Proposed Rezoning for Industrial Uses
1 to 4 Old Bathurst Road, Emu Plains

Traffic and Parking Assessment Report

Prepared for: Le Bursicot

June 2021

Report No: PT21024r01_V1

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1. Introduction

This report has been prepared on behalf of Le Bursicot to present findings of a traffic and parking assessment of the proposed rezoning of the site known as 1 to 4 Old Bathurst Road, Emu Plains from a combination of industrial / rural residential to sole industrial uses.

The study has assessed existing traffic conditions, parking demands, access arrangements, future traffic conditions and design compliance.

The remainder of the report is set out as follows:

- Section 2 describes the existing traffic and parking conditions;
- Section 3 summarises the proposed development;
- Section 4 reviews the potential traffic impacts of the proposal;
- Section 5 reviews the design for compliance with relevant standards; and
- Section 6 presents the conclusions

2. Existing Development / Conditions

The following presents a summary of existing site and traffic conditions.

2.1 Site Location

The proposed site includes frontages to both Russell Street in the west and Old Bathurst Road in the south. The existing site is a greenfield site and its location is shown in **Figure 1**.

Figure 1 - Site Location

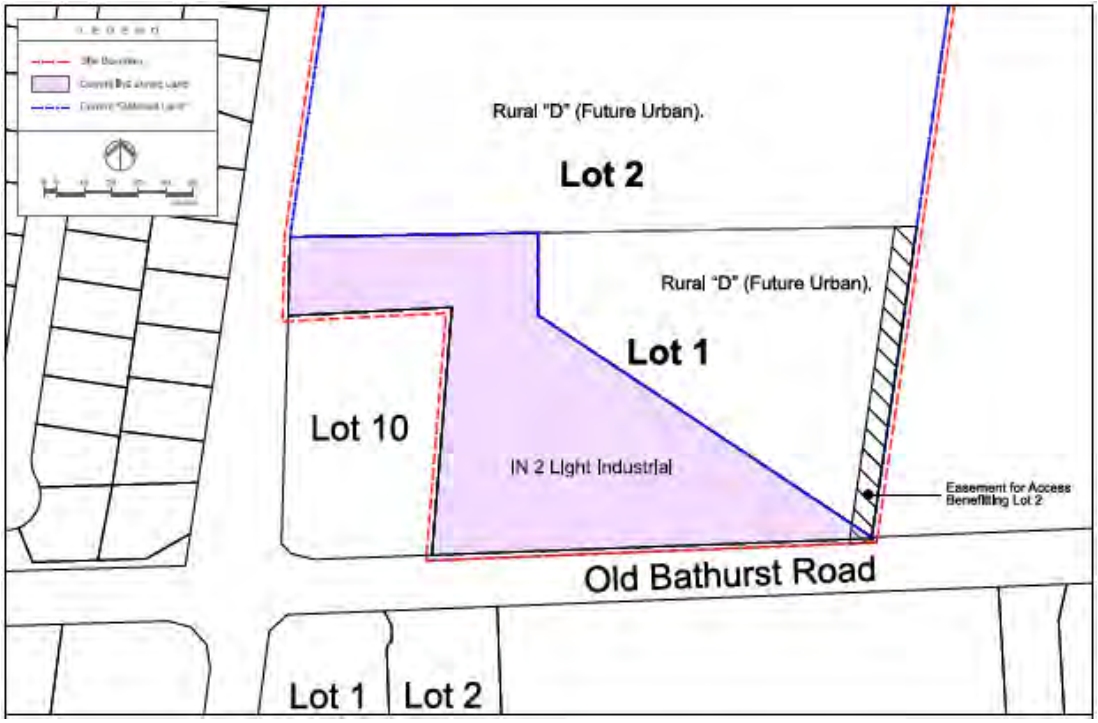
Source: Nearmap

The site surrounds an existing electrical sub station located on the north-east corner of the intersection of Old Bathurst Road / Russell Street.

2.2 Existing Zoning

The currently includes a proportion designated as 'IN2 Light Industrial' and 'Rural D Future Urban' and the arrangements of the existing zoning across the site is shown below in **Figure 2**.

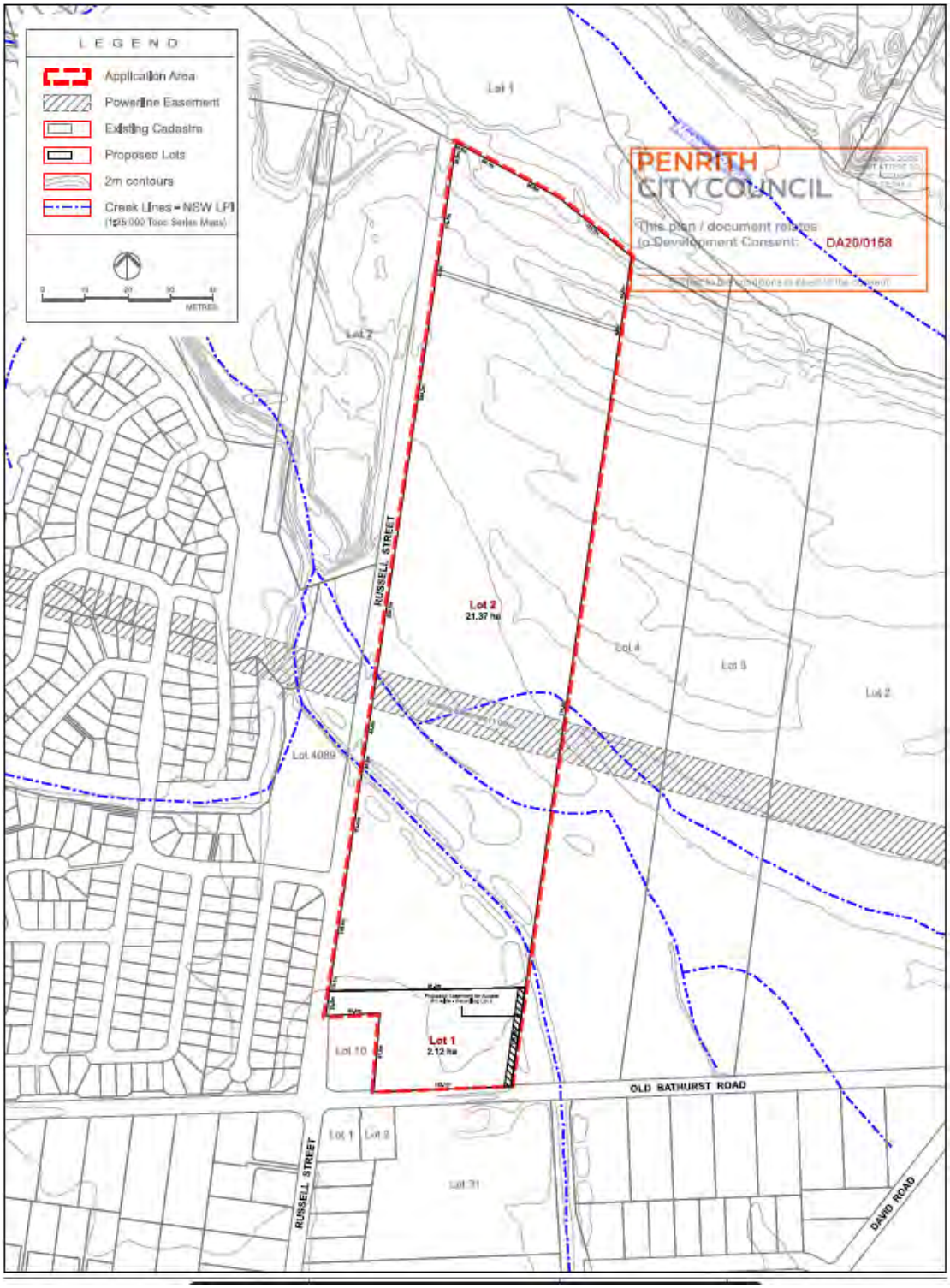
Figure 2 – Existing Site Zoning



2.3 Historical Development Approvals

It is noted that the subject site was included in a previous subdivision development application (DA20/0158) now approved by Penrith City Council to create Lot 1 (light industrial / rural D zoned land) and Lot 2 (rural housing zoned land. The lot arrangements approved by Penrith City Council are shown below in **Figure 3**.

Figure 3 – DA20/0158 Approved Sub Division Arrangements Including Subject Site



The intent of the subdivision was to create an allotment which complied with both the Industrial zoned land minimum lot size and the Rural "Future Urban" zone minimum lot size (being 2ha) to allow future development of the land. However, Lot 1 includes remnant rural residential zoning over a portion of the land which requires a further rezoning application which is the subject of this report.

2.4 Existing Site Traffic Generation

As stated above the existing site is a greenfield site and does not generate any traffic.

2.5 Existing Zoning Potential Traffic Generation

Lot 1 currently includes a combination of mainly IN2 Light Industrial zoning (11,000m^2) with small area zoned as Rural D future urban residential zoning.

On the basis that the site was developed under its current zoning, the potential light industrial proportion of the site would achieve a total of 5,500m^2 gross floor area (based on an assumed FSR of 0.5:1).

Applying the RMS Technical Direction 2013/04a rates for an industrial development (shown below),

Business parks and industrial estates

In 2012 eleven of these two types of sites were surveyed, four within the Sydney urban area, four within the Lower Hunter, one in the Illawarra and one in Dubbo. Summary vehicle trip generation rates were as follows:

Weekday Rates	Sydney Average	Sydney Range	Regional Average	Regional Range
AM peak (1 hour) vehicle trips per 100 m^2 of GFA.	0.52	0.15-1.31	0.70	0.32-1.20
PM peak (1 hour) vehicle trips per 100 m^2 of GFA.	0.56	0.16-1.50	0.78	0.39-1.30
Daily total vehicle trips	4.60	1.89-10.47	7.83	3.78-11.99

the existing zoned site would be expected to generate **29 AM Peak** hour trips two way and **31 PM Peak** hour trips way. The remaining portion of Lot 1 would not be expected to generate any traffic to any great extent given the minimum 2,000m^2 rural housing lot restrictions on such zoned land.

2.6 Classification Criteria

It is usual to classify roads according to a road hierarchy in order to determine their functional role within the road network. Changes to traffic flows on the roads can then be assessed within the context of the road hierarchy. Roads are classified according to the role they fulfil and the volume of traffic they should appropriately carry. The RTA has set down the following guidelines for the functional classification of roads.

- Arterial Road – typically a main road carrying over 15,000 vehicles per day and fulfilling a role as a major inter-regional link (over 1,500 vehicles per hour)
- Sub-arterial Road – defined as secondary inter-regional links, typically carrying volumes between 5,000 and 20,000 vehicles per day (500 to 2,000 vehicles per hour)
- Collector Road – provides a link between local roads and regional roads, typically carrying between 2,000 and 10,000 vehicles per day (250 to 1,000 vehicles per hour). At volumes greater than 5,000 vehicles per day, residential amenity begins to decline noticeably.
- Local Road – provides access to individual allotments, carrying low volumes, typically less than 2,000 vehicles per day (250 vehicles per hour).

2.7 Existing Road Network

Old Bathurst Road – is a Regional Road as defined Transport for NSW Schedule of Classified Roads and Unclassified Regional Roads. The road links the Great Western Highway in the east (and also providing a location to cross the Hawkesbury River) and Blaxland in the west providing one of the few links to the Blue Mountains. The intersection of Old Bathurst Road / Russell Street is controlled by a single lane roundabout. The speed limit in Old Bathurst Road is 50km/hr to a point some 100m east of the roundabout where it is 70km/hr. The road includes kerb and gutter along the southern side for the full frontage of the subject site. However, on the northern side kerb and gutter is only present for a distance of 100m. Across the frontage of the site the road includes a carriageway width of approximately 11.0m with a single travel lane in each direction and formed shoulders. Separate right and left turn bays are provided to the existing McDonalds Restaurant / Service Station on the south-eastern corner of the intersection of Old Bathurst Road / Russell Street.

Russell Street – north of Old Bathurst Road is a local street providing access to the suburb of Emu Heights. South of Old Bathurst Road Russell Street performs more like a Collector Road (Regional Road) as it provides direct access under the Western Railway Line and to the M4 Motorway via its own grade separated interchange. Across the site frontage Russell Street includes a carriageway width of approximately 11.0m, a single travel lane in each direction with unrestricted parallel parking on both sides of the street and a posted speed limit of 50km/hr.

2.8 Existing Traffic Flows

To gauge existing traffic flows on the surrounding road network an intersection count was undertaken on Wednesday 28th April 2021 at the intersection of Old Bathurst Road / Russell Street between the hours of 6:30am – 9:30am and 3:30pm – 6:30pm to capture both the expected peak periods of an industrial use and road network peak. Copies of the intersection count can be found in **Appendix A** of this report. The peak flows by direction in each street at each intersection are summarised below.

Of note, the morning peak demands occurred between **7:45am – 8:45am** and the afternoon peak period occurred between **4:30pm – 5:30pm**.

Table 1 – Existing Weekday Peak Period Volumes in vicinity of site (veh/hr)

		Weekday AM		Weekday PM	
Road	**Location**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
Old Bathurst Road	East of Russell Street	1,066	382	463	914
	West of Russell Street	848	360	496	910
Russell Street	North of Old Bathurst Road	64	207	203	127
	South of Old Bathurst Road	513	460	522	483

From **Table 1** it can be seen that existing flows on surrounding roads are in generally in line with their classification.

2.9 Mid-Block Capacity Assessment

On the matter of mid-block capacity of roads surveyed versus demands, the following mid block capacities are typical by road type.

Table 2 – Austroads 2020 Lane Mid Block Capacities

Type of lane	One-way mid-block capacity (pc/h)
Median or inner lane	
Divided road	1000
Undivided road	900
Middle lane (of a 3 lane carriageway)	
Divided road	900
Undivided road	1000
Kerb lane	
Adjacent to parking lane	900
Occasional parked vehicles	600
Clearway conditions	900

Source: Austroads (2020)

The following is also noted from Austroads in regards to assumed mid block capacity variations to the above table:

Peak-period mid-block traffic volumes may increase to 1200 to 1400 pc/h/ln on any approach road when the following conditions exist or can be implemented:

- *adequate flaring at major upstream intersections*
- *uninterrupted flow from a wider carriageway upstream of an intersection approach and flowing at capacity*
- *control or absence of crossing or entering traffic at minor intersections by major road priority controls*
- *control or absence of parking*
- *control or absence of right turns by banning turning at difficult intersections*
- *high-volume flows of traffic from upstream intersections during more than one phase of a signal cycle*
- *good co-ordination of traffic signals along the route*

Thus, as Old Bathurst Road does not include any formal parking with little to no side friction from side accesses, the adoption of 1,200 vehicles pc/h/ln is appropriate. The following existing volume capacity ratio by direction for Old Bathurst Road.

Table 3 – Volume / Capacity Analysis of Old Bathurst Road

Road	Mid Block Capacity	AM Peak Hour One Way Flow	AM Peak V/C	PM Peak Hour One Way Flow	PM Peak V/C
Old Bathurst Road – Eastbound	1,200	1,066	0.89	463	0.39
Old Bathurst Road – Westbound	1,200	382	0.32	914	0.76

From **Table 3** it is noted the existing AM / PM peak hour flows by direction on Old Bathurst Road are below the expected mid block lane capacity in each direction.

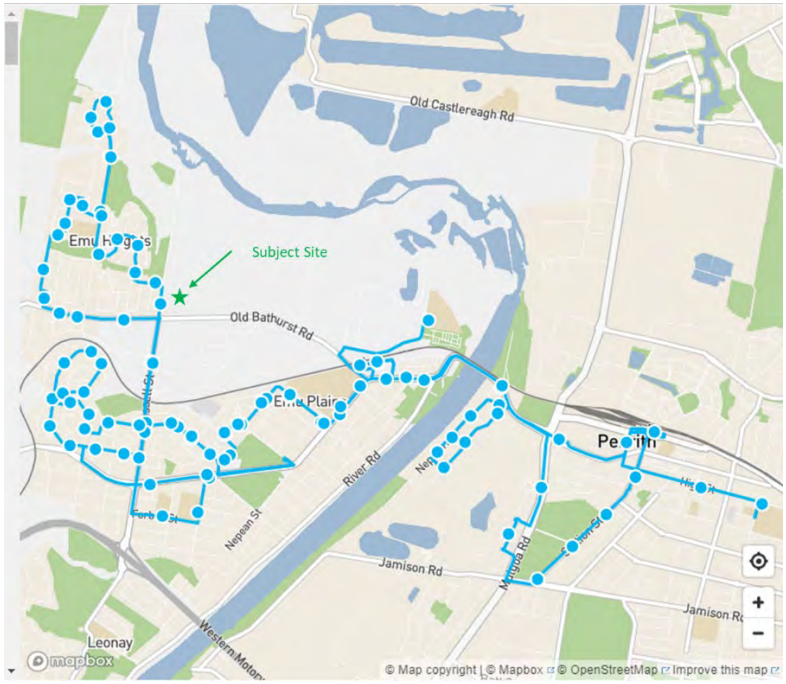
2.10 Public Transport - Buses

The Russell Street frontage of the subject site is located directly adjacent to an existing southbound bus stop in Russell Street which is part of the loop bus service serving Emu Heights. Further, approximately 400m walking distance (centroid of Old Bathurst Road frontage) from an existing westbound bus stop in Old Bathurst Road west of Russell Street. The locations of these stops are shown below.

Figure 4 – Existing Bus Stops Near Site

These stops within a convenient walking distance to the subject site provide a direct access to the Route 688 bus services which provides a loop service between Penrith and Emu Plains via Emu Heights. The route of travel of the 688 service is shown below in **Figure 5**.

Figure 5 – Route 688 Bus Service Route of Travel



The Route 688 service provides seven (7) services during the AM period (between 5:30am – 9:00am) and seven (7) services in the PM period (4:00pm – 7:00pm)

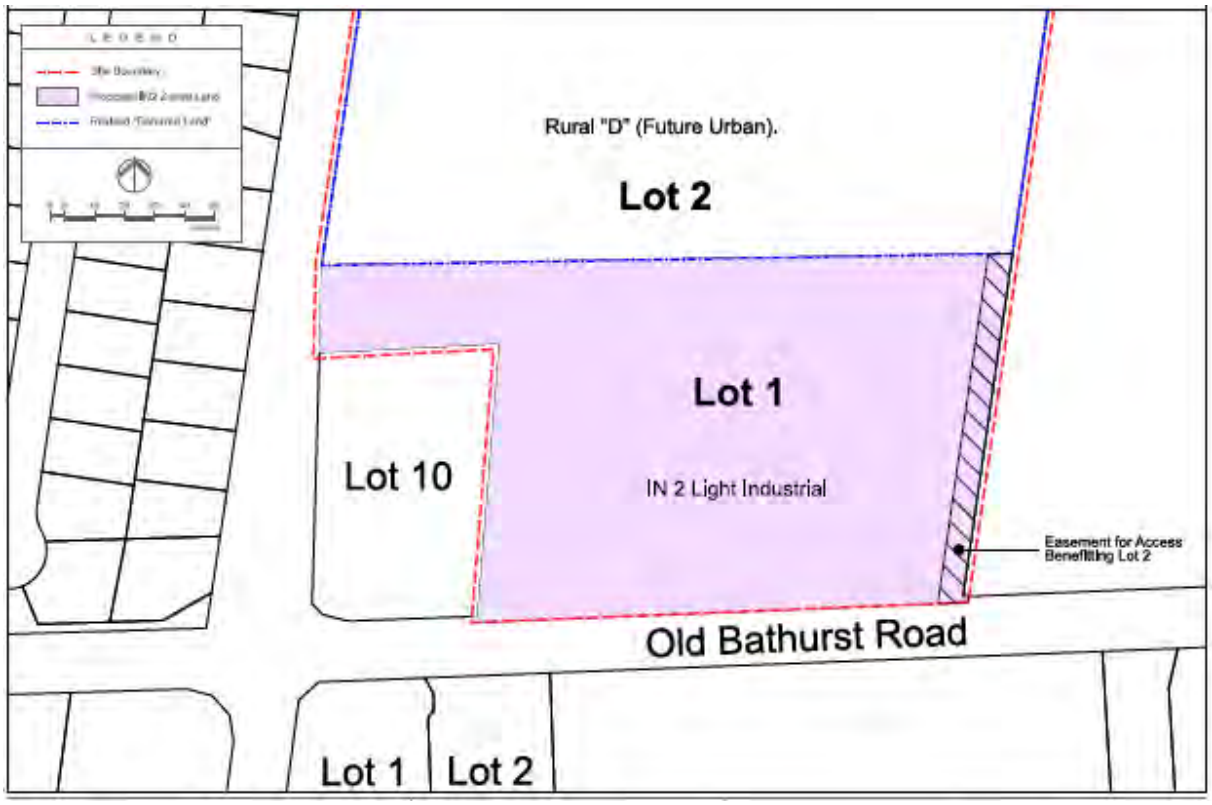
3. The Proposed Development

The key components of the proposed development are summarised below

- Rezoning of the existing portion of land from 'Rural D Future Urban' to 'IN2 Light Industrial' across the site as a whole.

The resulting zoning across the subject site is shown below in **Figure 6**.

Figure 6 – Resultant Site Zoning



For the purpose of assessing the traffic impacts of this rezoning proposal, (as shown in the preliminary arrangement plans shown in **Appendix B** of this report), a potential yield of 10,400m² of warehouse space and 1,540m² of ancillary office space (total 11,940m²) has been adopted.

4. Potential Traffic Impacts

4.1 Introduction

The following presents an assessment of the potential traffic impacts of the proposal using the Roads and Traffic Authority Guide to Traffic Generating Developments standard approach.

4.2 Development Traffic Generation

Applying the Transport for NSW Technical Direction TDT2013/04a rate to the potential total GFA industrial development yield of 11,940m2, the total site generation of Lot 1 would equate to **62 AM Peak** trips two way and **67 PM Peak** trips two way.

This in turn would equate to a net increase of **33 AM Peak trips** and **36 PM peak trips** over and above the traffic generation of Lot 1 under its current zoning.

4.3 Trip Distribution

As stated above Old Bathurst Road would provide the main access to the site and thus the distribution of trips has adopted the same AM / PM peak hour splits of eastbound and westbound traffic in the road to gauge potential impacts on mid-block capacities. The adopted distribution of generated trips is shown in **Figure 7**.

Figure 7 – Adopted Trip Distribution

A 50/50 split of AM and PM peak trips for inbound and outbound has been adopted being an industrial use type of development. The resulting additional trips on Old Bathurst Road is shown in **Figure 8**.

Figure 8 – Resultant Distribution of Trips by Approach Road

4.4 Future Mid-Block Capacity of Old Bathurst Road

The additional traffic generated by the proposal has been added to the surrounding road network in accordance with the adopted distribution of trips presented above. The resulting future mid-block capacity ratios for Old Bathurst Road is presented below in **Table 4**.

Table 4 – Existing vs Future Volume / Capacity Analysis of Old Bathurst Road

Road	Mid Block Capacity	AM Peak Hour Two Way Flow	AM Peak V/C	PM Peak Hour Two Way Flow	PM Peak V/C
Existing					
Old Bathurst Road – Eastbound	1,200	1,066	0.89	463	0.39
Old Bathurst Road – Westbound	1,200	382	0.32	914	0.76
Future					
Old Bathurst Road – Eastbound	1,200	1,097	0.91	497	0.41
Old Bathurst Road – Westbound	1,200	413	0.34	948	0.79

From **Table 4** it is noted that following full development of the rezoned site the future traffic flows in Old Bathurst Road would not result in the mid block capacities being exceeded in either direction during the AM and PM peak hour periods.

Overall, in the context of existing traffic volumes in Old Bathurst Road the total net traffic generation of the rezoning proposal to convert a portion of the site from residential to industrial uses would be low and is not expected to have a marked impact on existing traffic conditions in Old Bathurst Road.

The traffic impacts of the proposed rezoning are considered acceptable.

5. Parking and Access Review

5.1 Council DCP Parking Provision

It is expected that future development applications of each component of the development would provide parking in accordance with the requirements of Penrith City Councils DCP.

6. Conclusions

This report has reviewed the potential traffic impacts of the proposed rezoning of a portion of the site known as Lot 1 1-4 Old Bathurst Road, Emu Plains to provide light industrial zoning across the site as a whole. The findings of this assessment are presented below:

1. The potential traffic generation of the development would be very low in the context of existing traffic demands on the immediate surrounding road network.
2. The future traffic flows in Old Bathurst Road would remain below the mid-block lane capacity in either direction in both the AM and PM peak hour periods.
3. The proposed parking provision of the proposal is expected to comply with the requirements of Penrith City Council's DCP.

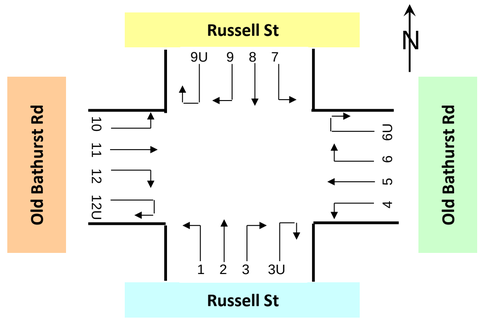
Overall the traffic impacts of the proposal are considered minimal.

7. Appendix A – Intersection Count

Job No. : AUNSW775
Client : The Trustee for Positive Traffic Trust
Suburb : Old Bathurst Road
Location : 1. Old Bathurst Rd / Russell St

Day/Date : Wed, 28th April 2021
Weather : Fine
Description : Classified Intersection Count
: 15 mins Data

Classifications	Class 1	Class 2
	Lights	Heavies



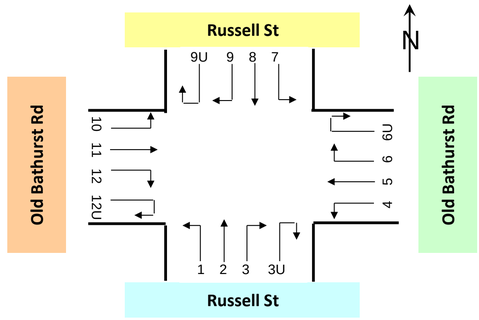
MATRIX Traffic and Transport Data

Approach	Russell St												Old Bathurst Rd											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 6:45	19	1	**20**	1	0	**1**	70	5	**75**	3	1	**4**	17	5	**22**	39	4	**43**	5	1	**6**	2	0	**2**
6:45 to 7:00	20	3	**23**	5	0	**5**	70	3	**73**	3	1	**4**	24	12	**36**	33	1	**34**	2	0	**2**	2	0	**2**
7:00 to 7:15	20	1	**21**	9	0	**9**	44	9	**53**	2	1	**3**	26	6	**32**	31	0	**31**	2	0	**2**	1	0	**1**
7:15 to 7:30	19	4	**23**	5	0	**5**	46	5	**51**	2	0	**2**	25	8	**33**	35	1	**36**	4	0	**4**	1	0	**1**
7:30 to 7:45	21	0	**21**	7	1	**8**	66	11	**77**	3	0	**3**	14	2	**16**	45	1	**46**	7	0	**7**	2	1	**3**
7:45 to 8:00	18	2	**20**	4	0	**4**	78	3	**81**	4	1	**5**	22	2	**24**	50	1	**51**	4	0	**4**	7	0	**7**
8:00 to 8:15	20	1	**21**	7	0	**7**	68	7	**75**	1	0	**1**	22	5	**27**	47	2	**49**	3	0	**3**	8	0	**8**
8:15 to 8:30	33	1	**34**	10	0	**10**	90	7	**97**	10	0	**10**	23	4	**27**	63	1	**64**	8	0	**8**	6	1	**7**
8:30 to 8:45	43	3	**46**	14	0	**14**	77	9	**86**	2	0	**2**	30	2	**32**	57	2	**59**	11	0	**11**	1	0	**1**
8:45 to 9:00	27	3	**30**	8	0	**8**	45	9	**54**	1	0	**1**	29	11	**40**	60	4	**64**	8	0	**8**	1	0	**1**
9:00 to 9:15	30	4	**34**	14	0	**14**	32	11	**43**	4	1	**5**	29	7	**36**	40	1	**41**	3	0	**3**	1	0	**1**
9:15 to 9:30	43	3	**46**	6	0	**6**	33	5	**38**	3	1	**4**	23	11	**34**	45	1	**46**	5	0	**5**	1	0	**1**
AM Totals	**313**	**26**	**339**	**90**	**1**	**91**	**719**	**84**	**803**	**38**	**6**	**44**	**284**	**75**	**359**	**545**	**19**	**564**	**62**	**1**	**63**	**33**	**2**	**35**
15:30 to 15:45	52	1	**53**	24	0	**24**	32	7	**39**	9	0	**9**	91	9	**100**	124	1	**125**	10	1	**11**	4	0	**4**
15:45 to 16:00	52	5	**57**	21	2	**23**	26	13	**39**	10	1	**11**	40	4	**44**	134	1	**135**	18	1	**19**	2	0	**2**
16:00 to 16:15	51	2	**53**	27	0	**27**	37	6	**43**	6	1	**7**	52	5	**57**	147	1	**148**	18	0	**18**	3	1	**4**
16:15 to 16:30	52	6	**58**	26	0	**26**	34	8	**42**	7	0	**7**	34	7	**41**	158	2	**160**	28	1	**29**	0	0	**0**
16:30 to 16:45	59	6	**65**	16	2	**18**	38	10	**48**	6	0	**6**	45	5	**50**	160	0	**160**	24	0	**24**	2	0	**2**
16:45 to 17:00	55	1	**56**	33	1	**34**	32	6	**38**	4	0	**4**	32	3	**35**	152	1	**153**	21	0	**21**	1	0	**1**
17:00 to 17:15	53	1	**54**	26	1	**27**	26	4	**30**	5	0	**5**	49	3	**52**	160	2	**162**	28	1	**29**	1	0	**1**
17:15 to 17:30	78	1	**79**	24	1	**25**	22	3	**25**	8	0	**8**	28	1	**29**	167	0	**167**	23	0	**23**	5	0	**5**
17:30 to 17:45	57	0	**57**	35	0	**35**	19	2	**21**	4	0	**4**	37	3	**40**	159	1	**160**	27	0	**27**	2	0	**2**
17:45 to 18:00	53	1	**54**	28	1	**29**	23	3	**26**	4	0	**4**	18	3	**21**	144	0	**144**	27	0	**27**	3	0	**3**
18:00 to 18:15	68	0	**68**	27	0	**27**	23	1	**24**	5	0	**5**	26	0	**26**	131	0	**131**	18	0	**18**	0	0	**0**
18:15 to 18:30	70	2	**72**	16	0	**16**	19	5	**24**	3	0	**3**	16	2	**18**	107	0	**107**	16	0	**16**	2	0	**2**
PM Totals	**700**	**26**	**726**	**303**	**8**	**311**	**331**	**68**	**399**	**71**	**2**	**73**	**468**	**45**	**513**	**1,743**	**9**	**1,752**	**258**	**4**	**262**	**25**	**1**	**26**

Approach	Russell St												Old Bathurst Rd											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 6:45	11	0	**11**	14	0	**14**	2	0	**2**	0	0	**0**	0	1	**1**	96	0	**96**	37	1	**38**	0	0	**0**
6:45 to 7:00	12	2	**14**	15	1	**16**	4	1	**5**	0	0	**0**	1	0	**1**	111	1	**112**	59	3	**62**	0	0	**0**
7:00 to 7:15	11	0	**11**	16	0	**16**	4	0	**4**	0	1	**1**	0	0	**0**	114	2	**116**	55	5	**60**	0	1	**1**
7:15 to 7:30	20	0	**20**	13	4	**17**	4	1	**5**	0	0	**0**	0	0	**0**	165	4	**169**	79	3	**82**	0	0	**0**
7:30 to 7:45	32	1	**33**	23	1	**24**	5	0	**5**	0	0	**0**	0	0	**0**	162	2	**164**	49	0	**49**	0	0	**0**
7:45 to 8:00	18	0	**18**	25	3	**28**	3	0	**3**	0	0	**0**	0	0	**0**	186	2	**188**	39	2	**41**	0	0	**0**
8:00 to 8:15	23	0	**23**	16	2	**18**	2	0	**2**	0	0	**0**	2	0	**2**	169	0	**169**	54	0	**54**	0	0	**0**
8:15 to 8:30	23	0	**23**	36	0	**36**	10	0	**10**	1	0	**1**	0	0	**0**	125	2	**127**	56	0	**56**	0	0	**0**
8:30 to 8:45	24	0	**24**	19	1	**20**	1	0	**1**	0	0	**0**	0	0	**0**	130	2	**132**	79	0	**79**	0	0	**0**
8:45 to 9:00	16	1	**17**	16	2	**18**	2	1	**3**	0	0	**0**	0	0	**0**	118	1	**119**	74	4	**78**	1	0	**1**
9:00 to 9:15	15	0	**15**	11	0	**11**	1	0	**1**	0	0	**0**	2	0	**2**	110	1	**111**	56	2	**58**	2	0	**2**
9:15 to 9:30	13	0	**13**	14	0	**14**	3	1	**4**	0	0	**0**	1	0	**1**	97	0	**97**	53	1	**54**	1	0	**1**
AM Totals	**218**	**4**	**222**	**218**	**14**	**232**	**41**	**4**	**45**	**1**	**1**	**2**	**6**	**1**	**7**	**1,583**	**17**	**1,600**	**690**	**21**	**711**	**4**	**1**	**5**
15:30 to 15:45	14	1	**15**	6	1	**7**	1	1	**2**	0	0	**0**	4	0	**4**	82	0	**82**	51	5	**56**	0	0	**0**
15:45 to 16:00	11	0	**11**	12	0	**12**	1	2	**3**	0	0	**0**	1	0	**1**	65	0	**65**	48	3	**51**	0	0	**0**
16:00 to 16:15	16	0	**16**	19	0	**19**	3	0	**3**	0	0	**0**	1	0	**1**	69	0	**69**	48	1	**49**	2	0	**2**
16:15 to 16:30	13	1	**14**	11	0	**11**	3	1	**4**	0	0	**0**	0	0	**0**	63	0	**63**	35	0	**35**	0	0	**0**
16:30 to 16:45	14	0	**14**	11	1	**12**	1	1	**2**	0	0	**0**	0	0	**0**	74	2	**76**	50	0	**50**	1	0	**1**
16:45 to 17:00	19	0	**19**	11	2	**13**	1	0	**1**	0	0	**0**	1	0	**1**	59	0	**59**	56	0	**56**	3	0	**3**
17:00 to 17:15	16	0	**16**	15	2	**17**	2	0	**2**	0	0	**0**	0	0	**0**	63	1	**64**	63	2	**65**	0	0	**0**
17:15 to 17:30	9	0	**9**	18	1	**19**	3	0	**3**	0	0	**0**	1	0	**1**	56	0	**56**	60	2	**62**	2	0	**2**
17:30 to 17:45	9	0	**9**	8	0	**8**	4	0	**4**	1	0	**1**	2	0	**2**	56	0	**56**	35	0	**35**	0	0	**0**
17:45 to 18:00	7	0	**7**	15	1	**16**	6	0	**6**	0	0	**0**	0	0	**0**	61	0	**61**	52	0	**52**	1	0	**1**
18:00 to 18:15	9	0	**9**	10	1	**11**	2	0	**2**	0	0	**0**	6	0	**6**	44	0	**44**	48	1	**49**	1	0	**1**
18:15 to 18:30	13	0	**13**	16	1	**17**	0	0	**0**	0	0	**0**	4	0	**4**	66	0	**66**	42	0	**42**	0	0	**0**
PM Totals	**150**	**2**	**152**	**152**	**10**	**162**	**27**	**5**	**32**	**1**	**0**	**1**	**20**	**0**	**20**	**758**	**3**	**761**	**588**	**14**	**602**	**10**	**0**	**10**

Job No. : AUNSW775
Client : The Trustee for Positive Traffic Trust
Suburb : Old Bathurst Road
Location : 1. Old Bathurst Rd / Russell St

Day/Date : Wed, 28th April 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



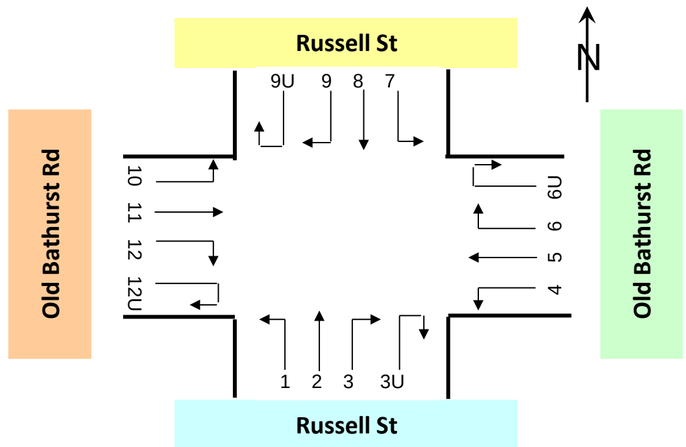
MATRIX Traffic and Transport Data

Approach	Russell St												Old Bathurst Rd											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30	78	9	**87**	20	0	**20**	230	22	**252**	10	3	**13**	92	31	**123**	138	6	**144**	13	1	**14**	6	0	**6**
6:45 to 7:45	80	8	**88**	26	1	**27**	226	28	**254**	10	2	**12**	89	28	**117**	144	3	**147**	15	0	**15**	6	1	**7**
7:00 to 8:00	78	7	**85**	25	1	**26**	234	28	**262**	11	2	**13**	87	18	**105**	161	3	**164**	17	0	**17**	11	1	**12**
7:15 to 8:15	78	7	**85**	23	1	**24**	258	26	**284**	10	1	**11**	83	17	**100**	177	5	**182**	18	0	**18**	18	1	**19**
7:30 to 8:30	92	4	**96**	28	1	**29**	302	28	**330**	18	1	**19**	81	13	**94**	205	5	**210**	22	0	**22**	23	2	**25**
7:45 to 8:45	114	7	**121**	35	0	**35**	313	26	**339**	17	1	**18**	97	13	**110**	217	6	**223**	26	0	**26**	22	1	**23**
8:00 to 9:00	123	8	**131**	39	0	**39**	280	32	**312**	14	0	**14**	104	22	**126**	227	9	**236**	30	0	**30**	16	1	**17**
8:15 to 9:15	133	11	**144**	46	0	**46**	244	36	**280**	17	1	**18**	111	24	**135**	220	8	**228**	30	0	**30**	9	1	**10**
8:30 to 9:30	143	13	**156**	42	0	**42**	187	34	**221**	10	2	**12**	111	31	**142**	202	8	**210**	27	0	**27**	4	0	**4**
AM Totals	**313**	**26**	**339**	**90**	**1**	**91**	**719**	**84**	**803**	**38**	**6**	**44**	**284**	**75**	**359**	**545**	**19**	**564**	**62**	**1**	**63**	**33**	**2**	**35**
15:30 to 16:30	207	14	**221**	98	2	**100**	129	34	**163**	32	2	**34**	217	25	**242**	563	5	**568**	74	3	**77**	9	1	**10**
15:45 to 16:45	214	19	**233**	90	4	**94**	135	37	**172**	29	2	**31**	171	21	**192**	599	4	**603**	88	2	**90**	7	1	**8**
16:00 to 17:00	217	15	**232**	102	3	**105**	141	30	**171**	23	1	**24**	163	20	**183**	617	4	**621**	91	1	**92**	6	1	**7**
16:15 to 17:15	219	14	**233**	101	4	**105**	130	28	**158**	22	0	**22**	160	18	**178**	630	5	**635**	101	2	**103**	4	0	**4**
16:30 to 17:30	245	9	**254**	99	5	**104**	118	23	**141**	23	0	**23**	154	12	**166**	639	3	**642**	96	1	**97**	9	0	**9**
16:45 to 17:45	243	3	**246**	118	3	**121**	99	15	**114**	21	0	**21**	146	10	**156**	638	4	**642**	99	1	**100**	9	0	**9**
17:00 to 18:00	241	3	**244**	113	3	**116**	90	12	**102**	21	0	**21**	132	10	**142**	630	3	**633**	105	1	**106**	11	0	**11**
17:15 to 18:15	256	2	**258**	114	2	**116**	87	9	**96**	21	0	**21**	109	7	**116**	601	1	**602**	95	0	**95**	10	0	**10**
17:30 to 18:30	248	3	**251**	106	1	**107**	84	11	**95**	16	0	**16**	97	8	**105**	541	1	**542**	88	0	**88**	7	0	**7**
PM Totals	**700**	**26**	**726**	**303**	**8**	**311**	**331**	**68**	**399**	**71**	**2**	**73**	**468**	**45**	**513**	**1,743**	**9**	**1,752**	**258**	**4**	**262**	**25**	**1**	**26**

Approach	Russell St												Old Bathurst Rd											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30	54	2	**56**	58	5	**63**	14	2	**16**	0	1	**1**	1	1	**2**	486	7	**493**	230	12	**242**	0	1	**1**
6:45 to 7:45	75	3	**78**	67	6	**73**	17	2	**19**	0	1	**1**	1	0	**1**	552	9	**561**	242	11	**253**	0	1	**1**
7:00 to 8:00	81	1	**82**	77	8	**85**	16	1	**17**	0	1	**1**	0	0	**0**	627	10	**637**	222	10	**232**	0	1	**1**
7:15 to 8:15	93	1	**94**	77	10	**87**	14	1	**15**	0	0	**0**	2	0	**2**	682	8	**690**	221	5	**226**	0	0	**0**
7:30 to 8:30	96	1	**97**	100	6	**106**	20	0	**20**	1	0	**1**	2	0	**2**	642	6	**648**	198	2	**200**	0	0	**0**
7:45 to 8:45	88	0	**88**	96	6	**102**	16	0	**16**	1	0	**1**	2	0	**2**	610	6	**616**	228	2	**230**	0	0	**0**
8:00 to 9:00	86	1	**87**	87	5	**92**	15	1	**16**	1	0	**1**	2	0	**2**	542	5	**547**	263	4	**267**	1	0	**1**
8:15 to 9:15	78	1	**79**	82	3	**85**	14	1	**15**	1	0	**1**	2	0	**2**	483	6	**489**	265	6	**271**	3	0	**3**
8:30 to 9:30	68	1	**69**	60	3	**63**	7	2	**9**	0	0	**0**	3	0	**3**	455	4	**459**	262	7	**269**	4	0	**4**
AM Totals	**218**	**4**	**222**	**218**	**14**	**232**	**41**	**4**	**45**	**1**	**1**	**2**	**6**	**1**	**7**	**1,583**	**17**	**1,600**	**690**	**21**	**711**	**4**	**1**	**5**
15:30 to 16:30	54	2	**56**	48	1	**49**	8	4	**12**	0	0	**0**	6	0	**6**	279	0	**279**	182	9	**191**	2	0	**2**
15:45 to 16:45	54	1	**55**	53	1	**54**	8	4	**12**	0	0	**0**	2	0	**2**	271	2	**273**	181	4	**185**	3	0	**3**
16:00 to 17:00	62	1	**63**	52	3	**55**	8	2	**10**	0	0	**0**	2	0	**2**	265	2	**267**	189	1	**190**	6	0	**6**
16:15 to 17:15	62	1	**63**	48	5	**53**	7	2	**9**	0	0	**0**	1	0	**1**	259	3	**262**	204	2	**206**	4	0	**4**
16:30 to 17:30	58	0	**58**	55	6	**61**	7	1	**8**	0	0	**0**	2	0	**2**	252	3	**255**	229	4	**233**	6	0	**6**
16:45 to 17:45	53	0	**53**	52	5	**57**	10	0	**10**	1	0	**1**	4	0	**4**	234	1	**235**	214	4	**218**	5	0	**5**
17:00 to 18:00	41	0	**41**	56	4	**60**	15	0	**15**	1	0	**1**	3	0	**3**	236	1	**237**	210	4	**214**	3	0	**3**
17:15 to 18:15	34	0	**34**	51	3	**54**	15	0	**15**	1	0	**1**	9	0	**9**	217	0	**217**	195	3	**198**	4	0	**4**
17:30 to 18:30	38	0	**38**	49	3	**52**	12	0	**12**	1	0	**1**	12	0	**12**	227	0	**227**	177	1	**178**	2	0	**2**
PM Totals	**150**	**2**	**152**	**152**	**10**	**162**	**27**	**5**	**32**	**1**	**0**	**1**	**20**	**0**	**20**	**758**	**3**	**761**	**588**	**14**	**602**	**10**	**0**	**10**

Job No. : AUNSW775
Client : The Trustee for Positive Traffic Trust
Suburb : Old Bathurst Road
Location : 1. Old Bathurst Rd / Russell St

Day/Date : Wed, 28th April 2021
Weather : Fine
Description : Classified Intersection Count
: Peak Hour Summary



MATRIX Traffic and Transport Da

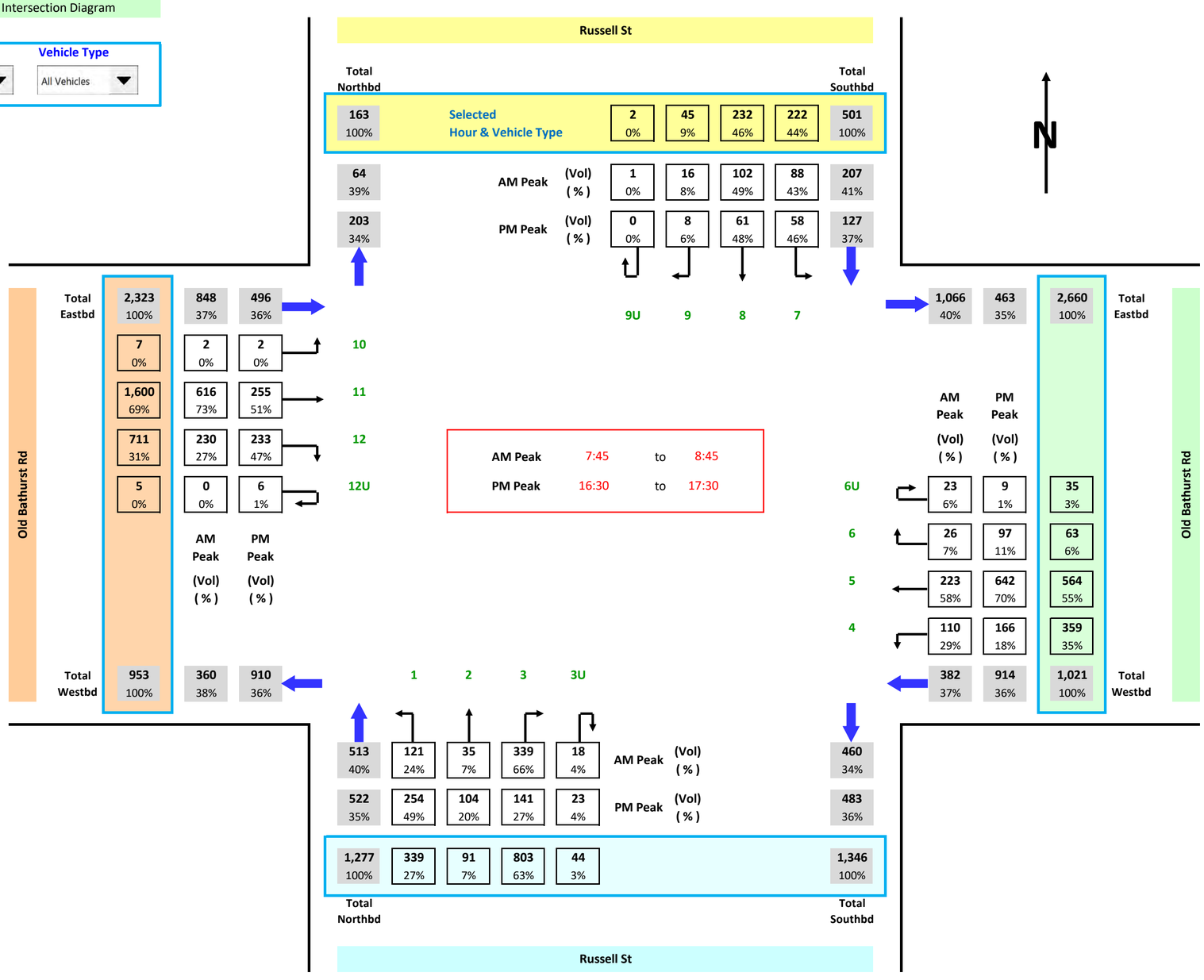
	Approach	Russell St			Old Bathurst Rd			Russell St			Old Bathurst Rd			Grand Total
	Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
AM	7:45 to 8:45	479	34	**513**	362	20	**382**	201	6	**207**	840	8	**848**	**1,950**
PM	16:30 to 17:30	485	37	**522**	898	16	**914**	120	7	**127**	489	7	**496**	**2,059**

Approach	Russell St			Old Bathurst Rd			Russell St			Old Bathurst Rd			Grand Total
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
6:30 to 7:30	338	34	**372**	249	38	**287**	126	10	**136**	717	21	**738**	**1,533**
6:45 to 7:45	342	39	**381**	254	32	**286**	159	12	**171**	795	21	**816**	**1,654**
7:00 to 8:00	348	38	**386**	276	22	**298**	174	11	**185**	849	21	**870**	**1,739**
7:15 to 8:15	369	35	**404**	296	23	**319**	184	12	**196**	905	13	**918**	**1,837**
7:30 to 8:30	440	34	**474**	331	20	**351**	217	7	**224**	842	8	**850**	**1,899**
7:45 to 8:45	479	34	**513**	362	20	**382**	201	6	**207**	840	8	**848**	**1,950**
8:00 to 9:00	456	40	**496**	377	32	**409**	189	7	**196**	808	9	**817**	**1,918**
8:15 to 9:15	440	48	**488**	370	33	**403**	175	5	**180**	753	12	**765**	**1,836**
8:30 to 9:30	382	49	**431**	344	39	**383**	135	6	**141**	724	11	**735**	**1,690**
AM Totals	**1,160**	**117**	**1,277**	**924**	**97**	**1,021**	**478**	**23**	**501**	**2,283**	**40**	**2,323**	**5,122**
15:30 to 16:30	466	52	**518**	863	34	**897**	110	7	**117**	469	9	**478**	**2,010**
15:45 to 16:45	468	62	**530**	865	28	**893**	115	6	**121**	457	6	**463**	**2,007**
16:00 to 17:00	483	49	**532**	877	26	**903**	122	6	**128**	462	3	**465**	**2,028**
16:15 to 17:15	472	46	**518**	895	25	**920**	117	8	**125**	468	5	**473**	**2,036**
16:30 to 17:30	485	37	**522**	898	16	**914**	120	7	**127**	489	7	**496**	**2,059**
16:45 to 17:45	481	21	**502**	892	15	**907**	116	5	**121**	457	5	**462**	**1,992**
17:00 to 18:00	465	18	**483**	878	14	**892**	113	4	**117**	452	5	**457**	**1,949**
17:15 to 18:15	478	13	**491**	815	8	**823**	101	3	**104**	425	3	**428**	**1,846**
17:30 to 18:30	454	15	**469**	733	9	**742**	100	3	**103**	418	1	**419**	**1,733**
PM Totals	**1,405**	**104**	**1,509**	**2,494**	**59**	**2,553**	**330**	**17**	**347**	**1,376**	**17**	**1,393**	**5,802**

Job No. : AUNSW775
Client : The Trustee for Positive Traffic Trust
Suburb : Old Bathurst Road
Location : 1. Old Bathurst Rd / Russell St

Day/Date : Wed, 28th April 2021
Weather : Fine
Description : Classified Intersection Count
: Intersection Diagram

Hour Starting AM Totals
Vehicle Type All Vehicles



8. Appendix B – Plans of Potential Development

INDICATIVE BUILDING ENVELOPE PLAN

PROPOSED LOT 1

1-4 OLD BATHURST ROAD, EMU PLAINS

NOTES

Base data supplied by NSW LPI
Projection MGA Zone 56

Areas and dimensions shown are subject to final survey calculations.
All carriageways are shown for illustrative purposes only and are subject to detailed engineering design.

0 5 10 15 20 25 METRES

CLIENT : Le Boursicot
SCALE : A2 @ 1:500
DATE : 07/06/2021
PLAN No : 056.EP.013
REVISION : 01

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