## Traffic Impact Assessment Report

## 402-508 Perricoota Road, Moama NSW

Project Number 210042
Draft2 Report 17/03/2023
Client Perricoota View Pty Ltd

## TRAFFICWORKS

## Document control record

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## Executive summary

Perricoota View Pty Ltd engaged Trafficworks to undertake a traffic impact assessment (TIA) for the proposed development of a residential subdivision with a small commercial area at 402-508 Perricoota Road, Moama NSW.

The table below summarises the subject site, the proposed development, and our conclusions and recommendations.

| Address | 402-508 Perricoota Road, Moama NSW |
| :--- | :--- |
| Zoning | Primary Production Zone (RU1) |
| Proposed development | The proposed development includes: |
|  | -140 residential dwelling lots |
|  | - Commercial property |
|  | - Internal road network |$\quad$|  | - Perricoota Road |
| :--- | :--- |
|  | - Myall Way |$\quad$| Road network | Peak hour = 112 (AM) and 122 (PM) |
| :--- | :--- |

through the network safely within court bowls and around bends in the road.

- Recommendation 7: footpaths should be provided on one side only for the 20 m wide road reserves and on both sides for 30 m wide road reserves.
- Recommendation 8: connect to the existing shared path along Perricoota Road and provide an additional crossing northwest of Layfield Road.
- Recommendation 9: Myall Way should be sealed and constructed per the Council Engineering Guidelines for Subdivisions and Development Standards between Perricoota Road and the western development access.


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## Referenced documents

References used in the preparation of this report include the following:

- RTA Guide to Traffic Generating Developments, Version 2.2, October 2002
- Technical Direction - Guide to Traffic Generating Developments Updated traffic surveys (TDT 2013/04a)
- Austroads Guide to Road Design:
- Part 4: Intersections and Crossings - General
- Part 4A: Unsignalised and Signalised Intersections
- Murray River Shire Council:
- Local Environmental Plan 2014
- Development Control Plans
- Engineering Guidelines for Subdivisions and Development Standards.


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## 1 Introduction

Trafficworks has been engaged by Habitat Planning on behalf of Perricoota View Pty Ltd to undertake a traffic impact assessment (TIA) for the proposed development of a residential subdivision with a small commercial area at 402-508 Perricoota Road, Moama NSW. The proposed development plan is included in Appendix 1.

For the detail about:

- existing site conditions - see section 2
- description of the proposed development - see section 3.1
- traffic impact of the proposed development - see section 3
- car parking assessment of the proposed development - see section 4
- assessment of the access to the proposed development - see section 5
- our conclusions and recommendations - see section 7.


## 2 Existing conditions

### 2.1 Subject site

The subject site is:

- located at 402-508 Perricoota Road, Moama NSW
- currently used for farmland

Vehicular access to the subject site is currently available via two (2) access points to the existing farm buildings off Perricoota Road.

The street frontage lengths are as follows:

- Perricoota Road: 1,000 m
- Myall Way: 450 m.

Figure 1 shows the site's location, surrounded by other farmland uses.


Figure 1: Location plan (Source: Nearmap)

Figure 2 shows the zoning for the subject site and surrounding area.

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Figure 2: Zoning plan (Source: ePlanning Spatial Viewer - Planning Portal - NSW Government Website)

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### 2.2 Road network

The road network includes:

- Perricoota Road
- Myall Way


### 2.2.1 Perricoota Road

Table 1 describes the features of this road.
Table 1: Perricoota Road features

| Feature | Description |
| :--- | :--- |
| Road type | Local Road |
| Access | Barham Road (Thule) in the northwest to Cobb Highway in the <br> southeast |
| Carriageway | 7.0 wide |
| Road cross section | $-\quad$ Two-lane two way |
|  | -Unsealed shoulders <br> subject site's frontage |
| Speed limit | $100 \mathrm{~km} / \mathrm{h}$ |

Figure 3 and Figure 4 provide further information about the road.


Figure 3: Perricoota Road - View west, with the shared path located on the south side of the road (left of the photo)


Figure 4: Perricoota Road - View east, with the shared path crossing in the foreground and the path extending on the north side of the road (left of the photo)

### 2.2.2 Myall Way

Table 2 describes the features of this road.
Table 2: Myall Way features

| Feature | Description |
| :--- | :--- |
| Road type | Local Road |
| Access | Perricoota Road in the south to farming properties in the north |
| Carriageway | 10.0 wide <br> Road cross section <br>  <br> Speed limit$\quad$Two way |

Figure 5 and Figure 6 provide further information about the road.


Figure 5: Myall Way - View north


Figure 6: Myall Way - View south

### 2.3 Traffic volumes

Council collected traffic volume data on Perricoota Road, approximately 300 m northwest of Twenty Four Lane, from January to February 2015. The survey results are summarised in Table 3 with full counts provided in Appendix 2.

Table 3: Perricoota Road - 2015 traffic volumes

|  | North-westbound | South-eastbound |
| :--- | :--- | :--- |
| AADT (vpd) | 4,268 | 4,265 |
| AM Peak (vph) | 296 | 279 |
| 4PM Peak (vph) | 395 | 245 |

For this assessment, a conservative annual growth rate of $1 \%$ was applied to the traffic volumes along Perricoota Road to forecast 2023 volumes. Table 4 below shows the peak hour volumes on Perricoota Road projected for 2023.

Table 4: Perricoota Road - Projected traffic volumes (2023)

|  | North-westbound | South-eastbound |
| :--- | :--- | :--- |
| AM Peak (vph) | 321 | 302 |
| PM Peak (vph) | 428 | 265 |

### 2.4 Crash history

The TfNSW Centre for Road Safety website was accessed; notably, the Crash and Casualty Statistics database stores details of all injury crashes on roads throughout NSW. Scrutiny of these records indicates that there have been no casualty crashes near the subject site or on Perricoota Road in the last five year period that data is available for (1/01/2017 31/12/2021).

Based on this, we conclude that no trend requires immediate investigation.

### 2.5 Public transport

There are no public transport services along Perricoota Road near the subject site.

### 2.6 Pedestrians and cyclists

There is an off-road shared path along Perricoota Road, with a shared path crossing located approximately 165 m southeast of Layfield Road (opposite the subject site). To the southeast of the shared path crossing, there is a sealed shared path on the north side of Perricoota Road. To the northwest of the shared path crossing is an unsealed shared path on the south side of Perricoota Road.

## 3 Traffic assessment of the proposed development

### 3.1 The proposal

The proposed development consists of the following:

- 140 residential dwellings
- $629 \mathrm{~m}^{2}$ commercial use
- parks and reserves
- off-street car park for the commercial development.

Vehicular access to the proposed development will be via direct access to Perricoota Road, with secondary access provided via Myall Way.

The development is proposed to occur across five (5) stages, with the commercial use, parks, and reserve proposed to be constructed during Stage 2a.
An extract of the proposed development is shown below in Figure 7, with the full development plan provided in Appendix 1.


Figure 7: Development plan extract

### 3.2 Traffic generation

Traffic generation for new developments is typically estimated using the traffic generation rates provided in the RTA Guide to Traffic Generating Developments (2002) and the Technical Direction for the document (TDT 2013/04a) titled 'Guide to Traffic Generating Developments Updated traffic surveys (the updated RTA Guide).

## Residential dwellings

The updated RTA Guide measured the following traffic generation rates for low density residential dwellings in regional areas:

- 7.4 daily vehicle trips per dwelling
- 0.71 weekday morning peak hour vehicle trips per dwelling
- 0.78 weekday evening peak hour vehicle trips per dwelling

Based on the rates above, the proposed 140 residential lots are expected to generate the following:

- 1,036 daily vehicle trips
- 99 weekday morning peak hour vehicle trips
- 109 weekday evening peak hour vehicle trips


## Commercial

The RTA Guide notes the following indicative traffic generation rates for commercial premises are applicable:

- 10 daily vehicle trips per $100 \mathrm{~m}^{2}$ gross floor area
- 2 peak hour vehicle trips per $100 \mathrm{~m}^{2}$ gross floor area

This assessment assumes that the peak hour trip generation rate applies to morning and evening peaks.

Based on the rates and assumptions above, the proposed commercial use is expected to generate the following:

- 63 daily vehicle trips
- 13 peak hour vehicle trips for both the morning and evening peak periods


## Other Uses

The splash park and playground uses are considered to be ancillary to the commercial and residential uses and would not generate their own traffic demand.

There is an existing dwelling (lot 61) that will continue to be occupied following the proposed development and will retain the current access to Perricoota Road and, as such, will have no impact on the proposed access points.

## Traffic generation summary

The traffic generated by the proposed development is summarised in Table 5.
Table 5: Daily and peak traffic flow for the proposed development

| Development Component \& Scale | Trip Generation Rate |  |  | Trip Generation (No. of vehicles) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Morning peak hour | Afternoon peak hour | Daily | Morning peak hour | Afternoon peak hour | Daily |
| 140 residential lots | 0.71 | 0.78 | 7.4 trips per dwelling | 99 | 109 | 1,036 |
| $629 \mathrm{~m}^{2}$ <br> commercial | 2 trips per $100 \mathrm{~m}^{2}$ GFA |  | 10 trips per $100 \mathrm{~m}^{2}$ GFA | 13 |  | 63 |
| Total |  |  |  | 112 | 122 | 1,099 |

Based on the above, the proposed development is anticipated to generate approximately:

- 1,099 vehicles per day (vpd) to and from the development
- morning and afternoon peaks of 112 and 122 vehicles per hour (vph), respectively.

Conclusion 1: The proposed development at completion will likely generate total daily traffic volumes of $1,099 \mathrm{vpd}$ with a morning peak of 112 vph and an afternoon peak of 122 vph .

### 3.3 Traffic distribution assumptions

Our traffic distribution assumptions are that:

- Residential component
- AM peak hour
- PM peak hour 60\% entering / 40\% leaving
- Commercial component
- AM peak hour $50 \%$ entering / $50 \%$ leaving
- PM peak hour $50 \%$ entering / $50 \%$ leaving
- $80 \%$ of the residential lots will utilise Perricoota Road, and the remaining $20 \%$ will use Myall Way
- $100 \%$ of the commercial traffic will utilise Perricoota Road
- at Perricoota Road, $95 \%$ of the traffic will travel east toward Moama town centre, with the remaining $5 \%$ heading west


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### 3.4 Anticipated traffic volumes

The proposed development will be constructed over five (5) stages, with the construction commencing in 2023 and stage 1 being completed in 2024. Assuming a stage is constructed each year, full development of the residential subdivision will be completed by 2028.

Figure 8 shows the anticipated peak hour traffic volumes at the full completion of the development.


Figure 8: Anticipated peak hour traffic volumes
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## 4 Car parking assessment of the proposed development

### 4.1 Planning scheme car parking assessment

Table 4.1 of the Murray Development Control Plan (2012) sets out the requirements for providing car parking for various land uses.

Specifically, Table 4.1 requires that 1 car parking spaces (including disabled car parking spaces) are needed per $40 \mathrm{~m}^{2}$ of the gross floor area of the commercial premises.

Table 6 provides a statutory parking assessment of the proposed development's components and confirms a car parking requirement of 16 spaces.

The proposal has a car parking requirement of 16 car parking spaces which is satisfied by the provision of 63 car parking spaces within this area.

Table 6: Statutory Car Parking Requirement

| Use | Rate | Measure | Requirement |
| :--- | :--- | :--- | :--- |
| Commercial | 1 car parking space for each <br> $40 \mathrm{~m}^{2}$ | $629 \mathrm{~m}^{2}$ | 16 spaces |

Conclusion 2: The proposed commercial premises has a car parking requirement of 16 spaces which is satisfied by the provision of 63 car parking spaces in this area.

Car parking for each residential lot will be provided within each lot.

## 5 Access to the subject site

### 5.1 Site access - Intersection SISD requirement

The visibility criterion typically applied to intersections is Safe Intersection Sight Distance (SISD). Figure 9 shows the SISD, which:

- is nominated in the Austroads Guide to Road Design, Part 4A (AGRD4) as the minimum distance that should be provided on a major road at any intersection (refer to Section 3.2.2 in AGRD4A)
- provides sufficient distance for a driver of a vehicle on the major road:
- to observe a vehicle from the minor access approach moving into a collision situation, e.g., in the worst case, stalling across the traffic lanes
- to decelerate to a stop before reaching the collision point.

The minimum SISD criterion, specified in Table 3.2 of AGRD4A, requires clear visibility for a desirable minimum distance of 285 m , relating to the general reaction time RT of 2 seconds and a design speed of $110 \mathrm{~km} / \mathrm{h}$ (posted speed limit plus $10 \mathrm{~km} / \mathrm{h}$ ).


Figure 9: Safe Intersection Sight Distance (SISD) (Source: Figure 3.2 from AGRD4)

Based on site observations, the visibility requirement, measured 5.0 m back from the edge of the traffic lane, is satisfied at the proposed development accesses on Perricoota Road and Myall Way, as demonstrated in Figure 10 to Figure 13 below.


Figure 10: Perricoota Road at site access - View west


Figure 11: Perricoota Road at site access - View east


Figure 12: Myall Way at site access - View north


Figure 13: Myall Way at site access - View south
Conclusion 3: Sight distance is provided at both proposed access points to the external network; however, this would have to be confirmed during detailed design.

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### 5.2 Turn provisions impact

The traffic turning from major roads into minor roads should not delay through traffic.
Generally, turn treatments from major roads into minor roads at sign-controlled intersections are provided for safe and efficient intersection operation.

Figure 8 previously shown in the report provides the anticipated traffic generated from the proposed development. Figure 14 shows the formulas determining the major road volume (QM).

The results were then applied to Figure 3.26, Austroads Guide to Traffic Management Part 6 (AGTM6), to determine the turning treatments for the intersections.


Figure 14: Formulas used to determine major road traffic (Source: Figure 3.26 from AGTM6)

### 5.2.1 Turn lane treatments

Traffic volumes help determine appropriate turn lane treatments at access intersections to development sites.

Table 10 in Appendix 3 - Turn treatments summarises the various types of left and right turn treatments, as defined in the AGRD4.

### 5.2.2 Anticipated conditions for Perricoota Road / Development Access intersection

To determine anticipated conditions at the intersection, traffic volumes from Section 2.3 were used to determine the warrants shown in

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Table 7 and were applied in Figure 15.

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Table 7: Turn lane treatments on Perricoota Road / Development Access - anticipated conditions

| Road | Peak Period | Left Turn $Q_{L}$ (vph) | Right Turn $\mathbf{Q}_{\mathrm{R}}$ (vph) | Through $\mathbf{Q}_{\text {T }}(\mathrm{vph})$ |  | $\mathbf{Q}_{\mathbf{M}}$ <br> Left Turn | Qm <br> Right <br> Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| Perricoota Road | AM | 1 | 21 | $\mathrm{Q}_{\text {T1 }}$ | 343 | 344 | 688 |
|  |  |  |  | $\mathrm{Q}_{\text {T2 }}$ | 344 |  |  |
|  |  |  |  |  |  |  |  |
|  | PM | 3 | 55 | $\mathrm{Q}_{\text {11 }}$ | 471 | 293 | 767 |
|  |  |  |  |  |  |  |  |
|  |  |  |  | $\mathrm{Q}_{\text {T2 }}$ | 293 |  |  |



Figure 15: Graph used to determine the turn treatments on Perricoota Road at the development access intersection - anticipated conditions

Based on the data gathered and reported in this section, our key observations are the:

- right turn from Perricoota Road into the development meets the warrants for a CHR(s) treatment in the morning and afternoon peak periods
- left turn from Perricoota Road into the development meets the warrants for a BAL treatment in the morning and afternoon peak periods.

Conclusion 4: The Perricoota Road / Development Access intersection warrants for a CHR and a BAL treatment.

Recommendation 1: Provide a CHR and BAL treatment for the Perricoota Road / Development Access intersection.

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### 5.2.3 Anticipated conditions for Perricoota Road / Myall Way intersection

To determine anticipated conditions at the intersection, traffic volumes from Section 2.3 were used to determine the warrants shown in Table 8 and were applied in Figure 16.

Table 8: Turn lane treatments on Perricoota Road / Myall Way - anticipated conditions

| Road | Peak Period | Left Turn QL (vph) | Right Turn $\mathbf{Q}_{\mathrm{R}}$ (vph) | Through $\mathbf{Q}_{\text {T }}(\mathbf{v p h})$ |  | $\mathbf{Q m}_{\text {M }}$ | $Q_{M}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Left Turn | Right Turn |
| Perricoota <br> Road | AM | 0 | 6 | $\mathrm{Q}_{\text {T1 }}$ | 321 | 319 | 640 |
|  |  |  |  | $\mathrm{Q}_{\text {T2 }}$ | 319 |  |  |
|  | PM | 1 | 21 | $\mathrm{Q}_{11}$ | 452 | 282 | 734 |
|  |  |  |  |  |  |  |  |
|  |  |  |  | $\mathrm{Q}_{\text {T2 }}$ | 282 |  |  |



Figure 16: Graph used to determine the turn treatments on Perricoota Road at the Myall Way intersection anticipated conditions
Based on the data gathered and reported in this section, our key observations are the:

- right turn from Perricoota Road into the development meets the warrants for a CHR treatment in the afternoon peak period
- left turn from Perricoota Road into the development meets the warrants for a BAL treatment in the morning and afternoon peak periods.

Conclusion 5: The Perricoota Road / Myall Way intersection warrants for a CHR and a BAL treatment.

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Recommendation 2: Provide a CHR and BAL treatment for the Perricoota Road / Myall Way intersection.

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## 6 Development internal road layout

The proposed internal road network and access points onto the abutting road network (shown in Appendix 1) generally meet good urban design principles. They offer a high level of road amenity, connectivity, and permeability.

The proposed internal network should meet the urban road characteristics, and requirements set out in the Infrastructure Design Manual (IDM) and Murray Shire Council: Engineering Guidelines for Subdivisions and Development Standards.

### 6.1 Speed zoning and traffic calming

The proposed development is expected to operate under the default urban $50 \mathrm{~km} / \mathrm{h}$ speed limit. The design of the Local Access streets should aim to meet the Murray Shire Council: Engineering Guidelines for Subdivisions and Development Standards target speeds of $30 \mathrm{~km} / \mathrm{h}$ and be self-enforceable by installing traffic calming devices along long straight sections of road.

Austroads Guide to Traffic Management Part 8: Local Area Traffic Management (AGTM8) indicates that street section lengths (i.e. between slow or near-stop conditions) should be kept below $200 \mathrm{~m}-250 \mathrm{~m}$ for target speeds of around $50 \mathrm{~km} / \mathrm{h}$.

Some internal roads exceed 250 m in length as shown in Figure 17, so traffic calming devices (such as slow points) should be considered to ensure safe travel speeds.


Figure 17: Non-compliant street sections

Recommendation 3: implement speed zoning and traffic calming for the road layout per AGTM8 and Murray Shire Council: Engineering Guidelines for Subdivisions and Development Standards. Traffic management devices (such as slow points) are required for straight sections of road length of 200 m , as highlighted in Figure 17.

### 6.2 Intersection design

The proposed development contains one bend with a traffic island, and all intersections being T-intersections, enhancing safety and minimising potential confusion for motorists at intersections. Intersections should be designed in locations to ensure suitable safe intersection sight distances can be provided.

The minimum SISD criterion specified in AGRD4A requires clear visibility for a desirable minimum distance of 97 m for a design speed of $50 \mathrm{~km} / \mathrm{h}$. This sight distance applies to each internal intersection proposed within the development site. Any landscaping within the verge near an intersection should be positioned not to obscure or obstruct drivers' line of sight.

Recommendation 4: ensure all intersections are designed to have clear visibility and meet minimum SISD criteria.

### 6.3 On-street car parking

On-street car parking is proposed to be permitted along both sides of each access street. Car parking should be restricted on approach to intersections (within 10 metres for unsignalised intersections) to ensure that adequate sight distances are provided in each direction along the frontage road.

Recommendation 5: restrict on-street car parking within 10 m of intersections to ensure adequate sight distance.

### 6.4 Emergency and service vehicle access

All roads within the development need to provide enough space so that emergency vehicles, waste collection vehicles and street-cleaning vehicles can carry out their functions while travelling in a forward direction only throughout the development.

Detailed design should ensure roads are designed to cater for an 8.8 m long service vehicle negotiating the road network in a forward direction, specifically ensuring that service vehicles can safely negotiate sharp curves in the road alignment and through all intersections within the subject site. Car parking should be restricted within approximately 15 m on each approach to sharp curves to ensure service vehicle access will be achieved.

Some residential lots are accessed via a narrow accessway. Although narrow, these accessways are relatively short and only serve a single dwelling each.

Recommendation 6: detailed design should ensure streets provide enough space for an 8.8 m emergency/service vehicle to travel through the network safely within court bowls and around bends in the road.

### 6.5 Termination of internal roads

Many of the internal roads are proposed to be temporarily terminated at different stages throughout the development. In the interim, the internal roads will always need to allow for service vehicles to travel in a forward direction. Therefore, a temporary court bowl cul-desac treatment has been provided at each location where an internal road is to be truncated.

Conclusion 6: temporary court bowl cul-de-sac treatment has been shown at the termination of all roads for each stage.

### 6.6 Pedestrian access

Council requirements necessitate footpaths on one side only for the 20 m wide road reserves and on both sides for 30 m wide road reserves.

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Recommendation 7: footpaths should be provided on one side only for the 20 m wide road reserves and on both sides for 30 m wide road reserves.

There is an existing shared path along Perricoota Road with a shared path crossing located approximately 165 m southeast of Layfield Road (about 75 m northwest of the proposed development). It is recommended to link the footpath network to the existing shared path and provide an additional crossing nx1orthwest of Layfield Road.

Recommendation 8: connect to the existing shared path and an additional crossing northwest of Layfield Road.

### 6.7 Proposed development road

The proposed development road to Perricoota Road satisfies the rural residential road characteristics and requirements set out in the Council Engineering Guidelines for Subdivisions and Development Standards. It is noted that the proposed development road's characteristics are consistent with other local roads near the subject site.

Conclusion 7: the proposed development road satisfies the requirements set out in Council's engineering guidelines and is consistent with nearby local roads.

### 6.8 Myall Way upgrade

Myall Way is an unsealed local road to the west of the subject site. A secondary access from the proposed development is proposed to Myall Way for the residential lots on the western side to access Perricoota Road. As such, it is recommended to upgrade Myall Way between Perricoota Road and the development of the west access as part of the proposed development.

It is anticipated that the traffic generated from the proposed development will only travel along the section of Myall Way between Perricoota Road and the western development access. Negligible traffic from the proposed development is expected to utilise Myall Way north of the development of the west access.

Recommendation 9: Myall Way should be sealed and constructed per the Council Engineering Guidelines for Subdivisions and Development Standards between Perricoota Road and the western development access.

## 7 Conclusions and recommendations

We conclude there are no traffic engineering reasons that would prevent the development from proceeding, as outlined below:

- at completion, the proposed development will likely generate total daily traffic volumes of $1,099 \mathrm{vpd}$ with a morning peak of 112 vph and an afternoon peak of 122 vph .
- the proposed commercial premises has a car parking requirement of 16 spaces which is satisfied by the provision of 63 car parking spaces in this area.
- sight distance is provided at both proposed access points to the external network; however, this would have to be confirmed during detailed design.
- the Perricoota Road / Development Access intersection warrants for a CHR and a BAL treatment.
- the Perricoota Road / Myall Way intersection warrants for a CHR and a BAL treatment.
- temporary court bowl cul-de-sac treatments have been shown at the termination of all roads for each stage.

However, this TIA has identified a number of recommendations that need to be addressed:

- Recommendation 1: provide a CHR and BAL treatment for the Perricoota Road / Development Access intersection.
- Recommendation 2: provide a CHR and BAL treatment for the Perricoota Road / Myall Way intersection.
- Recommendation 3: implement speed zoning and traffic calming for the road layout per AGTM8 and Murray Shire Council: Engineering Guidelines for Subdivisions and Development Standards. Traffic management devices (such as slow points) are required for straight sections of road length of 200 m .
- Recommendation 4: ensure all intersections are designed to have clear visibility and meet minimum SISD criteria.
- Recommendation 5: restrict on-street car parking within 10m of intersections to ensure adequate sight distance.
- Recommendation 6: detailed design should ensure streets provide enough space for an 8.8 m emergency/service vehicle to travel through the network safely within court bowls and around bends in the road.
- Recommendation 7: footpaths should be provided on one side only for the 20 m wide road reserves and on both sides for 30 m wide road reserves.
- Recommendation 8: connect to the existing shared path and an additional crossing northwest of Layfield Road.


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- Recommendation 9: Myall Way should be sealed and constructed per the Council Engineering Guidelines for Subdivisions and Development Standards between Perricoota Road and the western development access.


## Appendix 1 - Development plan



## Appendix 2 - Traffic Survey Results

## MetroCount Traffic Executive Weekly Vehicle Counts

## WeeklyVehicle-24 -- English (ENA)

Datasets:
Site: [1058] Perricoota rd 200 mtrs east of Merool rd

## Attribute:

Direction:
Survey Duration:
Perricoota rd
6 - West bound $A>B$, East bound $B>A$. Lane: 0

Zone:
File:
Identifier:
Algorithm:
13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019,

Data type:
105807Jun2019.EC0 (Plus )

Profile:
Filter time:
Included classes:
13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019 (13.9277)
Speed range:
Direction:
Separation:
Name:
Scheme:
EC35RJG1 MC56-L5 [MC55] (c)Microcom 19Oct04
Factory default axle (v5.02)
Axle sensors - Paired (Class/Speed/Count)

Units:
In profile:
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
$10-160 \mathrm{~km} / \mathrm{h}$.
North, East, South, West (bound), P = East, Lane $=0-16$
Headway > 0 sec, Span 0-100 metre
Default Profile
Vehicle classification (AustRoads94)
Metric (metre, kilometre, $\mathrm{m} / \mathrm{s}, \mathrm{km} / \mathrm{h}$, kg , tonne)
Vehicles = 96506 / 96525 (99.98\%)

## Weekly Vehicle Counts

WeeklyVehicle-24

Site:
Description:
Filter time:
Scheme:
Filter:
1058.0.1WE

Perricoota rd 200 mtrs east of Merool rd
13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019
Vehicle classification (AustRoads94)
Cls(1-12) $\operatorname{Dir}($ NESW $) \operatorname{Sp}(10,160)$ Headway(>0) Span(0-100) Lane(0-16)


*     - No data.


## Weekly Vehicle Counts

WeeklyVehicle-24

Site:
Description:
Filter time:
Scheme:
Filter:
1058.0.1WE

Perricoota rd 200 mtrs east of Merool rd
13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019
Vehicle classification (AustRoads94)
Cls(1-12) $\operatorname{Dir}($ NESW $) \operatorname{Sp}(10,160)$ Headway(>0) Span(0-100) Lane(0-16)

|  | 27 Mon | Tue <br> 28 May | Wed $29 \text { May }$ | Thu <br> 30 May | Fri <br> 31 May | $01 \frac{\text { Sat }}{\text { Jun }}$ | $02 \frac{\text { Sun }}{J u n}$ | Averag $1-5$ | s $1-7$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hour |  |  |  |  |  |  |  |  |  |
| 0000-0100 | 13 | 9 | 12 | 21 | 8 | 25 | 67 | 12.6 | 22.1 |
| 0100-0200 | 8 | 5 | 9 | 2 | 1 | 20 | 23 | 5.0 | 9.7 |
| 0200-0300 | 4 | 4 | 2 | 5 | 4 | 16 | 33 | 3.8 | 9.7 |
| 0300-0400 | 3 | 2 | 3 | 3 | 4 | 5 | 19 | 3.0 | 5.6 |
| 0400-0500 | 31 | 18 | 16 | 20 | 19 | 9 | 18 | 20.8 | 18.7 |
| 0500-0600 | 88 | 92 | 79 | 90 | 89 | 31 | 19 | 87.6 | 69.7 |
| 0600-0700 | 190 | 215 | 210 | 194 | 176 | 103 | 43 | 197.0 | 161.6 |
| 0700-0800 | 397 | 415 | 401 | 385 | 377 | 204 | 117 | 395.0 | 328.0 |
| 0800-0900 | 618 | 634 | 599 | 569 | 613 | 335 | 256 | 606.6 | 517.7 |
| 0900-1000 | 512 | 392 | 429 | 442 | 436 | 407 | 386 | 442.2 | 429.1 |
| 1000-1100 | 455 | 476 | 442 | 512 | 485 | 541 | 510 | 474.0 | 488.7 |
| 1100-1200 | 471 | 502 | 536 | 571 | 506 | 594 | 510 | 517.2 | 527.1 |
| 1200-1300 | 511 | 514 | 538 | 584 | 529 | 592 | 592 | 535.2 | 551.4 |
| 1300-1400 | 508 | 503 | 459 | 525 | 536 | 552 | 494 | 506.2 | 511.0 |
| 1400-1500 | 512 | 599 | 575 | 566 | 510 | 571 | 558 | 552.4 | 555.9 |
| 1500-1600 | 599 | 663 | 704 | 632 | 696 | 468 | 459 | 658.8 | 603.0 |
| 1600-1700 | 571 | 549 | 614 | 650 | 673 | 494 | 452 | 611.4 | 571.9 |
| 1700-1800 | 547 | 637 | 672 | 644 | 618 | 482 | 373 | 623.6 | 567.6 |
| 1800-1900 | 298 | 372 | 353 | 404 | 435 | 436 | 267 | 372.4 | 366.4 |
| 1900-2000 | 151 | 185 | 241 | 212 | 214 | 222 | 180 | 200.6 | 200.7 |
| 2000-2100 | 122 | 170 | 188 | 184 | 219 | 169 | 119 | 176.6 | 167.3 |
| 2100-2200 | 78 | 105 | 147 | 134 | 179 | 122 | 84 | 128.6 | 121.3 |
| 2200-2300 | 25 | 40 | 71 | 51 | 112 | 104 | 33 | 59.8 | 62.3 |
| 2300-2400 | 12 | 17 | 20 | 23 | 53 | 72 | 17 | 25.0 | 30.6 |
| Totals |  |  |  |  |  |  |  |  |  |
| 0700-1900 | 5999 | 6256 | 6322 | 6484 | 6414 | 5676 | 4974 | 6295.0 | 6017.9 |
| 0600-2200 | 6540 | 6931 | 7108 | 7208 | 7202 | 6292 | 5400 | 6997.8 | 6668.7 |
| 0600-0000 | 6577 | 6988 | 7199 | 7282 | 7367 | 6468 | 5450 | 7082.6 | 6761.6 |
| 0000-0000 | 6724 | 7118 | 7320 | 7423 | 7492 | 6574 | 5629 | 7215.4 | 6897.1 |
| AM Peak | 0800 | 0800 | 0800 | 1100 | 0800 | 1100 | 1100 |  |  |
|  | 618 | 634 | 599 | 571 | 613 | 594 | 510 |  |  |
| PM Peak | 1500 | 1500 | 1500 | 1600 | 1500 | 1200 | 1200 |  |  |
|  | 599 | 663 | 704 | 650 | 696 | 592 | 592 |  |  |

[^0]
## Weekly Vehicle Counts

WeeklyVehicle-24

Site:
Description:
Filter time:
Scheme:
Filter:
1058.0.1WE

Perricoota rd 200 mtrs east of Merool rd
13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019
Vehicle classification (AustRoads94)
Cls(1-12) $\operatorname{Dir}($ NESW $) \operatorname{Sp}(10,160)$ Headway(>0) Span(0-100) Lane(0-16)

|  | $03 \begin{aligned} & \text { Mon } \\ & \text { Jun } \end{aligned}$ | Tue <br> 04 Jun | $05 \begin{aligned} & \text { Wed } \\ & \text { Jun } \end{aligned}$ | $06 \begin{aligned} & \text { Thu } \\ & \text { Jun } \end{aligned}$ | $07 \begin{aligned} & \text { Fri } \\ & \text { Jun } \end{aligned}$ | $08 \frac{\text { Sat }}{\text { Jun }}$ | $09 \frac{\mathrm{Sun}}{\mathrm{Jun}}$ | Avera $1-5$ | $1 \text { - }$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hour |  |  |  |  |  |  |  |  |  |
| 0000-0100 | 12 | 9 | 16 | 20 | 10 | * | * | 13.4 | 13.4 |
| 0100-0200 | 4 | 5 | 6 | 11 | 6 | * | * | 6.4 | 6.4 |
| 0200-0300 | 5 | 4 | 2 | 8 | 6 | * | * | 5.0 | 5.0 |
| 0300-0400 | 6 | 2 | 3 | 2 | 2 | * | * | 3.0 | 3.0 |
| 0400-0500 | 20 | 27 | 18 | 25 | 17 | * | * | 21.4 | 21.4 |
| 0500-0600 | 92 | 95 | 80 | 91 | 84 | * | * | 88.4 | 88.4 |
| 0600-0700 | 187 | 203 | 189 | 208 | 183 | * | * | 194.0 | 194.0 |
| 0700-0800 | 366 | 389 | 388 | 427 | 389 | * | * | 391.8 | 391.8 |
| 0800-0900 | 585 | 629 | 718 | 627 | 583 | * | * | 628.4 | 628.4 |
| 0900-1000 | 435 | 391 | 457 | 440 | 520 | * | * | 448.6 | 448.6 |
| 1000-1100 | 390 | 429 | 459 | 513 | 576 | * | * | 473.4 | 473.4 |
| 1100-1200 | 404 | 517 | 458 | 551 | 170 | * | * | 420.0 | 420.0 |
| 1200-1300 | 430 | 515 | 488 | 565 | * | * | * | 499.5 | 499.5 |
| 1300-1400 | 432 | 507 | 485 | 490 | * | * | * | 478.5 | 478.5 |
| 1400-1500 | 517 | 539 | 530 | 593 | * | * | * | 544.8 | 544.8 |
| 1500-1600 | 588 | 605 | 722 | 688 | * | * | * | 650.8 | 650.8 |
| 1600-1700 | 506 | 617 | 662 | 661 | * | * | * | 611.5 | 611.5 |
| 1700-1800 | 520 | 597 | 627 | 640 | * | * | * | 596.0 | 596.0 |
| 1800-1900 | 300 | 379 | 433 | 425 | * | * | * | 384.3 | 384.3 |
| 1900-2000 | 154 | 213 | 196 | 214 | * | * | * | 194.3 | 194.3 |
| 2000-2100 | 99 | 169 | 194 | 218 | * | * | * | 170.0 | 170.0 |
| 2100-2200 | 75 | 99 | 148 | 118 | * | * | * | 110.0 | 110.0 |
| 2200-2300 | 33 | 36 | 66 | 58 | * | * | * | 48.3 | 48.3 |
| 2300-2400 | 19 | 20 | 31 | 24 | * | * | * | 23.5 | 23.5 |
| Totals |  |  |  |  |  |  |  |  |  |
| 0700-1900 | 5473 | 6114 | 6427 | 6620 | * | * | * | 6127.5 | 6127.5 |
| 0600-2200 | 5988 | 6798 | 7154 | 7378 | * | * | * | 6795.7 | 6795.7 |
| 0600-0000 | 6040 | 6854 | 7251 | 7460 | * | * | * | 6867.4 | 6867.4 |
| 0000-0000 | 6179 | 6996 | 7376 | 7617 | * | * | * | 7005.1 | 7005.1 |
| AM Peak | 0800 | 0800 | 0800 | 0800 | 0800 | * | * |  |  |
|  | 585 | 629 | 718 | 627 | 583 | * | * |  |  |
| PM Peak | 1500 | 1600 | 1500 | 1500 | * | * | * |  |  |
|  | 588 | 617 | 722 | 688 | * | * | * |  |  |

[^1]
## MetroCount Traffic Executive

## Speed Statistics

## SpeedStat-25 -- English (ENA)

Datasets:
Site: [1058] Perricoota rd 200 mtrs east of Merool rd
Attribute:
Direction:
Survey Duration: $\quad$ 13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019,
Zone:
File: 105807Jun2019.EC0 (Plus )
Identifier: EC35RJG1 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm: $\quad$ Factory default axle (v5.02)
Data type:
Axle sensors - Paired (Class/Speed/Count)
Profile:
Filter time: $\quad$ 13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019 (13.9277)
Included classes: $\quad 1,2,3,4,5,6,7,8,9,10,11,12$
Speed range:
Direction:
Separation:
Name:
Scheme:
Units:
In profile:
$10-160 \mathrm{~km} / \mathrm{h}$.
North, East, South, West (bound), P = East, Lane $=0-16$
Headway > 0 sec, Span 0-100 metre
Default Profile
Vehicle classification (AustRoads94)
Metric (metre, kilometre, $\mathrm{m} / \mathrm{s}, \mathrm{km} / \mathrm{h}$, kg , tonne)
Vehicles = 96506 / 96525 (99.98\%)

## Speed Statistics

## SpeedStat-25

Site:
Description:
Filter time:
1058.0.1WE

Scheme: 13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019
Vehicle classification (AustRoads94)
Filter: $\quad \operatorname{Cls}(1-12) \operatorname{Dir}(N E S W) \operatorname{Sp}(10,160)$ Headway $(>0)$ Span(0-100) Lane(0-16)
Vehicles = 96506
Posted speed limit $=80 \mathrm{~km} / \mathrm{h}$, Exceeding $=7182$ (7.442\%), Mean Exceeding $=83.74 \mathrm{~km} / \mathrm{h}$
Maximum $=156.8 \mathrm{~km} / \mathrm{h}$, Minimum $=16.9 \mathrm{~km} / \mathrm{h}$, Mean $=70.3 \mathrm{~km} / \mathrm{h}$
$85 \%$ Speed $=77.40 \mathrm{~km} / \mathrm{h}, 95 \%$ Speed $=81.36 \mathrm{~km} / \mathrm{h}$, Median $=70.92 \mathrm{~km} / \mathrm{h}$
20 km/h Pace $=61-81$, Number in Pace $=80650$ (83.57\%)
Variance $=58.28$, Standard Deviation $=7.63 \mathrm{~km} / \mathrm{h}$

## Speed Bins (Partial days)



Total Speed Rating $=0.00$
Total Moving Energy (Estimated) $=0.00$

## Speed limit fields (Partial days)

|  | Limit | Below | Above |  |
| :--- | :--- | :--- | :--- | :--- |
| 0 | 80 | (PSL) | 89324 | $92.6 \%$ |
| $7.4 \%$ |  |  |  |  |

## MetroCount Traffic Executive Weekly Vehicle Counts

## WeeklyVehicle-22 -- English (ENA)

Datasets:
Site:

## Attribute:

Direction:
Survey Duration: 13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019,
Zone:
File: 105907Jun2019.EC0 (Plus )
Identifier: EB61FS4P MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:
Factory default axle (v5.02)
Data type:
Axle sensors - Paired (Class/Speed/Count)
Profile:
Filter time:
Included classes:
13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019 (13.9058)
Speed range:
Direction:
Separation:
Name:
Scheme:
Units:
In profile:
[1059] Perricoota rd 200 mtrs west of Merool rd
Perricoota rd
8 - East bound $A>B$, West bound $B>A$. Lane: 0

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
10-160 km/h.
North, East, South, West (bound), P = East, Lane $=0-16$
Headway > 0 sec, Span 0-100 metre
Default Profile
Vehicle classification (AustRoads94)
Metric (metre, kilometre, m/s, km/h, kg, tonne)
Vehicles = $63788 / 83366$ (76.52\%)

## Weekly Vehicle Counts

WeeklyVehicle-22

Site:
Description:
Filter time:
Scheme:
Filter:

|  | $\begin{aligned} & \text { Mon } \\ & 20 \text { May } \end{aligned}$ | $\begin{aligned} & \text { Tue } \\ & 21 \text { May } \end{aligned}$ | 22 Med | $\begin{aligned} & \text { Thu } \\ & 23 \text { May } \end{aligned}$ | $24 \begin{aligned} & \text { Fri } \\ & \text { May } \end{aligned}$ | $25 \frac{\text { Sat }}{\text { May }}$ | $26 \frac{\text { Sun }}{M a y}$ |  | Averages $1-5$ | 1-7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hour |  |  |  |  |  |  |  |  |  |  |
| 0000-0100 | * | * | * | * | * | 44 | 40 | । | * | 42.0 |
| 0100-0200 | * | * | * | * | * | 29 | 44 | । | * | 36.5 |
| 0200-0300 | * | * | * | * | * | 31 | 33 | । | * | 32.0 |
| 0300-0400 | * | * | * | * | * | 1 | 27 |  | * | 14.0 |
| 0400-0500 | * | * | * | * | * | 14 | 11 |  | * | 12.5 |
| 0500-0600 | * | * | * | * | * | 36 | 18 |  | * | 27.0 |
| 0600-0700 | * | * | * | * | * | 115 | 41 | । | * | 78.0 |
| 0700-0800 | * | * | * | * | * | 278 | 96 | । | * | 187.0 |
| 0800-0900 | * | * | * | * | * | 456 | 256 |  | * | 356.0 |
| 0900-1000 | * | * | * | * | * | 533 | 389 |  | * | 461.0 |
| 1000-1100 | * | * | * | * | * | 585 | 496 |  | * | 540.5 |
| 1100-1200 | * | * | * | * | * | 663 | 579 |  | * | 621.0 |
| 1200-1300 | * | * | * | * | * | 594 | 593 |  | * | 593.5 |
| 1300-1400 | * | * | * | * | 466 | 563 | 564 |  | 466.0 | 531.0 |
| 1400-1500 | * | * | * | * | 646 | 475 | 533 |  | 646.0 | 551.3 |
| 1500-1600 | * | * | * | * | 652 | 412 | 438 |  | 652.0 | 500.7 |
| 1600-1700 | * | * | * | * | 655 | 457 | 445 |  | 655.0 | 519.0 |
| 1700-1800 | * | * | * | * | 561 | 450 | 323 |  | 561.0 | 444.7 |
| 1800-1900 | * | * | * | * | 432 | 321 | 241 |  | 432.0 | 331.3 |
| 1900-2000 | * | * | * | * | 211 | 211 | 136 |  | 211.0 | 186.0 |
| 2000-2100 | * | * | * | * | 147 | 129 | 89 |  | 147.0 | 121.7 |
| 2100-2200 | * | * | * | * | 174 | 131 | 87 |  | 174.0 | 130.7 |
| 2200-2300 | * | * | * | * | 105 | 99 | 50 |  | 105.0 | 84.7 |
| 2300-2400 | * | * | * | * | 51 | 84 | 22 |  | 51.0 | 52.3 |
| Totals |  |  |  |  |  |  |  |  |  |  |
| 0700-1900 | * | * | * | * | * | 5787 | 4953 |  | * 5 | 5637.0 |
| 0600-2200 | * | * | * | * | * | 6373 | 5306 |  | * | 6153.3 |
| 0600-0000 | * | * | * | * | * | 6556 | 5378 |  | * | 6290.3 |
| 0000-0000 | * | * | * | * | * | 6711 | 5551 | \| | * | 6454.3 |
| AM Peak | * | * | * | * | * | 1100 | 1100 | I |  |  |
|  | * | * | * | * | * | 663 | 579 | \| |  |  |
| PM Peak | * | * | * | * | * | 1200 | 1200 |  |  |  |
|  |  | * | * | * | * | 594 |  |  |  |  |

*     - No data.


## Weekly Vehicle Counts

WeeklyVehicle-22
Site:
Description: 1059.0.1EW
Filter time:
Scheme:
Filter:

Perricoota rd 200 mtrs west of Merool rd
13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019
Vehicle classification (AustRoads94)
Cls(1-12) $\operatorname{Dir}($ NESW $) \operatorname{Sp}(10,160)$ Headway(>0) Span(0-100) Lane(0-16)

|  | $27 \begin{array}{r}\text { Mon } \\ \text { May }\end{array}$ | Tue $28 \text { May }$ | $\begin{aligned} & \text { Wed } \\ & 29 \text { May } \end{aligned}$ | $\begin{aligned} & \text { Thu } \\ & 30 \text { May } \end{aligned}$ | $\begin{array}{r} \text { Fri } \\ 31 \text { May } \end{array}$ | $01 \frac{\text { Sat }}{\text { Jun }}$ | $02 \frac{\text { Sun }}{\text { Jun }}$ | Avera $1-5$ | s-7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hour |  |  |  |  |  |  |  |  |  |
| 0000-0100 | 8 | 4 | 6 | 7 | 4 | 13 | 28 | 5.8 | 10.0 |
| 0100-0200 | 11 | 4 | 5 | 2 | 1 | 12 | 14 | 4.6 | 7.0 |
| 0200-0300 | 4 | 2 | 2 | 2 | 2 | 5 | 18 | 2.4 | 5.0 |
| 0300-0400 | 6 | 0 | 3 | 1 | 3 | 2 | 13 | 2.6 | 4.0 |
| 0400-0500 | 33 | 6 | 10 | 9 | 8 | 7 | 8 | 13.2 | 11.6 |
| 0500-0600 | 85 | 72 | 57 | 40 | 43 | 16 | 12 | 59.4 | 46.4 |
| 0600-0700 | 207 | 166 | 157 | 100 | 103 | 59 | 25 | 146.6 | 116.7 |
| 0700-0800 | 422 | 249 | 235 | 210 | 218 | 125 | 56 | 266.8 | 216.4 |
| 0800-0900 | 695 | 404 | 408 | 278 | 359 | 157 | 120 | 428.8 | 345.9 |
| 0900-1000 | 506 | 254 | 279 | 250 | 253 | 234 | 229 | 308.4 | 286.4 |
| 1000-1100 | 502 | 315 | 227 | 282 | 278 | 326 | 295 | 320.8 | 317.9 |
| 1100-1200 | 505 | 326 | 305 | 347 | 292 | 332 | 307 | 355.0 | 344.9 |
| 1200-1300 | 544 | 278 | 292 | 325 | 300 | 324 | 299 | 347.8 | 337.4 |
| 1300-1400 | 586 | 303 | 259 | 298 | 288 | 262 | 266 | 346.8 | 323.1 |
| 1400-1500 | 638 | 326 | 298 | 297 | 278 | 297 | 302 | 367.4 | 348.0 |
| 1500-1600 | 671 | 470 | 418 | 369 | 409 | 238 | 203 | 467.4 | 396.9 |
| 1600-1700 | 675 | 376 | 337 | 360 | 362 | 251 | 226 | 422.0 | 369.6 |
| 1700-1800 | 612 | 482 | 392 | 360 | 354 | 259 | 168 | 440.0 | 375.3 |
| 1800-1900 | 315 | 247 | 195 | 231 | 222 | 204 | 118 | 242.0 | 218.9 |
| 1900-2000 | 150 | 115 | 109 | 104 | 100 | 90 | 82 | 115.6 | 107.1 |
| 2000-2100 | 74 | 79 | 77 | 91 | 77 | 69 | 41 | 79.6 | 72.6 |
| 2100-2200 | 47 | 40 | 63 | 50 | 78 | 52 | 32 | 55.6 | 51.7 |
| 2200-2300 | 13 | 27 | 26 | 23 | 55 | 50 | 9 | 28.8 | 29.0 |
| 2300-2400 | 10 | 10 | 7 | 13 | 30 | 41 | 4 | 14.0 | 16.4 |
| Totals |  |  |  |  |  |  |  |  |  |
| 0700-1900 | 6671 | 4030 | 3645 | 3607 | 3613 | 3009 | 2589 | 4313.2 | 3880.6 |
| 0600-2200 | 7149 | 4430 | 4051 | 3952 | 3971 | 3279 | 2769 | 4710.6 | 4228.7 |
| 0600-0000 | 7172 | 4467 | 4084 | 3988 | 4056 | 3370 | 2782 | 4753.4 | 4274.1 |
| 0000-0000 | 7319 | 4555 | 4167 | 4049 | 4117 | 3425 | 2875 | 4841.4 | 4358.1 |
| AM Peak | 0800 | 0800 | 0800 | 1100 | 0800 | 1100 | 1100 |  |  |
|  | 695 | 404 | 408 | 347 | 359 | 332 | 307 |  |  |
| PM Peak | 1600 | 1700 | 1500 | 1500 | 1500 | 1200 | 1400 |  |  |
|  | 675 | 482 | 418 | 369 | 409 | 324 | 302 |  |  |

[^2]
## Weekly Vehicle Counts

WeeklyVehicle-22

Site:
Description: 1059.0.1EW
Filter time
Scheme:
Filter:

Perricoota rd 200 mtrs west of Merool rd
13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019
Vehicle classification (AustRoads94)
Cls(1-12) $\operatorname{Dir}($ NESW $) \operatorname{Sp}(10,160)$ Headway(>0) Span(0-100) Lane(0-16)

|  | Mon <br> 03 Jun | Tue 04 Jun | Wed <br> 05 Jun | $06 \begin{aligned} & \text { Thu } \\ & \text { Jun } \end{aligned}$ | $07 \begin{aligned} & \text { Fri } \\ & \text { Jun } \end{aligned}$ | $08 \frac{\text { Sat }}{\text { Jun }}$ | $09 \frac{\text { Sun }}{\text { Jun }}$ | Averag $1-5$ | s $1-7$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hour |  |  |  |  |  |  |  |  |  |
| 0000-0100 | 7 | 4 | 9 | 5 | 4 | * | * | 5.8 | 5.8 |
| 0100-0200 | 4 | 4 | 4 | 5 | 3 | * | * | 4.0 | 4.0 |
| 0200-0300 | 3 | 2 | 3 | 5 | 5 | * | * | 3.6 | 3.6 |
| 0300-0400 | 4 | 1 | 2 | 0 | 1 | * | * | 1.6 | 1.6 |
| 0400-0500 | 13 | 12 | 7 | 9 | 8 | * | * | 9.8 | 9.8 |
| 0500-0600 | 55 | 43 | 51 | 47 | 45 | * | * | 48.2 | 48.2 |
| 0600-0700 | 124 | 140 | 109 | 106 | 105 | * | * | 116.8 | 116.8 |
| 0700-0800 | 204 | 231 | 196 | 261 | 220 | * | * | 222.4 | 222.4 |
| 0800-0900 | 440 | 309 | 368 | 296 | 310 | * | * | 344.6 | 344.6 |
| 0900-1000 | 307 | 204 | 260 | 240 | 291 | * | * | 260.4 | 260.4 |
| 1000-1100 | 259 | 252 | 235 | 286 | 210 | * | * | 248.4 | 248.4 |
| 1100-1200 | 269 | 278 | 235 | 295 | * | * | * | 269.3 | 269.3 |
| 1200-1300 | 267 | 299 | 250 | 301 | * | * | * | 279.3 | 279.3 |
| 1300-1400 | 266 | 267 | 238 | 278 | * | * | * | 262.3 | 262.3 |
| 1400-1500 | 295 | 259 | 270 | 292 | * | * | * | 279.0 | 279.0 |
| 1500-1600 | 372 | 363 | 429 | 408 | * | * | * | 393.0 | 393.0 |
| 1600-1700 | 316 | 344 | 364 | 349 | * | * | * | 343.3 | 343.3 |
| 1700-1800 | 341 | 369 | 331 | 356 | * | * | * | 349.3 | 349.3 |
| 1800-1900 | 180 | 221 | 213 | 252 | * | * | * | 216.5 | 216.5 |
| 1900-2000 | 85 | 129 | 95 | 117 | * | * | * | 106.5 | 106.5 |
| 2000-2100 | 43 | 61 | 66 | 99 | * | * | * | 67.3 | 67.3 |
| 2100-2200 | 40 | 51 | 60 | 43 | * | * | * | 48.5 | 48.5 |
| 2200-2300 | 17 | 19 | 24 | 25 | * | * | * | 21.3 | 21.3 |
| 2300-2400 | 10 | 12 | 18 | 10 | * | * | * | 12.5 | 12.5 |
| Totals |  |  |  |  |  |  |  |  |  |
| 0700-1900 | 3516 | 3396 | 3389 | 3614 | * | * | * | 3467.6 | 3467.6 |
| 0600-2200 | 3808 | 3777 | 3719 | 3979 | * | * | * | 3806.6 | 3806.6 |
| 0600-0000 | 3835 | 3808 | 3761 | 4014 | * | * | * | 3840.3 | 3840.3 |
| 0000-0000 | 3921 | 3874 | 3837 | 4085 | * | * | * | 3913.4 | 3913.4 |
| AM Peak | 0800 | 0800 | 0800 | 0800 | * | * | * |  |  |
|  | 440 | 309 | 368 | 296 | * | * | * |  |  |
| PM Peak | 1500 | 1700 | 1500 | 1500 | * | * | * |  |  |
|  | 372 | 369 | 429 | 408 | * | * | * |  |  |

[^3]
## MetroCount Traffic Executive

## Speed Statistics

## SpeedStat-23 -- English (ENA)

Datasets:
Site:
Attribute:
Direction:

Zone:
File: 105907Jun2019.EC0 (Plus )
Algorithm: $\quad$ Factory default axle (v5.02)
Data type:
Profile:
Included classes: $\quad 1,2,3,4,5,6,7,8,9,10,11,12$
Speed range:
Direction:
Separation:
Name:
Scheme:
Units:
In profile:

Survey Duration: 13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019,

Identifier: EB61FS4P MC56-L5 [MC55] (c)Microcom 19Oct04
Axle sensors - Paired (Class/Speed/Count)

Filter time: $\quad$ 13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019 (13.9058)
[1059] Perricoota rd 200 mtrs west of Merool rd
Perricoota rd
8 - East bound $A>B$, West bound $B>A$. Lane: 0

10-160 km/h.
North, East, South, West (bound), P = East, Lane $=0-16$
Headway > 0 sec, Span 0-100 metre
Default Profile
Vehicle classification (AustRoads94)
Metric (metre, kilometre, $\mathrm{m} / \mathrm{s}, \mathrm{km} / \mathrm{h}$, kg , tonne)
Vehicles $=63788 / 83366$ (76.52\%)

## Speed Statistics

## SpeedStat-23

Site:
Description:
Filter time:
1059.0.1EW

Scheme:
13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019
Vehicle classification (AustRoads94)
Filter: $\quad \operatorname{Cls}(1-12) \operatorname{Dir}(N E S W) \operatorname{Sp}(10,160)$ Headway $(>0)$ Span(0-100) Lane(0-16)

Vehicles $=63788$
Posted speed limit $=80 \mathrm{~km} / \mathrm{h}$, Exceeding $=6625$ (10.39\%), Mean Exceeding $=84.01 \mathrm{~km} / \mathrm{h}$
Maximum $=152.2 \mathrm{~km} / \mathrm{h}$, Minimum $=17.2 \mathrm{~km} / \mathrm{h}$, Mean $=71.9 \mathrm{~km} / \mathrm{h}$
$85 \%$ Speed $=78.66 \mathrm{~km} / \mathrm{h}, 95 \%$ Speed $=82.62 \mathrm{~km} / \mathrm{h}$, Median $=72.54 \mathrm{~km} / \mathrm{h}$
20 km/h Pace $=62-82$, Number in Pace $=54177$ (84.93\%)
Variance $=56.70$, Standard Deviation $=7.53 \mathrm{~km} / \mathrm{h}$

## Speed Bins (Partial days)



Total Speed Rating $=0.00$
Total Moving Energy (Estimated) $=0.00$

## Speed limit fields (Partial days)

|  | Limit | \| Below | Above |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| 0 | 80 | (PSL) | 57163 | $89.6 \%$ | 6625 |
| $10.4 \%$ |  |  |  |  |  |

## Appendix 3 - Turn treatments

## A3.1 - Urban turn treatments

Table 9: Turn Treatment Descriptions (Urban) (Source: Section 7.7, 7.8 and 8.3 of Austroads Guide to Road Design Part 4A)


CHR(S) CHannelised Right (Short) turn is a shorter version of the Channelised Right turn treatment which is reduced by removing space provided for storage in the right lane. This treatment type can only be used with line marking (Figure 7.7 of Austroads Guide to Road Design Part 4A).


CHR CHannelised Right turn treatment has two vehicle travel paths (through and right turns) separated by physical or painted medians or islands (Figure 7.8 of Austroads Guide to Road Design Part 4A).


BAL
BAsic Left turn treatment on the major road has a radius large enough to accommodate a design vehicle turning left into the minor road without crossing the centre line of the minor road (Figure A15 of Austroads Guide to
 Road Design Part 4).

## TRAFFICWORKS

```
Turn Description
treatment
```

AUL(S) AUxiliary Left (Short) turn treatment is a shorter version of the Auxiliary Left turn treatment which is reduced by allowing some deceleration to occur in the through lane on the major road. This turn treatment also allows through vehicles to pass to the right of turning vehicles (Figure A17 of Austroads Guide to Road Design Part 4).

AUL AUxiliary Left turn treatment is a left turn lane on the major road that allows through vehicles to pass to the right of turning vehicles (Figure 8.6 of Austroads Guide to Road Design Part 4A).


## A3.2 - Rural turn treatments

Table 10: Turn Lane Treatment Descriptions (Rural) (Source: Section 7.5 and 8.2 of Austroads Guide to Road Design Part 4A)
Turn
treatment

BAR BAsic Right turn treatment on the major road, features a widened area (usually in place of parking) on the major road that allows through vehicles to pass to the left of turning vehicles (Figure A6 of Austroads Guide to Road Design Part 4).


CHR(S) CHannelised Right (Short) turn is a shorter version of the Channelised Right turn treatment which is reduced by removing space provided for storage in the right lane. This treatment type can only be used with line marking (Figure A7 of Austroads Guide to Road Design
 Part 4).

## TRAFFICWORKS"

Turn
treatment

CHR CHannelised Right turn treatment has two vehicle travel paths (through and right turns) separated by physical or painted medians or islands (Figure A8 of Austroads Guide to Road Design Part 4).


BAL
BAsic Left turn treatment on the major road has a radius large enough to accommodate a design vehicle turning left into the minor road without crossing the centre line of the minor road (Figure 8.2 of Austroads Guide to Road Design Part 4A).


AUL(S) AUxiliary Left (Short) turn treatment is a shorter version of the Auxiliary Left turn treatment which is reduced by allowing some deceleration to occur in the through lane on the major road. This turn treatment also allows through vehicles to pass to the right of turning vehicles (Figure 8.3 of Austroads Guide to Road Design Part 4A).


AUL AUxiliary Left turn treatment is a left turn lane on the major road that allows through vehicles to pass to the right of turning vehicles (Figure 8.4 of Austroads Guide to Road Design Part 4A).


## TRAFFICWORKS"

## Turn treatment <br> Description

AUR
In addition to the above, DoT will allow the use of the rural Auxiliary lane Right turn treatment (from GTEP Part 5) in lieu of the CHR(s) treatment, (refer Sections 7.5.2 and 7.7.2 of VicRoads Supplement to AGRD4A)


## TRAFFICWORKS

## A3.3 - IDM rural access requirements

Standard Drawing SD 265, which accompanies the Infrastructure Design Manual (IDM) used by most regional councils in Victoria, should be applied to local road accesses for developments that represent significant traffic generators, particularly those that attract semi-trailer and B-Double use. This layout is shown in Figure 17 below.


Figure 18: SD 265 from the IDM

## TRAFFICWORKS

## Appendix 4 - Acronyms and terms

| Acronyms / terms | Definition |
| :---: | :---: |
| AGRD4 | Austroads Guide to Road Design Part 4 - Intersections and crossings |
| AGRD4A | Austroads Guide to Road Design Part 4A - Unsignalised and signalised intersections |
| AGTM6 | Austroads Guide to Traffic Management Part 6 - Intersections, interchanges and crossings management |
| AGTM8 | Austroads Guide to Traffic Management Part 8 - Local street management |
| AS/NZS2890.1 | Australian Standard / New Zealand Standard 2890.1 Parking facilities Part 1: Off-street car parking |
| DTP | Department of Transport and Planning (formerly VicRoads) |
| ESD | Entering site distance |
| PSP | Precinct structure plan |
| SIDRA | SIDRA intersection - micro analytical traffic engineering software to model the performance of intersections |
| SISD | safe intersection sight distance |
| TIA | traffic impact assessment |
| vpd | vehicles per day |
| vph | vehicles per hour |
| VPA | Victorian Planning Authority |


[^0]:    *     - No data.

[^1]:    *     - No data.

[^2]:    *     - No data.

[^3]:    *     - No data.

