 1500	0	0	0	0	0	0	**0**
1415 - 1515	0	2	0	0	0	1	**3**
1430 - 1530	0	5	0	0	0	1	**6**
1445 - 1545	1	8	0	1	0	1	**11**
1500 - 1600	1	8	4	5	0	3	**21**
1515 - 1615	2	8	6	5	0	2	**23**
1530 - 1630	2	5	11	5	0	2	**25**
1545 - 1645	2	2	11	4	0	2	**21**
1600 - 1700	3	2	7	0	0	0	**12**
PEAK HR	**2**	**5**	**11**	**5**	**0**	**2**	**25**

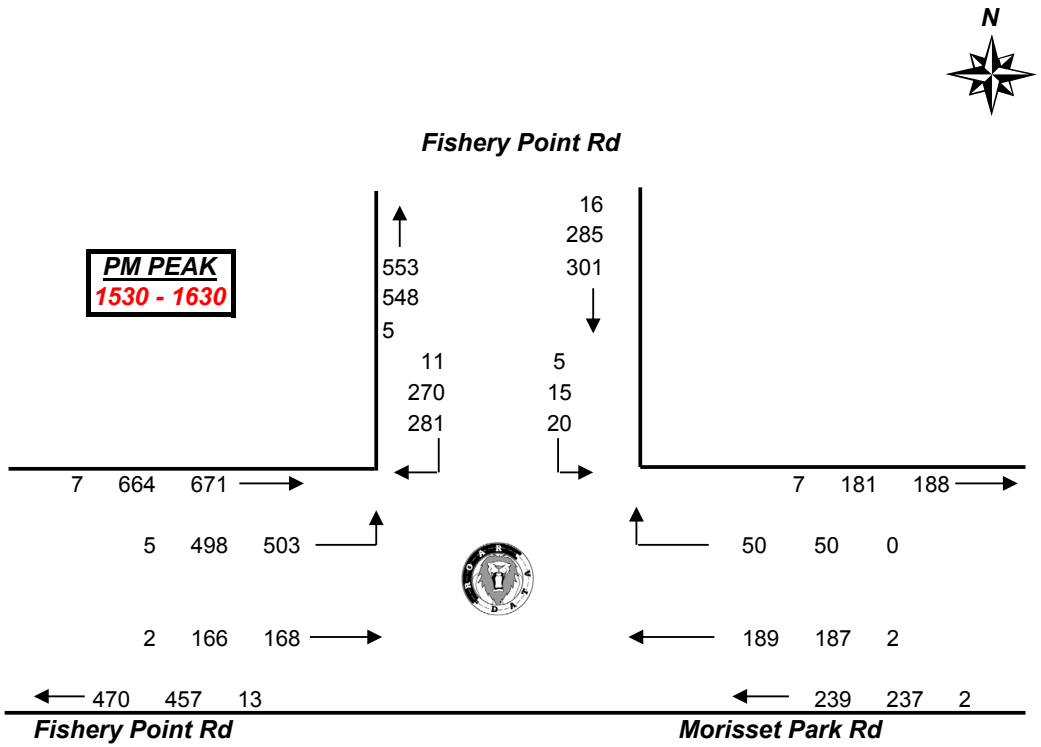
Combined	WEST		NORTH		EAST		
	Fishery Point		Fishery Point		Morisset Park		
Peak Per	T	L	R	L	R	T	TOT
1400 - 1500	103	335	312	13	8	117	**888**
1415 - 1515	104	356	314	24	8	127	**933**
1430 - 1530	138	399	281	35	7	130	**990**
1445 - 1545	169	454	256	45	36	170	**1130**
1500 - 1600	171	475	253	44	44	187	**1174**
1515 - 1615	188	496	247	33	47	188	**1199**
1530 - 1630	168	503	281	20	50	189	**1211**
1545 - 1645	148	492	315	8	17	145	**1125**
1600 - 1700	163	514	307	4	10	119	**1117**
PEAK HR	**168**	**503**	**281**	**20**	**50**	**189**	**1211**

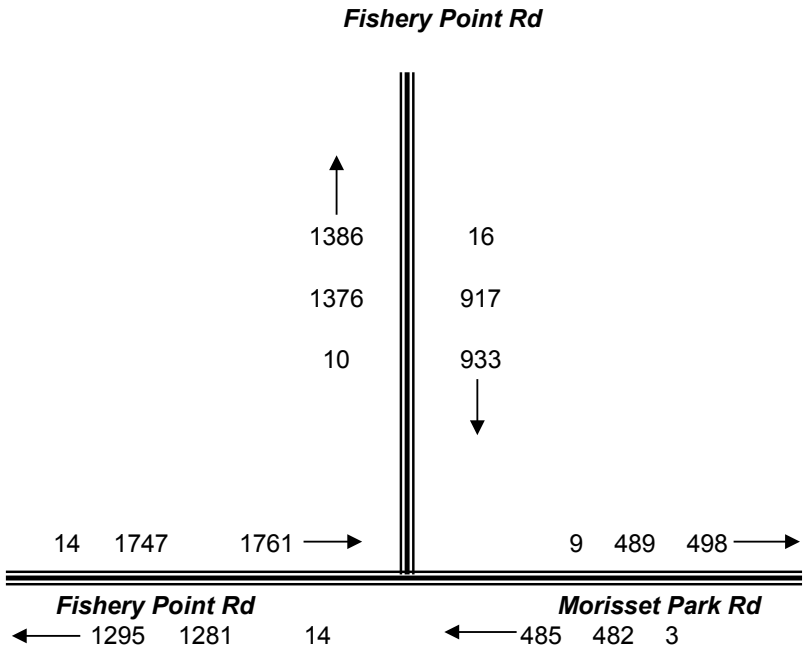
R.O.A.R. DATA

Reliable, Original & Authentic Results

Mob.0418-239019

Client : T.T.P.P
Job No/Name : 7613 MORISSET Fishery Point Rd
Day/Date : Thursday / 17th February 2022





R.O.A.R. DATA

Reliable, Original & Authentic Results

Mobile.0418239019

Client : T.T.P.P
Job No/Name : 7613 MORISSET Fishery Point Rd
Day/Date : Thursday / 17th February 2022

PEDS	WEST	NORTH	EAST	
Time Per	Fishery Point	Station St	Fishery Point	TOT
0700 - 0715	0	0	0	**0**
0715 - 0730	0	0	0	**0**
0730 - 0745	2	1	1	**4**
0745 - 0800	2	2	0	**4**
0800 - 0815	0	0	0	**0**
0815 - 0830	2	2	0	**4**
0830 - 0845	0	2	0	**2**
0845 - 0900	2	2	0	**4**
0900 - 0915	2	2	0	**4**
0915 - 0930	1	1	0	**2**
0930 - 0945	1	0	0	**1**
0945 - 1000	2	2	0	**4**
Per End	**14**	**14**	**1**	**29**

PEDS	WEST	NORTH	EAST	
Peak Per	Fishery Point	Station St	Fishery Point	TOT
0700 - 0800	4	3	1	**8**
0715 - 0815	4	3	1	**8**
0730 - 0830	6	5	1	**12**
0745 - 0845	4	6	0	**10**
0800 - 0900	4	6	0	**10**
0815 - 0915	6	8	0	**14**
0830 - 0930	5	7	0	**12**
0845 - 0945	6	5	0	**11**
0900 - 1000	6	5	0	**11**
PEAK HR	**5**	**7**	**0**	**12**

Lights	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Time Per	T	L	R	L	R	T	TOT
0700 - 0715	41	19	29	0	1	106	**196**
0715 - 0730	41	9	42	1	4	39	**136**
0730 - 0745	55	23	41	2	3	144	**268**
0745 - 0800	71	26	55	2	2	152	**308**
0800 - 0815	77	18	41	3	2	151	**292**
0815 - 0830	65	16	51	5	2	139	**278**
0830 - 0845	59	34	55	5	2	155	**310**
0845 - 0900	108	39	71	7	9	131	**365**
0900 - 0915	104	20	49	6	3	115	**297**
0915 - 0930	98	36	45	6	5	129	**319**
0930 - 0945	95	24	39	2	5	117	**282**
0945 - 1000	86	32	39	1	0	115	**273**
Per End	**900**	**296**	**557**	**40**	**38**	**1493**	**3324**

Heavies	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Time Per	T	L	R	L	R	T	TOT
0700 - 0715	1	1	1	0	0	0	**3**
0715 - 0730	5	0	0	0	0	3	**8**
0730 - 0745	2	0	0	0	0	3	**5**
0745 - 0800	3	0	1	1	0	1	**6**
0800 - 0815	5	0	2	1	0	1	**9**
0815 - 0830	1	0	2	0	0	5	**8**
0830 - 0845	3	0	1	0	0	3	**7**
0845 - 0900	2	3	0	0	0	2	**7**
0900 - 0915	1	1	0	0	0	2	**4**
0915 - 0930	0	0	0	0	0	1	**1**
0930 - 0945	1	0	0	0	0	0	**1**
0945 - 1000	1	1	0	0	0	0	**2**
Per End	**25**	**6**	**7**	**2**	**0**	**21**	**61**

Combined	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Time Per	T	L	R	L	R	T	TOT
0700 - 0715	42	20	30	0	1	106	**199**
0715 - 0730	46	9	42	1	4	42	**144**
0730 - 0745	57	23	41	2	3	147	**273**
0745 - 0800	74	26	56	3	2	153	**314**
0800 - 0815	82	18	43	4	2	152	**301**
0815 - 0830	66	16	53	5	2	144	**286**
0830 - 0845	62	34	56	5	2	158	**317**
0845 - 0900	110	42	71	7	9	133	**372**
0900 - 0915	105	21	49	6	3	117	**301**
0915 - 0930	98	36	45	6	5	130	**320**
0930 - 0945	96	24	39	2	5	117	**283**
0945 - 1000	87	33	39	1	0	115	**275**
Per End	**925**	**302**	**564**	**42**	**38**	**1514**	**3385**

Lights	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Peak Per	T	L	R	L	R	T	TOT
0700 - 0800	208	77	167	5	10	441	**908**
0715 - 0815	244	76	179	8	11	486	**1004**
0730 - 0830	268	83	188	12	9	586	**1146**
0745 - 0845	272	94	202	15	8	597	**1188**
0800 - 0900	309	107	218	20	15	576	**1245**
0815 - 0915	336	109	226	23	16	540	**1250**
0830 - 0930	369	129	220	24	19	530	**1291**
0845 - 0945	405	119	204	21	22	492	**1263**
0900 - 1000	383	112	172	15	13	476	**1171**
PEAK HR	**369**	**129**	**220**	**24**	**19**	**530**	**1291**

Heavies	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Peak Per	T	L	R	L	R	T	TOT
0700 - 0800	11	1	2	1	0	7	**22**
0715 - 0815	15	0	3	2	0	8	**28**
0730 - 0830	11	0	5	2	0	10	**28**
0745 - 0845	12	0	6	2	0	10	**30**
0800 - 0900	11	3	5	1	0	11	**31**
0815 - 0915	7	4	3	0	0	12	**26**
0830 - 0930	6	4	1	0	0	8	**19**
0845 - 0945	4	4	0	0	0	5	**13**
0900 - 1000	3	2	0	0	0	3	**8**
PEAK HR	**6**	**4**	**1**	**0**	**0**	**8**	**19**

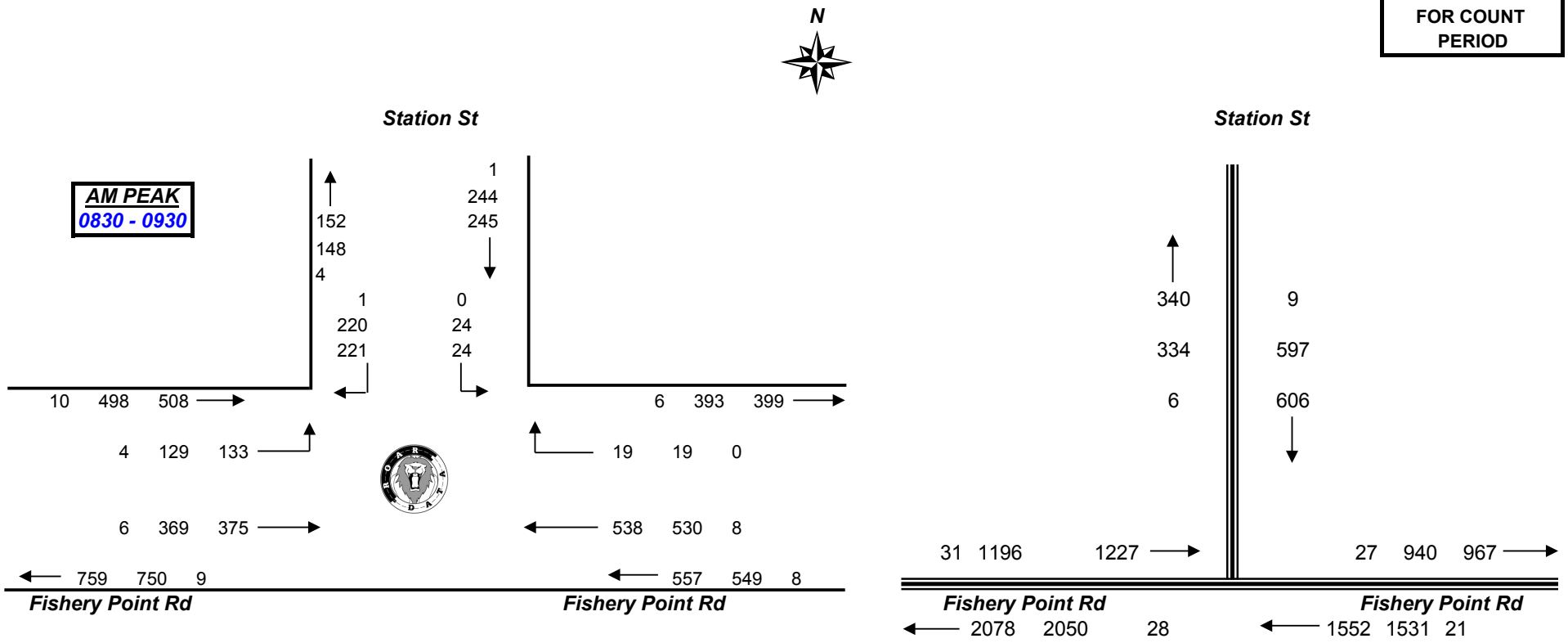
Combined	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Peak Per	T	L	R	L	R	T	TOT
0700 - 0800	219	78	169	6	10	448	**930**
0715 - 0815	259	76	182	10	11	494	**1032**
0730 - 0830	279	83	193	14	9	596	**1174**
0745 - 0845	284	94	208	17	8	607	**1218**
0800 - 0900	320	110	223	21	15	587	**1276**
0815 - 0915	343	113	229	23	16	552	**1276**
0830 - 0930	375	133	221	24	19	538	**1310**
0845 - 0945	409	123	204	21	22	497	**1276**
0900 - 1000	386	114	172	15	13	479	**1179**
PEAK HR	**375**	**133**	**221**	**24**	**19**	**538**	**1310**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Mob.0418-239019

Client : T.T.P.P
Job No/Name : 7613 MORISSET Fishery Point Rd
Day/Date : Thursday / 17th February 2022



R.O.A.R. DATA

Reliable, Original & Authentic Results

Mobile.0418239019

Client : T.T.P.P
Job No/Name : 7613 MORISSET Fishery Point Rd
Day/Date : Thursday / 17th February 2022

PEDS	WEST	NORTH	EAST	
Time Per	Fishery Point	Station St	Fishery Point	TOT
1400 - 1415	1	1	0	**2**
1415 - 1430	0	0	0	**0**
1430 - 1445	0	0	0	**0**
1445 - 1500	0	0	0	**0**
1500 - 1515	0	0	0	**0**
1515 - 1530	2	1	0	**3**
1530 - 1545	0	0	0	**0**
1545 - 1600	0	0	0	**0**
1600 - 1615	0	0	0	**0**
1615 - 1630	2	2	0	**4**
1630 - 1645	1	1	0	**2**
1645 - 1700	1	1	0	**2**
Per End	**7**	**6**	**0**	**13**

PEDS	WEST	NORTH	EAST	
Peak Per	Fishery Point	Station St	Fishery Point	TOT
1400 - 1500	1	1	0	**2**
1415 - 1515	0	0	0	**0**
1430 - 1530	2	1	0	**3**
1445 - 1545	2	1	0	**3**
1500 - 1600	2	1	0	**3**
1515 - 1615	2	1	0	**3**
1530 - 1630	2	2	0	**4**
1545 - 1645	3	3	0	**6**
1600 - 1700	4	4	0	**8**
PEAK HR	**2**	**2**	**0**	**4**

Lights	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Time Per	T	L	R	L	R	T	TOT
1400 - 1415	105	36	36	3	0	97	**277**
1415 - 1430	88	32	30	4	7	99	**260**
1430 - 1445	86	33	28	3	3	88	**241**
1445 - 1500	122	32	32	2	2	97	**287**
1500 - 1515	140	16	61	7	5	107	**336**
1515 - 1530	148	48	26	2	2	81	**307**
1530 - 1545	190	48	37	7	5	99	**386**
1545 - 1600	143	47	37	3	6	104	**340**
1600 - 1615	165	48	27	2	5	97	**344**
1615 - 1630	153	51	45	6	5	114	**374**
1630 - 1645	170	45	36	4	4	98	**357**
1645 - 1700	161	49	32	2	1	81	**326**
Per End	**1671**	**485**	**427**	**45**	**45**	**1162**	**3835**

Heavies	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Time Per	T	L	R	L	R	T	TOT
1400 - 1415	0	2	1	0	0	0	**3**
1415 - 1430	0	1	0	0	0	0	**1**
1430 - 1445	0	0	0	0	0	0	**0**
1445 - 1500	0	0	0	0	0	0	**0**
1500 - 1515	2	1	1	0	0	1	**5**
1515 - 1530	3	1	2	1	0	1	**8**
1530 - 1545	4	2	0	0	0	0	**6**
1545 - 1600	0	0	1	0	1	4	**6**
1600 - 1615	3	2	0	0	0	3	**8**
1615 - 1630	0	0	1	0	0	5	**6**
1630 - 1645	1	1	0	0	0	0	**2**
1645 - 1700	1	0	0	0	0	0	**1**
Per End	**14**	**10**	**6**	**1**	**1**	**14**	**46**

Combined	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Time Per	T	L	R	L	R	T	TOT
1400 - 1415	105	38	37	3	0	97	**280**
1415 - 1430	88	33	30	4	7	99	**261**
1430 - 1445	86	33	28	3	3	88	**241**
1445 - 1500	122	32	32	2	2	97	**287**
1500 - 1515	142	17	62	7	5	108	**341**
1515 - 1530	151	49	28	3	2	82	**315**
1530 - 1545	194	50	37	7	5	99	**392**
1545 - 1600	143	47	38	3	7	108	**346**
1600 - 1615	168	50	27	2	5	100	**352**
1615 - 1630	153	51	46	6	5	119	**380**
1630 - 1645	171	46	36	4	4	98	**359**
1645 - 1700	162	49	32	2	1	81	**327**
Per End	**1685**	**495**	**433**	**46**	**46**	**1176**	**3881**

Lights	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Peak Per	T	L	R	L	R	T	TOT
1400 - 1500	401	133	126	12	12	381	**1065**
1415 - 1515	436	113	151	16	17	391	**1124**
1430 - 1530	496	129	147	14	12	373	**1171**
1445 - 1545	600	144	156	18	14	384	**1316**
1500 - 1600	621	159	161	19	18	391	**1369**
1515 - 1615	646	191	127	14	18	381	**1377**
1530 - 1630	651	194	146	18	21	414	**1444**
1545 - 1645	631	191	145	15	20	413	**1415**
1600 - 1700	649	193	140	14	15	390	**1401**
PEAK HR	**651**	**194**	**146**	**18**	**21**	**414**	**1444**

Heavies	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Peak Per	T	L	R	L	R	T	TOT
1400 - 1500	0	3	1	0	0	0	**4**
1415 - 1515	2	2	1	0	0	1	**6**
1430 - 1530	5	2	3	1	0	2	**13**
1445 - 1545	9	4	3	1	0	2	**19**
1500 - 1600	9	4	4	1	1	6	**25**
1515 - 1615	10	5	3	1	1	8	**28**
1530 - 1630	7	4	2	0	1	12	**26**
1545 - 1645	4	3	2	0	1	12	**22**
1600 - 1700	5	3	1	0	0	8	**17**
PEAK HR	**7**	**4**	**2**	**0**	**1**	**12**	**26**

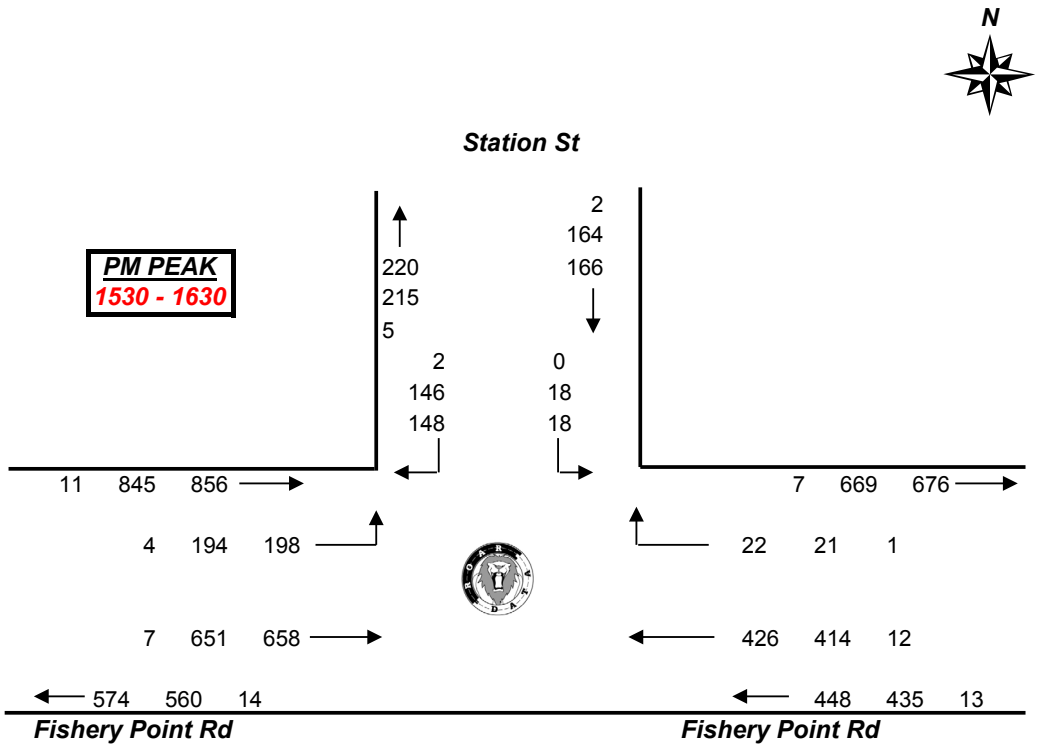
Combined	WEST		NORTH		EAST		
	Fishery Point		Station St		Fishery Point		
Peak Per	T	L	R	L	R	T	TOT
1400 - 1500	401	136	127	12	12	381	**1069**
1415 - 1515	438	115	152	16	17	392	**1130**
1430 - 1530	501	131	150	15	12	375	**1184**
1445 - 1545	609	148	159	19	14	386	**1335**
1500 - 1600	630	163	165	20	19	397	**1394**
1515 - 1615	656	196	130	15	19	389	**1405**
1530 - 1630	658	198	148	18	22	426	**1470**
1545 - 1645	635	194	147	15	21	425	**1437**
1600 - 1700	654	196	141	14	15	398	**1418**
PEAK HR	**658**	**198**	**148**	**18**	**22**	**426**	**1470**

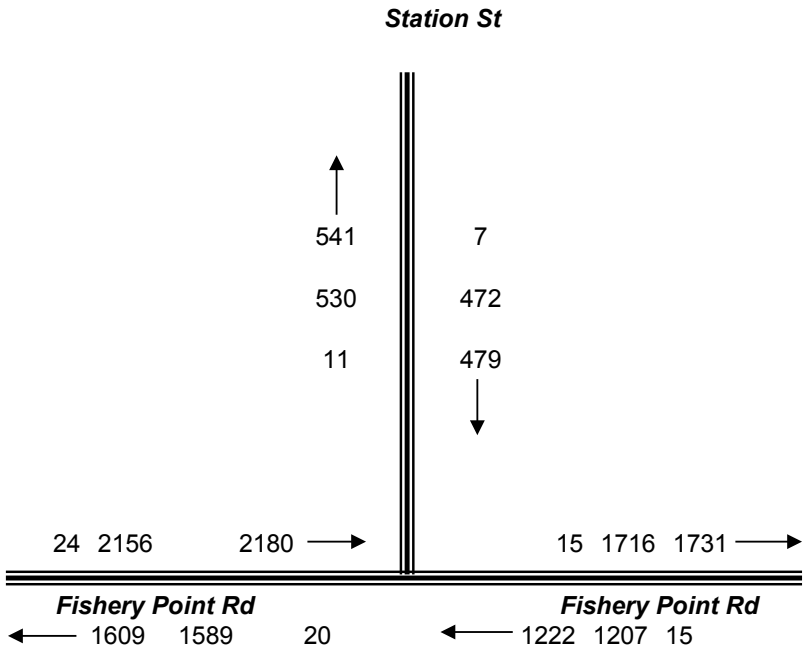
R.O.A.R. DATA

Reliable, Original & Authentic Results

Mob.0418-239019

Client : T.T.P.P
Job No/Name : 7613 MORISSET Fishery Point Rd
Day/Date : Thursday / 17th February 2022





Appendix C

Historic Crash Data

Crashes Map - Lake Macquarie

Transport for NSW – Centre for Road Safety

TOWARDS ZERO

Select your LGA

Lake Macquarie

Reporting year

Multiple selections

Degree of crash

All

Type of crash

All

Speed limit

All

RUM code group

All

Type of location group

All

Speeding involved in crash

All

Fatigue involved in crash

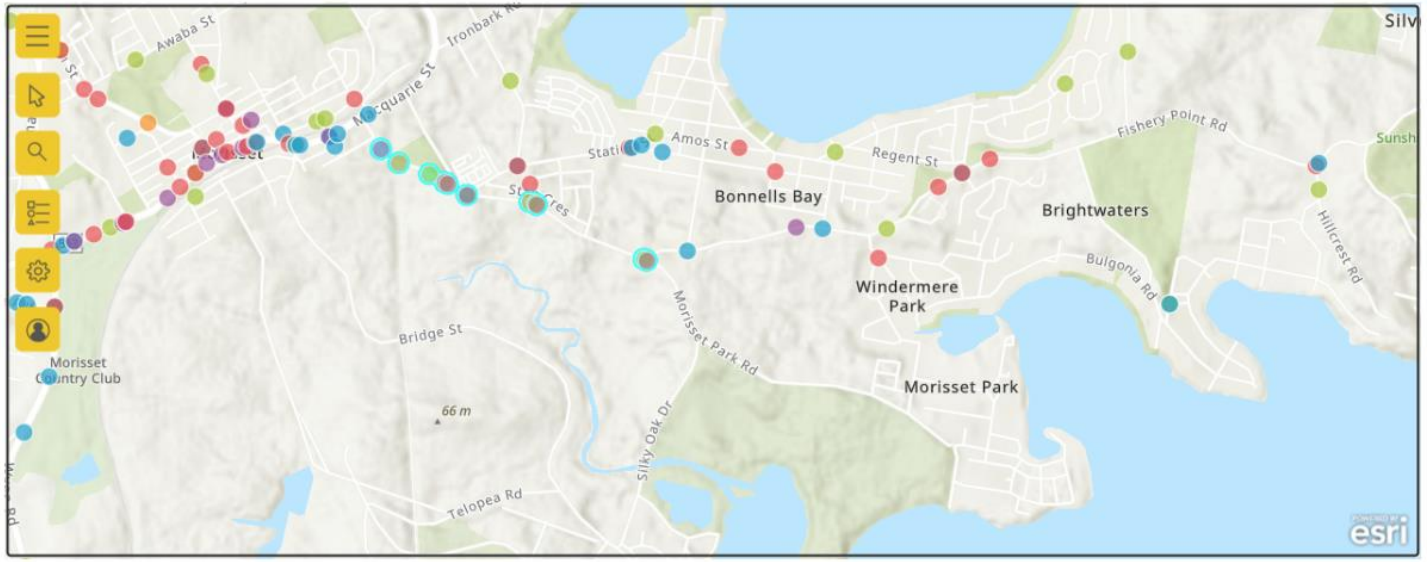
All

Road classification

All

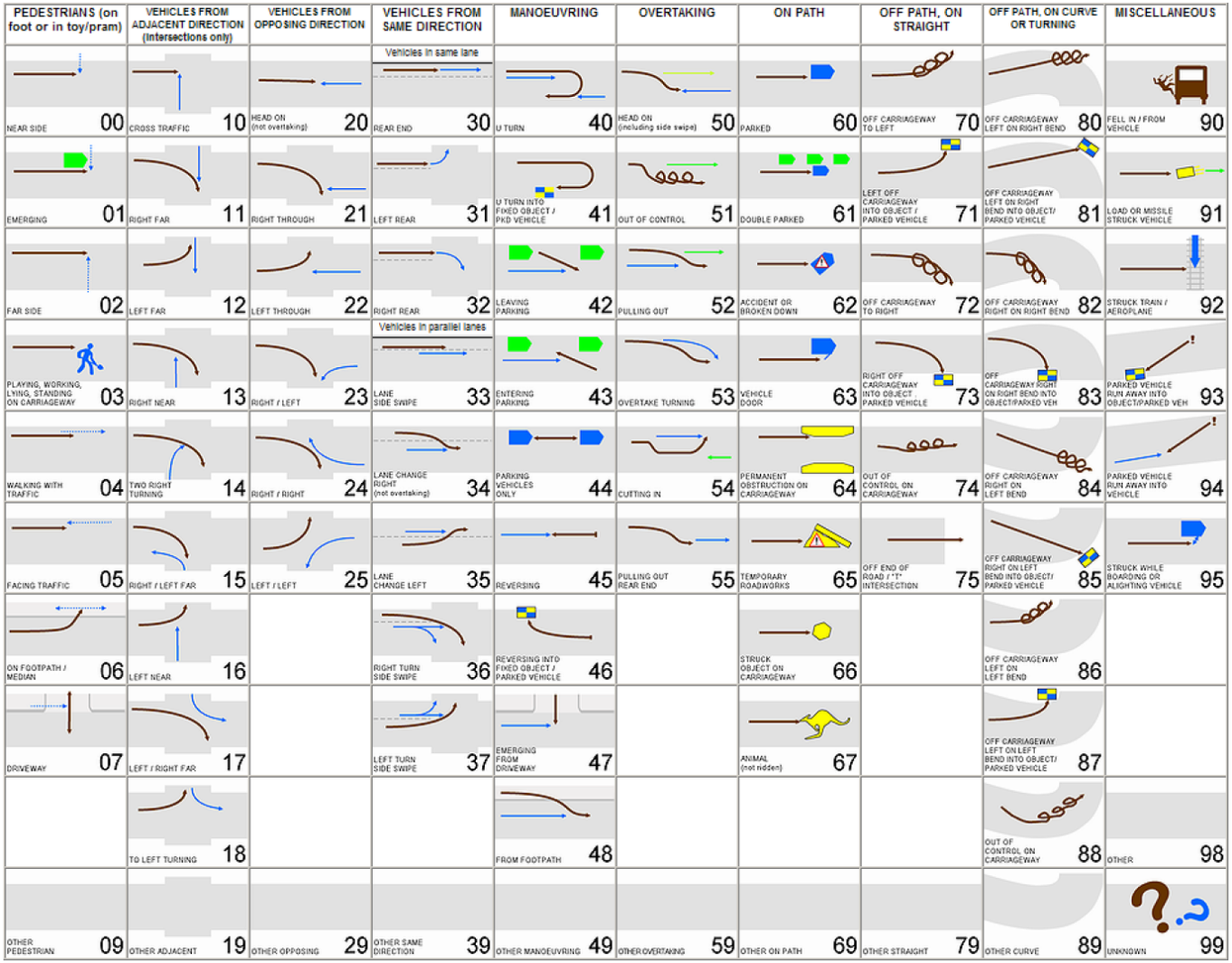
DATA AVAILABILITY

Finalised data is available for the 5 year period 2016 to 2020



Reporting year	Crash Id	Degree of crash	RUM - code	RUM - description	Type of location	Natural lighting	Longitude	Latitude	Number killed	Number injured
2017	1151388	Fatal	87	Off lft/lft bnd=>obj	2-way undivided	Darkness	151.507484	-33.110526	1	1
2019	1209075	Moderate Injury	20	Head on	T-junction	Darkness	151.503651	-33.110142		1
2020	1252355	Serious Injury	83	Off rt/rt bnd=>obj	2-way undivided	Darkness	151.501303	-33.109055		1
2016	1123680	Non-casualty (towaway)	30	Rear end	2-way undivided	Dusk	151.502252	-33.109521		
2016	1117328	Non-casualty (towaway)	49	Other manoeuvring	2-way undivided	Daylight	151.514707	-33.113567		
2017	1135196	Non-casualty (towaway)	81	Off left/rt bnd=>obj	2-way undivided	Daylight	151.507926	-33.110641		
2017	1150819	Serious Injury	71	Off rd left => obj	T-junction	Daylight	151.514509	-33.113498		1
2018	1176989	Non-casualty (towaway)	32	Right rear	T-junction	Daylight	151.503651	-33.110142		
2019	1191460	Non-casualty (towaway)	30	Rear end	T-junction	Daylight	151.502436	-33.109613		
2019	1216246	Fatal	0	Ped nearside	2-way undivided	Daylight	151.499427	-33.108496	1	2
2019	1219445	Minor/Other Injury	30	Rear end	2-way undivided	Daylight	151.498284	-33.107809		1
2020	1234380	Serious Injury	81	Off left/rt bnd=>obj	2-way undivided	Daylight	151.507779	-33.110581		1

Road user movement code table



Appendix D

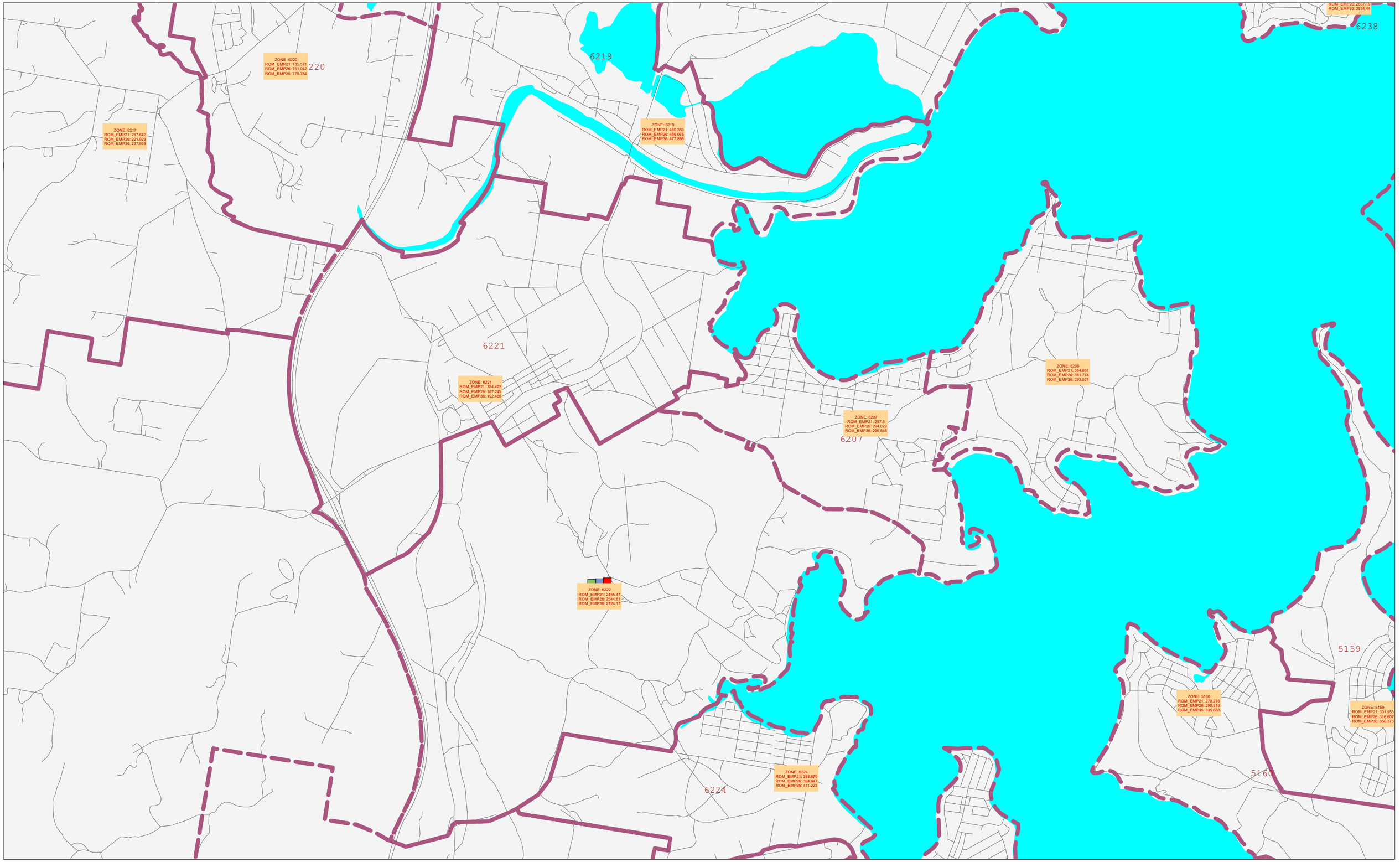
Strategic Travel Forecast Model (STFM) Data

Table D1: STFM Background Traffic Growth Rates Adopted in SIDRA Modelling

Intersection	Street	Approach	Annual Background Traffic Growth Rate (% p.a.)			
			2021-2026		2026-2036	
			AM Peak	PM Peak	AM Peak	PM Peak
Macquarie St/ Fishery Point Rd	Macquarie St	East	1.573%	2.243%	1.458%	0.582%
	Fishery Point Rd	South	1.146%	0.242%	0.442%	0.359%
	Macquarie St	West	0.505%	0.610%	1.594%	0.685%
Morisset Park Rd/ Trinity Point Dr/ Charles Ave	Morisset Park Rd	North	3.380%	1.000% [a]	1.000% [a]	1.014%
	Trinity Point Dr	East	1.000% [b]	1.000% [b]	1.000% [b]	1.000% [b]
	Charles Ave	South	1.000% [b]	1.000% [b]	1.000% [b]	1.000% [b]
Fishery Point Rd/ Morisset Park Rd	Fishery Point Rd	North	1.000% [b]	1.000% [b]	1.000% [b]	1.000% [b]
	Morisset Park Rd	East	0.231%	1.103%	1.361%	0.283%
	Fishery Point Rd	West	3.380%	1.000% [a]	1.000% [a]	1.911%
Fishery Point Rd/ Morisset Park Rd	Station St	North	1.166%	0.000%	0.812%	0.972%
	Fishery Point Rd	East	0.231%	1.103%	1.361%	0.283%
	Fishery Point Rd	West	0.420%	0.147%	0.874%	0.971%

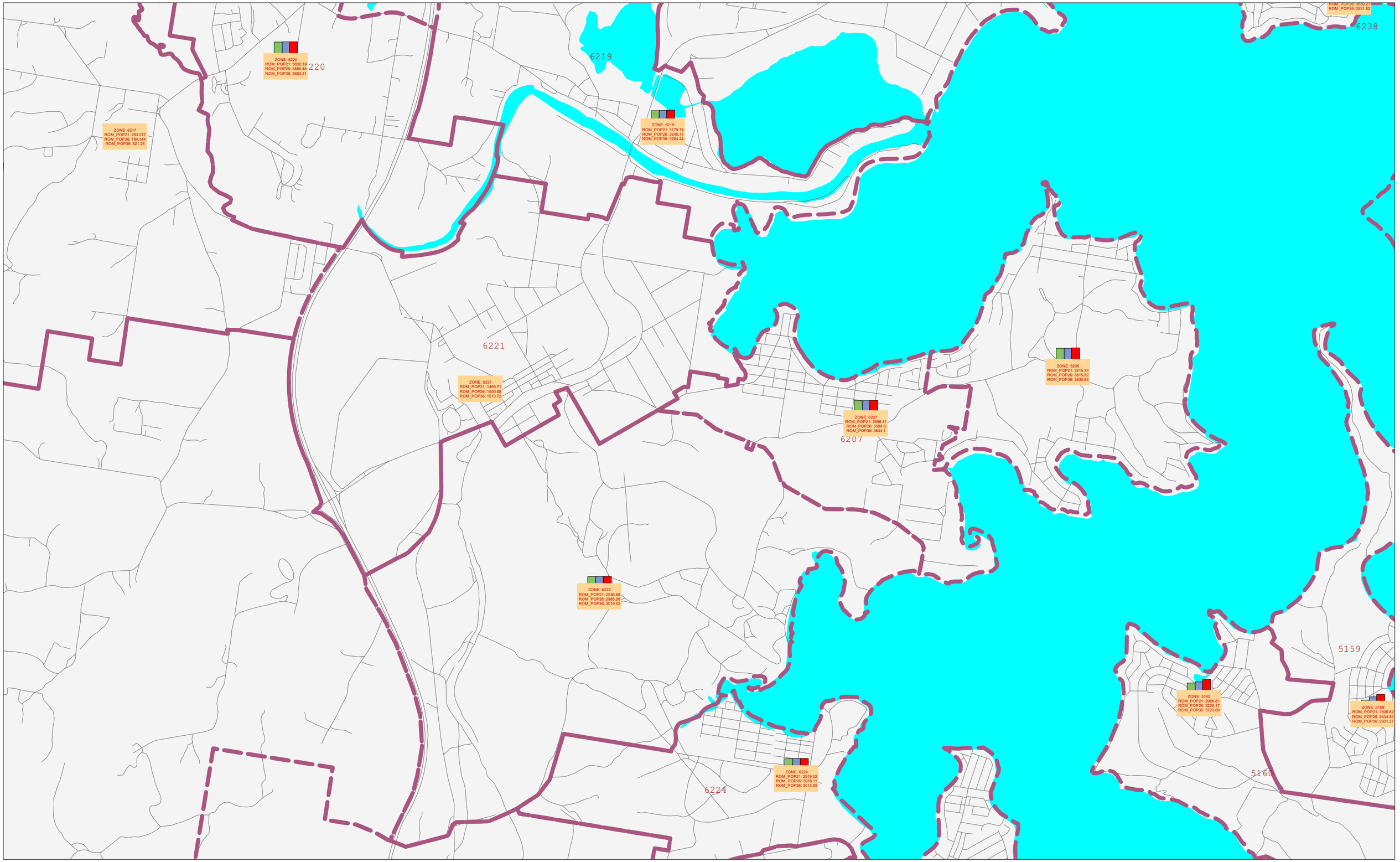
Notes:
a) Where STFM data presents a negative growth rate, an alternate growth rate of 1% p.a. has been adopted.
b) Where STFM growth plots are not provided for intersection approaches, a growth rate of 1% p.a. has been adopted.

LU_POPs&EMPs_ ZONAL_ DATA



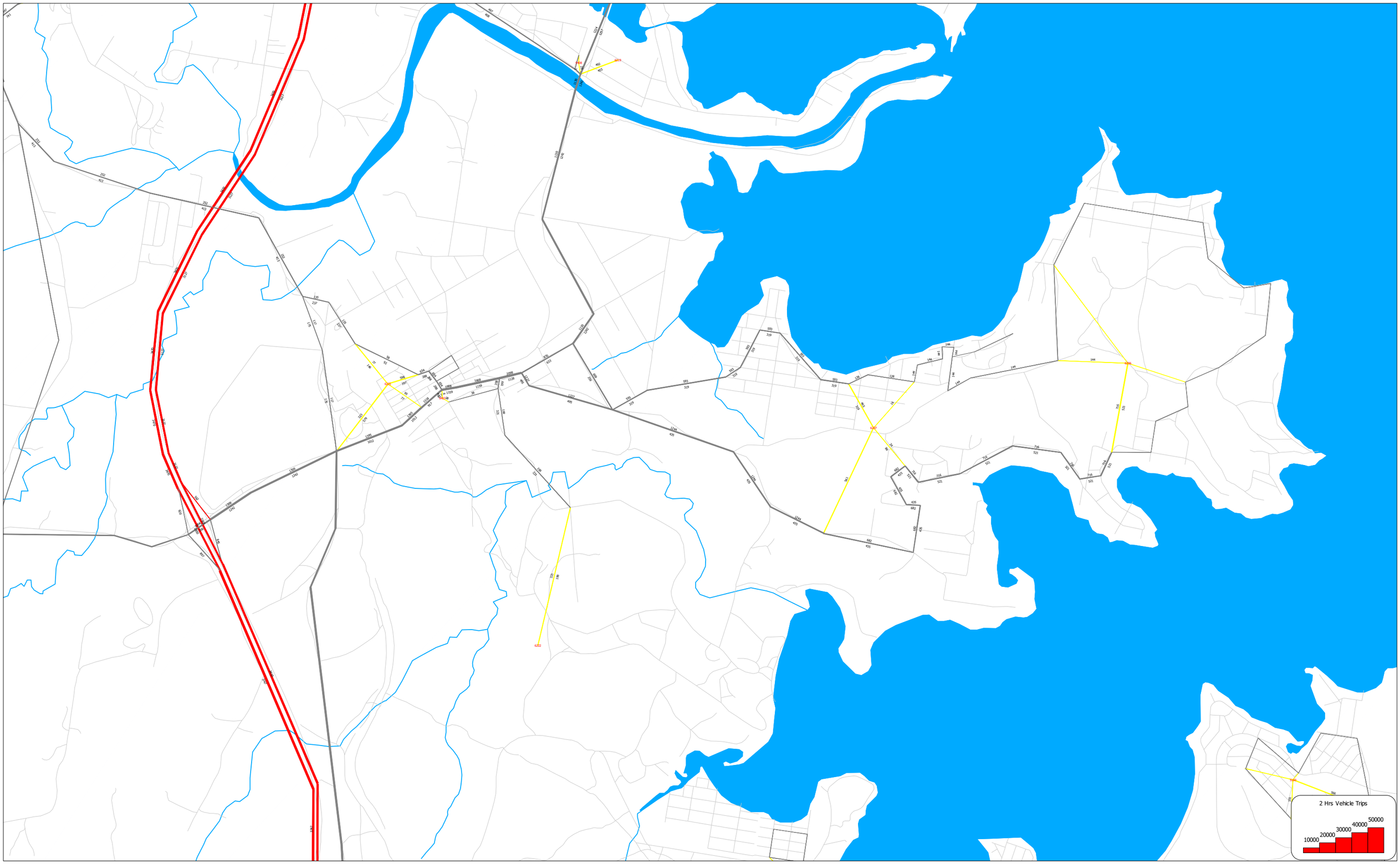
SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL(STFM) - ROM
Scenario 3652: STFM_ROM(TZP19ROMSTM3.8FMMV7.1)_4-6PM_2036(mf266)
2022-02-03 14:34 (jkim13)

LU_POPs&EMPs_ ZONAL_ DATA



SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL(STFM) - ROM
Scenario 3652: STFM_ROM(TZP19ROMSTM3.8FMMV7.1)_4-6PM_2036(mf266)
2022-02-03 14:36 (jkim13)

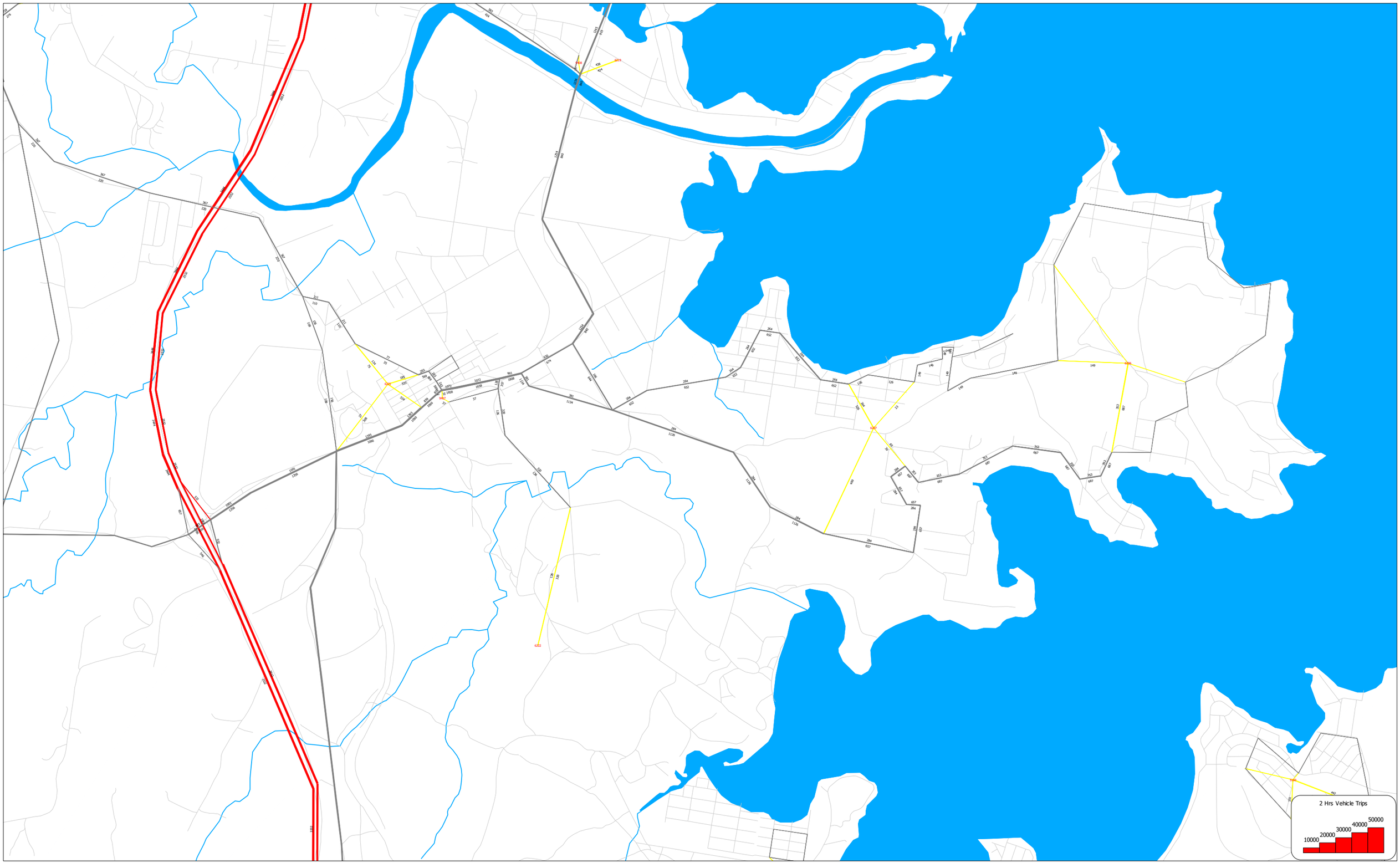
TRAFFIC VOLUMES__



SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL(STFM) - ROM
Scenario 2163: STFM_ROM(TZP19ROMSTM3.8FMMV7.1)_4-6PM_2021(mf255)
2022-02-03 14:14

LANE (1WAY):
1
2
3
4
5

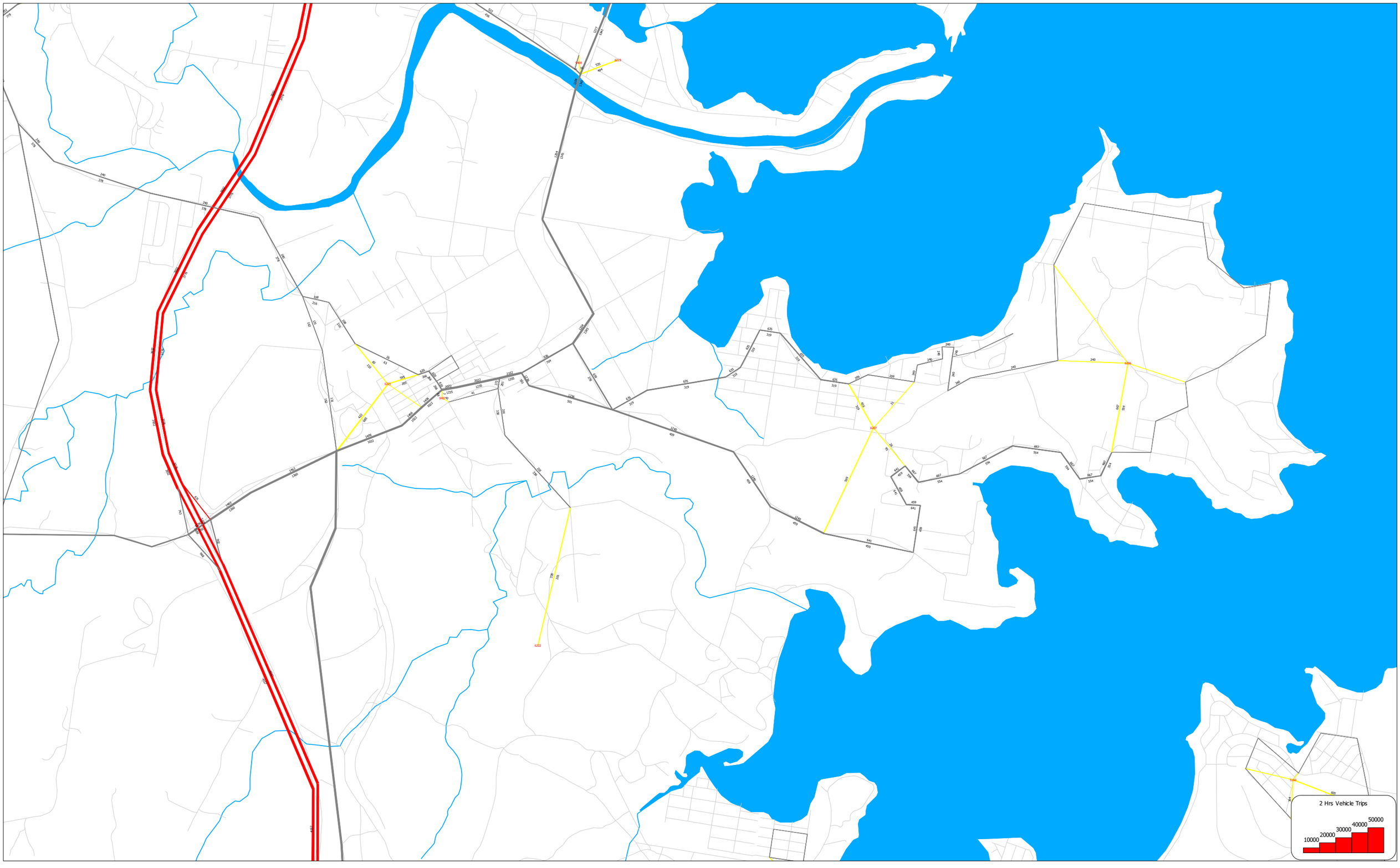
TRAFFIC VOLUMES__



SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL(STFM) - ROM
Scenario 2113: STFM_ROM(TZP19ROMSTM3.8FMMV7.1)_7-9AM_2021(mf205)
2022-02-03 14:11

LANE (1WAY):
1
2
3
4
5

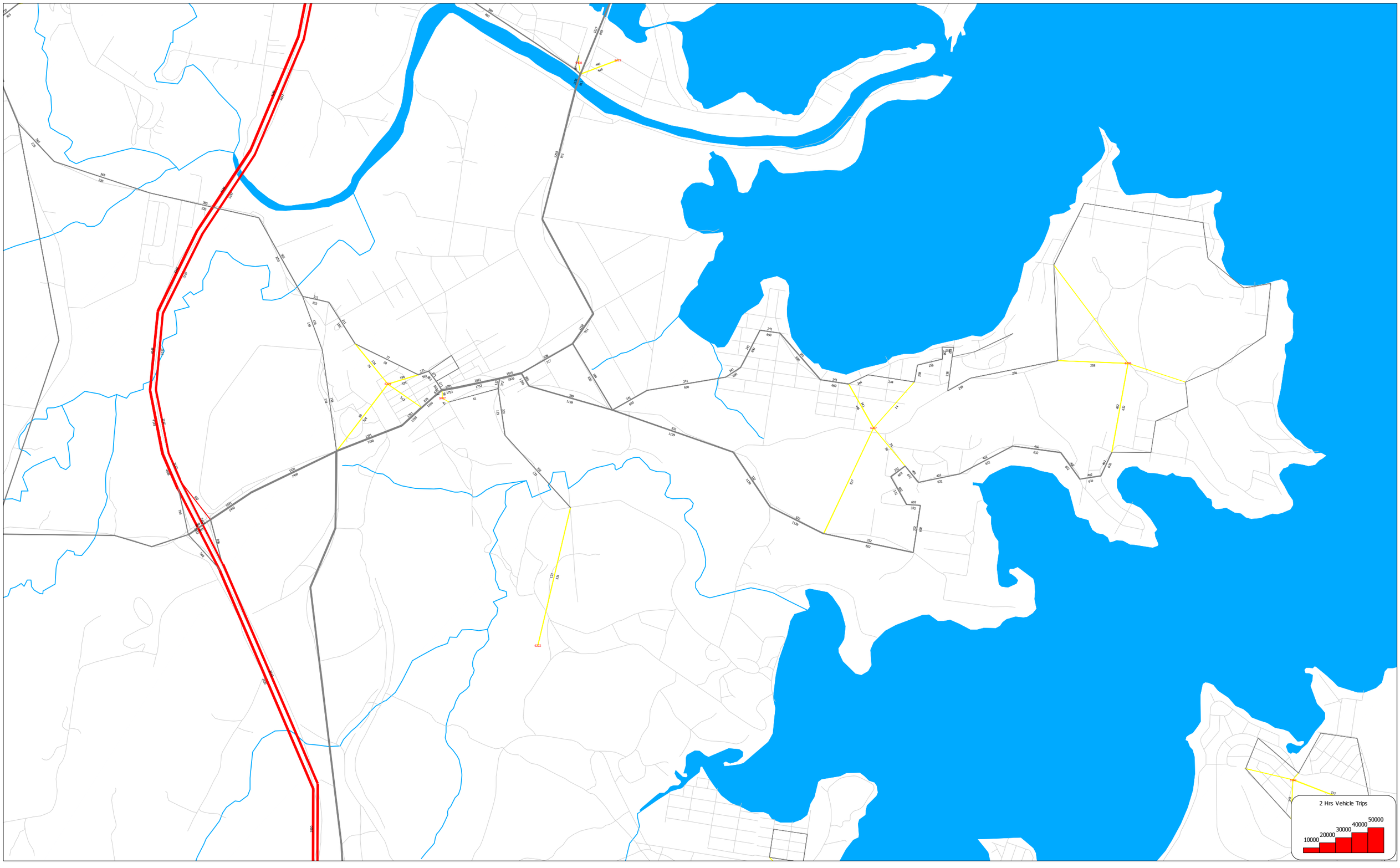
TRAFFIC VOLUMES__



SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL(STFM) - ROM
Scenario 2652: STFM_ROM(TZP19ROMSTM3.8FMMV7.1)_4-6PM_2026(mf264)
2022-02-03 14:14

LANE (1WAY):
1
2
3
4
5

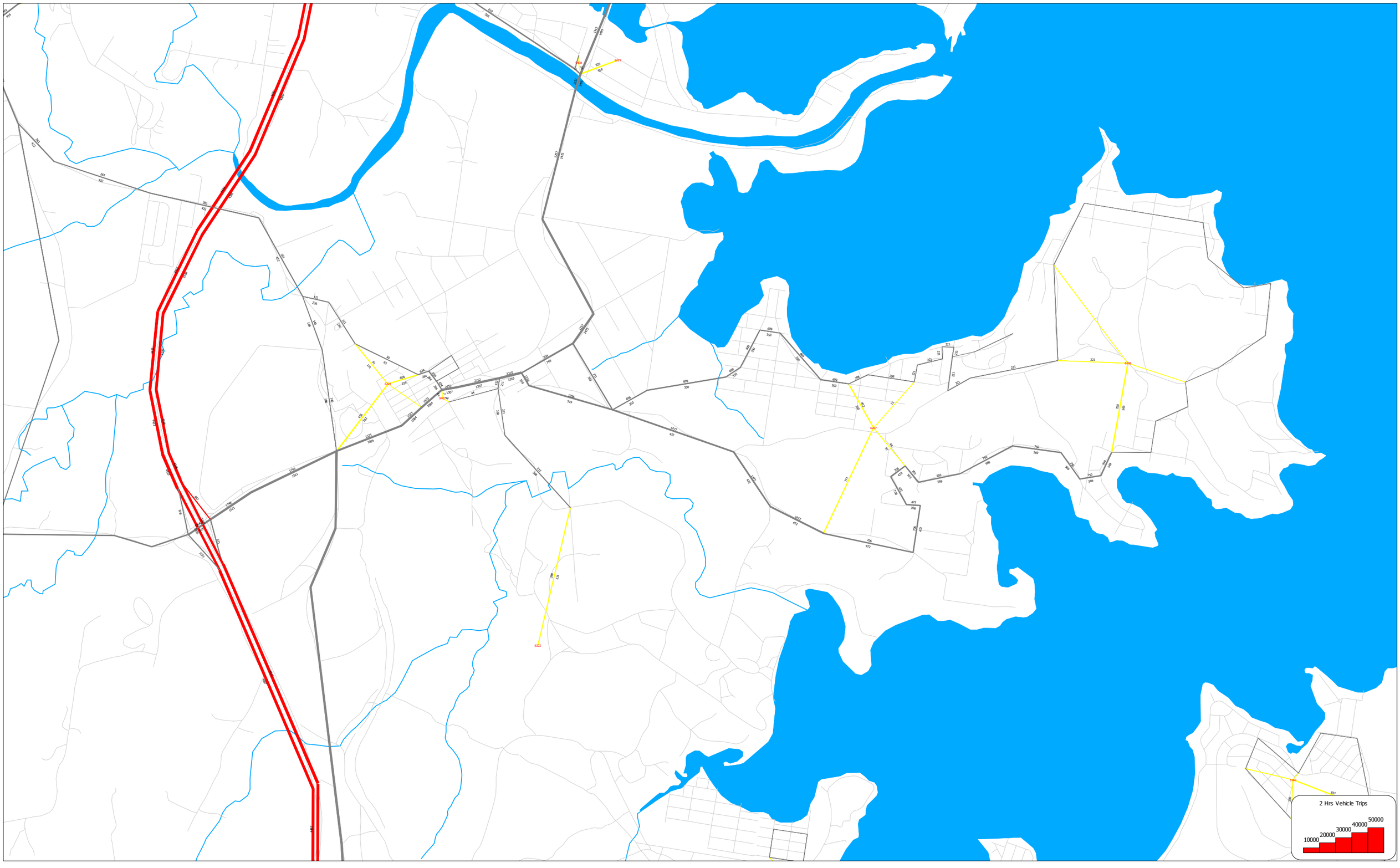
TRAFFIC VOLUMES__



SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL(STFM) - ROM
Scenario 2602: STFM_ROM(TZP19ROMSTM3.8FMMV7.1)_7-9AM_2026(mf214)
2022-02-03 14:14

LANE (1WAY):
1
2
3
4
5

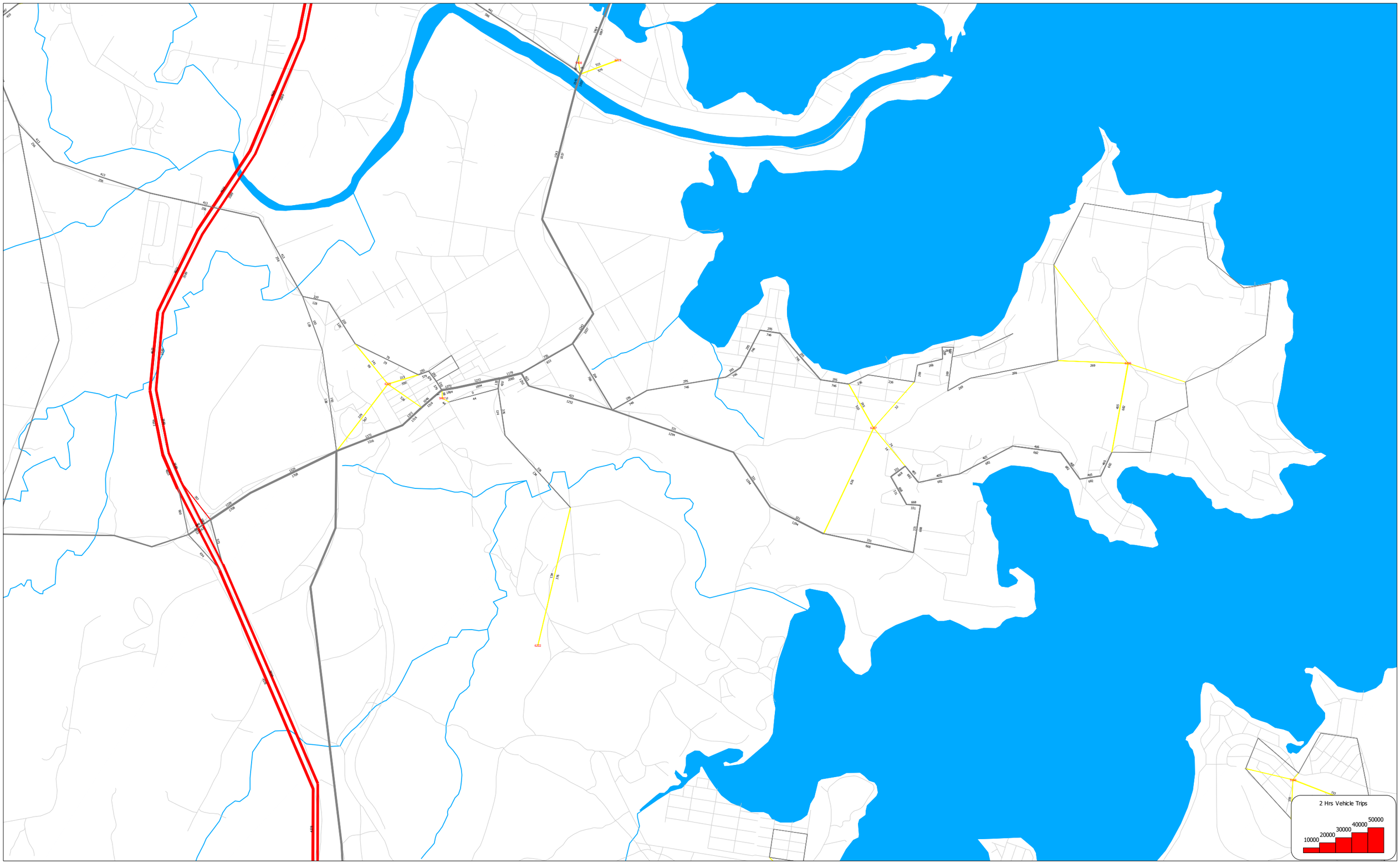
TRAFFIC VOLUMES__



SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL(STFM) - ROM
Scenario 3652: STFM_ROM(TZP19ROMSTM3.8FMMV7.1)_4-6PM_2036(mf266)
2022-02-03 14:15

LANE (1WAY):
1
2
3
4
5

TRAFFIC VOLUMES__



SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL(STFM) - ROM
Scenario 3602: STFM_ROM(TZP19ROMSTM3.8FMMV7.1)_7-9AM_2036(mf216)
2022-02-03 14:15

LANE (1WAY):
1
2
3
4
5

Appendix E

SIDRA Modelling Movement Summary Outputs

MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd Ex 815 (Site Folder: AM Ex 2021)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	633	22	666	3.5	* 0.757	21.5	LOS B	13.0	94.0	0.76	0.83	0.77	56.1
3	R2	121	9	127	7.4	0.316	38.0	LOS C	3.0	22.1	0.88	0.78	0.88	52.3
Approach		754	31	794	4.1	0.757	24.2	LOS B	13.0	94.0	0.78	0.82	0.79	55.6
East: Macquarie St														
4	L2	83	3	87	3.6	0.079	13.4	LOS A	1.0	7.0	0.43	0.67	0.43	56.8
5	T1	426	31	448	7.3	* 0.764	32.9	LOS C	11.7	87.4	0.96	0.89	1.03	47.6
Approach		509	34	536	6.7	0.764	29.8	LOS C	11.7	87.4	0.88	0.85	0.93	50.0
West: Macquarie St														
11	T1	301	23	317	7.6	0.266	7.6	LOS A	3.7	27.7	0.46	0.40	0.46	56.6
12	R2	264	26	278	9.8	0.307	35.4	LOS C	3.1	23.6	0.85	0.78	0.85	53.9
Approach		565	49	595	8.7	0.307	20.6	LOS B	3.7	27.7	0.64	0.58	0.64	54.7
All Vehicles		1828	114	1924	6.2	0.764	24.6	LOS B	13.0	94.0	0.76	0.75	0.78	54.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05
All Pedestrians		1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd Ex 815 (Site Folder: AM Ex 2021)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	14	1	15	7.1	0.013	4.4	LOS A	0.0	0.2	0.18	0.41	0.18	58.9
3	R2	1	0	1	0.0	0.013	9.0	LOS A	0.0	0.2	0.18	0.41	0.18	56.2
Approach		15	1	16	6.7	0.013	4.7	LOS A	0.0	0.2	0.18	0.41	0.18	58.9
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.039	3.9	LOS A	0.1	0.5	0.06	0.63	0.06	52.7
6	R2	50	2	53	4.0	0.039	8.8	LOS A	0.1	0.5	0.06	0.63	0.06	58.3
6u	U	1	0	1	0.0	0.039	10.8	LOS A	0.1	0.5	0.06	0.63	0.06	55.1
Approach		52	2	55	3.8	0.039	8.8	LOS A	0.1	0.5	0.06	0.63	0.06	58.2
North: Morisset Park Rd														
7	L2	36	4	38	11.1	0.032	4.0	LOS A	0.1	0.5	0.02	0.48	0.02	58.8
8	T1	6	0	6	0.0	0.032	4.1	LOS A	0.1	0.5	0.02	0.48	0.02	59.3
9u	U	3	2	3	66.7	0.032	11.6	LOS A	0.1	0.5	0.02	0.48	0.02	59.3
Approach		45	6	47	13.3	0.032	4.5	LOS A	0.1	0.5	0.02	0.48	0.02	58.9
All Vehicles		112	9	118	8.0	0.039	6.5	LOS A	0.1	0.5	0.06	0.54	0.06	58.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd Ex 815 (Site Folder: AM Ex 2021)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	179	2	188	1.1	0.120	0.3	LOS A	0.2	1.7	0.14	0.08	0.14	58.7
23	R2	25	0	26	0.0	0.120	7.1	LOS A	0.2	1.7	0.14	0.08	0.14	56.6
Approach		204	2	215	1.0	0.120	1.2	NA	0.2	1.7	0.14	0.08	0.14	58.5
NorthEast: Fishery Point Road														
24	L2	44	3	46	6.8	0.566	7.6	LOS A	3.9	28.2	0.55	0.91	0.85	50.1
26	R2	408	9	429	2.2	0.566	10.2	LOS A	3.9	28.2	0.55	0.91	0.85	49.8
Approach		452	12	476	2.7	0.566	10.0	LOS A	3.9	28.2	0.55	0.91	0.85	49.8
NorthWest: Fishery Point Rd														
27	L2	253	7	266	2.8	0.216	5.6	LOS A	0.0	0.0	0.00	0.39	0.00	54.9
28	T1	128	1	135	0.8	0.216	0.1	LOS A	0.0	0.0	0.00	0.39	0.00	56.5
Approach		381	8	401	2.1	0.216	3.8	NA	0.0	0.0	0.00	0.39	0.00	55.5
All Vehicles		1037	22	1092	2.1	0.566	6.0	NA	3.9	28.2	0.27	0.55	0.40	53.4

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St Ex 815 (Site Folder: AM Ex 2021)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 62 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	542	2	571	0.4	0.530	14.4	LOS A	10.8	75.7	0.67	0.78	0.67	53.1
6b	R3	16	0	17	0.0	* 0.039	19.1	LOS B	0.3	2.2	0.71	0.70	0.71	44.2
Approach		558	2	587	0.4	0.530	14.6	LOS B	10.8	75.7	0.67	0.78	0.67	52.7
NorthEast: Station St														
24b	L3	23	0	24	0.0	0.034	16.2	LOS B	0.4	2.9	0.60	0.67	0.60	45.0
26	R2	229	3	241	1.3	* 0.542	27.5	LOS B	6.6	46.8	0.92	0.81	0.92	39.0
Approach		252	3	265	1.2	0.542	26.5	LOS B	6.6	46.8	0.89	0.79	0.89	39.5
NorthWest: Fishery Point Rd														
27	L2	113	4	119	3.5	0.177	20.7	LOS B	2.5	17.7	0.71	0.75	0.71	43.5
27a	L1	343	7	361	2.0	* 0.516	22.0	LOS B	8.7	61.7	0.83	0.80	0.83	47.6
Approach		456	11	480	2.4	0.516	21.7	LOS B	8.7	61.7	0.80	0.79	0.80	46.5
All Vehicles		1266	16	1333	1.3	0.542	19.5	LOS B	10.8	75.7	0.76	0.78	0.76	47.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	6	6	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	4	4	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
All Pedestrians		0	11	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13

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

MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd Ex 1500 (Site Folder: PM Ex 2021)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 87 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	439	19	462	4.3	0.602	21.7	LOS B	8.2	59.3	0.73	0.80	0.73	56.1
3	R2	105	5	111	4.8	* 0.535	46.8	LOS D	2.9	20.8	0.99	0.78	0.99	50.9
Approach		544	24	573	4.4	0.602	26.5	LOS B	8.2	59.3	0.78	0.79	0.78	55.2
East: Macquarie St														
4	L2	131	1	138	0.8	0.135	15.6	LOS B	1.7	12.1	0.51	0.70	0.51	56.4
5	T1	368	25	387	6.8	* 0.564	23.8	LOS B	8.1	60.0	0.85	0.74	0.85	50.5
Approach		499	26	525	5.2	0.564	21.6	LOS B	8.1	60.0	0.76	0.73	0.76	52.9
West: Macquarie St														
11	T1	376	18	396	4.8	0.280	3.7	LOS A	3.2	23.6	0.34	0.30	0.34	58.3
12	R2	607	25	639	4.1	* 0.571	33.0	LOS C	7.1	51.2	0.89	0.83	0.89	54.3
Approach		983	43	1035	4.4	0.571	21.8	LOS B	7.1	51.2	0.68	0.63	0.68	55.0
All Vehicles		2026	93	2133	4.6	0.602	23.0	LOS B	8.2	60.0	0.73	0.70	0.73	54.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06
All Pedestrians		1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd Ex 1500 (Site Folder: PM Ex 2021)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	19	2	20	10.5	0.017	4.4	LOS A	0.0	0.2	0.14	0.40	0.14	59.0
3	R2	1	0	1	0.0	0.017	8.9	LOS A	0.0	0.2	0.14	0.40	0.14	56.4
Approach		20	2	21	10.0	0.017	4.6	LOS A	0.0	0.2	0.14	0.40	0.14	58.9
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.027	4.0	LOS A	0.0	0.4	0.12	0.60	0.12	52.6
6	R2	31	4	33	12.9	0.027	9.0	LOS A	0.0	0.4	0.12	0.60	0.12	58.1
Approach		32	4	34	12.5	0.027	8.8	LOS A	0.0	0.4	0.12	0.60	0.12	58.1
North: Morisset Park Rd														
7	L2	55	4	58	7.3	0.053	3.9	LOS A	0.1	0.8	0.02	0.46	0.02	58.9
8	T1	24	0	25	0.0	0.053	4.1	LOS A	0.1	0.8	0.02	0.46	0.02	59.3
9u	U	2	1	2	50.0	0.053	11.4	LOS A	0.1	0.8	0.02	0.46	0.02	59.4
Approach		81	5	85	6.2	0.053	4.2	LOS A	0.1	0.8	0.02	0.46	0.02	59.0
All Vehicles		133	11	140	8.3	0.053	5.4	LOS A	0.1	0.8	0.06	0.49	0.06	58.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd Ex 1500 (Site Folder: PM Ex 2021)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	186	2	196	1.1	0.157	1.4	LOS A	0.6	4.3	0.31	0.14	0.31	57.3
23	R2	44	0	46	0.0	0.157	9.2	LOS A	0.6	4.3	0.31	0.14	0.31	55.2
Approach		230	2	242	0.9	0.157	2.9	NA	0.6	4.3	0.31	0.14	0.31	56.9
NorthEast: Fishery Point Road														
24	L2	44	5	46	11.4	0.448	7.5	LOS A	2.3	16.5	0.54	0.86	0.77	49.5
26	R2	253	4	266	1.6	0.448	11.1	LOS A	2.3	16.5	0.54	0.86	0.77	49.4
Approach		297	9	313	3.0	0.448	10.5	LOS A	2.3	16.5	0.54	0.86	0.77	49.4
NorthWest: Fishery Point Rd														
27	L2	475	8	500	1.7	0.365	5.7	LOS A	0.0	0.0	0.00	0.43	0.00	54.6
28	T1	171	1	180	0.6	0.365	0.1	LOS A	0.0	0.0	0.00	0.43	0.00	56.0
Approach		646	9	680	1.4	0.365	4.2	NA	0.0	0.0	0.00	0.43	0.00	54.9
All Vehicles		1173	20	1235	1.7	0.448	5.5	NA	2.3	16.5	0.20	0.48	0.26	53.8

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St Ex 1500 (Site Folder: PM Ex 2021)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 59 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	397	6	418	1.5	* 0.395	13.3	LOS A	6.8	48.5	0.60	0.75	0.60	53.7
6b	R3	19	1	20	5.3	0.023	13.2	LOS A	0.3	1.9	0.46	0.69	0.46	47.6
Approach		416	7	438	1.7	0.395	13.3	LOS A	6.8	48.5	0.60	0.74	0.60	53.4
NorthEast: Station St														
24b	L3	20	1	21	5.0	0.056	24.7	LOS B	0.5	3.5	0.80	0.69	0.80	40.1
26	R2	165	4	174	2.4	* 0.401	25.8	LOS B	4.4	31.3	0.89	0.78	0.89	39.6
Approach		185	5	195	2.7	0.401	25.7	LOS B	4.4	31.3	0.88	0.77	0.88	39.7
NorthWest: Fishery Point Rd														
27	L2	163	4	172	2.5	0.168	13.2	LOS A	2.4	17.2	0.51	0.72	0.51	47.8
27a	L1	330	9	347	2.7	0.331	13.0	LOS A	5.4	38.9	0.58	0.73	0.58	53.8
Approach		493	13	519	2.6	0.331	13.0	LOS A	5.4	38.9	0.56	0.73	0.56	51.7
All Vehicles		1094	25	1152	2.3	0.401	15.3	LOS B	6.8	48.5	0.63	0.74	0.63	49.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	1	1	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	2	2	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
All Pedestrians		0	3	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13

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

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MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S1 815 (Site Folder: S1 - AM Base Case 2024)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	655	23	689	3.5	* 0.784	23.1	LOS B	14.3	102.9	0.78	0.84	0.81	55.9
3	R2	125	9	132	7.2	0.311	37.1	LOS C	3.0	22.5	0.87	0.78	0.87	52.4
Approach		780	32	821	4.1	0.784	25.4	LOS B	14.3	102.9	0.79	0.83	0.82	55.4
East: Macquarie St														
4	L2	87	3	92	3.4	0.082	13.0	LOS A	1.0	7.1	0.42	0.67	0.42	56.9
5	T1	447	33	471	7.4	* 0.807	35.5	LOS C	13.0	96.6	0.98	0.94	1.10	46.9
Approach		534	36	562	6.7	0.807	31.8	LOS C	13.0	96.6	0.89	0.90	0.99	49.4
West: Macquarie St														
11	T1	301	23	317	7.6	0.271	8.0	LOS A	3.8	28.6	0.48	0.41	0.48	56.4
12	R2	268	26	282	9.7	0.325	36.4	LOS C	3.2	24.4	0.86	0.78	0.86	53.8
Approach		569	49	599	8.6	0.325	21.4	LOS B	3.8	28.6	0.66	0.59	0.66	54.6
All Vehicles		1883	117	1982	6.2	0.807	26.0	LOS B	14.3	102.9	0.78	0.78	0.82	54.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05
All Pedestrians		1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S1 815 (Site Folder: S1 - AM Base Case 2024)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	14	1	15	7.1	0.013	4.4	LOS A	0.0	0.2	0.18	0.41	0.18	58.9
3	R2	1	0	1	0.0	0.013	9.0	LOS A	0.0	0.2	0.18	0.41	0.18	56.2
Approach		15	1	16	6.7	0.013	4.7	LOS A	0.0	0.2	0.18	0.41	0.18	58.9
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.040	3.9	LOS A	0.1	0.5	0.07	0.63	0.07	52.7
6	R2	51	2	54	3.9	0.040	8.8	LOS A	0.1	0.5	0.07	0.63	0.07	58.3
6u	U	1	0	1	0.0	0.040	10.9	LOS A	0.1	0.5	0.07	0.63	0.07	55.1
Approach		53	2	56	3.8	0.040	8.8	LOS A	0.1	0.5	0.07	0.63	0.07	58.2
North: Morisset Park Rd														
7	L2	39	4	41	10.3	0.034	4.0	LOS A	0.1	0.5	0.02	0.48	0.02	58.9
8	T1	7	0	7	0.0	0.034	4.1	LOS A	0.1	0.5	0.02	0.48	0.02	59.3
9u	U	3	2	3	66.7	0.034	11.6	LOS A	0.1	0.5	0.02	0.48	0.02	59.3
Approach		49	6	52	12.2	0.034	4.5	LOS A	0.1	0.5	0.02	0.48	0.02	59.0
All Vehicles		117	9	123	7.7	0.040	6.4	LOS A	0.1	0.5	0.06	0.54	0.06	58.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd 24 S1 815 (Site Folder: S1 - AM Base Case 2024)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	180	2	189	1.1	0.099	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
23	R2	25	0	26	0.0	0.023	7.1	LOS A	0.1	0.7	0.47	0.62	0.47	52.0
Approach		205	2	216	1.0	0.099	0.9	NA	0.1	0.7	0.06	0.08	0.06	58.9
NorthEast: Fishery Point Road														
24	L2	45	3	47	6.7	0.034	6.1	LOS A	0.1	1.0	0.24	0.55	0.24	52.6
26	R2	420	9	442	2.1	0.424	9.3	LOS A	3.1	22.3	0.66	0.87	0.84	50.2
Approach		465	12	489	2.6	0.424	9.0	LOS A	3.1	22.3	0.62	0.83	0.78	50.4
NorthWest: Fishery Point Rd														
27	L2	279	8	294	2.9	0.238	5.6	LOS A	0.0	0.0	0.00	0.39	0.00	54.9
28	T1	141	1	148	0.7	0.238	0.1	LOS A	0.0	0.0	0.00	0.39	0.00	56.5
Approach		420	9	442	2.1	0.238	3.8	NA	0.0	0.0	0.00	0.39	0.00	55.4
All Vehicles		1090	23	1147	2.1	0.424	5.5	NA	3.1	22.3	0.27	0.52	0.34	53.8

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S1 815 (Site Folder: S1 - AM Base Case 2024)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 62 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	546	2	575	0.4	0.550	15.2	LOS B	11.3	79.5	0.69	0.79	0.69	52.5
6b	R3	16	0	17	0.0	* 0.041	19.8	LOS B	0.3	2.3	0.73	0.70	0.73	43.8
Approach		562	2	592	0.4	0.550	15.3	LOS B	11.3	79.5	0.69	0.78	0.69	52.2
NorthEast: Station St														
24b	L3	24	0	25	0.0	0.034	15.6	LOS B	0.4	3.0	0.58	0.67	0.58	45.4
26	R2	237	3	249	1.3	* 0.525	26.6	LOS B	6.7	47.5	0.91	0.81	0.91	39.4
Approach		261	3	275	1.1	0.525	25.6	LOS B	6.7	47.5	0.88	0.79	0.88	39.9
NorthWest: Fishery Point Rd														
27	L2	114	4	120	3.5	0.187	21.5	LOS B	2.5	18.3	0.73	0.75	0.73	43.1
27a	L1	347	7	365	2.0	* 0.546	23.0	LOS B	9.0	64.3	0.85	0.81	0.85	47.0
Approach		461	11	485	2.4	0.546	22.6	LOS B	9.0	64.3	0.82	0.80	0.82	46.0
All Vehicles		1284	16	1352	1.2	0.550	20.0	LOS B	11.3	79.5	0.78	0.79	0.78	47.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	6	6	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	4	4	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
All Pedestrians		0	11	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13

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

MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S1 1500 (Site Folder: S1 - PM Base Case 2024)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 87 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	442	19	465	4.3	0.634	23.2	LOS B	8.6	62.7	0.76	0.81	0.76	55.8
3	R2	106	5	112	4.7	* 0.600	48.5	LOS D	3.0	21.6	1.00	0.80	1.05	50.6
Approach		548	24	577	4.4	0.634	28.1	LOS B	8.6	62.7	0.81	0.81	0.82	54.9
East: Macquarie St														
4	L2	142	3	149	2.1	0.145	15.2	LOS B	1.8	13.0	0.50	0.70	0.50	56.5
5	T1	399	33	420	8.3	* 0.581	22.6	LOS B	8.7	64.9	0.84	0.73	0.84	50.9
Approach		541	36	569	6.7	0.581	20.7	LOS B	8.7	64.9	0.75	0.73	0.75	53.2
West: Macquarie St														
11	T1	376	18	396	4.8	0.276	3.4	LOS A	3.1	22.5	0.33	0.29	0.33	58.4
12	R2	608	26	640	4.3	* 0.594	34.0	LOS C	7.2	52.3	0.91	0.83	0.91	54.2
Approach		984	44	1036	4.5	0.594	22.3	LOS B	7.2	52.3	0.69	0.62	0.69	54.9
All Vehicles		2073	104	2182	5.0	0.634	23.4	LOS B	8.7	64.9	0.74	0.70	0.74	54.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06
All Pedestrians		1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S1 1500 (Site Folder: S1 - PM Base Case 2024)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	20	2	21	10.0	0.018	4.4	LOS A	0.0	0.3	0.14	0.40	0.14	59.0
3	R2	1	0	1	0.0	0.018	8.9	LOS A	0.0	0.3	0.14	0.40	0.14	56.4
Approach		21	2	22	9.5	0.018	4.6	LOS A	0.0	0.3	0.14	0.40	0.14	59.0
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.028	4.0	LOS A	0.1	0.4	0.12	0.61	0.12	52.6
6	R2	32	4	34	12.5	0.028	9.0	LOS A	0.1	0.4	0.12	0.61	0.12	58.1
Approach		33	4	35	12.1	0.028	8.8	LOS A	0.1	0.4	0.12	0.61	0.12	58.1
North: Morisset Park Rd														
7	L2	57	4	60	7.0	0.053	3.9	LOS A	0.1	0.8	0.02	0.46	0.02	58.9
8	T1	25	0	26	0.0	0.053	4.1	LOS A	0.1	0.8	0.02	0.46	0.02	59.3
9u	U	1	0	1	0.0	0.053	10.8	LOS A	0.1	0.8	0.02	0.46	0.02	59.7
Approach		83	4	87	4.8	0.053	4.1	LOS A	0.1	0.8	0.02	0.46	0.02	59.0
All Vehicles		137	10	144	7.3	0.053	5.3	LOS A	0.1	0.8	0.06	0.48	0.06	58.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S1 1500 (Site Folder: S1 - PM Base Case 2024)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	193	3	203	1.6	0.106	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
23	R2	46	0	48	0.0	0.059	8.8	LOS A	0.2	1.6	0.59	0.76	0.59	50.9
Approach		239	3	252	1.3	0.106	1.7	NA	0.2	1.6	0.11	0.15	0.11	58.0
NorthEast: Fishery Point Road														
24	L2	15	5	16	33.3	0.014	6.7	LOS A	0.1	0.5	0.29	0.54	0.29	51.4
26	R2	261	4	275	1.5	0.330	10.2	LOS A	1.9	13.3	0.68	0.91	0.81	49.6
Approach		276	9	291	3.3	0.330	10.0	LOS A	1.9	13.3	0.66	0.89	0.78	49.7
NorthWest: Fishery Point Rd														
27	L2	489	8	515	1.6	0.376	5.7	LOS A	0.0	0.0	0.00	0.43	0.00	54.6
28	T1	176	1	185	0.6	0.376	0.1	LOS A	0.0	0.0	0.00	0.43	0.00	56.0
Approach		665	9	700	1.4	0.376	4.2	NA	0.0	0.0	0.00	0.43	0.00	54.9
All Vehicles		1180	21	1242	1.8	0.376	5.1	NA	1.9	13.3	0.18	0.48	0.21	54.2

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S1 1500 (Site Folder: S1 - PM Base Case 2024)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 59 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	410	6	432	1.5	* 0.408	13.4	LOS A	7.1	50.6	0.61	0.75	0.61	53.6
6b	R3	20	1	21	5.0	0.024	13.2	LOS A	0.3	2.0	0.46	0.69	0.46	47.6
Approach		430	7	453	1.6	0.408	13.4	LOS A	7.1	50.6	0.60	0.75	0.60	53.3
NorthEast: Station St														
24b	L3	20	1	21	5.0	0.056	24.7	LOS B	0.5	3.5	0.80	0.69	0.80	40.1
26	R2	165	4	174	2.4	* 0.401	25.8	LOS B	4.4	31.3	0.89	0.78	0.89	39.6
Approach		185	5	195	2.7	0.401	25.7	LOS B	4.4	31.3	0.88	0.77	0.88	39.7
NorthWest: Fishery Point Rd														
27	L2	164	4	173	2.4	0.169	13.2	LOS A	2.4	17.3	0.51	0.72	0.51	47.8
27a	L1	331	9	348	2.7	0.332	13.0	LOS A	5.5	39.1	0.58	0.73	0.58	53.8
Approach		495	13	521	2.6	0.332	13.0	LOS A	5.5	39.1	0.56	0.73	0.56	51.7
All Vehicles		1110	25	1168	2.3	0.408	15.3	LOS B	7.1	50.6	0.63	0.74	0.63	49.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	1	1	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	2	2	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
All Pedestrians		0	3	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13

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

MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S4 815 (Site Folder: S4 - AM Base Case 2034)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	684	24	720	3.5	* 0.868	34.1	LOS C	19.1	137.7	0.86	0.92	1.01	54.2
3	R2	131	10	138	7.6	0.379	40.2	LOS C	3.3	24.9	0.91	0.79	0.91	51.9
Approach		815	34	858	4.2	0.868	35.1	LOS C	19.1	137.7	0.87	0.90	1.00	53.9
East: Macquarie St														
4	L2	100	4	105	4.0	0.094	13.1	LOS A	1.1	8.3	0.43	0.68	0.43	56.9
5	T1	511	37	538	7.2	* 0.861	38.4	LOS C	15.9	117.9	0.98	1.01	1.18	46.1
Approach		611	41	643	6.7	0.861	34.2	LOS C	15.9	117.9	0.89	0.96	1.05	48.8
West: Macquarie St														
11	T1	354	27	373	7.6	0.302	6.9	LOS A	4.3	31.8	0.45	0.40	0.45	56.9
12	R2	311	31	327	10.0	0.378	36.9	LOS C	3.8	28.8	0.87	0.79	0.87	53.7
Approach		665	58	700	8.7	0.378	20.9	LOS B	4.3	31.8	0.65	0.58	0.65	54.6
All Vehicles		2091	133	2201	6.4	0.868	30.3	LOS C	19.1	137.7	0.80	0.82	0.90	53.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05
All Pedestrians		1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S4 815 (Site Folder: S4 - AM Base Case 2034)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	16	1	17	6.3	0.015	4.5	LOS A	0.0	0.2	0.19	0.41	0.19	58.9
3	R2	1	0	1	0.0	0.015	9.0	LOS A	0.0	0.2	0.19	0.41	0.19	56.2
Approach		17	1	18	5.9	0.015	4.7	LOS A	0.0	0.2	0.19	0.41	0.19	58.9
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.043	3.9	LOS A	0.1	0.6	0.06	0.63	0.06	52.7
6	R2	56	2	59	3.6	0.043	8.8	LOS A	0.1	0.6	0.06	0.63	0.06	58.3
6u	U	1	0	1	0.0	0.043	10.8	LOS A	0.1	0.6	0.06	0.63	0.06	55.1
Approach		58	2	61	3.4	0.043	8.8	LOS A	0.1	0.6	0.06	0.63	0.06	58.2
North: Morisset Park Rd														
7	L2	44	5	46	11.4	0.037	4.0	LOS A	0.1	0.5	0.02	0.47	0.02	58.8
8	T1	7	0	7	0.0	0.037	4.1	LOS A	0.1	0.5	0.02	0.47	0.02	59.2
9u	U	2	2	2	100.0	0.037	11.9	LOS A	0.1	0.5	0.02	0.47	0.02	59.1
Approach		53	7	56	13.2	0.037	4.3	LOS A	0.1	0.5	0.02	0.47	0.02	58.9
All Vehicles		128	10	135	7.8	0.043	6.4	LOS A	0.1	0.6	0.06	0.54	0.06	58.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S4 815 (Site Folder: S4 - AM Base Case 2034)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	205	2	216	1.0	0.112	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	29	0	31	0.0	0.028	7.3	LOS A	0.1	0.8	0.49	0.64	0.49	52.0
Approach		234	2	246	0.9	0.112	0.9	NA	0.1	0.8	0.06	0.08	0.06	58.8
NorthEast: Fishery Point Road														
24	L2	50	3	53	6.0	0.038	6.1	LOS A	0.2	1.1	0.26	0.55	0.26	52.6
26	R2	460	8	484	1.7	0.497	10.5	LOS A	4.1	29.3	0.71	0.97	1.03	49.4
Approach		510	11	537	2.2	0.497	10.1	LOS A	4.1	29.3	0.66	0.93	0.95	49.7
NorthWest: Fishery Point Rd														
27	L2	307	9	323	2.9	0.262	5.6	LOS A	0.0	0.0	0.00	0.39	0.00	54.9
28	T1	155	1	163	0.6	0.262	0.1	LOS A	0.0	0.0	0.00	0.39	0.00	56.5
Approach		462	10	486	2.2	0.262	3.8	NA	0.0	0.0	0.00	0.39	0.00	55.4
All Vehicles		1206	23	1269	1.9	0.497	5.9	NA	4.1	29.3	0.29	0.56	0.42	53.4

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S4 815 (Site Folder: S4 - AM Base Case 2034)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 62 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	620	2	653	0.3	0.637	15.8	LOS B	13.7	95.9	0.74	0.81	0.74	52.0
6b	R3	18	0	19	0.0	* 0.049	20.6	LOS B	0.4	2.6	0.75	0.70	0.75	43.4
Approach		638	2	672	0.3	0.637	15.9	LOS B	13.7	95.9	0.74	0.80	0.74	51.8
NorthEast: Station St														
24b	L3	26	0	27	0.0	0.037	15.6	LOS B	0.5	3.2	0.58	0.67	0.58	45.4
26	R2	256	3	269	1.2	* 0.567	26.9	LOS B	7.3	51.9	0.92	0.81	0.92	39.3
Approach		282	3	297	1.1	0.567	25.8	LOS B	7.3	51.9	0.89	0.80	0.89	39.8
NorthWest: Fishery Point Rd														
27	L2	124	4	131	3.2	0.203	21.6	LOS B	2.8	20.0	0.73	0.75	0.73	43.1
27a	L1	378	8	398	2.1	* 0.595	23.4	LOS B	10.1	71.8	0.87	0.82	0.87	46.8
Approach		502	12	528	2.4	0.595	22.9	LOS B	10.1	71.8	0.84	0.80	0.84	45.8
All Vehicles		1422	17	1497	1.2	0.637	20.4	LOS B	13.7	95.9	0.80	0.80	0.80	46.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	6	6	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	4	4	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
All Pedestrians		0	11	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13

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

MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S4 1500 (Site Folder: S4 - PM Base Case 2034)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 87 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	458	20	482	4.4	0.642	22.7	LOS B	8.9	64.3	0.76	0.81	0.76	55.9
3	R2	109	5	115	4.6	* 0.617	48.7	LOS D	3.1	22.3	1.00	0.81	1.06	50.6
Approach		567	25	597	4.4	0.642	27.7	LOS B	8.9	64.3	0.80	0.81	0.82	55.0
East: Macquarie St														
4	L2	148	1	156	0.7	0.153	15.7	LOS B	2.0	13.8	0.52	0.71	0.52	56.4
5	T1	415	28	437	6.7	* 0.617	23.7	LOS B	9.3	68.6	0.87	0.76	0.87	50.6
Approach		563	29	593	5.2	0.617	21.6	LOS B	9.3	68.6	0.77	0.74	0.77	52.9
West: Macquarie St														
11	T1	410	20	432	4.9	0.301	3.5	LOS A	3.5	25.2	0.34	0.30	0.34	58.4
12	R2	660	27	695	4.1	* 0.620	33.5	LOS C	7.8	56.7	0.91	0.83	0.91	54.2
Approach		1070	47	1126	4.4	0.620	22.0	LOS B	7.8	56.7	0.69	0.63	0.69	55.0
All Vehicles		2200	101	2316	4.6	0.642	23.4	LOS B	9.3	68.6	0.74	0.70	0.74	54.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06
All Pedestrians		1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S4 1500 (Site Folder: S4 - PM Base Case 2034)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	21	2	22	9.5	0.019	4.4	LOS A	0.0	0.3	0.16	0.40	0.16	59.0
3	R2	1	0	1	0.0	0.019	8.9	LOS A	0.0	0.3	0.16	0.40	0.16	56.3
Approach		22	2	23	9.1	0.019	4.6	LOS A	0.0	0.3	0.16	0.40	0.16	58.9
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.032	4.0	LOS A	0.1	0.5	0.14	0.60	0.14	52.6
6	R2	36	5	38	13.9	0.032	9.1	LOS A	0.1	0.5	0.14	0.60	0.14	58.1
Approach		37	5	39	13.5	0.032	8.9	LOS A	0.1	0.5	0.14	0.60	0.14	58.1
North: Morisset Park Rd														
7	L2	63	5	66	7.9	0.062	3.9	LOS A	0.1	0.9	0.02	0.47	0.02	58.9
8	T1	27	0	28	0.0	0.062	4.1	LOS A	0.1	0.9	0.02	0.47	0.02	59.3
9u	U	5	4	5	80.0	0.062	11.7	LOS A	0.1	0.9	0.02	0.47	0.02	59.2
Approach		95	9	100	9.5	0.062	4.4	LOS A	0.1	0.9	0.02	0.47	0.02	59.0
All Vehicles		154	16	162	10.4	0.062	5.5	LOS A	0.1	0.9	0.07	0.49	0.07	58.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S4 1500 (Site Folder: S4 - PM Base Case 2034)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	199	3	209	1.5	0.109	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	47	0	49	0.0	0.063	9.0	LOS A	0.2	1.7	0.60	0.78	0.60	50.8
Approach		246	3	259	1.2	0.109	1.7	NA	0.2	1.7	0.11	0.15	0.11	57.9
NorthEast: Fishery Point Road														
24	L2	50	6	53	12.0	0.041	6.3	LOS A	0.2	1.2	0.29	0.56	0.29	52.2
26	R2	287	5	302	1.7	0.373	10.8	LOS A	2.3	16.2	0.70	0.95	0.89	49.2
Approach		337	11	355	3.3	0.373	10.2	LOS A	2.3	16.2	0.64	0.89	0.80	49.6
NorthWest: Fishery Point Rd														
27	L2	504	9	531	1.8	0.387	5.7	LOS A	0.0	0.0	0.00	0.43	0.00	54.5
28	T1	181	1	191	0.6	0.387	0.1	LOS A	0.0	0.0	0.00	0.43	0.00	56.0
Approach		685	10	721	1.5	0.387	4.2	NA	0.0	0.0	0.00	0.43	0.00	54.9
All Vehicles		1268	24	1335	1.9	0.387	5.3	NA	2.3	16.2	0.19	0.50	0.24	54.0

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S4 1500 (Site Folder: S4 - PM Base Case 2034)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 59 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	421	6	443	1.4	* 0.419	13.5	LOS A	7.4	52.3	0.62	0.75	0.62	53.6
6b	R3	20	1	21	5.0	0.024	13.2	LOS A	0.3	2.0	0.46	0.69	0.46	47.6
Approach		441	7	464	1.6	0.419	13.4	LOS A	7.4	52.3	0.61	0.75	0.61	53.3
NorthEast: Station St														
24b	L3	22	1	23	4.5	0.062	24.7	LOS B	0.5	3.9	0.80	0.69	0.80	40.2
26	R2	181	4	191	2.2	* 0.439	26.0	LOS B	4.9	34.6	0.90	0.79	0.90	39.5
Approach		203	5	214	2.5	0.439	25.9	LOS B	4.9	34.6	0.89	0.78	0.89	39.6
NorthWest: Fishery Point Rd														
27	L2	179	4	188	2.2	0.184	13.3	LOS A	2.7	19.0	0.52	0.72	0.52	47.8
27a	L1	364	10	383	2.7	0.365	13.1	LOS A	6.1	44.0	0.59	0.74	0.59	53.7
Approach		543	14	572	2.6	0.365	13.2	LOS A	6.1	44.0	0.57	0.73	0.57	51.6
All Vehicles		1187	26	1249	2.2	0.439	15.5	LOS B	7.4	52.3	0.64	0.75	0.64	49.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	1	1	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	2	2	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
All Pedestrians		0	3	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13

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

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MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S2 815 (Site Folder: S2 - AM A2 2024)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	703	23	740	3.3	* 0.825	25.9	LOS B	16.7	120.1	0.79	0.87	0.87	55.4
3	R2	136	9	143	6.6	0.391	40.3	LOS C	3.5	25.7	0.91	0.79	0.91	51.9
Approach		839	32	883	3.8	0.825	28.3	LOS B	16.7	120.1	0.81	0.86	0.88	54.9
East: Macquarie St														
4	L2	116	3	122	2.6	0.116	15.0	LOS B	1.5	10.7	0.48	0.69	0.48	56.5
5	T1	447	33	471	7.4	* 0.843	39.1	LOS C	13.7	102.1	1.00	1.00	1.17	45.9
Approach		563	36	593	6.4	0.843	34.2	LOS C	13.7	102.1	0.89	0.93	1.03	49.2
West: Macquarie St														
11	T1	301	23	317	7.6	0.257	6.7	LOS A	3.5	26.0	0.43	0.38	0.43	57.0
12	R2	402	26	423	6.5	0.406	34.0	LOS C	4.7	34.9	0.85	0.80	0.85	54.2
Approach		703	49	740	7.0	0.406	22.3	LOS B	4.7	34.9	0.67	0.62	0.67	54.8
All Vehicles		2105	117	2216	5.6	0.843	27.8	LOS B	16.7	120.1	0.79	0.80	0.85	53.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05
All Pedestrians		1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S2 815 (Site Folder: S2 - AM A2 2024)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	69	1	73	1.4	0.059	4.4	LOS A	0.1	0.8	0.19	0.40	0.19	59.0
3	R2	1	0	1	0.0	0.059	9.0	LOS A	0.1	0.8	0.19	0.40	0.19	56.3
Approach		70	1	74	1.4	0.059	4.5	LOS A	0.1	0.8	0.19	0.40	0.19	59.0
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.044	4.0	LOS A	0.1	0.6	0.11	0.62	0.11	52.6
6	R2	54	2	57	3.7	0.044	8.9	LOS A	0.1	0.6	0.11	0.62	0.11	58.2
6u	U	1	0	1	0.0	0.044	10.9	LOS A	0.1	0.6	0.11	0.62	0.11	55.0
Approach		56	2	59	3.6	0.044	8.8	LOS A	0.1	0.6	0.11	0.62	0.11	58.2
North: Morisset Park Rd														
7	L2	189	4	199	2.1	0.135	3.9	LOS A	0.3	2.0	0.02	0.47	0.02	58.9
8	T1	21	0	22	0.0	0.135	4.1	LOS A	0.3	2.0	0.02	0.47	0.02	59.3
9u	U	3	2	3	66.7	0.135	11.6	LOS A	0.3	2.0	0.02	0.47	0.02	59.3
Approach		213	6	224	2.8	0.135	4.0	LOS A	0.3	2.0	0.02	0.47	0.02	59.0
All Vehicles		339	9	357	2.7	0.135	4.9	LOS A	0.3	2.0	0.07	0.48	0.07	58.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S2 815 (Site Folder: S2 - AM A2 2024)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	238	2	251	0.8	0.130	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	25	0	26	0.0	0.029	8.2	LOS A	0.1	0.8	0.55	0.70	0.55	51.4
Approach		263	2	277	0.8	0.130	0.8	NA	0.1	0.8	0.05	0.07	0.05	59.0
NorthEast: Fishery Point Road														
24	L2	45	3	47	6.7	0.041	6.8	LOS A	0.2	1.2	0.38	0.60	0.38	52.2
26	R2	420	9	442	2.1	0.577	13.8	LOS A	4.8	34.1	0.78	1.11	1.35	47.3
Approach		465	12	489	2.6	0.577	13.1	LOS A	4.8	34.1	0.74	1.06	1.26	47.7
NorthWest: Fishery Point Rd														
27	L2	279	8	294	2.9	0.326	5.7	LOS A	0.0	0.0	0.00	0.28	0.00	55.7
28	T1	305	1	321	0.3	0.326	0.1	LOS A	0.0	0.0	0.00	0.28	0.00	57.4
Approach		584	9	615	1.5	0.326	2.8	NA	0.0	0.0	0.00	0.28	0.00	56.6
All Vehicles		1312	23	1381	1.8	0.577	6.0	NA	4.8	34.1	0.27	0.51	0.46	53.5

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S2 815 (Site Folder: S2 - AM A2 2024)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 62 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	604	2	636	0.3	0.544	12.9	LOS A	11.2	78.7	0.62	0.77	0.62	54.3
6b	R3	16	0	17	0.0	* 0.045	20.6	LOS B	0.3	2.3	0.74	0.70	0.74	43.4
Approach		620	2	653	0.3	0.544	13.1	LOS A	11.2	78.7	0.63	0.77	0.63	53.9
NorthEast: Station St														
24b	L3	24	0	25	0.0	0.040	18.2	LOS B	0.5	3.3	0.65	0.68	0.65	44.0
26	R2	237	3	249	1.3	* 0.700	32.2	LOS C	7.7	54.2	0.99	0.87	1.10	37.2
Approach		261	3	275	1.1	0.700	30.9	LOS C	7.7	54.2	0.95	0.86	1.06	37.7
NorthWest: Fishery Point Rd														
27	L2	114	4	120	3.5	0.158	18.5	LOS B	2.3	16.4	0.65	0.74	0.65	44.7
27a	L1	511	7	538	1.4	* 0.681	21.4	LOS B	13.5	95.5	0.87	0.84	0.87	48.1
Approach		625	11	658	1.8	0.681	20.9	LOS B	13.5	95.5	0.83	0.82	0.83	47.4
All Vehicles		1506	16	1585	1.1	0.700	19.4	LOS B	13.5	95.5	0.77	0.80	0.79	47.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	6	6	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	4	4	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
All Pedestrians		0	11	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13

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

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MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S2 1500 (Site Folder: S2 - PM A2 2024)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 87 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	501	19	527	3.8	0.656	21.0	LOS B	9.3	67.4	0.73	0.80	0.73	56.2
3	R2	120	5	126	4.2	* 0.677	49.6	LOS D	3.4	24.9	1.00	0.84	1.12	50.4
Approach		621	24	654	3.9	0.677	26.5	LOS B	9.3	67.4	0.78	0.81	0.81	55.2
East: Macquarie St														
4	L2	183	3	193	1.6	0.203	17.6	LOS B	2.7	19.0	0.57	0.73	0.57	56.0
5	T1	399	33	420	8.3	* 0.658	26.3	LOS B	9.4	70.1	0.91	0.79	0.91	49.7
Approach		582	36	613	6.2	0.658	23.6	LOS B	9.4	70.1	0.80	0.77	0.80	52.6
West: Macquarie St														
11	T1	376	18	396	4.8	0.276	3.4	LOS A	3.1	22.5	0.33	0.29	0.33	58.4
12	R2	798	26	840	3.3	* 0.671	32.0	LOS C	9.4	67.8	0.91	0.85	0.91	54.5
Approach		1174	44	1236	3.7	0.671	22.8	LOS B	9.4	67.8	0.72	0.67	0.72	55.0
All Vehicles		2377	104	2502	4.4	0.677	24.0	LOS B	9.4	70.1	0.76	0.73	0.76	54.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06
All Pedestrians		1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S2 1500 (Site Folder: S2 - PM A2 2024)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	34	2	36	5.9	0.031	4.6	LOS A	0.1	0.4	0.25	0.42	0.25	58.9
3	R2	1	0	1	0.0	0.031	9.2	LOS A	0.1	0.4	0.25	0.42	0.25	56.0
Approach		35	2	37	5.7	0.031	4.8	LOS A	0.1	0.4	0.25	0.42	0.25	58.9
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.080	4.3	LOS A	0.2	1.1	0.23	0.61	0.23	52.2
6	R2	91	4	96	4.4	0.080	9.2	LOS A	0.2	1.1	0.23	0.61	0.23	58.1
Approach		92	4	97	4.3	0.080	9.2	LOS A	0.2	1.1	0.23	0.61	0.23	58.1
North: Morisset Park Rd														
7	L2	235	4	247	1.7	0.196	3.9	LOS A	0.5	3.2	0.02	0.46	0.02	59.0
8	T1	80	0	84	0.0	0.196	4.1	LOS A	0.5	3.2	0.02	0.46	0.02	59.3
9u	U	1	0	1	0.0	0.196	10.8	LOS A	0.5	3.2	0.02	0.46	0.02	59.7
Approach		316	4	333	1.3	0.196	4.0	LOS A	0.5	3.2	0.02	0.46	0.02	59.0
All Vehicles		443	10	466	2.3	0.196	5.1	LOS A	0.5	3.2	0.08	0.49	0.08	58.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S2 1500 (Site Folder: S2 - PM A2 2024)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	266	3	280	1.1	0.146	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	46	0	48	0.0	0.092	11.8	LOS A	0.3	2.3	0.73	0.89	0.73	48.9
Approach		312	3	328	1.0	0.146	1.8	NA	0.3	2.3	0.11	0.13	0.11	58.0
NorthEast: Fishery Point Road														
24	L2	45	5	47	11.1	0.047	7.4	LOS A	0.2	1.4	0.45	0.65	0.45	51.8
26	R2	263	6	277	2.3	0.539	17.7	LOS B	3.4	24.2	0.84	1.09	1.37	45.0
Approach		308	11	324	3.6	0.539	16.2	LOS B	3.4	24.2	0.79	1.03	1.23	45.9
NorthWest: Fishery Point Rd														
27	L2	489	8	515	1.6	0.501	5.7	LOS A	0.0	0.0	0.00	0.32	0.00	55.3
28	T1	408	1	429	0.2	0.501	0.2	LOS A	0.0	0.0	0.00	0.32	0.00	56.8
Approach		897	9	944	1.0	0.501	3.2	NA	0.0	0.0	0.00	0.32	0.00	56.0
All Vehicles		1517	23	1597	1.5	0.539	5.6	NA	3.4	24.2	0.18	0.43	0.27	54.0

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S2 1500 (Site Folder: S2 - PM A2 2024)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 59 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	483	6	508	1.2	0.440	12.0	LOS A	7.8	55.4	0.57	0.74	0.57	54.8
6b	R3	20	1	21	5.0	0.022	11.8	LOS A	0.2	1.7	0.41	0.69	0.41	48.4
Approach		503	7	529	1.4	0.440	12.0	LOS A	7.8	55.4	0.56	0.74	0.56	54.5
NorthEast: Station St														
24b	L3	20	1	21	5.0	0.072	27.6	LOS B	0.5	3.8	0.85	0.69	0.85	38.9
26	R2	165	4	174	2.4	* 0.510	29.1	LOS C	4.7	33.8	0.95	0.79	0.95	38.3
Approach		185	5	195	2.7	0.510	28.9	LOS C	4.7	33.8	0.94	0.78	0.94	38.3
NorthWest: Fishery Point Rd														
27	L2	164	4	173	2.4	0.155	11.7	LOS A	2.1	15.3	0.46	0.71	0.46	48.8
27a	L1	563	9	593	1.6	* 0.514	12.4	LOS A	9.7	69.1	0.61	0.76	0.61	54.5
Approach		727	13	765	1.8	0.514	12.3	LOS A	9.7	69.1	0.58	0.75	0.58	53.1
All Vehicles		1415	25	1489	1.8	0.514	14.3	LOS A	9.7	69.1	0.62	0.75	0.62	51.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	1	1	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	2	2	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
All Pedestrians		0	3	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13

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

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MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S5 815 (Site Folder: S5 - AM A2 2034)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	732	24	771	3.3	* 0.910	42.0	LOS C	23.3	167.4	0.88	0.97	1.13	53.1
3	R2	142	10	149	7.0	0.457	42.6	LOS D	3.8	28.0	0.94	0.80	0.94	51.5
Approach		874	34	920	3.9	0.910	42.1	LOS C	23.3	167.4	0.89	0.94	1.10	52.9
East: Macquarie St														
4	L2	129	4	136	3.1	0.127	14.6	LOS B	1.6	11.8	0.47	0.69	0.47	56.6
5	T1	511	37	538	7.2	* 0.904	45.8	LOS D	17.4	129.6	1.00	1.11	1.30	44.1
Approach		640	41	674	6.4	0.904	39.5	LOS C	17.4	129.6	0.89	1.02	1.14	47.8
West: Macquarie St														
11	T1	354	27	373	7.6	0.293	6.1	LOS A	4.0	29.7	0.42	0.37	0.42	57.3
12	R2	445	31	468	7.0	0.468	35.4	LOS C	5.4	40.1	0.88	0.81	0.88	54.0
Approach		799	58	841	7.3	0.468	22.4	LOS B	5.4	40.1	0.68	0.61	0.68	54.7
All Vehicles		2313	133	2435	5.8	0.910	34.6	LOS C	23.3	167.4	0.82	0.85	0.96	52.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05
All Pedestrians		1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S5 815 (Site Folder: S5 - AM A2 2034)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	71	1	75	1.4	0.061	4.4	LOS A	0.1	0.8	0.20	0.41	0.20	59.0
3	R2	1	0	1	0.0	0.061	9.0	LOS A	0.1	0.8	0.20	0.41	0.20	56.3
Approach		72	1	76	1.4	0.061	4.5	LOS A	0.1	0.8	0.20	0.41	0.20	59.0
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.048	4.0	LOS A	0.1	0.6	0.11	0.62	0.11	52.6
6	R2	59	2	62	3.4	0.048	8.9	LOS A	0.1	0.6	0.11	0.62	0.11	58.2
6u	U	1	0	1	0.0	0.048	10.9	LOS A	0.1	0.6	0.11	0.62	0.11	55.0
Approach		61	2	64	3.3	0.048	8.8	LOS A	0.1	0.6	0.11	0.62	0.11	58.2
North: Morisset Park Rd														
7	L2	194	5	204	2.6	0.138	3.9	LOS A	0.3	2.1	0.02	0.47	0.02	58.9
8	T1	21	0	22	0.0	0.138	4.1	LOS A	0.3	2.1	0.02	0.47	0.02	59.3
9u	U	2	2	2	100.0	0.138	11.9	LOS A	0.3	2.1	0.02	0.47	0.02	59.1
Approach		217	7	228	3.2	0.138	4.0	LOS A	0.3	2.1	0.02	0.47	0.02	59.0
All Vehicles		350	10	368	2.9	0.138	4.9	LOS A	0.3	2.1	0.07	0.48	0.07	58.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S5 815 (Site Folder: S5 - AM A2 2034)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	263	2	277	0.8	0.144	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	29	0	31	0.0	0.036	8.5	LOS A	0.1	1.0	0.57	0.72	0.57	51.2
Approach		292	2	307	0.7	0.144	0.9	NA	0.1	1.0	0.06	0.07	0.06	58.9
NorthEast: Fishery Point Road														
24	L2	50	3	53	6.0	0.046	6.9	LOS A	0.2	1.3	0.39	0.61	0.39	52.2
26	R2	462	10	486	2.2	0.688	16.9	LOS B	6.6	47.4	0.83	1.24	1.76	45.5
Approach		512	13	539	2.5	0.688	15.9	LOS B	6.6	47.4	0.79	1.18	1.63	46.0
NorthWest: Fishery Point Rd														
27	L2	307	9	323	2.9	0.350	5.7	LOS A	0.0	0.0	0.00	0.29	0.00	55.7
28	T1	319	1	336	0.3	0.350	0.1	LOS A	0.0	0.0	0.00	0.29	0.00	57.3
Approach		626	10	659	1.6	0.350	2.8	NA	0.0	0.0	0.00	0.29	0.00	56.5
All Vehicles		1430	25	1505	1.7	0.688	7.1	NA	6.6	47.4	0.29	0.56	0.60	52.7

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S5 815 (Site Folder: S5 - AM A2 2034)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 62 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	678	2	714	0.3	0.623	13.4	LOS A	13.4	94.1	0.67	0.79	0.67	53.9
6b	R3	18	0	19	0.0	* 0.053	21.5	LOS B	0.4	2.7	0.76	0.70	0.76	42.9
Approach		696	2	733	0.3	0.623	13.6	LOS A	13.4	94.1	0.67	0.78	0.67	53.5
NorthEast: Station St														
24b	L3	26	0	27	0.0	0.044	18.2	LOS B	0.5	3.6	0.65	0.68	0.65	44.0
26	R2	256	3	269	1.2	* 0.756	33.7	LOS C	8.6	60.8	1.00	0.91	1.19	36.6
Approach		282	3	297	1.1	0.756	32.2	LOS C	8.6	60.8	0.97	0.89	1.14	37.2
NorthWest: Fishery Point Rd														
27	L2	125	5	132	4.0	0.174	18.7	LOS B	2.5	18.2	0.66	0.74	0.66	44.6
27a	L1	543	9	572	1.7	* 0.742	23.3	LOS B	15.4	109.6	0.89	0.87	0.95	46.9
Approach		668	14	703	2.1	0.742	22.4	LOS B	15.4	109.6	0.85	0.85	0.90	46.5
All Vehicles		1646	19	1733	1.2	0.756	20.4	LOS B	15.4	109.6	0.79	0.83	0.84	47.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	6	6	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	4	4	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
All Pedestrians		0	11	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13

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

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MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S5 1500 (Site Folder: S5 - PM A2 2034)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 87 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	517	20	544	3.9	0.663	20.4	LOS B	9.5	68.9	0.73	0.80	0.73	56.3
3	R2	123	5	129	4.1	* 0.693	49.9	LOS D	3.5	25.6	1.00	0.85	1.14	50.4
Approach		640	25	674	3.9	0.693	26.1	LOS B	9.5	68.9	0.78	0.81	0.80	55.2
East: Macquarie St														
4	L2	89	1	94	1.1	0.101	17.5	LOS B	1.3	8.9	0.55	0.70	0.55	56.0
5	T1	415	28	437	6.7	* 0.702	27.7	LOS B	10.1	74.6	0.93	0.82	0.94	49.2
Approach		504	29	531	5.8	0.702	25.9	LOS B	10.1	74.6	0.86	0.80	0.87	51.2
West: Macquarie St														
11	T1	410	20	432	4.9	0.301	3.5	LOS A	3.5	25.2	0.34	0.30	0.34	58.4
12	R2	850	27	895	3.2	* 0.691	31.6	LOS C	10.0	72.2	0.91	0.85	0.91	54.5
Approach		1260	47	1326	3.7	0.691	22.4	LOS B	10.0	72.2	0.73	0.67	0.73	55.1
All Vehicles		2404	101	2531	4.2	0.702	24.1	LOS B	10.1	74.6	0.77	0.73	0.78	54.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06
All Pedestrians		1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S5 1515 (Site Folder: S5 - PM A2 2034)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	35	2	37	5.7	0.033	4.7	LOS A	0.1	0.5	0.26	0.42	0.26	58.9
3	R2	1	0	1	0.0	0.033	9.2	LOS A	0.1	0.5	0.26	0.42	0.26	55.9
Approach		36	2	38	5.6	0.033	4.8	LOS A	0.1	0.5	0.26	0.42	0.26	58.9
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.085	4.3	LOS A	0.2	1.2	0.24	0.61	0.24	52.2
6	R2	95	5	100	5.3	0.085	9.3	LOS A	0.2	1.2	0.24	0.61	0.24	58.1
Approach		96	5	101	5.2	0.085	9.2	LOS A	0.2	1.2	0.24	0.61	0.24	58.1
North: Morisset Park Rd														
7	L2	241	5	254	2.1	0.205	3.9	LOS A	0.5	3.5	0.02	0.46	0.02	58.9
8	T1	82	0	86	0.0	0.205	4.1	LOS A	0.5	3.5	0.02	0.46	0.02	59.3
9u	U	5	4	5	80.0	0.205	11.7	LOS A	0.5	3.5	0.02	0.46	0.02	59.2
Approach		328	9	345	2.7	0.205	4.1	LOS A	0.5	3.5	0.02	0.46	0.02	59.0
All Vehicles		460	16	484	3.5	0.205	5.2	LOS A	0.5	3.5	0.08	0.49	0.08	58.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S5 1500 (Site Folder: S5 - PM A2 2034)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	272	3	286	1.1	0.149	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	47	0	49	0.0	0.098	12.2	LOS A	0.4	2.5	0.74	0.89	0.74	48.7
Approach		319	3	336	0.9	0.149	1.8	NA	0.4	2.5	0.11	0.13	0.11	58.0
NorthEast: Fishery Point Road														
24	L2	50	6	53	12.0	0.053	7.5	LOS A	0.2	1.6	0.46	0.66	0.46	51.7
26	R2	287	5	302	1.7	0.604	19.5	LOS B	4.1	29.0	0.87	1.15	1.54	44.1
Approach		337	11	355	3.3	0.604	17.7	LOS B	4.1	29.0	0.81	1.07	1.38	45.1
NorthWest: Fishery Point Rd														
27	L2	504	9	531	1.8	0.513	5.7	LOS A	0.0	0.0	0.00	0.32	0.00	55.3
28	T1	413	1	435	0.2	0.513	0.2	LOS A	0.0	0.0	0.00	0.32	0.00	56.8
Approach		917	10	965	1.1	0.513	3.3	NA	0.0	0.0	0.00	0.32	0.00	55.9
All Vehicles		1573	24	1656	1.5	0.604	6.1	NA	4.1	29.0	0.19	0.45	0.32	53.6

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S5 1500 (Site Folder: S5 - PM A2 2034)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 59 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	494	6	520	1.2	0.450	12.0	LOS A	8.1	57.1	0.58	0.75	0.58	54.8
6b	R3	20	1	21	5.0	0.022	11.8	LOS A	0.2	1.7	0.41	0.69	0.41	48.4
Approach		514	7	541	1.4	0.450	12.0	LOS A	8.1	57.1	0.57	0.74	0.57	54.5
NorthEast: Station St														
24b	L3	22	1	23	4.5	0.079	27.6	LOS B	0.6	4.2	0.85	0.70	0.85	38.9
26	R2	181	4	191	2.2	* 0.559	29.3	LOS C	5.3	37.5	0.96	0.80	0.96	38.2
Approach		203	5	214	2.5	0.559	29.1	LOS C	5.3	37.5	0.95	0.79	0.95	38.3
NorthWest: Fishery Point Rd														
27	L2	179	4	188	2.2	0.169	11.8	LOS A	2.4	16.8	0.46	0.71	0.46	48.7
27a	L1	596	10	627	1.7	* 0.544	12.6	LOS A	10.6	75.3	0.63	0.77	0.63	54.3
Approach		775	14	816	1.8	0.544	12.4	LOS A	10.6	75.3	0.59	0.75	0.59	52.9
All Vehicles		1492	26	1571	1.7	0.559	14.6	LOS B	10.6	75.3	0.63	0.75	0.63	50.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	1	1	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	2	2	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
All Pedestrians		0	3	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13

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

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MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd 24 A3 815 (Site Folder: S3 - AM A3 2024)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	728	23	766	3.2	* 0.855	29.4	LOS C	18.8	134.9	0.81	0.90	0.93	54.9
3	R2	142	9	149	6.3	0.407	40.5	LOS C	3.6	26.9	0.91	0.79	0.91	51.9
Approach		870	32	916	3.7	0.855	31.2	LOS C	18.8	134.9	0.83	0.88	0.93	54.5
East: Macquarie St														
4	L2	117	3	123	2.6	0.117	15.0	LOS B	1.5	10.8	0.48	0.69	0.48	56.5
5	T1	447	33	471	7.4	* 0.843	39.2	LOS C	13.7	102.1	1.00	1.00	1.17	45.9
Approach		564	36	594	6.4	0.843	34.1	LOS C	13.7	102.1	0.89	0.93	1.03	49.2
West: Macquarie St														
11	T1	301	23	317	7.6	0.257	6.7	LOS A	3.5	26.0	0.43	0.38	0.43	57.0
12	R2	400	26	421	6.5	0.404	33.9	LOS C	4.7	34.7	0.85	0.80	0.85	54.2
Approach		701	49	738	7.0	0.404	22.2	LOS B	4.7	34.7	0.67	0.62	0.67	54.8
All Vehicles		2135	117	2247	5.5	0.855	29.0	LOS C	18.8	134.9	0.79	0.81	0.87	53.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05
All Pedestrians		1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S3 815 (Site Folder: S3 - AM A3 2024)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	81	1	85	1.2	0.070	4.5	LOS A	0.1	1.0	0.23	0.41	0.23	59.0
3	R2	1	0	1	0.0	0.070	9.1	LOS A	0.1	1.0	0.23	0.41	0.23	56.2
Approach		82	1	86	1.2	0.070	4.6	LOS A	0.1	1.0	0.23	0.41	0.23	59.0
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.059	4.0	LOS A	0.1	0.8	0.12	0.61	0.12	52.5
6	R2	74	2	78	2.7	0.059	8.9	LOS A	0.1	0.8	0.12	0.61	0.12	58.2
6u	U	1	0	1	0.0	0.059	10.9	LOS A	0.1	0.8	0.12	0.61	0.12	55.0
Approach		76	2	80	2.6	0.059	8.8	LOS A	0.1	0.8	0.12	0.61	0.12	58.2
North: Morisset Park Rd														
7	L2	184	4	194	2.2	0.134	3.9	LOS A	0.3	2.0	0.02	0.47	0.02	58.9
8	T1	24	0	25	0.0	0.134	4.1	LOS A	0.3	2.0	0.02	0.47	0.02	59.3
9u	U	3	2	3	66.7	0.134	11.6	LOS A	0.3	2.0	0.02	0.47	0.02	59.3
Approach		211	6	222	2.8	0.134	4.0	LOS A	0.3	2.0	0.02	0.47	0.02	59.0
All Vehicles		369	9	388	2.4	0.134	5.1	LOS A	0.3	2.0	0.09	0.49	0.09	58.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S3 815 (Site Folder: S3 - AM A3 2024)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	270	2	284	0.7	0.148	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	25	0	26	0.0	0.029	8.1	LOS A	0.1	0.8	0.55	0.69	0.55	51.4
Approach		295	2	311	0.7	0.148	0.7	NA	0.1	0.8	0.05	0.06	0.05	59.1
NorthEast: Fishery Point Road														
24	L2	45	3	47	6.7	0.041	6.8	LOS A	0.2	1.2	0.38	0.60	0.38	52.2
26	R2	420	9	442	2.1	0.597	14.5	LOS A	5.0	35.8	0.79	1.13	1.42	46.9
Approach		465	12	489	2.6	0.597	13.7	LOS A	5.0	35.8	0.75	1.08	1.32	47.4
NorthWest: Fishery Point Rd														
27	L2	279	8	294	2.9	0.325	5.7	LOS A	0.0	0.0	0.00	0.28	0.00	55.7
28	T1	303	1	319	0.3	0.325	0.1	LOS A	0.0	0.0	0.00	0.28	0.00	57.3
Approach		582	9	613	1.5	0.325	2.8	NA	0.0	0.0	0.00	0.28	0.00	56.6
All Vehicles		1342	23	1413	1.7	0.597	6.1	NA	5.0	35.8	0.27	0.51	0.47	53.5

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S3 815 (Site Folder: S3 - AM A3 2024)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 62 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	636	2	669	0.3	0.584	13.1	LOS A	12.1	85.1	0.64	0.78	0.64	54.1
6b	R3	16	0	17	0.0	* 0.044	20.6	LOS B	0.3	2.3	0.74	0.70	0.74	43.4
Approach		652	2	686	0.3	0.584	13.3	LOS A	12.1	85.1	0.64	0.77	0.64	53.8
NorthEast: Station St														
24b	L3	24	0	25	0.0	0.040	18.2	LOS B	0.5	3.3	0.65	0.68	0.65	44.0
26	R2	237	3	249	1.3	* 0.700	32.2	LOS C	7.7	54.2	0.99	0.87	1.10	37.2
Approach		261	3	275	1.1	0.700	30.9	LOS C	7.7	54.2	0.95	0.86	1.06	37.7
NorthWest: Fishery Point Rd														
27	L2	114	4	120	3.5	0.158	18.5	LOS B	2.3	16.4	0.65	0.74	0.65	44.7
27a	L1	509	7	536	1.4	* 0.678	21.4	LOS B	13.4	94.8	0.87	0.84	0.87	48.1
Approach		623	11	656	1.8	0.678	20.8	LOS B	13.4	94.8	0.83	0.82	0.83	47.5
All Vehicles		1536	16	1617	1.0	0.700	19.3	LOS B	13.4	94.8	0.77	0.81	0.79	47.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	6	6	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	4	4	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
All Pedestrians		0	11	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13

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

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MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S3 1500 (Site Folder: S3 - PM A3 2024)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 87 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	541	19	569	3.5	* 0.692	20.7	LOS B	10.2	73.3	0.74	0.81	0.74	56.2
3	R2	129	5	136	3.9	0.654	48.2	LOS D	3.6	26.2	1.00	0.83	1.08	50.6
Approach		670	24	705	3.6	0.692	26.0	LOS B	10.2	73.3	0.79	0.81	0.81	55.3
East: Macquarie St														
4	L2	179	3	188	1.7	0.198	17.6	LOS B	2.6	18.6	0.57	0.72	0.57	56.0
5	T1	399	33	420	8.3	* 0.681	27.2	LOS B	9.5	71.5	0.92	0.80	0.92	49.4
Approach		578	36	608	6.2	0.681	24.3	LOS B	9.5	71.5	0.81	0.78	0.81	52.4
West: Macquarie St														
11	T1	376	18	396	4.8	0.280	3.7	LOS A	3.2	23.6	0.34	0.30	0.34	58.3
12	R2	777	26	818	3.3	0.654	31.8	LOS C	9.1	65.5	0.90	0.84	0.90	54.5
Approach		1153	44	1214	3.8	0.654	22.6	LOS B	9.1	65.5	0.72	0.67	0.72	55.1
All Vehicles		2401	104	2527	4.3	0.692	24.0	LOS B	10.2	73.3	0.76	0.73	0.77	54.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06
All Pedestrians		1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S3 1500 (Site Folder: S3 - PM A3 2024)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	37	2	39	5.4	0.036	4.9	LOS A	0.1	0.5	0.31	0.44	0.31	58.8
3	R2	1	0	1	0.0	0.036	9.4	LOS A	0.1	0.5	0.31	0.44	0.31	55.7
Approach		38	2	40	5.3	0.036	5.0	LOS A	0.1	0.5	0.31	0.44	0.31	58.8
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.120	4.4	LOS A	0.2	1.7	0.25	0.61	0.25	52.2
6	R2	138	4	145	2.9	0.120	9.3	LOS A	0.2	1.7	0.25	0.61	0.25	58.1
Approach		139	4	146	2.9	0.120	9.2	LOS A	0.2	1.7	0.25	0.61	0.25	58.1
North: Morisset Park Rd														
7	L2	196	4	206	2.0	0.179	3.9	LOS A	0.4	3.0	0.02	0.45	0.02	58.9
8	T1	92	0	97	0.0	0.179	4.1	LOS A	0.4	3.0	0.02	0.45	0.02	59.3
9u	U	1	0	1	0.0	0.179	10.8	LOS A	0.4	3.0	0.02	0.45	0.02	59.7
Approach		289	4	304	1.4	0.179	4.0	LOS A	0.4	3.0	0.02	0.45	0.02	59.1
All Vehicles		466	10	491	2.1	0.179	5.6	LOS A	0.4	3.0	0.11	0.50	0.11	58.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S3 1500 (Site Folder: S3 - PM A3 2024)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	316	3	333	0.9	0.173	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	46	0	48	0.0	0.087	11.3	LOS A	0.3	2.2	0.71	0.88	0.71	49.2
Approach		362	3	381	0.8	0.173	1.5	NA	0.3	2.2	0.09	0.11	0.09	58.3
NorthEast: Fishery Point Road														
24	L2	45	5	47	11.1	0.046	7.3	LOS A	0.2	1.3	0.43	0.64	0.43	51.8
26	R2	261	4	275	1.5	0.541	17.9	LOS B	3.4	24.1	0.85	1.10	1.37	44.9
Approach		306	9	322	2.9	0.541	16.3	LOS B	3.4	24.1	0.79	1.03	1.23	45.8
NorthWest: Fishery Point Rd														
27	L2	489	8	515	1.6	0.487	5.7	LOS A	0.0	0.0	0.00	0.33	0.00	55.3
28	T1	382	1	402	0.3	0.487	0.2	LOS A	0.0	0.0	0.00	0.33	0.00	56.8
Approach		871	9	917	1.0	0.487	3.3	NA	0.0	0.0	0.00	0.33	0.00	55.9
All Vehicles		1539	21	1620	1.4	0.541	5.5	NA	3.4	24.1	0.18	0.42	0.27	54.1

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S3 1500 (Site Folder: S3 - PM A3 2024)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 59 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	533	6	561	1.1	0.485	12.2	LOS A	9.0	63.5	0.59	0.75	0.59	54.6
6b	R3	20	1	21	5.0	0.022	11.8	LOS A	0.2	1.7	0.41	0.69	0.41	48.4
Approach		553	7	582	1.3	0.485	12.2	LOS A	9.0	63.5	0.59	0.75	0.59	54.4
NorthEast: Station St														
24b	L3	20	1	21	5.0	0.072	27.6	LOS B	0.5	3.8	0.85	0.69	0.85	38.9
26	R2	165	4	174	2.4	* 0.510	29.1	LOS C	4.7	33.8	0.95	0.79	0.95	38.3
Approach		185	5	195	2.7	0.510	28.9	LOS C	4.7	33.8	0.94	0.78	0.94	38.3
NorthWest: Fishery Point Rd														
27	L2	164	4	173	2.4	0.155	11.7	LOS A	2.1	15.3	0.46	0.71	0.46	48.8
27a	L1	537	9	565	1.7	* 0.490	12.3	LOS A	9.1	64.6	0.60	0.75	0.60	54.6
Approach		701	13	738	1.9	0.490	12.1	LOS A	9.1	64.6	0.56	0.74	0.56	53.1
All Vehicles		1439	25	1515	1.7	0.510	14.3	LOS A	9.1	64.6	0.62	0.75	0.62	51.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	1	1	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	2	2	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
All Pedestrians		0	3	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13

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

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MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S6 815 (Site Folder: S6 - AM A3 2034)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 92 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	757	24	797	3.2	* 0.923	45.0	LOS D	25.1	180.3	0.88	0.99	1.17	52.7
3	R2	148	10	156	6.8	0.449	41.7	LOS C	3.9	28.7	0.93	0.80	0.93	51.7
Approach		905	34	953	3.8	0.923	44.5	LOS D	25.1	180.3	0.89	0.96	1.13	52.5
East: Macquarie St														
4	L2	130	4	137	3.1	0.128	14.6	LOS B	1.7	11.9	0.47	0.69	0.47	56.6
5	T1	511	37	538	7.2	* 0.939	55.3	LOS D	19.2	142.8	1.00	1.20	1.43	41.8
Approach		641	41	675	6.4	0.939	47.1	LOS D	19.2	142.8	0.89	1.09	1.24	46.0
West: Macquarie St														
11	T1	354	27	373	7.6	0.298	6.5	LOS A	4.1	30.7	0.44	0.38	0.44	57.1
12	R2	443	31	466	7.0	0.466	35.3	LOS C	5.4	39.9	0.88	0.81	0.88	54.0
Approach		797	58	839	7.3	0.466	22.5	LOS B	5.4	39.9	0.68	0.62	0.68	54.7
All Vehicles		2343	133	2466	5.7	0.939	37.7	LOS C	25.1	180.3	0.82	0.88	1.01	52.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05
All Pedestrians		1	1	40.2	LOS E	0.0	0.0	0.93	0.93	205.7	215.2	1.05

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S6 815 (Site Folder: S6 - AM A3 2034)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	83	1	87	1.2	0.072	4.5	LOS A	0.1	1.0	0.23	0.42	0.23	59.0
3	R2	1	0	1	0.0	0.072	9.2	LOS A	0.1	1.0	0.23	0.42	0.23	56.1
Approach		84	1	88	1.2	0.072	4.6	LOS A	0.1	1.0	0.23	0.42	0.23	59.0
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.063	4.0	LOS A	0.1	0.8	0.12	0.62	0.12	52.5
6	R2	79	2	83	2.5	0.063	8.9	LOS A	0.1	0.8	0.12	0.62	0.12	58.2
6u	U	1	0	1	0.0	0.063	10.9	LOS A	0.1	0.8	0.12	0.62	0.12	55.0
Approach		81	2	85	2.5	0.063	8.8	LOS A	0.1	0.8	0.12	0.62	0.12	58.2
North: Morisset Park Rd														
7	L2	189	5	199	2.6	0.137	3.9	LOS A	0.3	2.1	0.02	0.47	0.02	58.9
8	T1	24	0	25	0.0	0.137	4.1	LOS A	0.3	2.1	0.02	0.47	0.02	59.3
9u	U	2	2	2	100.0	0.137	11.9	LOS A	0.3	2.1	0.02	0.47	0.02	59.1
Approach		215	7	226	3.3	0.137	4.0	LOS A	0.3	2.1	0.02	0.47	0.02	59.0
All Vehicles		380	10	400	2.6	0.137	5.2	LOS A	0.3	2.1	0.09	0.49	0.09	58.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S6 1515 (Site Folder: S6 - AM A3 2034)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	295	2	311	0.7	0.161	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	29	0	31	0.0	0.035	8.5	LOS A	0.1	1.0	0.57	0.72	0.57	51.2
Approach		324	2	341	0.6	0.161	0.8	NA	0.1	1.0	0.05	0.06	0.05	59.0
NorthEast: Fishery Point Road														
24	L2	52	5	55	9.6	0.049	6.9	LOS A	0.2	1.4	0.39	0.61	0.39	52.0
26	R2	462	10	486	2.2	0.712	18.0	LOS B	7.1	50.4	0.85	1.28	1.89	44.8
Approach		514	15	541	2.9	0.712	16.9	LOS B	7.1	50.4	0.80	1.21	1.74	45.5
NorthWest: Fishery Point Rd														
27	L2	307	9	323	2.9	0.349	5.7	LOS A	0.0	0.0	0.00	0.29	0.00	55.7
28	T1	317	1	334	0.3	0.349	0.1	LOS A	0.0	0.0	0.00	0.29	0.00	57.3
Approach		624	10	657	1.6	0.349	2.8	NA	0.0	0.0	0.00	0.29	0.00	56.5
All Vehicles		1462	27	1539	1.8	0.712	7.3	NA	7.1	50.4	0.29	0.56	0.62	52.5

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S6 815 (Site Folder: S6 - AM A3 2034)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 62 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	709	2	746	0.3	0.651	13.6	LOS A	14.4	101.2	0.69	0.79	0.69	53.7
6b	R3	18	0	19	0.0	* 0.053	21.5	LOS B	0.4	2.7	0.76	0.70	0.76	42.9
Approach		727	2	765	0.3	0.651	13.8	LOS A	14.4	101.2	0.69	0.79	0.69	53.4
NorthEast: Station St														
24b	L3	26	0	27	0.0	0.044	18.2	LOS B	0.5	3.6	0.65	0.68	0.65	44.0
26	R2	256	3	269	1.2	* 0.756	33.7	LOS C	8.6	60.8	1.00	0.91	1.19	36.6
Approach		282	3	297	1.1	0.756	32.2	LOS C	8.6	60.8	0.97	0.89	1.14	37.2
NorthWest: Fishery Point Rd														
27	L2	125	5	132	4.0	0.174	18.7	LOS B	2.5	18.2	0.66	0.74	0.66	44.6
27a	L1	541	9	569	1.7	* 0.738	23.1	LOS B	15.3	108.6	0.89	0.87	0.95	47.0
Approach		666	14	701	2.1	0.738	22.3	LOS B	15.3	108.6	0.85	0.85	0.89	46.5
All Vehicles		1675	19	1763	1.1	0.756	20.3	LOS B	15.3	108.6	0.80	0.83	0.85	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	6	6	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	4	4	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13
All Pedestrians		0	11	25.3	LOS C	0.0	0.0	0.90	0.90	188.3	211.9	1.13

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

MOVEMENT SUMMARY

Site: 101 [1. Macquarie St/ Fishery Pt Rd S6 1500 (Site Folder: S6 - PM A3 2034)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 87 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fishery Pt Rd														
1	L2	557	20	586	3.6	0.712	20.9	LOS B	10.6	76.5	0.75	0.81	0.75	56.2
3	R2	132	5	139	3.8	* 0.668	48.4	LOS D	3.7	26.9	1.00	0.84	1.10	50.6
Approach		689	25	725	3.6	0.712	26.2	LOS B	10.6	76.5	0.80	0.82	0.82	55.2
East: Macquarie St														
4	L2	185	1	195	0.5	0.204	17.6	LOS B	2.7	19.0	0.57	0.73	0.57	56.0
5	T1	415	28	437	6.7	* 0.702	27.7	LOS B	10.1	74.6	0.93	0.82	0.94	49.2
Approach		600	29	632	4.8	0.702	24.6	LOS B	10.1	74.6	0.82	0.79	0.83	52.3
West: Macquarie St														
11	T1	410	20	432	4.9	0.306	3.8	LOS A	3.6	26.4	0.35	0.31	0.35	58.2
12	R2	829	27	873	3.3	* 0.697	32.5	LOS C	9.9	71.6	0.92	0.85	0.93	54.4
Approach		1239	47	1304	3.8	0.697	23.0	LOS B	9.9	71.6	0.73	0.67	0.74	55.0
All Vehicles		2528	101	2661	4.0	0.712	24.3	LOS B	10.6	76.5	0.77	0.74	0.78	54.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fishery Pt Rd												
P1	Full	1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06
All Pedestrians		1	1	37.7	LOS D	0.0	0.0	0.93	0.93	203.2	215.2	1.06

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

MOVEMENT SUMMARY

Site: 101 [2. Trinity Pt Dr/ Charles Ave/ Morisset Park Rd S6 1500 (Site Folder: S6 - PM A3 2034)]

New Site
Site Category: Existing Design
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Charles Ave														
2	T1	38	2	40	5.3	0.037	4.9	LOS A	0.1	0.5	0.32	0.44	0.32	58.8
3	R2	1	0	1	0.0	0.037	9.5	LOS A	0.1	0.5	0.32	0.44	0.32	55.7
Approach		39	2	41	5.1	0.037	5.0	LOS A	0.1	0.5	0.32	0.44	0.32	58.8
East: Trinity Point Dr														
4	L2	1	0	1	0.0	0.125	4.4	LOS A	0.2	1.8	0.26	0.61	0.26	52.1
6	R2	142	5	149	3.5	0.125	9.3	LOS A	0.2	1.8	0.26	0.61	0.26	58.1
Approach		143	5	151	3.5	0.125	9.3	LOS A	0.2	1.8	0.26	0.61	0.26	58.1
North: Morisset Park Rd														
7	L2	202	5	213	2.5	0.188	3.9	LOS A	0.5	3.2	0.02	0.46	0.02	58.9
8	T1	94	0	99	0.0	0.188	4.1	LOS A	0.5	3.2	0.02	0.46	0.02	59.3
9u	U	5	4	5	80.0	0.188	11.7	LOS A	0.5	3.2	0.02	0.46	0.02	59.2
Approach		301	9	317	3.0	0.188	4.1	LOS A	0.5	3.2	0.02	0.46	0.02	59.1
All Vehicles		483	16	508	3.3	0.188	5.7	LOS A	0.5	3.2	0.12	0.50	0.12	58.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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 [3. Fishery Pt Rd/ Morisset Park Rd S6 1500 (Site Folder: S6 - PM A3 2034)]

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

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Morisset Park Rd														
22	T1	322	3	339	0.9	0.176	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
23	R2	47	0	49	0.0	0.092	11.7	LOS A	0.3	2.3	0.72	0.89	0.72	49.0
Approach		369	3	388	0.8	0.176	1.5	NA	0.3	2.3	0.09	0.11	0.09	58.3
NorthEast: Fishery Point Road														
24	L2	50	6	53	12.0	0.052	7.3	LOS A	0.2	1.5	0.44	0.64	0.44	51.8
26	R2	287	5	302	1.7	0.616	20.1	LOS B	4.2	29.9	0.87	1.16	1.58	43.7
Approach		337	11	355	3.3	0.616	18.2	LOS B	4.2	29.9	0.81	1.08	1.41	44.8
NorthWest: Fishery Point Rd														
27	L2	504	9	531	1.8	0.499	5.7	LOS A	0.0	0.0	0.00	0.33	0.00	55.2
28	T1	387	1	407	0.3	0.499	0.2	LOS A	0.0	0.0	0.00	0.33	0.00	56.7
Approach		891	10	938	1.1	0.499	3.3	NA	0.0	0.0	0.00	0.33	0.00	55.9
All Vehicles		1597	24	1681	1.5	0.616	6.1	NA	4.2	29.9	0.19	0.44	0.32	53.6

Site Level of Service (LOS) Method: Delay (RTA NSW). 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: 101v [4. Fishery Pt Rd/ Station St S6 1500 (Site Folder: S6 - PM A3 2034)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 59 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fishery Point Rd														
6a	R1	544	6	573	1.1	0.509	12.9	LOS A	9.7	68.3	0.63	0.76	0.63	54.1
6b	R3	20	1	21	5.0	0.023	12.2	LOS A	0.2	1.8	0.43	0.69	0.43	48.1
Approach		564	7	594	1.2	0.509	12.9	LOS A	9.7	68.3	0.62	0.76	0.62	53.8
NorthEast: Station St														
24b	L3	22	1	23	4.5	0.072	26.6	LOS B	0.6	4.1	0.84	0.70	0.84	39.4
26	R2	181	4	191	2.2	* 0.512	28.2	LOS B	5.1	36.5	0.94	0.80	0.94	38.6
Approach		203	5	214	2.5	0.512	28.0	LOS B	5.1	36.5	0.93	0.79	0.93	38.7
NorthWest: Fishery Point Rd														
27	L2	179	4	188	2.2	0.174	12.2	LOS A	2.5	17.5	0.48	0.72	0.48	48.4
27a	L1	570	10	600	1.8	* 0.536	13.1	LOS A	10.4	73.6	0.64	0.77	0.64	53.9
Approach		749	14	788	1.9	0.536	12.9	LOS A	10.4	73.6	0.60	0.76	0.60	52.5
All Vehicles		1516	26	1596	1.7	0.536	14.9	LOS B	10.4	73.6	0.65	0.76	0.65	50.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Station St												
P6	Full	1	1	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
NorthWest: Fishery Point Rd												
P7	Full	2	2	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13
All Pedestrians		0	3	23.8	LOS C	0.0	0.0	0.90	0.90	186.8	211.9	1.13

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

Appendix F

Future Intersection Upgrade of Fishery Point Road/ Morisset Park Road Concept Design

Plan	Morisset Contributions Catchment	CONCEPT ONLY
Project M13	Fishery Point Road – Morisset Park Road	
Sub-Catchment	Morisset Peninsula	
Description	A T intersection. Morisset Park Road/ Fishery Point Road (west) operate with priority as the major through road. Fishery Point Road (east) operates under a signed give way control at this intersection.	
Site Layout	 View of proposed intersection layout at the junction of Fishery Point Road and Morisset Park Road	
Features	• A T intersection, CHR, with Morisset Park Road/ Fishery Point Road (west) operating as the major through road.	
Attachments	• Concept Plan • Concept Estimate	

INTERSECTION 13

NOTE:
1. ALL LANES 3.5m (TYP).

CONCEPT APPROVAL

OFFICE COMMUNICATION NUMBERS
PHONE No : 02 49 525 590 FAX No : 02 49 525 573
MOBILE PHONE No : 0409 258 778
EMAIL ADDRESS : mwaugh@markwaugh.com.au
POSTAL ADDRESS : PO Box 114, New Lambton, NSW 2305

Better Transport Futures
MARK WAUGH P/L
TRANSPORT PLANNING AND ENGINEERING

CLIENT: LAKE MACQUARIE CITY COUNCIL
PROJECT: MORISETT AREA STUDY
ROAD NETWORK UPGRADE
DESIGNED: SEAN MORGAN
APPROVED: MARK WAUGH

DRAWING TITLE: ROAD NETWORK UPGRADE
INTERSECTION 13
FISHERY POINT AND MORISETT PARK ROAD, MORISETT

SCALE: AS SHOWN, DO NOT SCALE
DRAWING BY: CIVIL DESIGN P/L
PROJECT No. 209176
DWG No. C15
SHEET 15 of 24
REVISION A

300mm ON ORIGINAL A1 SHEET

Appendix G

Architectural Plans

Trinity Point

Trinity Point Drive, Morisset Park, NSW 2264

PLANNING PROPOSAL
ARCHITECTURAL DRAWING LIST

PP-0000	COVER PAGE
PP-0001	PROJECT SUMMARY
PP-0010	CONTEXT PLAN
PP-0013	SITE PLAN
PP-0015	STAGING PLAN
PP-0149	BASEMENT PLANS
PP-0150	OVERALL FLOOR PLANS 01
PP-0151	OVERALL FLOOR PLANS 02
PP-0152	OVERALL FLOOR PLANS 03
PP-0200	ELEVATIONS (OVERALL)
PP-0201	ELEVATIONS (TYP HOTEL)
PP-0202	ELEVATIONS (TYP RESIDENTIAL)
PP-0300	SECTIONS (TYPICAL BUILDINGS)
PP-0455	CROSS VENTILATION DIAGRAMS 01
PP-0456	CROSS VENTILATION DIAGRAMS 02
PP-0457	CROSS VENTILATION DIAGRAMS 03
PP-0465	SOLAR ACCESS DIAGRAMS 01
PP-0466	SOLAR ACCESS DIAGRAMS 02
PP-0467	SOLAR ACCESS DIAGRAMS 03
PP-0470	SHADOW DIAGRAMS - SUMMER 01
PP-0471	SHADOW DIAGRAMS - SUMMER 02
PP-0472	SHADOW DIAGRAMS - SUMMER 03
PP-0476	SHADOW DIAGRAMS - WINTER 01
PP-0477	SHADOW DIAGRAMS - WINTER 02
PP-0478	SHADOW DIAGRAMS - WINTER 03

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PROJECT SUMMARY

Address	**49, 81 & 85 TRINITY POINT DRIVE, MORISSET PARK - MORISSET PARK NSW 2264**
Site Area	**36,500 m²**
Land Use	**HOTEL AND RESIDENTIAL DEVELOPMENT / TOURIST ACCOMMODATION ZONE**

PROPOSAL SUMMARY

Site Area	36,500m²	Hotel: 15,200m²	Residential: 21,300m²
Gross Floor Area	42,675m²	Hotel: 16,103m²	Residential: 26,572m²
FSR	1.17:1	Hotel: 1.06:1	1.25:1
Building Height (m)	Up to 34m to last slab from EGL Up to 42m to peak of feature roof from EGL		
Setback	As shown on Site Plan		
Car Parking	Hotel: 341 Residential: 270 Total : 611	Motorbikes: 45 Bicycle: 266	

GFA BREAKDOWN

	HOTEL		RESIDENTIAL				
	BUILDING A	**BUILDING B**	**BUILDING C**	**BUILDING D**	**BUILDING E**	**BUILDING F**	**TOTAL**
BASEMENT 02		32m²					32m²
BASEMENT 01	1159m²		79m²				1238m²
GROUND FLOOR	1395m²	1403m²	1436m²	1418m²	1435m²	1092m²	8179m²
LEVEL 01 FLOOR	1262m²	1254m²	1270m²	1287m²	1273m²	938m²	7284m²
LEVEL 02 FLOOR	1133m²	1123m²	1125m²	1127m²	1128m²	794m²	6430m²
LEVEL 03 FLOOR	1001m²	993m²	993m²	995m²	998m²	651m²	5631m²
LEVEL 04 FLOOR	869m²	863m²	848m²	847m²	851m²	530m²	4808m²
LEVEL 05 FLOOR	738m²	732m²	713m²	712m²	716m²	423m²	4034m²
LEVEL 06 FLOOR	596m²	602m²	567m²	568m²	570m²		2903m²
LEVEL 07 FLOOR	465m²	483m²	405m²	391m²	392m²		2136m²
TOTAL BUILDING AREA	7459m²	7453m²	7357m²	7345m²	7363m²	4428m²	41,405m²
TOTAL AREA (INCLUDING BASEMENT)	**16,103m²**		**26,572m²**				**42,675m²**

CAR SPACE BREAKDOWN

	HOTEL	RESIDENTIAL	MOTORBIKE	BICYCLE
BASEMENT 02	90	–	–	–
BASEMENT 01	251	270	45	266
SUBTOTAL:	341	270	45	266

TOTAL CAR SPACES: 611

GFA BREAKDOWN

	HOTEL		RESIDENTIAL				
	BUILDING A	**BUILDING B**	**BUILDING C**	**BUILDING D**	**BUILDING E**	**BUILDING F**	**TOTAL**
HOTEL ROOM - TYPE A	41	54					95 (42%)
HOTEL ROOM - TYPE B	69	54					123 (55%)
HOTEL ROOM - TYPE C	3	3					6 (3%)
TOTAL	**113**	**111**					**224**
2 BED + STUDY			24	30	24	16	94 (42%)
3 BED + STUDY			20	16	20	9	65 (36%)
4 BED + STUDY			6	6	6	3	21 (12%)
TOTAL			**50**	**52**	**50**	**28**	**180**

FOR INFORMATION ONLY

NO.	REVISION	BY	CHK	DATE

REVISION NOTES:

KEY PLAN

CLOUD LEGEND: REVISION, ON HOLD

OTHERS

CLIENT
Johnson Property Group
Suite 1004, Level 10
46 Market St, Sydney NSW 2000

ARCHITECT
SUITE 41 & 42, LEVEL 4
61 MARLBOROUGH ST
SURRY HILLS. NSW 2010
T 02 9698 8510
ABN 63 131 365 896
NOMINATED ARCHITECT:
KOICHI TAKADA
NSW ARCHITECTS 6901
VIC ARCHITECTS 16179
QLD ARCHITECTS 5590
KOICHITAKADA.COM

Koichi Takada Architects

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WIP: 04/03/2022

PROJECT
Trinity Point
Trinity Point Drive, Morisset Park, NSW 2264

STATUS
PROPOSED CONCEPT SCHEME

DWG TITLE
PROJECT SUMMARY

DWG NO.
PP-0001

REVISION

SCALE

DATE

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REVISION NOTES:

KEY PLAN

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Trinity Point Drive, Morisset Park, NSW 2264

STATUS
PROPOSED CONCEPT SCHEME

0 50 m

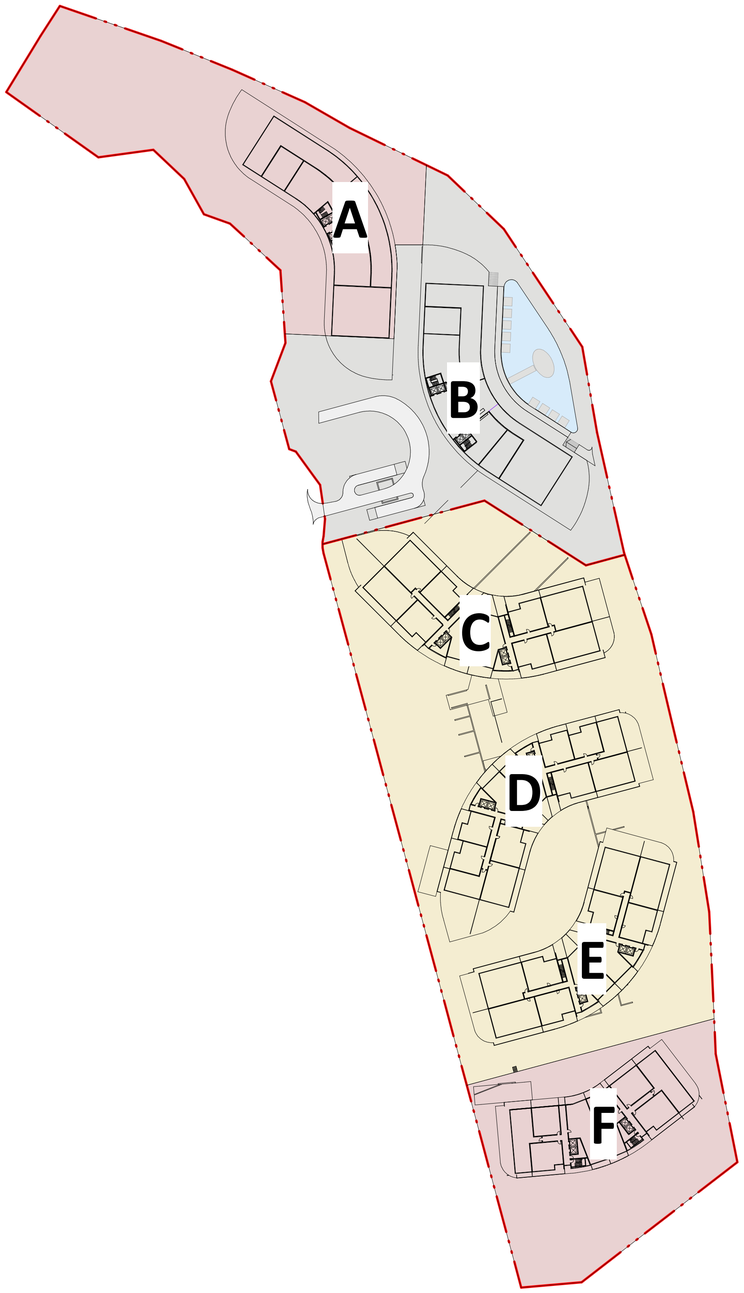
DWG TITLE
SITE PLAN

DWG NO.
PP-0013

REVISION

SCALE
1:1000@A1, 1:2000@A3

DATE



2 SITE PLAN (STAGING PLAN)
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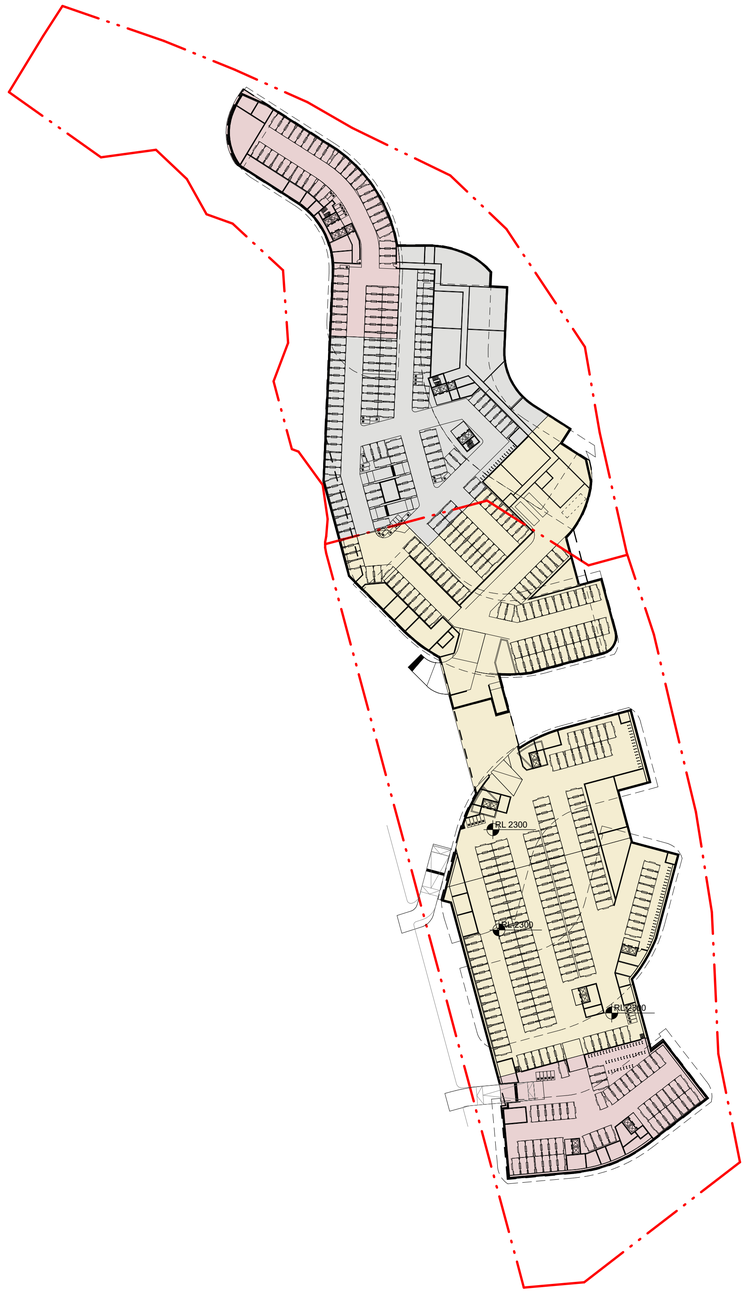

1 BASEMENT 01 (STAGING)
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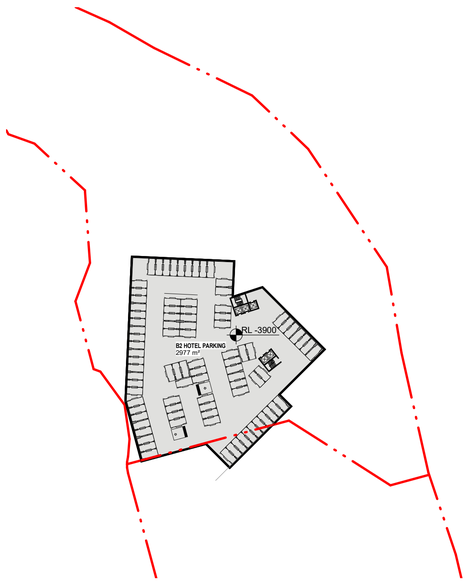

3 BASEMENT 2 (STAGING)
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STAGING SCHEDULE

STAGE	BUILDINGS	CARS
STAGE 1	C - D - E	HOTEL: 90 CARS RESIDENTIAL: 219 CARS
STAGE 2	B	HOTEL: B1 - 106 CARS B2 - 90 CARS
STAGE 3	A -F	HOTEL: 55 CARS RESIDENTIAL: 51 CARS

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REVISION NOTES:

KEY PLAN

CLOUD LEGEND
REVISION ON HOLD

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OTHERS

CLIENT
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Trinity Point
Trinity Point Drive, Morisset Park, NSW 2264

STATUS
PROPOSED CONCEPT SCHEME

0 50 m

DWG TITLE
STAGING PLAN

DWG NO.
PP-0015

REVISION

SCALE
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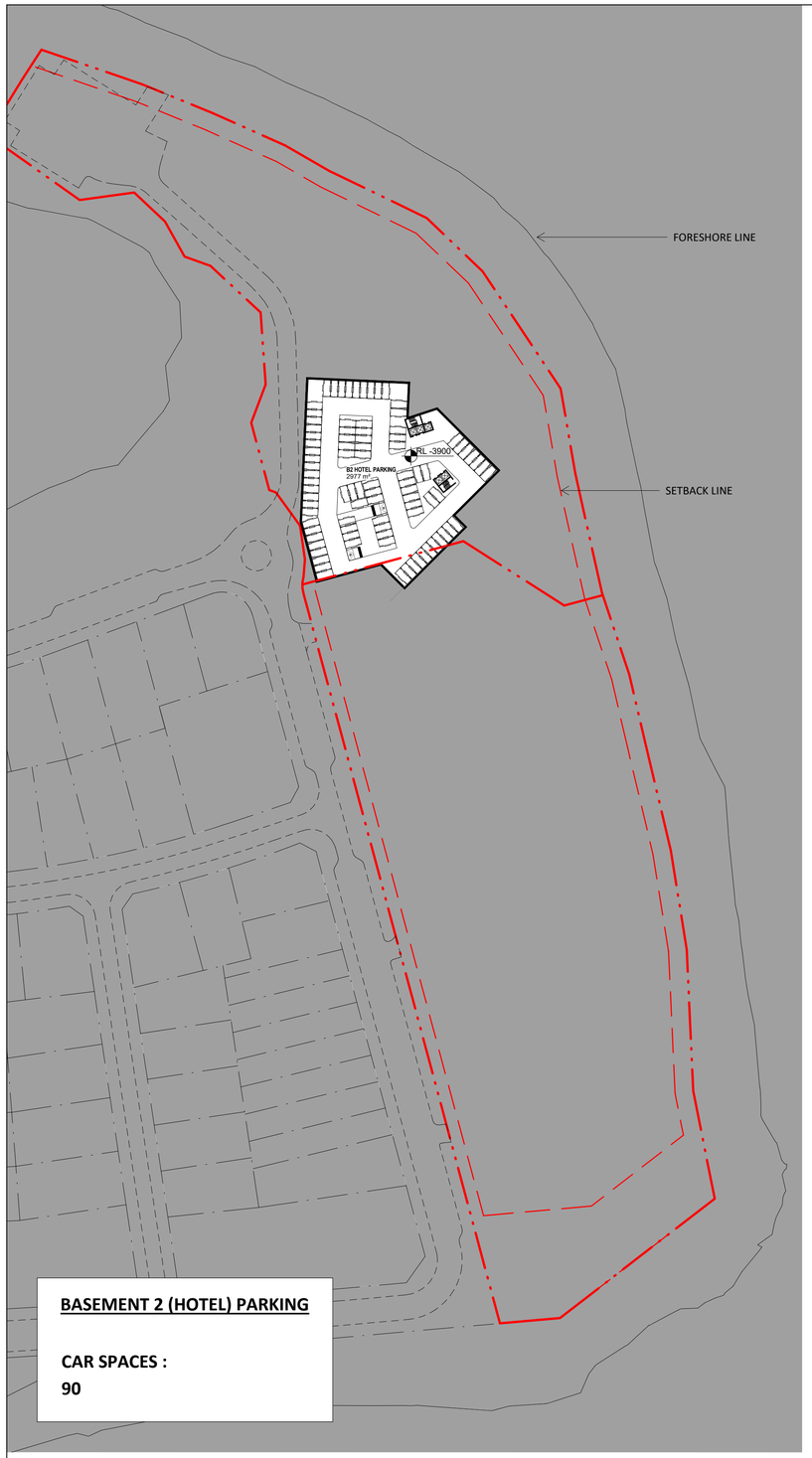
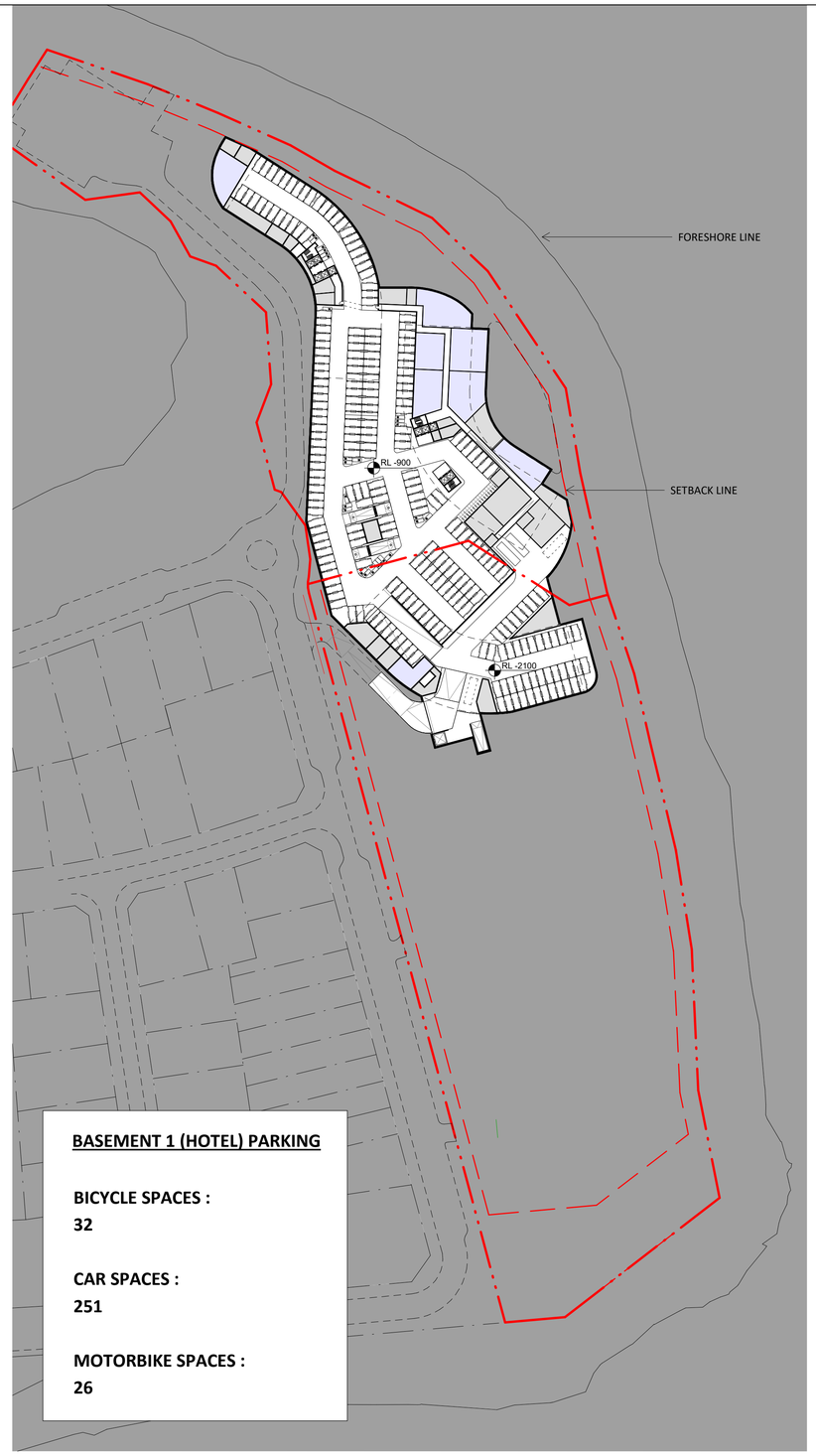
DATE



BASEMENT 2 (HOTEL) PARKING

CAR SPACES :
90

1 BASEMENT 2 (HOTEL)
1 : 1000



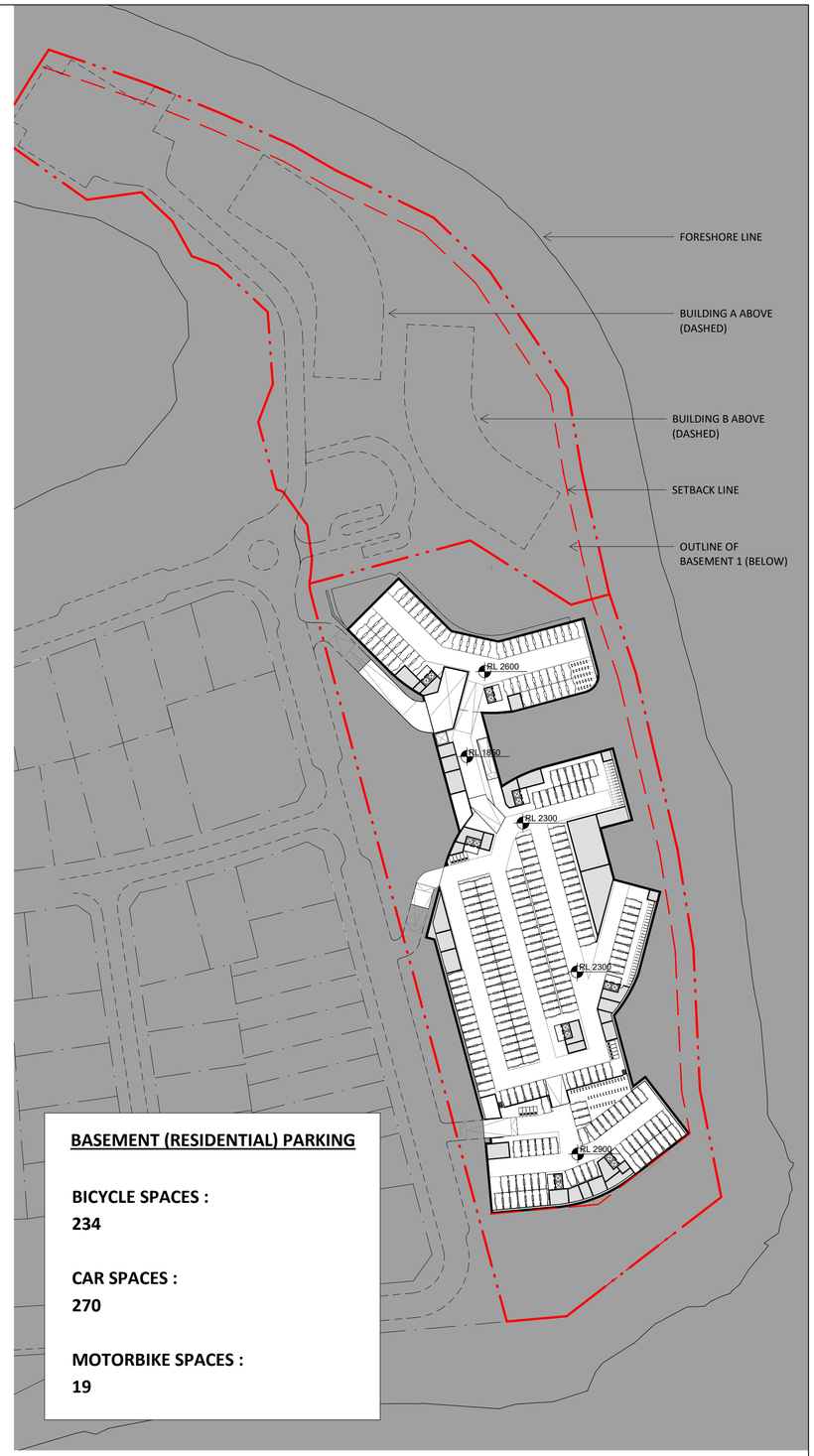
BASEMENT 1 (HOTEL) PARKING

BICYCLE SPACES :
32

CAR SPACES :
251

MOTORBIKE SPACES :
26

2 BASEMENT 1 (HOTEL)
1 : 1000



BASEMENT (RESIDENTIAL) PARKING

BICYCLE SPACES :
234

CAR SPACES :
270

MOTORBIKE SPACES :
19

3 BASEMENT (RESIDENTIAL)
1 : 1000

Hotel	**341**
Residential	**270**
Total	**611**

FOR INFORMATION ONLY

NO.	REVISION	BY	CHK	DATE

REVISION NOTES:

KEY PLAN

CLOUD LEGEND
REVISION ON HOLD

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OTHERS

CLIENT
Johnson Property Group
Suite 1004, Level 10
46 Market St, Sydney NSW 2000

ARCHITECT
SUITE 41 & 42, LEVEL 4
61 MARLBOROUGH ST
SURRY HILLS, NSW 2010
T 02 9698 8510
ABN 63 131 365 896
NOMINATED ARCHITECT:
KOICHI TAKADA
NSW ARCHITECTS 6901
VIC ARCHITECTS 16179
QLD ARCHITECTS 5590
KOICHITAKADA.COM

Koichi Takada Architects

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WIP: 04/03/2022

PROJECT
Trinity Point
Trinity Point Drive, Morisset Park, NSW 2264

STATUS
PROPOSED CONCEPT SCHEME

0 50 m

DWG TITLE
BASEMENT PLANS

DWG NO.
PP-0149

REVISION

SCALE
1:1000@A1, 1:2000@A3

DATE

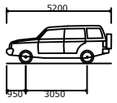
Appendix H

Swept Path Analysis

RL 4000 @ Porte cochere/Roundabout

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	SB	KH	07/03/22

ttpp transport planning

PROJECT: TRINITY POINT, LAKE MACQUARIE

TITLE: SWEPT PATH ANALYSIS - PORTE COCHERE
AS2890.1 5.2m B99 VEHICLE

DWG No. 18362CAD007
FIGURE 1

DATE STAMP: 07 MARCH 2022

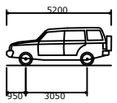
PROJECT No.	SCALE	REV.
18362	1:250 @A3	A

Filename: 18362CAD007-220307-SWEPT PATH.dwg
Date: 7 March 2022

RL 900

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	SB	KH	07/03/22

ttpp transport planning

PROJECT

TRINITY POINT, LAKE MACQUARIE

TITLE

SWEPT PATH ANALYSIS - BASEMENT LEVEL 1
AS2890.1 5.2m B99 VEHICLE

DWG No. 18362CAD007
FIGURE 3

DATE STAMP 07 MARCH 2022

PROJECT No.	SCALE	REV.
18362	1:200 @A3	A

Filename: 18362CAD007-220307-SWEPT PATH.dwg Date: 7 March 2022

The Transport Planning Partnership
Suite 402 Level 4, 22 Atchison Street
St Leonards NSW 2065

P.O. Box 237
St Leonards NSW 1590

02 8437 7800

info@ttpp.net.au

www.ttpp.net.au

3.2 Assessment Methodology

Given that the proposed development deviates from the Approved Concept Plan and development consents, so too will trip generation and parking provisions for the subject site.
Moreover, since the time that the Concept Plan was approved and DAs issued, there have been some revisions to trip generation and parking rates as a result of more recent data or application of more appropriate rates (for reasons as explained through this report). As such, the Approved Concept Plan has been reassessed in this TIA using the latest trip generation and parking rates to undertake a "like-for-like" assessment with the Proposal.
There are three distinct cases which have been assessed in this TIA; namely:

☐ Case A1: the Approved Concept Plan with historic rates

o this is the Approved Concept Plan with trip generation and parking provision estimated using accepted/approved rates as per the TIA prepared by SECA Solution (October 2014).

☐ Case A2: the Approved Concept Plan with new rates

o this is the Approved Concept Plan with trip generation and parking provision estimated using the revised rates.

☐ Case A3: the Proposed Development with new rates

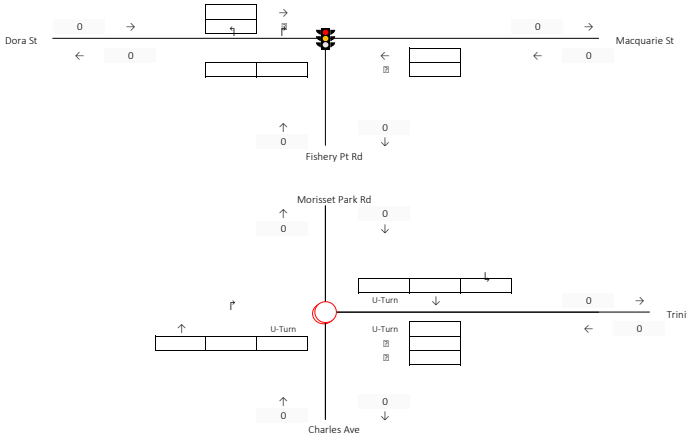
o this is the proposed development with trip generation and parking provision estimated using the revised rates.

In order to determine the net additional impacts of the proposed development (Case A3), this TIA assesses and compares Case A3 against Case A1, and Case A3 against Case A2.
A side-by-side comparison of historic rates and revised rates for trip generation and parking provision are provided in Chapter 4 and Chapter 5, respectively.

4.5.3 Modelling Scenarios

An analysis of existing and future intersection performance has been conducted to identify the traffic impacts arising from the Proposal.
The opening year of the proposal is estimated to be in 2024. Therefore, future conditions in the "plus 10 years" scenarios consider background traffic growth up to 2034.
The following scenarios have been assessed:

☐ S0 Existing conditions: 2021 base case.
☐ S1 Future conditions: existing conditions with background growth only (2024).
☐ S2 Future conditions: existing conditions with background growth plus the approved development (Case A2) (2024).
☐ S3 Future conditions: existing conditions with background growth plus the proposed development (Case A3) (2024).
☐ S4 Future conditions: existing conditions with background growth only (2034).
☐ S5 Future conditions: existing conditions with background growth plus the approved development (Case A2) (2034).
☐ S6 Future conditions: existing conditions with background growth plus the proposed development (Case A3) (2034).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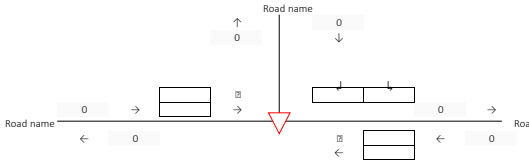
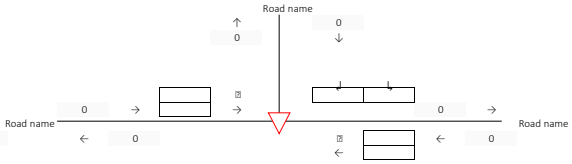
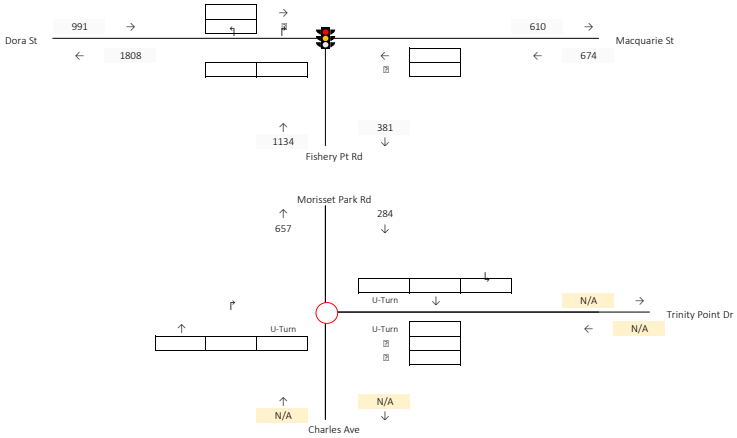
Macquarie St
Fishery Pt Rd
Morisset Park Rd
Trinity Point Dr
Charles Ave
U-Turn
U-Turn
U-Turn


Road name
Road name


Road name
Road name
Road name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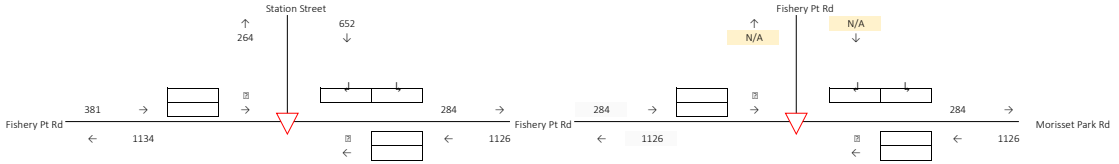
991
1808
610
674
Macquarie St
1134
381
Fishery Pt Rd
Morisset Park Rd
657
284
U-Turn
N/A
Trinity Point Dr
U-Turn
U-Turn
N/A
N/A
N/A
Charles Ave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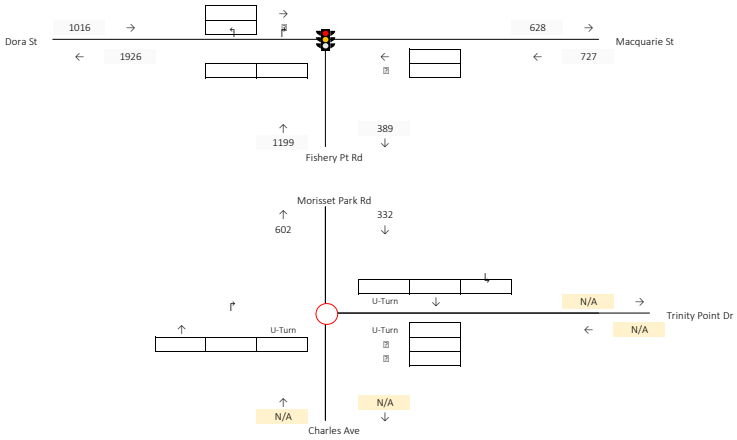
652
381
Fishery Pt Rd
284
1134
1126
Fishery Pt Rd
Fishery Pt Rd
N/A
N/A
284
1126
284
Morisset Park Rd
1126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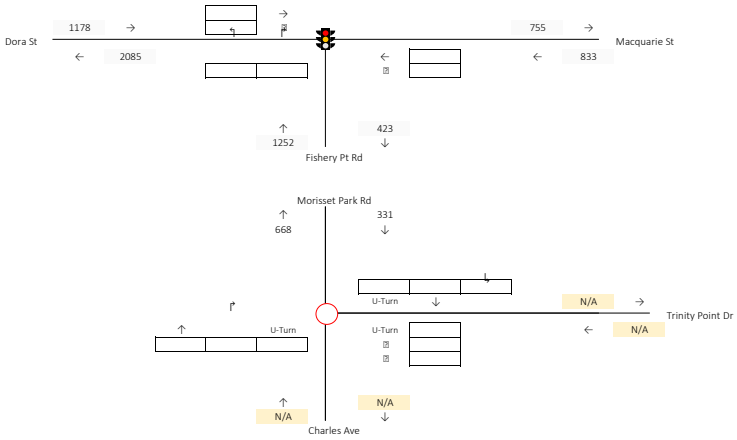
1926
Macquarie St
628
727
Fishery Pt Rd
1199
389
Morisset Park Rd
602
332
U-Turn
U-Turn
U-Turn
N/A
N/A
Trinity Point Dr
N/A
N/A
Charles Ave


Station Street
241
690
Fishery Pt Rd
389
1199
332
1139
Fishery Pt Rd
N/A
N/A
Fishery Pt Rd
332
1139
332
1139
Morisset Park Rd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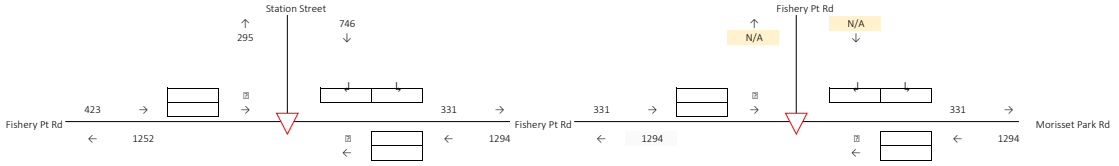
2085
755
833
Macquarie St
1252
423
Fishery Pt Rd
Morisset Park Rd
668
331
U-Turn
U-Turn
U-Turn
N/A
N/A
Trinity Point Dr
N/A
N/A
Charles Ave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746
Fishery Pt Rd
423
1252
331
1294
Fishery Pt Rd
Fishery Pt Rd
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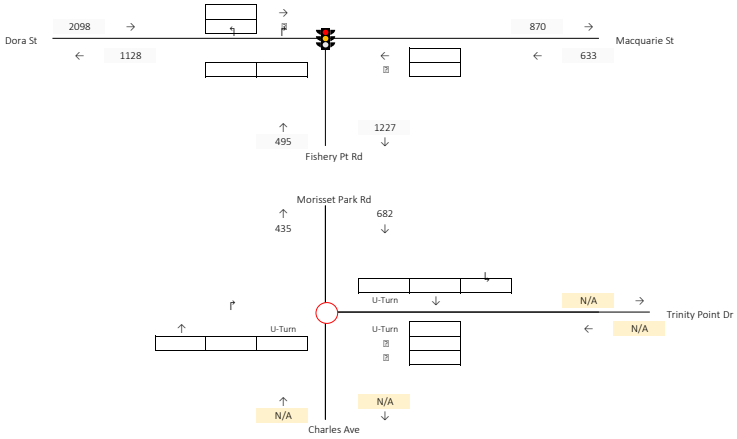
N/A
331
1294
331
1294
Morisset Park Rd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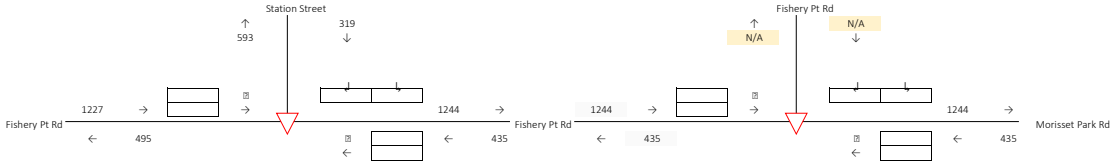
1128
870
633
Macquarie St
495
1227
Fishery Pt Rd
Morisset Park Rd
435
682
U-Turn
N/A
Trinity Point Dr
U-Turn
U-Turn
N/A
N/A
N/A
Charles Ave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593
319
1227
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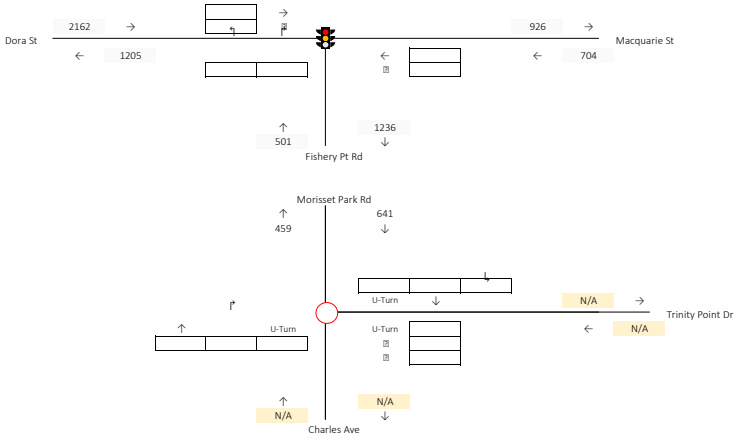
1244
495
435
Fishery Pt Rd
N/A
N/A
1244
435
1244
435
Morisset Park Rd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926
704
Macquarie St
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1236
Fishery Pt Rd
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Trinity Point Dr
U-Turn
U-Turn
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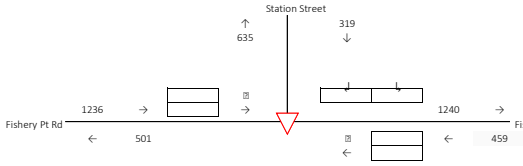
N/A
N/A
Charles Ave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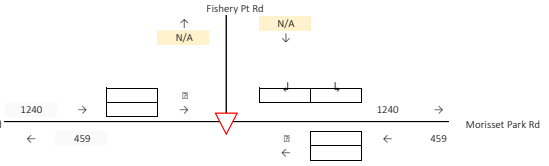
Fishery Pt Rd
501
459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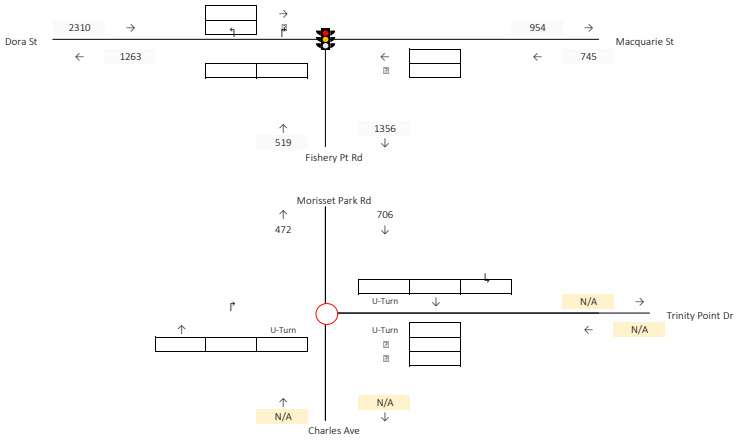
N/A
1240
1240
Morisset Park Rd
459
459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745
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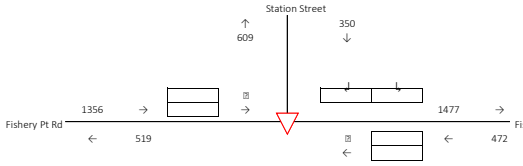
Charles Ave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1477
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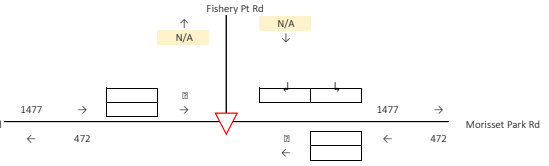
Fishery Pt Rd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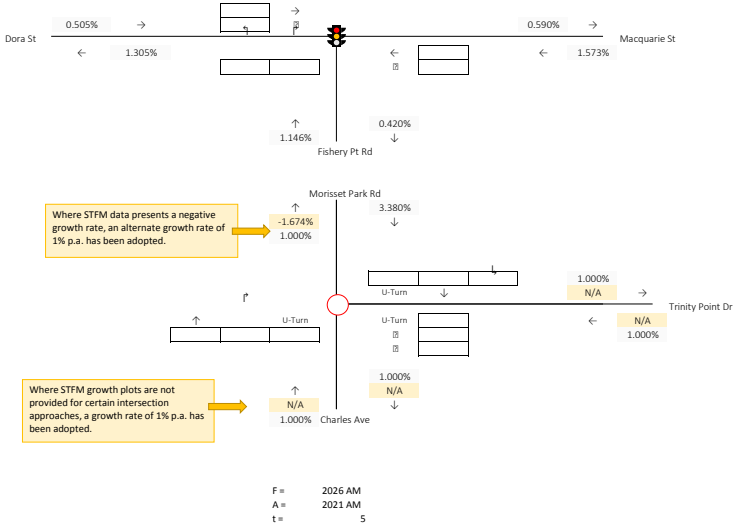
472
1477
472
Morisset Park Rd



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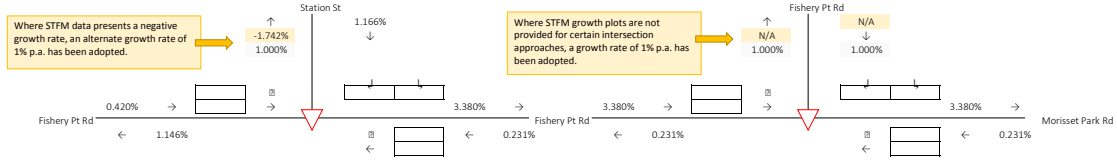

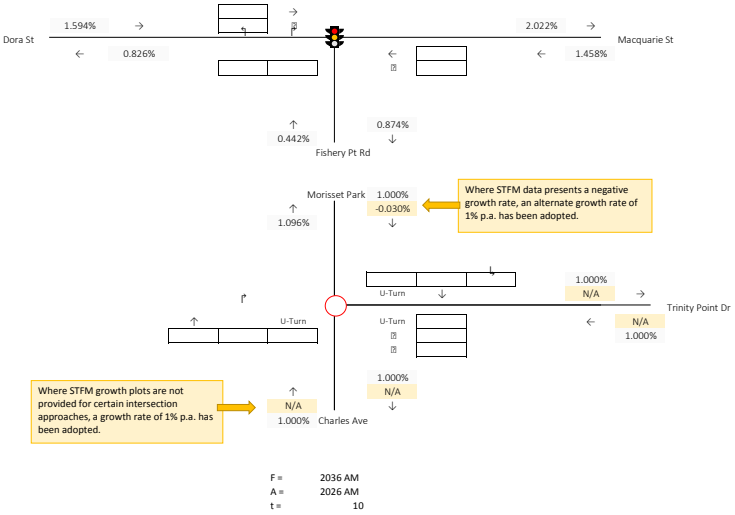
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1.594%
0.826%
2.022%
1.458%
Macquarie St
0.442%
0.874%
Fishery Pt Rd
Morisset Park
1.000%
-0.030%
1.096%
Where STFM data presents a negative growth rate, an alternate growth rate of 1% p.a. has been adopted.
U-Turn
U-Turn
U-Turn
1.000%
N/A
N/A
1.000%
Trinity Point Dr
Where STFM growth plots are not provided for certain intersection approaches, a growth rate of 1% p.a. has been adopted.
1.000%
N/A
N/A
1.000%
Charles Ave
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A = 2026 AM
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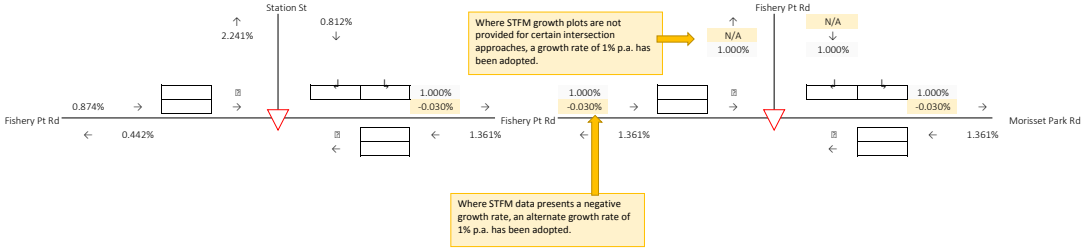
Station St
2.241%
0.812%
Where STFM growth plots are not provided for certain intersection approaches, a growth rate of 1% p.a. has been adopted.
Fishery Pt Rd
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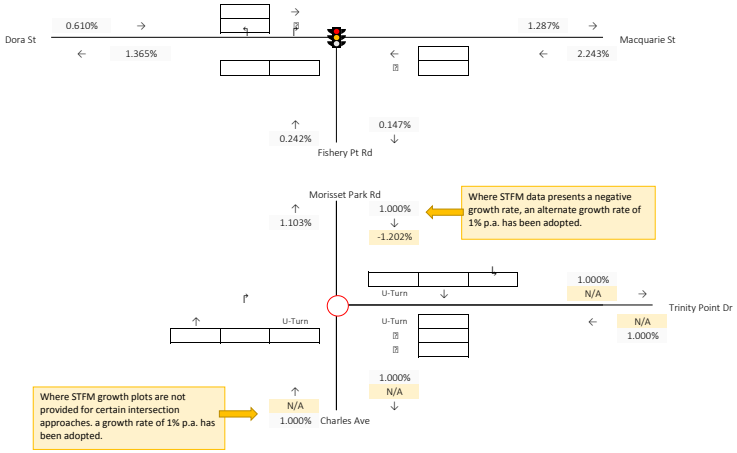
N/A
1.000%
Fishery Pt Rd
0.874%
0.442%
1.000%
-0.030%
1.361%
1.000%
-0.030%
1.361%
1.000%
-0.030%
1.361%
Morisset Park Rd
Where STFM data presents a negative growth rate, an alternate growth rate of 1% p.a. has been adopted.



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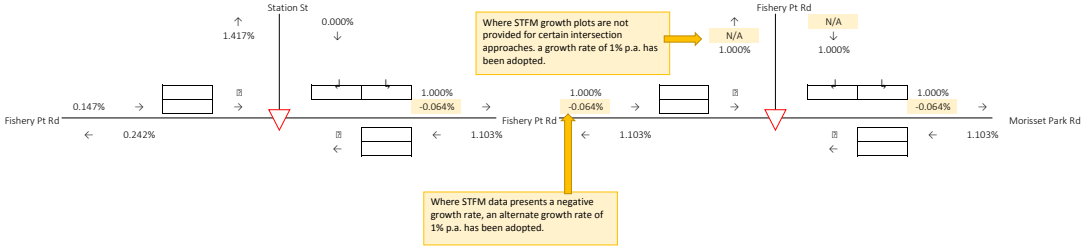

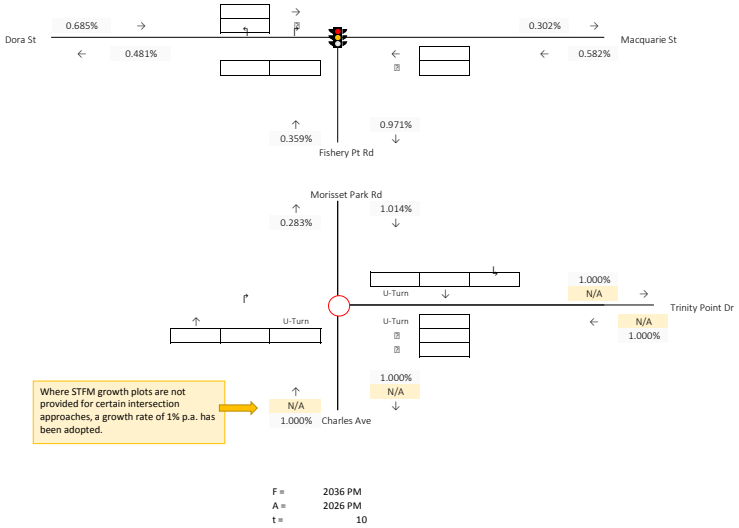

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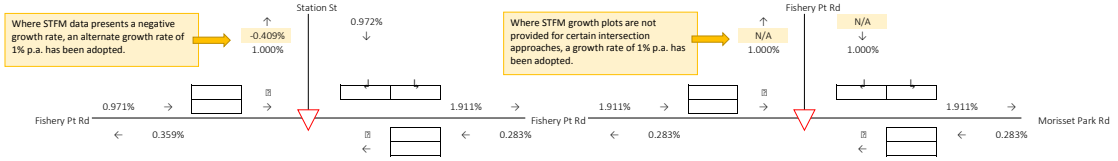
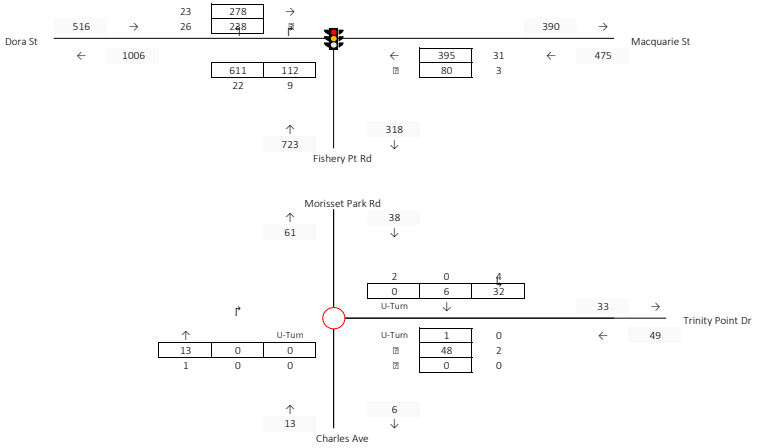
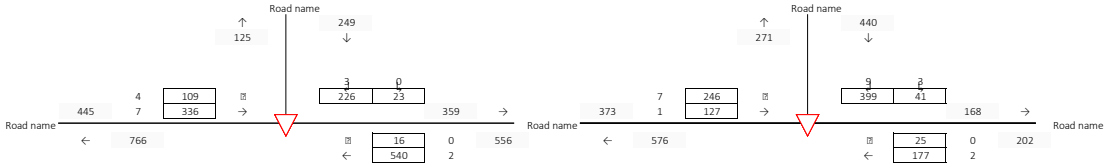
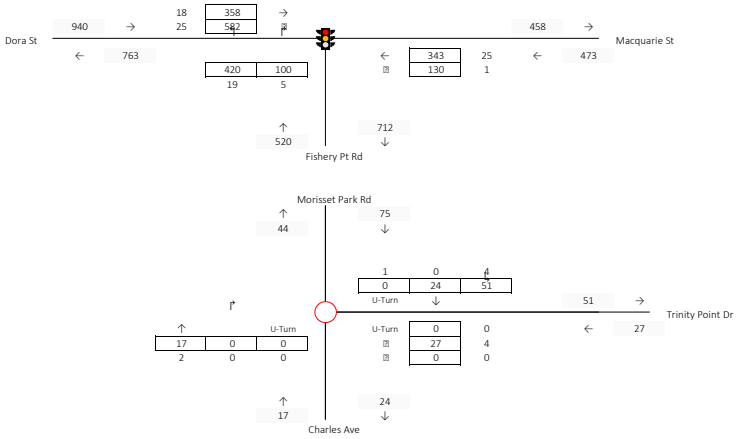
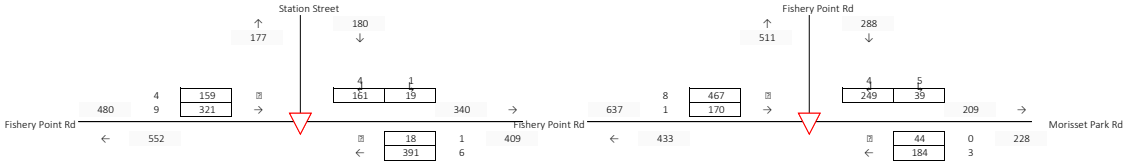
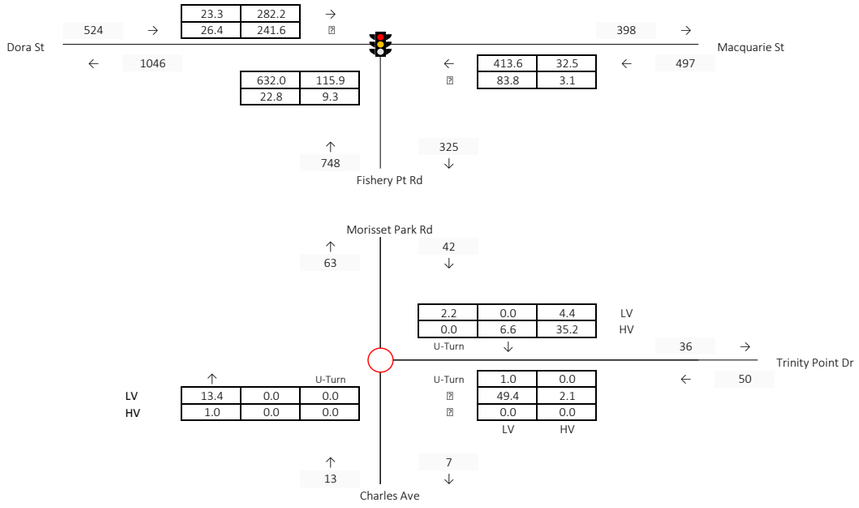


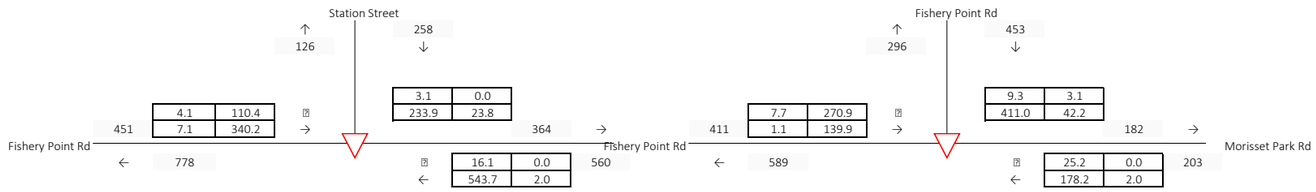

Dora St
Macquarie St
Fishery Pt Rd
Morisset Park Rd
Trinity Point Dr
Charles Ave
U-Turn
U-Turn

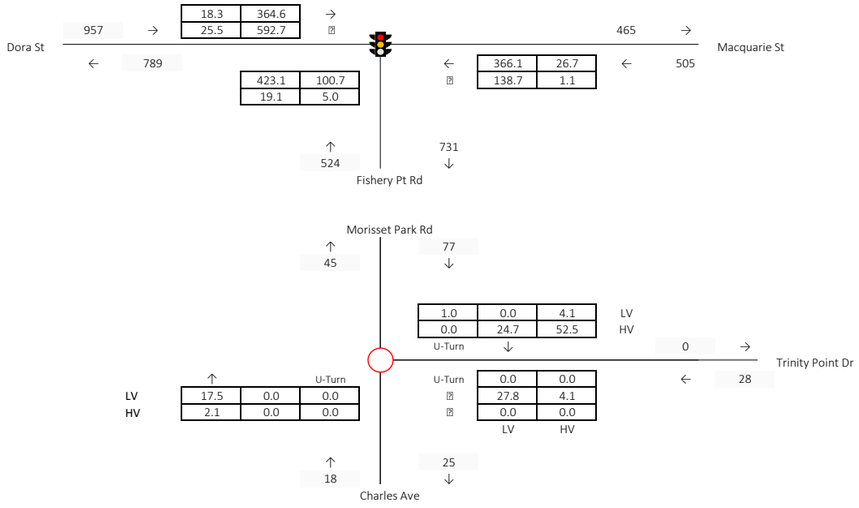

Road name
Road name
Road name
Road name

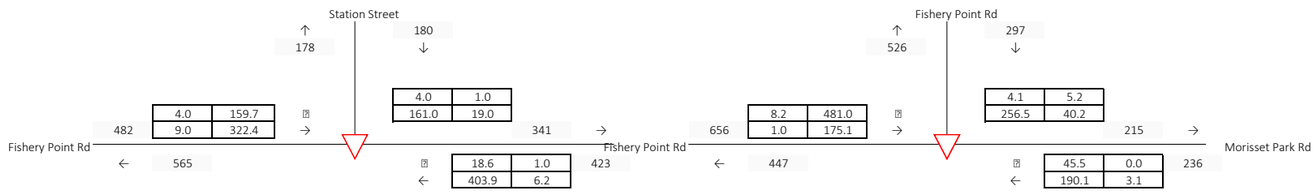

Dora St
Macquarie St
Fishery Pt Rd
Morisset Park Rd
Trinity Point Dr
Charles Ave
940
763
25
18
358
582
458
473
343
130
420
100
19
5
520
712
75
44
1
0
4
0
24
51
U-Turn
17
0
0
2
0
0
27
4
0
1
24
17

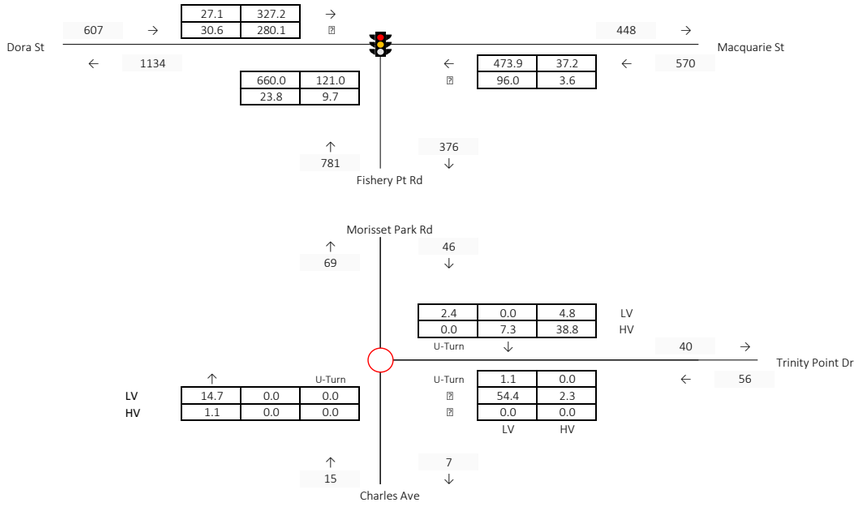

Station Street
Fishery Point Rd
Fishery Point Rd
Fishery Point Rd
Morisset Park Rd
480
9
4
159
321
552
177
180
4
1
161
19
340
18
391
1
6
409
637
1
8
467
170
433
511
288
4
5
249
39
209
44
184
0
3
228

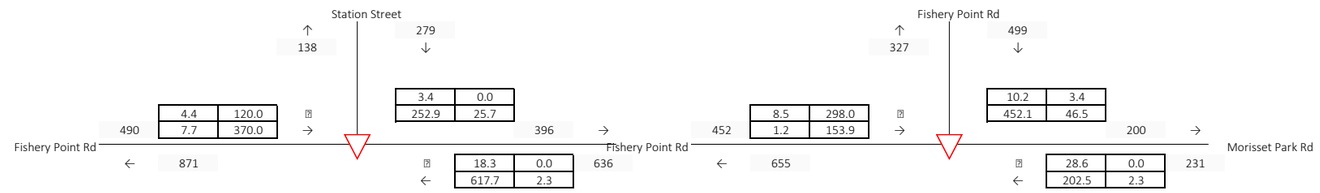

Dora St
Macquarie St
Fishery Pt Rd
524
1046
398
497
748
325
23.3
282.2
26.4
241.6
632.0
115.9
22.8
9.3
413.6
32.5
83.8
3.1
Morisset Park Rd
Trinity Point Dr
Charles Ave
63
42
36
50
13
7
2.2
0.0
4.4
LV
0.0
6.6
35.2
HV
U-Turn
U-Turn
U-Turn
LV
HV
13.4
0.0
0.0
1.0
0.0
0.0
1.0
0.0
49.4
2.1
0.0
0.0
LV
HV

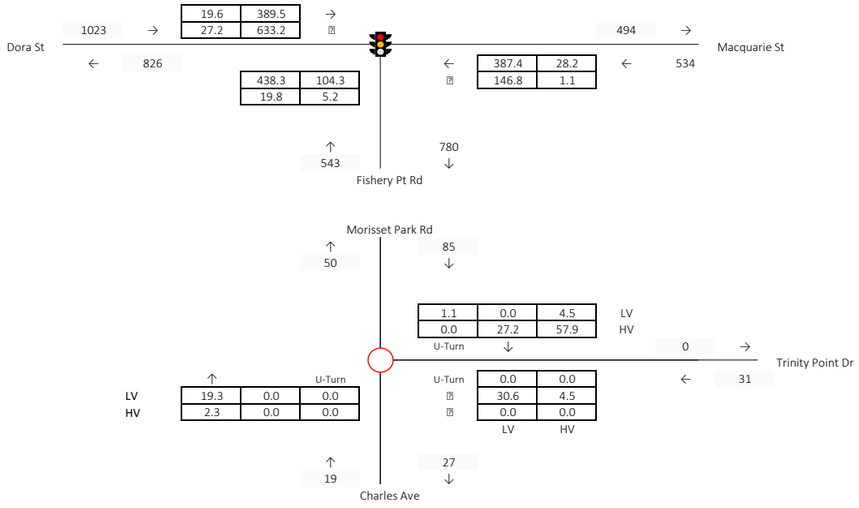

Station Street
Fishery Point Rd
Fishery Point Rd
Fishery Point Rd
Morisset Park Rd
126
258
451
778
364
560
411
589
296
453
182
203
4.1
110.4
7.1
340.2
3.1
0.0
233.9
23.8
16.1
0.0
543.7
2.0
7.7
270.9
1.1
139.9
9.3
3.1
411.0
42.2
25.2
0.0
178.2
2.0

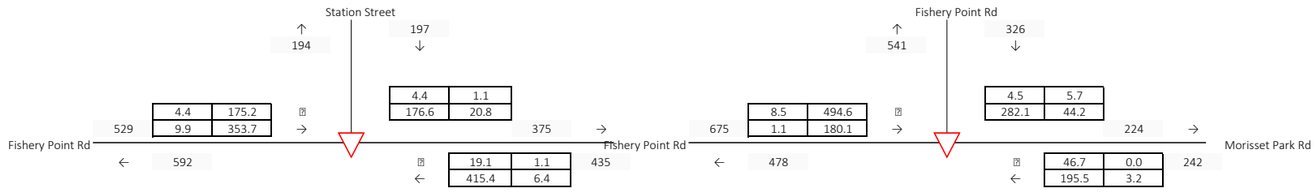

Dora St
Macquarie St
Fishery Pt Rd
Morisset Park Rd
Trinity Point Dr
Charles Ave
U-Turn
LV
HV
957
789
465
505
524
731
45
77
0
28
18
25
18.3
364.6
25.5
592.7
423.1
100.7
19.1
5.0
366.1
26.7
138.7
1.1
1.0
0.0
4.1
0.0
24.7
52.5
17.5
0.0
0.0
2.1
0.0
0.0
0.0
0.0
27.8
4.1
0.0
0.0


Station Street
Fishery Point Rd
Fishery Point Rd
Fishery Point Rd
Morisset Park Rd
178
180
482
565
341
423
656
447
526
297
215
236
4.0
159.7
9.0
322.4
4.0
1.0
161.0
19.0
18.6
1.0
403.9
6.2
8.2
481.0
1.0
175.1
4.1
5.2
256.5
40.2
45.5
0.0
190.1
3.1


Dora St
Macquarie St
Fishery Pt Rd
Morisset Park Rd
Trinity Point Dr
Charles Ave
607
1134
448
570
781
376
69
46
40
56
15
7
27.1
327.2
30.6
280.1
660.0
121.0
23.8
9.7
473.9
37.2
96.0
3.6
2.4
0.0
4.8
LV
0.0
7.3
38.8
HV
U-Turn
U-Turn
U-Turn
1.1
0.0
54.4
2.3
0.0
0.0
LV
HV
LV
14.7
0.0
0.0
HV
1.1
0.0
0.0


Station Street
Fishery Point Rd
Fishery Point Rd
Fishery Point Rd
Morisset Park Rd
490
871
396
636
452
655
200
231
138
279
327
499
4.4
120.0
7.7
370.0
3.4
0.0
252.9
25.7
18.3
0.0
617.7
2.3
8.5
298.0
1.2
153.9
10.2
3.4
452.1
46.5
28.6
0.0
202.5
2.3

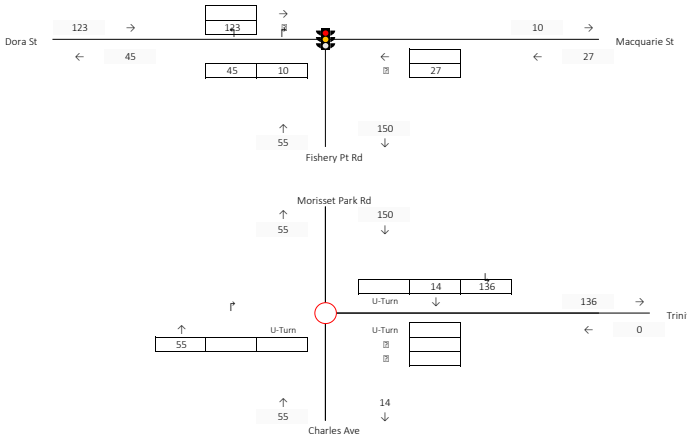

Dora St
Macquarie St
Fishery Pt Rd
1023
826
494
534
543
780
19.6
389.5
27.2
633.2
438.3
104.3
19.8
5.2
387.4
28.2
146.8
1.1
Morisset Park Rd
Trinity Point Dr
Charles Ave
50
85
0
31
19
27
U-Turn
LV
HV
1.1
0.0
4.5
0.0
27.2
57.9
19.3
0.0
0.0
2.3
0.0
0.0
30.6
4.5
0.0
0.0


Station Street
Fishery Point Rd
Fishery Point Rd
Morisset Park Rd
194
197
541
326
529
592
375
435
675
478
224
242
4.4
175.2
9.9
353.7
4.4
1.1
176.6
20.8
19.1
1.1
415.4
6.4
8.5
494.6
1.1
180.1
4.5
5.7
282.1
44.2
46.7
0.0
195.5
3.2

NB Excludes marina

0.82
0.81

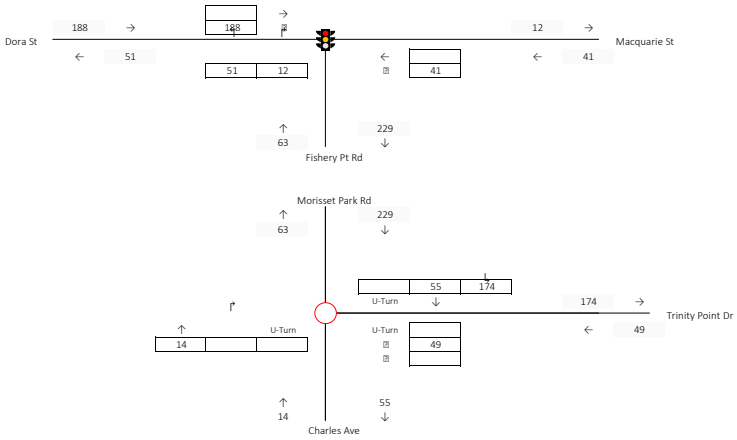
0.18
0.19

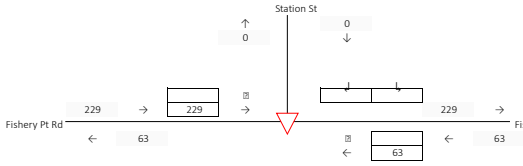


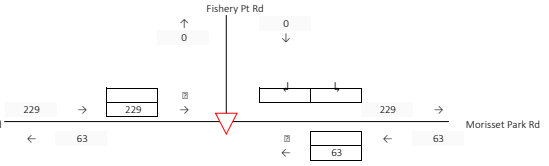
NB Excludes marina

0.82
0.81

0.18
0.19

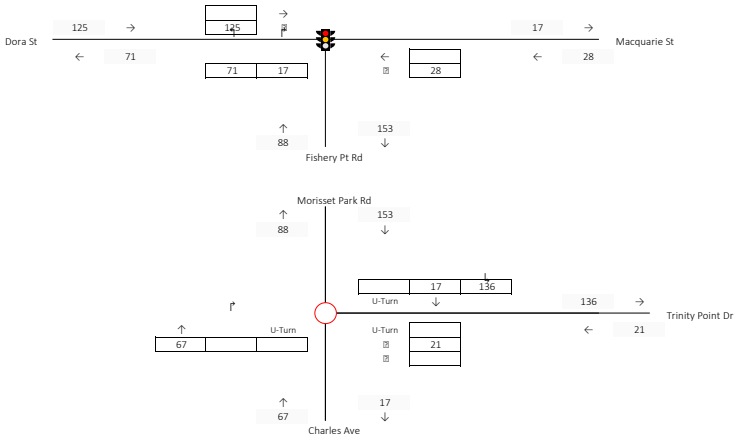


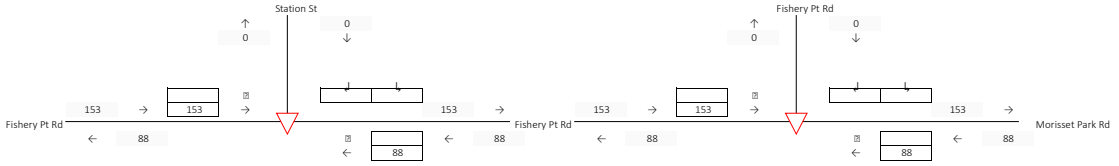




NB Excludes marina

0.82 0.18
0.81 0.19

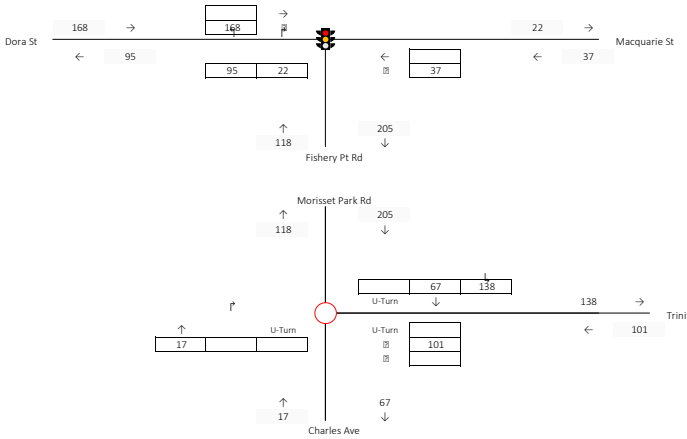




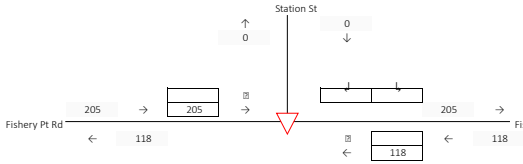
Generator	HOTEL	RESI	CONF	OTHER
IN%	50%	20%	100%	100%
OUT%	50%	80%	0%	0%
TOTAL	42	84	96	19
IN	21	16.8	96	19
OUT	21	67.2	0	0

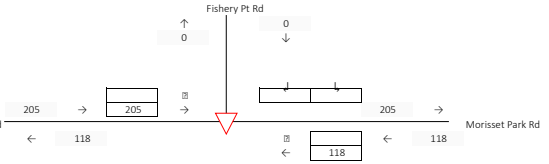
NB Excludes marina

0.82 0.18
0.81 0.19



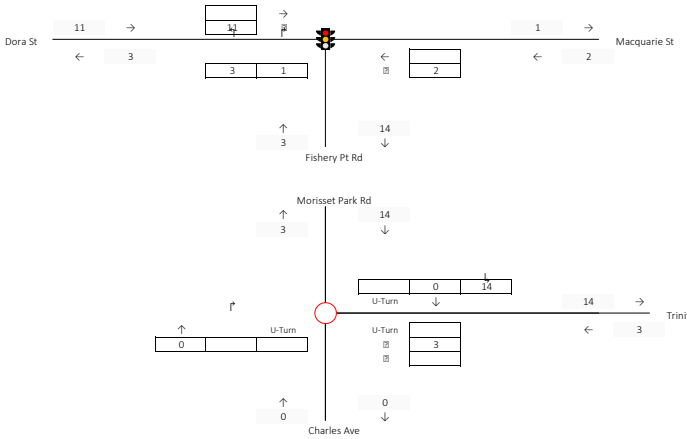
Generator	HOTEL	RESI	CONF	OTHER
IN%	50%	80%	100%	0%
OUT%	50%	20%	0%	100%
TOTAL	132	84	72	35
IN	66	67.2	72	0
OUT	66	16.8	0	35

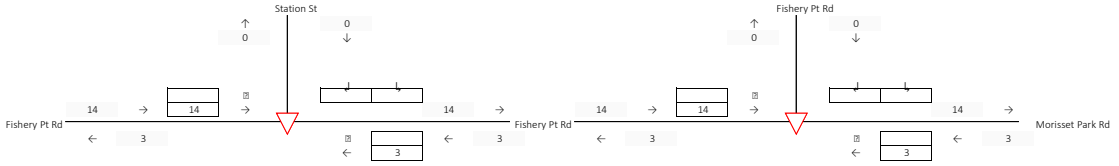




0.82
0.81

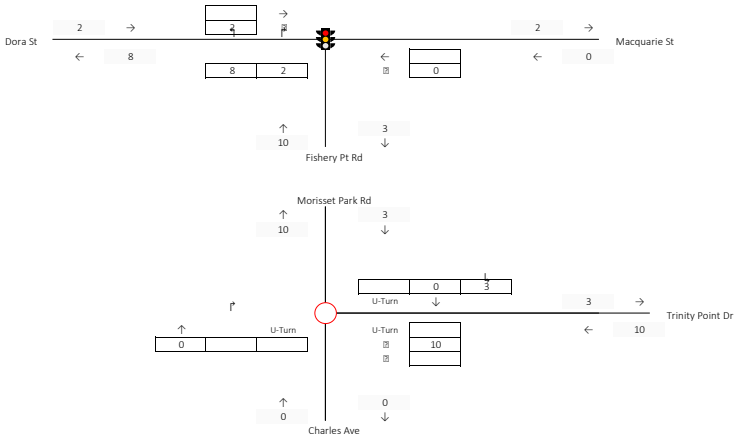
0.18
0.19

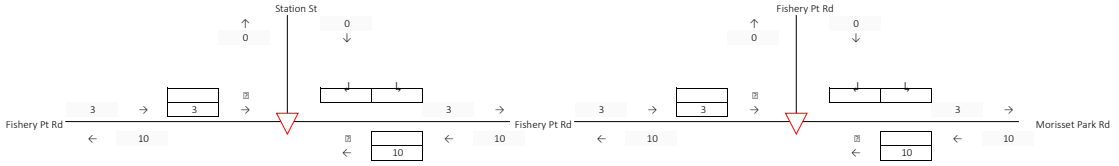




0.82
0.81

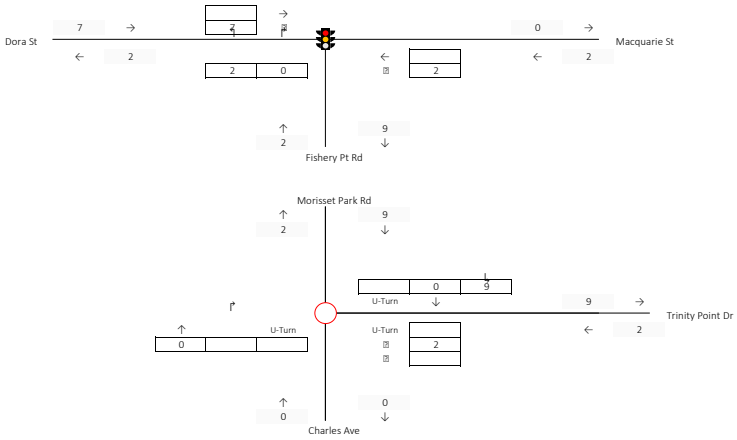
0.18
0.19

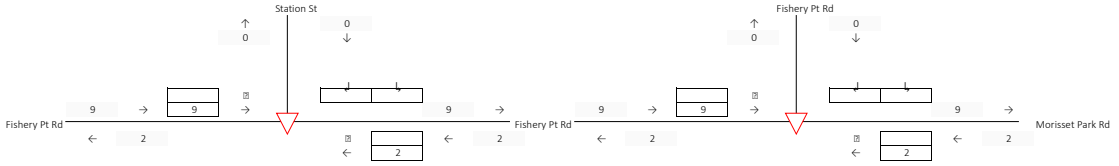




0.82
0.81

0.18
0.19





0.82
0.81

0.18
0.19