9 DEVELOPMENT AND INFRASTRUCTURE

9.1 SALE OF LAND - BROADFORD-WANDONG ROAD, WANDONG

Author: *Cameron Baird - Transport and Development Coordinator*
Tim Partridge - Manager Engineering and Major Projects

File No: *108763*

Attachments: *1. Title Information*
2. Traffic Safety Assessment Report

SUMMARY

The land owner at 6 Cochrane Court in Wandong has approached Council to purchase a section of Council owned land (tree reserve) adjacent to their property to help facilitate access to Broadford-Wandong Road and to ultimately facilitate future development of their land.

It is considered that the sale of this Council owned land will set an inappropriate precedence for future management of the tree reserve that has been established with the sole intention of restricting and controlling the manner in which land owners gain access to/from the road network.

It is recommended that the request to sell this land and provide formal property access at this location is not supported.

RECOMMENDATION

THAT Council:

1. Does not support the sale of (part) Council owned land (the subject land) known as Reserve 1 on PS428371C, Volume 10522 Folio 969;
2. Write to the property owner at 6 Cochrane Court, Wandong and advise of this decision.

BACKGROUND

The property at 6 Cochrane Court, Wandong does not currently have a legal right of access to Broadford-Wandong Road due to the existence of a 30cm wide Council owned reserve along the west boundary of the property preventing legal access to Broadford-Wandong Road, a Council managed road.

This strip of Council land (tree reserve) was created via a condition placed on the Planning Permit No. P301595A for the original subdivision of the land that is now known as Cochrane Court. The purpose of the tree reserve is to prevent ‘as of right’ access to Broadford-Wandong Road. A copy of the title is shown in Attachment 1.

In August 2016, Council received a letter from the property owner of 6 Cochrane Court, Wandong requesting that Council consider the sale of part of this reserve to the

property owner, thus allowing them 'as of right' access to Broadford-Wandong Road and expanding their development opportunities for their property.

Figure 1 below identifies the area of land requested to be purchased to allow legal access to Broadford-Wandong Road. The area of land is 10 metres in length and 30cm wide and is located in the South-West corner of the property at 6 Cochrane Court.

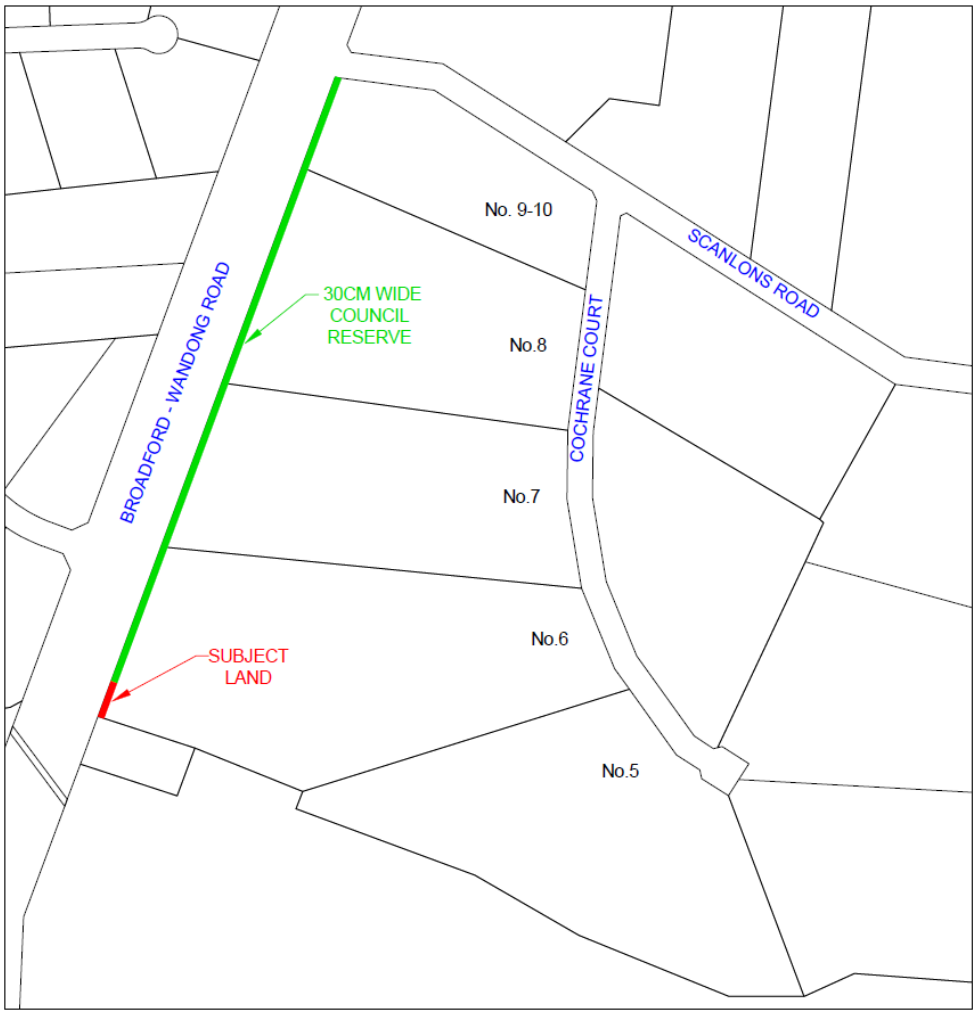


Figure 1: Location of land requested to be purchased

ISSUES AND DISCUSSION

Road Safety issues

In support of the request for Council to consider the part sale of this reserve to facilitate access to Broadford-Wandong Road, a traffic safety assessment report prepared by Transport and Traffic Solutions Pty. Ltd. has been provided to Council. This report is shown in Attachment 2.

The report concludes that the proposed new access to Broadford-Wandong Road will comply with all relevant standards and would not present a road safety issue. The Engineering Department supports this finding for a proposed single property access to this road. However, it is noted that the cumulative impact of multiple new entrances to

this road would lead to reduced safety along this stretch of Broadford-Wandong Road given the increased risk associated with increased traffic movements to and from the road. There are concerns that the precedent of potentially accepting this new access may lead to further requests. This is discussed further below.

Roadside vegetation issues.

The proposed location for the future vehicle access will not necessitate the removal of any significant roadside vegetation. This is due to the fact that an existing property access point has existed in this location for many years.

Change in environment

Since the original subdivision there have been no substantial changes in the environment to impact property access. It is considered that there are no new circumstances that would warrant a change from the original subdivision intent, which sought to remove access to Broadford-Wandong Road to this lot.

Other issues.

In considering the part sale of this tree reserve, officers consider it appropriate to consider the precedent that may be set for the future sale of Council owned reserves that serve the function of controlling, or rather restricting access to Council managed roads.

Tree reserves, also known as plantation reserves or vegetated buffers have been established in many locations across the Shire to control the manner in which access to roads is achieved through the removal of the direct abuttal of property to roads. By removing direct abuttal to roads, the legal right of access to a road is also removed.

The use of tree reserves serves to consolidate access points to/from new housing estates to predetermined intersection locations that exhibit better safety characteristics for the benefit of all road users.

The sale of this tree reserve will create a difficult precedent for the future management of these types of reserves that have been established at the time of sub-division with very clear intention of achieving a higher quality road safety outcome.

Future Actions

In the event the sale of land is supported, there are a number of processes to be undertaken to complete the sale. These are listed below;

- Planning Application to remove the reserve status of the subject land.
- Advertising the proposed sale of the land,
- Obtaining a valuation of the $3m^2$ subject parcel of land,
- Subdivision and new titles to be issued.
- Sale of land.

The sale will be conditional that all costs are borne by the purchaser. Should the land sale go ahead, it will be a condition that the land be consolidated into the parcel of land at 6 Cochrane Court, Wandong.

Alternatively, if refused the property owner will be advised in writing of this decision and no further action would be required.

CONSULTATION

Council's Property Officer has been consulted to confirm the process required for the possible sale of Council land.

Council's Environment Team has also been consulted regarding the possible sale and had no concerns as no vegetation is proposed to be removed as part of the proposed sale and future use of land.

A public notice for the proposed sale of the land will need to be undertaken if Council supports the sale of this land.

FINANCIAL, RESOURCE AND ASSET MANAGEMENT IMPLICATIONS

All costs associated with the subdivision and sale of the land would need to be met by the purchaser and at no cost to Council. These costs are estimated to be between $1500 - $2500.

Should sale of the land be supported, Council will receive a monetary benefit from the sale of the land, which is estimated at between $1000 and $2000.

There are no financial, resource or asset implications to refusing the request.

POLICY AND LEGISLATIVE IMPLICATIONS

There are no legislative or policy requirements that compel Council to sell this area of land or provide property access over it given the lands reserve status.

SUSTAINABILITY IMPLICATIONS (SOCIAL AND ENVIRONMENTAL)

There are no Sustainability Implications.

CHARTER OF HUMAN RIGHTS IMPLICATIONS

The rights protected in the *Charter of Human Rights and Responsibilities Act 2006* were considered in preparing this report and it's determined that the subject matter does not raise any human rights issues. **OFFICER DECLARATION OF CONFLICT OF INTEREST**

No officers involved in the preparation of this report have any direct or indirect interest in this matter.

CONCLUSION

Part of the land along Broadford-Wandong Road, Wandong currently known as Reserve 1 on PS428371C, Volume 10522 Folio 969, is the subject of a request to purchase by an adjoining landowner.

The sale of (part) of this reserve to the land owner at 6 Cochrane Court would allow the land owner to create a legal point of access to Broadford-Wandong Road.

Whilst no specific road safety or environmental issues have been raised concerning a future point of access to Broadford-Wandong Road, the is significant concern for the precedent that will be set for the future management of tree reserves throughout the Shire which serve the function of restricting access to Council managed roads.

For this reason, the sale of this land is not supported by Officers.

MITCHELL SHIRE COUNCIL

Council Meeting Attachment

DEVELOPMENT AND INFRASTRUCTURE

19 NOVEMBER 2018

9.1

SALE OF LAND - BROADFORD-WANDONG ROAD, WANDONG

Attachment No: 1

Title Information

Copyright State of Victoria. This publication is copyright.
No part may be reproduced by any process except in accordance with
the provisions of the Copyright Act and for the purposes of Section
32 of the Sale of Land Act 1962 or pursuant to a written agreement.
The information is only valid at the time and in the form obtained
from the LANDATA REGD TM System. The State of Victoria accepts no
responsibility for any subsequent release, publication or reproduction
of the information.

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958
VOLUME 10522 FOLIO 969 Security no : 124061656366P
Produced 09/08/2016 03:39 pm

LAND DESCRIPTION
Reserve 1 on Plan of Subdivision 428371C.
PARENT TITLE Volume 10500 Folio 206
Created by instrument PS428371C Stage 2 06/06/2000

REGISTERED PROPRIETOR
Estate Fee Simple
Sole Proprietor
MITCHELL SHIRE COUNCIL of 113 HIGH STREET BROADFORD VIC 3658
PS428371C Stage 2 06/06/2000

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION
SEE PS428371C FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

----------END OF REGISTER SEARCH STATEMENT----------

Additional information: (not part of the Register Search Statement)

Street Address: SCANLONS ROAD WANDONG VIC 3758

ADMINISTRATIVE NOTICES
NIL

eCT Control MITCHELL SHIRE COUNCIL
Effective from 18/08/2015

DOCUMENT END

Home	Account: **324666**		Authority Fee(GST exclusive): **$0.00** Service Fee(GST exclusive): **$0.00** GST Payable: **$0.00** Total: **$0.00**	09/08/2016 03:39PM

©State Government of Victoria.

VICTORIA

Delivered by LANDATA®. Land Victoria timestamp 09/08/2016 14:54 Page 1 of 6
© State of Victoria. This publication is copyright. No part may be reproduced by any process except in accordance with the provisions of the Copyright Act and for the purposes of Section 32 of the Sale of Land Act 1962 or pursuant to a written agreement. The information is only valid at the time and in the form obtained from the LANDATA® System. The State of Victoria accepts no responsibility for any subsequent release, publication or reproduction of the information.

	PLAN OF SUBDIVISION	STAGE No.	LTO USE ONLY EDITION 2	PLAN NUMBER PS 428371C

LOCATION OF LAND

PARISH: GLENBURNIE

TOWNSHIP: ———

SECTION: D

CROWN ALLOTMENT: 16 (PART)

CROWN PORTION: ———

LTO BASE RECORD: DCMB (RURAL)
TITLE REFERENCES: VOL. 10128 FOL. 426

LAST PLAN REFERENCE/S: LOT 1 PS 326580L

POSTAL ADDRESS: SCANLONS ROAD, WANDONG. 3758
(At time of subdivision)

AMG Co-ordinates
(of approx centre of land in plan) E 325 720 N5 864 290 ZONE: 55

COUNCIL CERTIFICATION AND ENDORSEMENT

COUNCIL NAME: MITCHELL SHIRE COUNCIL REF: 299,276

1. This plan is certified under Section 6 of the Subdivision Act 1988.
2. ~~This plan is certified under Section 11(7) of the Subdivision Act 1988.~~
~~Date of original certification under Section 6. / /~~
3. ~~This is a statement of compliance issued under Section 21 of the Subdivision Act 1988.~~

OPEN SPACE

(i) A requirement for public open space under Section 18 of the Subdivision Act 1988 has/~~has not~~ been made.

(ii) The requirement has been satisfied.

(iii) ~~The requirement is to be satisfied in Stage ……~~

Council Delegate
~~Council Seal~~
Date 20 / 12 / 99

Re-certified under Section 11(7) of the Subdivision Act 1988.
Council Delegate
Council Seal
Date / /

SUPPLIES TO MASTER PLAN (SETTLED) ONLY

VESTING OF ROADS AND/OR RESERVES

IDENTIFIER	COUNCIL/BODY/PERSON
ROAD R1	MITCHELL SHIRE COUNCIL
RESERVE No.1	MITCHELL SHIRE COUNCIL

NOTATIONS

STAGING This is/~~is not~~ a staged subdivision.
Planning permit No. 301,595a

DEPTH LIMITATION DOES NOT APPLY.

PURPOSE OF THE PLAN
VARIATION OF E-1 ON PS.326580L BY AGREEMENT WITH EASTERN ENERGY LTD.

SURVEY. THIS PLAN IS/~~IS NOT~~ BASED ON SURVEY
THIS SURVEY HAS BEEN CONNECTED TO PERMANENT MARKS No.(s)
IN PROCLAIMED SURVEY AREA No.

EASEMENT INFORMATION

LEGEND A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement (Road)

Easement Reference	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of
E-1	TRANSMISSION OF ELECTRICITY	SEE DIAG. SHEET 3	PS.326580L	S.E.C.V.
E-2	WATER SUPPLY	2.5	THIS PLAN	GOULBURN VALLEY REGION WATER AUTHORITY

LTO USE ONLY
STATEMENT OF COMPLIANCE/ EXEMPTION STATEMENT
RECEIVED ☑
DATE 5 / 1 / 2000

THIS IS AN L.T.O. COMPILED PLAN
CHECKED 9/6/2000
G.S.Newman
Assistant Registrar of Titles

SHEET 1 OF 5 SHEETS

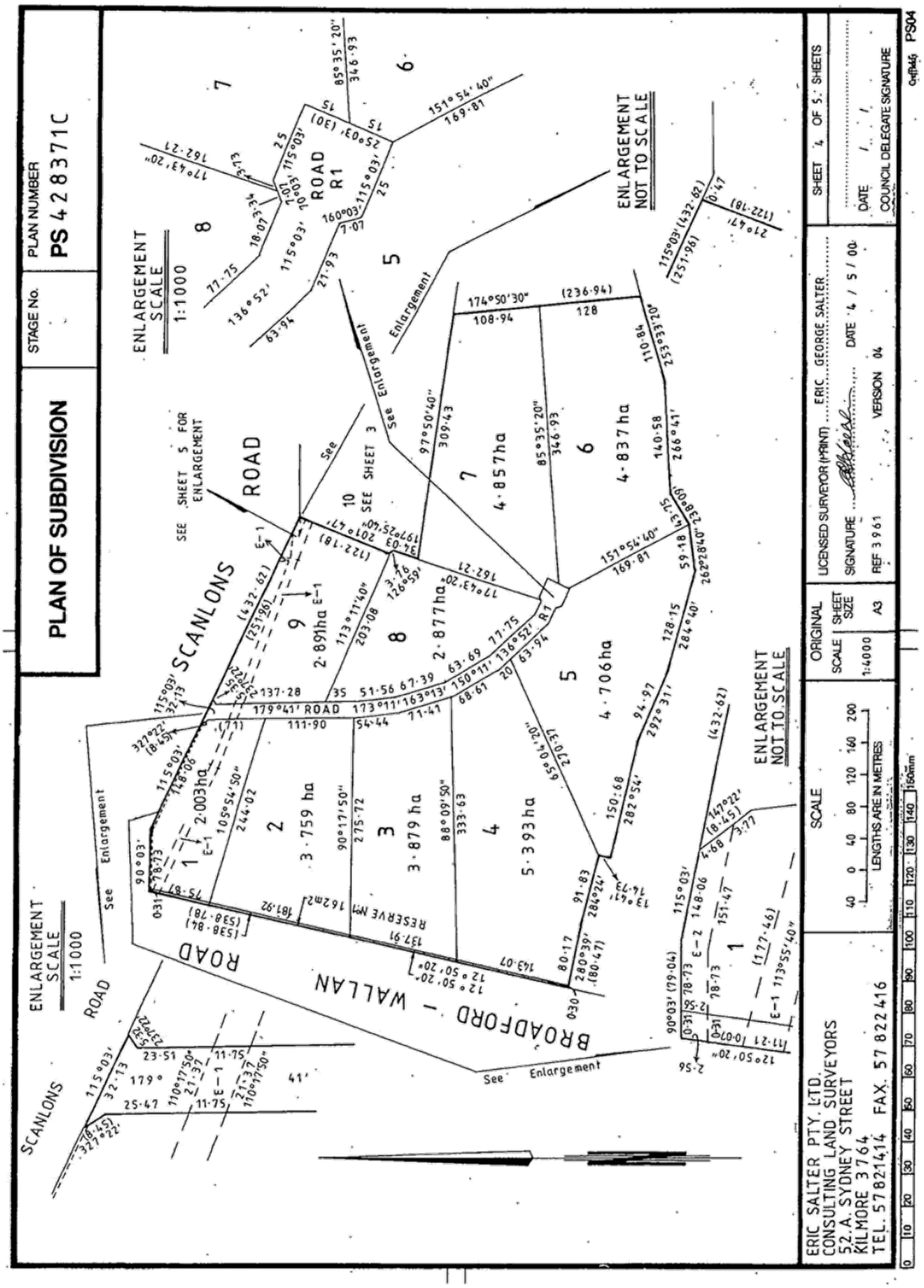
ERIC SALTER PTY. LTD.
CONSULTING LAND SURVEYORS
52. A. SYDNEY STREET
KILMORE 3764
TEL. 57821414 FAX. 57822416

LICENSED SURVEYOR (PRINT) ERIC GEORGE SALTER
SIGNATURE ……… DATE 18 / 11 / 99
REF 3961 VERSION 02

DATE 20 / 12 / 99
COUNCIL DELEGATE SIGNATURE
ORIGINAL SHEET SIZE A3

PS01

Delivered by LANDATA®. Land Victoria timestamp 09/08/2016 14:54 Page 4 of 6



MITCHELL SHIRE COUNCIL

Council Meeting Attachment

DEVELOPMENT AND INFRASTRUCTURE

19 NOVEMBER 2018

9.1

SALE OF LAND - BROADFORD-WANDONG ROAD, WANDONG

Attachment No: 2

Traffic Safety Assessment Report

T&TS TRANSPORT & TRAFFIC SOLUTIONS

Transport & Traffic Solutions Pty Ltd
420 Victoria Street
Brunswick VIC 3056
Tel: +61 3 9940 1575
Fax: +61 3 9381 0700

Ms. Julie Hogan
6 Cochrane Court
Wandong
VIC 3758

1 June 2016

Dear Ms. Hogan,

Re: Proposed 2 Lot Sub-division at 6 Cochrane Court, Wandong
Safety Assessment of the Proposed Site Access from Broadford-Wandong Road

Further to our engagement, Transport & Traffic Solutions Pty Ltd (T&TS) has completed a safety assessment of the existing gravel access driveway which provides secondary access to your property located at 6 Cochrane Court, Wandong from Broadford-Wandong Road. Details of the safety assessment follows.

1. INTRODUCTION

It is understood that you are proposing to subdivide your property into two lots with the front lot including the existing dwelling to obtain access from Cochrane Court as per the existing conditions and the proposed rear lot and new dwelling to obtain access from Broadford-Wandong Road via the existing gravel access driveway.

It is also understood that prior to you submitting a planning permit application to subdivide the exiting lot into two lots, Council's Engineering Department has requested that a safety assessment be completed to confirm if the existing gravel driveway provides safe access to the proposed new lot.

2. EXISTING CONDITIONS

A site visit was undertaken on Monday 16 May 2016 between the hours 1pm and 2pm to assess the existing conditions adjacent to the site and to check and confirm the available sight distance at the existing gravel access driveway.

2.1 Broadford-Wandong Road

Broadford-Wandong Road is a sealed two-lane, two-way Council road which runs in a north-south direction between the towns of Broadford in the north and Wandong in the south. The road reservation is approximately 60 metres wide with a 7.0 metre wide sealed carriageway. A grass verge and open drain is located on both sides side of the carriageway. Refer Figure 1 and Figure 2 below.

Adjacent to the site, and directly north of the existing driveway the posted speed limit increases from 60km/h to 80km/h northbound. The alignment of the road is straight and flat, with an average downhill slope of approximately 6% approaching from the north.

Referring to Mitchell Shire Council's Public Road Register dated 8 September 2015, Broadford-Wandong Road is classified as a Link Road. A Link Road *"provides direct linkage between significant population centres and major traffic generators such as Residential, Industrial, Commercial, Agricultural and Tourist areas and Declared Roads. These Roads have an Identifiable Origin and Destination."*[1]

[1] Mitchell Shire Council Road Management Plan, Version 4, 13 May 2013

Figure 1: Broadford-Wandong Road, looking north form the existing driveway

Figure 2: Broadford-Wandong Road, looking south form the existing driveway

2.2 Existing Traffic Volumes

An automatic traffic volume survey was conducted on Broadford-Wandong Road adjacent to the site by Trans Traffic Survey between Wednesday 13th April and Tuesday 20th April 2016. A summary of the traffic volumes for all vehicles is provided in Table 1 below. Refer Appendix A for a copy of the traffic volume summary.

Table 1: Traffic Volume Survey Results – Broadford-Wandong Road

	Direction		Combined	Average Speed	85th Percentile Speed
	North	South			
Weekday Average (Monday-Friday)	523 vpd	524 vpd	1,047 vpd	73.1	83.7
MDWK Average AM Peak (8:00 to 9:00)	28 vph	70 vph	98 vph	74.7	85.0
MDWK Average PM Peak (17:00 to 18:00)	69 vph	33 vph	102 vph	73.9	86.1

A summary of the existing traffic volumes follows:

- The 24-hour two-way daily traffic volume for Broadford-Wandong Road is 1,047 vehicles per day.
- The two-way mid-week average AM peak traffic volume is 98 vph (9.4% peak hour to daily traffic volume ratio), with 28 vph (29%) travelling northbound and 70 vph (71%) travelling southbound.
- The two-way mid-week average PM peak traffic volume is 102 vph (9.7% peak hour to daily traffic volume ratio), with 69 vph (68%) travelling northbound and 33 vph (32%) travelling southbound.
- The combined weekday average speed is 73.1 km/h.
- The combined weekday 85th percentile speed is 83.7 km/h.

Further to the above:

- Approximately 6.8% of vehicles were commercial vehicles.

Based on the results of the traffic volume survey it can be seen that Broadford-Wandong Road acts as a low volume, high speed rural Link Road connecting Broadford to Wandong whilst providing access to residential properties either directly via access driveways or indirectly via connecting access roads. Further during AM and PM peak times the majority of traffic,

approximately 70%, is headed southbound and northbound respectively. This traffic movement pattern is typical of a road whose main function is to provide access to residential dwellings.

2.3 Casualty Accident Statistics

The casualty accident history adjacent to the site was sourced from the VicRoads' Crashstats[2] database. The database indicates that there were no casualty accidents recorded on Broadford-Wandong Road directly adjacent to the site and in particular between Epping-Kilmore Road and Scanlons Road in the last six year period.

Therefore it can be concluded that there are no serious safety concerns with the existing conditions of Broadford-Wandong Road directly adjacent to the site.

3. SAFETY ASSESSMENT

The existing gravel access driveway is located on the east side of Broadford-Wandong Road, approximately 130 metres south of Mount View Road and directly north of the unnamed creek.

Section 7 of the Austroads Guide to Road Design – Part 4: Intersections and Crossings – General, provides guidance on locating property access points. The guide states that in determining access point locations, *"sight distance, design vehicle turning paths and interference to through traffic by decelerating and accelerating vehicles should be considered at all sites"*. Therefore a check of these items will be completed to confirm if the existing gravel access driveway will provide safe access to/from the proposed lot including residential dwelling from/to Broadford-Wandong Road.

3.1 Sight Distance Check

3.1.1 Stopping Sight Distance

The Austroads Guide states that "*a downstream access connection should not be less than the stopping sight distance from the downstream side of the previous connection or intersection.*" In this situation the distance between the existing access driveway and Mount View Road should be greater than or equal to the Stopping Sight Distance (SSD) requirement as per the Austroads Guide.

By achieving the SSD requirement, a driver of a vehicle that enters Broadford-Wandong Road from Mount View Road will have sufficient time to react and stop if there is a potential conflict with a vehicle entering Broadford-Wandong Road from the existing access driveway, and vice versa.

- SSD Check - Mount View Road to the Existing Access Driveway

  For a posted speed limit of 80 km/h[3], an approximate average downgrade of 6.5%, and a reaction time of 1.5 seconds[4], the SSD requirement in accordance with the Austroads Guideline is equivalent to 118 metres.

- SSD Check - Existing Access Driveway to Mount View Road

  For a posted speed limit of 80 km/h, an approximate average upgrade of 6.5%, and a reaction time of 1.5 seconds, the SSD requirement in accordance with the Austroads Guideline is equivalent to 92 metres.

The existing access driveway is located 130 metres south of Mount View Road. This distance is greater than the SSD requirement as per the Austroads Guide and as detailed above. Therefore the location of the existing gravel access driveway complies with the Austroads Guideline for spacing of intersections in accordance with the SSD requirement.

---

[2] The VicRoads Crashstats data base may not include accident data recorded after October 2015.
[3] The posted speed limit has been selected in this case as it is not expected that traffic turning out of Mount View Road will exceed the 80km/h speed limit. This is due to the short section of road available prior to the speed limit changing to 60km/h.
[4] A reaction time equivalent to 1.5 seconds is considered to be adequate in this situation as turning traffic from Mount View Road will predominately be made up of local traffic. Therefore drivers exiting Mount View Road will be very familiar with the existing access point location and the potential for traffic entering the major road.

T&TS TRANSPORT & TRAFFIC SOLUTIONS

3.1.2 Intersection Sight Distance

Section 3.4 of the Austroads Guide to Road Design – Part 4a: Unsignalised and Signalised Intersections provides guidance on sight distance requirements at property access points. The guide states that sight distances at property access points should comply with the Safe Intersection Sight Distance (SISD) and Minimum Gap Sight Distance (MGSD).

Safe Intersection Sight Distance

The Safe Intersection Sight Distance (SISD) is the *"minimum distance, which should be provided on the major road at any intersection so as to provide sufficient distance for a driver of a vehicle on the major road to observe a vehicle on a minor road approach moving into a collision situation and to decelerate to a stop before reaching the collision point."* Section 3.2.2 of the Austroads Guide Part 4a sets out the SISD requirements of the major road.

Based on the recorded 85th percentile speed of 87 km/h, an approximate average downgrade of -6.0% north of the of the existing access driveway and -1.0% south of the of the existing access driveway, and a reaction time of 2 seconds, the SISD required to the north and south of the existing access driveway is 220 metres and 205 metres respectively.

At a distance of 5.0 metres[5] (minimum) set back from the centre of the through lane (conflict point), the existing access driveway has an available sight distance of approximately 230 metres to the north and approximately 260 metres to the south. Refer Figure 3 to Figure 6 below. Therefore the available sight distance north and south of the existing access complies with the Austroads Guide SISD requirement.

Figure 3: Looking at the existing access driveway from the north

Figure 4: Looking north from the existing access driveway

[5] Due to the low volume of traffic expected to use the existing access driveway combined with the low volume of traffic recorded on Broadford-Wandong Road, a sight distance check taken at the minimum distance of 5.0 metres from the conflict point is considered to be a more than adequate provision.

Figure 5: Looking at the existing access driveway from the south

Figure 6: Looking south from the existing access driveway

Referring to Figure 3 above, it is noted that the existing fold down sign located on the east side of the carriageway and north of the existing access driveway will partially obstruct a vehicle existing the driveway. Therefore to improve visibility to the entering vehicle for oncoming traffic, it is recommended that the existing fold down sign be relocated to the opposite side of the carriageway.

Minimum Gap Sight Distance

The Minimum Gap Sight Distance (MGSD) *"is based on distances corresponding to the critical acceptance gap that drivers are prepared to accept when undertaking a crossing or turning manoeuvre at intersections."* Section 3.2.3 of the Austroads Guide Part 4a sets out the MGSD requirements for traffic entering the major road. Table 2 below sets out the MGSD for the expected turning movements at the existing access driveway.

Table 2: Traffic Volume Survey

Movement	Critical Acceptance Gap (sec)	85th %ile Speed of Approaching Vehicle (km/h)	MGSD (m)
Left Out	5	84.9	118
Right Out	5	84.9	118
Right In	4	82.5	92

Based on on-site measurements, each expected turn movement at the existing access driveway has an available MGSD greater than 200 metres. Therefore the available sight distance north and south of the existing access complies with the Austroads Guide MGSD requirement.

3.2 Interference to Through Traffic

Section 12.3.1 of the Infrastructure Design Manual v4.4.2 (IDM), states that traffic volumes for undeveloped residential allotments should normally be based upon a daily traffic generation rate equivalent to at least 10 vehicle movements per day per lot.

Based on the Broadford-Wandong Road AM and PM peak hour to daily traffic volume ratio of 9.4% and 9.7% respectively, it is estimated that during the AM and PM peak periods the proposed residential allotment will generate approximately 1 vehicle movement per hour i.e. one vehicle exiting the site during the AM peak period and one vehicle entering the site during the PM peak period.

Therefore it is not expected that one vehicle exiting and entering the access driveway to/from Broadford-Wandong Road during the AM and PM peak hours respectively will interfere with the movement of through traffic along Broadford-Wandong Road during these time periods.

T&TS TRANSPORT & TRAFFIC SOLUTIONS

3.3 Existing Site Access Driveway

Based on a visual inspection of the existing gravel access driveway during the site visit, it has been determined that the layout of the access driveway is sub-standard. Further the condition of the gravel surface has deteriorated in some areas with overgrown grass.

Therefore to improve access for turning vehicles it is recommended that the existing access driveway be upgraded to comply with the Infrastructure Design Manual's standard drawing no. SD 255 – Typical Swale Drain Vehicle Crossing (Rural Entrance).

4. FINDINGS

The key findings of this Safety Assessment are detailed below:

- Based on the historical Crashstats data it can be concluded that there are no serious safety concerns with the existing conditions of Broadford-Wandong Road directly adjacent to the site.
- The distance between the existing access driveway and Mount View Road complies with the Stopping Sight Distance requirement of the Austroads Guideline, and hence the spacing between the existing access driveway and Mount View Road is greater than the minimum requirement.
- The available sight distance north and south of the existing access driveway complies with the Safe Intersection Sight Distance requirement of the Austroads Guideline when measured at a minimum distance of 5.0 metres (minimum) set back from the centre of the through lane (conflict point).
- It is recommended the existing fold down sign located on the east of the Broadford-Wandong Road carriageway north of the existing access driveway be relocated to the western side to improve inter-visibility between drivers and vehicles on the major road (southbound approach) and access driveway approach.
- Due to the low volume of traffic recorded on Broadford-Wandong Road and the volume of traffic expected to enter and exit the site during the AM and PM peak periods, it is not expected that vehicles using the access driveway will interfere with the movement of through traffic.
- It is recommended that the existing access driveway be upgraded to comply with the Infrastructure Design Manual's standard drawing no. SD 255 – Typical Swale Drain Vehicle Crossing (Rural Entrance).

5. CONCLUSION

Based on the findings of this safety assessment combined with the above recommendations being adopted by the responsible authority, it can be concluded that the utilisation of the existing Broadford-Wandong Road access driveway for the purpose of providing primary access to one residential dwelling is an adequate provision as it will not have a detrimental impact on the operation and safety of the Broadford-Wandong Road.

If you have any further queries please do not hesitate to contact me on 9940- 1575 or 0437-682-170.

Yours sincerely,

Michael Marsicovetere
Director
Transport & Traffic Solutions Pty Ltd

T&TS TRANSPORT & TRAFFIC SOLUTIONS

ATTACHMENT A – TRAFFIC VOLUME SURVEY DATA RESULTS

AUTOMATIC COUNTER SUMMARY AND DATA SHEET

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

T. 1300 883 936 - F. 1300 882 932 - E. traffic@trafficsurvey.com.au - W. www.trafficsurvey.com.au

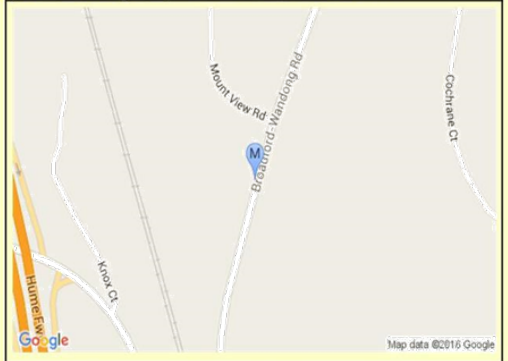
AUTOMATIC COUNT SUMMARY

Street Name :	Broadford-Wandong Rd	**Location :**	South Of Mount View Rd
Suburb :	Wandong	**Start Date :**	00:00 Wed 13/April/2016
Metrocount ID	Y624M6HR	**Finish Date :**	00:00 Wed 20/April/2016
Site ID Number :	2683	**Speed Zone :**	80 km/h
Prepared By :	Vo Son Binh	**Email:**	binh@trafficsurvey.com.au

GPS information	Lat 37° 20' 58.68 North Long 145° 1' 39.06 East	Direction of Travel		
		Combined	**Northbound**	**Southbound**
Traffic Volume :	Weekdays Average	1,047	523	524
(Vehicles/Day)	7 Day Average	1,008	505	503
Weekday AM	06:00	98	36	70
Peak hour starts PM	12:00	102	69	37
Speeds :	85th Percentile	83.5	82.9	84.2
(Km/Hr)	Average	73.2	73.4	73.0
Classification % :	Light Vehicles up to 5.5m	93.2%	93.0%	93.4%

Location

GPS Information	Load Google Map (internet required)
(Latitude, Longitude)	-37.349632,+145.027517



Speed Data	Speed Graph	Speed Bin
Volume Data	Volume Graph	Classification

QUALITY ASSURED COMPANY BY AS/NZS ISO 9001:2008
OH&S SYSTEM CERTIFIED TO AS/NZS ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO AS/NZS ISO14001:2004

Page 1 of 1

AUTOMATIC COUNTER SUMMARY AND DATA SHEET

TRANS TRAFFIC SURVEY
trafficsurvey.com.au

Site Broadford-Wandong Rd

Direction Combined

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	18/04/2016	19/04/2016	13/04/2016	14/04/2016	15/04/2016	16/04/2016	17/04/2016	Total	Average	Total	Average	Total	Average
AM Peak	09:00	10:00	10:00	06:00	07:00	09:00	11:00	N/A	09:00	N/A	06:00	N/A	09:00
PM Peak	15:00	16:00	12:00	16:00	16:00	19:00	17:00	N/A	16:00	N/A	12:00	N/A	16:00
00:00	0	1	2	6	2	5	11	27	4	11	2	16	8
01:00	2	3	2	4	2	1	3	17	2	13	3	4	2
02:00	0	0	2	0	0	2	6	10	1	2	0	8	4
03:00	0	2	0	1	0	2	1	6	1	3	1	3	2
04:00	1	6	1	2	4	2	1	17	2	14	3	3	2
05:00	17	19	19	23	17	8	5	108	15	95	19	13	7
06:00	39	40	42	42	50	7	7	227	32	213	43	14	7
07:00	58	65	62	70	74	18	20	367	52	329	66	38	19
08:00	102	95	100	96	98	55	32	578	83	491	98	87	44
09:00	73	80	85	54	68	65	55	480	69	360	72	120	60
10:00	71	50	52	55	49	80	61	418	60	277	55	141	71
11:00	58	43	64	61	49	81	80	436	62	275	55	161	81
12:00	54	54	52	62	57	97	73	449	64	279	56	170	85
13:00	66	50	62	67	49	83	75	452	65	294	59	158	79
14:00	60	71	74	59	77	86	60	487	70	341	68	146	73
15:00	89	96	101	108	87	79	76	636	91	481	96	155	78
16:00	98	97	81	92	104	68	67	607	87	472	94	135	68
17:00	103	111	97	93	108	80	59	651	93	512	102	139	70
18:00	56	66	58	63	58	43	41	385	55	301	60	84	42
19:00	27	22	25	49	44	38	31	236	34	167	33	69	35
20:00	21	17	23	36	31	19	19	166	24	128	26	38	19
21:00	14	15	15	25	18	22	24	133	19	87	17	46	23
22:00	7	8	12	17	16	17	8	85	12	60	12	25	13
23:00	3	3	5	9	16	7	1	44	6	36	7	8	4
Total	1019	1014	1036	1094	1078	965	816	7022	1003	5241	1047	1781	896
% Heavy	8.34%	8.38%	6.95%	6.67%	6.77%	6.42%	3.19%	6.78%		7.40%		4.94%	

Page 1 of 1

AUTOMATIC COUNTER SUMMARY AND DATA SHEET

TRANS TRAFFIC SURVEY
trafficsurvey.com.au

Site Broadford-Wandong Rd

Direction Northbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	18/04/2016	19/04/2016	13/04/2016	14/04/2016	15/04/2016	16/04/2016	17/04/2016	Total	Average	Total	Average	Total	Average
AM Peak	08:00	07:00	06:00	06:00	07:00	09:00	09:00	N/A	06:00	N/A	06:00	N/A	09:00
PM Peak	15:00	15:00	12:00	14:00	16:00	19:00	17:00	N/A	12:00	N/A	12:00	N/A	17:00
00:00	0	1	1	5	1	5	6	19	3	8	2	11	6
01:00	1	1	1	2	1	0	3	9	1	6	1	3	2
02:00	0	0	1	0	0	1	3	5	1	1	0	4	2
03:00	0	1	0	1	0	1	1	4	1	2	0	2	1
04:00	1	1	0	1	0	1	0	4	1	3	1	1	1
05:00	2	2	2	5	3	4	2	20	3	14	3	6	3
06:00	4	3	5	4	9	1	3	29	4	25	5	4	2
07:00	9	15	14	14	19	5	7	83	12	71	14	12	6
08:00	30	30	24	28	30	18	13	173	25	142	28	31	16
09:00	39	43	48	20	32	25	28	235	34	182	36	53	27
10:00	30	18	26	25	25	34	35	193	28	124	25	69	35
11:00	27	20	28	24	23	39	37	198	28	122	24	76	38
12:00	31	30	27	31	27	50	32	228	33	146	29	82	41
13:00	34	24	28	33	23	42	40	224	32	142	28	82	41
14:00	28	37	39	32	42	48	40	266	38	178	36	88	44
15:00	53	64	62	65	53	35	36	368	53	297	59	71	36
16:00	63	60	51	60	62	40	33	369	53	296	59	73	37
17:00	71	78	68	58	71	39	25	410	59	346	69	64	32
18:00	37	43	42	42	32	23	19	238	34	196	39	42	21
19:00	18	15	20	28	30	22	19	152	22	111	22	41	21
20:00	12	10	15	22	20	15	14	108	15	79	16	29	15
21:00	10	9	11	17	14	9	11	81	12	61	12	20	10
22:00	6	8	9	13	14	6	2	58	8	50	10	8	4
23:00	2	2	4	6	12	6	1	33	5	26	5	7	4
Total	508	515	526	536	543	469	410	3507	505	2628	523	879	445
% Heavy	8.66%	7.77%	7.41%	6.90%	7.37%	5.97%	3.17%	6.87%		7.61%		4.66%	

Page 1 of 1

AUTOMATIC COUNTER SUMMARY AND DATA SHEET

TRANS TRAFFIC SURVEY
trafficsurvey.com.au

Site Broadford-Wandong Rd

Direction Southbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	18/04/2016	19/04/2016	13/04/2016	14/04/2016	15/04/2016	16/04/2016	17/04/2016	Total	Average	Total	Average	Total	Average
AM Peak	09:00	11:00	10:00	06:00	04:00	10:00	10:00	N/A	10:00	N/A	04:00	N/A	10:00
PM Peak	15:00	12:00	12:00	16:00	14:00	16:00	16:00	N/A	16:00	N/A	14:00	N/A	16:00
00:00	0	0	1	1	1	0	5	8	1	3	1	5	3
01:00	1	2	1	2	1	1	0	8	1	7	1	1	1
02:00	0	0	1	0	0	1	3	5	1	1	0	4	2
03:00	0	1	0	0	0	1	0	2	0	1	0	1	1
04:00	0	5	1	1	4	1	1	13	2	11	2	2	1
05:00	15	17	17	18	14	4	3	88	13	81	16	7	4
06:00	35	37	37	38	41	6	4	198	28	188	38	10	5
07:00	49	50	48	56	55	13	13	284	41	258	52	26	13
08:00	72	65	76	68	68	37	19	405	58	349	70	56	28
09:00	34	37	37	34	36	40	27	245	35	178	36	67	34
10:00	41	32	26	30	24	46	26	225	32	153	31	72	36
11:00	31	23	36	37	26	42	43	238	34	153	31	85	43
12:00	23	24	25	31	30	47	41	221	32	133	27	88	44
13:00	32	26	34	34	26	41	35	228	33	152	30	76	38
14:00	32	34	35	27	35	38	20	221	32	163	33	58	29
15:00	36	32	39	43	34	44	40	268	38	184	37	84	42
16:00	35	37	30	32	42	28	34	238	34	176	35	62	31
17:00	32	33	29	35	37	41	34	241	34	166	33	75	38
18:00	19	23	16	21	26	20	22	147	21	105	21	42	21
19:00	9	7	5	21	14	16	12	84	12	56	11	28	14
20:00	9	7	8	14	11	4	5	58	8	49	10	9	5
21:00	4	6	4	8	4	13	13	52	7	26	5	26	13
22:00	1	0	3	4	2	11	6	27	4	10	2	17	9
23:00	1	1	1	3	4	1	0	11	2	10	2	1	1
Total	511	499	510	558	535	496	406	3515	503	2613	524	902	456
% Heavy	8.02%	9.02%	6.47%	6.45%	6.17%	6.85%	3.20%	6.69%		7.19%		5.21%	

Page 1 of 1

AUTOMATIC COUNTER SUMMARY AND DATA SHEET

TRANS TRAFFIC SURVEY
trafficsurvey.com.au

Site

Back to Site Summary Page

Direction Combined

Day Weekdays (Monday to Friday)

Note: #N/A "Modal Speed" means too few data points

Hour Start	Total Vehicles	Avgerage Speed	85th percentile	Modal Speed	Minimum Speed	Maximum Speed	Standard Deviation
00:00	3	75.5	78.7	97	46.3	103.7	0.9
01:00	2	69.8	81.2	91	54.6	98.0	3.3
02:00	0	N/A	N/A	N/A	N/A	N/A	N/A
03:00	0	N/A	N/A	N/A	N/A	N/A	N/A
04:00	2	56.4	66.5	69	42.0	73.8	2.3
05:00	19	75.7	85.0	91	42.8	103.4	10.5
06:00	42	73.4	84.9	85	41.1	95.7	11.5
07:00	65	73.3	84.6	74	35.1	107.1	12.3
08:00	98	74.7	85.0	78	37.5	102.2	11.9
09:00	70	74.2	86.8	71	33.9	111.7	11.6
10:00	56	73.4	83.1	73	40.4	108.9	11.3
11:00	53	74.0	84.8	76	24.9	102.1	11.4
12:00	56	74.9	86.1	73	26.1	107.6	12.3
13:00	57	74.3	85.0	74	39.3	105.7	11.0
14:00	67	74.0	86.2	74	25.4	115.1	12.7
15:00	95	74.0	84.7	73	42.0	100.0	10.2
16:00	92	75.4	87.6	80	30.0	113.7	12.3
17:00	102	73.9	86.1	74	20.8	114.9	12.5
18:00	58	72.7	84.2	69	39.2	98.6	11.1
19:00	33	75.7	87.7	73	41.7	116.7	12.9
20:00	26	73.5	87.9	78	37.7	107.9	13.7
21:00	17	74.6	85.0	78	44.0	107.9	11.6
22:00	12	74.9	82.5	90	49.7	108.6	9.3
23:00	7	70.8	77.7	102	42.5	102.8	8.4
Summary	**1032**	**73.1**	**83.7**	**79**	**38.1**	**104.8**	**10.2**

Page 1 of 1

AUTOMATIC COUNTER SUMMARY AND DATA SHEET

TRANS TRAFFIC SURVEY
trafficsurvey.com.au

Site

Back to Site Summary Page

Direction Northbound

Day Weekdays (Monday to Friday)

Note: #N/A "Modal Speed" means too few data points

Hour Start	Total Vehicles	Avgerage Speed	85th percentile	Modal Speed	Minimum Speed	Maximum Speed	Standard Deviation
00:00	2	65.6	66.9	84	36.3	96.5	1.9
01:00	1	79.2	81.5	101	57.5	108.6	3.3
02:00	0	N/A	N/A	N/A	N/A	N/A	N/A
03:00	0	N/A	N/A	N/A	N/A	N/A	N/A
04:00	1	44.0	54.2	55	43.9	57.1	0.0
05:00	3	76.6	82.9	99	45.8	103.9	8.5
06:00	5	71.6	79.9	90	41.4	90.4	9.2
07:00	14	72.0	80.5	73	34.3	102.5	11.6
08:00	28	74.7	84.2	77	36.7	106.4	10.1
09:00	36	75.7	86.4	75	26.7	114.5	10.4
10:00	26	74.8	83.4	76	42.1	103.1	10.7
11:00	23	73.7	82.9	70	35.9	103.2	9.6
12:00	29	77.0	86.7	77	15.2	104.0	11.7
13:00	27	75.7	85.5	75	46.2	111.8	10.2
14:00	35	74.6	85.0	75	38.8	114.4	12.2
15:00	59	75.8	85.5	73	38.9	101.9	9.8
16:00	58	77.2	87.9	81	40.6	117.2	11.5
17:00	69	74.5	85.0	73	8.0	116.3	12.1
18:00	38	75.8	86.6	75	44.1	106.0	11.1
19:00	22	74.7	85.2	72	43.1	117.0	11.8
20:00	16	75.8	90.2	83	38.2	117.0	13.7
21:00	12	76.4	88.6	72	45.2	110.9	12.2
22:00	10	73.6	82.1	74	49.5	106.0	11.0
23:00	5	73.0	83.5	110	38.8	112.0	12.7
Summary	**519**	**73.3**	**82.5**	**79**	**38.5**	**105.5**	**9.8**

Page 1 of 1

AUTOMATIC COUNTER SUMMARY AND DATA SHEET

TRANS TRAFFIC SURVEY
trafficsurvey.com.au

Site

Back to Site Summary Page

Direction Southbound

Day Weekdays (Monday to Friday)

Note: #N/A "Modal Speed" means too few data points

Hour Start	Total Vehicles	Avgerage Speed	85th percentile	Modal Speed	Minimum Speed	Maximum Speed	Standard Deviation
00:00	1	85.3	90.5	111	56.4	110.8	0.0
01:00	1	60.3	80.9	81	51.6	87.4	3.3
02:00	0	N/A	N/A	N/A	N/A	N/A	N/A
03:00	0	N/A	N/A	N/A	N/A	N/A	N/A
04:00	1	68.8	78.8	84	40.2	90.5	4.6
05:00	16	74.8	87.1	83	39.7	102.8	12.5
06:00	37	75.3	89.8	79	40.9	101.0	13.8
07:00	51	74.5	88.6	75	36.0	111.6	13.0
08:00	70	74.6	85.9	79	38.3	98.0	13.8
09:00	34	72.6	87.2	68	41.1	109.0	12.9
10:00	30	72.0	82.8	70	38.7	114.8	12.0
11:00	30	74.3	86.6	81	13.8	101.0	13.2
12:00	27	72.8	85.5	69	37.1	111.2	12.9
13:00	30	73.0	84.5	74	32.5	99.5	11.8
14:00	32	73.3	87.4	72	11.9	115.8	13.3
15:00	36	72.1	84.0	74	45.0	98.1	10.7
16:00	34	73.7	87.3	79	19.4	110.3	13.0
17:00	33	73.3	87.1	75	33.6	113.5	12.9
18:00	20	69.5	81.7	63	34.2	91.2	11.1
19:00	11	76.7	90.2	74	40.4	116.4	14.0
20:00	10	71.1	85.5	73	37.2	98.7	13.7
21:00	5	72.8	81.3	83	42.8	104.9	11.1
22:00	2	76.2	82.9	106	50.0	111.1	7.6
23:00	2	68.6	71.9	94	46.3	93.6	4.1
Summary	**513**	**73.0**	**84.9**	**79**	**37.6**	**104.1**	**10.7**

Page 1 of 1