TRAFFIC IMPACT ASSESSMENT

DUNMORE HOUSE – TEMPORARY USE FUNCTION CENTRE

LOT 1 DP1005679
557 PATERSON ROAD, BOLWARRA HEIGHTS

PREPARED FOR: DUNMORE HOUSE PTY LTD

NOVEMBER 2025

REF: 25/106

TRAFFIC IMPACT ASSESSMENT
DUNMORE HOUSE PTY LTD
TEMPORARY USE OF DUNMORE HOUSE AS FUNCTION CENTRE
LOT 1 DP1005679
557 PATERSON ROAD, BOLWARRA HEIGHTS

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QUALITY ASSURANCE

This document has been prepared, checked, and released in accordance with the Quality Control Standards established by Intersect Traffic Pty Ltd.

Issue	Date	Description	By
A	29/10/25	Draft	JG
B	30/10/25	Edit	JG
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D	20/11/25	Approved	JG
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This document has been authorised by 

Date 24th November 2025

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1. INTRODUCTION

Intersect Traffic Pty Ltd (Intersect Traffic) has been engaged by Dunmore House Pty Ltd to prepare a Traffic Impact Assessment (TIA) for the temporary use of Dunmore House as a function centre up to 52 days within a 12-month period. Dunmore House is located on Lot 1 DP1005679, 557 Paterson Road, Bolwarra Heights. The functions will require the erection of a function marquee, provision of portable amenities, provision of a self-contained catering kitchen and delineation of an on-site temporary car parking area with sufficient capacity to cater for a total of 49 vehicles (including 47 car parking spaces, one (1) accessible car parking space and one (1) mini-bus parking space). Each function will be covered by an individualised Plan of Management as is best practice for running functions of these types and this TIA will be part of the Function Plan of Management. The current site plan for the functions is provided in ***Appendix 1***.

The purpose of this document is to assess the traffic related impacts on the general community of the temporary use of the site for functions, maximise road safety for both vehicular and pedestrian traffic as well as provide for safe traffic and parking movements to, from and within the function and car parking sites.

This review considers the requirements of the following:

- TfNSW's *Guide to Transport Impact Assessment (2024).*
- Maitland Council's DCP 2011;
- Australian Standard *AS2890.1-2004 – Parking Facilities Part 1 – Off street car parking*;
- NSW Government's – *Guide to Traffic and Transport Management at Special Events*;
- Transport for NSW's – *Traffic Control at Work Sites*; and
- Transport for NSW's – *Guide to Signs and Markings*.

This TIA is required to support a development application to Maitland City Council for the temporary use of the site as a function centre up to 52 days in a 12-month period with attendance numbers of up to 140 people. Following the conclusion of a function, the site will be restored to its pre-function condition, as far as is practicable.

2. DEVELOPMENT PROPOSAL

2.1 Site Location

The site is located on the western side of Paterson Road, immediately opposite Dunmore Road. The site is 6.5 km north-east of the Maitland CBD and 5.2 km north-west of Morpeth Village. ***Figure 1*** below shows the site location from a local context. The functions are proposed within the grounds of the existing Dunmore House with temporary parking provided either side of the internal access road. The car parking area is to be accessed from Paterson Road using the existing vehicular access to the site. The functions will held on the lawn areas at the northern and southern end of the house.

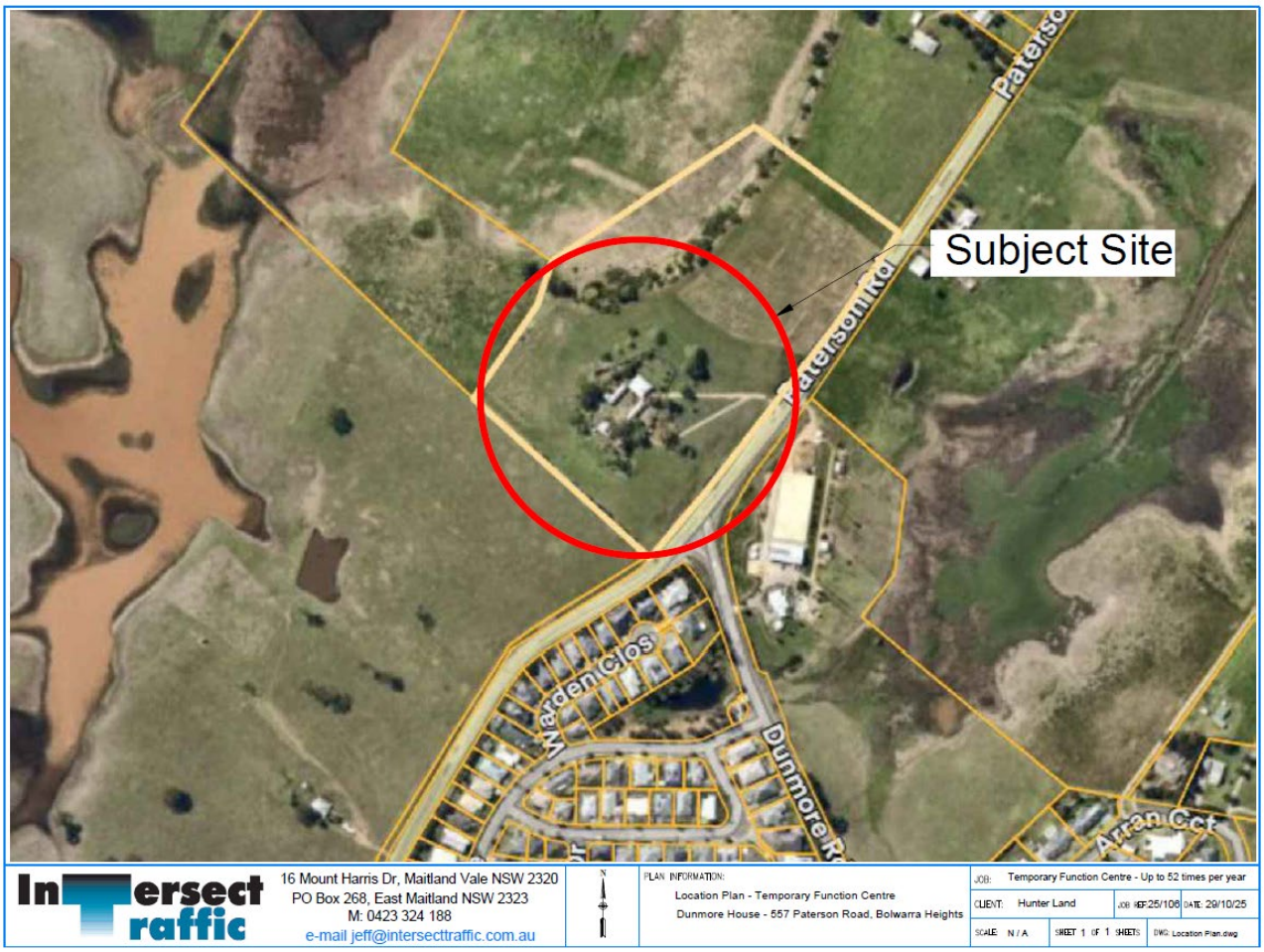


Figure 1 – Site Location

Photograph 1 below shows the existing house and grounds, while ***Photograph 2*** shows the existing vehicular access to the site. ***Photograph 3*** shows the internal access road and temporary parking area.

Photograph 1 – Dunmore House and grounds

Photograph 2 – Existing vehicular access to Dunmore House

Photograph 3 – Internal access driveway and temporary car parking area

2.2 Development Proposal

The proposal is to hold functions at Dunmore House up to 52 times per year as follows:

The proposed use will comprise the following temporary components:

- designation of three (3) areas, one of which will be selected to erect a marquee,
- designation of an area for the positioning of amenities (toilets),
- designation of an area for the parking of a self-contained catering kitchen, and
- designation of a parking area with sufficient capacity to cater for a total of 49 vehicles (including 47 car parking spaces, one (1) accessible car parking space and one (1) mini-bus parking space).

Three (3) areas have been identified on the site plan for the erection of the temporary marquee, as follows:

- Option 1: 20m x 40m, located to the southwest of the existing barn.
- Option 2: 14m x 30m, located centrally to the existing buildings.
- Option 3: 20m x 40m, located to the northeast of the existing dwelling.

The intent of identifying three (3) areas is to permit a customer to choose which location suits their needs, accounting for matters such as: the number of people attending the function; the size/design of the selected marquee; the date/time of the function; anticipated weather conditions; and desired site-specific views. It is noted that only one (1) function will occur at any one time, i.e., there will not be multiple functions held concurrently.

3. TRAFFIC & PARKING

The road most impacted by the functions will be Paterson Road. The first step in this traffic impact assessment is to translate the attendance into the key elements of:

- Parking; and
- Traffic Generation.

Vehicle trips to the functions will be made by guests in mainly in private light vehicles or chartered minibuses. The peak traffic generation will include the arrival of guests, but it is assumed staff arrivals do not occur in the same peak hour as for the arrival of guests. Similarly guest departures will occur in a peak hour before staff departures from the site occurs. Each function, for those utilising private vehicles has the potential for vehicle capacity to comprise couples and pairs of couples while the bus services are likely to cater for between 12 and 20 people. Previous work by Intersect Traffic in the Pokolbin vineyards area has indicated functions like those proposed result in an average vehicle occupancy rate of 3 persons per vehicle and this vehicle occupancy rate has been adopted in this assessment. A robust assessment which looks at the worst-case scenario of 100% of vehicles arriving at the site in the same hour period and leaving the site in the same hour period results in a peak traffic generation rate for the development as calculated below;

Peak traffic generation = 100 % x 140 / 3 = 47 vtph.

3.1 Parking

The provisions for parking proposed include capacity for both:

- Private vehicles; and
- Buses.

3.1.1 Private Vehicles & Pedestrians

The parking area identified on the ***Function Site Plan (Appendix 1)*** has at least 47 spaces though would have capacity to provide additional spaces if required. On-street parking on Paterson Road is unlikely to be an issue in this location due to the size of the site, the availability of overflow car parking areas and the steep walk from Paterson Road to the function marquee.

In assessing traffic generation and car parking with regard to maximum attendance, it is reasonable to accept that arrivals and departures would be:

- Traffic generation as calculated above worst case 47 vtph.
- Stay at the venue will be long term for the full function therefore sufficient parking to cater for all vehicles attending the site will need to be provided i.e. at least 46 cars and 1 minibus. It is noted that under the Maitland DCP (2011) the proposal would fall under the requirements for a restaurant which is 1 space per 6.5m^2 GFA or 1 space per 3 seats whichever is greater. As an outdoor function centre, the GFA rate is not valid so the parking requirement would default to 1 space per 3 seats. With the function capacity capped at 140 spaces this represents a Maitland DCP (2011) parking requirement for 47 spaces. As the proposal is to provide 49 on-site car spaces it can be concluded the proposal is compliant with Maitland City Council's DCP requirement.

The proposed car parking will need to be compliant with AS2890.1-2004 Parking facilities – Off-street car parking and Maitland City Council's DCP.

3.1.2 Bus Parking

A single bus parking bay has been provided in the concept plan for the site, and this will be sufficient for the proposal.

3.2 Traffic Generation

3.2.1 Function Traffic Generation

Based on estimated attendance numbers the likely traffic generation from the site for functions will be 47 vtph arrivals and 47 vtph departures. The majority of arrivals 70 % are likely to have an origin from the south and 30 % from the north along Paterson Road. The resulting hourly trip distribution is therefore likely to be as shown in ***Figure 2*** below.

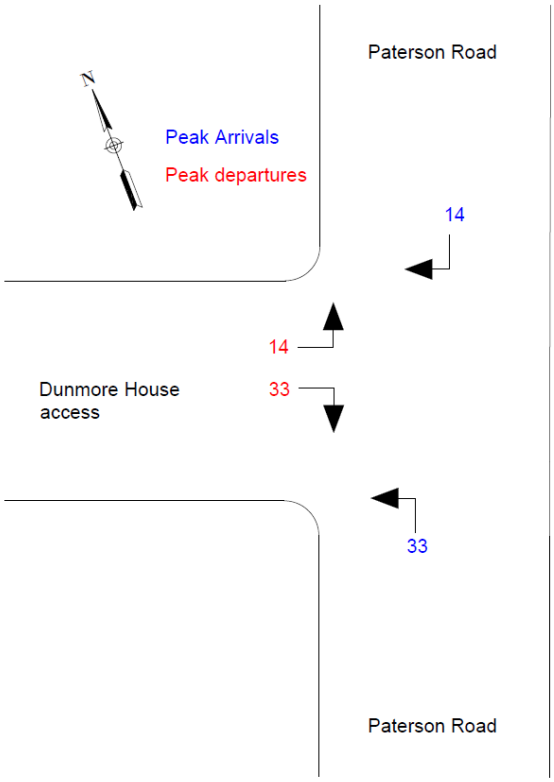


Figure 2 – Function Peak Hour Traffic Generation

3.2.2 Existing Traffic

Intersect Traffic undertook traffic counts during the AM and PM peak hour periods at the Tocal Road / Paterson Road intersection as part of traffic data collection for a development in Bolwarra Heights in 2024. This data provided in ***Appendix 2*** indicated that peak hourly traffic volumes on Paterson Road east of Tocal Road are in the order of 600 vtph. With this traffic including traffic with origin / destinations in the Dalveen Road area, the Largs village area, and Lang Drive area it is likely peak hourly traffic volumes on Paterson Road near Dunmore House would be in the order of up to 300 vtph maximum. As a rural collector road with level terrain the two-way mid-block capacity of Paterson Road would be expected to be in the order of 1,200 vtph. This indicates that Paterson Road currently operates at only 25% capacity during peak periods. This is consistent with observations on site during peak periods.

Therefore, with the functions only increasing two-way mid-block traffic flows by a maximum of 33 vtph on any road leg, if they did happen to coincide with the road network peak periods, which is highly unlikely, there would still be sufficient spare two-way mid-block capacity in Paterson Road to easily cater for the additional function traffic. Therefore, it is reasonable to conclude the proposed function traffic would not adversely impact on the operation and safety of the adjoining road network.

3.2.3 Car Park Access

Traffic volumes on Paterson Road during the functions is likely to be in the order of 300 vtph with traffic using the car park access being in the order of up to 47 vtph. The following table sourced from Austroads *Guide to Traffic Management Part 6 – Intersections, Interchanges and Crossings,* reproduced below in ***Table 3,*** provides the thresholds for uninterrupted flow conditions whereby the Guide states that if traffic volumes are not above these thresholds, then uninterrupted flow conditions can be assumed, and little or no delay will be experienced by motorists at these intersections. No further intersection analysis is required.

Table 3 – Uninterrupted flow condition thresholds at an intersection

Major road type[1]	Major road flow (vph)[2]	Minor road flow (vph)[3]
Two-lane	400	250
	500	200
	650	100
Four-lane	1000	100
	1500	50
	2000	25

Source: - Austroads Guide to Traffic Management – Part 6: Intersections, Interchanges and Crossings (2010).

Noting the traffic volumes are well below these thresholds it is reasonable to conclude that the Dunmore House vehicular access is likely to operate with little if any delay or queuing for motorists during the functions and that the access has suitable capacity to cater for traffic generated by the functions.

The car park access as a combined entry/exit driveways less than 6 metres wide is equivalent to a Category 1 access based on the requirements of AS2890.1-2004 Parking facilities – Part 1 – Off-street car parking which is satisfactory servicing up to 100 car parks accessed off a local collector road. As the site only contains 49 car parks the access is considered suitable for use for the functions.

Sight distance at the existing vehicular access was observed on site to be in the order of 180 metres to the south and over 300 metres to the north which is in excess of both minimum Austroads and Australian Standards requirements for safe intersection sight distance for an 80 km/h speed zoning (171 metres and 111 metres respectively). Therefore, the existing vehicular access is considered suitably safe and satisfactory for use during the functions.

4. TRAFFIC IMPACTS & CONSIDERATIONS

4.1 Queue Lengths / Entry Delay

Entry to the car park will be free therefore no additional delay at the entry will occur. It is considered the entry conditions are suitable to ensure queuing of vehicles does not impact on traffic flows in Paterson Road as uninterrupted flow conditions are expected at the access. No additional signage or traffic control would be required at the access.

4.2 Average Delay

The average delay at the access driveway would be limited to vehicles slowing down to enter the site which may impact on following traffic. With uninterrupted flow conditions it would be expected that this delay would only be 5 to 7 seconds.

4.3 Signposting

The signposting recommendations for traffic management associated with the proposed functions are detailed below.

1. Wayfinding within the site for vehicles and pedestrians' signage and suitable bunting.
2. Prohibiting parking along Paterson Road if needed. As there is ample room within the site to provide on-site car parking this is not expected to be an issue and no temporary signage or bunting should be required.

The internal traffic flow, pedestrian management and parking will be suitably delineated during a function, and it is concluded there is no need for supplementary traffic or parking signposting within the site.

4. CONCLUSION / RECOMMENDATION

This traffic impact assessment has determined that the temporary use of Dunmore House on Lot 1 DP1005679, 557 Paterson Road, Bolwarra Heights will not adversely impact on the adjoining local and state road network and provides sufficient on-site parking such that functions undertaken at the site would do so without impacting on the road safety environment on the adjoining road network.

Therefore, it is recommended Maitland City Council could approve the use of Dunmore House for functions as not only will it not adversely impact on the adjoining local road network, but it would be compliant with Maitland City Council, Austroads and Australian Standard requirements.

JR Garry BE (Civil), Masters of Traffic
Director
Intersect Traffic Pty Ltd

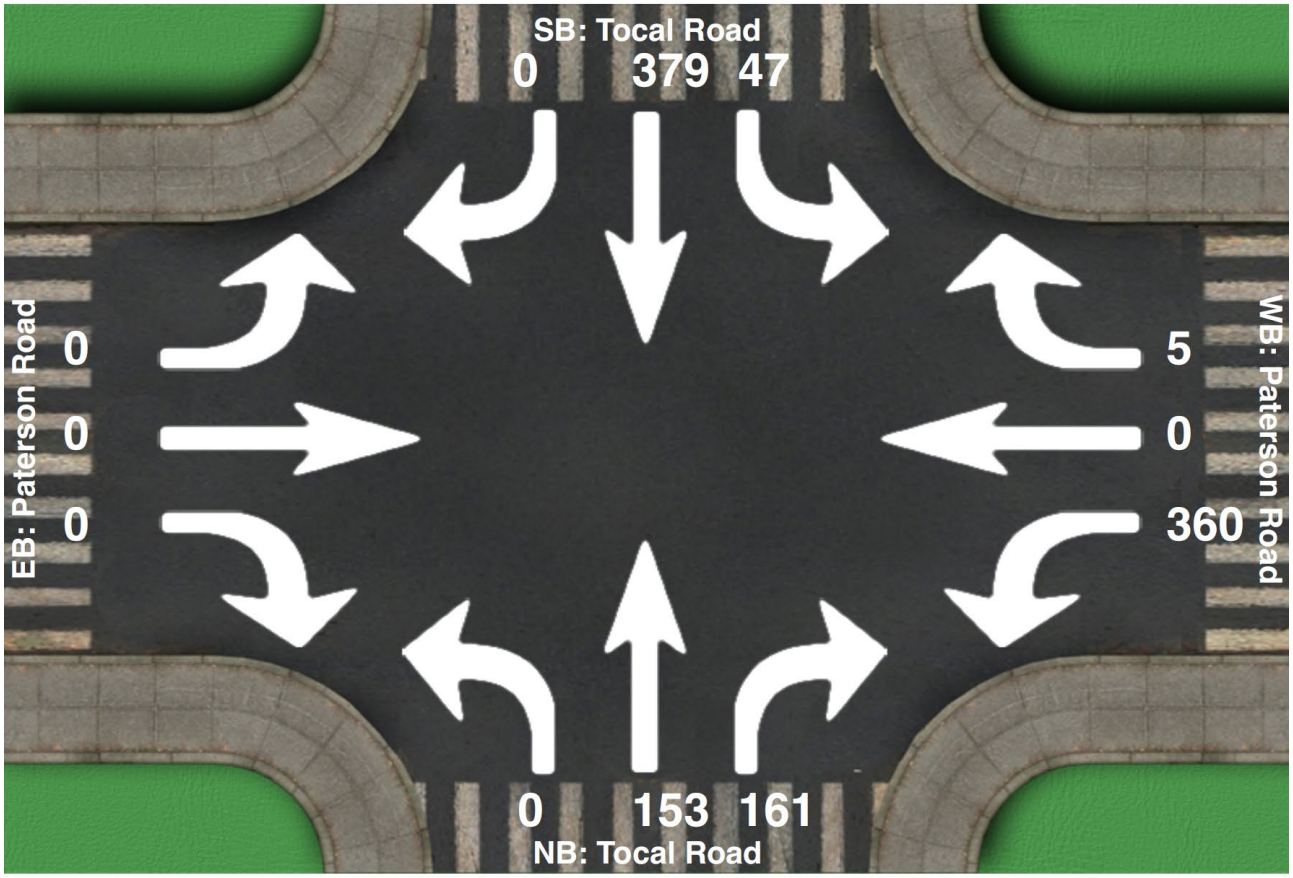
APPENDIX 1
FUNCTION SITE PLAN.


DUNMORE HOUSE
PROPOSED TEMPORARY CAR PARK (BEHIND TREE)
2
VIEW FROM PATERSON RD
DUNMORE HOUSE
PROPOSED TEMPORARY CAR PARK
3
VIEW FROM PATERSON RD
PATERSON ROAD
DRAWING KEY
LOCATION FOR TEMPORARY MARQUEE
LOCATION FOR TEMPORARY PORTABLE AMENITIES
TPA
ROAD VIEWPOINT WITH PHOTO NUMBER
X
NOTES
A EXISTING ARBOUR AND PLANTING TO BE RETAINED
B SELF-CONTAINED CATERING KITCHEN TO BE SET UP WITHIN EXISTING BARN
C ALL PARKING SPACES WILL ACHIEVE MINIMUM DIMENSIONS OF 2.5 x 5.5 M
OPTION 3
OPTION 2
OPTION 1
TPA
1
SITE PLAN
1:1000
DUNMORE HOUSE CONSERVATION : TEMPORARY USE OF SITE AS FUNCTION CENTRE
15638 - A01 - Rev E - 11 November 2025
Confidential. Copyright EJE Architecture. Nominated Architect - Bernard Collins No. 4438 (NSW ARB)
PRELIMINARY CONCEPT PLAN
@ A3
EJE
Integrity
Innovation
Inspiration

APPENDIX 2
TRAFFIC DATA

Intersection Peak Hour

Location: Tocal Road at Paterson Road, Bolwarra
GPS Coordinates: Lat=-32.701588, Lon=151.584118
Date: 2024-06-06
Day of week: Thursday
Weather:
Analyst: Jeff



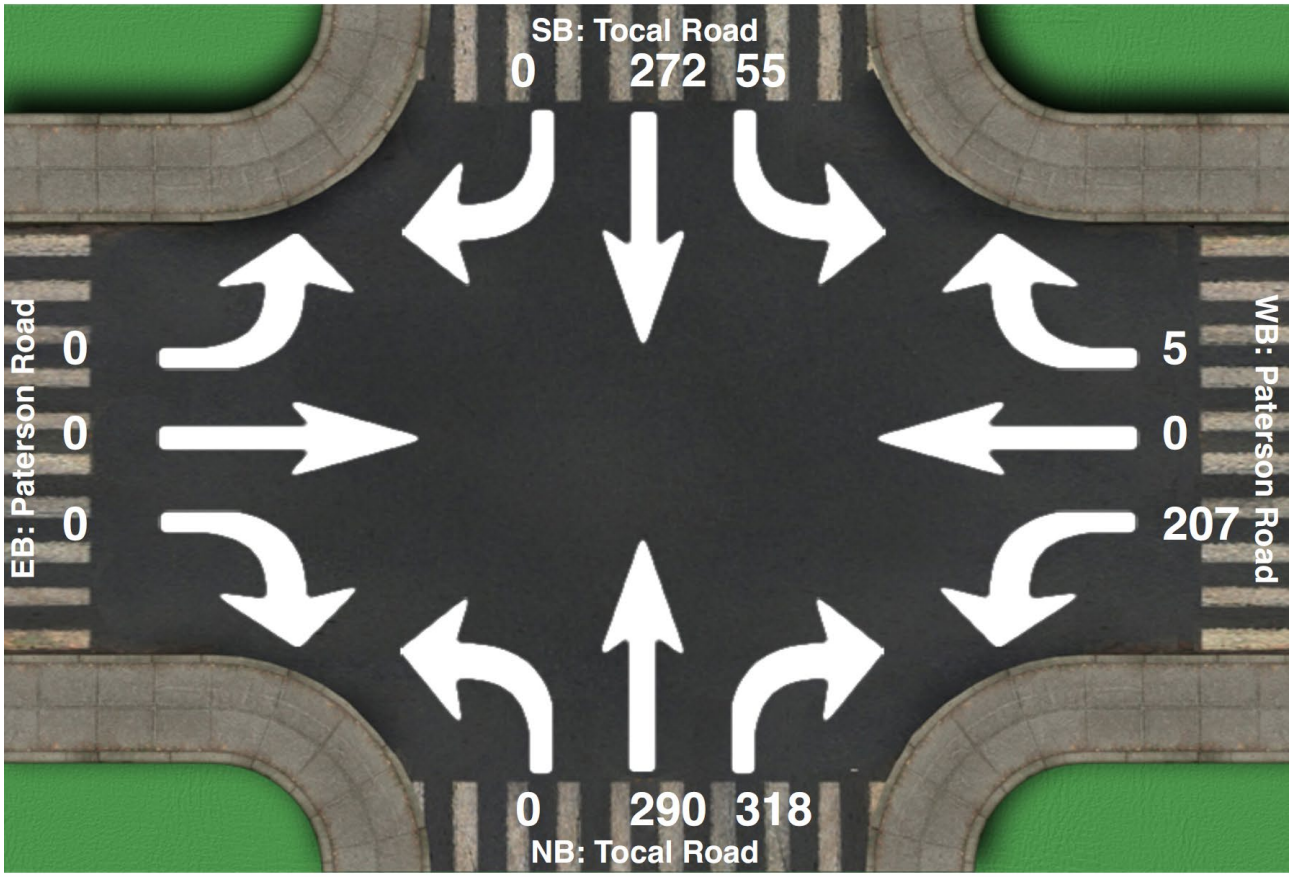
Intersection Peak Hour

08:00 - 09:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	47	379	0	360	0	5	0	153	161	0	0	0	1105
Factor	0.65	0.88	0.00	0.80	0.00	0.62	0.00	0.91	0.71	0.00	0.00	0.00	0.90
Approach Factor	0.85			0.79			0.84			0.00			

Intersection Peak Hour

Location: Tocal Road at Paterson Road, Bolwarra
GPS Coordinates: Lat=-32.701649, Lon=151.584020
Date: 2024-06-06
Day of week: Thursday
Weather:
Analyst: Jeff



Intersection Peak Hour

15:00 - 16:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	55	272	0	207	0	5	0	290	318	0	0	0	1147
Factor	0.62	0.86	0.00	0.92	0.00	0.42	0.00	0.81	0.87	0.00	0.00	0.00	0.90
Approach Factor	0.92			0.90			0.88			0.00			