

Transport for NSW Trip Generation Surveys

Low Density Residential Data Report

Transport for NSW

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1. INTRODUCTION

1.1 Background

Transport for New South Wales (TfNSW), previously known as Roads and Maritime Services (RMS), commissioned Bitzios Consulting to undertake a trip generation and parking demand survey of Low Density Residential. The Roads and Maritime Guide to Traffic Generating Developments – 2002 (hereafter referred to as the Guide), contains traffic generation and parking demand information based on surveys completed since 1978 and regularly requires updating.

TfNSW recognised that many new and emerging business types are not adequately represented in the Guide, including Low Density Residential. Other early trip generation studies were too focussed on Sydney and did not adequately reflect potential differences in regional areas. Additionally, there is an increasing awareness that public transport and active transport access has not been adequately accounted for in previous trip and parking generation surveys for some particular land uses.

Several large trip and parking generation rate databases have been developed over the years. Notable among these are the NZ Trips Database Bureau (TDB), the US Institute of Transportation Engineers (ITE) Trip Generation / Parking Generation, and the Trip Rate Information Computer System (TRICS).

Over the last few years, the implementation of lockdowns or restrictions to mitigate the spread of Covid-19 has impacted traffic movements for certain land uses. Emerging studies are indicating that outside of government-mandated lockdowns and movement restrictions, traffic in major centres appears to be remaining consistent with pre-Covid levels. There is existing trip rate data for low density residential included in the Guide, data previously collected over large precinct areas shows some variance from similar data derived from the Household Travel Survey trip diaries. Furthermore, the ongoing effect of covid-induced working from home has not been surveyed. This study does not analyse or discuss any impacts to traffic due to Covid-19 lockdowns.

1.2 Scope

The scope of this Data Report includes:

- Research and identification of Low Density Residential which meet the requirements of Transport for NSW brief
- Summary of all collected relevant and available background data for each selected survey site (e.g. the number of dwellings within the catchment area, any localised home businesses)
- Directional traffic count data (12-bin) at the entrance to the residential precinct collected over 7 days, for each direction, at the same location as the traffic counter, in the peak periods (6.00am to 9.00am; 3.30pm to 6.30pm) on one weekday
- Assembly and summary of information on all mode trip generation data
- Tabulating and presenting the collected data to establish any initial statistical relationship.

Detailed data and regression analysis shall be included in the corresponding Analysis Report for this study.

1.3 Definition of Key Terms

The following key terms are utilised within this report:

- **TfNSW** – Transport for New South Wales
- **Trip Generation** – Generation of trips undertaken by individuals, including pedestrians and cyclist. It should be noted that a ‘trip’ is the movement of a vehicle or person from origin to destination so that a person travelling to a business site and departing later is counted as two trips.
- **Traffic Generation** – Individual vehicle trips regardless of the number of persons within the vehicle.

1.4 Project Challenges and Responses

Table 1.1 shows and summarises the challenges that occurred throughout the data collection phase of the project and the steps taken to address them.

Table 1.1: Addressing Project Challenges

Challenges	Responses
The large number of survey sites increased the likelihood of data collection errors or corrupted datasets	Where possible, additional surveys were undertaken to correct probably data errors. All other errors were noted within the Data Report and were taken into consideration throughout the data analysis
Ensuring a typical weekday and weekend was surveyed for each site.	Surveys were undertaken outside of School Holiday periods

2. SITE SELECTION

2.1 Transport for NSW Criteria

The selection of sites is based on the following criteria provided by TfNSW:

- Only detached and semi-detached housing – no villas, aged care, medium density or high-rise
- Reasonable geographic spread
- A range of precinct sizes
- A range of accessibility to public transport
- No non-residential traffic generating developments (e.g. child care centres; shops; schools, etc) within the catchment area.

2.2 Candidate Site Selection

The candidate sites were selected by manually reviewing aerial imagery (Google Maps and Nearmap)
A total of 28 candidate sites, comprising of 9 regional and 19 around Sydney.

2.3 Selection Basis

A total of 24 sites were selected from the 28 nominates sites. The final selection of sites was based on a number of key factors. The candidate sites satisfied the Transport for NSW criteria listed above.

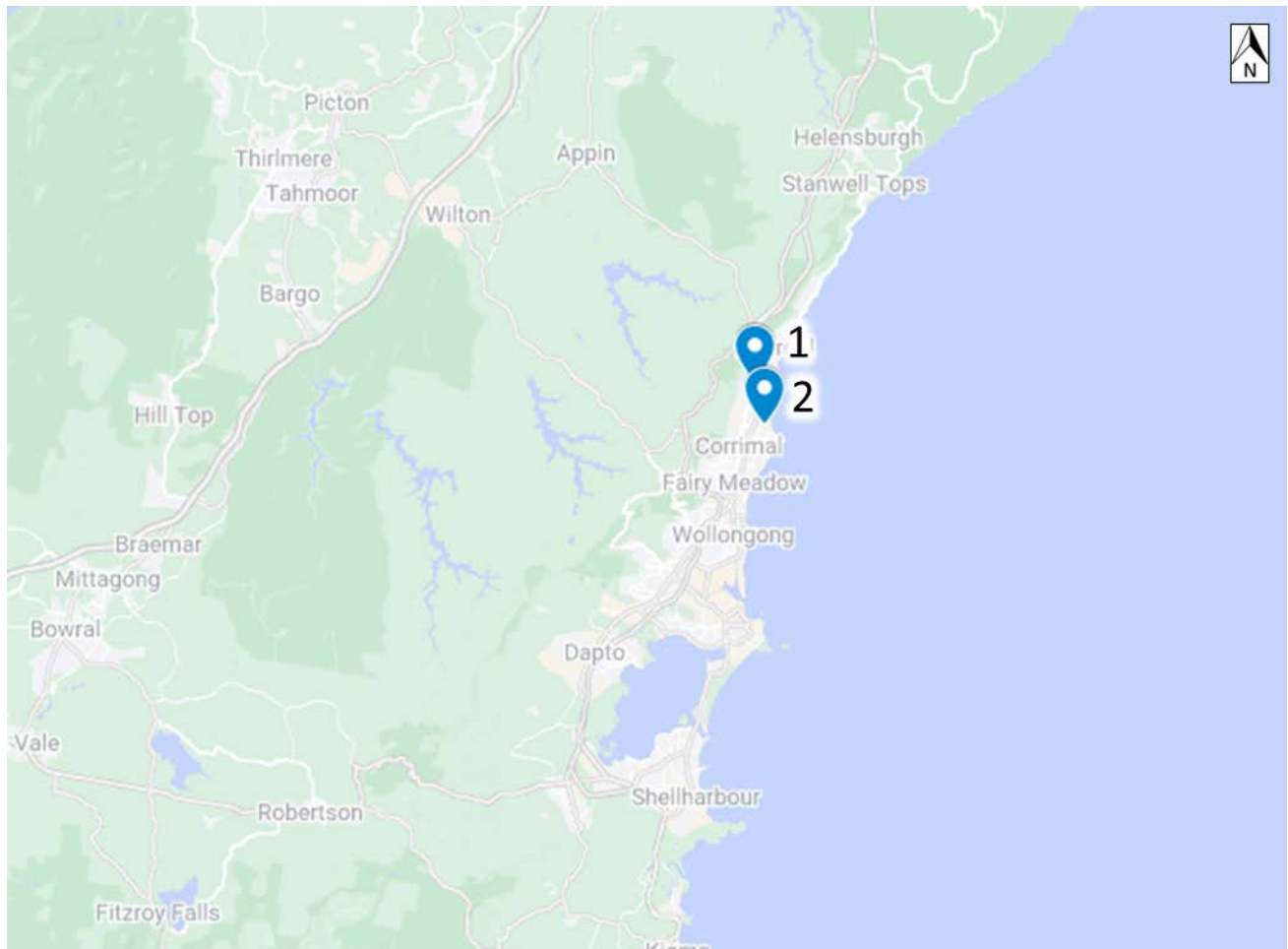
2.4 Selected Survey Sites

A summary of each of the selected survey sites and their locations is provided in Table 2.2 and Figure 2.1, Figure 2.2, Figure 2.3 and Figure 2.4 respectively. The number of home based businesses within each survey catchment has also been noted, “retail” has been defined as businesses that are understood to have home-based sales and pick-up, while “commercial” has been defined as office or trade businesses. Number of businesses is based on an aerial imagery review and online mapping information.

Table 2.1: Survey Sites

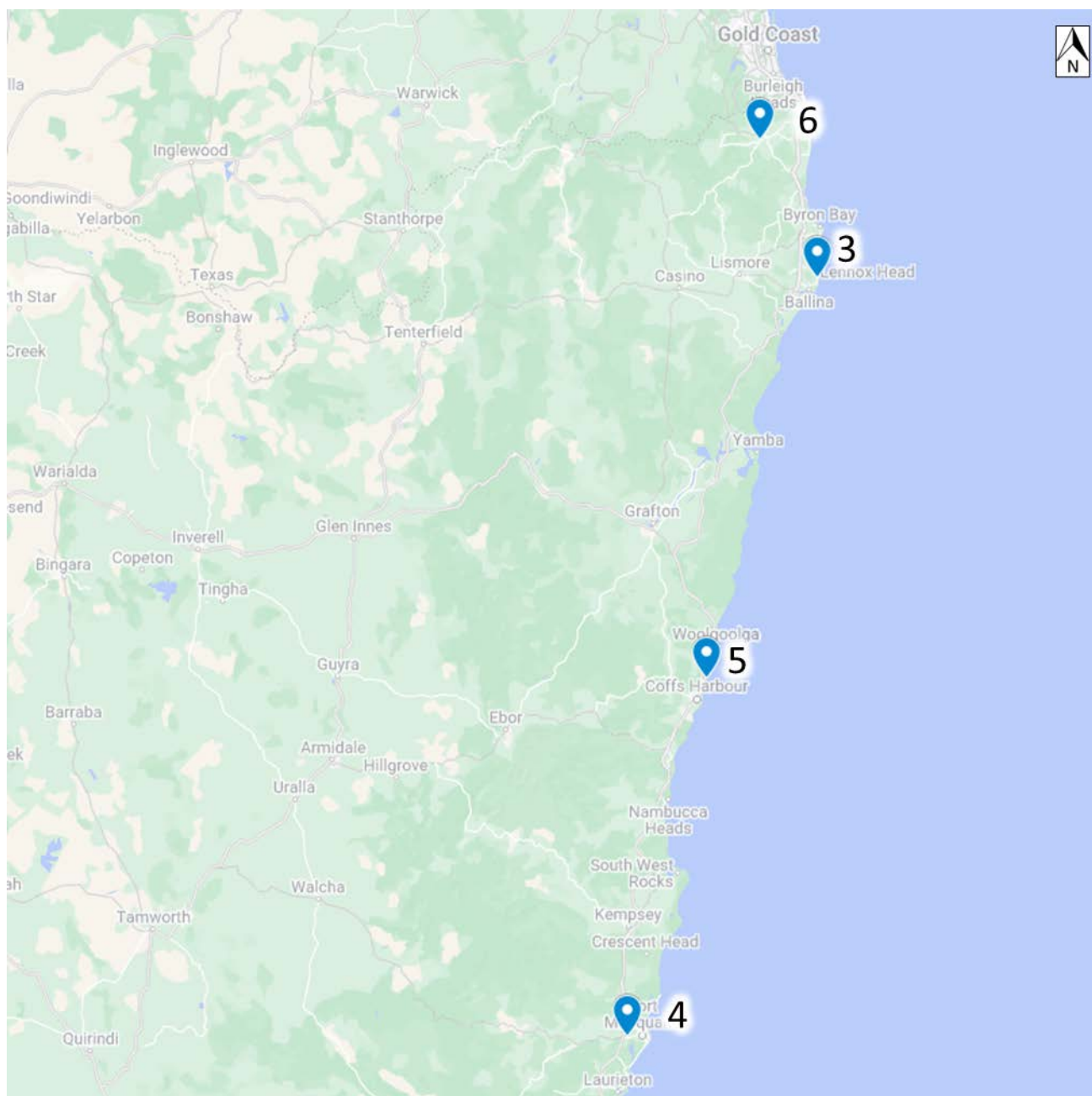
Sit e No.	Region	Region Type	Suburb /Town	Catchment Entry Road	No. of Dwellings	Retail	Commercial
1	Wollongong	Outer Suburban	Buli	Hospital Road	182	2	0
2	Wollongong	Outer Suburban	Woonona	Charlotte Harrison Drive	91	1	0
3	Ballina	87	0	Henderson Drive			2
4	Port Macquarie-Hastings	150	0	Chancellors Drive			2
5	Coffs Harbour	220	1	N Solitary Drive			0
6	Tweed	118	1	Golden Links Drive			0
7	Newcastle	87	5	Cedrella Crescent			2
8	Newcastle	Outer Suburban	Fletcher	Redwood Close	81	3	2
9	Camden	Outer Suburban	Harrington Park	Hawthorne Circuit	85	3	2
10	Sutherland Shire	Outer Suburban	Greenhills Beach	Wategos Street	226	8	0
11	Cumberland	Outer Suburban	Merrylands	Shannon Avenue	58	4	0
12	Parramatta	Inner Suburban	Northmead	Christine Street	53	1	0
13	Hornsby Shire	Outer Suburban	Pennant Hills	Kurrajong Street	129	0	0
14	City of Fairfield	Inner Suburban	Old Guildford	Orchid Road	54	8	0
15	Sutherland Shire	Inner Suburban	Illawong	Austin Street	247	0	0
16	Sutherland Shire	Inner Suburban	Menai	Portmadoc Drive	271	0	0
17	City of Willoughby	Inner Suburban	Chatswood West	River Avenue	136	0	0
18	City of Ryde	Inner Suburban	Marsfield	Elk Street	52	2	0
19	Canterbury-Bankstown	Inner Suburban	Punchbowl	Patrick Street	41	3	1
20	Campbelltown	Inner Suburban	Leumeah	Jenolan Street	56	1	0
21	Macarthur	Inner Suburban	Ingleburn	Delage Place	27	3	0

22	Liverpool	Inner Suburban	Wattle Grove	Castle Rock Court	124	2	0
23	Liverpool	Inner Suburban	Hammondville	Meehan Avenue	161	2	1
24	Liverpool	Inner Suburban	Moorebank	Marshall Avenue	121	3	0



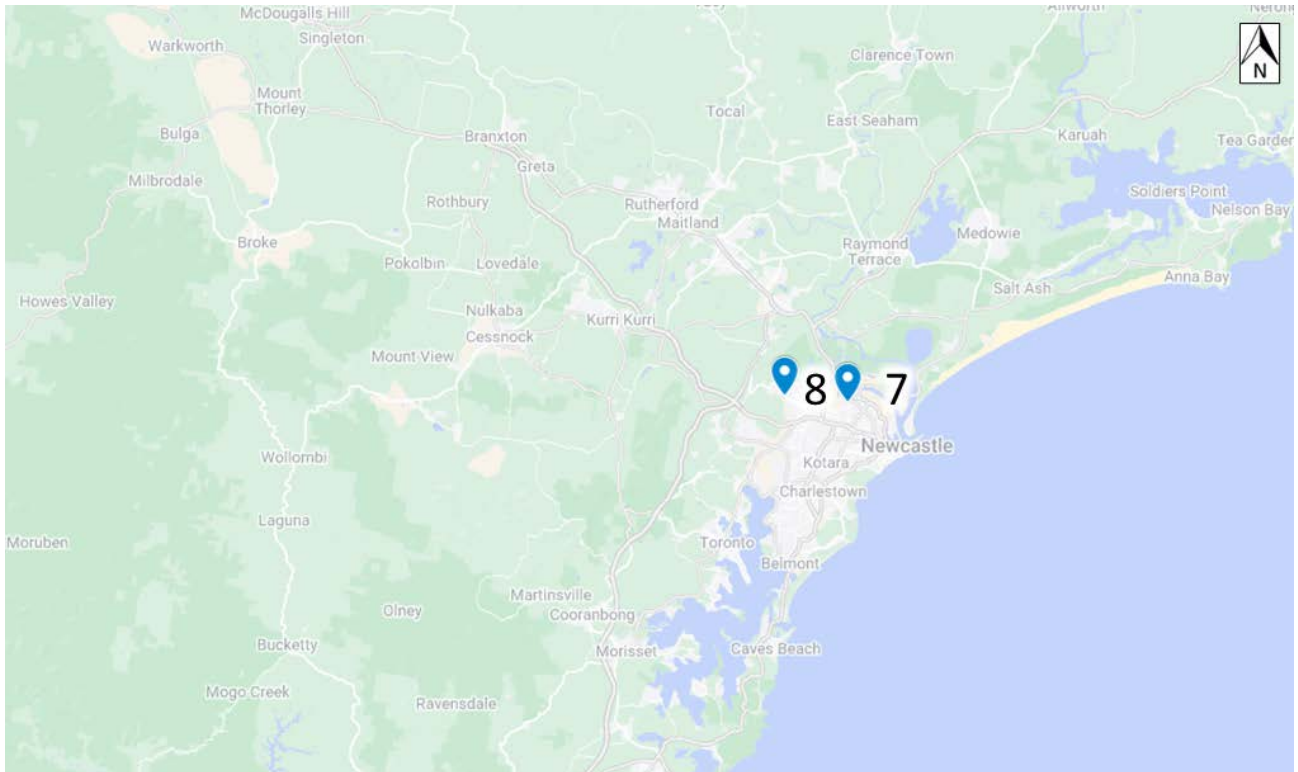
SOURCE: Google Maps (edited by Bitzios)

Figure 2.1: Low Density Residential Survey Site Locations



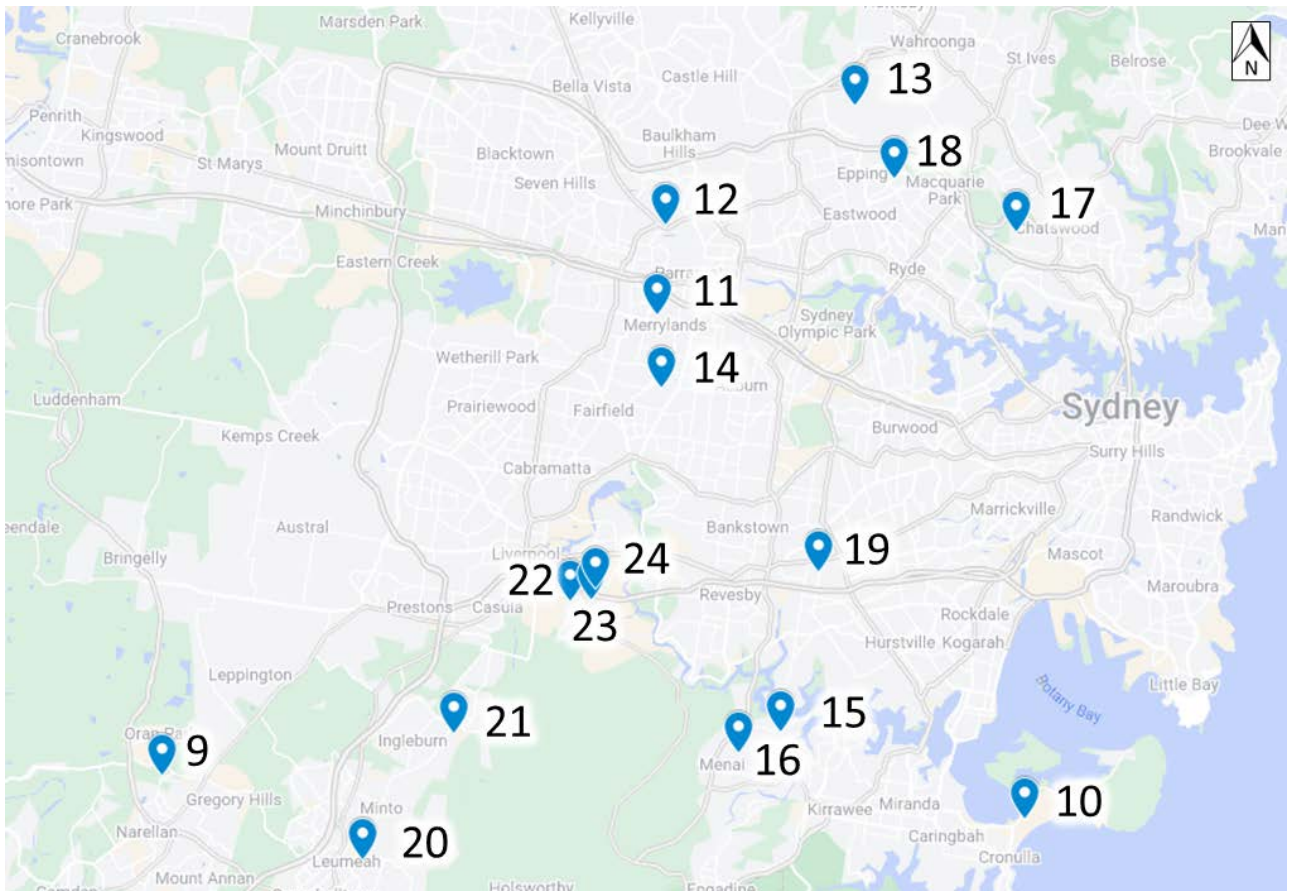
SOURCE: Google Maps (edited by Bitzios)

Figure 2.2: Low Density Residential Survey Site Locations



SOURCE: Google Maps (edited by Bitzios)

Figure 2.3: Low Density Residential Survey Site Locations



SOURCE: Google Maps (edited by Bitzios)

Figure 2.4: Low Density Residential Survey Site Locations

3. SURVEY PROCEDURE

3.1 Survey Schedule

Two sets of Surveys were undertaken, Automatic Tube counts and Manual counts. Tube Counts were collected across a seven (7) day period at the entrance to the residential precinct. Manual observational counts were undertaken on a single weekday to capture pedestrian, cyclist, occupants in passing cars and passengers in passing buses if any. This was collected for each direction, at the same location as the traffic counter, during the peak periods (6.00am to 9.00am; 3.30pm to 6.30pm) to provide data on mode choice.

Table 3.1: Site Survey Schedule and Notes

Site No.	Manual Survey Date	Tube Count Survey Dates
1, 2, 5, 8, 11, 13, 18, 19, 20	Wednesday, 1 June 2022	28th May to 3rd June 2022
3, 6	Tuesday, 7 June 2022	7th - 13th June 2022
4	Thursday, 2 June 2022	30th May - 5th June 2022
7, 9, 12, 21	Tuesday, 31 May 2022	28th May-3rd June 2022
10	Tuesday, 14 June 2022	8th - 14th June 2022
14, 15, 16, 22, 23, 17	Thursday 2nd June 2022	28th May -3rd June 2022
24	Tuesday, 7 June 2022	1st - 7th June 2022

All survey sites are of 'closed' catchments with only one (1) road in/out of the survey area.

3.2 Site Information

The following site information was collected for each site (where available):

- Number of dwellings within catchment
- Bus routes / PT availability
- Parking restrictions
- Number of local businesses.

3.3 Collection Methods

Site information was collected using two (2) different sources, as follows:

- On-site observations completed by traffic counting firm Traffic Data & Control (TDC)
- Manually researching information and review aerial imagery.

4. SURVEY RESULTS

4.1 Overview

This report contains a summary of select data. Alongside daily trip data, each site's AM and PM peak periods are reviewed on a weekday (Tuesday, Wednesday or Thursday) and weekend (Saturday). Preliminary data summaries for all the sites are contained in **Appendix A** and include site information, trip generation derived from traffic counts and survey data. Complete survey data sets for individual sites, as completed by TDC, are provided in **Appendix B**.

4.2 Preliminary Analysis and Key Statistics

Key outputs of the surveys including factors that impact the road network such as, vehicle and person trip generation, development peak periods, trips per number of dwellings, and travel mode splits have been summarised in this section.

During the preliminary investigations the following was noted:

- AM Peak Hour Periods on weekdays typically occur within a narrower time frame (regularly beginning at 7:30am – 8:00am) while PM peaks varied more in range (beginning between 3:00pm – 4:30pm)
- As seen historically in data, the weekend peak periods are closer to midday than the weekday peaks. However, some sites showed a higher peak trip generation during the weekend
- Maximum trip generation on weekends has a greater disparity between the Greater Sydney vs Regional sites than on weekdays
- Catchments with high trip generation rates appear to have home-based businesses located within the catchment area.

Many of the trends noted within the data align with typically adopted industry standards. However, there are some differences, such as the trip generation during the weekend being comparable and sometimes higher than the weekday trip generation.

4.2.1 Initial Site Analysis

An initial site analysis was undertaken to identify any overarching trends within the survey data that will inform further detailed analysis and regression models to be completed in the subsequent corresponding Analysis Report.

A comparison between all site's peak vehicle trips and daily vehicle trips is shown in Figure 4.1 and Figure 4.2 respectively, to establish initial trip demand profiles.

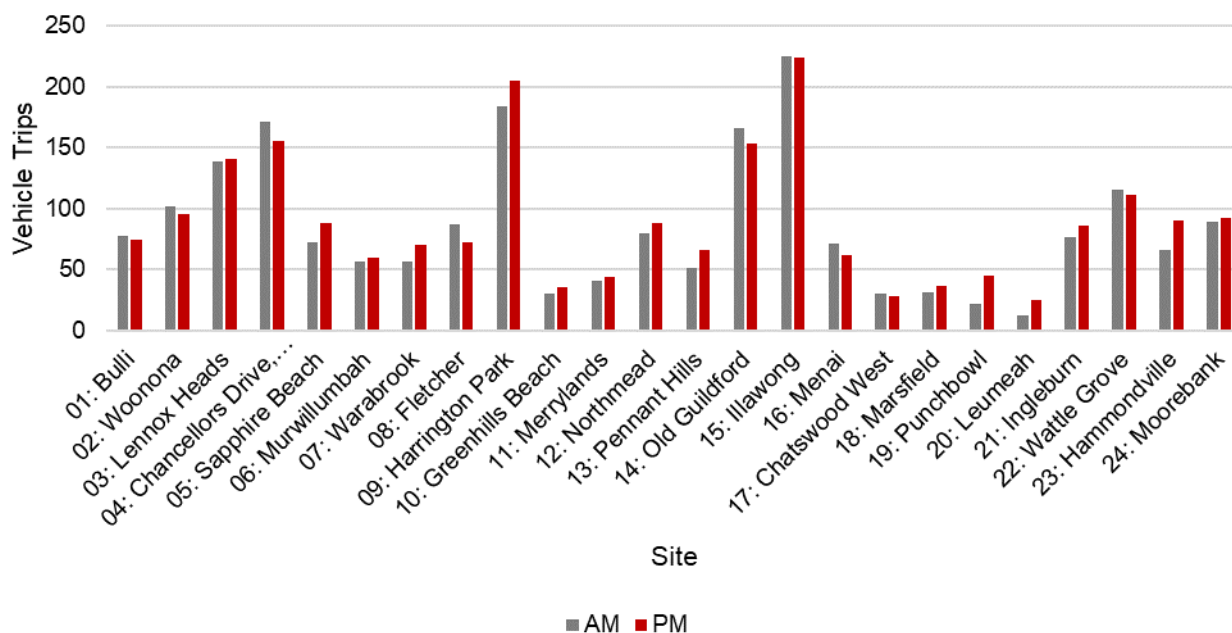


Figure 4.1: Peak Vehicle Trips on Weekdays and Weekends

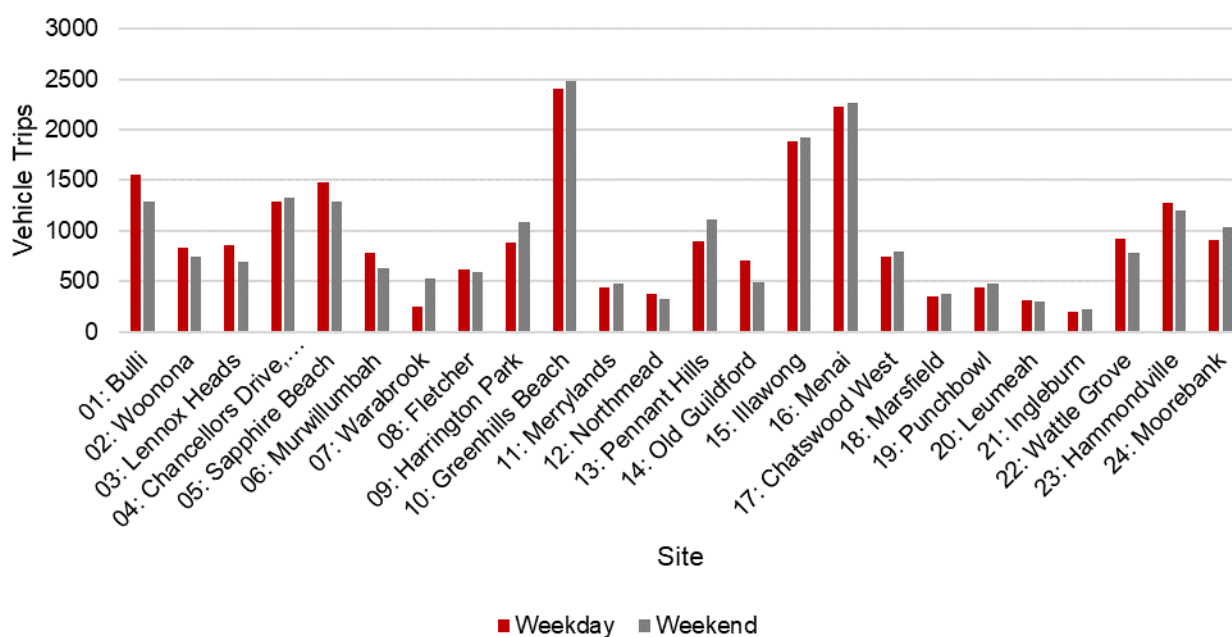


Figure 4.2: Daily Vehicle Trips Comparison

Comparisons were undertaken considering the number of dwellings at each site which, as historically applied, provides the clearest influence of trip generating variables. Generally there is an even split of sites with daily peaks occurring in the AM and PM, while a number of sites noted higher weekend peak periods than on weekdays.

Initial overviews of travel mode splits, in/out traffic movements, and daily traffic profiles was also undertaken as follows.

4.2.2 Weekday Survey Data

Surveys conducted for sites on a weekday have been examined to identify key findings and trends in trip generation and associated factors. Complete site data details can be found in **Appendix A**.

Figure 4.3 below illustrates the average hourly traffic on a weekday for all 24 sites.

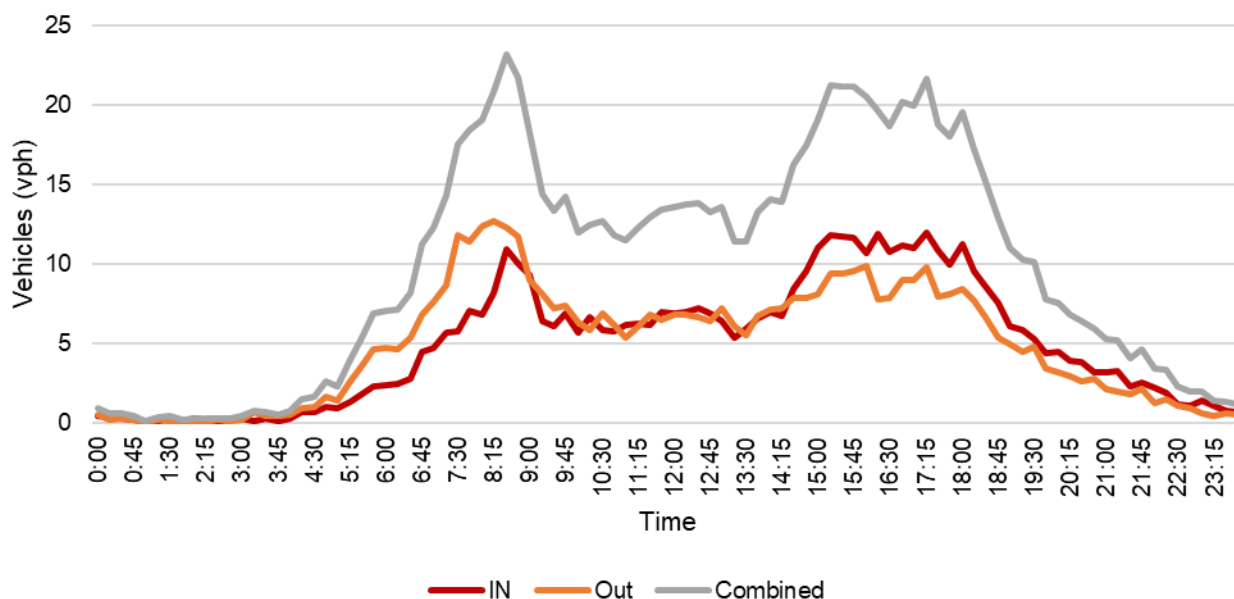


Figure 4.3: Average Weekday Inbound and Outbound Daily Profile

Examination of the data indicates that the weekday peak periods are typically between 7:30 AM and 8:30 AM and 3:30 PM and 5:30 PM.

As shown in Table 4.1 and Table 4.2 present further data for the sites on weekdays.

Table 4.1: Vehicle Trip Data Summary - Weekday

Site Number	Peak Hour (Starting)		Peak Vehicle Trips				Peak trips per dwelling		Daily Veh trips	Daily Veh trips per dwelling
			Weekday		% of Daily Trips		Weekday		Weekday	Weekday
	AM	PM	AM	PM	AM	PM	AM	PM		
1	8:00:00 AM	3:45:00 PM	163	148	10%	9%	0.90	0.81	1561	8.6
2	8:00:00 AM	3:45:00 PM	78	75	9%	9%	0.86	0.82	837	4.6
3	8:00:00 AM	4:15:00 PM	102	96	12%	11%	1.20	1.13	864	4.7
4	7:30:00 AM	3:30:00 PM	139	141	11%	11%	0.93	0.94	1291	7.1
5	7:45:00 AM	4:30:00 PM	171	155	12%	10%	0.78	0.70	1479	8.1
6	7:45:00 AM	4:45:00 PM	72	88	9%	11%	0.61	0.75	780	4.3
7	8:00:00 AM	4:45:00 PM	57	60	22%	24%	0.66	0.69	255	1.4
8	8:00:00 AM	4:45:00 PM	57	70	9%	11%	0.70	0.86	618	3.4
9	8:00:00 AM	5:30:00 PM	87	72	10%	8%	1.02	0.85	880	4.8
10	8:00:00 AM	3:30:00 PM	184	205	8%	9%	0.81	0.91	2407	13.2
11	7:45:00 AM	3:30:00 PM	30	36	7%	8%	0.52	0.62	445	2.4
12	7:30:00 AM	3:30:00 PM	41	44	11%	12%	0.77	0.83	371	2.0

13	7:45:00 AM	3:30:00 PM	80	88	9%	10 %	0.62	0.6 8	896	4.9
14	8:00:00 AM	3:30:00 PM	51	66	7%	9%	0.94	1.2 2	702	3.9
15	7:45:00 AM	4:30:00 PM	166	153	9%	8%	0.67	0.6 2	1891	10.4
16	7:30:00 AM	4:15:00 PM	225	224	10%	10 %	0.83	0.8 3	2234	12.3
17	8:00:00 AM	3:30:00 PM	71	62	10%	8%	0.52	0.4 6	746	4.1
18	8:00:00 AM	3:30:00 PM	30	28	9%	8%	0.58	0.5 4	351	1.9
19	8:00:00 AM	4:30:00 PM	31	37	7%	8%	0.76	0.9 0	439	2.4
20	8:00:00 AM	4:45:00 PM	22	45	7%	15 %	0.39	0.8 0	307	1.7
21	6:45:00 AM	5:00:00 PM	13	25	7%	13 %	0.48	0.9 3	194	1.1
22	7:45:00 AM	4:00:00 PM	77	86	8%	9%	0.62	0.6 9	916	5.0
23	8:00:00 AM	4:00:00 PM	116	111	9%	9%	0.72	0.6 9	1274	7.0
24	8:00:00 AM	5:15:00 PM	66	90	7%	10 %	0.55	0.7 4	913	5.0

Table 4.2: Vehicle Split and Person Trips Data Summary - Weekday

Site	AM Peak Splits (%)		PM Peak Splits (%)		Weekday Person Trips		Average Vehicle Occupancy	
Number	In	Out	In	Out	AM Peak	PM Peak	AM Peak	PM Peak
1	31%	69%	57%	43%	227	203	1.34	1.19
2	74%	26%	44%	56%	98	92	1.17	1.10
3	32%	68%	56%	44%	171	150	1.64	1.44

4	24%	76%	62%	38%	212	185	1.34	1.17
5	22%	78%	67%	33%	277	206	1.53	1.14
6	38%	62%	61%	39%	108	108	1.34	1.34
7	38%	62%	63%	37%	69	80	1.15	1.34
8	70%	30%	35%	65%	75	86	1.31	1.50
9	43%	57%	63%	37%	147	110	1.55	1.16
10	61%	39%	47%	53%	296	395	1.43	1.91
11	29%	71%	60%	40%	41	51	1.28	1.59
12	32%	68%	52%	48%	54	58	1.24	1.33
13	73%	27%	37%	63%	127	130	1.40	1.43
14	33%	67%	64%	36%	93	105	1.68	1.89
15	29%	71%	61%	39%	244	200	1.37	1.12
16	27%	73%	60%	40%	401	382	1.69	1.61
17	73%	27%	40%	60%	102	81	1.25	1.00
18	22%	78%	66%	34%	59	50	1.61	1.36
19	31%	69%	58%	42%	51	47	1.58	1.45
20	64%	36%	43%	57%	38	53	1.60	2.23
21	22%	78%	72%	28%	20	30	1.44	2.16
22	27%	73%	63%	37%	118	129	1.44	1.58
23	36%	64%	60%	40%	213	190	1.49	1.33
24	70%	30%	42%	58%	77	122	1.16	1.84

Initial examination of the Weekday data for all the sites indicates that:

- The average peak vehicle trips per dwelling are 0.73 and 0.79 in the AM and PM peaks respectively. Data points ranging from 0.4 to 1.2 and 0.45 to 1.22.
- Daily vehicle trips per dwelling varied from 2.9 to 13 with an average of 7.9
- Vehicle occupancy averaged as 1.45 persons per vehicle, with data ranging from 1.00 to 2.4
- On average peak traffic made up 10% of total daily traffic, though results ranged from 7% to 24%.
- In and Out splits averaged out as 41%/59% during AM peaks and 56%/44% during PM peaks.

Figure 4.4 demonstrates the hourly IN/OUT distribution on a weekday for all sites

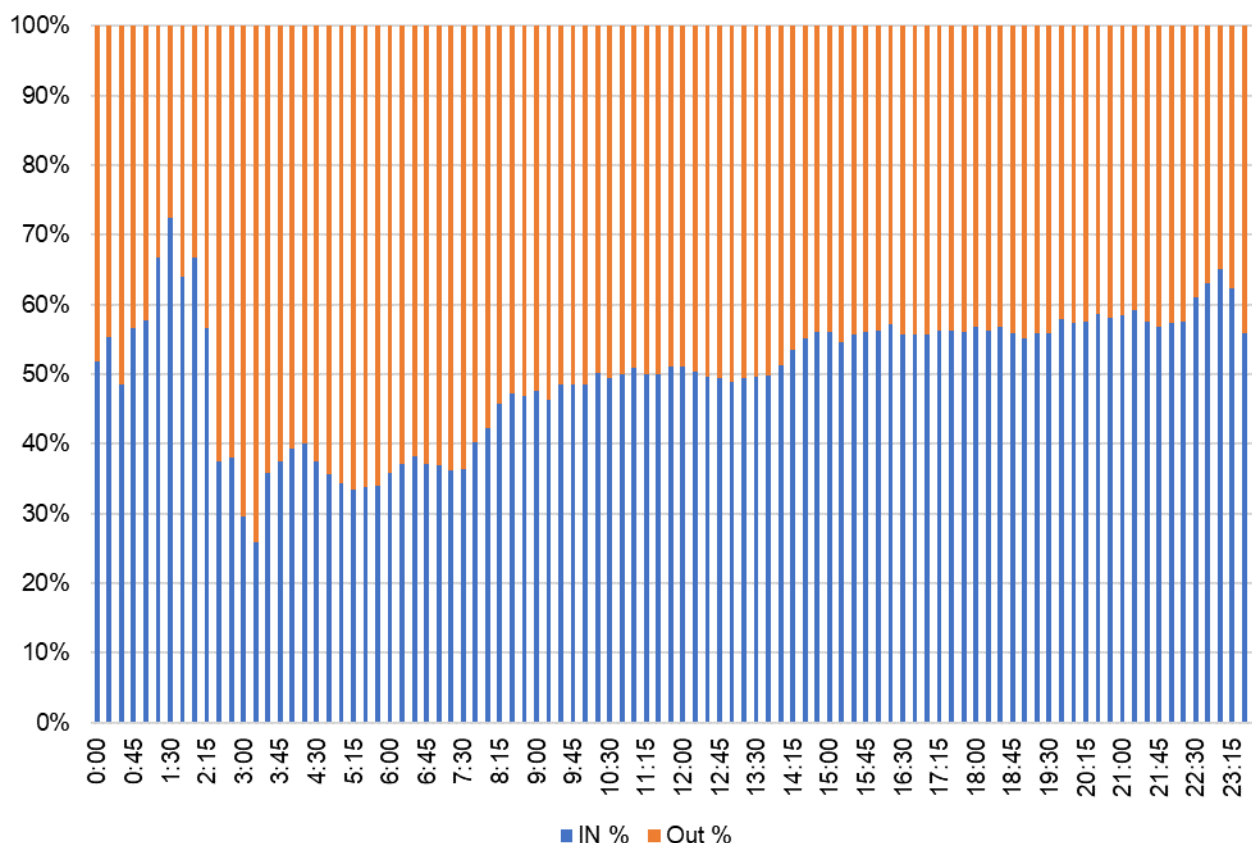


Figure 4.4: IN/OUT Directional Splits – Weekday

Figure 4.5 demonstrates the frequency of trips rates per dwelling for all survey sites.

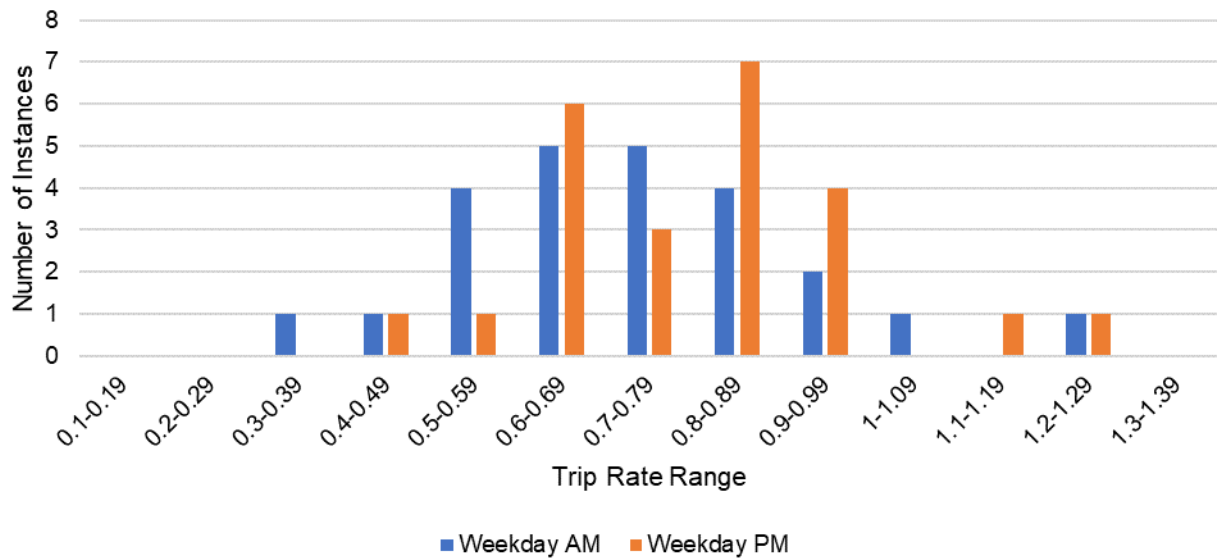


Figure 4.5: Frequency of Weekday Peak Trip Rates per Dwelling

Generally, Weekday peak rates consolidated around the 0.5 to 0.9 trips per dwelling range. However, AM peak rates are, in general, slightly lower than PM peak rates.

4.2.3 Weekend Survey Data

Automatic surveys conducted for sites on weekends have been examined to identify key findings and trends in trip generation and associated factors. Complete site data details can be found in **Appendix A**.

Figure 4.6 below illustrates the average hourly traffic on a weekend for all 24 sites.

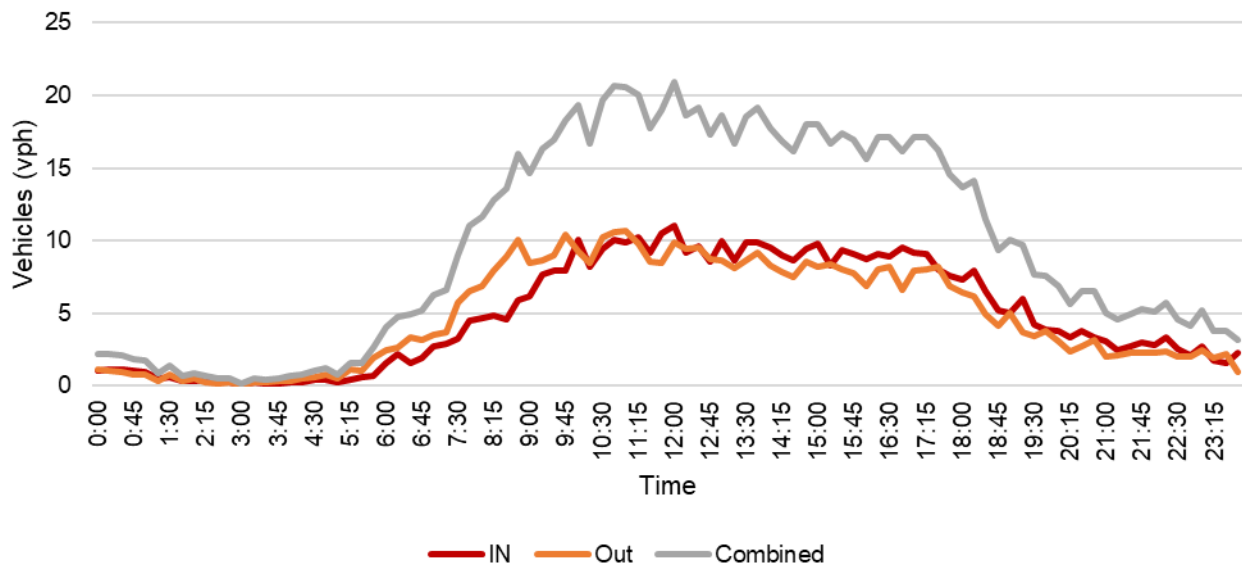


Figure 4.6: Average Weekend Inbound and Outbound Daily Profile

Examination of the data indicates that the weekend peak period is typically between 11:00 AM and 1:00 PM, however, traffic levels close to peak times extends out to 2:00PM to 3:00PM from the highest peak.

Table 4.3 and Table 4.4 present further data for the sites on weekends.

Considering the daily vehicle volumes are similar it was anticipated the total vehicle volumes would be similar.

Table 4.3: Vehicle Trip Data Summary - Weekend

Site Number	Peak Time	Peak Vehicle Trips	Peak Trips per dwelling	Daily Vehicle Trips	Daily Vehicle Trips per Dwelling
1	11:45:00 AM	113	0.90	1295	7.1
2	10:45:00 AM	81	0.86	742	4.1
3	8:45:00 AM	76	1.20	700	3.8
4	10:00:00 AM	141	0.93	1323	7.3
5	10:00:00 AM	120	0.78	1293	7.1
6	10:45:00 AM	60	0.61	634	3.5
7	10:30:00 AM	50	0.66	535	2.9
8	11:00:00 AM	54	0.70	589	3.2
9	9:45:00 AM	74	1.02	1081	5.9
10	10:45:00 AM	235	0.81	2488	13.7
11	11:45:00 AM	43	0.52	479	2.6
12	11:15:00 AM	26	0.77	325	1.8
13	10:30:00 AM	125	0.62	1108	6.1
14	11:45:00 AM	55	0.94	492	2.7
15	11:30:00 AM	170	0.67	1920	10.5
16	10:30:00 AM	207	0.83	2272	12.5
17	9:15:00 AM	88	0.52	800	4.4
18	11:00:00 AM	52	0.58	382	2.1
19	11:45:00 AM	46	0.76	478	2.6
20	9:30:00 AM	36	0.39	305	1.7
21	10:15:00 AM	33	0.48	219	1.2
22	11:45:00 AM	69	0.62	784	4.3
23	9:15:00 AM	91	0.72	1196	6.6

24	11:45:00 AM	85	0.55	1030	5.7
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Table 4.4: Vehicle Split and Person Trips Data Summary - Weekend

Site Number	Peak In (%)	Peak Out (%)	Peak Persons*	Peak Vehicle Occupancy
1	49.7%	50.3%	227	1.32
2	50.0%	50.0%	98	1.74
3	49.9%	50.1%	171	1.16
4	50.1%	49.9%	212	1.52
5	49.9%	50.1%	277	1.21
6	50.3%	49.7%	108	1.29
7	50.1%	49.9%	80	1.51
8	50.0%	50.0%	86	1.60
9	53.8%	46.2%	147	1.73
10	50.6%	49.4%	395	1.36
11	49.9%	50.1%	51	2.24
12	48.3%	51.7%	58	1.37
13	50.0%	50.0%	130	1.75
14	50.1%	49.9%	105	1.25
15	49.8%	50.2%	244	1.79
16	50.2%	49.8%	401	1.18
17	50.4%	49.6%	102	1.81
18	49.9%	50.1%	59	1.54
19	50.7%	49.3%	51	2.11
20	48.6%	51.4%	53	1.53
21	49.7%	50.3%	30	1.64
22	50.2%	49.8%	129	1.34
23	50.5%	49.5%	213	1.10

24	49.8%	50.2%	122	2.08
----	-------	-------	-----	------

**Peak Persons it estimated based on the product of average weekday peak occupancy and weekend peak vehicle trips.*

Initial examination of the Weekend data for all the sites indicates that:

- The average peak vehicle trips per dwelling is 0.81 with data points ranging from 0.54 to 1.2.
- Daily vehicle trips per dwelling varied from 5.3 to 12.7 with an average of 7.8
- Vehicle occupancy averaged as 1.55 persons per vehicle, with data ranging from 1.1 to 2.2
- In and Out splits averaged out as 47% and 53% during peaks.

Figure 4.7 demonstrates the hourly IN/OUT distribution on a weekend for all sites.

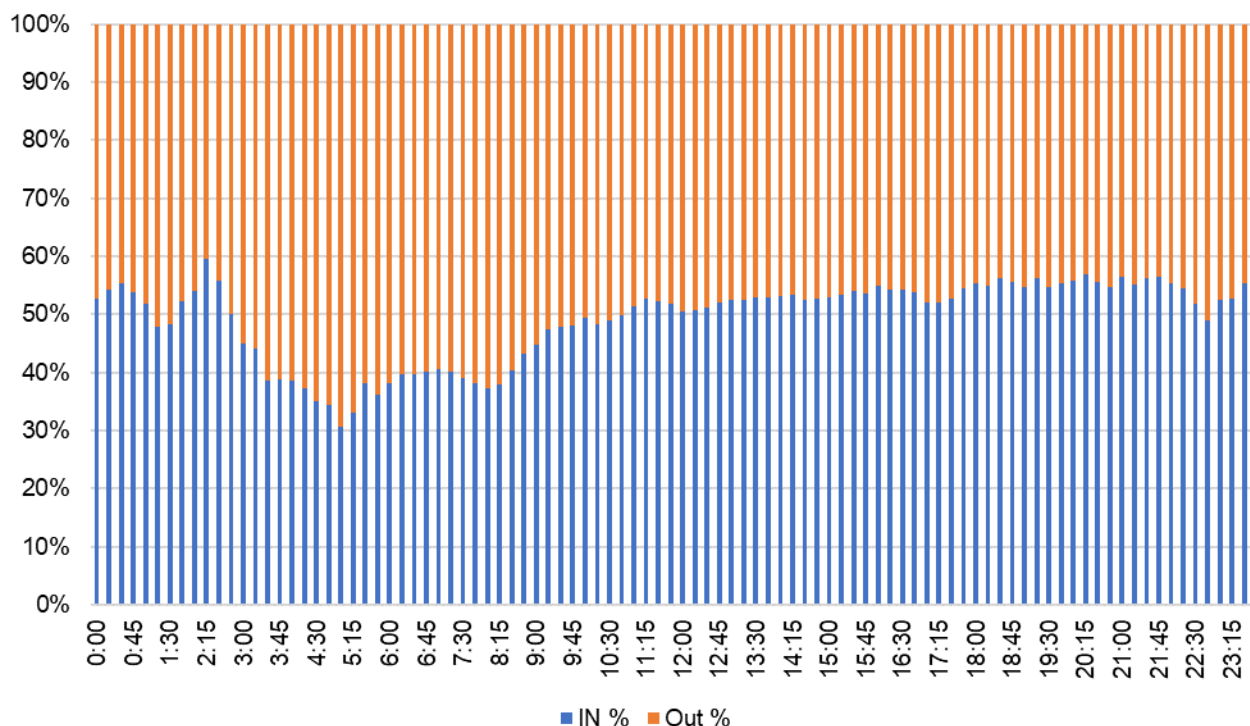


Figure 4.7: IN/OUT Directional Splits – Weekend

Figure 4.8 demonstrates the frequency of trips rates per dwelling for all survey sites.

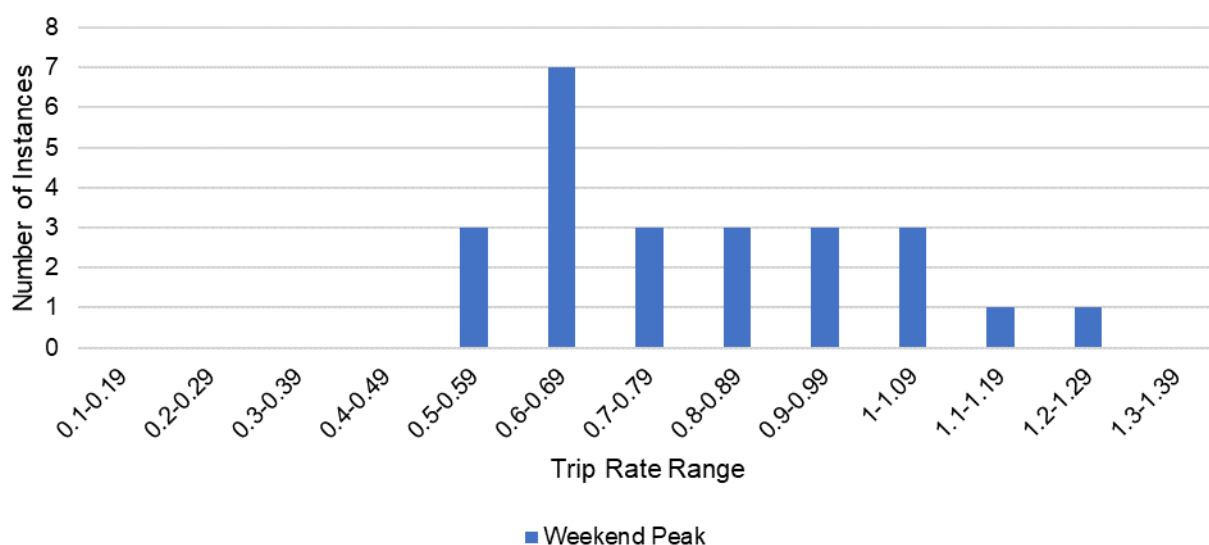


Figure 4.8: Frequency of Weekend Peak Trip Rates per Dwelling

Although the weekend resulted in a wide range of trip rates, all rates were above 0.5. The largest number of sites surveyed trip rates fall between 0.6 and 0.7.

4.2.4 Weekly Trip Rate Profiles

Figure 4.9, Figure 4.10, Figure 4.11, demonstrate the average trip rates per dwelling across a surveyed week for Daily, AM Peak and PM Peak periods respectively.

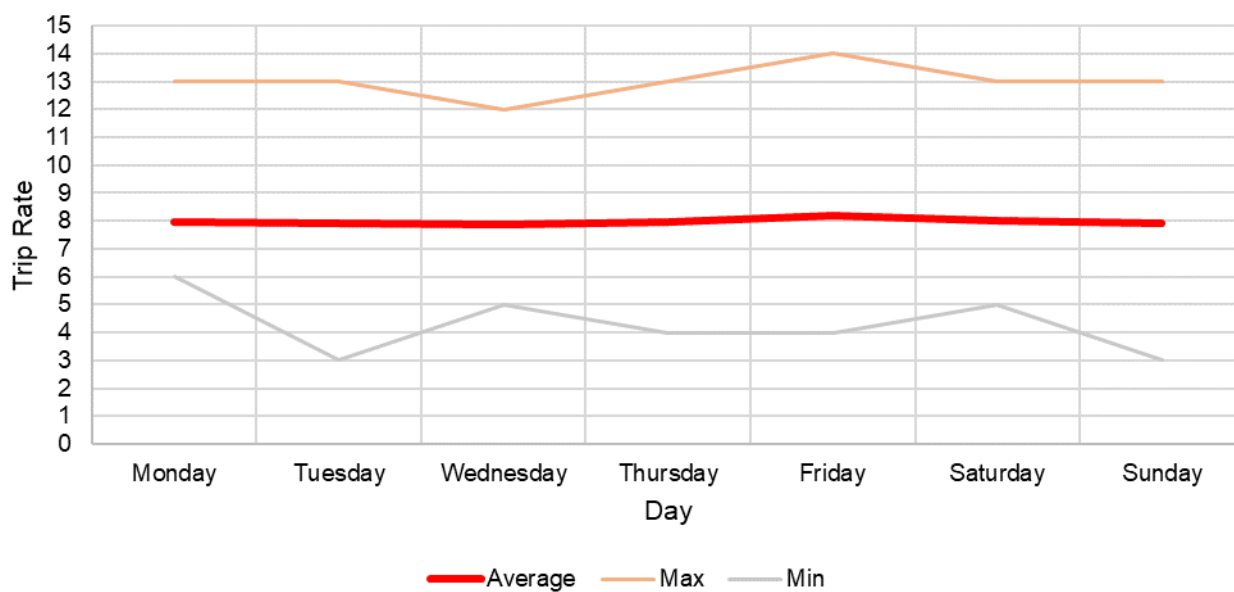


Figure 4.9: Daily Vehicle Trips per Dwelling – Weekly Profile

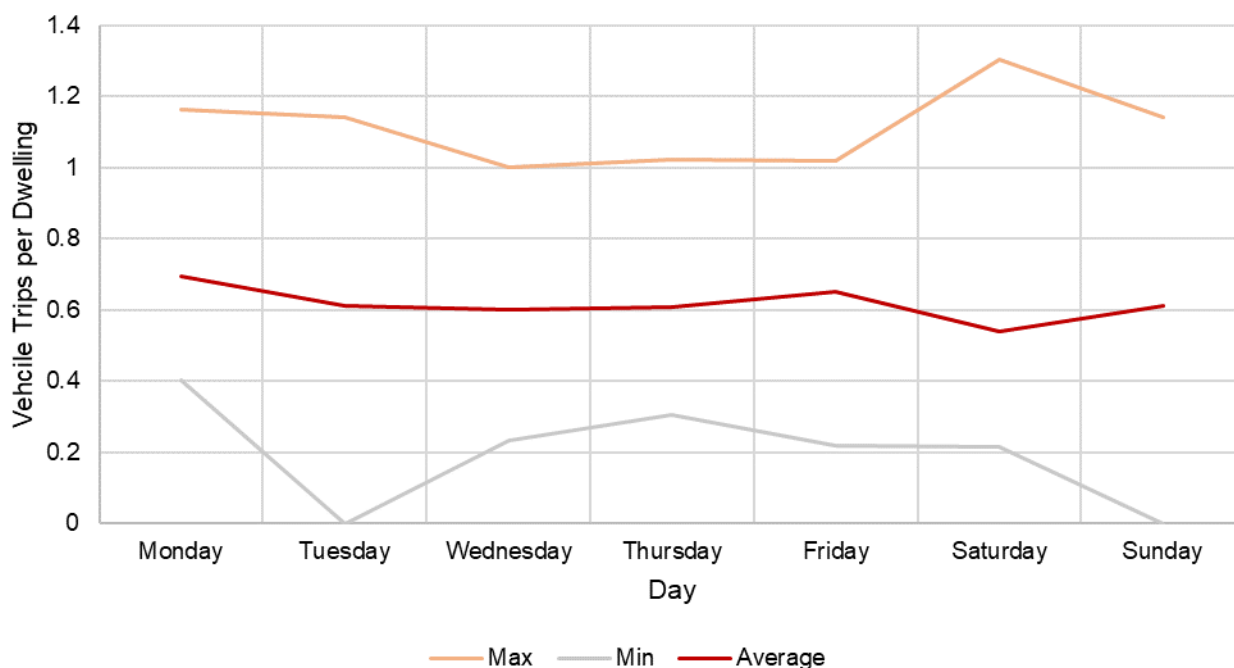


Figure 4.10: AM Peak Vehicle Trips per Dwelling – Weekly Profile

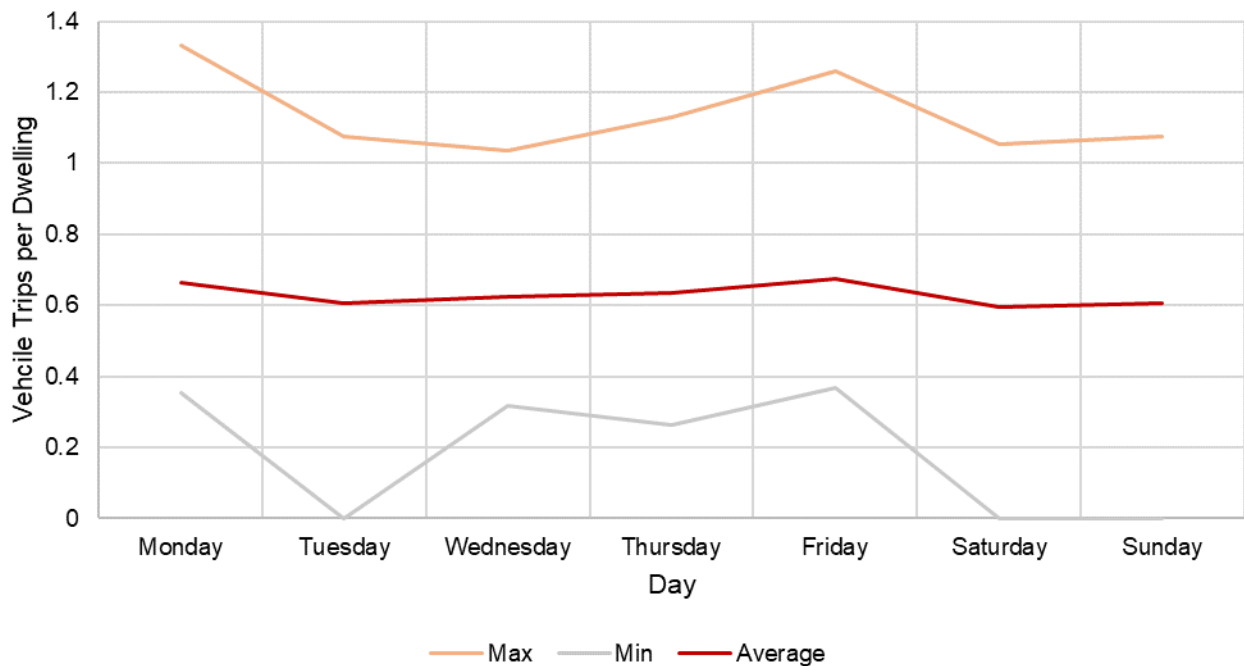


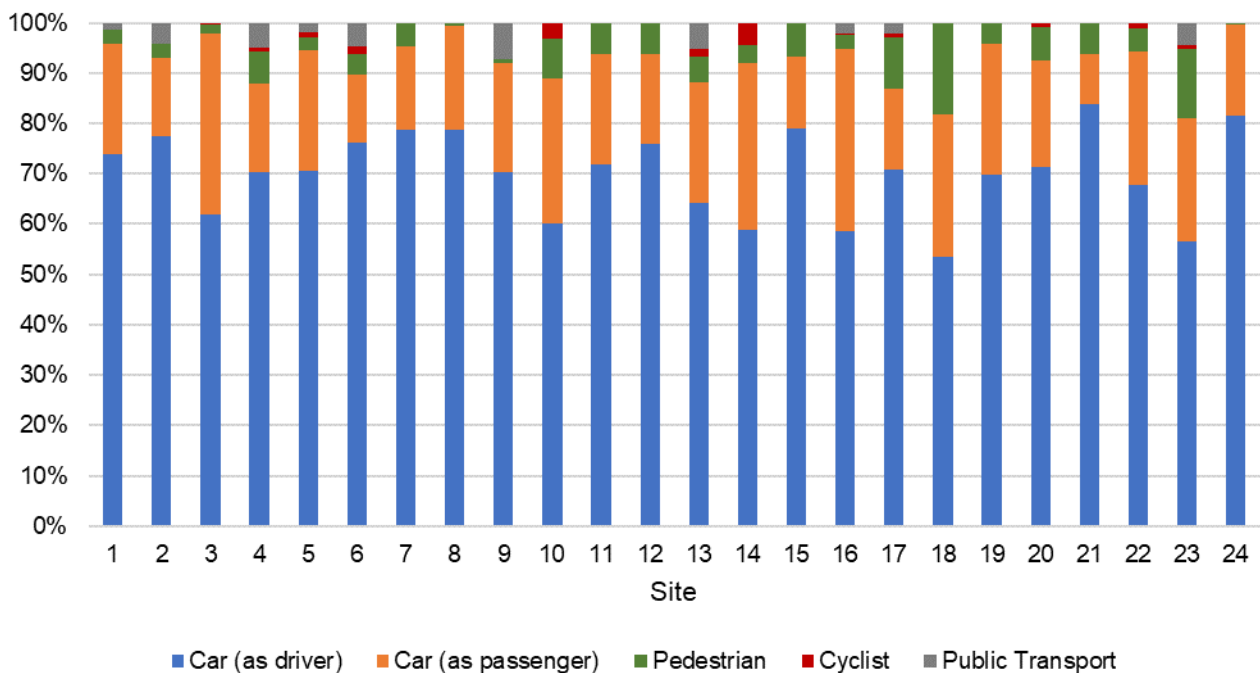
Figure 4.11: PM Peak Vehicle Trips per Dwelling – Weekly Profile

Initial examination of the week trip rate profiles indicates that:

- On average the highest vehicle trip rates occur on a Friday, with lowest demands occurring on Tuesdays, Wednesdays and Saturdays
- Maximum trips rates occur on Mondays and Fridays, while minimums occur on Tuesdays and Sundays.

4.2.5 Travel Mode Splits

Peak period mode splits based on manual surveys for each of the sites are shown in Figure 4.12.



Mode Split data was manually collected during AM and PM peak periods on a typical weekday

Figure 4.12: Mode Split Comparison by Site

Initial examination of the above data shows that:

- Private vehicles make up the majority of the mode share of trips with an average proportion of 15%- 20% persons as car passengers
- The second largest mode of travel surveyed was pedestrians, accounting for up to 10% of trips at some sites.

4.3 Additional Survey Data or Information

Figure 4.13 summarises the maximum 1-hour peak person trips across all sites.

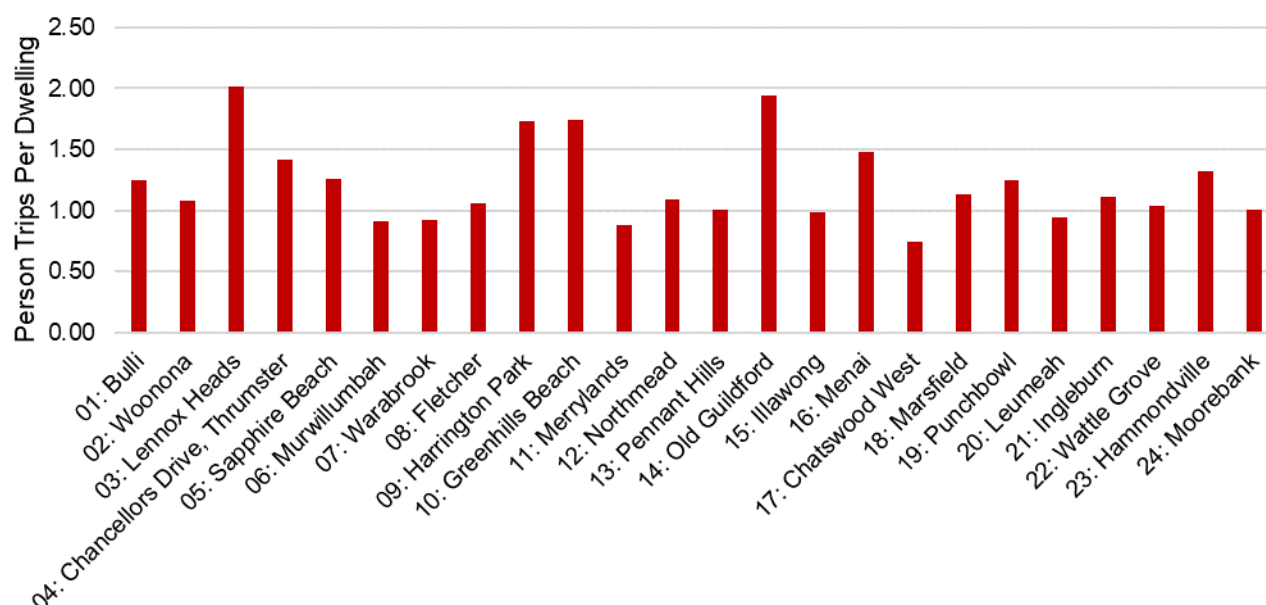


Figure 4.13: Maximum 1-hour Person Trips per Site

On average person trips were 13% higher than vehicle trips, though some sites showed a much higher or lower proportion of person trips than others. For example, Site 3 (Lennox Head) had a rate of almost double the amount of person trips per dwelling than vehicle trips per dwelling, while Site 17 (Chatswood West) had a rate half that of vehicle trips.

5. CONCLUSIONS

A total of 24 Low Density Residential sites were surveyed across regional NSW areas. A large range of locations were surveyed to capture potential differences that might arise in trip generation. The proposed surveys provide an opportunity to gather recent and relevant data to call upon, and the ability to better match survey sites and traffic generation rate, with new developments, especially those in regional and metropolitan locations of various sizes and geographical catchment areas. The survey methodology of low-density residential trip generation used a combination of Automatic Traffic Counter (ATC) and manual (on-site) surveys during a typical weekday AM and PM peak. Data from all 24 sites has been presented in this data report.

Each site's ATC recorded vehicles entering and exiting each study area, included directional movements, and classified (12 bins) of vehicle types at 15-minute intervals across seven days. The manual surveys were undertaken at the same locations as the ATC (i.e. at the entry/exit to the residential precinct) between 6:00am-9:00am and 3:30pm-6:30pm on a typical weekday. Manual surveys recorded:

- Pedestrians
- Cyclists
- Occupants in passing cars
- Passengers in passing buses.

For each site, peak Period Start times, Peak Vehicle & Person Trips, Daily Vehicle & Person Trips have been determined, noting that daily person trips have been estimated based on surveyed results during peak times. The rate of trips per dwelling have also been determined for each site's AM Peak, PM Peak, Weekend Peak, and Daily periods.

Preliminary data review also include investigation of daily traffic profiles, In/Out movement splits, vehicle occupancy during peak times, weekly profiles, and travel mode splits. Some key outcomes included:

- In comparing weekend with weekday, weekend peaks appear to have a slightly higher trip generation rate
- Weekdays present two clear 'peak' times in the morning and afternoons and weekends present a single midday peak. It is noted that while weekday peaks are very distinct, weekend traffic profiles are flatter and much more gradual
- Generally trip rates and times for peak and daily periods are consistent with historical rates and times for low density housing. The proportion of peak to daily trips also remained consistent with the industry 'rule of thumb' value of 10%
- Vehicle occupancy averaged at approximately 1.4-1.6 people per vehicle
- The split of trips 'in to' and 'out of' surveyed sites was observed to provide only a gradual shift throughout the day (approximately 45/55 in the AM to 55/45 in the evenings)
- The highest trip rates occurred on Fridays and Mondays, with the lowest occurring on Tuesdays and Sundays
- Private vehicles account for the largest proportion of trips (approx. 90%), with 'pedestrian' trips accounting for the next highest proportion.

Overall the data collected, and preliminary analysis, has built a platform for detailed analysis to provide a recommendation for trip generation for Low Density Residential, which will be contained in the subsequent Analysis Report.

Appendix A: Traffic Data Summaries

Site 01 - Results Summary Sheet

Address Hospital Road, Buli
Notes: Summary of survey results and preliminary analysis for site, as per TINSW template.



Survey for:		Transport for NSW		Office Use Only
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
Main Land Use		R2: LOW DENSITY RESIDENTIAL		
A. Main		Sub Land Use		

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE		
	Site Name	Hospital Road, Buli	
	Street	Hospital Road	
	Town	Buli	
	Territorial Local Authority	Wollongong	
	Latitude (5 decimal places)	-34.33499	
	Longitude (5 decimal places)	150.9048	
	Location	Outer Suburban	
	Pedestrian Activity	Low	
	Public Transport Accessibility	Low	
	DETAILS OF LOCAL POPULATION LEVELS		
	Population within 500 metres		
	Population within 1 kilometre		
	Population within 5 kilometres		
	Total Population of Urban Area		
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		

C. Area Characteristics	AREA CHARACTERISTICS		
	Site Name	Hospital Road, Buli	
	Land Use	Low Density Residential	
	No. Dwellings	182	
	Typical Housing Style	Single Dwelling	
	No. Bus Stops	0	
	Average Lot Size (m2)	580	
	Median Weekly Household Income	\$ 1,896.00	
	Average Car Ownership/Haushold	1.9	
	Nearby Businesses		
Parking Regime	Unmetered		
COMMENTS			

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS		
	Survey date (dd/mm/yyyy)	#####	
	Survey start time	6:00:00 AM	
	Survey end time	6:30:00 PM	
	AM weather conditions	Fine	
PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	163		
	Road PM Peak Period	Time	3:45:00 PM	4:45:00 PM	
		Total	148		
	Road Daily	Total	1561		

Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.90	trips per dwelling		
		PM Peak				
			0.81	trips per dwelling		
		Daily	8.58	trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	0.47	trips per vehicle owned	9:00:00 AM	
		PM Peak		3:45:00 PM	4:45:00 PM	
			0.43	trips per vehicle owned		
		Daily				
			4.51	trips per vehicle owned		

Mode Split	Mode Split (Averaged over both peaks)			
	Modal Split		Number	%
	Total Private Vehicles		155	96%
	Car (as driver)		155	74%
	Car (as passenger)		47	22%
	Total All Trans (PT and		9	4%
	On Foot		6	3%
	Cycle		0	0%
	Public Transport		3	1%
	Survey Undertaken by (organisation):		TDC	Survey Contact
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au	

Site 02 - Results Summary Sheet

Address Charlotte Harrison Drive, Woonona
Notes Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use R2: LOW DENSITY RESIDENTIAL			
A. Main	Sub Land Use		

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE		
	Site Name	Charlotte Harrison Drive, Woonona	
	Sheet	Charlotte Harrison Drive	
	Town	Woonona	
	Territorial Local Authority	Wollongong	
	Latitude (5 decimal places)	-34.39987	
	Longitude (5 decimal places)	150.91314	
	Location	Outer Suburban	
	PeDESTRIAN Activity	Low	
	Public Transport Accessibility	Low	
	DETAILS OF LOCAL POPULATION LEVELS		
	Population within 500 metres		
	Population within 1 kilometre		
	Population within 5 kilometres		
	Total Population of Urban Area		
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		

C. Area Characteristics	AREA CHARACTERISTICS		
	Site Name	Charlotte Harrison Drive, Woonona	
	Land Use	Low Density Residential	
	No. Dwellings	91	
	Typical Housing Style	Single Dwelling	
	No. Bus Stops	0	
	Average Lot Size (m2)	650	
	Median Weekly Household Income	\$ 1,511.00	
	Average Car Ownership/Household	1.7	
	Nearby Businesses		
Parking Regime	Unmetered		
COMMENTS			

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS		
	Survey date (dd/mm/yyyy)	Wednesday, 1 June 2022	
	Survey start time	6:00:00 AM	
	Survey end time	6:30:00 PM	
	AM weather conditions	Fine	
	PM weather conditions	Fine	

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	78		
	Road PM Peak Period	Time	3:45:00 PM	4:45:00 PM	
		Total	75		
	Road Daily	Total	837		

Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.86	trips per dwelling	
		PM Peak			
			0.82	trips per dwelling	
		Daily	9.20	trips per dwelling	
	Development Trips per average household vehicle ownership	AM Peak	8:00:00 AM	9:00:00 AM	
			0.50	trips per vehicle owned	
		PM Peak	3:45:00 PM	4:45:00 PM	
			0.48	trips per vehicle owned	
		Daily			
			5.41	trips per vehicle owned	

Mode Split	Mode Split (Averaged over both peaks)			
	Modal Split	Number	%	
	Total Private Vehicles	74	93%	
	Car (as driver)	74	77%	
	Car (as passenger)	15	16%	
	Total All Trans (PT and	7	7%	
	On Foot	3	3%	
	Cycle	0	0%	
	Public Transport	4	4%	
	Survey Undertaken by (organisation):	TDC	Survey Contact:	Fred Stone
Survey Undertaken by (surveyor):	Fred Stone	fred@trafficdc.com.au		

Site 03 - Results Summary Sheet

Address Henderson Drive, Lennox Heads
Notes: Summary of survey results and preliminary analysis for site, as per TINSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use		R2: LOW DENSITY RESIDENTIAL
		Sub Land Use		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Henderson Drive, Lennox Heads		
	Sheet	Henderson Drive		
	Town	Lennox Heads		
	Territorial Local Authority	Ballina		
	Latitude (5 decimal places)	-28.8228		
	Longitude (5 decimal places)	153.59638		
	Location	Outer Suburban		
	PeDESTRIAN Activity			
	Public Transport Accessibility	Low		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Henderson Drive, Lennox Heads		
	Land Use	Low Density Residential		
	No. Dwellings	87		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	1200		
	Median Weekly Household Income	\$ 1,577.00		
	Average Car Ownership/Household	1.9		
	Nearby Businesses	3 potential businesses within catchment		
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Tuesday, 7 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	102		
	Road PM Peak Period	Time	4:15:00 PM	5:15:00 PM	
		Total	96		
	Road Daily	Total	864		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	1.17 trips per dwelling		
		PM Peak			
		Daily	1.10 trips per dwelling		
		Daily	9.93 trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	8:00:00 AM	9:00:00 AM	
			0.62 trips per vehicle owned		
		PM Peak	4:15:00 PM	5:15:00 PM	
			0.58 trips per vehicle owned		
		Daily			
			5.23 trips per vehicle owned		
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	99	96%		
	Car (as driver)	99	62%		
	Car (as passenger)	58	36%		
	Total All Trans (PT and On Foot)	4	2%		
	On Foot	3	2%		
	Cycle	1	0%		
	Public Transport	0	0%		
	Survey Undertaken by (organisation):	TDC	Survey Contact: Fred Stone		
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au		

Site 03 - Results Summary Sheet

Address

Chancellors Drive, Thrumsier

Notes:

Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
Main Land Use		R2: LOW DENSITY RESIDENTIAL		
Sub Land Use				
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Chancellors Drive, Thrumsier		
	Sheet	Chancellors Drive, Thrumsier		
	Town	Thrumsier		
	Territorial Local Authority	Port Macquarie-Hastings		
	Latitude (5 decimal places)	-31.45493		
	Longitude (5 decimal places)	152.82743		
	Location	Outer Suburban		
	PeDESTRIAN Activity	Moderate		
	Public Transport Accessibility	Low		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Chancellors Drive, Thrumsier		
	Land Use	Low Density Residential		
	No. Dwellings	150		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	750		
	Median Weekly Household Income	\$ 1,885.00		
	Average Car Ownership/Household	2.1		
	Nearby Businesses			
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Thursday, 2 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	7:30:00 AM	8:30:00 AM	
		Total	139		
	Road PM Peak Period	Time	3:30:00 PM	4:30:00 PM	
		Total	141		
	Road Daily	Total	1291		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.93	trips per dwelling	
		PM Peak	0.94	trips per dwelling	
		Daily	8.61	trips per dwelling	
			7:30:00 AM	8:30:00 AM	
	Development Trips per average household vehicle ownership	AM Peak	0.44	trips per vehicle owned	
		PM Peak	0.45	trips per vehicle owned	
		Daily	4.10	trips per vehicle owned	
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	139	88%		
	Car (as driver)	139	70%		
	Car (as passenger)	36	18%		
	Total All Trans (PT and	24	12%		
	On Foot	13	7%		
	Cycle	2	1%		
	Public Transport	9	5%		
Survey Undertaken by (organisation):		TDC	Survey Contact:	Fred Stone	
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au		

Site 05 - Results Summary Sheet

Address N Solitary Drive, Sapphire Beach
Notes: Summary of survey results and preliminary analysis for site, as per TINSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use		R2: LOW DENSITY RESIDENTIAL
		Sub Land Use		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	N Solitary Drive, Sapphire Beach		
	Sheet	N Solitary Drive		
	Town	Sapphire Beach		
	Territorial Local Authority	Coffs Harbour		
	Latitude (5 decimal places)	-30.22621		
	Longitude (5 decimal places)	153.14891		
	Location	Outer Suburban		
	PeDESTRIAN Activity	Low		
	Public Transport Accessibility	Low		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	N Solitary Drive, Sapphire Beach		
	Land Use	Low Density Residential		
	No. Dwellings	220		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	650		
	Median Weekly Household Income	\$ 1,544.00		
	Average Car Ownership/Household	1.8		
	Nearby Businesses			
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Wednesday, 1 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	7:45:00 AM	8:45:00 AM	
		Total	171		
	Road PM Peak Period	Time	4:30:00 PM	5:30:00 PM	
		Total	155		
	Road Daily	Total	1479		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.78	trips per dwelling	
		PM Peak	0.70	trips per dwelling	
		Daily	6.72	trips per dwelling	
	Development Trips per average household vehicle ownership	AM Peak	7:45:00 AM	8:45:00 AM	
		PM Peak	4:30:00 PM	5:30:00 PM	
		Daily	0.39	trips per vehicle owned	
		Daily	3.73	trips per vehicle owned	
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	162	95%		
	Car (as driver)	162	71%		
	Car (as passenger)	59	24%		
	Total All Trans (PT and	14	5%		
	On Foot	7	3%		
	Cycle	2	1%		
	Public Transport	6	2%		
	Survey Undertaken by (organisation):	TDC	Survey Contact:	Fred Stone	
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au		

Site 06 - Results Summary Sheet

Address Golden Links, Murwillumbah
Notes Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use R2: LOW DENSITY RESIDENTIAL			
A. Main Sub Land Use			

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE	
	Site Name	Golden Links, Murwillumbah
	Sheet	Golden Links Drive
	Town	Murwillumbah
	Territorial Local Authority	Tweed
	Latitude (5 decimal places)	-28.3367
	Longitude (5 decimal places)	153.36605
	Location	Inner Rural
	PeDESTRIAN Activity	Low
	Public Transport Accessibility	Low
	DETAILS OF LOCAL POPULATION LEVELS	
	Population within 500 metres	
	Population within 1 kilometre	
	Population within 5 kilometres	
	Total Population of Urban Area	
ROAD HIERARCHY AND TRAFFIC VOLUME		
Major Arterial		
Minor Arterial		
Collector Road		
Local Road	Local Road	

C. Area Characteristics	AREA CHARACTERISTICS	
	Site Name	Golden Links, Murwillumbah
	Land Use	Low Density Residential
	No. Dwellings	118
	Typical Housing Style	Single Dwelling
	No. Bus Stops	1
	Average Lot Size (m2)	680
	Median Weekly Household Income	\$ 957.00
	Average Car Ownership/Household	1.6
	Nearby Businesses	Golf Course
Parking Regime	Unmetered	
COMMENTS		

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS	
	Survey date (dd/mm/yyyy)	Tuesday, 7 June 2022
	Survey start time	6:00:00 AM
	Survey end time	6:30:00 PM
	AM weather conditions	Fine
	PM weather conditions	Fine

Traffic Generation	Road AM Peak Period	Time	7:45:00 AM	8:45:00 AM	
		Total	72		
	Road PM Peak Period	Time	4:45:00 PM	5:45:00 PM	
		Total	88		
	Road Daily	Total	780		

Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.61	trips per dwelling		
		PM Peak				
		Daily	0.75	trips per dwelling		
			6.61	trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	7:45:00 AM	8:45:00 AM		
			0.38	trips per vehicle owned		
		PM Peak	4:45:00 PM	5:45:00 PM		
			0.47	trips per vehicle owned		
		Daily				
			4.13	trips per vehicle owned		

Mode Split	Mode Split (Averaged over both peaks)			
	Modal Split	Number	%	
	Total Private Vehicles	78	90%	
	Car (as driver)	76	76%	
	Car (as passenger)	14	13%	
	Total All Trans (PT and	11	10%	
	On Foot	5	4%	
	Cycle	2	1%	
	Public Transport	5	5%	
	Survey Undertaken by (organisation):	TDC	Survey Contact:	Fred Stone
Survey Undertaken by (surveyor):	Fred Stone	fred@trafficdc.com.au		

Site 07 - Results Summary Sheet

Address Cedrella Crescent, Warabrook
Notes: Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use		R2: LOW DENSITY RESIDENTIAL
		Sub Land Use		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Cedrella Crescent, Warabrook		
	Sheet	Cedrella Crescent		
	Town	Warabrook		
	Territorial Local Authority	Newcastle		
	Latitude (5 decimal places)	-32.88976		
	Longitude (5 decimal places)	151.71869		
	Location	Inner Rural		
	Peakishan Activity			
	Public Transport Accessibility	Low		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Cedrella Crescent, Warabrook		
	Land Use	Low Density Residential		
	No. Dwellings	87		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	600		
	Median Weekly Household Income	\$ 1,391.00		
	Average Car Ownership/Household	1.8		
	Nearby Businesses			
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Tuesday, 31 May 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	57		
	Road PM Peak Period	Time	4:45:00 PM	5:45:00 PM	
		Total	60		
	Road Daily	Total	255		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.66 trips per dwelling		
		PM Peak			
			0.69 trips per dwelling		
		Daily	2.93 trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	8:00:00 AM	9:00:00 AM	
			0.36 trips per vehicle owned		
		PM Peak	4:45:00 PM	5:45:00 PM	
			0.38 trips per vehicle owned		
		Daily			
			1.63 trips per vehicle owned		
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	59	95%		
	Car (as driver)	59	79%		
	Car (as passenger)	13	17%		
	Total All Trans (PT and	4	5%		
	On Foot	4	5%		
	Cycle	0	0%		
	Public Transport	0	0%		
	Survey Undertaken by (organisation):	TDC	Survey Contact: Fred Stone		
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au		

Site 08 - Results Summary Sheet

Address Redwood Close, Fletcher
Notes Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use R2: LOW DENSITY RESIDENTIAL			
A. Main	Sub Land Use		

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE		
	Site Name	Redwood Close, Fletcher	
	Sheet	Redwood Close	
	Town	Fletcher	
	Territorial Local Authority	Newcastle	
	Latitude (5 decimal places)	-32.88514	
	Longitude (5 decimal places)	151.65212	
	Location	Outer Suburban	
	PeDESTRIAN Activity	Low	
	Public Transport Accessibility	Low	
	DETAILS OF LOCAL POPULATION LEVELS		
	Population within 500 metres		
	Population within 1 kilometre		
	Population within 5 kilometres		
	Total Population of Urban Area		
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		

C. Area Characteristics	AREA CHARACTERISTICS		
	Site Name	Redwood Close, Fletcher	
	Land Use	Low Density Residential	
	No. Dwellings	81	
	Typical Housing Style	Single Dwelling	
	No. Bus Stops	0	
	Average Lot Size (m2)	600	
	Median Weekly Household Income	\$ 2,296.00	
	Average Car Ownership/Household	2.2	
	Nearby Businesses		
Parking Regime	Unmetered		
COMMENTS			

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS		
	Survey date (dd/mm/yyyy)	Wednesday, 1 June 2022	
	Survey start time	6:00:00 AM	
	Survey end time	6:30:00 PM	
	AM weather conditions	Fine	
	PM weather conditions	Fine	

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	57		
	Road PM Peak Period	Time	4:45:00 PM	5:45:00 PM	
		Total	70		
	Road Daily	Total	618		

Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.70 trips per dwelling		
		PM Peak			
			0.86 trips per dwelling		
		Daily	7.63 trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	8:00:00 AM	9:00:00 AM	
			0.32 trips per vehicle owned		
		PM Peak	4:45:00 PM	5:45:00 PM	
			0.39 trips per vehicle owned		
		Daily			
			3.47 trips per vehicle owned		

Mode Split	Mode Split (Averaged over both peaks)			
	Mode Split	Number	%	
	Total Private Vehicles	64	99%	
	Car (as driver)	64	79%	
	Car (as passenger)	17	21%	
	Total All Trans (PT and On Foot)	1	1%	
	On Foot	1	1%	
	Cycle	0	0%	
	Public Transport	0	0%	

Survey Undertaken by (organisation):		TDC	Survey Contact:	Fred Stone
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au	

Site 09 - Results Summary Sheet

Address Hawthorne Circuit, Harrington Park
Notes Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use R2: LOW DENSITY RESIDENTIAL			
A. Main	Sub Land Use		

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE		
	Site Name	Hawthorne Circuit, Harrington Park	
	Street	Hawthorne Circuit	
	Town	Harrington Park	
	Territorial Local Authority	Camden	
	Latitude (5 decimal places)	-34.02022	
	Longitude (5 decimal places)	150.73967	
	Location	Outer Suburban	
	PeDESTRIAN Activity	Low	
	Public Transport Accessibility	Low	
	DETAILS OF LOCAL POPULATION LEVELS		
	Population within 500 metres		
	Population within 1 kilometre		
	Population within 5 kilometres		
	Total Population of Urban Area		
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		

C. Area Characteristics	AREA CHARACTERISTICS		
	Site Name	Hawthorne Circuit, Harrington Park	
	Land Use	Low Density Residential	
	No. Dwellings	85	
	Typical Housing Style	Single Dwelling	
	No. Bus Stops	0	
	Average Lot Size (m2)	800	
	Median Weekly Household Income	\$ 2,416.00	
	Average Car Ownership/Household	2.3	
	Nearby Businesses	3 potentially in catchment	
Parking Regime	Unmetered		
COMMENTS			

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS		
	Survey date (dd/mm/yyyy)	Tuesday, 31 May 2022	
	Survey start time	6:00:00 AM	
	Survey end time	6:30:00 PM	
	AM weather conditions	Fine	
	PM weather conditions	Fine	

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	87		
	Road PM Peak Period	Time	5:30:00 PM	6:30:00 PM	
		Total	72		
	Road Daily	Total	880		

Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	1.02	trips per dwelling		
		PM Peak				
			0.85	trips per dwelling		
		Daily				
	Development Trips per average household vehicle ownership		10.35	trips per dwelling		
		AM Peak		8:00:00 AM	9:00:00 AM	
			0.45	trips per vehicle owned		
		PM Peak		5:30:00 PM	6:30:00 PM	
			0.37	trips per vehicle owned		
		Daily				
		4.50	trips per vehicle owned			

Mode Split	Mode Split (Averaged over both peaks)			
	Modal Split	Number	%	
	Total Private Vehicles	79	92%	
	Car (as driver)	79	70%	
	Car (as passenger)	27	22%	
	Total All Trans (PT and	12	8%	
	On Foot	1	1%	
	Cycle	0	0%	
	Public Transport	11	7%	
	Survey Undertaken by (organisation):	TDC	Survey Contact:	Fred Stone
Survey Undertaken by (surveyor):	Fred Stone	fred@trafficdc.com.au		

Site 10 - Results Summary Sheet

Address: Watagos Street, Greenhills Beach
Notes: Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use: R2: LOW DENSITY RESIDENTIAL			
Sub Land Use:			

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE		
	Site Name	Watagos Street, Greenhills Beach	
	Street	Watagos Street	
	Town	Greenhills Beach	
	Territorial Local Authority	Sutherland Shire	
	Latitude (5 decimal places)	-34.03634	
	Longitude (5 decimal places)	151.16148	
	Location	Outer Suburban	
	Peaks/Urban Activity	Moderate	
	Public Transport Accessibility	Moderate	
	DETAILS OF LOCAL POPULATION LEVELS		
	Population within 500 metres		
	Population within 1 kilometre		
	Population within 5 kilometres		
	Total Population of Urban Area		
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		

C. Area Characteristics	AREA CHARACTERISTICS		
	Site Name	Watagos Street, Greenhills Beach	
	Land Use	Low Density Residential	
	No. Dwellings	226	
	Typical Housing Style	Single Dwelling	
	No. Bus Stops	0	
	Average Lot Size (m2)	550	
	Median Weekly Household Income	\$ 3,731.00	
	Average Car Ownership/Household	2.5	
	Nearby Businesses	~10	
Parking Regime	Unmetered		
COMMENTS			

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS		
	Survey date (dd/mm/yyyy)	Tuesday, 14 June 2022	
	Survey start time	6:00:00 AM	
	Survey end time	6:30:00 PM	
	AM weather conditions	Fine	
	PM weather conditions	Fine	

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	184		
	Road PM Peak Period	Time	3:30:00 PM	4:30:00 PM	
		Total	205		
	Road Daily	Total	2407		

Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.81	trips per dwelling		
		PM Peak				
			0.91	trips per dwelling		
		Daily	10.65	trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	8:00:00 AM	9:00:00 AM		
			0.33	trips per vehicle owned		
		PM Peak	3:30:00 PM	4:30:00 PM		
			0.36	trips per vehicle owned		
		Daily				
			4.26	trips per vehicle owned		

Mode Split	Mode Split (Averaged over both peaks)			
	Mode Split	Number	%	
	Total Private Vehicles	195	89%	
	Car (as driver)	195	60%	
	Car (as passenger)	95	29%	
	Total All Trans (PT and On Foot)	36	11%	
	On Foot	26	8%	
	Cycle	10	3%	
	Public Transport	0	0%	
	Survey Undertaken by (organisation):		TDC	Survey Contact:
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au	

Site 11 - Results Summary Sheet

Address Shannon Avenue, Marylands
Notes: Summary of survey results and preliminary analysis for site, as per TINSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use		R2: LOW DENSITY RESIDENTIAL
		Sub Land Use		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Shannon Avenue, Marylands		
	Sheet	Shannon Avenue		
	Town	Marylands		
	Territorial Local Authority	Camden		
	Latitude (5 decimal places)	-34.03634		
	Longitude (5 decimal places)	151.16148		
	Location	Outer Suburban		
	Public Transport Accessibility	Low		
	Public Transport Accessibility	Moderate		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Shannon Avenue, Marylands		
	Land Use	Low Density Residential		
	No. Dwellings	58		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	550		
	Median Weekly Household Income	\$ 1,267.00		
	Average Car Ownership/Household	1.6		
	Nearby Businesses			
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Wednesday, 1 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	7:45:00 AM	8:45:00 AM	
		Total	30		
	Road PM Peak Period	Time	3:30:00 PM	4:30:00 PM	
		Total	36		
	Road Daily	Total	445		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.52 trips per dwelling		
		PM Peak			
			0.62 trips per dwelling		
		Daily	7.67 trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	7:45:00 AM	8:45:00 AM	
			0.32 trips per vehicle owned		
		PM Peak	3:30:00 PM	4:30:00 PM	
			0.39 trips per vehicle owned		
		Daily			
			4.80 trips per vehicle owned		
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	33	94%		
	Car (as driver)	33	72%		
	Car (as passenger)	10	22%		
	Total All Trans (PT and	3	6%		
	On Foot	3	6%		
	Cycle	0	0%		
	Public Transport	0	0%		
	Survey Undertaken by (organisation)	TDC	Survey Contact	Fred Stone	
	Survey Undertaken by (surveyor)	Fred Stone	fred@traffidc.com.au		

Site 12 - Results Summary Sheet

Address Christine Street, Northmead
Notes: Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use		R2: LOW DENSITY RESIDENTIAL
		Sub Land Use		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Christine Street, Northmead		
	Street	Christine Street		
	Town	Northmead		
	Territorial Local Authority	Parramatta		
	Latitude (5 decimal places)	-33.7957		
	Longitude (5 decimal places)	150.98718		
	Location	Inner Suburban		
	Peaks/Urban Activity	Low		
	Public Transport Accessibility	Moderate		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Christine Street, Northmead		
	Land Use	Low Density Residential		
	No. Dwellings	53		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	620		
	Median Weekly Household Income	\$ 1,639.00		
	Average Car Ownership/Household	1.6		
	Nearby Businesses			
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Tuesday, 31 May 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	7:30:00 AM	8:30:00 AM	
		Total	41		
	Road PM Peak Period	Time	3:30:00 PM	4:30:00 PM	
		Total	44		
	Road Daily	Total	371		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.77	trips per dwelling	
		PM Peak			
		Daily	0.83	trips per dwelling	
	Development Trips per average household vehicle ownership	Daily	7.00	trips per dwelling	
		AM Peak	7:30:00 AM	8:30:00 AM	
			0.48	trips per vehicle owned	
		PM Peak	3:30:00 PM	4:30:00 PM	
			0.52	trips per vehicle owned	
		Daily			
			4.38	trips per vehicle owned	
Mode Split	Mode Split (Averaged over both peaks)				
	Modal Split	Number	%		
	Total Private Vehicles	43	94%		
	Car (as driver)	43	76%		
	Car (as passenger)	10	18%		
	Total All Trans (PT and On Foot)	4	6%		
	On Foot	4	6%		
	Cycle	0	0%		
	Public Transport	0	0%		
	Survey Undertaken by (organisation):	TDC	Survey Contact:	Fred Stone	
Survey Undertaken by (surveyor):		Fred Stone	fred@traffltdc.com.au		

Site 13 - Results Summary Sheet

Address Kurrajong Street, Pennant Hills
Notes: Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use		R2: LOW DENSITY RESIDENTIAL
		Sub Land Use		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Kurrajong Street, Pennant Hills		
	Street	Kurrajong Street		
	Town	Pennant Hills		
	Territorial Local Authority	Hornsby Shire		
	Latitude (5 decimal places)	-33.74587		
	Longitude (5 decimal places)	151.07783		
	Location	Outer Suburban		
	Pedestrian Activity			
	Public Transport Accessibility	Low		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Kurrajong Street, Pennant Hills		
	Land Use	Low Density Residential		
	No. Dwellings	129		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	880		
	Median Weekly Household Income	\$ 2,222.00		
	Average Car Ownership/Household	1.7		
	Nearby Businesses	-2		
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Wednesday, 1 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	7:45:00 AM	8:45:00 AM	
		Total	80		
	Road PM Peak Period	Time	3:30:00 PM	4:30:00 PM	
		Total	88		
	Road Daily	Total	896		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.62	trips per dwelling	
		PM Peak			
			0.68	trips per dwelling	
		Daily	6.95	trips per dwelling	
	Development Trips per average household vehicle ownership		7:45:00 AM	8:45:00 AM	
		AM Peak	0.36	trips per vehicle owned	
		PM Peak	3:30:00 PM	4:30:00 PM	
			0.40	trips per vehicle owned	
		Daily			
			4.09	trips per vehicle owned	
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	83	88%		
	Car (as driver)	83	64%		
	Car (as passenger)	31	24%		
	Total All Trans (PT and On Foot)	15	12%		
	On Foot	7	5%		
	Cycle	2	2%		
	Public Transport	7	5%		
	Survey Undertaken by (organisation):	TDC	Survey Contact:	Fred Stone	
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au		

Site 14 - Results Summary Sheet

Address Orchid Road, Old Guildford
Notes: Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use		R2: LOW DENSITY RESIDENTIAL
		Sub Land Use		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Orchid Road, Old Guildford		
	Sheet	Orchid Road		
	Town	Old Guildford		
	Territorial Local Authority	City of Fairfield		
	Latitude (5 decimal places)	-33.86173		
	Longitude (5 decimal places)	150.984783		
	Location	Inner Suburban		
	Proximate Activity	Low		
	Public Transport Accessibility	High		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Orchid Road, Old Guildford		
	Land Use	Low Density Residential		
	No. Dwellings	54		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	550		
	Median Weekly Household Income	\$ 1,286.00		
	Average Car Ownership/Household	2.1		
	Nearby Businesses	-3		
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Thursday, 2 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	51		
	Road PM Peak Period	Time	3:30:00 PM	4:30:00 PM	
		Total	66		
	Road Daily	Total	702		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.94	trips per dwelling	
		PM Peak			
		Daily	1.22	trips per dwelling	
		Daily	13.00	trips per dwelling	
	Development Trips per average household vehicle ownership	AM Peak	8:00:00 AM	9:00:00 AM	
			0.45	trips per vehicle owned	
		PM Peak	3:30:00 PM	4:30:00 PM	
			0.58	trips per vehicle owned	
		Daily			
			6.19	trips per vehicle owned	
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	59	92%		
	Car (as driver)	59	99%		
	Car (as passenger)	33	33%		
	Total All Trans (PT and	8	8%		
	On Foot	4	4%		
	Cycle	5	4%		
	Public Transport	0	0%		
	Survey Undertaken by (organisation)	TDC	Survey Contact	Fred Stone	
	Survey Undertaken by (surveyor)	Fred Stone	fred@trafficdc.com.au		

Site 15 - Results Summary Sheet

Address Austin Street, Ilwong
Notes: Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use R2: LOW DENSITY RESIDENTIAL			
A. Main	Sub Land Use		
B. Catchment Details			
DETAILS OF ADDRESS AND LOCATION TYPE			
Site Name	Austin Street, Ilwong		
Street	Austin Street		
Town	Ilwong		
Territorial Local Authority	Sutherland Shire		
Latitude (5 decimal places)	-34.00073		
Longitude (5 decimal places)	151.04005		
Location	Inner Suburban		
Public Transport Accessibility	Low		
Public Transport Accessibility	Moderate		
DETAILS OF LOCAL POPULATION LEVELS			
Population within 500 metres			
Population within 1 kilometre			
Population within 5 kilometres			
Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		
C. Area Characteristics			
AREA CHARACTERISTICS			
Site Name	Austin Street, Ilwong		
Land Use	Low Density Residential		
No. Dwellings	247		
Typical Housing Style	Single Dwelling		
No. Bus Stops	0		
Average Lot Size (m2)	690		
Median Weekly Household Income	\$ 1,352.00		
Average Car Ownership/Household	1.8		
Nearby Businesses	-2		
Parking Regime	Unmetered		
COMMENTS			
D. Survey Summary			
SURVEY DATE AND WEATHER DETAILS			
Survey date (dd/mm/yyyy)	Thursday, 2 June 2022		
Survey start time	6:00:00 AM		
Survey end time	6:30:00 PM		
AM weather conditions	Fine		
PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	7:45:00 AM	8:45:00 AM	
		Total	166		
	Road PM Peak Period	Time	4:30:00 PM	5:30:00 PM	
		Total	153		
	Road Daily	Total	1891		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.67	trips per dwelling	
		PM Peak	0.62	trips per dwelling	
		Daily	7.66	trips per dwelling	
	Development Trips per average household vehicle ownership	AM Peak	0.37	trips per vehicle owned	8:45:00 AM
		PM Peak	0.34	trips per vehicle owned	5:30:00 PM
		Daily	4.25	trips per vehicle owned	
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	160	93%		
	Car (as driver)	160	79%		
	Car (as passenger)	33	14%		
	Total All Trans (PT and	14	7%		
	On Foot	14	7%		
	Cycle	0	0%		
	Public Transport	0	0%		
Survey Undertaken by (organisation):		TDC	Survey Contact:	Fred Stone	
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au		

Site 16 - Results Summary Sheet

Address Portmadoc Drive, Merali
Notes Summary of survey results and preliminary analysis for site, as per TINSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use R2: LOW DENSITY RESIDENTIAL			
A. Main	Sub Land Use		

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE		
	Site Name	Portmadoc Drive, Merali	
	Sheet	Portmadoc Drive	
	Town	Merali	
	Territorial Local Authority	Sutherland Shire	
	Latitude (5 decimal places)	-34.01112	
	Longitude (5 decimal places)	151.0181	
	Location	Inner Suburban	
	PeDESTRIAN Activity	Low	
	Public Transport Accessibility	Moderate	
	DETAILS OF LOCAL POPULATION LEVELS		
	Population within 500 metres		
	Population within 1 kilometre		
	Population within 5 kilometres		
	Total Population of Urban Area		
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		

C. Area Characteristics	AREA CHARACTERISTICS		
	Site Name	Portmadoc Drive, Merali	
	Land Use	Low Density Residential	
	No. Dwellings	271	
	Typical Housing Style	Single Dwelling	
	No. Bus Stops	0	
	Average Lot Size (m2)	520	
	Median Weekly Household Income	\$ 2,238.00	
	Average Car Ownership/Household	2.1	
	Nearby Businesses	-3	
Parking Regime	Unmetered		
COMMENTS			

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS		
	Survey date (dd/mm/yyyy)	Tuesday, 7 June 2022	
	Survey start time	6:00:00 AM	
	Survey end time	6:30:00 PM	
	AM weather conditions	Fine	
	PM weather conditions	Fine	

Traffic Generation	Road AM Peak Period	Time	7:30:00 AM	8:30:00 AM	
		Total	225		
	Road PM Peak Period	Time	4:15:00 PM	5:15:00 PM	
		Total	224		
	Road Daily	Total	2234		

Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.83	trips per dwelling		
		PM Peak				
			0.83	trips per dwelling		
		Daily	8.24	trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	0.40	trips per vehicle owned	7:30:00 AM	8:30:00 AM
			0.40	trips per vehicle owned	4:15:00 PM	5:15:00 PM
		PM Peak	0.39	trips per vehicle owned		
		Daily				
			3.93	trips per vehicle owned		

Mode Split	Mode Split (Averaged over both peaks)			
	Modal Split	Number	%	
	Total Private Vehicles	223	96%	
	Car (as driver)	223	99%	
	Car (as passenger)	138	36%	
	Total All Trans (PT and On Foot)	20	5%	
	On Foot	10	3%	
	Cycle	2	0%	
	Public Transport	9	2%	
	Survey Undertaken by (organisation):	TDC	Survey Contact:	Fred Stone
Survey Undertaken by (surveyor):	Fred Stone	fred@trafficdc.com.au		

Site 17 - Results Summary Sheet

Address River Avenue, Chatswood West
Notes: Summary of survey results and preliminary analysis for site, as per TINSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use		R2: LOW DENSITY RESIDENTIAL
		Sub Land Use		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	River Avenue, Chatswood West		
	Sheet	River Avenue		
	Town	Chatswood West		
	Territorial Local Authority	City of Willoughby		
	Latitude (5 decimal places)	-33.79301		
	Longitude (5 decimal places)	151.15621		
	Location	Inner Suburban		
	Peaks/Urban Activity	Moderate		
	Public Transport Accessibility	High		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
C. Area Characteristics	AREA CHARACTERISTICS			
	Site Name	River Avenue, Chatswood West		
	Land Use	Low Density Residential		
	No. Dwellings	136		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	2		
	Average Lot Size (m2)	650		
	Median Weekly Household Income	\$ 2,533.00		
	Average Car Ownership/Household	1.9		
	Nearby Businesses	Unmetered		
Parking Regime	Unmetered			
COMMENTS				
D. Survey Summary	SURVEY DATE AND WEATHER DETAILS			
	Survey date (dd/mm/yyyy)	Wednesday, 1 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	71		
	Road PM Peak Period	Time	3:30:00 PM	4:30:00 PM	
		Total	62		
	Road Daily	Total	746		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.52 trips per dwelling		
		PM Peak			
		Daily	0.46 trips per dwelling		
		Daily	5.49 trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	8:00:00 AM	9:00:00 AM	
			0.27 trips per vehicle owned		
		PM Peak	3:30:00 PM	4:30:00 PM	
			0.24 trips per vehicle owned		
		Daily			
			2.89 trips per vehicle owned		
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	65	87%		
	Car (as driver)	65	71%		
	Car (as passenger)	16	16%		
	Total All Trans (PT and On Foot)	12	13%		
	On Foot	9	10%		
	Cycle	1	1%		
	Public Transport	2	2%		
	Survey Undertaken by (organisation):	TDC	Survey Contact: Fred Stone		
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au		

Site 18 - Results Summary Sheet

Address Elk Street, Mansfield

Notes: Summary of survey results and preliminary analysis for site, as per TINSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
Main Land Use		R2: LOW DENSITY RESIDENTIAL		
A. Main	Sub Land Use			

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Elk Street, Mansfield		
	Street	Elk Street		
	Town	Mansfield		
	Territorial Local Authority	City of Ryde		
	Latitude (5 decimal places)	-33.77594		
	Longitude (5 decimal places)	151.09754		
	Location	Inner Suburban		
	PeDESTRIAN Activity	Moderate		
	Public Transport Accessibility	Moderate		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			

C. Area Characteristics	AREA CHARACTERISTICS			
	Site Name	Elk Street, Mansfield		
	Land Use	Low Density Residential		
	No. Dwellings	52		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	580		
	Median Weekly Household Income	\$ 1,641.00		
	Average Car Ownership/Household	1.4		
	Nearby Businesses			
Parking Regime	Unmetered			
COMMENTS				

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS			
	Survey date (dd/mm/yyyy)	Wednesday, 1 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	30		
	Road PM Peak Period	Time	3:30:00 PM	4:30:00 PM	
		Total	28		
	Road Daily	Total	351		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.58 trips per dwelling		
		PM Peak			
		Daily	0.54 trips per dwelling		
		Daily	6.75 trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	8:00:00 AM	9:00:00 AM	
			0.41 trips per vehicle owned		
		PM Peak	3:30:00 PM	4:30:00 PM	
			0.38 trips per vehicle owned		
		Daily			
			4.82 trips per vehicle owned		
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	29	82%		
	Car (as driver)	29	53%		
	Car (as passenger)	16	28%		
	Total All Trans (PT and On Foot	10	18%		
	On Foot	10	18%		
	Cycle	0	0%		
	Public Transport	0	0%		
	Survey Undertaken by (organisation):	TDC	Survey Contact: Fred Stone		
Survey Undertaken by (surveyor):		Fred Stone	fred@traffidc.com.au		

Site 19 - Results Summary Sheet

Address Patrick Street, Punchbowl
Notes Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use R2: LOW DENSITY RESIDENTIAL			
A. Main	Sub Land Use		

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE		
	Site Name	Patrick Street, Punchbowl	
	Street	Patrick Street	
	Town	Punchbowl	
	Territorial Local Authority	Canterbury-Bankstown	
	Latitude (5 decimal places)	-33.93589	
	Longitude (5 decimal places)	151.06161	
	Location	Inner Suburban	
	PeDESTRIAN Activity	Low	
	Public Transport Accessibility	High	
	DETAILS OF LOCAL POPULATION LEVELS		
	Population within 500 metres		
	Population within 1 kilometre		
	Population within 5 kilometres		
	Total Population of Urban Area		
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		

C. Area Characteristics	AREA CHARACTERISTICS		
	Site Name	Patrick Street, Punchbowl	
	Land Use	Low Density Residential	
	No. Dwellings	41	
	Typical Housing Style	Single Dwelling	
	No. Bus Stops	0	
	Average Lot Size (m2)	430	
	Median Weekly Household Income	\$ 1,146.00	
	Average Car Ownership/Household	1.7	
	Nearby Businesses		
Parking Regime	Unmetered		
COMMENTS			

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS		
	Survey date (dd/mm/yyyy)	Wednesday, 1 June 2022	
	Survey start time	6:00:00 AM	
	Survey end time	6:30:00 PM	
	AM weather conditions	Fine	
	PM weather conditions	Fine	

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	31		
	Road PM Peak Period	Time	4:30:00 PM	5:30:00 PM	
		Total	37		
	Road Daily	Total	439		

Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.76	trips per dwelling		
		PM Peak				
		Daily	0.90	trips per dwelling		
			10.71	trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak		8:00:00 AM	9:00:00 AM	
			0.44	trips per vehicle owned		
		PM Peak		4:30:00 PM	5:30:00 PM	
			0.53	trips per vehicle owned		
		Daily				
			6.30	trips per vehicle owned		

Mode Split	Mode Split (Averaged over both peaks)		
	Modal Split	Number	%
	Total Private Vehicles	34	96%
	Car (as driver)	34	70%
	Car (as passenger)	13	26%
	Total All Trans (PT and	2	4%
	On Foot	2	4%
	Cycle	0	0%
	Public Transport	0	0%
	Survey Undertaken by (organisation):	TDC	Survey Contact:
Survey Undertaken by (surveyor):	Fred Stone		fred@trafficdc.com.au

Site 20 - Results Summary Sheet

Address Jenolan Street, Leumeah
Notes: Summary of survey results and preliminary analysis for site, as per TINSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use: R2: LOW DENSITY RESIDENTIAL		
		Sub Land Use:		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Jenolan Street, Leumeah		
	Sheet	Jenolan Street		
	Town	Leumeah		
	Territorial Local Authority	Campbelltown		
	Latitude (5 decimal places)	-34.05242		
	Longitude (5 decimal places)	150.83767		
	Location	Inner Suburban		
	PeDESTrian Activity	Low		
	Public Transport Accessibility	Low		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Jenolan Street, Leumeah		
	Land Use	Low Density Residential		
	No. Dwellings	56		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	550		
	Median Weekly Household Income	\$ 2,083.00		
	Average Car Ownership/Household	2		
	Nearby Businesses	-1		
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Wednesday, 1 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	22		
	Road PM Peak Period	Time	4:45:00 PM	5:45:00 PM	
		Total	45		
	Road Daily	Total	307		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.39 trips per dwelling		
		PM Peak			
			0.80 trips per dwelling		
		Daily	5.48 trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	0.00 trips per vehicle owned	9:00:00 AM	
			0.20 trips per vehicle owned		
		PM Peak	4:45:00 PM	5:45:00 PM	
			0.40 trips per vehicle owned		
		Daily			
			2.74 trips per vehicle owned		
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	34	92%		
	Car (as driver)	34	71%		
	Car (as passenger)	9	21%		
	Total All Trans (PT and	3	8%		
	On Foot	3	7%		
	Cycle	1	1%		
	Public Transport	0	0%		
	Survey Undertaken by (organisation):	TDC	Survey Contact: Fred Stone		
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au		

Site 21 - Results Summary Sheet

Address Delage Place, Ingisburn
Notes: Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time				
Extended Data Collection? NO		Includes Manual Survey?		
A. Main				
Main Land Use		R2: LOW DENSITY RESIDENTIAL		
Sub Land Use				
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Delage Place, Ingisburn		
	Street	Delage Place		
	Town	Ingisburn		
	Territorial Local Authority	Macarthur		
	Latitude (5 decimal places)	-34.00188		
	Longitude (5 decimal places)	150.88215		
	Location	Inner Suburban		
	Peaks/Urban Activity	Low		
	Public Transport Accessibility	Moderate		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Delage Place, Ingisburn		
	Land Use	Low Density Residential		
	No. Dwellings	27		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	550		
	Median Weekly Household Income	\$ 1,401.00		
	Average Car Ownership/Household	1.6		
	Nearby Businesses			
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Tuesday, 31 May 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	6:45:00 AM	7:45:00 AM	
		Total	13		
	Road PM Peak Period	Time	5:00:00 PM	6:00:00 PM	
		Total	25		
	Road Daily	Total	194		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.48 trips per dwelling		
		PM Peak			
			0.93 trips per dwelling		
		Daily	7.19 trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	6:45:00 AM	7:45:00 AM	
			0.30 trips per vehicle owned		
		PM Peak	5:00:00 PM	6:00:00 PM	
			0.58 trips per vehicle owned		
		Daily			
			4.49 trips per vehicle owned		
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	19	94%		
	Car (as driver)	19	94%		
	Car (as passenger)	3	10%		
	Total All Trans (PT and On Foot)	1	6%		
	On Foot	1	6%		
	Cycle	0	0%		
	Public Transport	0	0%		
	Survey Undertaken by (organisation):	TDC	Survey Contact: Fred Stone		
Survey Undertaken by (surveyor):		Fred Stone	fred@trafficdc.com.au		

Site 22 - Results Summary Sheet

Address Castle Rock Court, Wattle Grove
Notes: Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:		Transport for NSW		Office Use Only:
Survey Period				
Date and Time		Extended Data Collection? NO		Includes Manual Survey?
A. Main		Main Land Use: R2: LOW DENSITY RESIDENTIAL		
		Sub Land Use:		
B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE			
	Site Name	Castle Rock Court, Wattle Grove		
	Sheet	Castle Rock Court		
	Town	Wattle Grove		
	Territorial Local Authority	Liverpool		
	Latitude (5 decimal places)	-33.94757		
	Longitude (5 decimal places)	150.94088		
	Location	Inner Suburban		
	PeDESTRIAN Activity	Low		
	Public Transport Accessibility	Moderate		
	DETAILS OF LOCAL POPULATION LEVELS			
	Population within 500 metres			
	Population within 1 kilometre			
	Population within 5 kilometres			
	Total Population of Urban Area			
ROAD HIERARCHY AND TRAFFIC VOLUME				
Major Arterial				
Minor Arterial				
Collector Road				
Local Road	Local Road			
AREA CHARACTERISTICS				
C. Area Characteristics	Site Name	Castle Rock Court, Wattle Grove		
	Land Use	Low Density Residential		
	No. Dwellings	124		
	Typical Housing Style	Single Dwelling		
	No. Bus Stops	0		
	Average Lot Size (m2)	410		
	Median Weekly Household Income	\$ 2,148.00		
	Average Car Ownership/Household	2		
	Nearby Businesses			
	Parking Regime	Unmetered		
COMMENTS				
SURVEY DATE AND WEATHER DETAILS				
D. Survey Summary	Survey date (dd/mm/yyyy)	Thursday, 2 June 2022		
	Survey start time	6:00:00 AM		
	Survey end time	6:30:00 PM		
	AM weather conditions	Fine		
	PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	7:45:00 AM	8:45:00 AM	
		Total	77		
	Road PM Peak Period	Time	4:00:00 PM	5:00:00 PM	
		Total	86		
	Road Daily	Total	916		
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.62 trips per dwelling		
		PM Peak			
			0.69 trips per dwelling		
		Daily	7.39 trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	7:45:00 AM	8:45:00 AM	
			0.31 trips per vehicle owned		
		PM Peak	4:00:00 PM	5:00:00 PM	
			0.35 trips per vehicle owned		
		Daily			
			3.69 trips per vehicle owned		
Mode Split	Mode Split (Averaged over both peaks)				
	Mode Split	Number	%		
	Total Private Vehicles	82	94%		
	Car (as driver)	82	68%		
	Car (as passenger)	32	28%		
	Total All Trans (PT and On Foot)	7	6%		
	On Foot	6	5%		
	Cycle	2	1%		
	Public Transport	0	0%		
	Survey Undertaken by (organisation):	TDC	Survey Contact: Fred Stone		
	Survey Undertaken by (surveyor):	Fred Stone	fred@trafficdc.com.au		

Site 23 - Results Summary Sheet

Address Moshan Avenue, Hammondville
Notes Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use R2: LOW DENSITY RESIDENTIAL			
A. Main	Sub Land Use		

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE		
	Site Name	Moshan Avenue, Hammondville	
	Street	Moshan Avenue	
	Town	Hammondville	
	Territorial Local Authority	Liverpool	
	Latitude (5 decimal places)	-33.94845	
	Longitude (5 decimal places)	150.95079	
	Location	Inner Suburban	
	Peaks/Urban Activity	Moderate	
	Public Transport Accessibility	High	
	DETAILS OF LOCAL POPULATION LEVELS		
	Population within 500 metres		
	Population within 1 kilometre		
	Population within 5 kilometres		
	Total Population of Urban Area		
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		

C. Area Characteristics	AREA CHARACTERISTICS		
	Site Name	Moshan Avenue, Hammondville	
	Land Use	Low Density Residential	
	No. Dwellings	161	
	Typical Housing Style	Single Dwelling	
	No. Bus Stops	0	
	Average Lot Size (m2)	570	
	Median Weekly Household Income	\$ 1,580.00	
	Average Car Ownership/Household	1.7	
	Nearby Businesses	-4	
Parking Regime	Unmetered		
COMMENTS			

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS		
	Survey date (dd/mm/yyyy)	Thursday, 2 June 2022	
	Survey start time	6:00:00 AM	
	Survey end time	6:30:00 PM	
	AM weather conditions	Fine	
	PM weather conditions	Fine	

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM		
		Total	116			
	Road PM Peak Period	Time	4:00:00 PM	5:00:00 PM		
		Total	111			
	Road Daily	Total	1274			
Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.72	trips per dwelling		
		PM Peak				
			0.69	trips per dwelling		
		Daily	7.91	trips per dwelling		
	Development Trips per average household vehicle ownership	AM Peak	0.42	trips per vehicle owned	8:00:00 AM	9:00:00 AM
			0.42	trips per vehicle owned	4:00:00 PM	5:00:00 PM
		PM Peak	0.41	trips per vehicle owned		
		Daily	4.65	trips per vehicle owned		
Mode Split (Averaged over both peaks)						
Mode Split	Modal Split		Number	%		
	Total Private Vehicles		114	81%		
	Car (as driver)		114	56%		
	Car (as passenger)		50	25%		
	Total All Trans (PT and		38	19%		
	On Foot		28	14%		
	Cycle		2	1%		
	Public Transport		9	4%		
Survey Undertaken by (organisation): TDC			Survey Contact: Fred Stone			
Survey Undertaken by (surveyor): Fred Stone			fred@trafficdc.com.au			

Site 24 - Results Summary Sheet

Address: Marshall Avenue, Moorebank
Notes: Summary of survey results and preliminary analysis for site, as per TNSW template.



Survey for:	Transport for NSW		Office Use Only:
Survey Period			
Date and Time	Extended Data Collection? NO	Includes Manual Survey?	
Main Land Use: R2: LOW DENSITY RESIDENTIAL			
Sub Land Use:			

B. Catchment Details	DETAILS OF ADDRESS AND LOCATION TYPE		
	Site Name	Marshall Avenue, Moorebank	
	Street	Marshall Avenue	
	Town	Moorebank	
	Territorial Local Authority	Liverpool	
	Latitude (5 decimal places)	-33.94259	
	Longitude (5 decimal places)	150.95143	
	Location	Inner Suburban	
	Proximate Activity	Low	
	Public Transport Accessibility	High	
	DETAILS OF LOCAL POPULATION LEVELS		
	Population within 500 metres		
	Population within 1 kilometre		
	Population within 5 kilometres		
	Total Population of Urban Area		
ROAD HIERARCHY AND TRAFFIC VOLUME			
Major Arterial			
Minor Arterial			
Collector Road			
Local Road	Local Road		

C. Area Characteristics	AREA CHARACTERISTICS		
	Site Name	Marshall Avenue, Moorebank	
	Land Use	Low Density Residential	
	No. Dwellings	121	
	Typical Housing Style	Single Dwelling	
	No. Bus Stops	0	
	Average Lot Size (m2)	750	
	Median Weekly Household Income	\$ 1,889.00	
	Average Car Ownership/Household	1.9	
	Nearby Businesses	-2	
Parking Regime	Unmetered		
COMMENTS			

D. Survey Summary	SURVEY DATE AND WEATHER DETAILS		
	Survey date (dd/mm/yyyy)	Tuesday, 7 June 2022	
	Survey start time	6:00:00 AM	
	Survey end time	6:30:00 PM	
	AM weather conditions	Fine	
PM weather conditions	Fine		

Traffic Generation	Road AM Peak Period	Time	8:00:00 AM	9:00:00 AM	
		Total	66		
	Road PM Peak Period	Time	5:15:00 PM	6:15:00 PM	
		Total	90		
	Road Daily	Total	913		

Vehicle Trip Generation	Peak 1-hour Vehicle-trips per Dwelling	AM Peak	0.55	trips per dwelling	
		PM Peak	0.74	trips per dwelling	
		Daily	7.55	trips per dwelling	
	Development Trips per average household vehicle ownership	AM Peak	0.29	trips per vehicle owned	9:00:00 AM
		PM Peak	0.39	trips per vehicle owned	6:15:00 PM
		Daily	3.97	trips per vehicle owned	

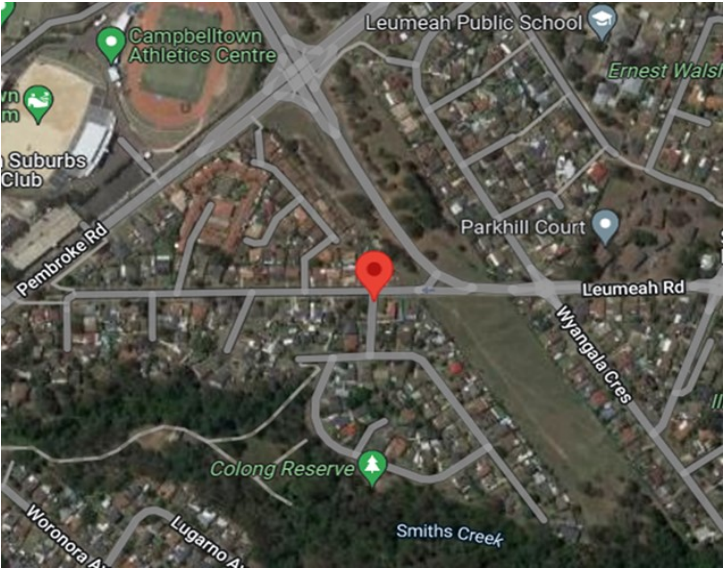
Mode Split	Mode Split (Averaged over both peaks)			
	Mode Split	Number	%	
	Total Private Vehicles	78	100%	
	Car (as driver)	78	82%	
	Car (as passenger)	18	18%	
	Total All Trans (PT and	1	0%	
	On Foot	1	0%	
	Cycle	0	0%	
	Public Transport	0	0%	

Survey Undertaken by (organisation):	TDC	Survey Contact:	Fred Stone
Survey Undertaken by (surveyor):	Fred Stone		fred@trafficdc.com.au

Appendix B: Raw Survey Data

Low Density Residential Catchment Site Information	
Site Location	Jenolan St, Leumeah
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map

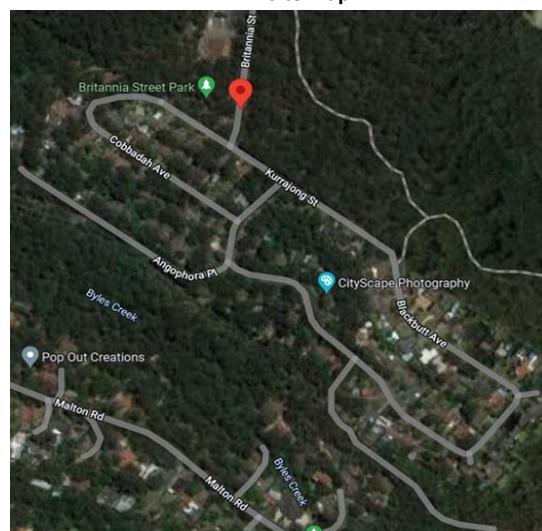



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Jenolan St, Leumeah										
Survey Day/Date:-		Wednesday, 1 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		X Rai										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting		Entering	Exiting	Entering	Exiting
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy				
6:00 AM	0	0	1	1	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	4	5	0	0	0	0	0	0	0	0
6:45 AM	2	2	3	3	0	0	0	0	0	0	0	0
7:00 AM	1	2	2	2	0	0	0	0	0	1	0	0
7:15 AM	1	1	2	3	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	3	4	1	1	0	0	0	0	1	1	0	0
8:00 AM	1	1	5	6	0	0	0	0	0	2	0	0
8:15 AM	0	0	4	5	0	0	0	0	0	2	0	0
8:30 AM	0	0	4	8	0	0	0	0	0	0	0	0
8:45 AM	4	4	4	9	0	0	0	0	1	0	0	0
3:30 PM	2	2	6	7	0	0	0	0	0	0	0	0
3:45 PM	4	5	4	5	0	0	0	0	0	0	0	0
4:00 PM	3	3	2	3	0	0	0	0	0	0	0	0
4:15 PM	2	2	2	3	0	0	0	0	0	0	0	0
4:30 PM	6	8	2	3	0	0	0	0	0	0	0	0
4:45 PM	8	9	2	2	0	0	0	0	0	0	1	0
5:00 PM	9	12	8	10	0	0	0	0	0	0	0	0
5:15 PM	4	5	2	2	0	0	0	0	0	0	0	0
5:30 PM	5	5	7	7	0	0	0	0	0	0	0	0
5:45 PM	1	3	1	1	0	0	0	0	0	0	0	0
6:00 PM	3	4	5	7	0	0	0	0	0	0	0	0
6:15 PM	4	6	3	4	0	0	0	0	0	0	0	0
AM Total	12	14	30	43	0	0	0	0	2	6	0	0
PM Total	51	64	44	54	0	0	0	0	0	0	1	0
Average Pax per Vehicle		1.17	AM	1.43								
		1.25	PM	1.23								

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Low Density Residential Catchment Site Information	
Site Location	Kurrajong St, Pennant Hills
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



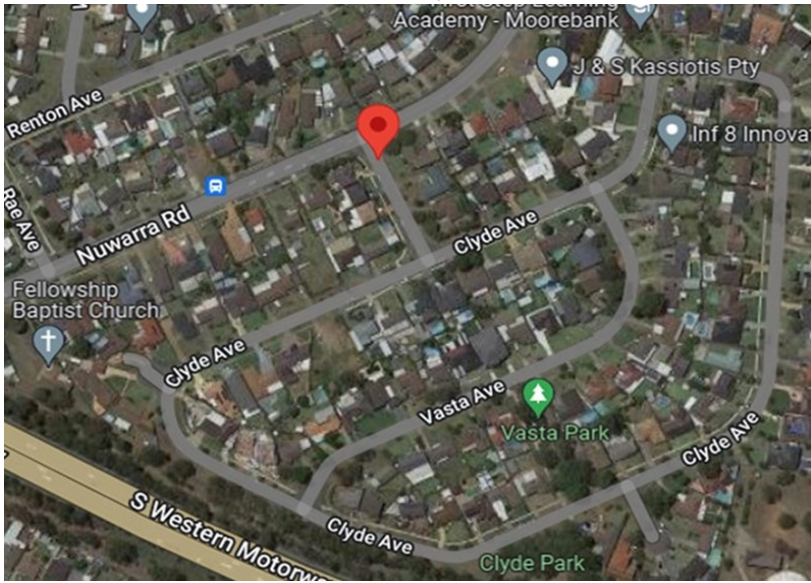
LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Kurrajong St, Pennant Hills										
Survey Day/Date:-		Wednesday, 1 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		R Bigger										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	0	0	5	6	0	0	0	0	0	0	0	0
6:15 AM	3	4	8	12	0	0	0	0	1	0	0	0
6:30 AM	1	1	5	7	0	0	0	0	0	0	0	0
6:45 AM	1	1	8	14	0	0	0	0	0	0	0	0
7:00 AM	7	7	8	12	0	0	0	0	0	1	0	0
7:15 AM	4	5	13	19	0	0	0	0	1	0	0	0
7:30 AM	4	4	10	16	0	0	0	0	0	0	0	0
7:45 AM	3	4	20	32	0	0	0	0	0	2	0	0
8:00 AM	2	2	12	15	0	0	0	0	1	1	0	0
8:15 AM	10	10	14	20	0	0	0	0	1	2	0	0
8:30 AM	2	2	15	21	1	5	1	7	0	0	0	2
8:45 AM	4	4	8	11	0	0	0	0	0	0	1	0
3:30 PM	20	24	9	14	0	0	0	0	1	0	0	0
3:45 PM	9	12	13	19	0	0	1	1	1	0	0	0
4:00 PM	15	19	7	12	0	0	0	0	1	0	0	1
4:15 PM	8	11	6	10	0	0	0	0	2	1	1	0
4:30 PM	6	6	6	11	0	0	0	0	1	0	0	0
4:45 PM	10	14	8	11	0	0	0	0	1	3	0	0
5:00 PM	10	14	4	5	0	0	0	0	0	0	0	0
5:15 PM	8	11	5	7	0	0	0	0	0	2	0	0
5:30 PM	6	8	7	8	0	0	0	0	1	1	0	0
5:45 PM	12	16	6	7	0	0	0	0	3	0	0	0
6:00 PM	7	9	4	5	0	0	0	0	0	0	0	0
6:15 PM	15	20	6	7	0	0	0	0	2	1	0	0
AM Total	41	44	126	185	1	5	1	7	4	6	1	2
PM Total	126	164	81	116	0	0	1	1	13	8	1	1
Average Pax per Vehicle	1.07	AM	1.47	Average Pax per	5.00	AM	7.00					
	1.30	PM	1.43	Bus		PM	1.00					



Sunday, 20 May 2012Monday, 20 May 2020

Low Density Residential Catchment Site Information	
Site Location	Marshall Avenue, Moorebank
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



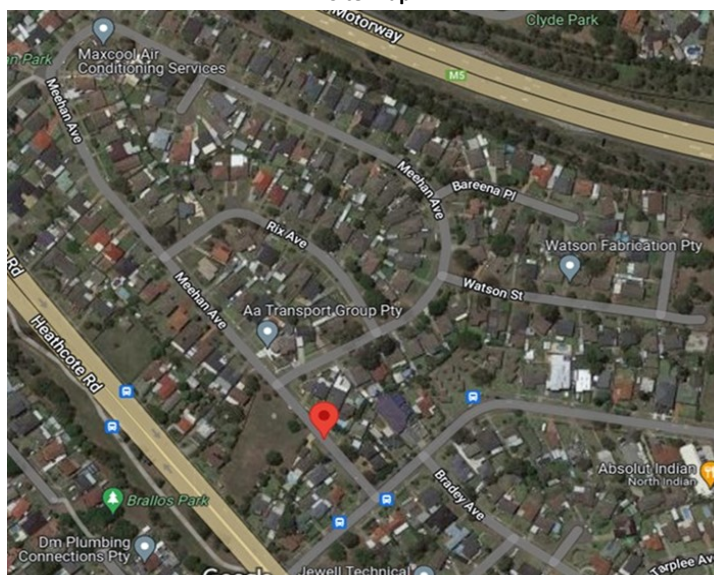
LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Marshall Ave, Moorebank										
Survey Day/Date:-		Tuesday, 7 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		X Rai										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting		Entering	Exiting	Entering	Exiting
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy				
6:00 AM	0	0	10	19	0	0	0	0	0	0	0	0
6:15 AM	0	0	6	7	0	0	0	0	0	0	0	0
6:30 AM	0	0	9	12	0	0	0	0	0	0	0	0
6:45 AM	0	0	5	8	0	0	0	0	0	0	0	0
7:00 AM	0	0	8	12	0	0	0	0	0	0	0	0
7:15 AM	0	0	8	14	0	0	0	0	0	0	0	0
7:30 AM	0	0	8	10	0	0	0	0	0	0	0	0
7:45 AM	2	2	8	9	0	0	0	0	0	1	0	0
8:00 AM	0	0	8	9	0	0	0	0	0	0	0	0
8:15 AM	5	7	11	15	0	0	0	0	0	0	0	0
8:30 AM	4	5	14	15	0	0	0	0	0	0	0	0
8:45 AM	10	11	14	15	0	0	0	0	0	0	0	0
3:30 PM	11	22	6	6	0	0	0	0	2	0	0	0
3:45 PM	8	11	5	5	0	0	0	0	0	0	0	0
4:00 PM	12	20	6	7	0	0	0	0	0	1	0	0
4:15 PM	16	24	9	11	0	0	0	0	0	0	0	0
4:30 PM	10	17	8	9	0	0	0	0	2	0	0	0
4:45 PM	13	19	10	12	0	0	0	0	0	0	0	0
5:00 PM	10	12	6	8	0	0	0	0	0	2	0	0
5:15 PM	16	20	7	7	0	0	0	0	0	0	0	0
5:30 PM	10	12	10	13	0	0	0	0	1	0	0	0
5:45 PM	16	19	6	8	0	0	0	0	0	0	0	0
6:00 PM	10	13	15	23	0	0	0	0	0	0	0	0
6:15 PM	4	8	6	8	0	0	0	0	0	0	0	0
AM Total	21	25	109	145	0	0	0	0	0	1	0	0
PM Total	136	197	94	117	0	0	0	0	5	3	0	0
Average Pax per Vehicle		1.19	AM	1.33								
		1.45	PM	1.24								


***TDC**
TDC Data & Control

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Low Density Residential Catchment Site Information	
Site Location	Meehan Ave, Hammondville
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Meehan Ave, Hammondville										
Survey Day/Date:-		Thursday, 2 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		N Ofamooni										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	1	1	10	12	0	0	0	0	0	0	0	0
6:15 AM	0	0	5	5	0	0	0	0	0	0	0	0
6:30 AM	0	0	5	5	0	0	0	0	0	1	0	0
6:45 AM	2	2	14	17	0	0	0	0	0	0	0	0
7:00 AM	4	4	7	9	0	0	0	0	1	3	0	0
7:15 AM	4	6	12	18	0	0	0	0	1	3	0	0
7:30 AM	3	3	16	28	1	10	1	11	2	0	0	0
7:45 AM	7	7	12	18	0	0	0	0	0	7	0	0
8:00 AM	5	7	18	26	0	0	0	0	0	6	0	1
8:15 AM	10	15	19	32	0	0	0	0	1	5	1	0
8:30 AM	9	10	23	41	0	0	0	0	1	14	0	0
8:45 AM	11	15	21	30	0	0	0	0	6	1	0	1
3:30 PM	16	26	7	9	0	0	0	0	1	0	0	1
3:45 PM	19	27	7	12	0	0	0	0	0	0	0	0
4:00 PM	15	21	14	25	1	9	1	8	7	2	0	0
4:15 PM	14	15	13	18	0	0	0	0	0	1	0	0
4:30 PM	14	17	5	6	0	0	0	0	2	3	0	0
4:45 PM	14	17	20	32	0	0	0	0	6	1	0	0
5:00 PM	14	18	7	11	0	0	0	0	0	0	0	2
5:15 PM	14	16	8	11	0	0	0	0	4	4	0	0
5:30 PM	11	11	18	26	0	0	0	0	2	1	5	2
5:45 PM	18	24	6	8	0	0	0	0	1	4	0	0
6:00 PM	22	26	14	18	0	0	0	0	1	1	0	0
6:15 PM	11	11	11	19	0	0	0	0	0	0	0	0
AM Total	56	70	162	241	1	10	1	11	12	40	1	2
PM Total	182	229	130	195	1	9	1	8	24	17	5	5
Average Pax per Vehicle	1.25	AM	1.49	Average Pax per	10.00	AM	11.00					
	1.26	PM	1.50	Bus	9.00	PM	8.00					

Site Location	Eastman Ave. Hammondville
Survey Date	08/04/2022 - 08/05/2022
Survey Period	22 Hours
AM Peak Period	
PM Peak Period	

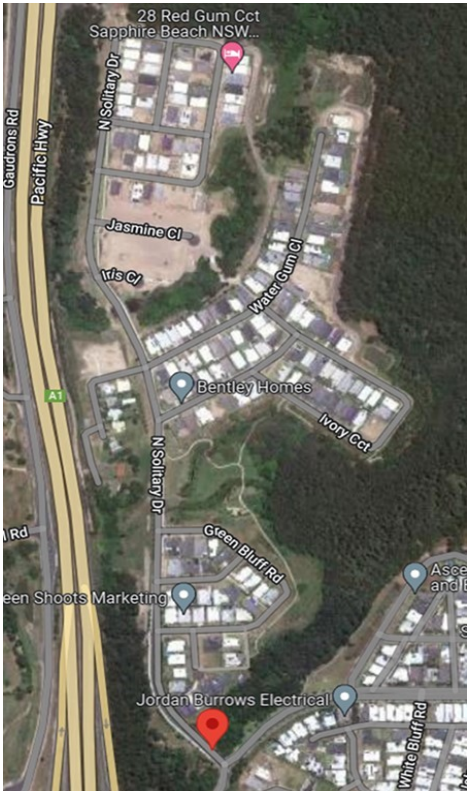



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Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442
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Low Density Residential Catchment Site Information	
Site Location	N Solitary Dr, Sapphire Beach
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		N Solitary Dr, Sapphire Beach										
Survey Day/Date:-		Wednesday, 1 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		M Ludolph										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	1	1	7	7	0	0	0	0	2	2	0	0
6:15 AM	4	4	9	9	0	0	0	0	0	0	0	0
6:30 AM	3	4	8	9	0	0	0	0	1	1	0	0
6:45 AM	7	8	16	16	0	0	0	0	0	1	0	0
7:00 AM	4	6	14	17	0	0	0	0	2	1	1	1
7:15 AM	0	0	17	19	0	0	0	0	0	0	0	1
7:30 AM	8	8	21	27	0	0	0	0	0	0	0	0
7:45 AM	10	12	36	68	1	1	1	10	0	11	0	0
8:00 AM	11	12	40	57	0	0	0	0	0	0	0	2
8:15 AM	7	8	31	43	0	0	0	0	0	0	0	0
8:30 AM	5	5	29	48	0	0	0	0	0	0	0	0
8:45 AM	10	13	26	40	0	0	0	0	0	0	0	0
3:30 PM	28	39	14	16	0	0	0	0	4	0	0	0
3:45 PM	20	27	8	9	1	6	1	1	0	0	0	0
4:00 PM	23	32	19	19	0	0	0	0	6	0	1	0
4:15 PM	30	38	7	8	0	0	0	0	0	0	0	0
4:30 PM	22	27	18	22	0	0	0	0	0	0	0	0
4:45 PM	24	30	10	10	0	0	0	0	0	0	0	0
5:00 PM	31	39	9	10	0	0	0	0	1	1	2	0
5:15 PM	26	34	15	17	0	0	0	0	0	0	0	0
5:30 PM	16	21	11	13	0	0	0	0	0	0	0	0
5:45 PM	17	20	9	9	0	0	0	0	0	0	0	0
6:00 PM	23	28	16	19	0	0	0	0	0	0	0	0
6:15 PM	14	18	7	9	0	0	0	0	0	0	0	0
AM Total	70	81	254	360	1	1	1	10	5	16	1	4
PM Total	274	353	143	161	1	6	1	1	11	1	3	0
Average Pax per Vehicle	1.16	AM	1.42	Average Pax per Bus	1.00	AM	10.00					
	1.29	PM	1.13		6.00	PM	1.00					

Site Location	11 Military Dr., Tappan, New York
Survey Date	20th May – 2nd June 2012
Survey Period	2.2 Hours
AM Peak Period	
PM Peak Period	

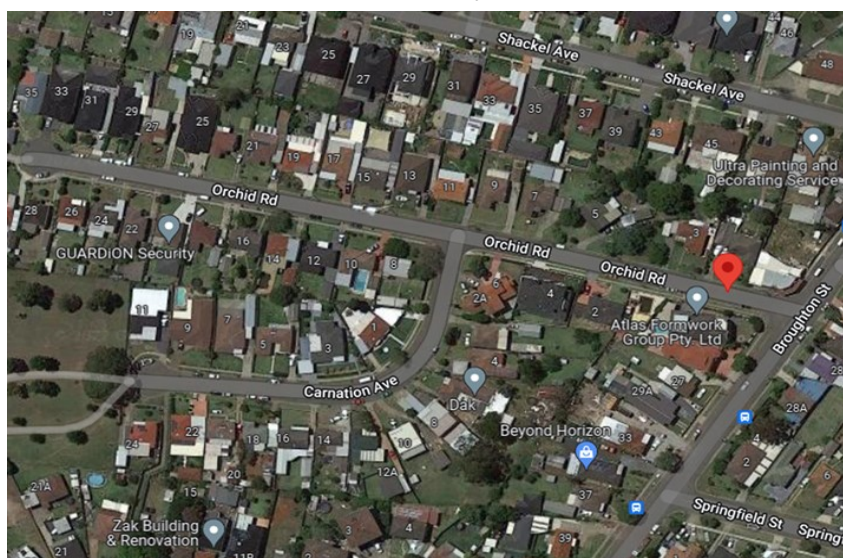



Name	Metric 1 Group										Metric 2 Group										Total
	M1.1	M1.2	M1.3	M1.4	M1.5	M1.6	M1.7	M1.8	M1.9	M1.10	M2.1	M2.2	M2.3	M2.4	M2.5	M2.6	M2.7	M2.8	M2.9	M2.10	
Category A Item 1	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	1500
Category A Item 2	15	25	35	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	1550
Category A Item 3	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	1600
Category A Item 4	25	35	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	215	1650
Category A Item 5	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	1700
Category A Item 6	35	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	215	225	1750
Category A Item 7	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	1800
Category A Item 8	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	215	225	235	1850
Category A Item 9	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	1900
Category A Item 10	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	215	225	235	245	1950
Category B Item 1	12	22	32	42	52	62	72	82	92	102	112	122	132	142	152	162	172	182	192	202	1400
Category B Item 2	17	27	37	47	57	67	77	87	97	107	117	127	137	147	157	167	177	187	197	207	1450
Category B Item 3	22	32	42	52	62	72	82	92	102	112	122	132	142	152	162	172	182	192	202	212	1500
Category B Item 4	27	37	47	57	67	77	87	97	107	117	127	137	147	157	167	177	187	197	207	217	1550
Category B Item 5	32	42	52	62	72	82	92	102	112	122	132	142	152	162	172	182	192	202	212	222	1600
Category B Item 6	37	47	57	67	77	87	97	107	117	127	137	147	157	167	177	187	197	207	217	227	1650
Category B Item 7	42	52	62	72	82	92	102	112	122	132	142	152	162	172	182	192	202	212	222	232	1700
Category B Item 8	47	57	67	77	87	97	107	117	127	137	147	157	167	177	187	197	207	217	227	237	1750
Category B Item 9	52	62	72	82	92	102	112	122	132	142	152	162	172	182	192	202	212	222	232	242	1800
Category B Item 10	57	67	77	87	97	107	117	127	137	147	157	167	177	187	197	207	217	227	237	247	1850
Category C Item 1	8	18	28	38	48	58	68	78	88	98	108	118	128	138	148	158	168	178	188	198	1300

[illegible]

Low Density Residential Catchment Site Information	
Site Location	Orchid Rd, Old Guildford
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Orchid Rd, Old Guildford										
Survey Day/Date:-		Thursday, 2 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		L Ma										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	3	3	0	0	0	0	0	0	0	0
6:30 AM	3	3	5	11	0	0	0	0	0	0	0	0
6:45 AM	2	2	5	7	0	0	0	0	0	0	0	0
7:00 AM	2	2	4	5	0	0	0	0	0	0	0	0
7:15 AM	2	2	4	6	0	0	0	0	0	0	0	0
7:30 AM	2	3	4	5	0	0	0	0	0	1	0	0
7:45 AM	0	0	6	11	0	0	0	0	0	0	0	0
8:00 AM	0	0	5	8	0	0	0	0	0	0	0	0
8:15 AM	4	4	10	21	0	0	0	0	1	1	0	2
8:30 AM	6	8	12	26	0	0	0	0	0	0	1	0
8:45 AM	4	4	10	16	0	0	0	0	0	1	0	0
3:30 PM	10	18	7	8	0	0	0	0	1	0	0	0
3:45 PM	8	20	6	8	0	0	0	0	1	0	0	1
4:00 PM	9	10	6	6	0	0	0	0	1	1	2	2
4:15 PM	11	15	9	10	0	0	0	0	0	0	1	0
4:30 PM	10	15	4	5	0	0	0	0	0	0	0	0
4:45 PM	6	12	8	8	0	0	0	0	0	0	0	0
5:00 PM	6	8	10	11	0	0	0	0	0	0	0	0
5:15 PM	6	6	5	5	0	0	0	0	0	0	0	0
5:30 PM	4	4	2	2	0	0	0	0	0	0	0	0
5:45 PM	5	5	2	2	0	0	0	0	0	0	0	0
6:00 PM	8	8	5	5	0	0	0	0	0	0	0	0
6:15 PM	1	1	5	5	0	0	0	0	0	1	0	0
AM Total	25	28	68	119	0	0	0	0	1	3	1	2
PM Total	84	122	69	75	0	0	0	0	3	2	3	3

Average Pax per Vehicle 1.12 AM 1.75
 1.45 PM 1.09

TDC

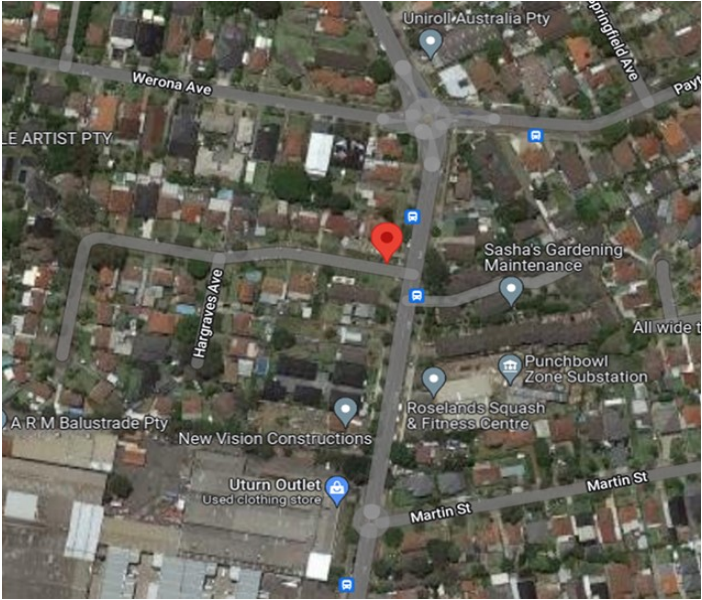
vehicle parked on tubes from
6:30pm to 8:00pm on Sunday


Table 1: Data for 2019

Year	Q1										Q2										Q3										Yearly Total
	Q1-1	Q1-2	Q1-3	Q1-4	Q1-5	Q1-6	Q1-7	Q1-8	Q1-9	Q1-10	Q2-1	Q2-2	Q2-3	Q2-4	Q2-5	Q2-6	Q2-7	Q2-8	Q2-9	Q2-10	Q3-1	Q3-2	Q3-3	Q3-4	Q3-5	Q3-6	Q3-7	Q3-8	Q3-9	Q3-10	
2010	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2011	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
2012	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
2013	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
2014	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
2015	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
2016	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
2017	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
2018	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
2019	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
2020	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	
2021	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
2022	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	
2023	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
2024	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
2025	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
2026	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	
2027	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
2028	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	
2029	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
2030	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
2031	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
2032	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	
2033	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
2034	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
2035	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
2036	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
2037	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
2038	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
2039	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
2040	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
2041	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	
2042	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	
2043	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	
2044	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
2045	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	
2046	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	
2047	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
2048	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	
2049	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
2050	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
2051	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	
2052	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	
2053	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
2054	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	
2055	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	
2056	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	
2057	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
2058	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	
2059	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
2060	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	
2061	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52</												

Low Density Residential Catchment Site Information	
Site Location	Patrick St, Punchbowl
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Patrick St, Punchbowl										
Survey Day/Date:-		Wednesday, 1 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		J Li										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	0	0	6	6	0	0	0	0	0	0	0	0
6:15 AM	1	1	1	1	0	0	0	0	0	0	0	0
6:30 AM	3	4	2	2	0	0	0	0	0	0	0	0
6:45 AM	1	1	5	5	0	0	0	0	0	0	0	0
7:00 AM	1	1	2	2	0	0	0	0	0	0	0	0
7:15 AM	1	1	0	0	0	0	0	0	0	0	0	0
7:30 AM	2	2	7	8	0	0	0	0	0	0	0	0
7:45 AM	1	1	2	2	0	0	0	0	0	0	0	0
8:00 AM	1	1	6	8	0	0	0	0	0	0	0	0
8:15 AM	2	2	8	15	0	0	0	0	0	0	0	0
8:30 AM	1	1	6	15	0	0	0	0	0	0	0	0
8:45 AM	5	5	2	4	0	0	0	0	0	0	0	0
3:30 PM	7	11	4	4	0	0	0	0	0	0	0	0
3:45 PM	10	21	1	1	0	0	0	0	0	0	0	0
4:00 PM	3	4	2	2	0	0	0	0	0	0	0	0
4:15 PM	3	3	1	1	0	0	0	0	0	0	0	0
4:30 PM	8	9	3	3	0	0	0	0	0	1	0	0
4:45 PM	4	5	4	4	0	0	0	0	1	1	0	0
5:00 PM	2	3	8	10	0	0	0	0	1	0	0	0
5:15 PM	4	4	4	5	0	0	0	0	0	0	0	0
5:30 PM	4	4	1	2	0	0	0	0	1	0	0	0
5:45 PM	2	2	0	0	0	0	0	0	0	0	0	1
6:00 PM	3	4	6	8	0	0	0	0	0	0	0	0
6:15 PM	7	9	4	4	0	0	0	0	0	0	0	0
AM Total	19	20	47	68	0	0	0	0	0	0	0	0
PM Total	57	79	38	44	0	0	0	0	3	2	0	1
Average Pax per Vehicle	1.05 1.39	AM PM	1.45 1.16									

Site Location	Patrick St, Punchbowl
Survey Date	08B, Mon - 3rd June 2022
Survey Period	22 Hours
AM Peak Period	
PM Peak Period	




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Low Density Residential Catchment Site Information	
Site Location	Portmadoc Drive, Menai
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY											<div>TDC</div> <div>Traffic Data & Control</div>	
Site Location:-		Portmadoc Dr, Menai										
Survey Day/Date:-		Tuesday 7th June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		J Li										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	8	10	7	9	0	0	0	0	1	1	0	0
6:15 AM	4	5	7	10	0	0	0	0	1	3	0	0
6:30 AM	3	4	12	18	0	0	0	0	0	2	0	0
6:45 AM	8	12	42	80	0	0	0	0	4	4	1	0
7:00 AM	8	13	21	35	0	0	0	0	0	3	0	0
7:15 AM	10	17	37	59	0	0	0	0	1	3	0	0
7:30 AM	11	15	48	76	0	0	0	0	1	1	0	0
7:45 AM	12	20	42	76	0	0	0	0	1	1	0	0
8:00 AM	10	14	36	67	0	0	0	0	0	1	0	0
8:15 AM	14	19	49	91	2	15	1	2	0	1	0	0
8:30 AM	17	22	26	46	0	0	1	4	3	0	0	0
8:45 AM	11	14	18	29	0	0	0	0	2	0	0	0
3:30 PM	23	42	22	39	2	18	2	14	6	4	0	0
3:45 PM	23	37	23	39	1	5	1	9	6	2	0	0
4:00 PM	24	43	16	26	0	0	0	0	1	2	0	0
4:15 PM	30	48	24	37	0	0	0	0	3	1	0	0
4:30 PM	44	73	18	26	0	0	0	0	1	3	3	0
4:45 PM	38	60	18	28	0	0	0	0	2	1	0	0
5:00 PM	32	43	20	29	0	0	0	0	1	2	0	0
5:15 PM	32	49	18	24	0	0	0	0	2	4	0	0
5:30 PM	37	53	19	25	0	0	0	0	1	1	0	0
5:45 PM	28	36	16	22	0	0	0	0	1	0	0	0
6:00 PM	38	51	17	26	0	0	0	0	0	2	0	0
6:15 PM	26	35	15	20	0	0	0	0	0	0	0	0
AM Total	116	165	345	596	2	15	2	6	14	20	1	0
PM Total	375	570	226	341	3	23	3	23	24	22	3	0
Average Pax per Vehicle	1.42	AM	1.73	Average Pax per Bus	7.50	AM	3.00					
	1.52	PM	1.51		7.67	PM	7.67					

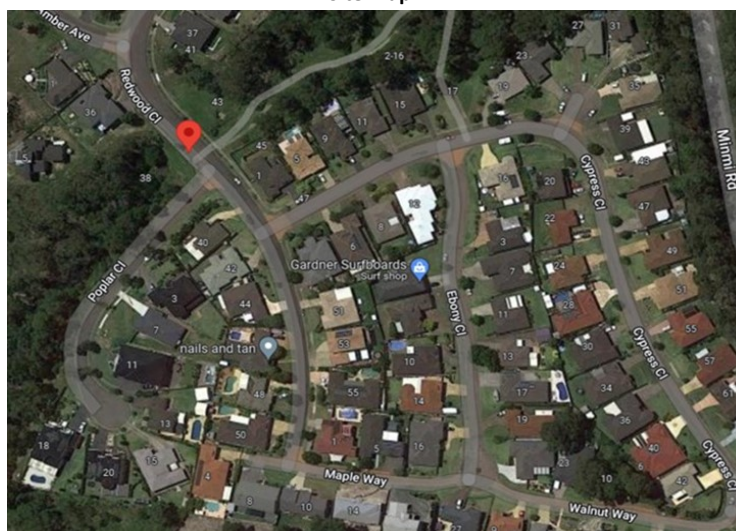
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Date		January 2020										February 2020										Total
		Jan 1		Jan 2		Jan 3		Jan 4		Jan 5		Feb 1		Feb 2		Feb 3		Feb 4				
Day	Month	Year	Day	Month	Year	Day	Month	Year	Day	Month	Year	Day	Month	Year	Day	Month	Year	Day	Month	Year		
1	1	2020	2	1	2020	3	1	2020	4	1	2020	5	1	2020	6	2	2020	7	2	2020		
6	1	2020	7	1	2020	8	1	2020	9	1	2020	10	1	2020	11	2	2020	12	2	2020		
11	1	2020	12	1	2020	13	1	2020	14	1	2020	15	1	2020	16	2	2020	17	2	2020		
16	1	2020	17	1	2020	18	1	2020	19	1	2020	20	1	2020	21	2	2020	22	2	2020		
21	1	2020	22	1	2020	23	1	2020	24	1	2020	25	1	2020	26	2	2020	27	2	2020		
26	1	2020	27	1	2020	28	1	2020	29	1	2020	30	1	2020	31	2	2020					
31	1	2020																				
1	2	2020	2	2	2020	3	2	2020	4	2	2020	5	2	2020	6	2	2020	7	2	2020		
7	2	2020	8	2	2020	9	2	2020	10	2	2020	11	2	2020	12	2	2020	13	2	2020		
12	2	2020	13	2	2020	14	2	2020	15	2	2020	16	2	2020	17	2	2020	18	2	2020		
17	2	2020	18	2	2020	19	2	2020	20	2	2020	21	2	2020	22	2	2020	23	2	2020		
22	2	2020	23	2	2020	24	2	2020	25	2	2020	26	2	2020	27	2	2020	28	2	2020		
27	2	2020	28	2	2020	29	2	2020	30	2	2020	31	2	2020								
31	2	2020																				
1	3	2020	2	3	2020	3	3	2020	4	3	2020	5	3	2020	6	3	2020	7	3	2020		
7	3	2020	8	3	2020	9	3	2020	10	3	2020	11	3	2020	12	3	2020	13	3	2020		
12	3	2020	13	3	2020	14	3	2020	15	3	2020	16	3	2020	17	3	2020	18	3	2020		
17	3	2020	18	3	2020	19	3	2020	20	3	2020	21	3	2020	22	3	2020	23	3	2020		
22	3	2020	23	3	2020	24	3	2020	25	3	2020	26	3	2020	27	3	2020	28	3	2020		
27	3	2020	28	3	2020	29	3	2020	30	3	2020	31	3	2020								
31	3	2020																				
1	4	2020	2	4	2020	3	4	2020	4	4	2020	5	4	2020	6	4	2020	7	4	2020		
7	4	2020	8	4	2020	9	4	2020	10	4	2020	11	4	2020	12	4	2020	13	4	2020		
12	4	2020	13	4	2020	14	4	2020	15	4	2020	16	4	2020	17	4	2020	18	4	2020		
17	4	2020	18	4	2020	19	4	2020	20	4	2020	21	4	2020	22	4	2020	23	4	2020		
22	4	2020	23	4	2020	24	4	2020	25	4	2020	26	4	2020	27	4						

Year	Month	January												February												March												April												May												June												July												August												September												October												November												December												Total																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

Low Density Residential Catchment Site Information	
Site Location	Redwood Cl, Fletcher
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Redwood Close, Fletcher										
Survey Day/Date:-		Wednesday, 1 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		S Greentree										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	0	0	2	2	0	0	0	0	0	0	0	0
6:15 AM	3	3	6	6	0	0	0	0	0	1	1	0
6:30 AM	1	1	10	11	0	0	0	0	1	2	0	0
6:45 AM	0	0	5	6	0	0	0	0	0	0	0	0
7:00 AM	4	4	6	6	0	0	0	0	0	0	0	0
7:15 AM	3	3	10	11	0	0	0	0	1	1	0	0
7:30 AM	3	3	8	10	0	0	0	0	1	0	0	0
7:45 AM	1	1	10	12	0	0	0	0	0	0	0	0
8:00 AM	4	5	9	11	0	0	0	0	0	0	0	0
8:15 AM	4	4	9	13	0	0	0	0	0	0	0	0
8:30 AM	2	3	13	19	0	0	0	0	1	0	0	0
8:45 AM	8	8	8	11	0	0	0	0	0	0	0	0
3:30 PM	8	11	2	3	0	0	0	0	0	1	0	1
3:45 PM	8	12	5	7	0	0	0	0	0	2	0	0
4:00 PM	6	6	11	13	0	0	0	0	0	0	0	1
4:15 PM	10	13	7	8	0	0	0	0	0	0	0	0
4:30 PM	6	6	3	3	0	0	0	0	0	0	0	0
4:45 PM	11	14	7	9	0	0	0	0	0	0	0	0
5:00 PM	14	17	7	11	0	0	0	0	0	0	0	0
5:15 PM	7	7	3	5	0	0	0	0	0	0	0	0
5:30 PM	15	16	6	7	0	0	0	0	0	0	0	0
5:45 PM	6	7	0	0	0	0	0	0	1	0	0	0
6:00 PM	6	7	4	5	0	0	0	0	0	0	0	0
6:15 PM	6	6	3	4	0	0	0	0	0	1	0	0
AM Total	33	35	96	118	0	0	0	0	4	4	1	0
PM Total	103	122	58	75	0	0	0	0	1	4	0	2
Average Pax per Vehicle	1.06	AM	1.23									
	1.18	PM	1.29									

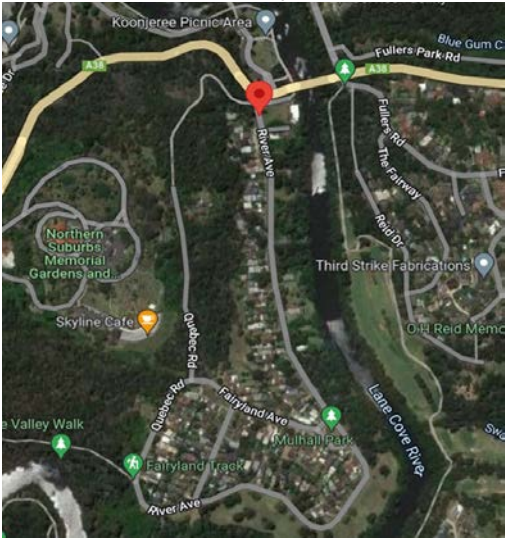



***TDC**
TDC Data & Control

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Low Density Residential Catchment Site Information	
Site Location	River Ave, Chatswood West
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



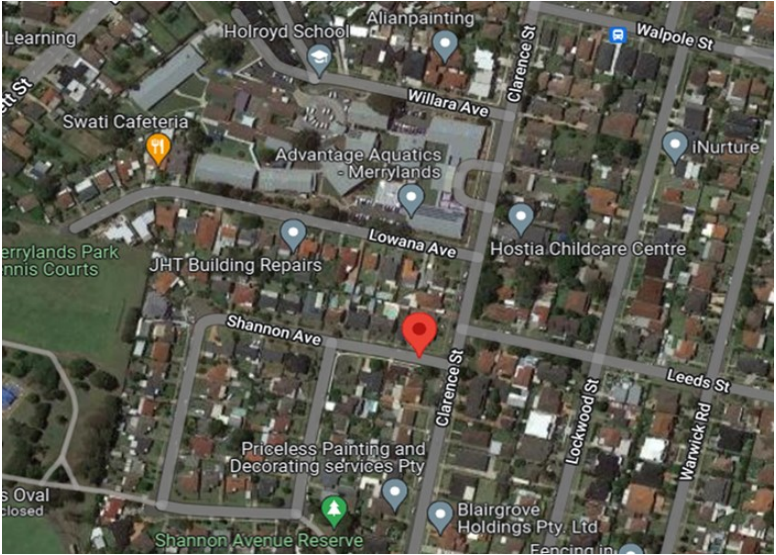
LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		River Ave, Chatswood West										
Survey Day/Date:-		Wednesday, 1 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		T Norman										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	0	0	3	3	0	0	0	0	2	1	0	0
6:15 AM	0	0	1	1	0	0	0	0	0	0	0	0
6:30 AM	0	0	2	3	0	0	0	0	0	0	0	0
6:45 AM	3	4	8	9	0	0	0	0	0	2	0	0
7:00 AM	5	5	4	4	0	0	0	0	1	1	0	0
7:15 AM	2	4	10	10	1	1	1	1	3	1	0	0
7:30 AM	8	8	6	6	0	0	0	0	1	1	0	0
7:45 AM	2	2	10	14	1	1	1	2	1	1	0	0
8:00 AM	4	4	16	20	0	0	0	0	2	1	0	0
8:15 AM	6	7	6	10	1	1	1	1	0	0	0	0
8:30 AM	5	6	14	24	0	0	0	0	0	1	0	0
8:45 AM	6	6	12	16	0	0	0	0	0	3	0	0
3:30 PM	10	11	10	10	1	1	1	1	3	1	1	0
3:45 PM	7	10	11	11	0	0	0	0	1	0	0	0
4:00 PM	5	6	3	4	0	0	0	0	0	3	0	0
4:15 PM	10	11	4	4	0	0	0	0	3	0	0	0
4:30 PM	4	4	3	3	1	1	1	2	1	4	0	0
4:45 PM	6	6	2	2	0	0	0	0	0	1	0	0
5:00 PM	5	7	6	6	0	0	0	0	2	0	0	0
5:15 PM	7	8	3	3	0	0	0	0	0	0	0	0
5:30 PM	8	8	5	5	1	2	1	1	0	0	0	0
5:45 PM	8	8	3	3	0	0	0	0	1	0	0	0
6:00 PM	9	9	1	1	0	0	0	0	1	0	0	0
6:15 PM	10	10	7	7	0	0	0	0	1	1	0	0
AM Total	41	46	92	120	3	3	3	4	10	12	0	0
PM Total	89	98	58	59	3	4	3	4	13	10	1	0
Average Pax per Vehicle	1.12	AM	1.30	Average Pax per Bus	1.00	AM	1.33					
	1.10	PM	1.02		1.33	PM	1.33					

*TDC

[illegible]

Low Density Residential Catchment Site Information	
Site Location	Shannon Ave, Merrylands
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



[illegible]

Site Location	Shannon Run, Maryland
Survey Date	28th May - 3rd June 2022
Survey Period	24 Hours
AMT Peak Period	
PMI Peak Period	

Feature	Category 1 (10%)										Category 2 (10%)										Total Count
	Subcat 1.1	Subcat 1.2	Subcat 1.3	Subcat 1.4	Subcat 1.5	Subcat 1.6	Subcat 1.7	Subcat 1.8	Subcat 1.9	Subcat 1.10	Subcat 2.1	Subcat 2.2	Subcat 2.3	Subcat 2.4	Subcat 2.5	Subcat 2.6	Subcat 2.7	Subcat 2.8	Subcat 2.9	Subcat 2.10	
Feature 1.0.0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
Feature 1.0.1	11	21	31	41	51	61	71	81	91	101	111	121	131	141	151	161	171	181	191	201	
Feature 1.0.2	12	22	32	42	52	62	72	82	92	102	112	122	132	142	152	162	172	182	192	202	
Feature 1.0.3	13	23	33	43	53	63	73	83	93	103	113	123	133	143	153	163	173	183	193	203	
Feature 1.0.4	14	24	34	44	54	64	74	84	94	104	114	124	134	144	154	164	174	184	194	204	
Feature 1.0.5	15	25	35	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	
Feature 1.0.6	16	26	36	46	56	66	76	86	96	106	116	126	136	146	156	166	176	186	196	206	
Feature 1.0.7	17	27	37	47	57	67	77	87	97	107	117	127	137	147	157	167	177	187	197	207	
Feature 1.0.8	18	28	38	48	58	68	78	88	98	108	118	128	138	148	158	168	178	188	198	208	
Feature 1.0.9	19	29	39	49	59	69	79	89	99	109	119	129	139	149	159	169	179	189	199	209	
Feature 1.0.10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	
Feature 1.1.0	21	31	41	51	61	71	81	91	101	111	121	131	141	151	161	171	181	191	201	211	
Feature 1.1.1	22	32	42	52	62	72	82	92	102	112	122	132	142	152	162	172	182	192	202	212	
Feature 1.1.2	23	33	43	53	63	73	83	93	103	113	123	133	143	153	163	173	183	193	203	213	
Feature 1.1.3	24	34	44	54	64	74	84	94	104	114	124	134	144	154	164	174	184	194	204	214	
Feature 1.1.4	25	35	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	215	
Feature 1.1.5	26	36	46	56	66	76	86	96	106	116	126	136	146	156	166	176	186	196	206	216	
Feature 1.1.6	27	37	47	57	67	77	87	97	107	117	127	137	147	157	167	177	187	197	207	217	
Feature 1.1.7	28	38	48	58	68	78	88	98	108	118	128	138	148	158	168	178	188	198	208	218	
Feature 1.1.8	29	39	49	59	69	79	89	99	109	119	129	139	149	159	169	179	189	199	209	219	
Feature 1.1.9	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	
Feature 1.2.0	31	41	51	61	71	81	91	101	111	121	131	141	151	161	171	181	191	201	211	221	
Feature 1.2.1	32	42	52	62	72	82	92	102	112	122											

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Low Density Residential Catchment Site Information	
Site Location	Austin St, Illawong
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Austin St, Illawong										
Survey Day/Date:-		Thursday 2nd June 2022										
Survey Period:-		6am - 9am & 3:30pm - 6:30pm										
Surveyors Name:-		M Fletcher										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting		Entering	Exiting	Entering	Exiting
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy				
6:00 AM	0	0	7	7	0	0	0	0	0	0	0	0
6:15 AM	0	0	12	12	0	0	0	0	0	0	0	0
6:30 AM	3	3	15	15	0	0	0	0	0	4	0	0
6:45 AM	7	8	23	25	0	0	0	0	0	0	0	0
7:00 AM	9	9	15	17	0	0	0	0	1	0	0	0
7:15 AM	6	7	21	24	0	0	0	0	0	1	0	0
7:30 AM	3	3	25	32	0	0	0	0	1	1	0	0
7:45 AM	12	12	32	51	0	0	0	0	0	2	0	0
8:00 AM	8	11	25	39	0	0	0	0	2	3	0	0
8:15 AM	16	16	19	26	0	0	0	0	1	7	0	0
8:30 AM	20	21	34	47	0	0	0	0	1	2	0	0
8:45 AM	11	12	24	47	0	0	0	0	4	5	0	0
3:30 PM	24	32	20	20	0	0	0	0	4	1	0	0
3:45 PM	28	35	19	21	0	0	0	0	0	4	0	0
4:00 PM	16	19	11	12	0	0	0	0	0	2	0	0
4:15 PM	26	31	7	11	0	0	0	0	2	6	0	0
4:30 PM	24	29	11	11	0	0	0	0	1	2	0	0
4:45 PM	21	24	19	20	0	0	0	0	6	0	0	0
5:00 PM	23	23	14	14	0	0	0	0	0	0	0	0
5:15 PM	27	27	14	14	0	0	0	0	1	0	0	0
5:30 PM	22	22	13	13	0	0	0	0	0	0	0	0
5:45 PM	22	22	13	13	0	0	0	0	0	0	0	0
6:00 PM	22	22	18	18	0	0	0	0	0	0	0	0
6:15 PM	26	26	17	17	0	0	0	0	0	0	0	0
AM Total	95	102	252	342	0	0	0	0	10	25	0	0
PM Total	281	312	176	184	0	0	0	0	14	15	0	0
Average Pax per Vehicle		1.07	AM	1.36								
		1.11	PM	1.05								



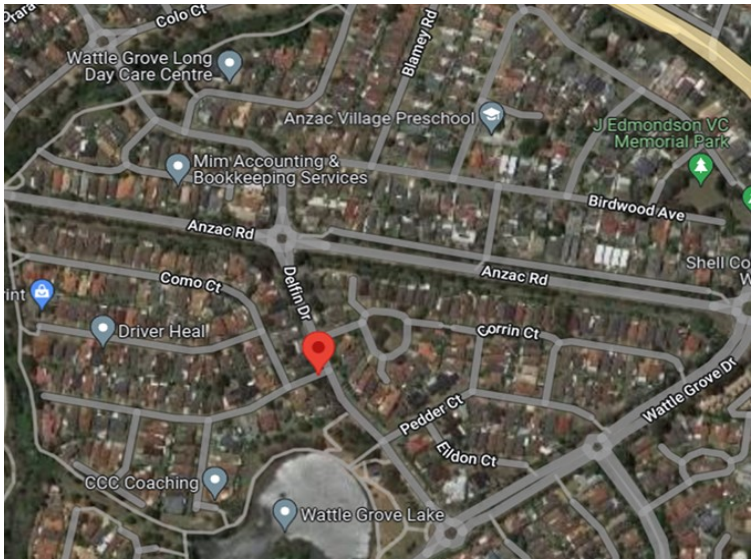



Metric: 20 May 2022										Unit										Total																																																																																																																																																																																																																													
Category	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16	Group 17	Group 18	Group 19		Group 20	Group 21	Group 22	Group 23	Group 24	Group 25	Group 26	Group 27	Group 28	Group 29	Group 30	Group 31	Group 32	Group 33	Group 34	Group 35	Group 36	Group 37	Group 38	Group 39	Group 40	Group 41	Group 42	Group 43	Group 44	Group 45	Group 46	Group 47	Group 48	Group 49	Group 50	Group 51	Group 52	Group 53	Group 54	Group 55	Group 56	Group 57	Group 58	Group 59	Group 60	Group 61	Group 62	Group 63	Group 64	Group 65	Group 66	Group 67	Group 68	Group 69	Group 70	Group 71	Group 72	Group 73	Group 74	Group 75	Group 76	Group 77	Group 78	Group 79	Group 80	Group 81	Group 82	Group 83	Group 84	Group 85	Group 86	Group 87	Group 88	Group 89	Group 90	Group 91	Group 92	Group 93	Group 94	Group 95	Group 96	Group 97	Group 98	Group 99	Group 100																																																																																																																																												
11-00000	11-00001	11-00002	11-00003	11-00004	11-00005	11-00006	11-00007	11-00008	11-00009	11-00010	11-00011	11-00012	11-00013	11-00014	11-00015	11-00016	11-00017	11-00018	11-00019	11-00020	11-00021	11-00022	11-00023	11-00024	11-00025	11-00026	11-00027	11-00028	11-00029	11-00030	11-00031	11-00032	11-00033	11-00034	11-00035	11-00036	11-00037	11-00038	11-00039	11-00040	11-00041	11-00042	11-00043	11-00044	11-00045	11-00046	11-00047	11-00048	11-00049	11-00050	11-00051	11-00052	11-00053	11-00054	11-00055	11-00056	11-00057	11-00058	11-00059	11-00060	11-00061	11-00062	11-00063	11-00064	11-00065	11-00066	11-00067	11-00068	11-00069	11-00070	11-00071	11-00072	11-00073	11-00074	11-00075	11-00076	11-00077	11-00078	11-00079	11-00080	11-00081	11-00082	11-00083	11-00084	11-00085	11-00086	11-00087	11-00088	11-00089	11-00090	11-00091	11-00092	11-00093	11-00094	11-00095	11-00096	11-00097	11-00098	11-00099	11-00100	11-00101	11-00102	11-00103	11-00104	11-00105	11-00106	11-00107	11-00108	11-00109	11-00110	11-00111	11-00112	11-00113	11-00114	11-00115	11-00116	11-00117	11-00118	11-00119	11-00120	11-00121	11-00122	11-00123	11-00124	11-00125	11-00126	11-00127	11-00128	11-00129	11-00130	11-00131	11-00132	11-00133	11-00134	11-00135	11-00136	11-00137	11-00138	11-00139	11-00140	11-00141	11-00142	11-00143	11-00144	11-00145	11-00146	11-00147	11-00148	11-00149	11-00150	11-00151	11-00152	11-00153	11-00154	11-00155	11-00156	11-00157	11-00158	11-00159	11-00160	11-00161	11-00162	11-00163	11-00164	11-00165	11-00166	11-00167	11-00168	11-00169	11-00170	11-00171	11-00172	11-00173	11-00174	11-00175	11-00176	11-00177	11-00178	11-00179	11-00180	11-00181	11-00182	11-00183	11-00184	11-00185	11-00186	11-00187	11-00188	11-00189	11-00190	11-00191	11-00192	11-00193	11-00194	11-00195	11-00196	11-00197	11-00198	11-00199	11-00200	11-00201	11-00202	11-00203	11-00204	11-00205	11-00206	11-00207	11-00208	11-00209	11-00210	11-00211	11-00212	11-00213	11-00214	11-00215	11-00216	11-00217	11-00218	11-00219	11-00220	11-00221	11-00222	11-00223	11-00224	11-00225	11-00226	11-00227	11-00228	11-00229	11-00230	11-00231	11-00232	11-00233	11-00234	11-00235	11-00236	11-00237	11-00238	11-00239	11-00240	11-00241

[illegible]

Low Density Residential Catchment Site Information	
Site Location	Castle Rock Court, Wattle Grove
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

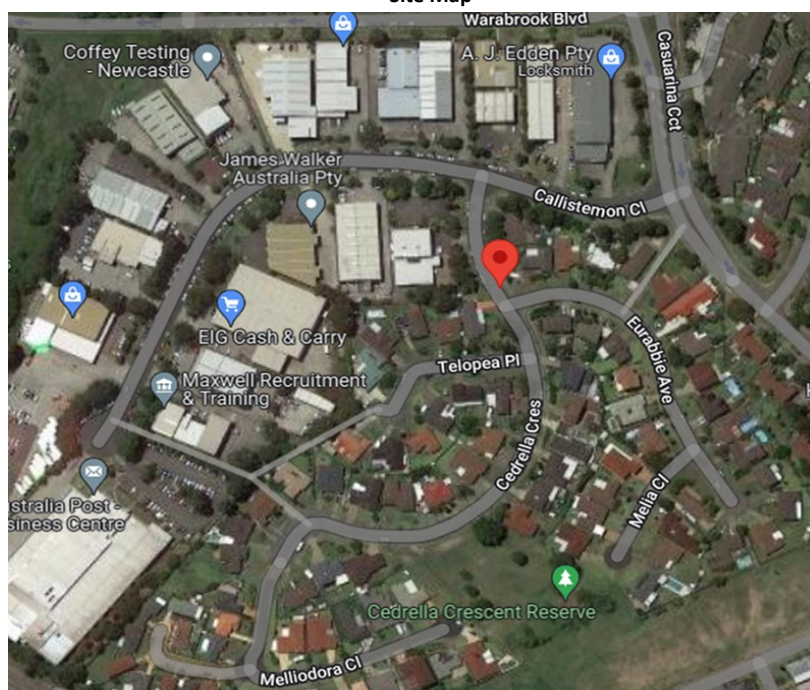
Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Castle Rock Court, Wattle Grove										
Survey Day/Date:-		Thursday 2nd June 2022										
Survey Period:-		6am - 9am & 3:30pm - 6:30pm										
Surveyors Name:-		R Bigger										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	0	0	4	4	0	0	0	0	0	1	0	0
6:15 AM	0	0	4	6	0	0	0	0	1	1	0	0
6:30 AM	0	0	5	6	0	0	0	0	1	0	0	0
6:45 AM	1	1	6	6	0	0	0	0	0	0	0	0
7:00 AM	3	4	5	7	0	0	0	0	1	1	0	0
7:15 AM	6	8	10	13	0	0	0	0	0	1	0	0
7:30 AM	5	6	12	17	0	0	0	0	0	1	0	0
7:45 AM	5	8	12	15	0	0	0	0	0	0	0	0
8:00 AM	3	3	15	26	0	0	0	0	0	0	0	2
8:15 AM	4	4	16	23	0	0	0	0	0	4	0	0
8:30 AM	7	9	15	24	0	0	0	0	0	0	0	0
8:45 AM	8	11	7	8	0	0	0	0	0	0	0	0
3:30 PM	14	23	5	5	0	0	0	0	5	2	0	0
3:45 PM	9	14	9	11	0	0	0	0	1	0	0	0
4:00 PM	10	17	6	7	0	0	0	0	1	0	0	0
4:15 PM	21	28	8	10	0	0	0	0	2	2	1	0
4:30 PM	9	11	10	12	0	0	0	0	1	0	0	0
4:45 PM	16	22	6	7	0	0	0	0	1	0	0	0
5:00 PM	4	6	5	5	0	0	0	0	0	0	0	0
5:15 PM	15	19	11	13	0	0	0	0	1	0	0	0
5:30 PM	18	23	6	10	0	0	0	0	0	1	0	0
5:45 PM	12	16	9	12	0	0	0	0	0	0	0	0
6:00 PM	12	14	2	3	0	0	0	0	1	0	0	0
6:15 PM	9	12	8	9	0	0	0	0	0	0	1	0
AM Total	42	54	111	155	0	0	0	0	3	9	0	2
PM Total	149	205	85	104	0	0	0	0	13	5	2	0
Average Pax per Vehicle	1.29 1.38	AM PM	1.40 1.22									

Low Density Residential Catchment Site Information	
Site Location	Cedrella Crescent, Warabrook
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



[illegible]



Table 10 (Contd.)													Table 11													Total																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Sl. No.	Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Low Density Residential Catchment Site Information	
Site Location	Chancellors Drive, Thrumster
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map

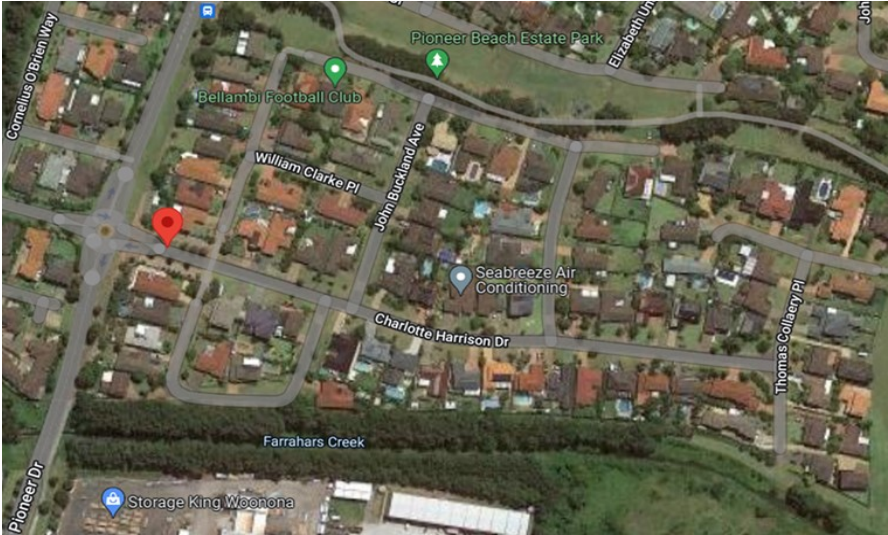


LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Chancellors Dr, Thrumster										
Survey Day/Date:-		Thursday, 2 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		L Sanders										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting		Entering	Exiting	Entering	Exiting
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy				
6:00 AM	0	0	10	12	0	0	0	0	0	1	0	0
6:15 AM	0	0	12	13	0	0	0	0	0	1	0	0
6:30 AM	2	2	11	11	0	0	0	0	1	0	3	3
6:45 AM	2	2	6	6	0	0	0	0	0	0	0	0
7:00 AM	5	5	7	7	0	0	0	0	1	2	0	0
7:15 AM	4	5	11	17	1	1	1	1	1	0	0	0
7:30 AM	7	7	24	34	0	0	0	0	0	2	1	0
7:45 AM	3	3	36	54	0	0	0	0	1	8	0	0
8:00 AM	12	13	29	47	0	0	0	0	1	0	0	1
8:15 AM	7	8	21	29	0	0	0	0	0	3	0	0
8:30 AM	10	10	11	14	1	8	0	0	1	2	0	0
8:45 AM	6	6	13	17	0	0	1	12	0	1	0	0
3:30 PM	23	27	12	16	0	0	0	0	0	1	1	0
3:45 PM	24	24	11	13	1	10	1	8	0	1	0	0
4:00 PM	24	24	9	11	0	0	0	0	1	1	0	0
4:15 PM	20	20	16	20	0	0	0	0	7	0	0	0
4:30 PM	10	10	2	2	0	0	0	0	0	0	0	0
4:45 PM	20	20	14	17	0	0	0	0	1	1	0	0
5:00 PM	19	19	13	14	0	0	0	0	0	0	0	0
5:15 PM	10	10	6	7	0	0	0	0	1	0	0	1
5:30 PM	16	17	11	11	0	0	0	0	0	0	0	0
5:45 PM	16	18	4	5	0	0	0	0	1	0	0	0
6:00 PM	17	23	7	8	0	0	0	0	0	1	0	0
6:15 PM	6	6	4	6	0	0	0	0	0	0	1	0
AM Total	58	61	191	261	2	9	2	13	6	20	4	4
PM Total	205	218	109	130	1	10	1	8	11	5	2	1
Average Pax per Vehicle	1.05	AM	1.37	Average Pax per Bus	4.50	AM	6.50					
	1.06	PM	1.19		10.00	PM	8.00					

[illegible]

Low Density Residential Catchment Site Information	
Site Location	Charlotte Harrison Drive, Woonona
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map

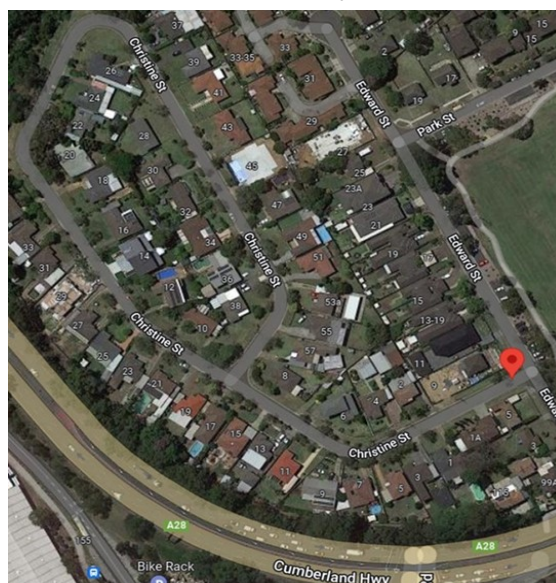


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Low Density Residential Catchment Site Information	
Site Location	Christine St, Northmead
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



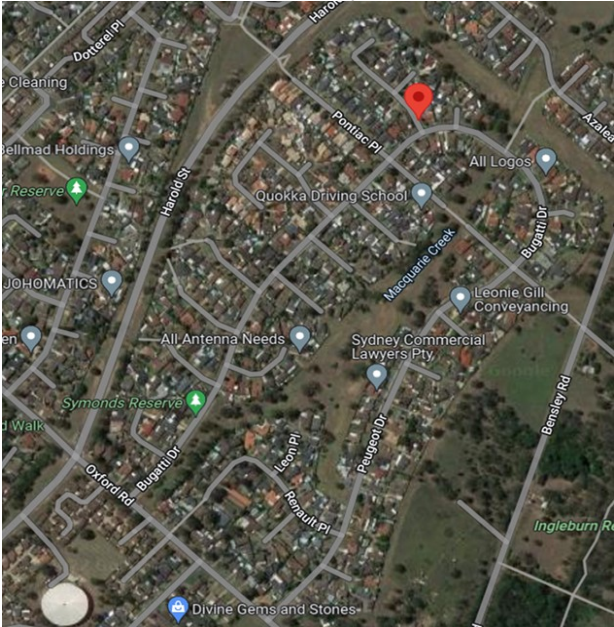
LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Christine St, Northmead										
Survey Day/Date:-		Tuesday, 31 May 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		S Greentree										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting		Entering	Exiting	Entering	Exiting
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy				
6:00 AM	1	1	2	2	0	0	0	0	2	0	0	0
6:15 AM	2	3	2	2	0	0	0	0	0	3	0	0
6:30 AM	1	1	4	4	0	0	0	0	0	0	0	0
6:45 AM	3	3	2	2	0	0	0	0	3	1	0	0
7:00 AM	3	3	3	5	0	0	0	0	0	0	0	0
7:15 AM	2	4	3	6	0	0	0	0	0	0	0	0
7:30 AM	5	5	6	8	0	0	0	0	0	0	0	0
7:45 AM	2	2	6	8	0	0	0	0	0	2	0	0
8:00 AM	5	5	8	13	0	0	0	0	0	0	0	0
8:15 AM	3	4	6	6	0	0	0	0	1	0	0	0
8:30 AM	1	1	4	4	0	0	0	0	0	3	0	0
8:45 AM	2	2	3	3	0	0	0	0	0	2	0	0
3:30 PM	11	13	3	5	0	0	0	0	2	0	0	0
3:45 PM	5	7	5	6	0	0	0	0	0	1	0	0
4:00 PM	6	7	6	7	0	0	0	0	1	0	0	0
4:15 PM	4	4	4	5	0	0	0	0	0	0	0	0
4:30 PM	2	2	2	3	0	0	0	0	1	0	0	0
4:45 PM	1	1	0	0	0	0	0	0	2	5	0	0
5:00 PM	4	5	4	6	0	0	0	0	1	0	0	0
5:15 PM	4	4	2	2	0	0	0	0	0	0	0	0
5:30 PM	4	4	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	1	1	1	0	0	0	0	0	0	0	0
6:00 PM	6	6	3	3	0	0	0	0	2	0	0	0
6:15 PM	1	1	1	1	0	0	0	0	0	0	0	0
AM Total	30	34	49	63	0	0	0	0	6	11	0	0
PM Total	49	55	31	39	0	0	0	0	9	6	0	0
Average Pax per Vehicle		1.13	AM	1.29								
		1.12	PM	1.26								



[illegible]

Low Density Residential Catchment Site Information	
Site Location	Delage Pl, Ingleburn
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



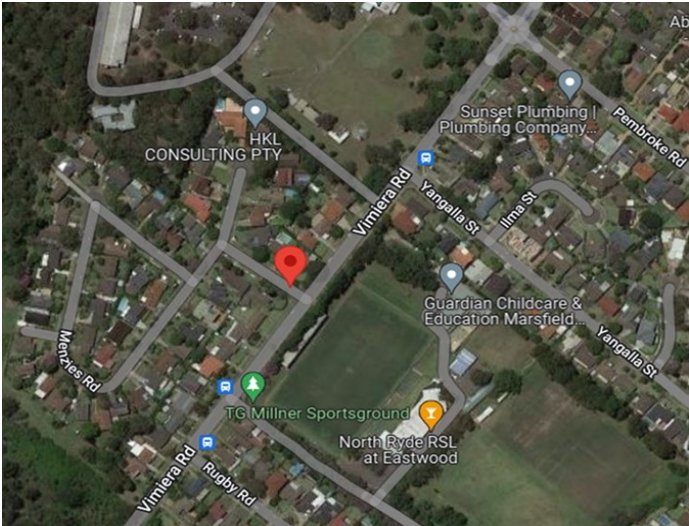
[illegible]

TDC
Traffic Data & Control

[illegible]

Low Density Residential Catchment Site Information	
Site Location	Elk St, Marsfield
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



[illegible]

TDC
Traffic Data & Control


[illegible]

Year	1990										1991										1992										Total
	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	
1990	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1991	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1992	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1993	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1994	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1995	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1996	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1997	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1998	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1999	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2000	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2001	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2002	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2003	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2004	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2005	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2006	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2007	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2008	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2009	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2010	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2011	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2012	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2013	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2014	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2015	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2016	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2017	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2018	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2019	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2021	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2022	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2023	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2024	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2025	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2026	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2027	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2028	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2029	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2030	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2031	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2032	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2033	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2034	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2035	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2036	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2037	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2038	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2039	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2040	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2041	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2042	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2043	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2044	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29</		

Low Density Residential Catchment Site Information	
Site Location	Golden Links, Murwillumbah
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Golden Links, Murwillumbah										
Survey Day/Date:-		Tuesday, 7 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		H Lowe										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	1	1	3	3	0	0	0	0	0	0	0	0
6:15 AM	0	0	5	5	0	0	0	0	0	0	0	0
6:30 AM	1	1	7	7	0	0	0	0	0	0	0	0
6:45 AM	4	4	7	7	0	0	0	0	0	0	0	1
7:00 AM	0	0	6	6	0	0	0	0	0	0	0	0
7:15 AM	3	3	8	8	0	0	0	0	0	0	0	0
7:30 AM	4	4	10	13	0	0	0	0	0	2	0	0
7:45 AM	6	8	12	14	0	0	0	0	2	0	0	0
8:00 AM	7	9	12	13	0	0	0	0	0	0	1	2
8:15 AM	5	5	12	20	1	3	1	5	0	0	0	0
8:30 AM	5	6	11	15	0	0	0	0	0	5	0	0
8:45 AM	3	4	8	8	0	0	0	0	0	1	0	0
3:30 PM	14	18	6	8	0	0	0	0	0	0	0	0
3:45 PM	10	13	13	19	0	0	0	0	0	0	0	0
4:00 PM	17	20	10	12	0	0	0	0	0	1	0	0
4:15 PM	12	13	3	3	0	0	0	0	1	0	0	0
4:30 PM	6	8	3	3	0	0	0	0	0	0	0	0
4:45 PM	13	16	6	7	0	0	0	0	0	0	0	0
5:00 PM	11	13	6	7	1	1	1	1	1	1	0	0
5:15 PM	19	19	11	12	0	0	0	0	0	0	0	0
5:30 PM	13	13	7	7	0	0	0	0	0	0	0	0
5:45 PM	6	6	8	8	0	0	0	0	0	0	0	0
6:00 PM	11	11	4	4	0	0	0	0	0	0	0	0
6:15 PM	5	5	5	5	0	0	0	0	0	0	0	0
AM Total	39	45	101	119	1	3	1	5	2	8	1	3
PM Total	137	155	82	95	1	1	1	1	2	2	0	0
Average Pax per Vehicle	1.15	AM	1.18	Average Pax per Bus	3.00	AM	5.00					
	1.13	PM	1.16		1.00	PM	1.00					

[illegible][illegible][illegible]

Low Density Residential Catchment Site Information	
Site Location	Hawthorne Circuit, Harrington Park
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map




LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Hawthorne Cct, Harrington Park										
Survey Day/Date:-		Tuesday, 31 May 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		N Ofamooni										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting		Entering	Exiting	Entering	Exiting
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy				
6:00 AM	4	5	12	14	0	0	0	0	0	0	0	0
6:15 AM	1	1	6	7	0	0	0	0	0	0	0	0
6:30 AM	2	2	5	6	0	0	0	0	0	1	0	0
6:45 AM	3	3	9	10	0	0	0	0	1	0	0	0
7:00 AM	1	1	8	9	0	0	0	0	0	0	0	0
7:15 AM	3	3	10	11	0	0	0	0	0	0	0	0
7:30 AM	1	1	15	27	0	0	0	0	0	1	0	0
7:45 AM	3	4	16	26	0	0	0	0	0	1	0	0
8:00 AM	2	2	4	6	0	0	0	0	0	0	0	0
8:15 AM	3	3	19	36	0	0	0	0	0	1	0	0
8:30 AM	12	12	9	13	1	10	0	0	0	0	0	0
8:45 AM	16	19	20	34	0	0	1	11	0	0	0	0
3:30 PM	10	18	6	9	0	0	0	0	0	0	0	0
3:45 PM	14	22	7	10	0	0	0	0	2	0	0	0
4:00 PM	8	10	10	17	0	0	0	0	0	0	0	0
4:15 PM	9	15	4	6	0	0	0	0	1	0	0	0
4:30 PM	10	11	8	9	0	0	0	0	0	1	0	0
4:45 PM	10	13	4	6	0	0	0	0	0	0	0	0
5:00 PM	12	16	7	8	0	0	0	0	0	3	0	0
5:15 PM	11	15	9	13	0	0	0	0	0	1	0	0
5:30 PM	12	14	4	5	0	0	0	0	1	0	0	0
5:45 PM	9	10	6	9	0	0	0	0	0	0	0	0
6:00 PM	9	11	8	9	0	0	0	0	0	0	0	0
6:15 PM	15	16	9	12	0	0	0	0	0	0	0	0
AM Total	51	56	133	199	1	10	1	11	1	4	0	0
PM Total	129	171	82	113	0	0	0	0	4	5	0	0
Average Pax per Vehicle	1.10	AM	1.50	Average Pax per Vehicle	10.00	AM	11.00					
	1.33	PM	1.38			PM						

Sunday, 28 May 2022Monday, 30 May 2022

Low Density Residential Catchment Site Information	
Site Location	Henderson Dr, Lennox Head
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Henderson Drive, Lennox Head										
Survey Day/Date:-		Tuesday, 7 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		I Pentleton										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	0	0	4	4	0	0	0	0	0	0	0	0
6:15 AM	2	3	4	5	0	0	0	0	0	1	0	0
6:30 AM	0	0	6	6	0	0	0	0	0	1	0	0
6:45 AM	5	8	3	5	0	0	0	0	0	1	0	0
7:00 AM	5	6	3	4	0	0	0	0	1	0	0	0
7:15 AM	6	11	2	3	0	0	0	0	2	1	0	0
7:30 AM	2	3	9	12	0	0	0	0	0	0	0	0
7:45 AM	4	5	15	19	0	0	0	0	0	0	0	0
8:00 AM	2	3	11	19	0	0	0	0	1	1	0	0
8:15 AM	6	8	10	23	0	0	0	0	0	0	0	0
8:30 AM	18	31	24	42	0	0	0	0	0	0	0	0
8:45 AM	16	21	15	22	0	0	0	0	0	0	0	0
3:30 PM	14	21	23	38	0	0	0	0	0	2	0	0
3:45 PM	8	9	9	11	0	0	0	0	1	0	0	0
4:00 PM	3	5	2	2	0	0	0	0	0	0	0	0
4:15 PM	17	29	11	17	0	0	0	0	0	0	0	0
4:30 PM	11	15	12	19	0	0	0	0	3	0	0	0
4:45 PM	11	15	6	8	0	0	0	0	1	0	1	0
5:00 PM	15	19	13	23	0	0	0	0	0	0	0	0
5:15 PM	8	11	7	9	0	0	0	0	0	0	0	0
5:30 PM	9	12	5	6	0	0	0	0	0	0	0	0
5:45 PM	5	7	5	8	0	0	0	0	0	0	0	0
6:00 PM	4	5	4	4	0	0	0	0	0	0	0	0
6:15 PM	5	6	8	12	0	0	0	0	0	0	0	0
AM Total	66	99	106	164	0	0	0	0	4	5	0	0
PM Total	110	154	105	157	0	0	0	0	5	2	1	0
Average Pax per Vehicle	1.50	AM	1.55	PM	1.50							

Low Density Residential Catchment Site Information	
Site Location	Hospital Rd, Buli
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-				Hospital Rd, Buli								
Survey Day/Date:-				Wednesday, 1 June 2022								
Survey Period:-				6am-9am & 3:30pm-6:30pm								
Surveyors Name:-				S Charlton								
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting		Entering	Exiting	Entering	Exiting
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy				
6:00 AM	0	0	5	8	0	0	0	0	0	0	0	0
6:15 AM	0	0	11	13	0	0	0	0	3	1	0	0
6:30 AM	2	2	11	12	0	0	0	0	0	1	0	0
6:45 AM	6	7	18	20	0	0	0	0	0	1	0	0
7:00 AM	12	12	12	12	0	0	0	0	0	0	0	0
7:15 AM	6	6	14	17	0	0	0	0	1	0	0	0
7:30 AM	9	10	27	32	0	0	0	0	0	0	0	0
7:45 AM	11	11	12	18	1	1	1	26	0	2	0	0
8:00 AM	9	10	27	43	0	0	0	0	0	3	0	0
8:15 AM	11	11	33	43	0	0	0	0	1	0	0	0
8:30 AM	15	17	28	40	0	0	0	0	1	0	0	0
8:45 AM	20	21	20	27	0	0	0	0	0	0	0	0
3:30 PM	19	28	14	18	0	0	0	0	1	0	0	0
3:45 PM	14	20	18	26	1	6	0	0	2	1	0	0
4:00 PM	22	25	16	21	0	0	0	0	2	0	0	0
4:15 PM	20	26	15	19	0	0	0	0	0	0	0	0
4:30 PM	31	37	11	17	0	0	0	0	0	1	0	0
4:45 PM	13	15	7	7	0	0	0	0	1	0	0	0
5:00 PM	17	18	10	11	0	0	0	0	2	0	1	0
5:15 PM	29	34	15	17	0	0	0	0	2	0	0	0
5:30 PM	12	13	13	14	0	0	0	0	2	0	1	0
5:45 PM	20	24	9	13	0	0	0	0	0	0	0	0
6:00 PM	16	19	19	22	0	0	0	0	0	0	0	0
6:15 PM	23	28	9	10	0	0	0	0	1	0	0	0
AM Total	101	107	218	285	1	1	1	26	6	8	0	0
PM Total	236	287	156	195	1	6	0	0	13	2	2	0
Average Pax	1.06	AM	1.31	Average Pax per	1.00	AM	26.00					
per Vehicle	1.22	PM	1.25	Vehicle	6.00	PM						

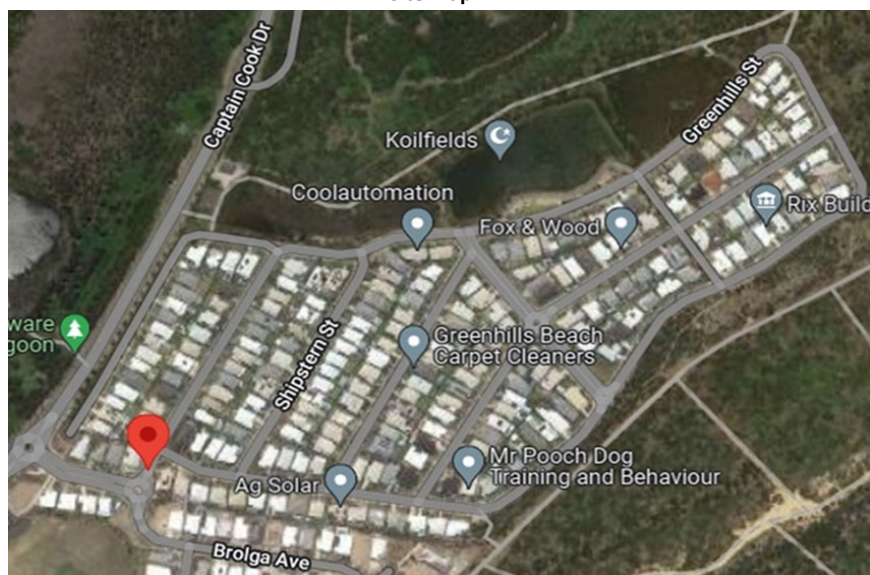



Date		Month												Year												Total												
Month	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1999-01-01	1999																																					
1999-01-02	1999																																					
1999-01-03	1999																																					
1999-01-04	1999																																					
1999-01-05	1999																																					
1999-01-06	1999																																					
1999-01-07	1999																																					
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1999-01-25	1999																																					
1999-01-26	1999																																					
1999-01-27	1999																																					
1999-01-28	1999																																					
1999-01-29	1999																																					
1999-01-30	1999																																					
1999-01-31	1999																																					
1999-02-01	1999																																					
1999-02-02	1999																																					
1999-02-03	1999																																					
1999-02-04	1999																																					
1999-02-05	1999																																					
1999-02-06	1999																																					
1999-02-07	1999																																					
1999-02-08	1999																																					
1999-02-09	1999																																					
1999-02-10	1999																																					
1999-02-11	1999																																					
1999-02-12	1999																																					
1999-02-13	1999																																					
1999-02-14	1999																																					
1999-02-15	1999																																					
1999-02-16	1999																																					
1999-02-17	1999																																					
1999-02-18	1999																																					
1999-02-19	1999																																					
1999-02-20	1999																																					
1999-02-21	1999																																					
1999-02-22	1999																																					
1999-02-23	1999																																					
1999-02-24	1999																																					
1999-02-25	1999																																					
1999-02-26	1999																																					
1999-02-27	1999																																					
1999-02-28	1999																																					
1999-03-01	1999																																					
1999-03-02	1999																																					

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Low Density Residential Catchment Site Information	
Site Location	Wategos St, Greenhills Beach
Number of Completed Dwellings	
Number of Bus Stops	
Weather Conditions	Fine
Local Traffic Congestions/Incidents	
Home Based Businesses in Catchment	
Special Events in Vicinity of Site	
Traffic Surveyor Comments (eg. Local issues?, Roadworks?, Closed Areas?, Disability Access?, etc)	

Site Map



LOW DENSITY RESIDENTIAL TRIP GENERATION SURVEY												
Site Location:-		Wategos St, Greenhills Beach										
Survey Day/Date:-		Tuesday, 14 June 2022										
Survey Period:-		6am-9am & 3:30pm-6:30pm										
Surveyors Name:-		J Li										
Start Time	Cars				Bus				Pedestrians		Cyclists	
	Entering		Exiting		Entering		Exiting					
	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Vehicles	Occupancy	Entering	Exiting	Entering	Exiting
6:00 AM	5	5	8	9	0	0	0	0	2	1	1	1
6:15 AM	1	1	14	15	0	0	0	0	5	0	2	4
6:30 AM	2	2	19	24	0	0	0	0	0	0	0	0
6:45 AM	4	5	17	22	0	0	0	0	0	0	5	6
7:00 AM	13	18	20	26	0	0	0	0	2	4	0	0
7:15 AM	8	11	25	32	0	0	0	0	1	0	3	0
7:30 AM	8	9	32	42	0	0	0	0	0	0	2	1
7:45 AM	8	10	27	46	0	0	0	0	3	2	0	1
8:00 AM	15	19	22	39	0	0	0	0	0	2	1	0
8:15 AM	12	13	41	60	0	0	0	0	3	4	2	2
8:30 AM	7	8	37	57	0	0	0	0	0	10	0	3
8:45 AM	26	31	24	37	0	0	0	0	0	2	1	2
3:30 PM	48	88	16	23	0	0	0	0	7	2	1	3
3:45 PM	32	48	12	17	0	0	0	0	1	1	4	0
4:00 PM	30	42	25	34	0	0	0	0	8	8	0	0
4:15 PM	23	36	19	26	0	0	0	0	0	4	0	1
4:30 PM	26	38	17	23	0	0	0	0	5	0	0	0
4:45 PM	25	39	24	37	0	0	0	0	40	27	0	0
5:00 PM	21	26	15	22	0	0	0	0	32	0	0	0
5:15 PM	35	56	18	24	0	0	0	0	2	3	0	0
5:30 PM	37	47	19	34	0	0	0	0	2	4	0	0
5:45 PM	32	41	15	18	0	0	0	0	0	2	0	0
6:00 PM	30	44	16	23	0	0	0	0	2	1	1	0
6:15 PM	29	43	9	13	0	0	0	0	1	0	0	0
AM Total	109	132	286	409	0	0	0	0	16	25	17	20
PM Total	368	548	205	294	0	0	0	0	100	52	6	4
Average Pax per Vehicle	1.21	AM	1.43	PM	1.43							

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