

Traffic Impact Assessment Report

402-508 Perricoota Road, Moama NSW

Project Number 210042 Draft2 Report 17/03/2023

Client Perricoota View Pty Ltd



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			
Road network	— Perricoota Road			
	— Myall Way			
Traffic generation	Daily = 1,099			
	Peak hour = 112 (AM) and 122 (PM)			
Car parking	16 car parking spaces for commercial component, residential lots will have on-site parking.			
Conclusion	We conclude that no traffic engineering reasons would prevent the development from proceeding, subject to the implementation of our recommendations.			
Recommendations	It is recommended that:			
	 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 as detailed in the report. 			
	 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 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.



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.





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



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 southeast		
Carriageway	7.0 wide		
Road cross section	 Two-lane two way Unsealed shoulders Shared path on south side of road with a crossing on the subject site's frontage 		
Speed limit	100 km/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
Road cross section	Two wayUnsealed carriageway
Speed limit	100 km/h (Rural default speed limit)

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 m² 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 m² gross floor area
- 2 peak hour vehicle trips per 100 m² 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 m² commercial	2 trips per 1	00m² GFA	10 trips per 100 m² GFA			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 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 20% entering / 80% leaving
 - 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



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.



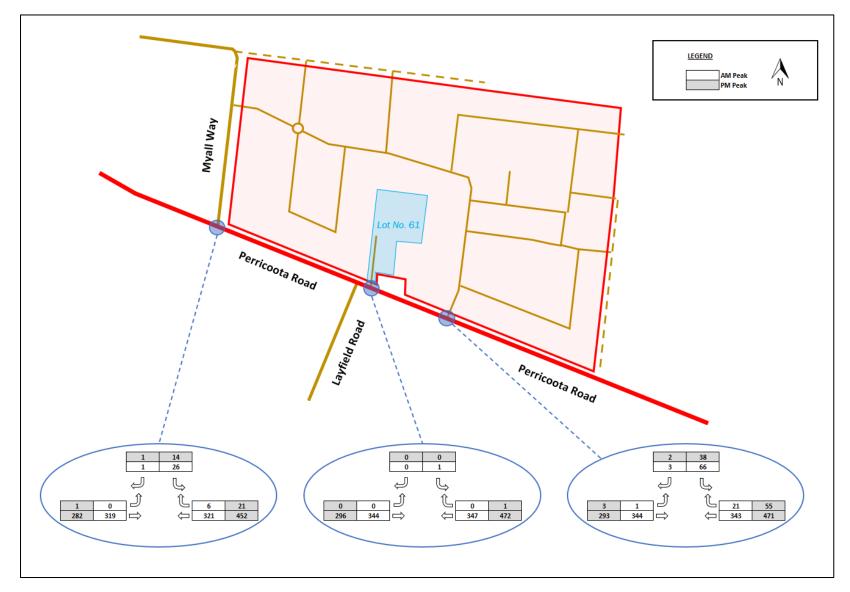


Figure 8: Anticipated peak hour traffic volumes



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 m² 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 40m²	629m²	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 km/h (posted speed limit plus 10 km/h).

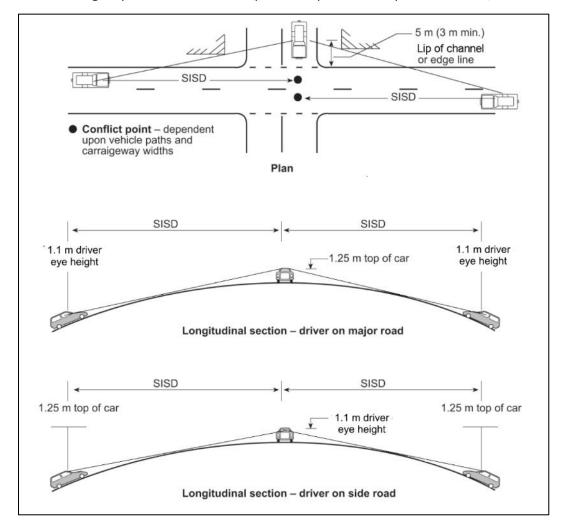


Figure 9: Safe Intersection Sight Distance (SISD) (Source: Figure 3.2 from AGRD4)



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.



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.

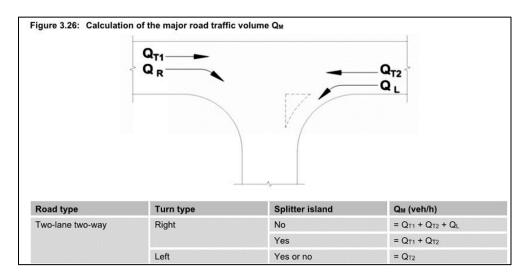


Figure 14: Formulas used to determine major road traffic (Source: Figure 3.26 from AGTM6)

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



Table 7 and were applied in Figure 15.



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

Road	Peak Period	Left Turn Q∟ (vph)	Right Turn Q _R (vph)	Through Q _⊤ (vph)		Qм	Q _M
						Left Turn	Right Turn
Perricoota Road	AM 1	4	21	Q _{T1}	343	- 344	688
		ı		Q_{T2}	344		
	PM 3	2	EE	Q _{T1}	471	- 293	767
		55	Q_{T2}	293	- 233	767	

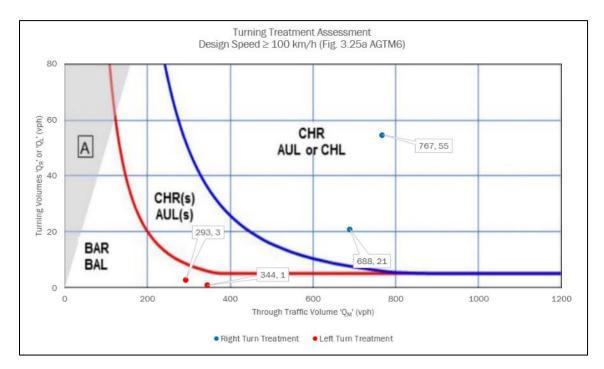


Figure 15: Graph used to determine the turn treatments on Perricoota Road at the development access intersection – anticipated conditions

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.



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 Q∟ (vph)	Right Turn Q _R (vph)	Through Q₁ (vph)		Qм	Q _м
						Left Turn	Right Turn
Perricoota Road	AM	0	6	Q _{T1}	321	- 319	640
				Q_{T2}	319		
	PM	1	21	Q _{T1}	452	- 282	734
				Q_{T2}	282		

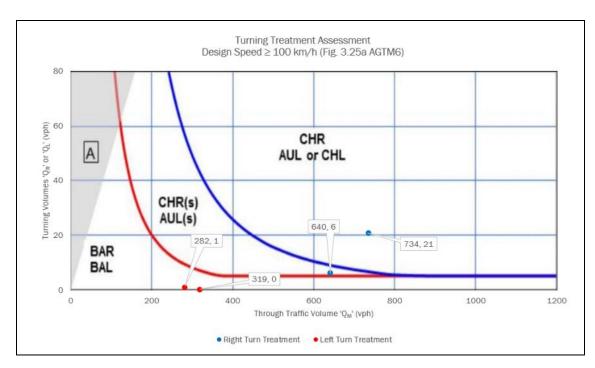


Figure 16: Graph used to determine the turn treatments on Perricoota Road at the Myall Way intersection – anticipated conditions

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.



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



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 km/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 km/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 m - 250 m for target speeds of around 50 km/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 km/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 10m 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.



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 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.



 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: Perricoota rd

Direction: 6 - West bound A>B, East bound B>A. **Lane:** 0

Survey Duration: 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: Factory default axle (v5.02)

Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019 (13.9277)

Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Speed range: 10 - 160 km/h.

Direction: North, East, South, West (bound), P = East, Lane = 0-16

Separation: Headway > 0 sec, Span 0 - 100 metre

Name: Default Profile

Scheme: Vehicle classification (AustRoads94)

Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)

In profile: Vehicles = 96506 / 96525 (99.98%)

WeeklyVehicle-24

Site: 1058.0.1WE

Description: Perricoota rd 200 mtrs east of Merool rd

Filter time: 13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019

Scheme: Vehicle classification (AustRoads94)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	es
	20 May	21 May	22 May	23 May	24 May	25 <u>May</u>	26 <u>May</u>	1 - 5	1 - 7
Hour									
0000-0100	*	*	*	*	*	45	54	*	49.5
0100-0200	*	*	*	*	*	32	47	*	39.5
0200-0300	*	*	*	*	*	24	32	*	28.0
0300-0400	*	*	*	*	*	2	25	*	13.5
0400-0500	*	*	*	*	*	14	13	*	13.5
0500-0600	*	*	*	*	*	32	18	*	25.0
0600-0700	*	*	*	*	*	126	44	*	85.0
0700-0800	*	*	*	*	*	265	91	*	178.0
0800-0900	*	*	*	*	*	428	259	*	343.5
0900-1000	*	*	*	*	*	499	395	*	447.0
1000-1100	*	*	*	*	*	586	479	*	532.5
1100-1200	*	*	*	*	*	693	602	*	647.5
1200-1300	*	*	*	*	*	616	613	*	614.5
1300-1400	*	*	*	*	532	609	585	532.0	575.3
1400-1500	*	*	*	*	608	530	529	608.0	555.7
1500-1600	*	*	*	*	682	466	470	682.0	539.3
1600-1700	*	*	*	*	689	502	490	689.0	560.3
1700-1800	*	*	*	*	615	512	402	615.0	509.7
1800-1900	*	*	*	*	501	383	305	501.0	396.3
1900-2000	*	*	*	*	248	255	183	248.0	228.7
2000-2100	*	*	*	*	195	166	132	195.0	164.3
2100-2200	*	*	*	*	189	155	102	189.0	148.7
2200-2300	*	*	*	*	120	111	54	120.0	95.0
2300-2400	*	*	*	*	49	88	21	49.0	52.7
Totals									
0700-1900	*	*	*	*	*	6089	5220	*	5899.7
0600-2200	*	*	*	*	*	6791	5681	*	6526.3
0600-0000	*	*	*	*	*	6990	5756	*	6674.0
0000-0000	*	*	*	*	*	7139	5945	*	6843.0
AM Peak	*	*	*	*	*	1100	1100		
	*	*	*	*	*	693	602		
PM Peak	*	*	*	*	*	1200	1200		
III IGAN	*	*	*	*	*	616	613		

^{* -} No data.

WeeklyVehicle-24

Site: 1058.0.1WE

Description: Perricoota rd 200 mtrs east of Merool rd

Filter time: 13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019

Scheme: Vehicle classification (AustRoads94)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
	27 May	28 May	29 May	30 May	31 May	01 Jun	02 Jun	1 - 5	1 - 7
Hour									
0000-0100	13	9	12	21	8	25	67		22.1
0100-0200	8	5	9	2	1	20	23		9.7
0200-0300	4	4	2	5	4	16	33		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		429.1
1000-1100	455	476	442	512	485	541	510	1 1 1 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		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
								l	
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
0000 0000	0724	7110	7520	7423	7432	0374	3023	/213 . 4	0057.1
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	 	
rm reak	599	663	704	650	696	592	592	 	
	239	003	704	000	090	392	392	I	

^{* -} No data.

WeeklyVehicle-24

Site: 1058.0.1WE

Description: Perricoota rd 200 mtrs east of Merool rd

Filter time: 13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019

Scheme: Vehicle classification (AustRoads94)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averag	es
	03 Jun	04 Jun	05 Jun	06 Jun	07 Jun	08 Jun	09 Jun	1 - 5	1 - 7
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 1000	E 472	C114	6407	6600	*	*	*	C107 F	6107 5
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	*	*		
	4 = 0 -		4 = 0 -	4 = 0 -					
PM Peak	1500	1600	1500	1500	*	*	*		
	588	617	722	688	*	*	*		

^{* -} No data.

MetroCount Traffic Executive Speed Statistics

SpeedStat-25 -- English (ENA)

Datasets:

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

Attribute: Perricoota rd

Direction: 6 - West bound A>B, East bound B>A. **Lane:** 0

Survey Duration: 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: Factory default axle (v5.02)

Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019 (13.9277)

Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Speed range: 10 - 160 km/h.

Direction: North, East, South, West (bound), P = <u>East</u>, Lane = 0-16

Separation: Headway > 0 sec, Span 0 - 100 metre

Name: Default Profile

Scheme: Vehicle classification (AustRoads94)

Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)

In profile: Vehicles = 96506 / 96525 (99.98%)

Speed Statistics

SpeedStat-25

Site: 1058.0.1WE

Description: Perricoota rd 200 mtrs east of Merool rd

13:00 Friday, 24 May 2019 => 11:15 Friday, 7 June 2019 Filter time:

Scheme: Vehicle classification (AustRoads94)

Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Vehicles = 96506

Posted speed limit = 80 km/h, Exceeding = 7182 (7.442%), Mean Exceeding = 83.74 km/h Maximum = 156.8 km/h, Minimum = 16.9 km/h, Mean = 70.3 km/h

85% Speed = 77.40 km/h, 95% Speed = 81.36 km/h, Median = 70.92 km/h

20 km/h Pace = 61 - 81, Number in Pace = 80650 (83.57%)

Variance = 58.28, Standard Deviation = 7.63 km/h

Speed Bins (Partial days)

Spe	eed	Bin	ĺ	Below	Above	Energy	vMult n	* vMult
0 -	- 10	0 0.0	000%	0 0.000%	96506 100.0%	0.00	0.00	0.00
10 -	- 20	2 0.0	002%	2 0.002%	96504 100.00%	0.00	0.00	0.00
20 -	- 30	26 0.0)27%	28 0.029%	96478 99.97%	0.00	0.00	0.00
30 -	- 40	85 0.0	1 8880	113 0.117%	96393 99.88%	0.00	0.00	0.00
40 -	- 50	854 0.8	385%	967 1.002%	95539 99.00%	0.00	0.00	0.00
50 -	- 60	7709 7.9	988%	8676 8.990%	87830 91.01%	0.00	0.00	0.00
60 -	- 70	34556 35.	.81%	43232 44.80%	53274 55.20%	0.00	0.00	0.00
70 -	- 80	46092 47.	.76%	89324 92.56%	7182 7.442%	0.00	0.00	0.00
80 -	- 90	6664 6.9	905%	95988 99.46%	518 0.537%	0.00	0.00	0.00
90 -	- 100	440 0.4	456%	96428 99.92%	78 0.081%	0.00	0.00	0.00
100 -	- 110	46 0.0	048%	96474 99.97%	32 0.033%	0.00	0.00	0.00
110 -	- 120	20 0.0	021%	96494 99.99%	12 0.012%	0.00	0.00	0.00
120 -	- 130	3 0.0	003%	96497 99.99%	9 0.009%	0.00	0.00	0.00
130 -	- 140	5 0.0	005%	96502 100.00%	4 0.004%	0.00	0.00	0.00
140 -	- 150	2 0.0	002%	96504 100.00%	2 0.002%	0.00	0.00	0.00
150 -	- 160	2 0.0	002%	96506 100.0%	0 0.000%	0.00	0.00	0.00
160 -	- 170	0 0.0	000%	96506 100.0%	0 0.000%	0.00	0.00	0.00
170 -	- 180	0 0.0	000%	96506 100.0%	0 0.000%	0.00	0.00	0.00
180 -	- 190	0 0.0	000%	96506 100.0%	0 0.000%	0.00	0.00	0.00
190 -	- 200	0 0.0	000%	96506 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00

Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

Limit	Bel	OW	Abov	re
0 80 (PSL)	89324	92.6%	7182	7.4%

MetroCount Traffic Executive Weekly Vehicle Counts

WeeklyVehicle-22 -- English (ENA)

Datasets:

Site: [1059] Perricoota rd 200 mtrs west of Merool rd

Attribute: Perricoota rd

Direction: 8 - East bound A>B, West bound B>A. **Lane:** 0

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: 13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019 (13.9058)

Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Speed range: 10 - 160 km/h.

Direction: North, East, South, West (bound), P = <u>East</u>, Lane = 0-16

Separation: Headway > 0 sec, Span 0 - 100 metre

Name: Default Profile

Scheme: Vehicle classification (AustRoads94)

Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)

In profile: Vehicles = 63788 / 83366 (76.52%)

WeeklyVehicle-22

Site: 1059.0.1EW

Description: Perricoota rd 200 mtrs west of Merool rd

Filter time: 13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019

Scheme: Vehicle classification (AustRoads94)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	es
	20 May	21 May	22 May	23 May	24 May	25 <u>May</u>	26 <u>May</u>	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	*	5637.0
0600-2200	*	*	*	*	*	6373	5306	*	6153.3
0600-0000	*	*	*	*	*	6556	5378	*	6290.3
0000-0000	*	*	*	*	*	6711	5551 	*	6454.3
AM Peak	*	*	*	*	*	1100	1100		
	*	*	*	*	*	663	579		
PM Peak	*	*	*	*	*	1200	1200		
	*	*	*	*	*	594	593		

^{* -} No data.

WeeklyVehicle-22

Site: 1059.0.1EW

Description: Perricoota rd 200 mtrs west of Merool rd

Filter time: 13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019

Scheme: Vehicle classification (AustRoads94)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average	
	27 May	28 May	29 May	30 May	31 May	01 Jun	02 Jun	1 - 5	1 - 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		

^{* -} No data.

WeeklyVehicle-22

Site: 1059.0.1EW

Description: Perricoota rd 200 mtrs west of Merool rd

Filter time: 13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019

Scheme: Vehicle classification (AustRoads94)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averag	es
	03 Jun	04 Jun	05 Jun	06 Jun	07 Jun	08 Jun	09 Jun	1 - 5	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
	3321	3071	3037	1000				3313.1	3313.1
AM Peak	0800	0800	0800	0800	*	*	*		
	440	309	368	296	*	*	*		
PM Peak	1500	1700	1500	1500	*	*	*		
	372	369	429	408	*	*	*		

^{* -} No data.

MetroCount Traffic Executive Speed Statistics

SpeedStat-23 -- English (ENA)

Datasets:

Site: [1059] Perricoota rd 200 mtrs west of Merool rd

Attribute: Perricoota rd

Direction: 8 - East bound A>B, West bound B>A. **Lane:** 0

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: 13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019 (13.9058)

Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Speed range: 10 - 160 km/h.

Direction: North, East, South, West (bound), P = East, Lane = 0-16

Separation: Headway > 0 sec, Span 0 - 100 metre

Name: Default Profile

Scheme: Vehicle classification (AustRoads94)

Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)

In profile: Vehicles = 63788 / 83366 (76.52%)

Speed Statistics

SpeedStat-23

Site: 1059.0.1EW

Description: Perricoota rd 200 mtrs west of Merool rd

13:00 Friday, 24 May 2019 => 10:44 Friday, 7 June 2019 Filter time:

Scheme: Vehicle classification (AustRoads94)

Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Vehicles = 63788

Posted speed limit = 80 km/h, Exceeding = 6625 (10.39%), Mean Exceeding = 84.01 km/h Maximum = 152.2 km/h, Minimum = 17.2 km/h, Mean = 71.9 km/h

85% Speed = 78.66 km/h, 95% Speed = 82.62 km/h, Median = 72.54 km/h

20 km/h Pace = 62 - 82, Number in Pace = 54177 (84.93%) Variance = 56.70, Standard Deviation = 7.53 km/h

Speed Bins (Partial days)

Sp	ee	d	1	В:	in	1	Below	ı	Above	ı	Energy	vMult n	* vMult
0	-	10		0	0.000%		0 0.000%		63788 100.0%		0.00	0.00	0.00
10	-	20		4	0.006%		4 0.006%		63784 99.99%		0.00	0.00	0.00
20	-	30		28	0.044%		32 0.050%		63756 99.95%		0.00	0.00	0.00
30	-	40		56	0.088%		88 0.138%		63700 99.86%		0.00	0.00	0.00
40	-	50		338	0.530%		426 0.668%		63362 99.33%		0.00	0.00	0.00
50	-	60		3458	5.421%		3884 6.089%		59904 93.91%		0.00	0.00	0.00
60	-	70		18906	29.64%		22790 35.73%		40998 64.27%		0.00	0.00	0.00
70	-	80		34373	53.89%		57163 89.61%		6625 10.39%		0.00	0.00	0.00
80	-	90		6092	9.550%		63255 99.16%		533 0.836%		0.00	0.00	0.00
90	-	100		434	0.680%		63689 99.84%		99 0.155%		0.00	0.00	0.00
100	-	110		50	0.078%		63739 99.92%		49 0.077%		0.00	0.00	0.00
110	-	120		24	0.038%		63763 99.96%		25 0.039%		0.00	0.00	0.00
120	-	130		17	0.027%		63780 99.99%		8 0.013%		0.00	0.00	0.00
130	-	140		6	0.009%		63786 100.00%		2 0.003%		0.00	0.00	0.00
140	-	150		1	0.002%		63787 100.00%		1 0.002%		0.00	0.00	0.00
150	-	160		1	0.002%		63788 100.0%		0 0.000%		0.00	0.00	0.00
160	-	170		0	0.000%		63788 100.0%		0 0.000%		0.00	0.00	0.00
170	-	180		0	0.000%		63788 100.0%		0 0.000%		0.00	0.00	0.00
180	-	190		0	0.000%		63788 100.0%		0 0.000%		0.00	0.00	0.00
190	-	200		0	0.000%		63788 100.0%		0 0.000%		0.00	0.00	0.00

Total Speed Rating = 0.00

Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

I	Limit	Bel	OW	Abov	ve
0	80 (PSL)	57163	89.6%	6625	10.4%



Appendix 3 - Turn treatments

A3.1 - Urban turn treatments

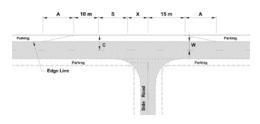
Table 9: Turn Treatment Descriptions (**Urban**) (Source: Section 7.7, 7.8 and 8.3 of Austroads Guide to Road Design Part 4A)

Turn treatment

Description

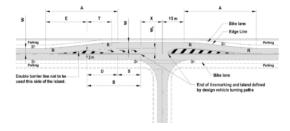
BAR

BAsic **R**ight 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 7.6 of Austroads Guide to Road Design Part 4A).



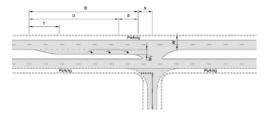
CHR(S)

CHannelised **R**ight (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).



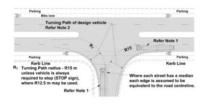
CHR

CHannelised **R**ight 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).



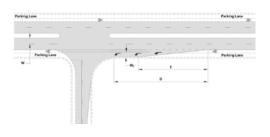


Turn treatment

Description

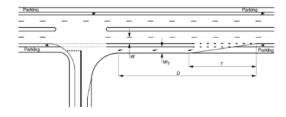
AUL(S)

AUxiliary **L**eft (**S**hort) 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 **L**eft 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

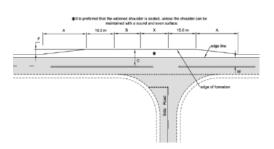
Table 10: Turn Lane Treatment Descriptions (Rural) (Source: Section 7.5 and 8.2 of Austroads Guide to Road Design Part 4A)

Turn treatment

Description

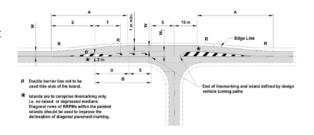
BAR

BAsic **R**ight 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 **R**ight (**S**hort) 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).



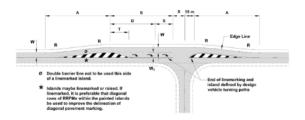


Turn treatment

Description

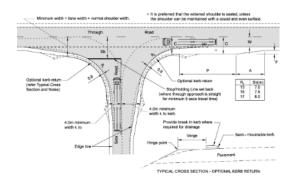
CHR

CHannelised **R**ight 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*).



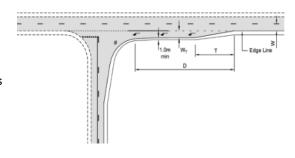
BAL

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*).



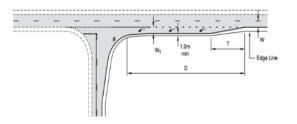
AUL(S)

AUxiliary **L**eft (**S**hort) 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 **L**eft 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*).







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.

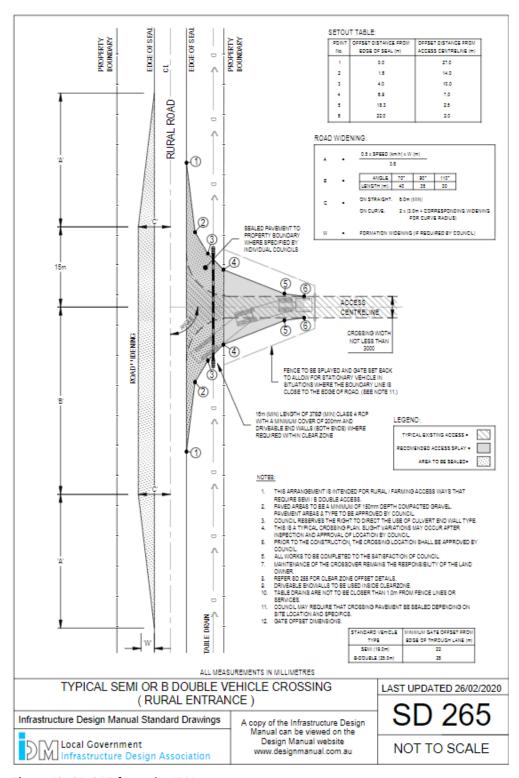


Figure 18: SD 265 from the IDM



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