Proposed Low Density Residential Development

Traffic Impact Assessment

Lots 101 & 102 DP1256572 & Lot 1 DP32272 (No.53) Macquarie Street, Coopernook

for

MIDCOAST PLANNING

On behalf of

Wingham Projects Pty Ltd

1 September 2023

Traffic Impact Assessment Details

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CONTENTS

APPENDICES

ACRONYM / ABREVIATION GLOSSARY

Acronyms / Abreviations used in this documenthave the following meanings	
AADT	Annual Average Daily Traffic
AUL	Auxiliary Right Turn
BAR	Basic Right Turn
BAL	Basic Left Turn
CHR	Channelised Right Turn
CHR(s)	Channelised Right Turn (short)
DA	Development Application
LoS	Level of Service
MCC	MidCoast Council
SISD	Safe Intersection Sight Distance
TfNSW	Transport for New South Wales
TIA	Traffic Impact Assessment
VPHR	Vehicles per Hour
VPD	Vehicles per Day

1. INTRODUCTION

1.1 General

StreetWise Road Safety and Traffic Services have been engaged by Midcoast Planning on behalf of Wingham Projects Pty Ltd to prepare a Traffic Impact Assessment as part of a Residential Subdivision Application for a Low Density Residential development located at Lots 101 & 102 DP 1256572 and Lot 1 DP32272 (No.53) Macquarie Street, Coopernook.

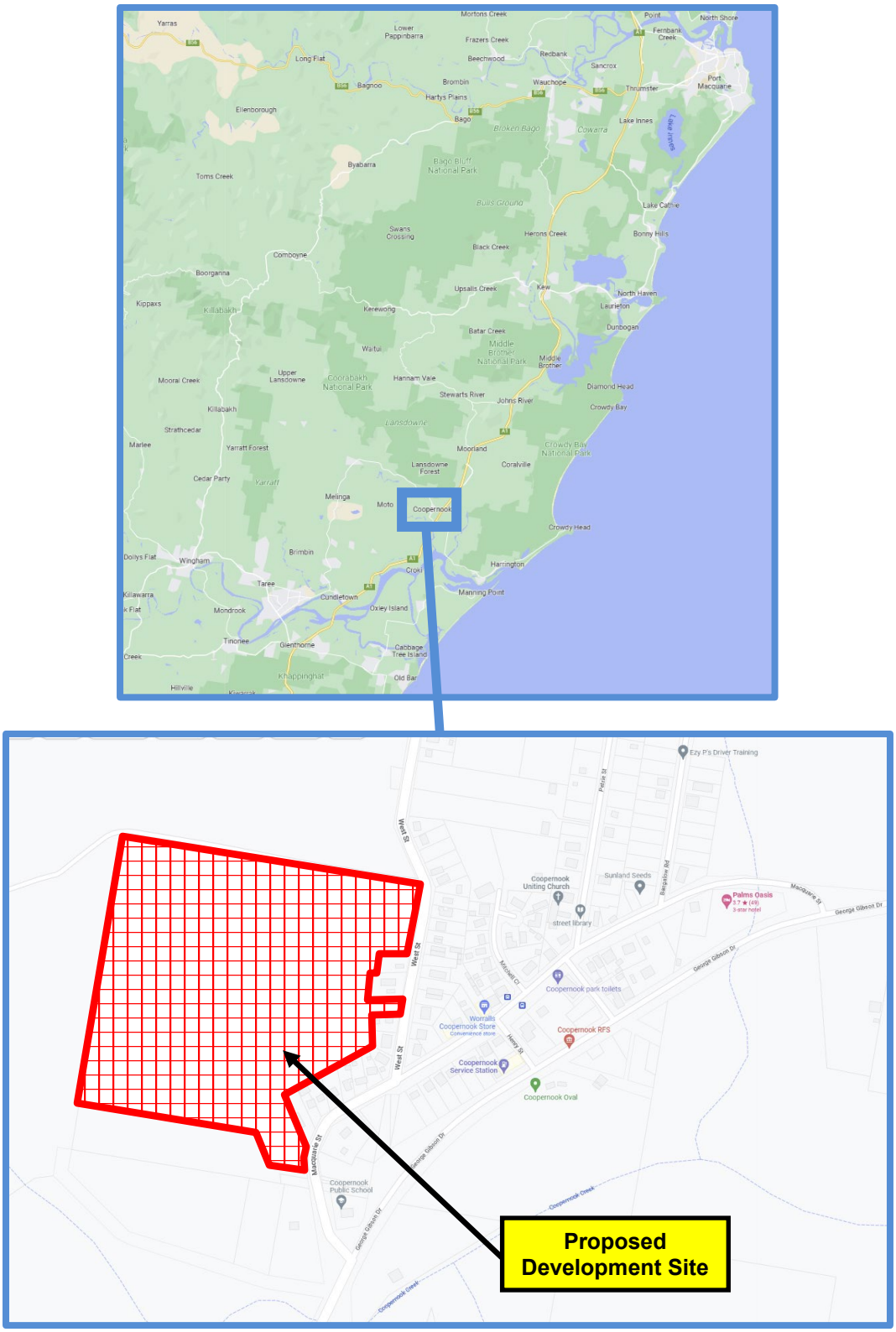

Figure 1.10 – LOCALITY SKETCH

1.2 Description of Project

The proposed development will consist of 98 low density sites / lots being provided. Also, as part of the development it is proposed to provide the following ancillary facilities to complement the development:

- A number of public access roads within the site,
- A road intersection with Macquarie Street to the north of the site, and
- A road intersection with Macquarie Street to the south of the site.

Figure 1.20 – DEVELOPMENT PROPOSAL (98 Lots)

1.1 Scope of Work

At a Pre-Lodgement Meeting attended by Midcoast Planning with Midcoast Council staff minutes from that meeting were provided with the following Scope of Work provided for the completion of a TIA.

Issue to be Addressed	TIA Report Reference
Consideration will need to be given to the impact the increase in lots will have on existing infrastructure, particularly the existing road networks. A traffic impact assessment would be highly recommended upfront.	This report

2. LOCAL ROAD NETWORK

The proposed development site is located on the southern edge of the of the township of Coopernook with accesses proposed off both Macquarie Street and West Street. See Figure 1.20.

2.1.1 George Gibson Drive

George Gibson Drive is the main north /south collector road for the township of Coopernook providing connection back to the Pacific Motorway to the east and Lansdowne to the west via Macquarie Street and West Street. The section of George Gibson Drive servicing Coopernook was previously the old Pacific Highway prior to Coopernook being bypassed by the Pacific Motorway.

In the vicinity of the site, George Gibson Drive has single 3.50m wide travel lanes in each direction with a 1.0m sealed shoulder in each direction along the edge of the formation with no kerb and gutter provided.

The posted speed limit of George Gibson Drive in the vicinity of the development is 60km/h.

George Gibson Drive – North of Macquarie Street Looking South

George Gibson Drive – South of Macquarie Street Looking North

2.1.2 Macquarie Street

Macquarie Street is a collector road within the township of Coopernook providing connection to and from George Gibson Drive to the east, West Street to the west and the local road network within Coopernook .

In the vicinity of the site, Macquarie Street has a formation width of 10.50m wide with kerb and gutter along both sides of the formation.

The posted speed limit of Macquarie Street generally is the 50km/h urban default with a special 40km/h School Zone limit operating between 8.30 and 9.00am and 2.30 and 4.00pm at the southern end of Macquarie Street just west of the George Gibson Drive intersection. The School Zone extends for approximately 150m north along Macquarie Street.

Macquarie Street – Looking towards George Gibson Drive

2.1.3 West Street

West Street is the main east /west arterial road between Coopernook in the east and Lansdowne in the west onto Manning River Drive (Taree) in the south. West Street at High Street in Coopernook changes to Lansdowne Road.

In the vicinity of the site, West Street provides for a 9.5m wide sealed formation with kerb and gutter on both sides of the formation. At approximately 300m west of Macquarie Street, West Street changes to a rural 7.0m wide formation with no discernible shoulders just grass verges.

The posted speed limit of West Street is the 50km/h urban default for a distance of 400m past High Street on Lansdown Road.

West Street (Lansdowne Road) – Looking towards George Gibson Drive

2.1.4 Intersection of George Gibson Drive & Macquarie Street (south)

The intersection of George Gibson Drive and Macquarie Street (south) generally conforms to an Austroads Type BAR / BAL layout treatment standard with generous widenings in Macquarie Street to allow for large vehicles to turn at the intersection.

The Macquarie Street leg of the intersection has kerb and gutter on both sides of the formation stopping just short of George Gibson Drive where the formation of George Gibson Drive at the intersection is of a rural formation type.

There are no sheltered turn bays provided on George Gibson Drive. Further assessment of the intersection will be completed as part of assessing the impacts on the local road network because of this development.

The Coopernook Public School is located on the western corner of the intersection while there are residential properties on the other corners of the intersection.

3. EXISTING TRAFFIC VOLUMES

Midcoast Council were contacted to see if they had any background traffic data for the site. Council's Traffic Engineer advised the information they had on hand dated back to 2005. Therefore, this data was considered to be out of date for the purpose of this assessment.

StreetWise Road Safety & Traffic Services conducted manual intersection counts on Thursday 9 March 2023 to determine the peak periods for the AM and PM peaks. These counts determined the AM peak hour period was between 7.45 and 8.45am while the PM peak hour period was between 2.45 and 3.45pm. It is noted these peak periods coincide with the start and end times of the adjacent Coopernook Public School. Figure 3.10 provides a summary of the AM and PM periods.

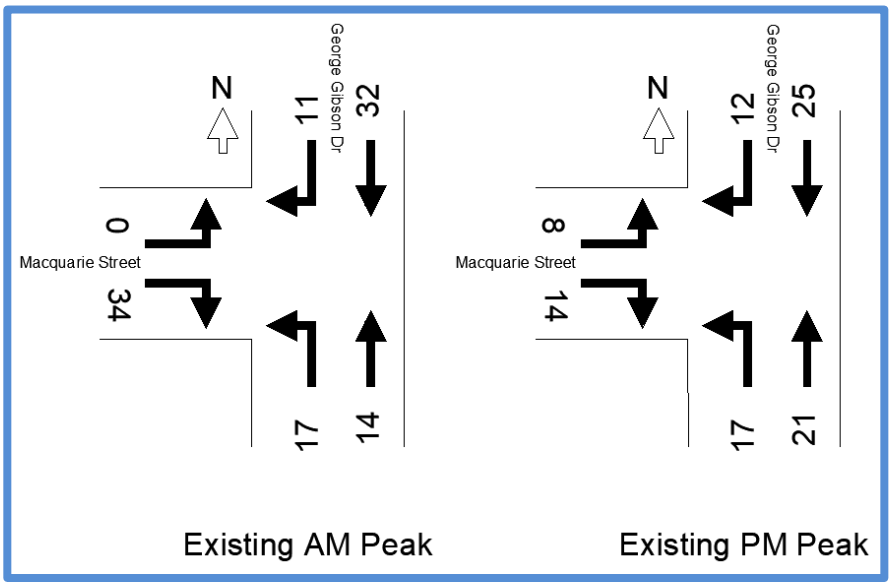

Figure 3.10 – SUMMARY OF EXISTING AM & PM PEAK PERIODS

4. FUTURE TRAFFIC ASSESSMENT

4.1 Development Traffic Generation

As outlined in section 1.2 of this assessment the following proposed land use will be part of this development:-

- 98 Lot / Site Low Density Residential Development.

The development will be accessed by two (2) intersections located at the northern end of the site (West Street) and other at the south of the site (Macquarie Street).

4.1.1 References for Traffic Generation

The primary reference documents used to determine the traffic flow generated by the developments are the "TfNSW Guide to Traffic Generating Developments" and MCC Development Control requirements.

4.1.2 TfNSW Guidelines

The TfNSW Guidelines prescribes the following traffic generation rates for a low density site including rural / residential land use including the Seven Mile Beach development:-

- 7.40 daily trips per site / dwelling
- 0.74 hourly peak period trips per site / dwelling

4.1.3 Mid Coast Council Guidelines

MCC does not prescribe traffic generation rates.

4.2 Proposed Traffic Generation – For this Proposal

Table 4.20 provides a summary of the future traffic generation for the proposed development.

Land Use	No. of Lots	Daily Trip Rate	Peak Hour Trip Rate	Daily Trip Generation	Peak Hour Trip Generation

Low Density Residential	98	7.4	0.74	725	73

Table 4.20 – SUMMARY OF FUTURE TRAFFIC GENERATION (FULL DEVELOPMENT)

For the purposes of this assessment a design horizon of 10 years has been adopted. Therefore, this the 98 lot residential development will be construction staged over a period of 10 years with the site to be fully developed at this time.

4.3 Other Future Development Consideration in the Area

MCC Planning staff were contacted to determine if there was any other planned future development in the Coopernook area.

Information provided by Council staff indicated there were two primary areas to be considered.

1) Coopernook Village – Macquarie Street precinct (this development), and
2) Coopernook Village – Bangalow Road precinct.

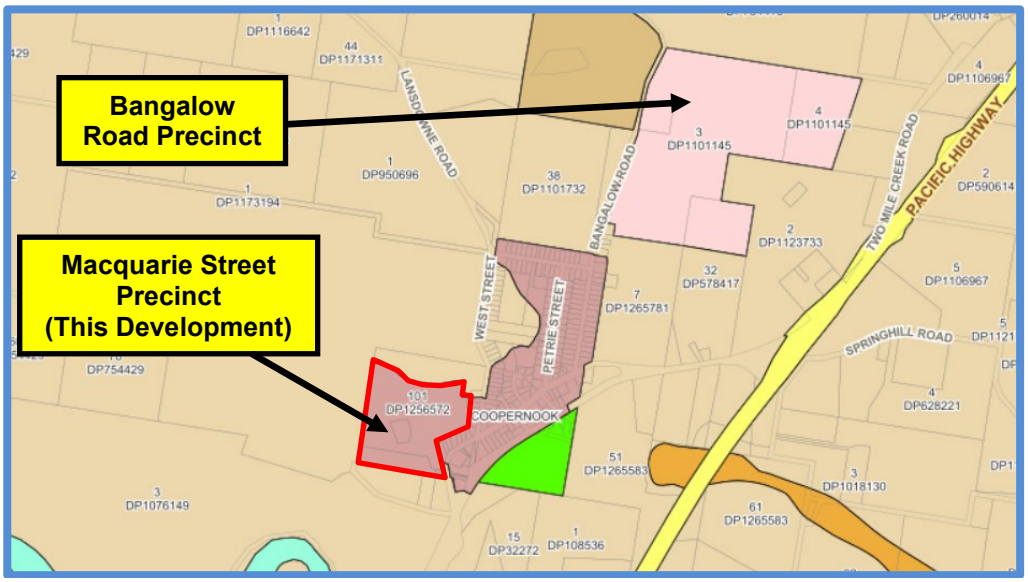

Figure 4.30 – POSSIBLE FUTURE DEVELOPMENT AREAS

MCC Planning staff indicated the Bangalow Road Precinct is considered to be a long term (plus 10 years) future development option. When considering future traffic impacts including predicted traffic flows a design horizon of 10 years has been adopted. Given the advice provided by MCC the traffic to be generated by the Bangalow Road Precinct will not be considered as part of this assessment.

4.4 Proposed Traffic Assignment

The site is located towards the southern end of the township of Coopernook. Given Coopernook's location is closer to the major town of Taree rather than Port Macquarie it can be expected most vehicle trips will be to the south to Taree. Therefore, the following assumptions have been made for this assessment:-

- 75% of total generated traffic will utilise the southern access point to the site (Road No.1),
- 25% of total generated traffic will utilise the northern access point to the site (Road No.2),
- 75% of total generated traffic will travel south, and
- 25% of total generated traffic will travel north.

4.5 Proposed Traffic Distribution

Again, based on the existing peak period traffic volumes generated for Macquarie Street the following traffic distribution has been assumed.

- 55% out of the site, 45% into the site for the AM peak, and
- 45% out of the site, 55% into the site for the PM peak.

4.6 Development Traffic Generation Summary

Based on the above calculations and assumptions the following summary of the traffic to be generated by this development is provided for the AM and PM peak periods.

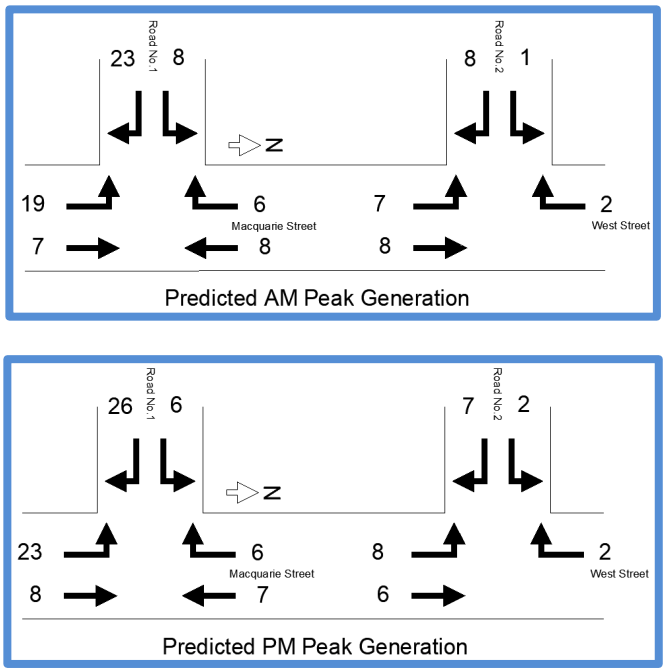

Figure.4.60 SUMMARY OF THE ASSIGNMENT & DISTRIBUTION FOR THE AM & PM PEAK PERIODS FOR TRAFFIC GENERATED

4.7 Traffic Growth

MCC's Community Profile website, indicates the Coopernook (Northern Rural) area population will grow by 1.25% per annum between 2023 and 2036 for a total increase of 17.61% for the same period. For the purposes of this assessment an annual traffic growth rate of 1.25% will be applied to the original 2023 background data to determine predicted flows for the roads being assessed over the design period of 10 years.

This traffic growth rate will allow for individual development infill / population during this period for the Coopernook area.

4.8 Predicted Traffic Volumes

Based on the Traffic Generation, Traffic Assignment and Distributions and Traffic Growth calculations and assumptions the following predicted traffic volumes for the AM peak (worst case) are provided for:-

- Proposed Intersection of Road No.1 & Macquarie Street,
- Proposed Intersection of Road No.2 & West Street, and
- Existing Intersection of George Gibson Drive & Macquarie Street.

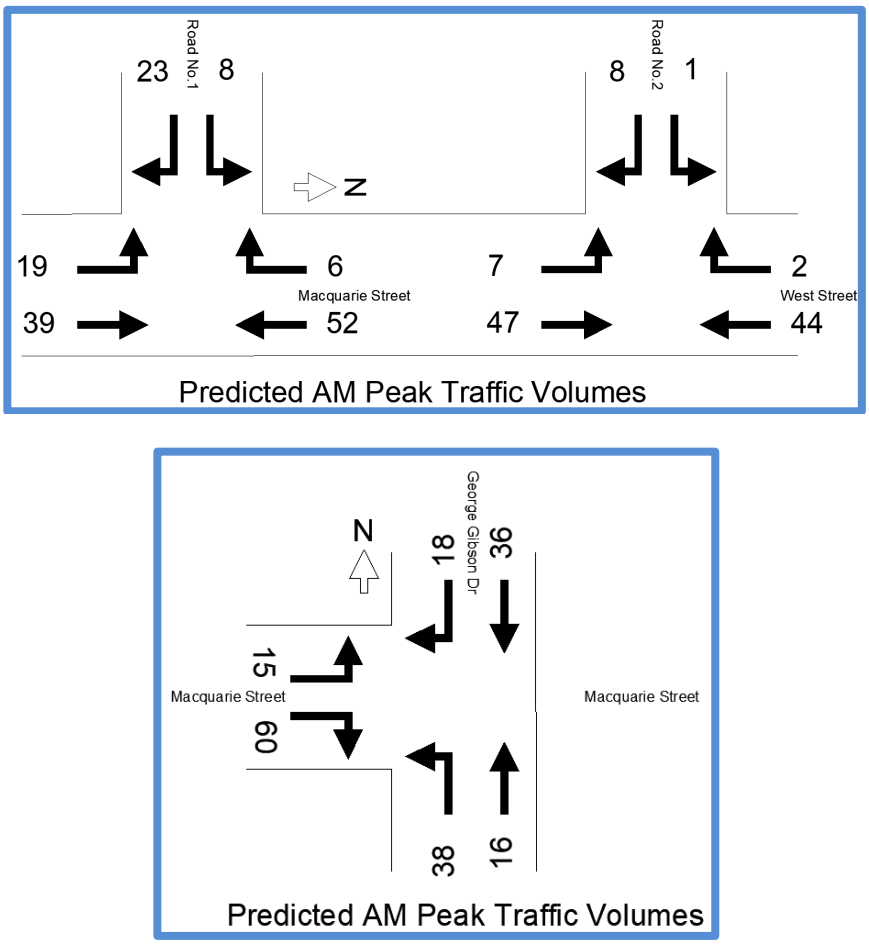

Figure.4.80 PREDICTED FUTURE TRAFFIC FLOWS AT NOMINATED INTERSECTIONS (AM PEAK WORST CASE)

4.9 Road Capacity

Currently George Gibson Drive is catering for approximately 74 peak hour trips (AM Peak worst case) in both directions (37 one way flows) with daily flows amounting to 740 in both directions (370 one way flows). Macquarie Street is currently catering for approximately 34 peak hour trips (AM Peak worst case) in both directions (17 one way flows) with daily flows amounting to 340 in both directions (170 one way flows).

MCC's version of the AUSPEC 0041 - Geometric Sealed and Road Design – M5 Table 1 - URBAN ROADS indicates George Gibson Drive is currently operating as a "Local Street" (400 – 2000 vpd) while Macquarie Street is operating as a "Access Street" (<400 vpd).

When considering full development Macquarie Street will increase to 125 peak hour trips in both directions (63 one way flows) with daily flows amounting to 1 250 in both directions (av. 625 one way flows) while George Gibson Drive will increase to approximately 183 peak hour trips in both directions (92 one way flows) with daily flows amounting to 1 830 in both directions (av. 915 one way flows). These predicted flows will change the road classification for Macquarie Street, where it will be classified as a "Local Street" (400 - 2000 vpd) with George Gibson Drive remaining the same.

The TfNSW Guide to Traffic Generating Developments indicates these roads can operate as a "Local Street" where the maximum peak hour traffic volumes can be up to 300 vphr.

Road class	Road type	Maximum Speed (km/hr)	Maximum peak hour volume (veh/hr)
Local	Access way	25	100
	Street	40	200 environmental goal
			300 maximum
Collector	Street	50	300 environmental goal
			500 maximum

Figure.4.90 TFNSW GUIDE to TRAFFIC GENERATING DEVELOPMENTS CAPACITY PERFORMANCE OF RESIDENTIAL STREETS

The Austroads Guide to Traffic Management indicates the lane capacity for an undivided road with one (1) lane in each direction can cater for up to 900 vehicles per hour per lane.

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

Source: Table 5.1 of Austroads Guide to Traffic Management Part 3

For the purposes of this assessment the lane capacities prescribed by the Austroads Guide will be used as they are the most current data for when considering road capacities. Currently George Gibson Drive is operating at 4.1% of capacity while Macquarie Street is operating at 1.90% of capacity based on the Austroads requirements. At full development, these capacities will increase to 10.2% and 7.0% respectively with there being no requirement for the roads in question to be upgraded because of this development.

5. FUTURE INTERSECTION REQUIREMENTS

5.1 Proposed Road No.1 & Road No.2 intersections

As indicated previously the development will be serviced by two (2) access points to be located off Macquarie Street in the south and West Street (Lansdowne Road) to the north.

Based on the future peak period traffic volumes (worst case AM Peak), an assessment for the warrant of these intersection treatments is provided in Figure 5.10.

In accordance with Figure 3.25 of the Austroads Guide to Traffic Management, Part 6 –Intersections, Interchanges and Crossings Management. the following assessment is provided.

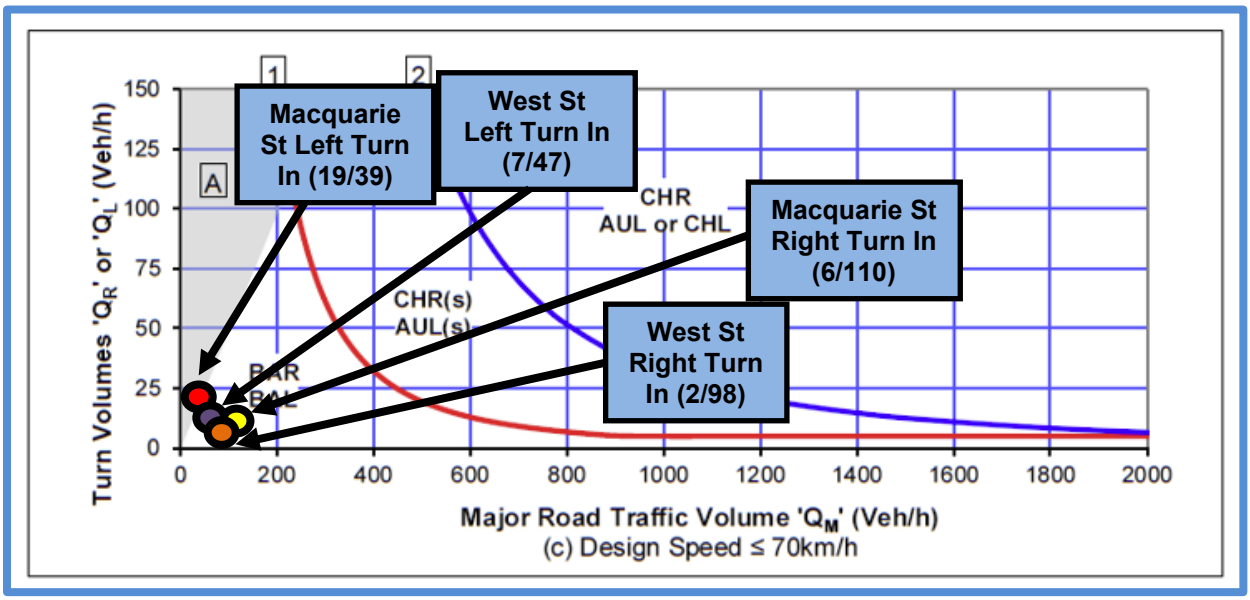

Figure 5.10 – WARRANTS FOR TURN TREATMENTS FOR THE MAJOR ROAD AT UNSIGNALISED INTERSECTIONS (DEVELOPMENT ACCESS LOCATIONS)

The above assessment indicates the proposed development access points will adequately operate as BAR / BAL intersection treatments at full development.

The Austroads Guide to Traffic Management, Part 6 - Intersections, Interchanges and Crossings Management prescribes the following Urban BAR / BAL intersection treatments that should be provided in a detailed design.

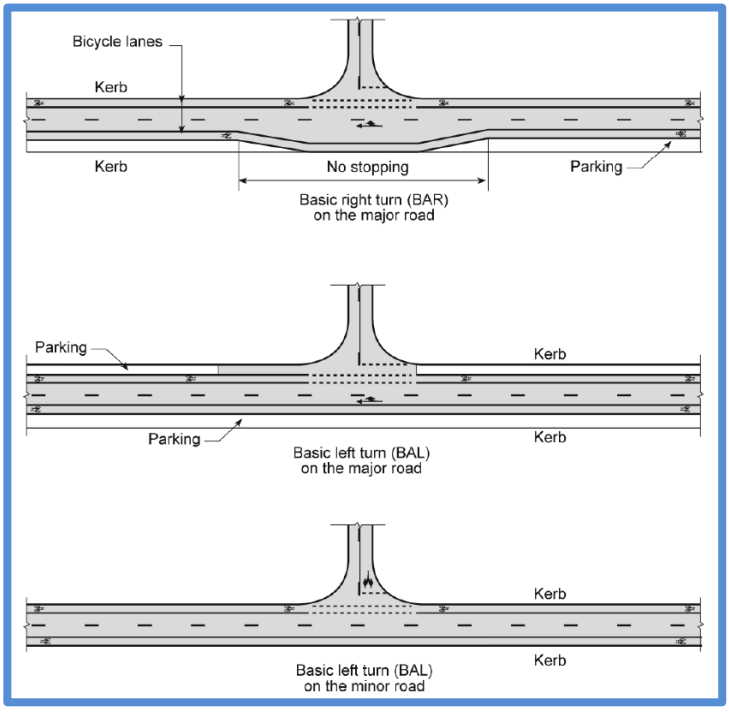

Figure 5.11 – TYPICAL URBAN BAR / BAL INTERSECTION TREATMENTS (AUSTROADS)

As indicated in Section 2.1 of this assessment the formation width of Macquarie Street in the location of the Road No.1 access point is 10.50m wide. Based on this the BAR / BAL configuration could allow for a right turn treatment into Road No.1 where through traffic can pass a turning vehicle at the intersection. The West Street intersection cannot be configured to allow through traffic to pass a right turning vehicle given its current width of 9.50m. As this will be the secondary access location

it can operate at the minimum treatment with the following through traffic having to wait for the right turn movement to be completed.

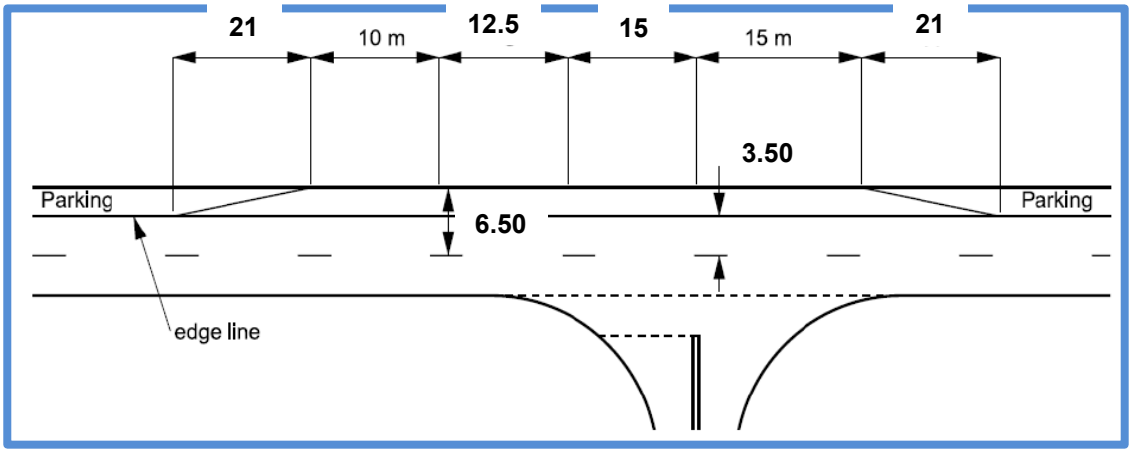

Figure 5.12 – TYPICAL URBAN BAR / BAL INTERSECTION TREATMENTS (AUSTROADS) – ROAD No.1 INTERSECTION

The detailed design of the intersections should be configured in accordance with the dimensions provided in Figure 5.12 above. As part of the design and implementation of the intersections parking restrictions will need to be put in place to allow safe passage of through traffic to pass right turning vehicles at each of the intersections.

5.2 Intersection of George Gibson Drive & Macquarie Street (south)

As the development is located towards the southern end of the township of Coopernook and Coopernook's location is closer to the major town of Taree rather than Port Macquarie it can be expected most vehicle trips will be to the south to Taree. Therefore, based on the future peak period traffic volumes to be generated by the development, the following assessment for the warrant for the intersection treatment is provided in Figure 5.20.

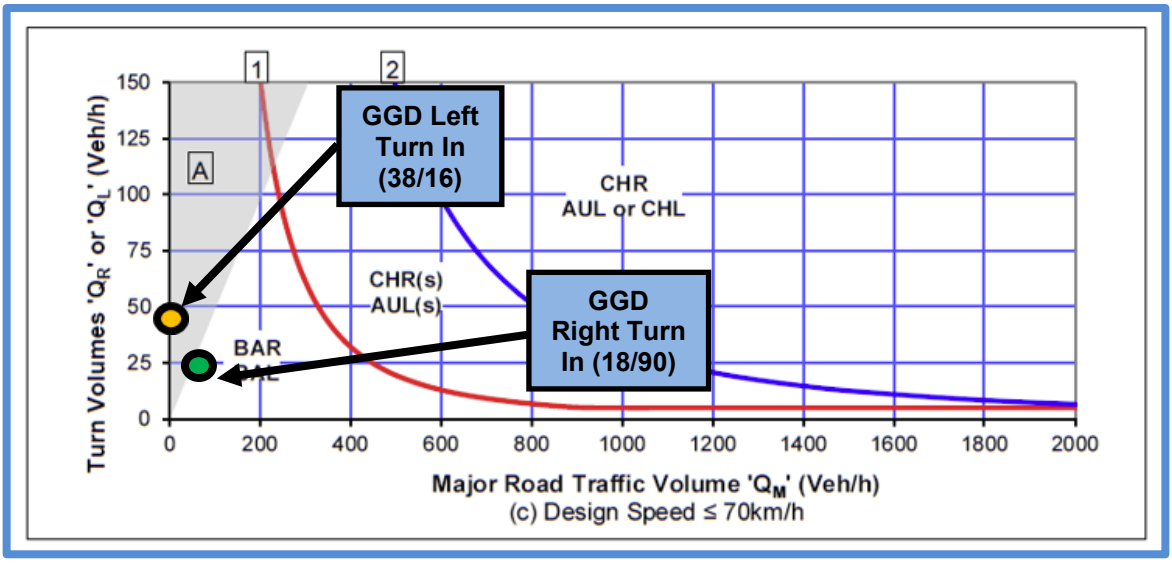

Figure 5.20 – WARRANTS FOR TURN TREATMENTS FOR THE MAJOR ROAD AT UNSIGNALISED INTERSECTIONS (INTERSECTION OF GEORGE GIBSON DRIVE & MACQUARIE STREET (SOUTH))

The above assessment indicates the existing intersection configuration of George Gibson Drive and Macquarie Street (south) will adequately operate as BAR / BAL intersection treatment at full development.

5.3 Safe Intersection Sight Distance (SISD) Assessment

The Austroads Guide to Road Design requirements for SISD is prescribed as follows:-

- 97.0m – 50km/h Design Speed (2 sec desirable reaction time)
- 123.0m – 60km/h Design Speed (2 sec desirable reaction time)

The vertical terrain of Macquarie Street in the vicinity of the Road No.1 access is considered to be on a vertical grade of 6 to 8%. Therefore, consideration of the vertical requirement for SISD should be completed as part of the detailed design of the intersection.

The vertical terrain of West Street in the vicinity of the Road No.2 access is considered to be on a vertical grade of 3 to 5%. Therefore, consideration of the vertical requirement for SISD should be completed as part of the detailed design of the intersection.

An assessment for SISD for the Road No.1 intersection in the horizontal plane indicates there is acceptable sight distance to the east towards George Gibson Drive. However, SISD towards the west on Macquarie Street is constrained by the existing horizontal alignment and vegetation (a tree) located within an opposite private property.

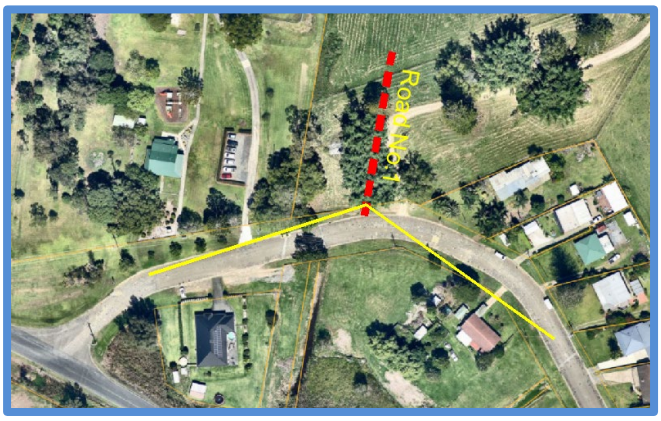

Figure 5.30 – HORZONTAL PLANE SISD ASSESSMENT – ROAD No.1 (MACQUARIE STREET)

An assessment for SISD for the Road No.2 intersection in the horizontal plane indicates there is acceptable sight distance to the east towards Macquarie Street. However, SISD towards the west, on West Street, is constrained by the existing horizontal alignment and vegetation located within private property.

Figure 5.31 – HORZONTAL PLANE SISD ASSESSMENT – ROAD No.2 (WEST STREET)

Further investigation will need to be undertaken to determine if the vegetation can be removed or looped to improved SISD or relocation of the access point/s.

5.4 Sidra Intersection Modelling

As indicated in Section 4.9 of this assessment future predicted one way traffic flows on George Gibson Drive will be 125 vph while Macquarie Street will generate 105 vph.

The TfNSW Guide to Traffic Generating Development prescribes peak flows per lane based on Level of Service (LoS). The extracted table from the guide indicates both George Gibson Drive and Macquarie Street will operate at a LoS A at full development.

Level of Service	One Lane (veh/hr)	Two Lanes (veh/hr)
A	200	900
B	380	1400
C	600	1800
D	900	2200
E	1400	2800

The Austroads Guide to Traffic Management prescribes the following definitions for Level of Service (LoS) with the various levels of service for urban and suburban arterial roads with interrupted flow conditions are described in HCM 2016 as follows:

- **LOS A** describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to manoeuvre within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 80% of the base free-flow speed (BFFS).

- **LOS B** describes reasonably unimpeded operation. The ability to manoeuvre within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the BFFS.

- **LOS C** describes stable operation. The ability to manoeuvre and change lanes at mid- segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the BFFS.

- **LOS D** indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the BFFS.

- **LOS E** is characterised by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the BFFS.

- **LOS F** is characterised by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the BFFS.

- **LOS F** is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a VCR ratio greater than 1.0.

Based on the Austroads definitions for LoS and the future predicted one way flows for George Gibson Drive and Macquarie Street it is felt there is no requirement to complete further Sidra Modelling assessments given the future "minimal control delays" (Los A) at each intersection.

6. PEDESTRIAN & CYCLIST ACCESS PLANNING

In April 2022 MCC adopted a municipality wide Pedestrian Access Mobility Plan (PAMP) and Bike Plan. This document does not specifically address the future planning needs for pedestrian and cyclist facilities in the Coopernook area.

Currently there are no formal pedestrian or cyclist facilities provided in the vicinity of the development.

However, given the proximity of the development to the Coopernook Public School pedestrian and cyclist facilities should be considered in the final detailed design of the development. The following facilities are suggested for consideration as part of the development final design:-

1) 1.50m wide footpath between Road No.1 and Road No.2 within the development site, and
2) 2.50m wide shared path between Road No.1 and the Coopernook Public School driveway access (approx. 50m in length).

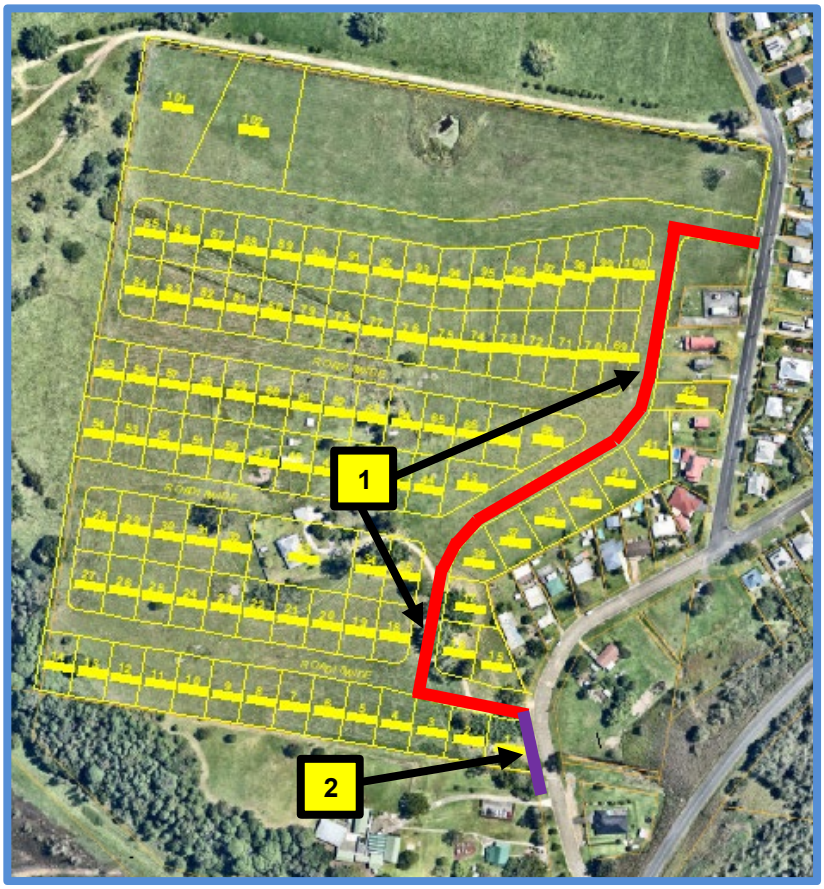

Figure 6.00 – SUGGESTION PEDESTRIAN & CYCLIST FACILITY LOCATIONS

7. PUBLIC TRANSPORT PLANNING

Eggins Comfort Coaches currently runs regular single service (Route 320) between Taree and Harrington via Coopernook Monday to Friday with an extra service on Thursday afternoon.

There are currently no formal bus stops located in the vicinity of the development site. The bus stop in Coopernook is located at the General Store in Macquarie Street, approximately 380m northeast of the proposed Road No.1 intersection.

A further review of the servicing requirements will need to be undertaken between MCC, Eggins Comfort Coaches and TfNSW to determine if future bus facilities are to be provided in Coopernook.

8. ROAD SAFETY

Generally, this development will not create any significant road safety issues given the relatively low existing and predicted traffic volumes on the local road network.

The development will create some minor road safety issues around the proposed intersections to be provided as result of turn movements in and out of the proposed side roads. However, the perceived road safety issues should be minimised if the intersections are designed and constructed with the prescribed guidelines.

Safe Intersection Sight Distance at the proposed intersections will generally be acceptable with some minor reduction due to existing vegetation around the proposed intersection locations.

It shall be noted the existing wearing course (pavement) standard of Macquarie Street in the vicinity of the proposed Road No.1 is of a poor standard with a significant amount of "pothole" patching being completed, reducing drivability along Macquarie Street.

9. SUMMARY OF ASSESSMENT

StreetWise Road Safety and Traffic Services have been engaged by Midcoast Planning on behalf of Wingham Projects Pty Ltd to prepare a Traffic Impact Assessment as part of a Residential Subdivision Application for a Low Density Residential development located at Lots 101 & 102 DP 1256572 and Lot 1 DP32272 (No.53) Macquarie Street, Coopernook.

The proposed development will consist of 98 low density sites / lots being provided. Also, as part of the development it is proposed to provide the following ancillary facilities to complement the development:

- A number of public access roads within the site,
- A road intersection with Macquarie Street to the north of the site, and
- A road intersection with Macquarie Street to the south of the site.

This development proposal will have minimal impact on the local road network, being George Gibson Drive, Macquarie Street and West Street (Lansdowne Road) where all these roads currently operate at a Level of Service (LoS) A and will continue to operate at a LoS A into the future considering the predicted full development traffic flows for the site. The Development will generate a total of 73 peak hour trips with the majority

of the developments trips to more than likely occur during the notional morning and afternoon peak periods which coincide with the school drop of and pick up hours when considering the nearby Coopernook Public School. For the purposes of this assessment the notional peak periods were assessed with the AM peak being the worst case scenario for generated impacts on George Gibson Drive, Macquarie Street and West Street (Lansdowne Road).

Based on the Austroads definitions for LoS and the future predicted one way flows for George Gibson Drive and Macquarie Street there was no requirement to complete Sidra Modelling assessments for the nominated intersections given the future "minimal control delays" (Los A) at each intersection.

In April 2022 MCC adopted a municipality wide Pedestrian Access Mobility Plan (PAMP) and Bike Plan. This document does not specifically address the future planning needs for pedestrian and cyclist facilities in the Coopernook area.

Currently there are no formal pedestrian or cyclist facilities provided in the vicinity of the development.

However, given the proximity of the development to the Coopernook Public School pedestrian and cyclist facilities should be considered in the final detailed design of the development. The following facilities are suggested for consideration as part of the development final design:-

- 1.50m wide footpath between Road No.1 and Road No.2 within the development site, and
- 2.10m wide shared path between Road No.1 and the Coopernook Public School driveway access (approx. 50m in length).

Eggin's Comfort Coaches currently runs regular single service (Route 320) between Taree and Harrington via Coopernook Monday to Friday with an extra service on Thursday afternoon.

There are currently no formal bus stops located in the vicinity of the development site. The bus stop in Coopernook is located at the General Store in Macquarie Street, approximately 380m northeast of the proposed Road No.1 intersection.

A further review of the servicing requirements will need to be undertaken between MCC, Eggins Comfort Coaches and TfNSW to determine if future bus facilities are to be provided in Coopernook.

Generally, this development will not create any major road safety issues given the existing and predicted traffic volumes on the local road network.

The development will create some minor road safety issues around the proposed intersections to be provided as result of turn movements in and out of the proposed side roads. However, the perceived road safety issues should be minimised if the intersections are designed and constructed with the prescribed guidelines of the time.

Safe Intersection Sight Distance at the proposed intersections will generally be acceptable with some minor reduction due to existing vegetation around the proposed intersection locations.

10. RECOMMENDATIONS

- This assessment has determined George Gibson Drive and Macquarie Street will have the capacity (Austroads Guidelines) to cater for the future traffic volumes generated by the development, with no significant reduction to existing safety, efficiency or capacity.

- As part of the development, 2 x Urban BAR / BAL intersection treatments are to be designed and constructed off Macquarie Street to the south and West Street to the north.

- It is recommended the development design and construct an internal 1.50m wide concrete footpath between Road No.1 and Road No.2 and a 50m length of 2.50m wide shared path between Road No.1 and the Coopernook Public School driveway to the east of the site.

APPENDIX A
DEVELOPMENT PROPOSAL


PLAN OF PROPOSED LOT LAYOUT
53 MACQUARIE STREET, COOPERNOOK
SCALE 1:2000
DATUM - AHD
DATE 09/08/2023
JOB No. 4150
DWG No. 001
AMENDMENTS
LOT 3942, 56-57 MINOR AMENDS 09.08.23 FC
DATE BY
PROJECT - COOPERNOOK SUBN
CLIENT - Coopernook Projects Pty Ltd
34 KING STREET, GLOUCESTER
P.O. BOX 194 GLOUCESTER 2422
Ph. 02 6558 2255 Fax. 02 6558 2327
EMAIL - survey@calcosurveyors.com.au
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102 DP1256572