

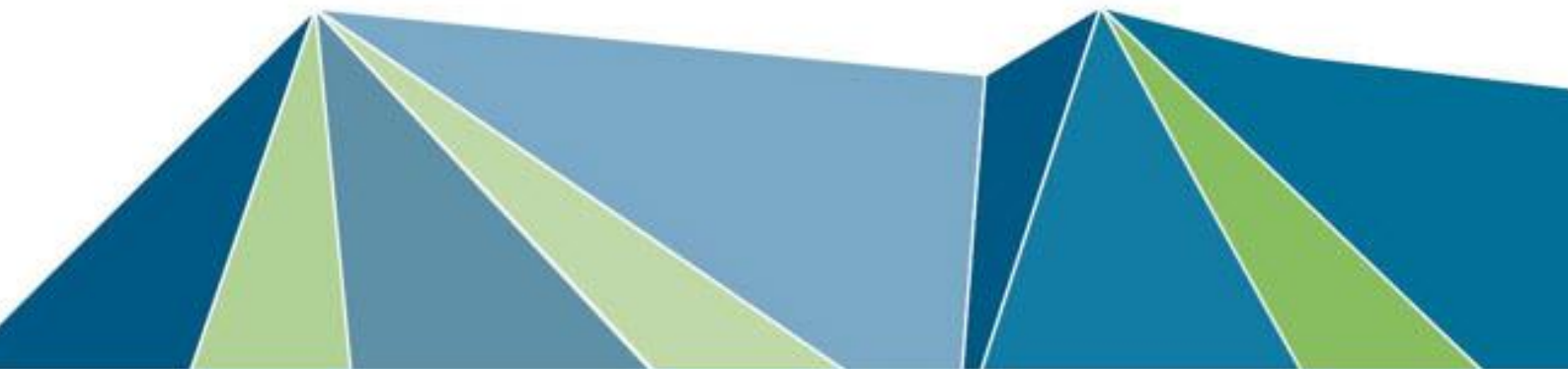
# Agenda

## *Local Traffic Committee Meeting* 26 June 2024

A Local Traffic Committee Meeting will be held in the Ballina Shire Council Chambers, 40 Cherry Street, Ballina on **26 June 2024 commencing at 2:00 PM.**

1. Attendance & Apologies
2. Minutes of Previous Meeting
3. Deputations by Members of Public or Councillors
4. Summary Report – Recent Decisions of Council in Response to LTC Recommendations
5. Items to be Referred to Council
6. Items to be Referred to the General Manager's Delegate
7. Items for Traffic Engineering Advice
8. Information of the Committee
9. Regulatory Matters on Classified Roads (GM's Delegate)
10. Items Without Notice
11. Next Meeting

John Truman  
**Director**  
**Civil Services Division**



## Table of Contents

1.	Attendance & Apologies .....	3
2.	Minutes of Previous Meeting .....	3
3.	Deputations by Members of Public or Councillors .....	3
4.	Summary Report - Recent Decisions of Council in Response to LTC Recommendations .....	4
5.	Items to be Referred to Council .....	5
6.	Items Referred to General Manager's Delegate.....	6
6.1	Proposed No Stopping Zone, Pacific Parade, Lennox Head	6
6.2	Proposed Wardell Community Green Space Project	8
6.3	Proposed Parking Configuration, Tamar Street Ballina, Kerr Street to Grant Street	14
7.	Items for Traffic Engineering Advice .....	18
7.1	Proposed Ballina Heights Shopping Centre - Traffic Changes	18
8.	Information for the Committee.....	66
8.1	Schedule of Outstanding Resolutions of the Committee	66
9.	Regulatory Matters on Classified Roads (GM's Delegate) .....	72
10.	Items Without Notice .....	73
11.	Next Meeting .....	73

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1. Attendance & Apologies
  2. Minutes of Previous Meeting
  3. Deputations by Members of Public or Councillors
- 

**1. Attendance & Apologies**

**2. Minutes of Previous Meeting**

A copy of the Minutes of the Local Traffic Committee Meeting held on Wednesday 12 June 2024 were distributed with the business paper.

**RECOMMENDATION**

That the Committee confirms the Minutes of the Local Traffic Committee Meeting held on Wednesday 12 June 2024.

**3. Deputations by Members of Public or Councillors**

Nil

**4. Summary Report - Recent Decisions of Council in Response to LTC Recommendations**

Nil Items

5. Items to be Referred to Council

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**5. Items to be Referred to Council**

Nil Items

## **6.1 Proposed No Stopping Zone, Pacific Parade, Lennox Head**

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### **6. Items Referred to General Manager's Delegate**

#### **6.1 Proposed No Stopping Zone, Pacific Parade, Lennox Head**

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##### **Introduction**

Council's Rangers are having some difficulties enforcing the existing No Parking Zone on the west side of Pacific Parade, north of Byron Street.

##### **Information**

Council's Rangers are having some difficulties enforcing the existing No Parking Zone on the west side of Pacific Parade, north of Byron Street. This has included vandalism/defacing of the current No Parking signage.

This is a busy section of street as it contains the Lennox Head Hotel as well as beach access and is the through road to Lake Ainsworth, the caravan park and residential areas. The section of Pacific Parade from Byron Street to Lennox Street is only 7 m wide kerb to kerb, sufficient width for two travel lanes, but insufficient to accommodate additional space for kerbside parking. There are indented 90 degree parking bays on the east (beach) side of Pacific Parade which compensate for the absence of kerbside parking adjacent to residences and provide parking for beach visitors and hotel patrons. The current No Parking Zone extends from the Hotel Bottle Shop access, northwards along the west side of Pacific Parade, terminating at the kerb return at the Lennox Street intersection. Further south, the northbound section of Pacific Parade from Byron Street in front of the main section of the hotel is only 3.5 m wide and kerbside parking is prevented by NSW Road Rule 208(6) (requires 3m clearance from a marked road centreline). See sketch below:



**Current Parking Controls  
Pacific Parade Lennox Head**

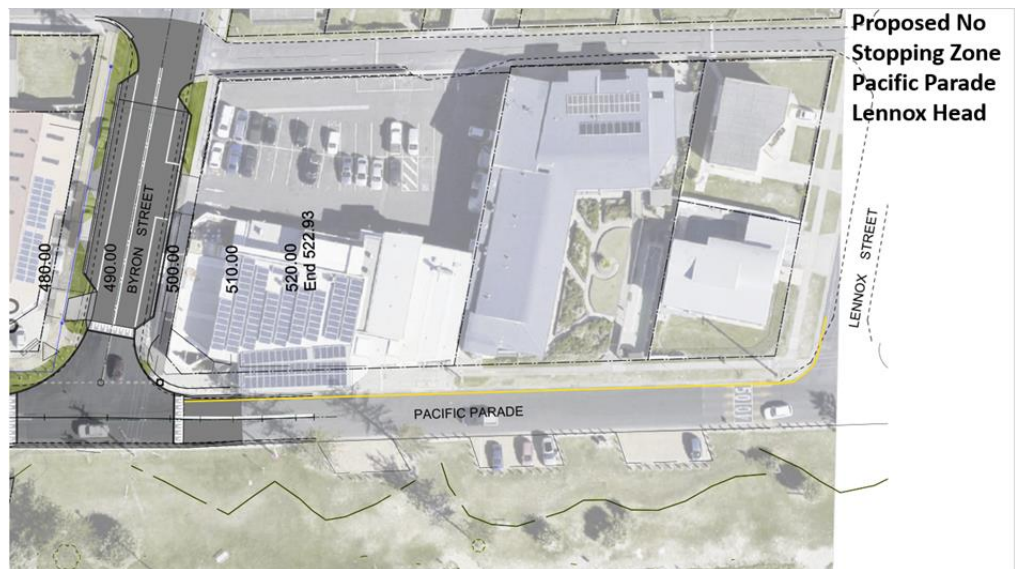
Current No  
Parking Zone

##### **Pacific Parade – Current No Parking Zone**

## 6.1 Proposed No Stopping Zone, Pacific Parade, Lennox Head

The compliance issues with the current No Parking zone may be related to bottle shop customers stopping in this section to take advantage of the 2 minute drop off/pick up allowance provided by NSW Road Rule 168 and overstaying the time limit. These issues would be overcome by replacing the No Parking zone with a No Stopping Zone.

It is proposed to replace and extend the existing No Parking Zone with a No Stopping Zone, indicated by pavement edge yellow line marking as shown on the following sketch.



**Pacific Parade – Proposed No Stopping Zone**

### RECOMMENDATIONS

That the Committee support the replacement and extension of the existing No Parking Zone on the west side of Pacific Parade between Byron Street and Lennox Street with a No Stopping Zone as indicated by pavement edge yellow line marking on the above sketch.

### Attachment(s)

Nil

**6.2 Proposed Wardell Community Green Space Project**

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**Introduction**

The Committee's support is requested for regulatory signs and markings associated with the proposed Wardell Community Green Space Project.

**Information**

Plans of the Wardell Community Green Space Project are an attachment to this report. There are three plans showing existing conditions, proposed works and proposed future stages. The project team have advised:

**Two New Mobility Parking Spaces**

Consistent with the masterplan and addressing concerns raised by locals, two additional mobility spaces have been proposed at Wardell. The surrounding footpaths and road grades will allow compliant mobility access to Richmond Street to the east, Wardell wharf to the south and the new community green space to the west. Space dimensions, signage and line marking are consistent with AS2890.5/6.

**Conversion of Existing Intersection into a "Mini – Roundabout"**

Consistent with Austroads guide AGRD07 a mini roundabout has been proposed at the intersection of Sinclair Street and Richmond Street. The purpose of the roundabout is to simplify the intersection, provide additional traffic calming, and allow for a turnaround on Richmond Street when the ultimate master planned strategy has been implemented (60 degree parking with roundabouts to allow for circulation at Richmond Street and Sinclair Street; Richmond Street and Swamp Street).

The roundabout will be a mountable stamped and coloured asphalt; the signage and linemarking consistent with TfNSW delineation Section 11, AS1742.10, and AGRD07; a pedestrian refuge built into the Richmond Street western leg, and raised wombat crossing on Sinclair Street southern leg.

**Shared Zone on Richmond Street:**

Shared zones cannot be approved by Council/Local Traffic Committee under delegated authority and require formal approval from TfNSW. The following information is provided for the Committee's information and pending the Committee's support, a formal application will be forwarded to TfNSW.

Consistent with TfNSW Technical Direction TD00030:2023 and the TfNSW Movement and Place Framework, a shared zone has been proposed at Richmond Street west of the intersection with Sinclair Street. The purpose of the shared zone is to maximise the space available for pedestrians and cyclists, create a lower speed environment, alert drivers to a lower speed environment, and create a more socially inclusive space. The signage and line marking is consistent with Figure 38 of TD00030:2023 with "Park in Bays Only".

The following characteristics support the road's eligibility for a shared zone designation:

- Currently low speed <50km/hr on the road itself and all approaches
- Classified as a local road with no through movement of vehicles
- Not along a bus route
- 3m wide lanes, changed surface treatment and will not have kerb and channel
- Significant public engagement has already occurred

### **Wombat Crossing on Sinclair Street**

Consistent with TfNSW Pedestrian Crossing Guideline TS 00043:1.0, AS1742 series, and Austroads Guide AGTM08, a raised “Wombat” crossing has been proposed on the southern leg of Sinclair Street leading into the proposed roundabout. The ramp is proposed at 15% grade (bicycle friendly), 6m long, 100mm high (suitable for infrequent bus use) with a stencilled and coloured asphalt finish. Kerb extensions are also proposed on the eastern departure side of Sinclair Street to reduce crossing distance and improve sight distance. The raised crossing has been proposed to reduce vehicle speeds and crashes, reduce vehicle-pedestrian conflicts, and provide a designated crossing place for pedestrians.

The pedestrian crossing at Sinclair Street will act as a safe pedestrian link between the School and town centre; towards the proposed community greenspace, the pedestrian bridge to East Wardell (south of the Richmond River), and West Wardell when future proposed pedestrian crossing points are established on Blackwell Drive. Currently the biggest trip generator is from Richmond Street to the Bank Building (currently operating as Wardell Core). On Friday 11th October and Saturday 15th of October 2022 pedestrian numbers were observed at approximately 10-15 people crossing Sinclair Street during the peak morning hours. This can be further corroborated by a mid-weekday audit to average out for a “typical day”

The following characteristics support the proposed crossing’s eligibility:

- non-arterial road
- 50 km/h or less
- no more than one lane of moving traffic on each approach
- adequate sight distances (refer to Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections)
- adequate kerb ramps (refer to AS 1428)
- adequate lighting (refer to AS/NZS 1158.4)
- In two separate one-hour periods in a typical day pedestrian flow is expected to be greater than 20 consistent with 6.1.2 of TS 00042:1.0 (once the master planned works have occurred), see below.

TfNSW Pedestrian Crossing Guideline TS 00043:1.0 clause 6.1.2, advises the warrants for pedestrian crossings at a local road can be relaxed to “In each of two separate one-hour periods in a typical day, the pedestrian flow per hour (P) crossing the road is, or is expected to be, equal to or greater than 20.”

To further support this proposed crossing, it is anticipated that after the works are completed pedestrian trip generation could be expected over this link to increase to 20-25. When pedestrian refuges and footpath is established on Blackwell Drive this number could further increase to 30 (0.05 weekday peak hour trips generated per dwelling), and if the hotel reopens this number would again significantly increase. Moreover, there will be times of high pedestrian activity during events, markets and holiday periods.”

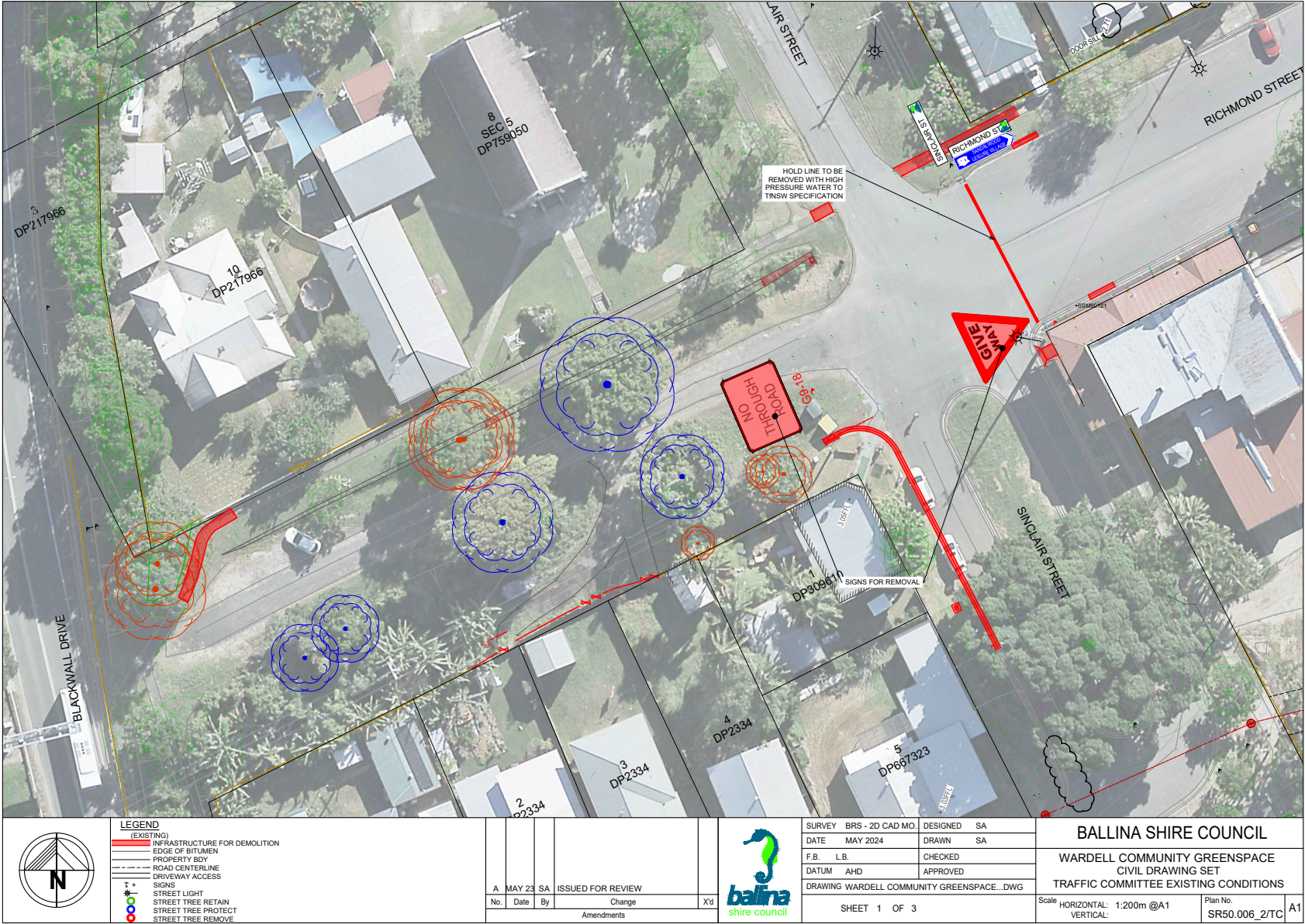
### **RECOMMENDATIONS**

1. That the Committee support the proposed “shared zone” in principle and endorse lodgement of a formal application for approval to Transport for NSW.
2. That the Committee support the other proposed traffic facilities, wombat pedestrian crossing and all other associated regulatory signs and markings, as shown on the “Traffic Committee Proposed Works” Plan attached to this report.

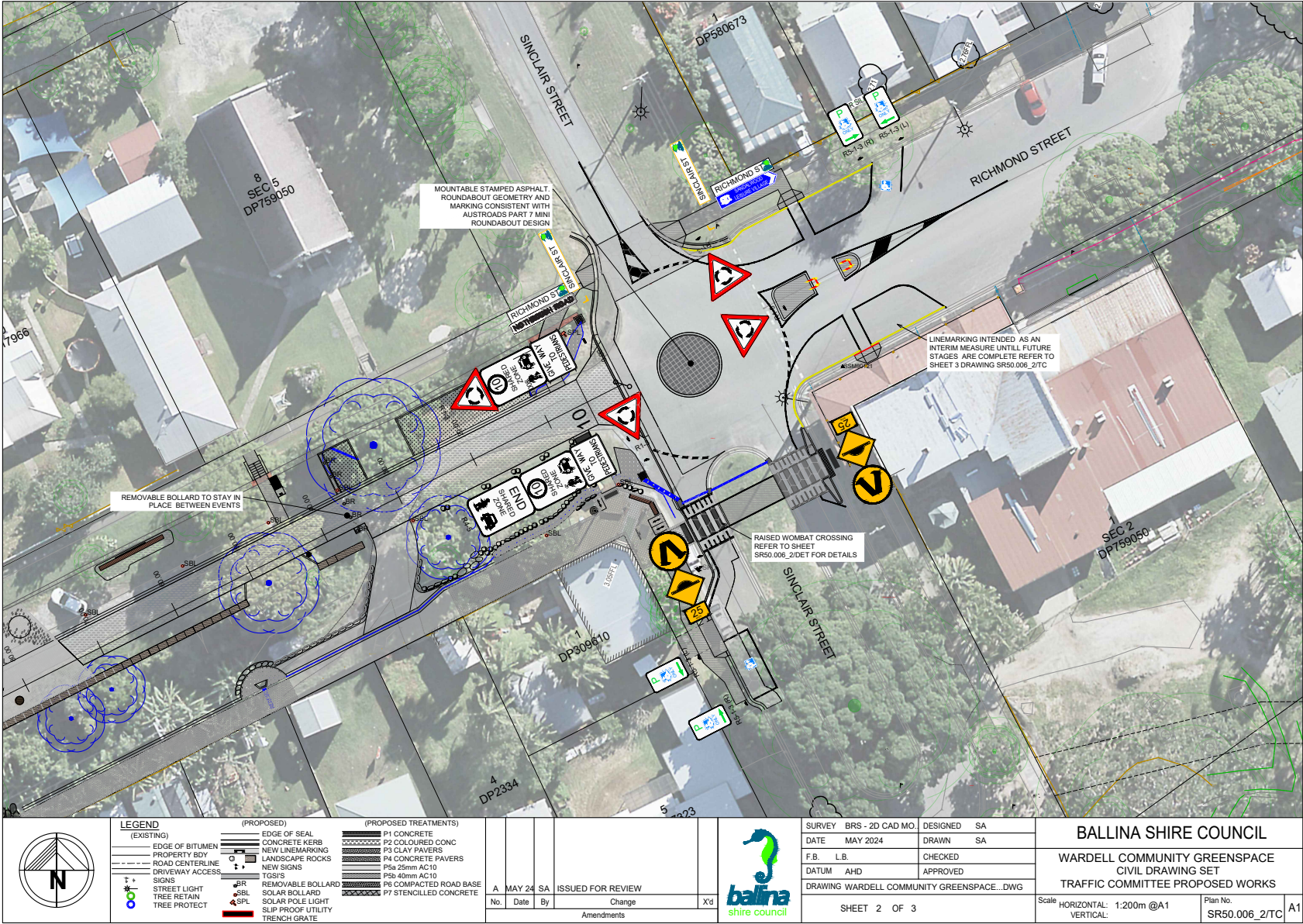
### **Attachment(s)**

1. Wardell Community Green Space Project: - Existing, Proposed and Future Stages [↓](#)

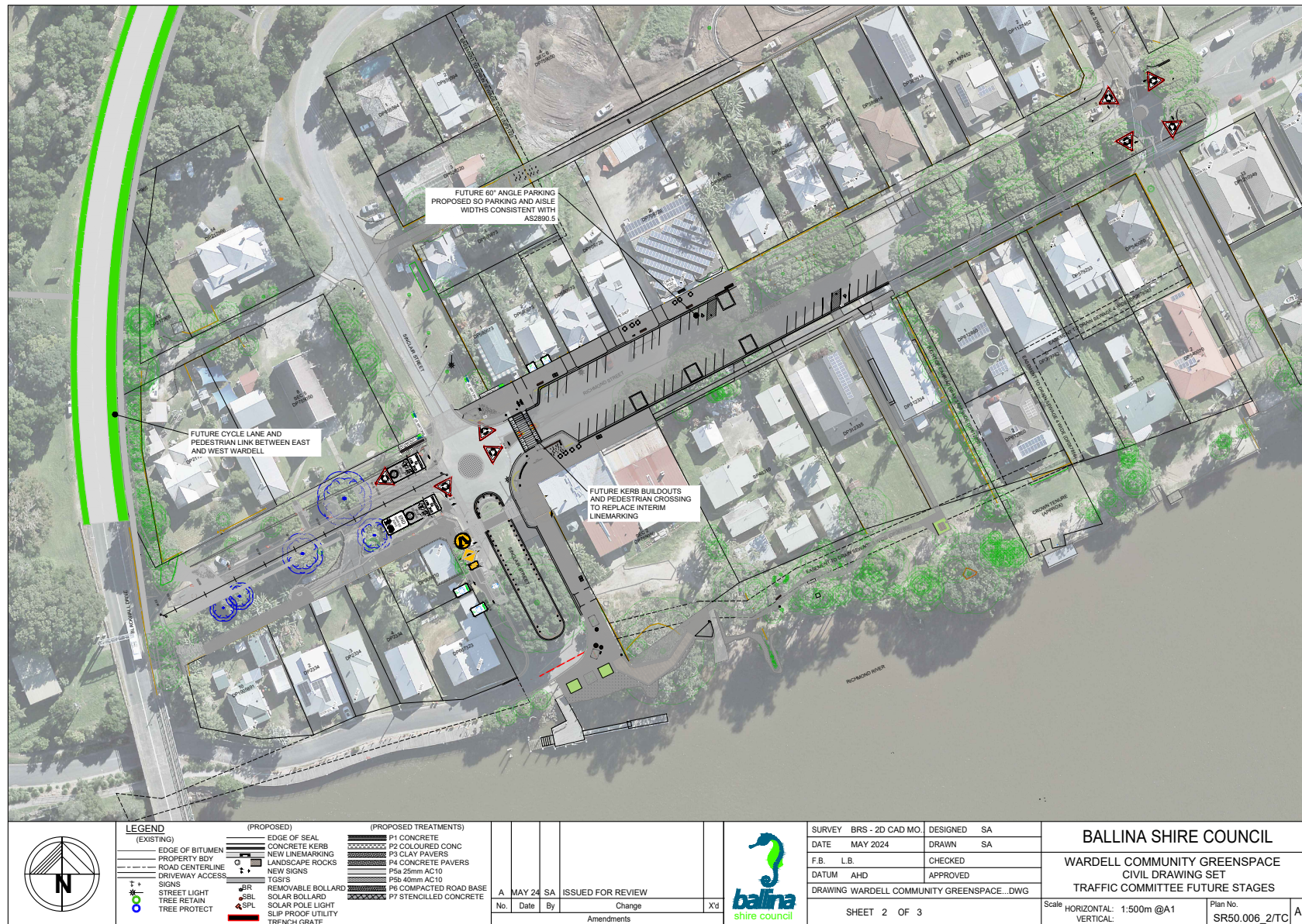












### **6.3 Proposed Parking Configuration, Tamar Street Ballina, Kerr Street to Grant Street**

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### **6.3 Proposed Parking Configuration, Tamar Street Ballina, Kerr Street to Grant Street**

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#### **Introduction**

Following Council consideration of the Ballina CBD Parking Study, the Committee's support is requested for linemarking of parking spaces in Tamar Street, Ballina between Kerr Street and Grant Street and associated authorisation of 60 degree, rear to kerb, angle parking and two disability vehicle spaces.

#### **Information**

At the meeting held 22 February 2022 to consider recommendations from the Ballina CBD Parking Study and associated public submissions, Council in part resolved:

- "1. That based on the submissions outlined in this report Council take no action on implementation of the study recommendation for proposed time parking zone changes.
2. ....
3. That subject to funding in future budgets, Council approves within the study area, the proposed line marking of unmarked parking spaces in River Street and Tamar Street."

Implementation of the above Council resolution will take some time to produce parking space marking design plans that are compatible with the unique geometry and spacing of existing driveways, parking blisters and the like. It is also necessary to formalise approval of angle parking which is practised in most of Tamar Street, but not always with formal approval or signage for angle parking.

The section of Tamar Street between Kerr Street and Grant Street has been forwarded for the Committee's consideration as an incremental approach to implementing the Council resolution. Below is an aerial photo which depicts current parking practice in this section Tamar Street.



### 6.3 Proposed Parking Configuration, Tamar Street Ballina, Kerr Street to Grant Street

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**Tamar Street Aerial View (2022)**

There is currently no parking time restriction in this part of Tamar Street and there is no signage authorising angle parking. In the absence of angle parking signage, parking defaults to parallel parking under NSW Road Rules. However, as can be seen in the photo and by observation, angle parking (rear to kerb) is almost universally, but unlawfully, practiced and is generally at an angle around 60 and 80 degrees.

It is proposed to request the Committee's formal approval for 60 degree, rear to kerb parking zones in this section of Tamar Street to enable the proposed parking space marking to proceed when budget funds are available. It is also proposed to include two disability parking spaces on the south side. Note: There are already some disability spaces on the north side in the Centrelink car parking area.

The proposed parking spaces and regulatory signage and markings are shown in the attachment to this report. Buildings on No 111 Tamar Street and No 18 Grant Street have been demolished in preparation for construction of a medical centre the subject of Development Application No. 2023/537, currently under consideration by the Northern Regional Planning Panel. The application proposes all vehicular access from the rear via Holden Lane with no penetration of the Tamar Street frontage by driveways. This access arrangement is supported by Council staff. The attachment depicts continuous parking spaces along this section of Tamar Street frontage across the existing, but proposed to be redundant, layback crossings, to be consistent with the application.

As shown on the attachment, 60 degree rear to kerb angle parking is proposed which is consistent with parking practice in adjacent areas. 60 degrees is preferred to 45 degrees as it is generally preferred by drivers and also produces a higher parking space yield.

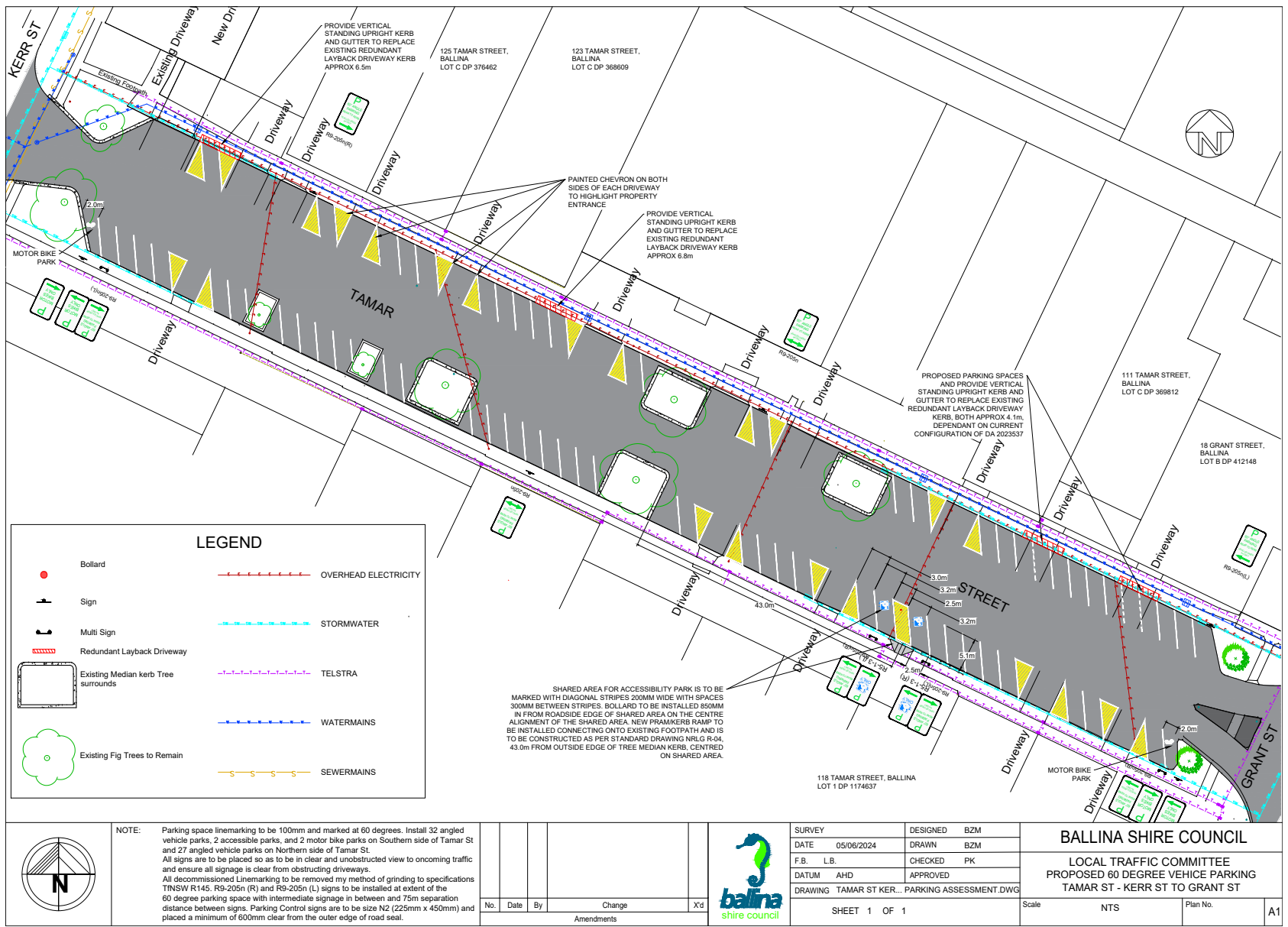
**RECOMMENDATIONS**

That the Committee support the proposed 60 degree rear to kerb parking zones, disability parking spaces and associated regulatory signs and markings on Tamar Street, Ballina between Kerr Street and Grant Street as depicted on the attachment to this report.

**Attachment(s)**

1. Tamar St Ballina, Kerr to Grant St, Proposed Parking Arrangements [↓](#)

6.3 Proposed Parking Configuration, Tamar Street Ballina, Kerr Street to Grant Street



## **7.1 Proposed Ballina Heights Shopping Centre - Traffic Changes**

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### **7. Items for Traffic Engineering Advice**

#### **7.1 Proposed Ballina Heights Shopping Centre - Traffic Changes**

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##### **Introduction**

Council has received an application for a proposed local shopping centre at Ballina Heights Cumbalum that requires changes to local street traffic arrangements.

##### **Information**

Council has received an application for a proposed local shopping centre at Ballina Heights, Cumbalum. The Committee's support is sought for associated proposed changes to traffic arrangements in the local street network.

The proponent has presented a master plan for the site. Stage One DA2023/270 consists of an initial Commercial development of 11 Tenancies over 1,342 sqm GFA. The Master Plan includes further development of the site to include future Child Care centre, Supermarket & Bottle shop, Food & Drink premises and Multi-Unit Housing.

The application and assessment process has determined a range of changes to the existing streetscape and traffic arrangements proposed by the applicant's Traffic Consultants, McLaren, and by Council assessment staff for this local commercial Hub that will attract a high volume of vehicular and pedestrian patronage.

The changes can be summarised into two categories.

1. Proposed by Applicant
2. Requested by Council development assessment staff, and intended as conditions of consent.

##### **Changes proposed by applicant**

1. Variations to line marking and additional chevron line marking to the roundabout at Ballina Heights Drive/Farrelly Avenue/Power Drive, to convert from two lane to single lane circulation to improve performance and provide space for channelling for entry to the premises.
2. Basic right turn (BAR) access from Power Drive into the premises.

##### **Further changes proposed by Council staff assessing the application**

1. Bus bay and shelter in both directions on Ballina Heights Drive near the entry point to the premises.
2. Pedestrian refuge & wheel ramps on Power Drive between Ballina Heights Drive and O'Rourke Street.



## **7.1 Proposed Ballina Heights Shopping Centre - Traffic Changes**

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3. Extension of the existing Farrelly Avenue footpath on the south western side from Farrelly Avenue path to the new Bus Shelter on Ballina Heights Drive.
4. Construction of pram ramps and a pedestrian refuge adjacent to the new bus bays and shelters on the approach side to each of the bus bays. To facilitate pedestrian and bus passenger access to the shopping centre.

The principal reason for the Proponent's proposal to convert the Ballina Heights Drive/Farrelly Avenue/Power Drive is understood to be to create sufficient pavement space on the Ballina Heights Drive southbound roundabout exit to then develop a separate left turn entry lane into the shopping centre. To justify this proposal, the TIA provides SIDRA modelling to demonstrate that the single circulation lane roundabout still has more than sufficient capacity to accommodate, at Level of Service A & B, both background and development generated traffic volumes now and in the horizon year of 2036.

Sketch details of the proposed traffic changes are shown in an attachment to this report. Detailed design plans will be required to be submitted to Council for approval at construction certificate and S138 Roads Act Approval Stage. Also attached is the text section of the Proponent's Traffic Impact Assessment.

Council's assessment staff are of the opinion that the treatments proposed to be implemented for Stage One of the development and will also be suitable for the completion of future Stages of the development as shown in the Master Plan accompanying DA2023/535 currently before Council.

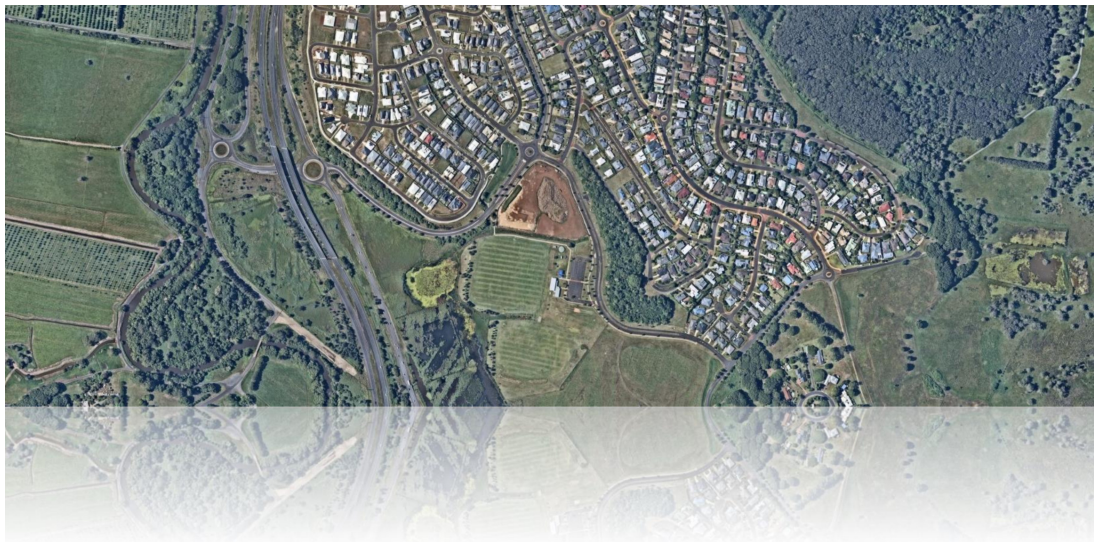
### **RECOMMENDATIONS**

That the Committee provide traffic engineering advice and/or support for:

1. The proposed conversion of the Ballina Heights Drive/Farrelly Avenue/Power Drive roundabout from a dual circulation lane to a single circulating lane as depicted on the attachment to this report .
2. The proposed additional traffic facilities including bus bays, pedestrian refuges, path extension and protected right turn bay in Power Drive as depicted on the attachment to this report.

### **Attachment(s)**

1. Ballina Heights Shopping Centre Traffic Impact Assessment [↓](#)
2. Ballina Heights Shopping Centre Proposed Traffic Changes [↓](#)



**TRAFFIC AND PARKING IMPACT ASSESSMENT OF  
THE PROPOSED MIXED-USE DEVELOPMENT (MASTER PLAN AND STAGE 1)  
AT THE CORNER OF BALLINA HEIGHTS DRIVE / POWER DRIVE, CUMBALUM**



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Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

240046.01FA - 21 March 2024



**Development Type:** Mixed-Use Development (Master Plan and Stage 1)  
**Site Address:** Corner of Ballina Heights Drive / Power Drive, Cumbalum  
**Prepared for:** Trustees of the Roman Catholic Parish of Ballina  
c/- Planners North  
**Document reference:** 240046.01FA

Status	Issue	Prepared By	Checked By	Approved By	Date
As Pre-DA Traffic and Parking Report 220157.01					
Draft	A	JC	AT	TS	3 August 2022
As DA Traffic and Parking Report 220157.02					
Draft	B	AT	TS	TS	5 May 2023
Final	A	AT	AT	AT	15 May 2023
As Revised DA Traffic and Parking Report 240046.01					
Draft	A	AT			20 March 2024
Final	A	AT	TS	TS	21 March 2023

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240046.01FA - 21 March 2024



## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	Description and Scale of Development.....	1
1.2	State Environmental Planning Policy (Transport and Infrastructure) 2021 .....	2
1.3	Site Description.....	2
1.4	Site Context .....	3
<b>2</b>	<b>EXISTING TRAFFIC AND PARKING CONDITIONS .....</b>	<b>4</b>
2.1	Road Hierarchy.....	4
2.1.1	Power Drive .....	4
2.1.2	Ballina Heights Drive .....	4
2.1.3	Farrelly Avenue .....	4
2.1.4	O'Rourke Street .....	4
2.1.5	Tamarind Drive.....	4
2.2	Existing Traffic Management .....	5
2.3	Existing Traffic Environment .....	5
2.3.1	Existing Road Performance.....	5
2.4	Public Transport.....	8
2.5	Future Road and Infrastructure Upgrades .....	8
<b>3</b>	<b>PARKING ASSESSMENT .....</b>	<b>9</b>
3.1	Council Parking Requirement .....	9
3.2	Parking for People with Disabilities.....	10
3.3	Bicycle & Motorcycle Parking Requirements .....	13
3.4	Servicing & Loading.....	13
3.5	Car Park Design & Compliance .....	14
3.6	Changes Required to Accommodate Stage 1.....	15
3.6.1	Turning Bays.....	15
3.7	Ballina Heights Drive / Power Drive Intersection.....	15
<b>4</b>	<b>TRAFFIC ASSESSMENT .....</b>	<b>17</b>
4.1	Traffic Generation .....	17
4.2	Traffic Assignment .....	21
4.3	Traffic Impact.....	22
4.3.1	2022 Traffic Performance .....	22
4.3.2	2036 Traffic Performance .....	25
4.3.3	Summary of Traffic Performance.....	31
<b>5</b>	<b>RESPONSE TO COUNCIL .....</b>	<b>33</b>
<b>6</b>	<b>CONCLUSIONS.....</b>	<b>39</b>

240046.01FA - 21 March 2024



### 1 INTRODUCTION

*McLaren Traffic Engineering* was commissioned by the *Trustees of the Roman Catholic Parish of Ballina* to provide a revised traffic and parking impact assessment of Stage 1 of the proposed mixed-use master plan development at the corner of Ballina Heights Drive / Power Drive, Cumbalum, with the original master plan depicted in **Annexure A**. There have been some changes in the scale of the later stages of the master plan since this original plan was prepared, which are included within the Stage 1 plans (**Annexure B**). These changes have been included in this revised report.

*McLaren Traffic Engineering* initially prepared and submitted an assessment of Stage 1 of the subject mixed-use development (Stage 1 plans provided in **Annexure B**) within the report *Traffic and Parking Impact Assessment of the Proposed Mixed-Use Development (Stage 1) (220157.02FA)*. The council requested additional information in their letter dated 29 January 2024, which this revised traffic and parking impact addresses, with a formal response in **Section 5** of this report. This revised TPIA aims to include a revised assessment of the proposal, consisting of the entire proposed master plan (**Annexure A**, with changes to some scale and land use) and an evaluation of Stage 1 (**Annexure B**) within the proposed master plan.

It should also be noted that *McLaren Traffic Engineering* has previously been involved in developing the master plan for the whole site, with consideration to this stage (Stage 1) and the potential following stages. This analysis was assessed and outlined within the *Pre-DA Traffic and Parking Impact Assessment (220157.01DA)* dated 3 August 2022, which was submitted to Council.

#### 1.1 Description and Scale of Development

The proposed development has the following characteristics within Stage 1 that are relevant to traffic and parking:

- 1,342m<sup>2</sup> Gross Floor Area (GFA) Commercial Premises (Shop/Retail Premises);
- An at-grade car parking area with vehicular access via four proposed driveways from Ballina Heights Drive (separated entry and exit driveways) and Power Drive (two two-way driveways), accommodating 60 car spaces within Stage 1.

The remaining areas of the proposed masterplan development have the following characteristics that are relevant to traffic and parking (as referred to within the scale associated with the Stage 1 plans in **Annexure B**):

- A child care centre accommodating 90 children;
- 550m<sup>2</sup> GFA Supermarket;
- 200m<sup>2</sup> GFA Bottle Shop;
- 400m<sup>2</sup> GFA (30 Seats) Food & Beverage premises;
- Nine (9) Live/work developments, each with a 130m<sup>2</sup> GFA commercial component and a dwelling;



- An additional 108 car parking spaces, resulting in a total of 168 car parking spaces across the site.

### **1.2 State Environmental Planning Policy (Transport and Infrastructure) 2021**

Stage 1 of the development does not qualify as a traffic-generating development with relevant size and/or capacity under *Clause 2.122* of the *SEPP (Transport and Infrastructure) 2021*, as the proposal does not provide over 2,000m<sup>2</sup> in gross floor area of shops. Accordingly, formal referral to Transport for NSW (TfNSW) is not necessary for Stage 1, and the application can be assessed by Ballina Shire Council officers.

However, the scale of the overall master plan for the subject site is anticipated to include over 2,000m<sup>2</sup> in gross floor area of shops and, as such, would require formal referral to Transport for NSW (TfNSW) by Council, if considered holistically.

### **1.3 Site Description**

The subject development site is currently zoned *E1 – Local Centre* under *Amendment No. 7* to the *Ballina Local Environment Plan 2012 (BLEP 2012)*. The site is currently unoccupied and has frontages to Power Drive to the east and Ballina Heights Drive to the west.

The site is generally surrounded by low-density residential dwellings, with the Ballina Heights Sporting Facility located directly to the south of the site. The Pacific Highway is located approximately 400m to the east of the site.



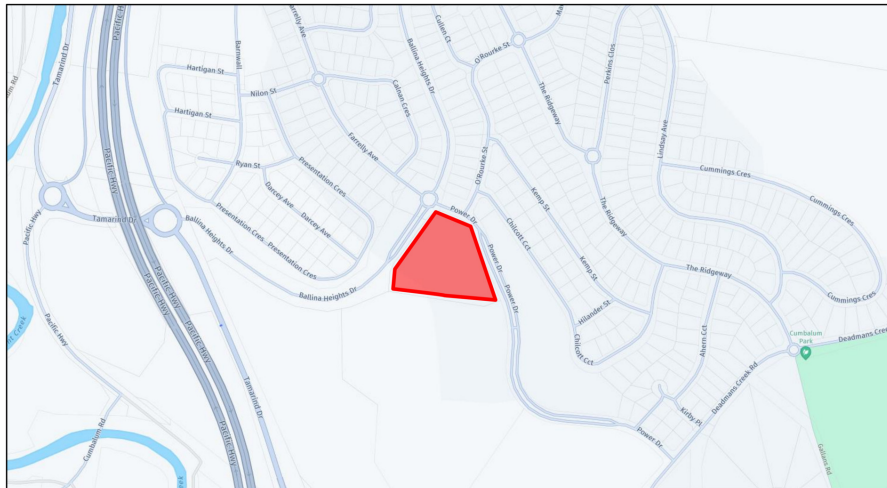
## 1.4 Site Context

The site's location is shown on an aerial photo and a street map in **Figure 1** and **Figure 2** respectively.



 Site Location

**FIGURE 1: SITE CONTEXT – AERIAL PHOTO**



 Site Location

**FIGURE 2: SITE CONTEXT – STREET MAP**

Mixed-Use Development (Master Plan and Stage 1)  
Corner of Ballina Heights Drive / Power Drive, Cumbalum  
240046.01FA - 21 March 2024

Page 3 of 40



### 2 **EXISTING TRAFFIC AND PARKING CONDITIONS**

#### **2.1 Road Hierarchy**

The road network servicing the site has characteristics described in the following sub-sections.

##### **2.1.1 Power Drive**

- Unclassified LOCAL Road;
- Approximately 13m wide two-way carriageway facilitating one (1) traffic flow lane in each direction and a 2m wide central median;
- Signposted 50km/h speed limit;
- Unrestricted kerbside parking is permitted along both sides of the road.

##### **2.1.2 Ballina Heights Drive**

- Unclassified COLLECTOR Road;
- Approximately 13m wide two-way carriageway facilitating one (1) traffic flow lane in each direction;
- Signposted 60km/h speed limit;
- Unrestricted kerbside parking is permitted along both sides of the road.

##### **2.1.3 Farrelly Avenue**

- Unclassified LOCAL Road;
- Approximately 11m wide two-way carriageway facilitating two-way traffic flow and kerbside parking on both sides of the road.
- Signposted 50km/h speed limit;
- Unrestricted kerbside parking is permitted along both sides of the road.

##### **2.1.4 O'Rourke Street**

- Unclassified LOCAL Road;
- Approximately 9m wide two-way carriageway facilitating two-way traffic flow and kerbside parking on both sides of the road;
- Default 50km/h speed limit;
- Unrestricted kerbside parking is permitted along both sides of the road.

##### **2.1.5 Tamarind Drive**

- Unclassified COLLECTOR Road;
- Approximately 11m wide two-way carriageway facilitating one (1) traffic flow lane in each direction and a 2m wide sealed shoulder on each side;
- Signposted 60km/h speed limit;





- No formal kerbside parking along either side of the road.

### 2.2 Existing Traffic Management

- Roundabout controlled intersection of Ballina Heights Drive / Power Drive / Farrelly Avenue;
- Priority controlled intersection of Power Drive / O'Rourke Street;
- Roundabout controlled intersection of Tamarind Drive / Ballina Heights Drive;
- 'Give Way' controlled intersection of Power Drive / Deadmans Creek Road;
- 'Give Way' controlled intersection of Tamarind Drive / Deadmans Creek Road with separated left and right turn lanes from Tamarind Drive.

### 2.3 Existing Traffic Environment

Intersection turning movement traffic surveys were conducted at the intersections of:

- Ballina Heights Drive / Tamarind Drive;
- Ballina Heights Drive / Power Drive / Farrelly Avenue;
- O'Rourke Street / Power Drive;
- Power Drive / Deadmans Creek Road; and
- Deadmans Creek Road / Tamarind Drive.

The times surveyed were from 7:00 am to 9:30 am and 2:30 pm to 6:00 pm on Friday 27 May 2022, representing a typical operating weekday, and from 10:00 am to 2:00 pm on Saturday 28 May 2022, representing a typical operating weekend. The full survey results are reproduced in **Annexure C** for reference.

#### 2.3.1 Existing Road Performance

The performance of the surrounding intersections under the existing traffic conditions has been assessed using SIDRA INTERSECTION 9.1, **Table 1** summarises the resultant intersection performance data, with full SIDRA results reproduced in **Annexure D**.


**TABLE 1: EXISTING INTERSECTION PERFORMANCES (SIDRA INTERSECTION 9.0)**

Intersection	Peak Hour	Degree of Saturation <sup>(1)</sup>	Average Delay <sup>(2)</sup> (sec/veh)	Level of Service <sup>(3)(4)</sup>	Control Type	Worst Movement
<b>EXISTING PERFORMANCE (2022)</b>						
Ballina Heights Drive / Tamarind Drive	AM	0.30	5.3 (Worst: 14.7)	<b>A</b> (Worst: B)	Roundabout	UT from Ballina Heights Drive
	PM	0.44	4.6 (Worst: 14.1)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
	SAT	0.32	4.6 (Worst: 13.6)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
Ballina Heights Drive / Power Drive	AM	0.10	5.5 (Worst: 10.7)	<b>A</b> (Worst: B)	Roundabout	UT from Power Drive
	PM	0.13	5.7 (Worst: 10.5)	<b>A</b> (Worst: B)		UT from Farrelly Avenue
	SAT	0.08	5.3 (Worst: 10.3)	<b>A</b> (Worst: B)		UT from Power Drive
O'Rourke Street / Power Drive	AM	0.06	3.6 (Worst: 4.7)	<b>NA</b> (Worst: A)	Give Way	RT from O'Rourke Street
	PM	0.04	3 (Worst: 5)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
	SAT	0.04	3.3 (Worst: 4.7)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
Deadmans Creek Road / Power Drive	AM	0.04	1.7 (Worst: 5.1)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.07	1.7 (Worst: 5.2)	<b>NA</b> (Worst: A)		RT from Power Drive
	SAT	0.04	1.2 (Worst: 5)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Tamarind Drive	AM	0.34	1.6 (Worst: 24.2)	<b>NA</b> (Worst: C)	Give Way	RT from Deadmans Creek Road
	PM	0.35	1.5 (Worst: 35.9)	<b>NA</b> (Worst: E)		RT from Deadmans Creek Road
	SAT	0.25	1.1 (Worst: 19.5)	<b>NA</b> (Worst: C)		RT from Deadmans Creek Road

**Notes:**

- (1) The Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.
- (2) The average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.
- (3) The Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.
- (4) No overall Level of Service is provided for Give Way and Stop controlled intersections as the low delays associated with the dominant movements skew the average delay of the intersection. The Level of Service of the worst approach is an indicator of the operation of the intersection, with a worse Level of Service corresponding to lengthy delays and reduced safety outcomes for that approach.



As shown, the most relevant intersections are currently performing at a high level of efficiency for all turn movements, with service “A” or “B” conditions in both the AM, PM and Weekend peak hour periods. The level of service “A” and “B” performance is characterised by low approach delays and spare capacity.

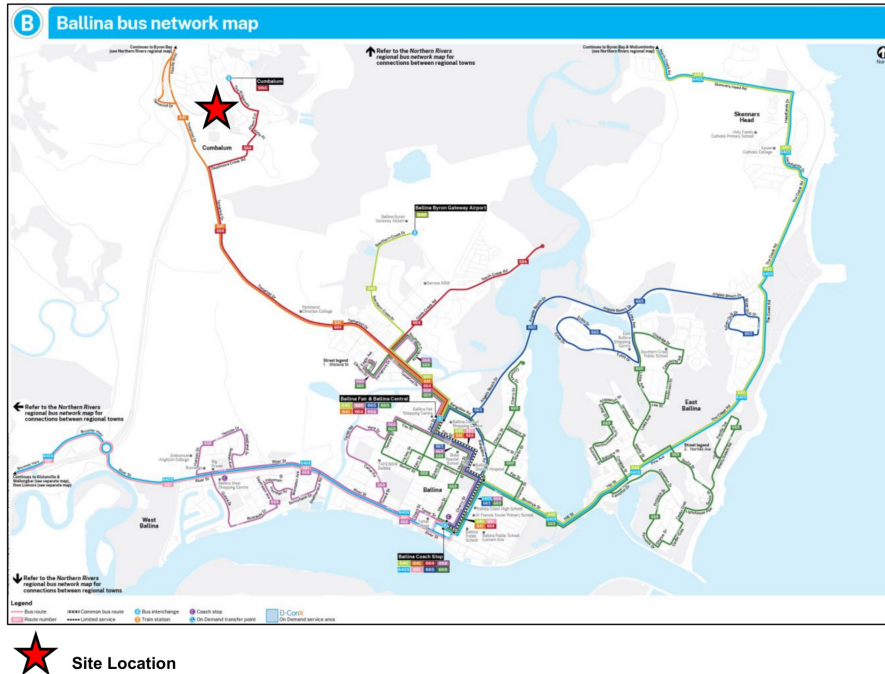
It should be noted that in some circumstances, with intersections controlled by give way and stop signs, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service “A”, except one which is at a level of service “E”, may not necessarily define the intersection level of service as “E” if that movement is of a relatively small traffic volume. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue is also involved.

In this instance, the Deadmans Creek Road / Tamarind Drive intersection has a right turn movement operating at a level of service “E” with all other turn movements operating at a level of service “A”. During the peak hour, this right turn is undertaken by only six (6), five (5) and three (3) vehicles in the AM, PM, and Saturday peaks, respectively. This is compared to 1001 (AM), 1187 (PM) and 932 (SAT) two-way vehicle movements along Tamarind Drive. Given the delay, right-turn demand will likely remain low as drivers that seek access to travel north will turn right via Ballina Heights Drive.

A review of the intersection crash history between 2017 and 2022 indicates only one crash at this location. The recorded crash type was a RUM code 00 - (Pedestrian (near side)) and unfortunately resulted in a fatality. No further information is available about this accident. It is not considered typical for pedestrians to use this intersection as there are no pedestrian desire points (residential dwellings, shops, bus stops) within the immediate vicinity of the intersection and none will be added as a result of the development. A review of the intersection does not indicate any inherent safety issues with road geometry or sightlines. On this basis and the basis of low right turning volumes, there is no need for an intersection upgrade.

## 2.4 Public Transport

The subject site has access to the existing bus stop (ID: 24785) located approximately 400m walking distance to the north on The Ridgeway. The bus stop services existing bus route 664 (Ballina Heights to Ballina via Northlakes) provided by *Blanch's Bus Company*. The site's location is shown in, subject to the surrounding public transport network **Figure 3**.



**FIGURE 3: PUBLIC TRANSPORT NETWORK MAP**

It is expected that with the increased population of Cumbalum and the addition of this mixed-use development, bus routes may be extended to service the proposed town centre and a broader area of Cumbalum. However, it is noted that there have been no planned changes to these bus routes by the council or the local bus service providers as a result of the Cumbalum subdivision growth.

## 2.5 Future Road and Infrastructure Upgrades

From the Ballina Council Development Application tracker and website, it appears that there are no future planned road or public transport changes that will affect traffic conditions within the immediate vicinity of the subject site.

It is noted that the development of the Cumbalum residential subdivision is ongoing, particularly to the north of the site, and the local population serviced by the site will increase further.



### 3 PARKING ASSESSMENT

#### 3.1 Council Parking Requirement

Reference is made to the *Ballina Shire Council Development Control Plan 2012 (BDCP 2012) Chapter 2 - General and Environmental Considerations*, which designates the following minimum car parking rates applicable to the proposed development:

##### 3.19 Car Parking and Access

*Child Care Centre*

*1 space per 4 children plus drop off / pick up area*

*Shop / Retail premises*

*1 space per 40m<sup>2</sup> GFA*

*Food & Drink (in commercial centres)*

*1 space per 25m<sup>2</sup> of gross floor area at ground level*

*1 space per 40m<sup>2</sup> gross floor area at the first floor level and above*

*Live / work development*

*1 space per dwelling requirement, plus*

*1 space per 75m<sup>2</sup> for commercial/light industrial*

*No requirement for visitor car parking where clause 3.19.3. E v.c. matters are satisfied.*

**Table 2** presents the parking requirements for Stage 1 and the entire master plan (scale outlined in **Section 1.1**) of the proposal according to the BDCP 2012 above car parking rates.



**TABLE 2: BDCP 2012 PARKING RATES**

Land Use	Scale	Rate	Spaces Required	Spaces Provided
Commercial	1,342m <sup>2</sup> GFA	1 per 40m <sup>2</sup> GFA	34	60
<b>Stage 1 Sub Total</b>	-	-	<b>34</b>	<b>60</b>
Supermarket	550m <sup>2</sup> GFA	1 per 40m <sup>2</sup>	14	108
Bottle Shop	200m <sup>2</sup> GFA	1 per 40m <sup>2</sup>	5	
Child Care Centre	90 Children	1 per 4 children	23	
Food & Beverage	400m <sup>2</sup> GFA	1 per 25m <sup>2</sup> GFA	16	
Live / Work	9 x Live/Work Dwellings	1 per dwelling	9	
	9 x Live/Work Commercial (130m <sup>2</sup> GFA)	1 per 75m <sup>2</sup> GFA Commercial	18 (2 per unit)	
<b>Remaining Stages Sub Total</b>	-	-	<b>85</b>	<b>108</b>
<b>Master plan Total</b>	-	-	<b>119</b>	<b>168</b>

As shown, the strict application of the BDCP 2012 requires at least **34** car parking spaces for Stage 1 of the development. The proposed plans detail the provision of **60** car parking spaces within Stage 1, resulting in compliance with the DCP.

It is noted that the remaining master plan stages require an additional **85** parking spaces, resulting in **119** parking spaces being required for the entire master plan. The total number of parking spaces provided within the master plan is **168**, resulting in compliance with the DCP and an excess of **49** parking spaces.

### 3.2 Parking for People with Disabilities

The BDCP 2012 states the following regarding accessible parking provisions relevant to the proposed development:

#### 3.19.3 Development Controls

*Parking for people with disabilities is to be provided in accordance with the requirements of the Building Code of Australia and designed in accordance with the requirements of Australian Standard 2890.*



Reference is made to *Volume 1, Section D4D6 Accessible Parking* of the *Building Code of Australia* (BCA) as part of the *National Construction Code 2022* (NCC), which categorises shops / retail premises provided in Stage 1 as a Class 6 building and therefore requires the provision of car parking for people with disabilities at a rate of:

*(2) (c) Class 6 Buildings –*

*With up to 1000 carparking spaces - 1 accessible space for every 50 carparking spaces or part thereof.*

Based on a total of 60 car parking spaces and an accessible parking rate of one (1) accessible parking space per 50 spaces, two (2) accessible parking spaces are required for Stage 1, designed in accordance with AS2890.6:2009.

The proposed plans include one (1) accessible car parking space, resulting in a shortfall of one (1) parking space from the BCA requirements. However, Stage 1 of the development provides an excess of 26 car parking spaces, such that the shortfall of one (1) accessible parking space can easily be rectified through the conversion of two (2) excess parking spaces into one (1) accessible car parking space (one for the accessible space and one for the required shared zone, in accordance with AS2890.6:2022). There is sufficient area on-site to provide adequate parking for people with disabilities, and this matter can be resolved via a consent condition if required.

Concerning the remaining stages of the masterplan, reference is also made to *Volume 1, Section D4D6 Accessible Parking* of the *Building Code of Australia* (BCA) as part of the *National Construction Code 2022* (NCC), which categorises the remaining components of the building are a combination of Class 2, Class 5, Class 6 and Class 9b buildings, and therefore they require the provision of car parking for people with disabilities at the following rates:

*(2) (b) Class 5, 7, 8, or 9c buildings –*

*1 accessible space for every 100 car parking spaces or part thereof*

*(c) Class 6 buildings –*

*(i) with up to 1000 carparking spaces – 1 accessible space for every 50 car parking spaces or part thereof;*

*(e) Class 9b buildings:*

*(ii) For other assembly buildings –*

*(A) With up to 1000 carparking spaces – 1 accessible space for every 50 carparking spaces or part thereof;*




**TABLE 3: ACCESSIBLE CAR PARKING RATES**

Land Use	No. Spaces	Accessible Parking Rate	Spaces Required
Commercial	34	1 space for every 50 spaces	0.68
Surplus Parking Spaces (Stage 1)	26	1 space for every 50 spaces <sup>(1)</sup>	0.52
<b>Stage 1 Sub Total</b>	<b>34</b>	-	<b>1.2 (2)</b>
Supermarket	14	1 space for every 50 spaces	0.28
Bottle Shop	5	1 space for every 50 spaces	0.1
Child Care Centre	23	1 space for every 50 spaces	0.46
Food & Beverage	16	1 space for every 50 spaces	0.32
Live / Work	9	1 per Adaptable Dwelling (if provided)	n/a
	27 (3 per unit)	1 space for every 100 spaces	0.27
Surplus Parking Spaces (Remaining Stages)	12	1 space for every 50 spaces <sup>(1)</sup>	0.24
<b>Remaining Stages Sub Total</b>	<b>108</b>	-	<b>1.67 (2)</b>
<b>Masterplan Total</b>	<b>168</b>	-	<b>2.87 (3)</b>

Note:

(1) The highest accessible parking provision, one accessible space for every 50 spaces, has been applied to the on-site surplus car parking.

Based upon the above assessment of the proposed master plan, the site requires a total of three (3) accessible spaces designed in accordance with AS2890.6:2022. If adaptable dwellings are required/proposed, generally, one adaptable or accessible parking space would be required per adaptable dwelling, in addition to the accessible parking for visitors.

There is sufficient on-site space to provide adequate parking for people with disabilities, given the surplus of 40 car parking spaces above the minimum DCP requirements. During the detailed design of the remaining stages of the master plan, the remaining two (2) accessible car parking spaces can be provided.





### 3.3 Bicycle & Motorcycle Parking Requirements

The BDCP 2012 does not require the provision of bicycle/motorcycle parking. Nonetheless, it is recommended that some bicycle and motorcycle parking is provided on-site for both staff and visitors.

The proposed Stage 1 plans provided five (5) bicycle racks within the Ground Floor Plans for Stage 1 of the development, which is considered a satisfactory provision for this development scale and locality.

In the remaining stages of the proposed development, additional bicycle racks are recommended to encourage alternative travel modes. However, there is no strict DCP requirement for bicycle parking.

Due to the surplus of 40 car parking spaces above the BDCP 2012 requirements, there is no need for additional dedicated car parking space for motorcycles, as any motorcycle can utilise one of the available car parking spaces on-site without impacting the minimum car parking provision as per the BDCP 2012.

### 3.4 Servicing & Loading

Reference is made to Ballina Shire Council's DCP 2012 *Chapter 2 – General and Environmental Considerations*, which outlines the following concerning servicing and loading facilities.

*xiii. The number of loading bays to be provided shall be determined having regard to the scale and type of use proposed. In this regard full details of the anticipated volume and frequency of deliveries shall be supplied with each development application;*

*xiv. Service areas and loading bays should be designed to cater for the vehicles and servicing operations anticipated to occur in a particular development. Designs shall comply with Australian Standard 2890.2 Part 2: Off-street commercial vehicle facilities; and*

*xv. The location and design of loading bays are to integrate into the overall design of the building, be separate from customer car parking areas and be appropriately screened when located adjacent to sensitive adjoining land uses.*

A total of two (2) loading bays are proposed on-site to serve the Stage 1 retail land uses, including one (1) loading bay suitable for an 8.8m long Medium Rigid Vehicle (MRV) and one (1) loading bay suitable for a 6.4m long Small Rigid Vehicle (SRV) within the proximity of the central commercial core to service the Stage 1 commercial uses. The proposed loading and servicing provision, as outlined above, will meet the demands of Stage 1 of the commercial proposal.



The proposed masterplan for the subject site will include additional loading and servicing facilities, including one (1) loading bay suitable for a 12.5m Heavy Rigid Vehicle (HRV) associated with the proposed small-scale supermarket and bottle shop. An additional two (2) loading areas suitable for an 8.8m Medium Rigid Vehicle (MRV) serving the food & beverage facility and other commercial tenancies are provided. The provision of servicing across the proposed development is sufficient to meet the demands of the proposal, with servicing and loading areas located near their intended location. The proposed loading and servicing facilities can be further assessed in detail during the supplementary stages of the development.

### 3.5 Car Park Design & Compliance

The car parking layout for Stage 1, as depicted in **Annexure B**, has been assessed to achieve the relevant clauses and objectives of *AS2890.1:2004*, *AS2890.2:2018*, and *AS2890.6:2022*. Any variances from standards are addressed in the following subsections, including required changes, if any. Swept path testing has been undertaken, and the results are reproduced within **Annexure E** for reference.

It should be noted that the Stage 1 car park and driveway access proposal has been developed considering the overall masterplan to ensure sufficient car parking and access arrangements are suitable for the ultimate masterplan of the subject site. At a later stage of the subject proposal, the detailed design of the remaining components of the car park shall be assessed to comply with the relevant standards before DA submission.

The proposed Stage 1 car parking and vehicular access design achieves the following:

- 7.4m wide one-way entry driveway facilitating access from Ballina Heights Drive;
- 7.2m wide one-way exit driveway facilitating access to Ballina Heights Drive;
- 10.4m wide two-way driveway facilitating access to Power Drive (Northern driveway);
- 10.4m wide two-way driveway facilitating access to Power Drive (Southern driveway);
- Minimum 6.6m wide parking aisles;
- Compliant grades not exceeding 20% for private developments and no grade change greater than 12.5%:
  - Maximum proposed grade is currently unknown but anticipated to be no greater than 12.5% at any point.
- Minimum 5.4m long, 2.6m wide spaces for all users;
- Minimum 5.4m long, 2.4m wide accessible spaces with adjacent associated 5.4m long, 2.4m wide shared space;
- 2.0m x 2.5m pedestrian sight triangles clear of obstructions can and will be provided at all exit driveways.

Whilst the Stage 1 plans have been assessed to comply with the relevant standards, it is usual and expected that a design certificate be required at the Construction Certificate stage to account for any changes following the development application.



### 3.6 Changes Required to Accommodate Stage 1

#### 3.6.1 Turning Bays

The Stage 1 development is designed with the ultimate site masterplan in mind, and as such, some two-way internal circulation roads terminate temporarily without full two-way circulation. Two turning bays should be implemented temporarily until further stages of the master plan are built. These turning bays are recommended to occupy two typical car bays and shall be line marked and signposted to stop them from being used as parking. One turn bay is required in the car park's northern section; another is needed in the southern section of the car park.

**Annexure E** provides the location and testing of two recommended turning bays within the proposed plans.

#### 3.7 Ballina Heights Drive / Power Drive Intersection

The intersection of Ballina Heights Drive / Power Drive / Farrelly Avenue is poorly designed. The intersection includes two full circulating lanes within the roundabout. However, only one approach and departure lane is provided for each leg, except for the Ballina Heights Drive South approach. This unusual arrangement confuses drivers as it is unclear which circulating lane a driver should use when circulating the roundabout. Observed behaviour at the site indicates most drivers do not travel exclusively within one travel lane, moving between both lanes (or partly occupying both lanes) while circulating the roundabout. Further, the existing short merge lane along Ballina Heights Drive departure is too short to accommodate the safe merge of vehicles after exiting the roundabout. It does not achieve the minimum length of 145m per the AUSTROADS roundabout design requirements.

By nature of these arrangements, it would be a rare event that two vehicles would exit the roundabout onto Ballina Heights Drive simultaneously, requiring vehicles to utilise the merge lane. Given the existing atypical design, it is recommended that the Ballina Heights Drive exit (south), adjacent to the site, be reduced to a single exit lane through the use of line marking and that the dual circulating lanes be removed entirely.

The council has provided the following comment within their request for additional information.

*Please Note: Council does not support reducing the number of lanes exiting the Ballina Heights Drive/Power Drive/Farrelly Avenue roundabout, despite comments in the TIA regarding the design of the existing roundabout. The proposal to close the two-lane exit for the roundabout effectively requires traffic from Farrelly Avenue and Ballina Heights Drive (right hand lane) to merge with traffic from Power Drive within the circulation of the roundabout rather than upon exit of the roundabout.*

The risk Council has identified is present on all other exits from the existing roundabout due to dual circulating lanes and a single-lane exit. Specifically, the risks with the existing roundabout design and line marking include:



- Traffic from Power Drive and Ballina Heights Drive (south) is required to merge with traffic from Farrelly Avenue within the circulation lanes of the roundabout rather than upon exit to Ballina Heights Drive (north).
  - It is unclear if drivers from Power Drive and U-turning traffic from Ballina Heights Drive (north) which circulating lane should be utilising. Observations on-site indicate vehicles typically straddle both lanes when circulating.
- Traffic from Ballina Heights Drive (south) and Farrelly Avenue are required to merge with traffic from Ballina Heights Drive (north) within the circulation lanes of the roundabout rather than upon exit to Power Drive.
  - It is unclear if drivers from Farrelly Avenue and U-turning traffic from Power Drive which circulating lane should be utilising. Observations on-site indicate vehicles typically straddle both lanes when circulating.
- It is unclear if drivers from Farrelly Avenue and Ballina Heights Drive (south) which circulating lane should be utilising when exiting onto Ballina Heights Drive (south). Observations on-site indicate vehicles typically straddle both lanes when circulating.

The above traffic conflicts identified and the apparent driver confusion created by this intersection's design and line marking suggest that the Council should resolve existing issues in the first instance.

A line marking concept has been prepared in **Annexure F** to resolve the existing design issues. This concept includes:

- Removal of the dual circulating lanes within the roundabout;
- Closure of the second Ballina Heights Drive exit lane (merge lane) through the installation of Chevron line marking to form a single exit lane;
- Extend the holding line position from Farrelly Avenue into the roundabout and provide a chevron at the Farrelly Avenue leg to give the necessary space and separation for left-turning vehicles from Ballina Heights Drive (south) to Farrelly Avenue;
- Adjust the location of the kerbside "Give Way" sign from Farrelly Avenue to match the new holding line position.

Alternatively, Council could remove the dual entry and exit lanes from Ballina Heights Drive (south) and revert the intersection to a single approach in all directions. However, the original reasoning behind the dual approach lanes is unknown. It is noted all intersection analysis within this report considers this roundabout to have a single approach and departure lane for all legs (i.e. the dual lane entry is not considered), with the intersection operating sufficiently, even in the 2036 scenario (Refer to **Section 4**). Under all scenarios, including 2036, the roundabout operates with an overall level of service "A", indicating no traffic flow reason for a dual-lane approach from Ballina Heights Drive.

These changes are anticipated to also help ensure safe and efficient access to the proposed development and rectify the design deficiencies within the existing roundabout design.



#### 4 TRAFFIC ASSESSMENT

The impact of the expected traffic generation levels associated with the subject proposal is discussed in the following sub-sections.

##### 4.1 **Traffic Generation**

Traffic generation rates for the relevant land uses are provided in the *RTA Guide to Traffic Generating Developments (2002)* and recent supplements as adopted by Transport for NSW (TfNSW) and are as follows:

##### 3.6 **Retail.**

##### 3.6.1 **Shopping centres.**

Thursday:  $V(P) = 20 A(S) + 51 A(F) + 155 A(SM) + 46 A(SS) + 22 A(OM)$   
(vehicle trips per 1000m<sup>2</sup>).

Friday:  $V(P) = 11 A(S) + 23 A(F) + 138 A(SM) + 56 A(SS) + 5 A(OM)$   
(vehicle trips per 1000m<sup>2</sup>).

Saturday:  $PVT = 38 A(S) + 13 A(F) + 147 A(SM) + 107 A(SS)$   
(vehicle trips per 1000m<sup>2</sup>).

Where:

A(S): Slow Trade GLFA, includes major Department stores such as David Jones and Grace Brothers, furniture, electrical and utility goods stores.

A(F): Faster Trade GLFA, includes discount department stores such as K-Mart and Target, together with larger specialist stores such as Fosseys.

A(SM): Supermarket GLFA, includes stores such as Franklins and large fruit markets.

A(SS): Speciality Shops and Secondary retail GLFA, includes speciality shops and take-away stores such as McDonalds. These stores are grouped since they tend not be primary attractors to the centre.

A(OM): Offices, medical GLFA.

##### 2 **Restaurants**

Evening peak hour vehicle trips = 5 per 100 m<sup>2</sup> gross floor area.



### 3.11.3 Child care centres

#### Long-day care

7.00-9.00am 0.8 peak vehicle trips per child

2.30-4.00pm 0.3 peak vehicle trips per child

4.00-6.00pm 0.7 peak vehicle trips per child

#### TDT 2013/04a

#### Low density residential dwellings

Weekday average evening peak hour vehicle trips = 0.78 per dwelling in regional areas

Weekday average morning peak hour vehicle trips = 0.71 per dwelling in regional areas

#### Office Blocks

Morning peak hour vehicle trips = 1.6 per 100m<sup>2</sup> gross floor area.

Evening peak hour vehicle trips = 1.2 per 100m<sup>2</sup> gross floor area

The resulting AM and PM peak hourly traffic generation for Stage 1 is summarised below in Table 6.

**TABLE 4: ESTIMATED TRAFFIC GENERATION (STAGE 1)**

Use	Scale	Peak	Generation Rate	Trips
Speciality Shops <sup>(1)</sup>	1,342m <sup>2</sup> GFA	AM <sup>(2)</sup>	2.8 per 100m <sup>2</sup> GFA	38 (19 in, 19 out)
		PM <sup>(3)</sup>	5.6 per 100m <sup>2</sup> GFA	75 (37 in, 38 out)
		WE	10.7 per 100m <sup>2</sup> GFA	144 (72 in, 72 out)
Total		AM	-	38 (19 in, 19 out)
		PM	-	75 (37 in, 38 out)
		WE	-	144 (72 in, 72 out)

**Notes:**

(1) 50/50 inbound/outbound split.

(2) The AM peak traffic generation has been assumed to be 50% of the PM peak traffic generation.

(3) Friday traffic generation rate for shopping centres applied.




**TABLE 5: ESTIMATED TRAFFIC GENERATION (REMAINING STAGES)**

Use	Scale	Peak	Generation Rate	Trips
Child Care Centre (long-day care) <sup>(1)</sup>	90 Children	AM	0.8 per child	<b>72</b> (36 in, 36 out)
		PM	0.7 per child	<b>63</b> (31 in, 32 out)
		WE <sup>(2)</sup>	n/a	n/a
Supermarket <sup>(1)</sup>	550m <sup>2</sup> GFA	AM <sup>(3)</sup>	6.9 per 100m <sup>2</sup> GFA	<b>38</b> (19 in, 19 out)
		PM <sup>(4)</sup>	13.8 per 100m <sup>2</sup> GFA	<b>76</b> (38 in, 38 out)
		WE	14.7 per 100m <sup>2</sup> GFA	<b>81</b> (41 in, 40 out)
Bottle Shop <sup>(1)</sup>	200m <sup>2</sup> GFA	AM <sup>(3)</sup>	6.9 per 100m <sup>2</sup> GFA	<b>14</b> (7 in, 7 out)
		PM <sup>(4)</sup>	13.8 per 100m <sup>2</sup> GFA	<b>28</b> (14 in, 14 out)
		WE	14.7 per 100m <sup>2</sup> GFA	<b>29</b> (15 in, 14 out)
Food & Beverage <sup>(1)</sup>	400m <sup>2</sup> GFA	AM <sup>(5)</sup>	5 per 100m <sup>2</sup> GFA	<b>20</b> (10 in, 10 out)
		PM <sup>(5)</sup>	5 per 100m <sup>2</sup> GFA	<b>20</b> (10 in, 10 out)
		WE <sup>(5)</sup>	5 per 100m <sup>2</sup> GFA	<b>20</b> (10 in, 10 out)
Live/Work Commercial <sup>(6)</sup>	1,170m <sup>2</sup> GFA (130m <sup>2</sup> GFA Each)	AM <sup>(7)</sup>	1.6 per 100m <sup>2</sup> GFA	<b>19</b> (17 in, 2 out)
		PM <sup>(7)</sup>	1.2 per 100m <sup>2</sup> GFA	<b>14</b> (1 in, 13 out)
		WE <sup>(8)</sup>	n/a	n/a
Live/Work Dwelling <sup>(9)</sup>	9 Dwellings	AM	0.78 per dwelling	<b>7</b> (1 in, 6 out)
		PM	0.71 per dwelling	<b>6</b> (5 in, 1 out)
		WE <sup>(6)</sup>	0.78 per dwelling	<b>7</b> (3 in, 4 out)
<b>Total</b>		<b>AM</b>	-	<b>170</b> <b>(90 in, 80 out)</b>
		<b>PM</b>	-	<b>207</b> <b>(99 in, 108 out)</b>
		<b>WE</b>	-	<b>137</b> <b>(69 in, 68 out)</b>

**Notes:**

- (1) 50/50 inbound/outbound split.
- (2) Child care centre will not operate on weekends.
- (3) The AM peak traffic generation has been assumed to be 50% of the PM peak traffic generation.
- (4) Friday traffic generation rate for shopping centres applied.
- (5) The RMS Restaurant rate is applied to the AM, PM, and Weekend (WE) periods.
- (6) 90/10 inbound/outbound split for the AM peak and vice versa for the PM peak.
- (7) RMS Office Block rate applied to Commercial Component of Live/Work developments.
- (8) Traffic is not expected to be generated during weekend periods due to the typical Monday-Friday operating pattern.
- (9) 20/80 inbound/outbound split for the AM peak and vice versa for the PM peak.
- (10) AM traffic generation rate applied to the weekend, with a 50/50 inbound/outbound split representing the nature of weekend residential traffic generation.


**TABLE 6: ESTIMATED TRAFFIC GENERATION (ENTIRE MASTERPLAN)**

Stage	Peak	Generation Rate	Trips
Stage 1	AM	Refer to <b>Table 4</b>	38 (19 in, 19 out)
	PM		75 (37 in, 38 out)
	WE		144 (72 in, 72 out)
Remaining stages of the master plan	AM	Refer to <b>Table 5</b>	170 (90 in, 80 out)
	PM		207 (99 in, 108 out)
	WE		137 (69 in, 68 out)
<b>Total</b>	<b>AM</b>	-	<b>208</b> <b>(109 in, 99 out)</b>
	<b>PM</b>	-	<b>282</b> <b>(136 in, 146 out)</b>
	<b>WE</b>	-	<b>281</b> <b>(141 in, 140 out)</b>

As shown, the expected traffic generation associated with Stage 1 of the proposed development is 38 vehicle trips in the AM peak period (19 in, 19 out), 75 vehicle trips in the PM peak period (37 in, 38 out), and **144** vehicle trips during the weekend peak period (72 in, 72 out).

The remaining stages of the proposed masterplan are expected to generate traffic in the order of **170** vehicle trips in the AM peak hour (90 in, 80 out), **207** vehicle trips in the PM peak hour (99 in, 108 out), and **137** vehicle trips during the weekend peak hour (69 in, 68 out).

The combined site master plan is estimated to generate 208 vehicle trips during the AM peak hour (109 in, 99 out), 282 vehicle trips during the PM peak hour (136 in, 146 out), and 281 vehicle trips during the weekend peak hour period.



#### 4.2 Traffic Assignment

The road network, traffic surveys, and locations of residential areas surrounding the site have been assessed, and the following traffic assignment has been assumed for all traffic to and from the site, as outlined in Figure 4. This trip distribution has been revised based on the Council's feedback, with an increase in internal trips within the Cumbalum subdivision to 50% of all trips and consideration for additional turning movements.

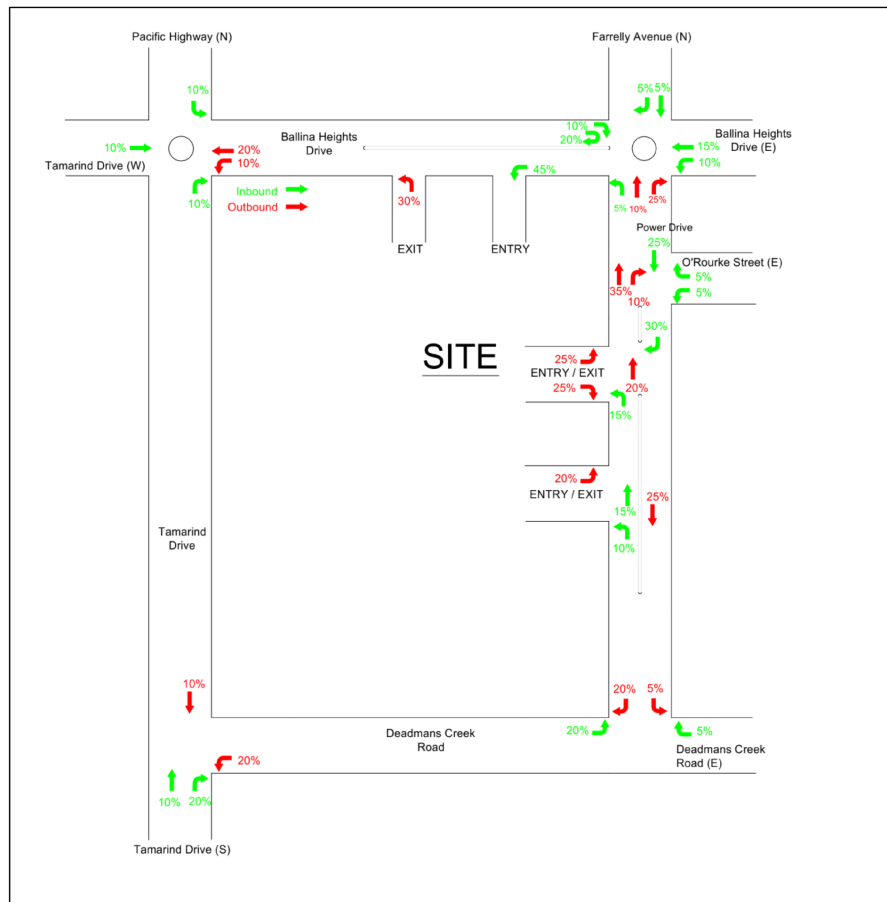


FIGURE 4: TRIP DISTRIBUTION

### 4.3 Traffic Impact

#### 4.3.1 2022 Traffic Performance

The traffic generation outlined in **Sections 4.1 & 4.2** above has been added to the recorded traffic volumes. SIDRA INTERSECTION 9.1 was used to assess the intersection's performance. This assessment aims to compare the existing intersection operations to the future scenario under the increased traffic load associated with the proposed development. The results of this assessment are shown in **Table 7**, **Table 8**, and **Table 9**. Full results for the future analysis are provided in **Annexure G**.

**TABLE 7: INTERSECTION PERFORMANCE – EXISTING (NO DEVELOPMENT)**

Intersection	Peak Hour	Degree of Saturation <sup>(1)</sup>	Average Delay <sup>(2)</sup> (sec/veh)	Level of Service <sup>(3)(4)</sup>	Control Type	Worst Movement
<b>EXISTING PERFORMANCE (2022 – No Development)</b>						
Ballina Heights Drive / Tamarind Drive	AM	0.30	5.3 (Worst: 14.7)	<b>A</b> (Worst: B)	Roundabout	UT from Ballina Heights Drive
	PM	0.44	4.6 (Worst: 14.1)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
	SAT	0.32	4.6 (Worst: 13.6)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
Ballina Heights Drive / Power Drive	AM	0.10	5.5 (Worst: 10.7)	<b>A</b> (Worst: B)	Roundabout	UT from Power Drive
	PM	0.13	5.7 (Worst: 10.5)	<b>A</b> (Worst: B)		UT from Farrelly Avenue
	SAT	0.08	5.3 (Worst: 10.3)	<b>A</b> (Worst: B)		UT from Power Drive
O'Rourke Street / Power Drive	AM	0.06	3.6 (Worst: 4.7)	<b>NA</b> (Worst: A)	Give Way	RT from O'Rourke Street
	PM	0.04	3 (Worst: 5)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
	SAT	0.04	3.3 (Worst: 4.7)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
Deadmans Creek Road / Power Drive	AM	0.04	1.7 (Worst: 5.1)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.07	1.7 (Worst: 5.2)	<b>NA</b> (Worst: A)		RT from Power Drive
	SAT	0.04	1.2 (Worst: 5)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Tamarind Drive	AM	0.34	1.6 (Worst: 24.2)	<b>NA</b> (Worst: C)	Give Way	RT from Deadmans Creek Road
	PM	0.35	1.5 (Worst: 35.9)	<b>NA</b> (Worst: E)		RT from Deadmans Creek Road
	SAT	0.25	1.1 (Worst: 19.5)	<b>NA</b> (Worst: C)		RT from Deadmans Creek Road

Notes: Refer to Table 1

Mixed-Use Development (Master Plan and Stage 1)  
Corner of Ballina Heights Drive / Power Drive, Cumbalum  
240046.01FA - 21 March 2024

Page 22 of 40


**TABLE 8: INTERSECTION PERFORMANCE –STAGE 1 (2022)**

Intersection	Peak Hour	Degree of Saturation <sup>(1)</sup>	Average Delay <sup>(2)</sup> (sec/veh)	Level of Service <sup>(3)(4)</sup>	Control Type	Worst Movement
<b>FUTURE PERFORMANCE (2022 + Stage 1)</b>						
Ballina Heights Drive / Tamarind Drive	AM	0.30	5.3 (Worst: 14.8)	<b>A</b> (Worst: B)	Roundabout	UT from Ballina Heights Drive
	PM	0.44	4.7 (Worst: 14.1)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
	SAT	0.33	4.7 (Worst: 13.6)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
Ballina Heights Drive / Power Drive	AM	0.10	5.7 (Worst: 10.8)	<b>A</b> (Worst: B)	Roundabout	UT from Power Drive
	PM	0.15	5.9 (Worst: 10.8)	<b>A</b> (Worst: B)		UT from Farrelly Avenue
	SAT	0.10	5.9 (Worst: 10.4)	<b>A</b> (Worst: B)		UT from Power Drive
O'Rourke Street / Power Drive	AM	0.06	3.4 (Worst: 5.2)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.04	2.8 (Worst: 5.1)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
	SAT	0.04	2.5 (Worst: 5.3)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Power Drive	AM	0.04	1.9 (Worst: 5.2)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.07	2.1 (Worst: 5.4)	<b>NA</b> (Worst: A)		RT from Power Drive
	SAT	0.05	2.0 (Worst: 5.6)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Tamarind Drive	AM	0.34	1.7 (Worst: 24.9)	<b>NA</b> (Worst: C)	Give Way	RT from Deadmans Creek Road
	PM	0.35	1.6 (Worst: 37.6)	<b>NA</b> (Worst: E)		RT from Deadmans Creek Road
	SAT	0.26	0.9 (Worst: 19)	<b>NA</b> (Worst: C)		RT from Deadmans Creek Road

As shown, all surrounding intersections retain the same overall level of service under future conditions with minimal delays and additional capacity, indicating that there will be no adverse impact on the existing road network due to the proposed Stage 1 of the development.


**TABLE 9: INTERSECTION PERFORMANCE –MASTER PLAN (2022)**

Intersection	Peak Hour	Degree of Saturation <sup>(1)</sup>	Average Delay <sup>(2)</sup> (sec/veh)	Level of Service <sup>(3)(4)</sup>	Control Type	Worst Movement
<b>FUTURE PERFORMANCE (2022 + Full Master Plan)</b>						
Ballina Heights Drive / Tamarind Drive	AM	0.31	5.4 (Worst: 14.8)	<b>A</b> (Worst: B)	Roundabout	UT from Ballina Heights Drive
	PM	0.46	4.8 (Worst: 14.2)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
	SAT	0.34	4.8 (Worst: 13.7)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
Ballina Heights Drive / Power Drive	AM	0.13	6.3 (Worst: 11.0)	<b>A</b> (Worst: B)	Roundabout	UT from Power Drive
	PM	0.18	6.5 (Worst: 10.9)	<b>A</b> (Worst: B)		UT from Farrelly Avenue
	SAT	0.12	6.4 (Worst: 10.6)	<b>A</b> (Worst: B)		UT from Power Drive
O'Rourke Street / Power Drive	AM	0.07	2.8 (Worst: 5.5)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.06	2.5 (Worst: 5.6)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
	SAT	0.04	2.2 (Worst: 5.5)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Power Drive	AM	0.05	2.7 (Worst: 5.6)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.09	2.8 (Worst: 5.8)	<b>NA</b> (Worst: A)		RT from Power Drive
	SAT	0.06	2.6 (Worst: 5.8)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Tamarind Drive	AM	0.34	2.0 (Worst: 27)	<b>NA</b> (Worst: D)	Give Way	RT from Deadmans Creek Road
	PM	0.35	1.8 (Worst: 41.6)	<b>NA</b> (Worst: E)		RT from Deadmans Creek Road
	SAT	0.26	1.1 (Worst: 20.2)	<b>NA</b> (Worst: C)		RT from Deadmans Creek Road

As shown, the intersections of Ballina Heights Drive / Tamarind Drive, Ballina Heights Drive / Power Drive / Farrelly Avenue, O'Rourke Street / Power Drive, Power Drive / Deadmans Creek Road and Deadmans Creek Road / Tamarind Drive all retain the same overall level of service under future master plan conditions with minimal delays and additional capacity, indicating that there will be negligible impact on the existing road network as a result of the proposed development.



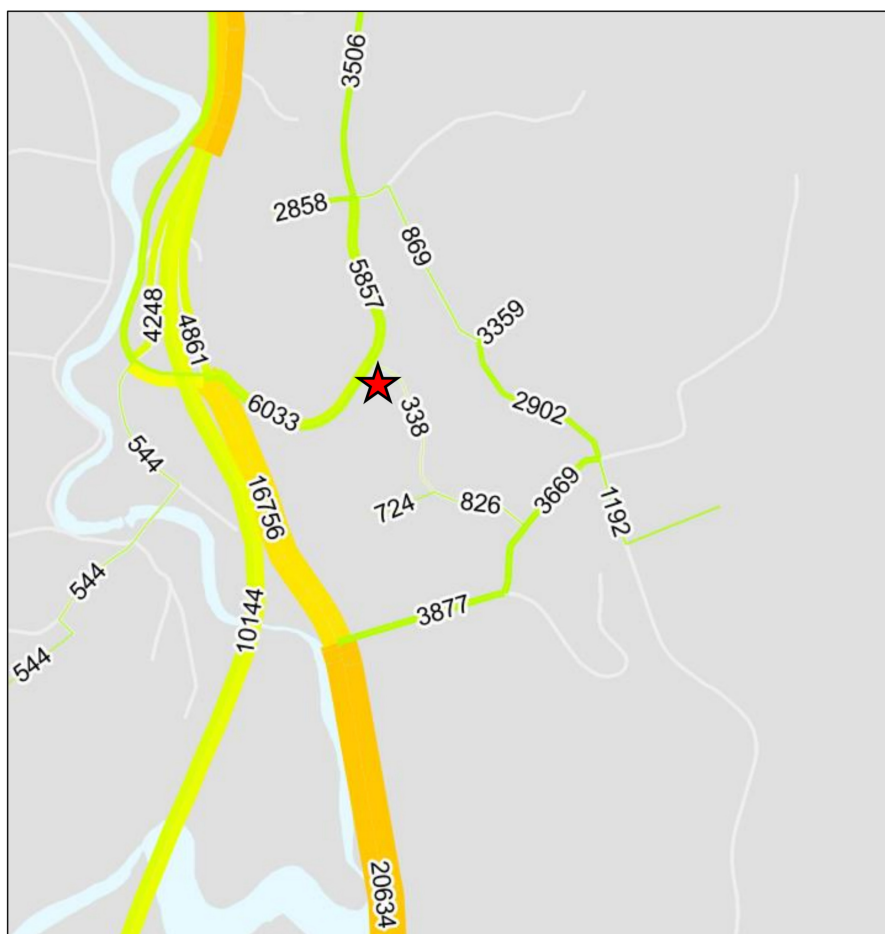
### 4.3.2 2036 Traffic Performance

Ballina Shire Council has provided the applicant with an extract of Figure 5 of the *Ballina Section 94 Update*, titled *Daily Total Volume (2036+ Run2) Insert A-D*, (Provided in **Annexure H**) as part of their request for the proposal to be tested against the 2036 future traffic volumes (+14 years from the 2022 surveys undertaken).

While the applicant has accepted this request and the 2036 modelling has been completed within the following sub-sections, it is important to note the following regarding this requested analysis.

- The provided data does not include any associated commentary or description regarding the purpose of the modelling or the assumptions that underpin the reported traffic volumes. In particular, the following is unknown.
  - Assumed road links and the nature of those links;
  - Only daily volumes are presented; however, intersection traffic modelling is undertaken using peak-hour volumes;
  - Turn movements and Origin / Destination distributions;
  - Any road upgrades that may or may not have been considered which may impact the assumed traffic distribution within the network.
- It is assumed that the model's traffic volumes and road links reflect the full development of the Cumbalum estate (total capacity). The Cumbalum Estate has always included a commercial component of similar size to the commercial core proposed in this DA (albeit in a slightly different location). As such, the provided volumes within the 2036 model likely have already incorporated traffic generation associated with the commercial/retail precinct, such that analysis using this data could potentially be double counting the commercial/retail precinct's traffic generation.

Given the above, the results presented in this section should be considered within this context and the wide range of assumptions adopted to undertake an accurate analysis using these 2036 traffic volumes.



Site Location

**FIGURE 5: EXTRACT FOR BALLINA COUNCIL'S 2036 TRAFFIC VOLUMES**

Given that the provided volumes are daily volumes and no further detail is provided to estimate daily volumes, it has been assumed that the peak hour volumes are 10% of the recorded daily volumes.

No turning movement information has been provided, so the distribution of the future 2036 volumes across turn movements needs to be considered. The most accurate way to determine appropriate turning movement volumes is to determine the average growth rate between 2022 (existing survey data) and the 2036 data (provided by the Council).



This approach allows the existing turning movement distribution, as observed during the 2022 surveys, to be maintained but multiplied considering the 2036 volumes.

**Table 10** summarises the average annual growth rates for each intersection. A breakdown of the determination of these annual growth rates is provided in **Annexure I** for reference.

**TABLE 10: AVERAGE GROWTH RATES AT RELEVANT INTERSECTIONS**

Intersection	Average Annual Growth Rate
Tamarind Drive / Ballina Heights Drive / M1 Off Ramp	4.3%
Ballina Heights Drive / Power Drive	6.9%
Power Drive / O'Rourke Street	6.9% <sup>(1)</sup>
Power Drive / Deadmans Creek Road	7.6%
Deadmans Creek Road / Tamarind Drive	5.6%

**Notes:**

- (1) No 2036 volumes were provided for O'Rourke Street, so the Ballina Heights / Power Drive growth rate of 6.9% has been applied to this intersection as a conservative estimate.

It is to be noted that the growth rates in **Table 10** have been applied in calculating the traffic impact of the subject site in 2036. These growth rates were applied for 14 years (from 2022 to 2036) to all volumes within the SIDRA model, with the exception of the development traffic, which remains constant.

The traffic generation outlined in **Section 4.1 & 4.2** and the associated intersection growth rates outlined above have been applied to the recorded traffic volumes. SIDRA INTERSECTION 9.1 was used to assess the performance of the intersections in 2036. This assessment aims to compare the 2036 intersection operations to the future 2036 scenario under the increased traffic load associated with the proposed development. The results of this assessment are shown in **Table 11**, **Table 12** and **Table 13**. Full results for the 2036 analysis are provided in **Annexure J**.




**TABLE 11: INTERSECTION PERFORMANCE –2036 (NO DEVELOPMENT)**

Intersection	Peak Hour	Degree of Saturation <sup>(1)</sup>	Average Delay <sup>(2)</sup> (sec/veh)	Level of Service <sup>(3)(4)</sup>	Control Type	Worst Movement
<b>2036 Growth Conditions – No Development</b>						
Ballina Heights Drive / Tamarind Drive	AM	0.57	7.5 (Worst: 21.8)	<b>A</b> (Worst: C)	Roundabout	UT from Ballina Heights Drive
	PM	0.73	5.9 (Worst: 16.5)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
	SAT	0.53	5.3 (Worst: 15.2)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
Ballina Heights Drive / Power Drive	AM	0.21	6.1 (Worst: 11.9)	<b>A</b> (Worst: B)	Roundabout	UT from Power Drive
	PM	0.26	6.1 (Worst: 11.4)	<b>A</b> (Worst: B)		UT from Farrelly Avenue
	SAT	0.15	5.6 (Worst: 10.8)	<b>A</b> (Worst: B)		UT from Power Drive
O'Rourke Street / Power Drive	AM	0.12	3.7 (Worst: 4.8)	<b>NA</b> (Worst: A)	Give Way	RT from O'Rourke Street
	PM	0.07	3.1 (Worst: 5.4)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
	SAT	0.07	3.3 (Worst: 4.9)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
Deadmans Creek Road / Power Drive	AM	0.09	1.8 (Worst: 5.8)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.15	1.9 (Worst: 6.1)	<b>NA</b> (Worst: A)		RT from Power Drive
	SAT	0.08	1.3 (Worst: 5.6)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Tamarind Drive	AM	1.88	90.6 (Worst: >70)	<b>NA</b> (Worst: F)	Give Way	RT from Deadmans Creek Road
	PM	1.97	57.4 (Worst: >70)	<b>NA</b> (Worst: F)		RT from Deadmans Creek Road
	SAT	0.45	2.2 (Worst: >70)	<b>NA</b> (Worst: F)		RT from Deadmans Creek Road

As shown, the intersections of Ballina Heights Drive / Tamarind Drive, Ballina Heights Drive / Power Drive, O'Rourke Street / Power Drive and Deadmans Creek Road / Power Drive are currently performing at a high level of efficiency for all turn movements in 2036 with a level of service "A" or "B" conditions in both the AM, PM and Weekend peak hour periods. The level of service "A" and "B" performance is characterised by low approach delays and spare capacity. Based on the provided 2036 volumes, the intersection of Deadmans Creek Road / Tamarind Drive will have exceeded capacity, particularly the right turn from Deadmans Creek Road. This occurs regardless of the development proceeding.


**TABLE 12: INTERSECTION PERFORMANCE – 2036 + STAGE 1**

Intersection	Peak Hour	Degree of Saturation <sup>(1)</sup>	Average Delay <sup>(2)</sup> (sec/veh)	Level of Service <sup>(3)(4)</sup>	Control Type	Worst Movement
<b>2036 Growth Conditions + Stage 1</b>						
Ballina Heights Drive / Tamarind Drive	AM	0.58	7.6 (Worst: 22.1)	<b>A</b> (Worst: C)	Roundabout	UT from Ballina Heights Drive
	PM	0.74	6 (Worst: 16.5)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
	SAT	0.55	5.4 (Worst: 15.2)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
Ballina Heights Drive / Power Drive	AM	0.21	6.3 (Worst: 12)	<b>A</b> (Worst: B)	Roundabout	UT from Power Drive
	PM	0.28	6.3 (Worst: 11.5)	<b>A</b> (Worst: B)		UT from Farrelly Avenue
	SAT	0.25	6.2 (Worst: 11.8)	<b>A</b> (Worst: B)		UT from Power Drive
O'Rourke Street / Power Drive	AM	0.13	3.6 (Worst: 5.1)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.08	3 (Worst: 5.5)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
	SAT	0.07	2.8 (Worst: 5.3)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Power Drive	AM	0.09	2.0 (Worst: 5.8)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.15	2.1 (Worst: 6.3)	<b>NA</b> (Worst: A)		RT from Power Drive
	SAT	0.09	1.7 (Worst: 6.0)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Tamarind Drive	AM	1.93	96.1 (Worst: >70)	<b>NA</b> (Worst: F)	Give Way	RT from Deadmans Creek Road
	PM	2.00	61.5 (Worst: >80)	<b>NA</b> (Worst: F)		RT from Deadmans Creek Road
	SAT	0.45	1.5 (Worst: >70)	<b>NA</b> (Worst: F)		RT from Deadmans Creek Road

As shown, all surrounding intersections retain the same overall level of service under 2036 conditions after the addition of Stage 1 of the development. As such, the proposed Stage 1 will have no significant impact in 2036.


**TABLE 13: INTERSECTION PERFORMANCE – 2036 + MASTER PLAN**

Intersection	Peak Hour	Degree of Saturation <sup>(1)</sup>	Average Delay <sup>(2)</sup> (sec/veh)	Level of Service <sup>(3)(4)</sup>	Control Type	Worst Movement
<b>2036 Growth Conditions + Full Masterplan</b>						
Ballina Heights Drive / Tamarind Drive	AM	0.62	8 (Worst: 23.2)	<b>A</b> (Worst: C)	Roundabout	UT from Ballina Heights Drive
	PM	0.77	6.4 (Worst: 16.7)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
	SAT	0.56	5.5 (Worst: 15.3)	<b>A</b> (Worst: B)		UT from Ballina Heights Drive
Ballina Heights Drive / Power Drive	AM	0.26	6.8 (Worst: 12.3)	<b>A</b> (Worst: B)	Roundabout	UT from Power Drive
	PM	0.32	6.8 (Worst: 11.9)	<b>A</b> (Worst: B)		UT from Farrelly Avenue
	SAT	0.20	6.4 (Worst: 11.2)	<b>A</b> (Worst: B)		UT from Power Drive
O'Rourke Street / Power Drive	AM	0.14	3.3 (Worst: 5.5)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.10	2.9 (Worst: 6)	<b>NA</b> (Worst: A)		RT from O'Rourke Street
	SAT	0.08	2.6 (Worst: 5.5)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Power Drive	AM	0.09	2.4 (Worst: 6.1)	<b>NA</b> (Worst: A)	Give Way	RT from Power Drive
	PM	0.16	2.6 (Worst: 6.6)	<b>NA</b> (Worst: A)		RT from Power Drive
	SAT	0.10	2.1 (Worst: 6.3)	<b>NA</b> (Worst: A)		RT from Power Drive
Deadmans Creek Road / Tamarind Drive	AM	2.11	120.3 (Worst: >70)	<b>NA</b> (Worst: F)	Give Way	RT from Deadmans Creek Road
	PM	2.08	73 (Worst: >70)	<b>NA</b> (Worst: F)		RT from Deadmans Creek Road
	SAT	0.46	1.7 (Worst: >70)	<b>NA</b> (Worst: F)		RT from Deadmans Creek Road

As shown, the intersections of Ballina Heights Drive / Tamarind Drive, Ballina Heights Drive / Power Drive / Farrelly Avenue, O'Rourke Street / Power Drive, and Power Drive / Deadmans Creek Road all retain the same overall level of service under future master plan conditions in 2036 with minimal delays and additional capacity, indicating that the proposed development will have a negligible impact on the 2036 road network.

It is noted that the poor performance of the Deadmans Creek Road / Tamarind Drive is maintained, regardless of the development.



#### 4.3.3 Summary of Traffic Performance

Given the analysis of all the scenarios, including the 2022 and 2036 time horizons, **Table 14** provides a summary of the recorded level of service results.

**TABLE 14: SUMMARY OF LEVEL OF SERVICE RESULTS**

Intersection	Peak	2022			2036		
		Existing (No Dev)	Stage 1	Full Masterplan	No Dev	Stage 1	Full Masterplan
Ballina Heights Drive / Tamarind Drive	AM	A	A	A	A	A	A
	PM	A	A	A	A	A	A
	SAT	A	A	A	A	A	A
Ballina Heights Drive / Power Drive	AM	A	A	A	A	A	A
	PM	A	A	A	A	A	A
	SAT	A	A	A	A	A	A
O'Rourke Street / Power Drive <sup>(1)</sup>	AM	A	A	A	A	A	A
	PM	A	A	A	A	A	A
	SAT	A	A	A	A	A	A
Deadmans Creek Road / Power Drive <sup>(1)</sup>	AM	A	A	A	A	A	A
	PM	A	A	A	A	A	A
	SAT	A	A	A	A	A	A
Deadmans Creeks Road / Tamarind Drive <sup>(1)</sup>	AM	C	C	D	F	F	F
	PM	E	E	E	F	F	F
	SAT	C	C	C	F	F	F

Note:

- (1) Give-way intersections do not report an overall level of service. Hence, the level of service presented here represents the "worst-movement" level of service as reported by a turning movement within the SIDRA model.

As shown, all intersections (except for Deadmans Creek Road / Tamarind Drive) retain the same overall level of service of "A" under future conditions, both in the existing intersections (2022) and the future 2036 model, with minimal delays and additional capacity. This indicates that the proposed development will have a negligible impact on the existing road network surrounding the site.



However, with consideration to the Deadmans Creek Road / Tamarind Drive intersection, the worst movement (right-turn from Deadmans Creek Road) level of service of “C” or “E” is retained across Stage 1 and the Masterplan. The exception is the AM period, where the level of service reduces to “D”; however, this is only a 2.1-second increase in average delay for this turn, which is a minor increase given the low turn volumes. Considering the high two-way volumes along Tamarind Drive, increased delays for right-turning movements from the minor leg can be expected. In the 2022 model, it should be noted that the 95<sup>th</sup> percentile queue along Deadmans Creek Road is only 1.1 vehicles and an average delay of 27 seconds for a right turn in the worst instance. Given this turn has the lowest priority, this is acceptable, and no upgrades are required unless an existing safety issue is present. The crash history at the site has been reviewed in **Section 2.3.1**.

The traffic volumes turning left and right from Deadmans Creek Drive exceed capacity regardless of the development by 2036, and this intersection will require an upgrade or the closure of the right turn. Given that the Council's 2036 traffic modelling should have indicated this outcome, it is expected that the Council will have apportioned appropriate funds from contributions to support this upgrade. It is noted that it is not expected that right turn movements from Deadmans Creek Road will increase as a result of this development.

It is also likely that traffic equilibrium will result in drivers diverting their travel routes via Ballina Heights Drive (which operates at a level of service “A” in all 2036) when delays at the intersection of Deadmans Creek Road / Tamarind Drive increase. This development is not responsible for providing this road upgrade, as it would be required regardless of the subject development.



## 5 RESPONSE TO COUNCIL

This section responds to the Ballina Shire Council's comments in their request for additional information letter dated 29 January 2024 concerning DA Number 2023/270 / PAN-340937. The Council's comments relevant to traffic and parking are shown below (italicised), followed by M<sup>C</sup>Laren Traffic Engineering's (MTE) response.

### **Traffic Impact**

*In relation to the submitted Traffic Impact Assessment (TIA) by McLaren Traffic Engineering & Road Safety Consultants Report 220157.02 dated 15 May, the following additional information is requested:*

#### 1. Proposed Development Generated Traffic Volumes

*Whilst the submitted DA is for "Stage 1", being on 1342m<sup>2</sup> of floor space and parking for 60 vehicles, the Statement of Environmental Effects clearly foreshadows that this is an initial stage of a larger development of a total 6,552m<sup>2</sup> floor area and 168 car parking spaces. See extract from section 3.4 of the SEE below.*

TABLE 3.1 LAND USE BUDGET		
Land Use	Master Plan	Stage 1
Site Area	21,390m <sup>2</sup>	7,400m <sup>2</sup>
Floor Area	6,552m <sup>2</sup>	1,342m <sup>2</sup>
Floor Space Ratio	0.3:1	0.29:1
Maximum Building Height	9m	6.5m
Parking	168 spaces	60 spaces

*The site layout and external traffic access arrangements proposed in this DA must therefore demonstrate that they are consistent with and adequate for the overall development of the site in fitting with the demands generated by the locality (Cumbalum / Ballina Heights / Banyan Hill and surrounds).*

*The TIA is therefore requested to analyse two development traffic generation scenarios, firstly for Stage 1 as submitted, and secondly for full development of the site, as indicated in Table 3.1 of the SEE.*

*The above development generated is to be assigned to the external road network to identify potential impacted links and intersections.*

**MTE Response:** This revised Traffic and Parking Impact Assessment (TPIA) provides the requested analysis of both Stage 1 (as submitted) and the entire development master plan for the site as requested by the Council.



### 2. Projected External Road Network Traffic Volumes

*The TIA has examined traffic volumes for the current time only.*

*The TIA is also requested to examine traffic volumes and interactions with development generated traffic for a time horizon year of 2036. In this regard, daily traffic volumes generated by Council's traffic model for 2036+ can be used where applicable (see attached file "2036+ Volumes Run 2 Insets A-D.pdf" and estimate peak hourly volumes derived from the daily volume predictions.*

**MTE Response:** Further traffic analysis of the 2036 traffic scenario at the relevant intersections has been undertaken using the daily traffic flows provided by the Council. This analysis is provided in **Section 4.3.2**, along with some discussions regarding the assumptions required as part of this analysis. It should be noted that these traffic 2036 volumes would likely have already had consideration to a Village Centre within Cumbalum of similar size to this proposal, such that this process is potentially double counting the traffic volumes associated with the Village Centre.

### 3. Traffic Impact Analysis

*The TIA is to identify and analyse impacts, (including SIDRA intersection modelling) on the external network for each development traffic generation scenario for both the current time frame and the horizon year of 2036+.*

*Based on the above the TIA is to provide recommendations and concept designs for staged upgrades required on external road network to avoid/minimise/manage adverse impacts caused by the development generated traffic.*

*Please Note: Council does not support reducing the number of lanes exiting the Ballina Heights Drive/Power Drive/Farrelly Avenue roundabout, despite comments in the TIA regarding the design of the existing roundabout. The proposal to close the two-lane exit for the roundabout effectively requires traffic from Farrelly Avenue and Ballina Heights Drive (right hand lane) to merge with traffic from Power Drive within the circulation of the roundabout rather than upon exit of the roundabout.*

**MTE Response:** Analysis of the 2036 time horizon scenario is provided within **Section 4.3.2**. The intersections of Ballina Heights Drive / Tamarind Drive, Ballina Heights Drive / Power Drive / Farrelly Avenue, O'Rourke Street / Power Drive, and Power Drive / Deadmans Creek Road all operate with a level of service "A" during the 2036 conditions. The intersection of Deadmans Creek Road / Tamarind Drive reaches capacity in 2036 without the development, whereby the right-turn movement operates at a level of service "F" in all peak hours. This occurs regardless of the development, and as such, any upgrade or changes to this intersection are not considered the responsibility of this development.





Intersection changes to the Ballina Heights Drive / Power Drive / Farrelly Avenue roundabout are not a function of its capacity but rather due to its poor design, which creates driver confusion and increases the likelihood of crashes. **Section 3.7** of this report discusses these design issues and proposes an adjustment to line marking to resolve them (as provided in **Annexure F**).

#### 4. Access for the Site

*The TIA is to analyse and provide recommended site access concept designs/design criteria for vehicles, pedestrians and cyclists, based on analysis of access requirements (including SIDRA intersection modelling) for each development traffic generation scenario for both the current time frame and the horizon year of 2036+.*

*The above analysis is to include consideration of the need for dedicated auxiliary left/right lanes to access the site.*

*Please note: the current TIA access plans/geometry in Power Drive is not consistent with the submitted plans elsewhere in the application. Section 4.2 – Traffic Assignment and Figure 5 of the TIA does not identify the Auxiliary right turn manoeuvre from Power Drive into the development site. Refer to Ardill Payne & Partners Plan No. SK406-06 Rev C. Figure 5 – Trip distribution does not assign traffic flow (right turn at roundabout or left turn actions from Ballina Heights Drive or O'Rourke Street) to enter the development from Power Drive in the southward direction.*

**MTE Response:** The traffic distribution within **Section 4.2** and **Figure 4** has been updated considering the Council's comments regarding traffic distribution, and this has been incorporated within the revised SIDRA modelling. However, this did not have a material impact on the previous conclusions. Given the performance of the surrounding intersections, which all perform at a level of service "A", there is no need to provide any dedicated auxiliary left or right lanes to access the site based on traffic flow. A dedicated right-turn lane in Power Drive to access the site is not required. All driveways have compliant sightlines and are designed to achieve safe access and movement for all road users, including pedestrians, cyclists and other vehicles.

#### 5. Internal Circulation and Parking

*The TIA is to recommend internal circulation access arrangements (for vehicles, pedestrians and cyclists) and parking concept designs/design criteria (for cars and cyclists) based on analysis of requirements for each development traffic generation scenario for both the current time frame and the horizon year of 2036+.*



*The above analysis and recommendations to include provision for service vehicles and loading/unloading. The master plan indicates a supermarket that is likely to require access by articulated vehicles. Turning paths for articulated service vehicles should, therefore, be provided to ensure any initial construction works will cater for future vehicle types.*

*With the provision of 60 car parking spaces, please provide details of two undercover for disabled access with direct access to the internal pedestrian pathways in front of the proposed shops.*

**MTE Response:** The proposed supermarket will be small (only 550m<sup>2</sup> including BOH) and more similar to a small local FoodWorks or IGA, not a full-line large Coles or Woolworths supermarket. These smaller supermarkets can comfortably be serviced by vehicles up to a 12.5m long Heavy Rigid Vehicle (HRV) and do not require an articulated vehicle for access. The subject masterplan (and all relevant access driveways) has been designed to accommodate an HRV for the supermarket and bottle shop. 20m long Articulated Vehicles (20m AVs) will not be required to access the site, and this can be controlled by a Plan of Management or a consent condition if needed.

The overall masterplan provided in **Annexure A** has been assessed with swept paths (provided in **Annexure E**) and is designed accordingly. The inclusions of the driveways within Stage 1 and the overall circulation on-site align with the demands of the site's master plan. The detailed design of internals will be reviewed again during the detailed design stage to ensure compliance with the relevant AS2890 standards. There is sufficient room on-site to achieve design compliance.

AS2890.6:2023 does not require accessible parking spaces to be undercover. This requirement is a matter for others to address.

### 6. SIDRA Files

*SIDRA files conducted to support the TIA are required to be submitted with the amended TIA.*

**MTE Response:** The SIDRA files will be provided upon submission of this amended TPIA to the Council.

### 7. Public Transport

*The current proposal as submitted for consideration makes no provision for any public transport to a Commercial hub in a high populated area.*

*The proposed development, being a key, high volume destination, will require provision of bus stops and shelters, in both traffic directions, adjacent to the site on Ballina Heights Drive.*



*A pedestrian refuge will be required on Ballina Heights Drive to provide safe access to/from the site to the bus site on the far side of Ballina Heights Drive.*

*A pedestrian safety refuge should be provided at the pedestrian crossing on Power Drive connecting the 2.5m pathway from Ballina Heights Drive, to the 2.5m existing footpath on the southern side of Power Drive.*

**MTE Response:** No current or planned bus services pass the proposed development. The closest bus stop is located on The Ridgeway and is over 500m walking distance from the proposed development.

The local bus companies would have to agree to move their existing bus route to service this subject site. The commercial viability of including the subject site within the bus network is questionable, as the proposed centre serves the immediate local Cumbalum community (not the broader Ballina community), who are unlikely to catch a bus service and are more likely to walk to drive to the centre.

While the provision of bus stop facilities can be considered, the Council should confirm that it is viable in the first instance. If required, the provision of these bus stop facilities can be included as a condition of consent, as can the inclusion of a pedestrian refuge along Power Drive.

### 8. Pedestrian and Cyclist Access

*With reference to Ardill Payne & Partners Plan No. SK406-06 Rev C, points of pedestrian access to the site are located on the southern side of the proposed shops on Ballina Heights Drive and Power Drive. Other than sporting events, the majority of local pedestrians and cycle movements will originate from the north of the site, Farrelly Avenue, Ballina Heights Drive and O'Rourke Street. The 2.5m Ballina Heights Drive/Power Drive footpath via a 2.5m shared pathway is considered the primary passage for local residents to the development site.*

*For the most part, the plans suggest that pedestrians and cyclists will cross both vehicle access points and walk some distance past the driveways (to the 11 proposed shops) in order to access the premises.*

*Council considers this arrangement to be unsafe and create a conflict between vehicles entering and leaving the premises and pedestrian/cyclists movements.*

*These conflicts include:-*

- i. Pedestrian impeding vehicle access to the site on Ballina Heights Drive. In the context of the submitted plans or any proposed single lane passage of Ballina Heights Drive southwards, vehicles will block Ballina Heights Drive through traffic in close proximity to the roundabout exit,*



*pending clearance of pedestrians and or cyclists. Refer to Item 3 notation above.*

- ii. From the north of the site, it is anticipated that pedestrians (including young children and infants in prams) and cyclists will take the most direct route to the shopping centre via the two points of vehicle access and impede vehicle entry/exit and present an unsafe environment for all users of the site.*
- iii. Footpaths should be designed and located to intercept pedestrians and cyclist and direct them onto the premises, without crossing driveways in the road reserve where possible in this instance.*
- iv. The footpath located on the western side of Farrelly Avenue should be extended to the bus stop on the northern side of Ballina Heights Drive.*

**MTE Response:** It is not inherently unsafe for pedestrians to cross a driveway. Driveways along Ballina Heights Drive are separated entry and exit driveways (which reduces conflicts), and all driveways are provided with clear sightlines and will be designed to comply with the minimum design requirements of AS2890.1:2004 for pedestrian sightlines.

The concern that a vehicle turning into the site may “block” Ballina Heights Drive is unfounded because this could occur at any commercial driveway in a town centre and is not a concern on local roads elsewhere. Any such ‘delay’ or blockage that may arise will be minor and will also act to reduce vehicle speeds along Ballina Heights Drive, which is a desirable outcome surrounding a town centre. Any driver travelling along Ballina Heights Drive has the required minimum Stopping Sight Distance (SSD), so any slowing vehicle to turn into the site can do so safely.

The master plan proposal includes well-located pathways that allow for safe pedestrian access. Within the master plan, pedestrians approaching from the north will reach an internal pathway before they cross any driveway, which will guide them into the central commercial buildings of Stage 1 and later to the remainder of the master plan site.

It is noted that some of these internal paths to the north of the site are not included in Stage 1. It is agreed that these paths should be included within Stage 1 to provide pedestrian connectivity to Ballina Heights Drive and Power Drive; this should be amended.

There is no current bus stop on the northern side of Ballina Heights Drive, and no current (or future) bus services run along it. While the pedestrian footpath can be extended from Farrelly Avenue to Ballina Heights Drive, it is not considered necessary given the lack of pedestrian demand and the fact that a bus service here is unlikely. There is no nexus between the proposed project and the need to connect Farrelly Avenue to Ballina Heights Drive for a bus stop.



### 6 CONCLUSIONS

In view of the foregoing, Stage 1 of the subject mixed-use development proposal at the corner of Ballina Heights Drive / Power Drive, Cumbalum (as depicted in **Annexure B**) is fully supportable in terms of its traffic and parking impacts. The entire master plan for the subject site (as depicted in **Annexure A**) is also supportable in terms of its traffic and parking impacts.

The following outcomes of this traffic impact assessment are relevant to note with respect to Stage 1 of the proposal:

- The Stage 1 proposal includes the provision of **60** car parking spaces within the proposed car park, exceeding the BDCP 2012 parking requirement of **34** car parking spaces.
- The BDCP 2012 does not require bicycle and motorcycle parking facilities. There is sufficient room on-site for bicycle and motorcycle parking, and five (5) bicycle racks have been provided on the Stage 1 plans.
- The parking areas of Stage 1 have been assessed against the relevant sections of AS2890.1:2004, AS2890.2:2018 and AS2890.6:2022 and have been found to satisfy the objectives of each standard. Swept path testing has been undertaken, and the results are reproduced in **Annexure E**.
- As the entire internal circulation network will not be complete after Stage 1, two temporary turning bays are required to accommodate circulation within the basement. Recommended temporary turning bay locations are provided within **Annexure E**.
- To improve access to the site and general safety and efficiency of the existing intersection of Ballina Heights Drive / Power Drive, it is recommended that the dual circulating lanes of the roundabout be removed and the southern leg of the intersection be reduced to a single exit lane. A concept for these changes is provided in **Annexure F**.
- The traffic generation of Stage 1 of the development has been estimated to be some **38** trips in the AM peak period (19 in, 19 out), **75** trips in the PM peak period (37 in, 37 out) and **144** trips in the weekend peak period (72 in, 72 out). The impacts of the traffic generation have been modelled using SIDRA INTERSECTION 9.1, indicating that there will be no detrimental impact on the performance of the intersections due to the generated traffic.
- The Stage 1 traffic generation has also been tested against predicted 2036 traffic flows using SIDRA INTERSECTION 9.1, resulting in all immediate intersections operating at an overall level of service "A" in 2036.
- The right turn at the intersection of Deadmans Creek Road / Tamarind Drive will fail in 2036 due to already predicted background traffic growth. This development is not responsible for treating this right turn, as it occurs regardless of this proposal.

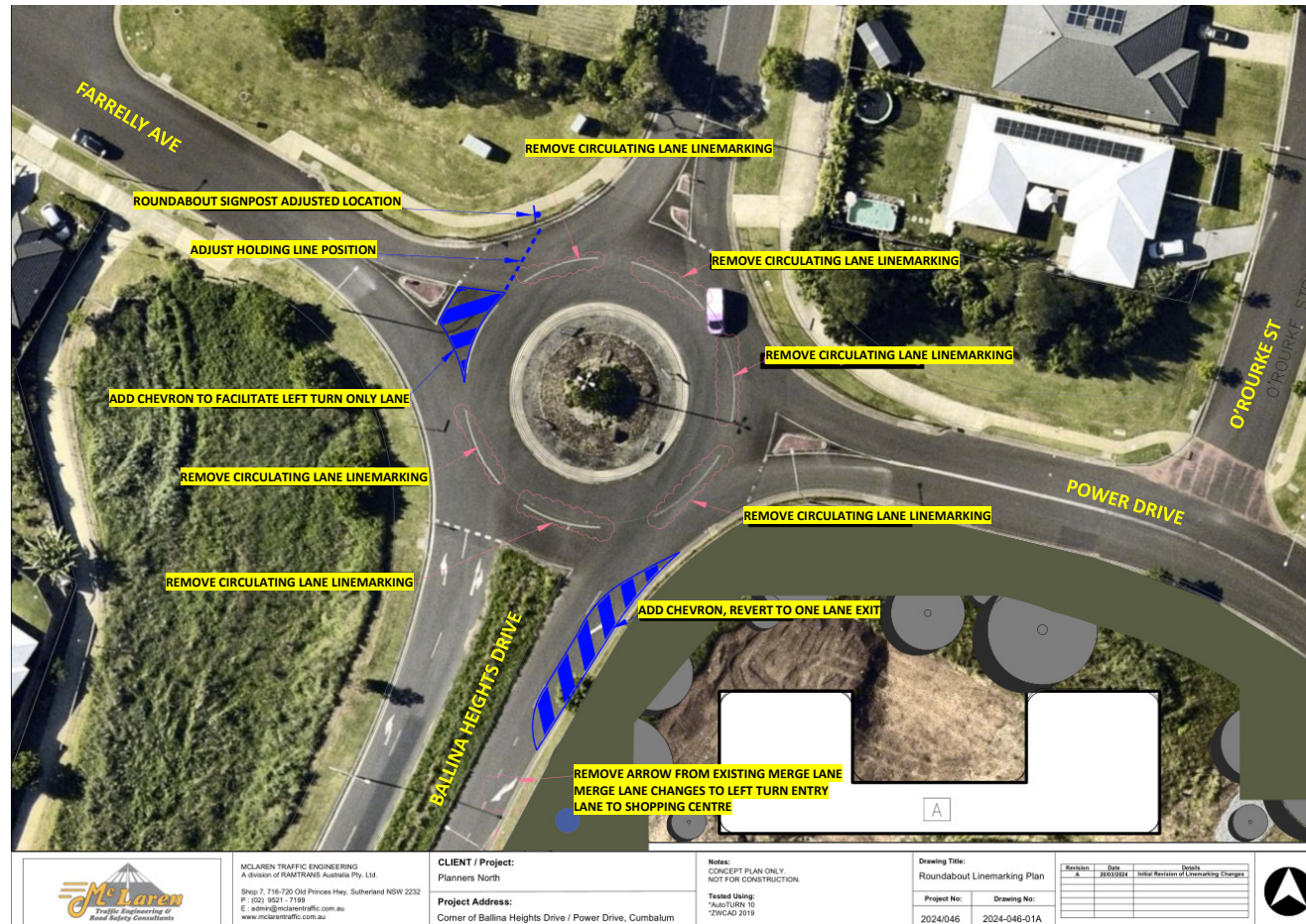




**BALLINA HEIGHTS  
PROPOSED SHOPPING CENTRE SITE  
AERIAL VIEW 2022**

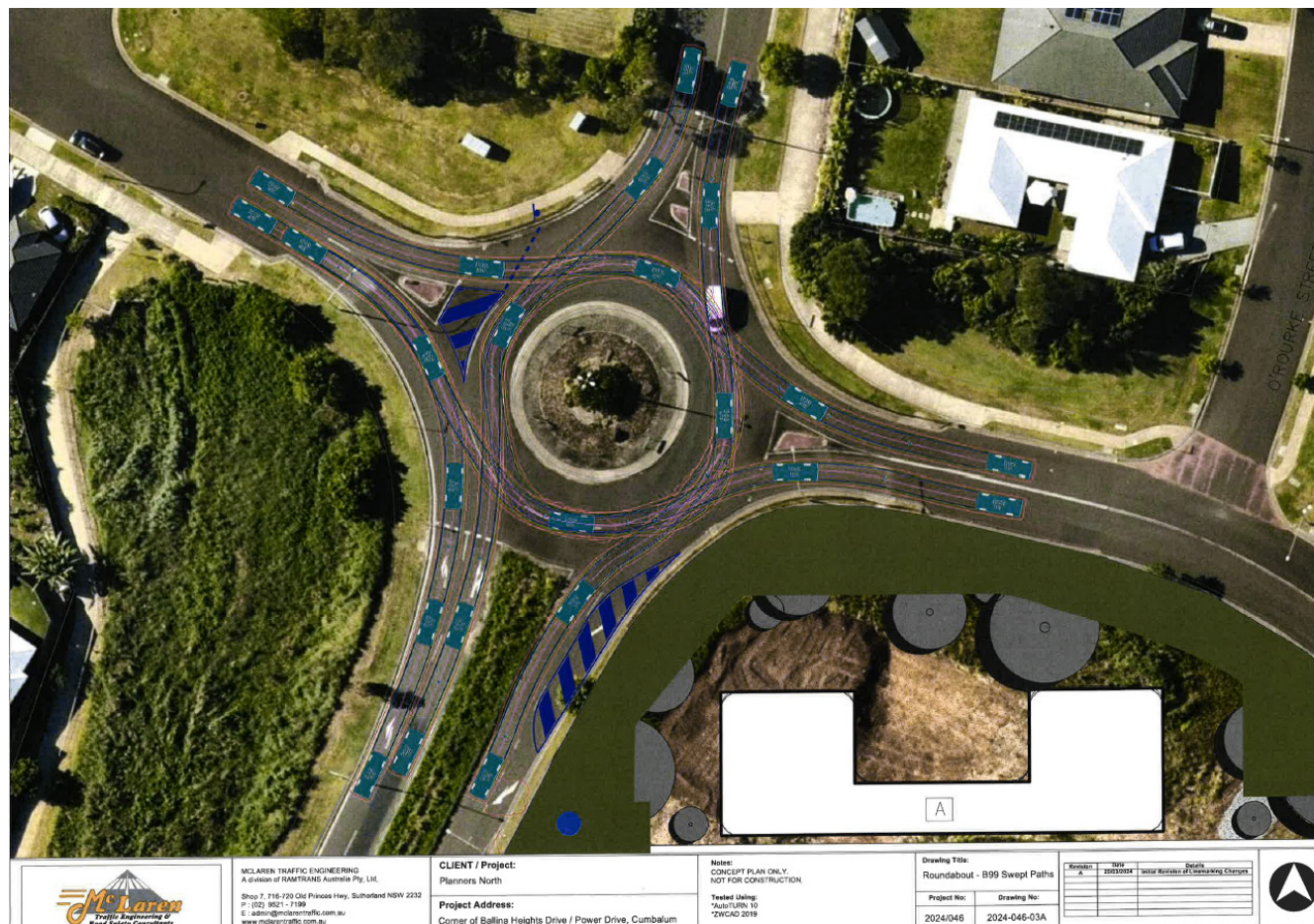


## 7.1 Proposed Ballina Heights Shopping Centre - Traffic Changes

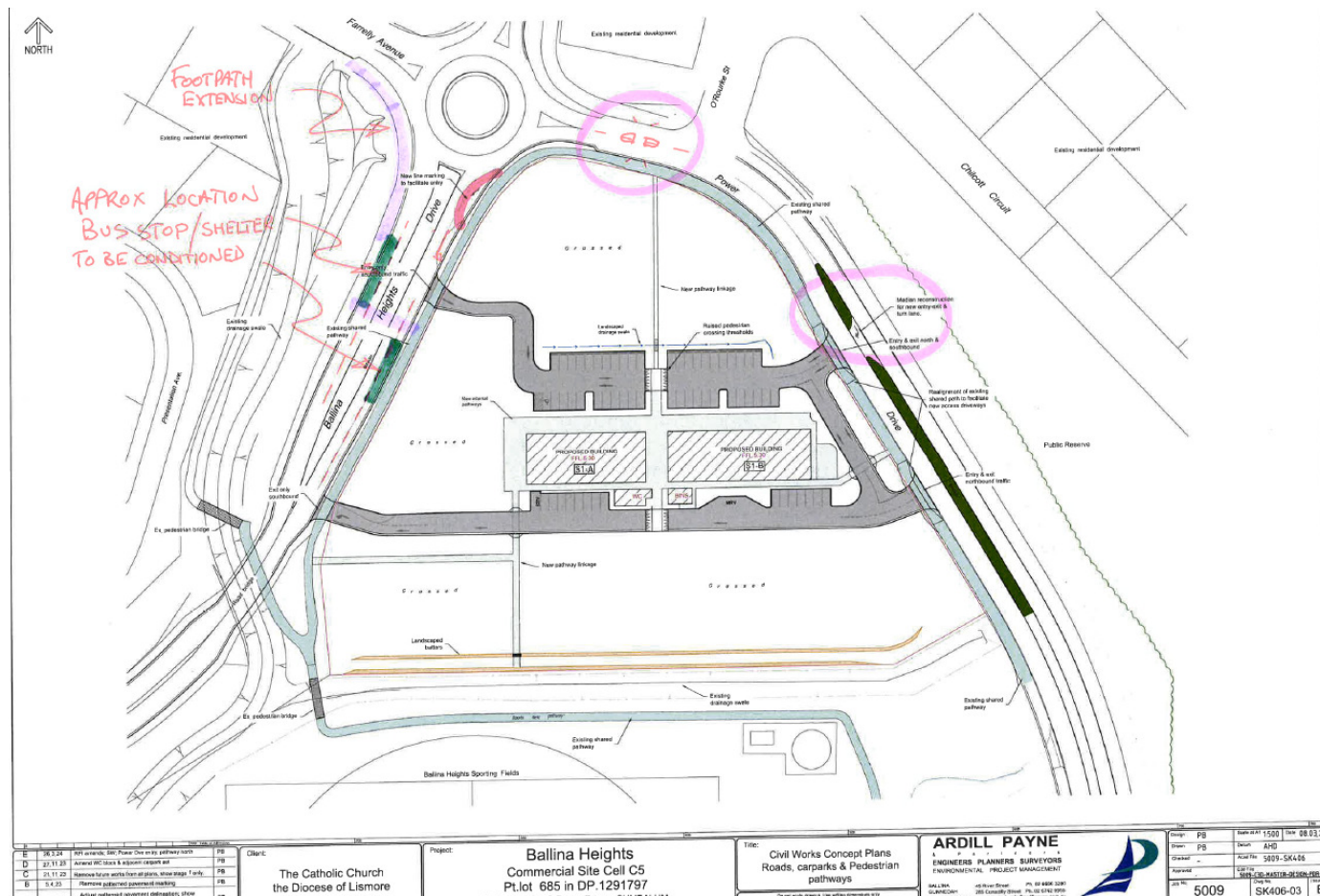


**BALLINA HEIGHTS  
SHOPPING CENTRE  
PROPOSED TRAFFIC  
CHANGES BY THE  
PROPONENT**





**BALLINA HEIGHTS  
SHOPPING CENTRE  
PROPOSED SINGLE  
CIRCULATING LANE  
SWEEP VEHICLE  
PATHS BY THE  
PROPONENT**



## BALLINA HEIGHTS SHOPPING CENTRE PROPOSED TRAFFIC CHANGES BY COUNCIL STAFF

### Includes:

1. Bus Bays in Ballina Hts Dr with connecting Pedestrian Refuge (Green)
2. Extension of footpath from Farrelly Ave to proposed Bus Shelter (Purple)
3. Pedestrian Refuge Power Dr (Pink)
4. Protected Right Turn Lane into Shopping Centre, Power Dr. (Pink)

## 8.1 Schedule of Outstanding Resolutions of the Committee

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### 8. Information for the Committee

#### 8.1 Schedule of Outstanding Resolutions of the Committee

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##### **Introduction**

List of outstanding resolutions from previous meetings of the Local Traffic Committee.

##### **Information**

##### **Meeting Held 10 April 2024**

##### **04/24-5.1 Ballina CBD Parking Study, Council Meeting 22 February 2024**

###### *Recommendations*

That the Committee note the resolutions of Council regarding actions following on from consideration of the Ballina CBD Parking Study.

###### Action to Date

A report on partial implementation of the above for the section of Tamar Street between Kerr Street and Grant Street is included in this meeting's agenda.

##### **04/24-6.1 Proposed Drop Off Parking Zone for Flat Rock Beach Parking Area.**

###### *Recommendations*

The Committee support provision of a 1/4P Drop Off Parking Zone at Flat Rock Beach Parking area and associated regulatory signs and markings, as shown on the sketches included with this report.

###### Action to Date

No action to date.

##### **04/24-6.3 Houghlahans Creek Road/Pearces Creek Hall Road Intersection.**

###### *Recommendations*

1. That the Committee support the replacement of Give Way control with Stop control on the Pearces Creek Hall Road leg of the Houghlahans Creek Road/Pearces Creek Hall Road, Tee Intersection at Pearces Creek as shown on the attachment to this report.
2. Council will investigate installing advance warning signs before the stop sign.

###### Action to Date

No action to date.

### **04/24-10.1 Ross Lane Flood Signage**

Chris Hardy suggested that during flood events which close Ross Lane, advance warning “road closed” signage be installed on the main roads before turning in to Ross Lane.

#### Action to Date

Additional signage has been ordered to provide advanced notification of Ross Lane closure.

### **Meeting Held 14 February 2024**

### **02/24-6.1 Proposed Electric Vehicle Chargers on Public Streets**

#### *Recommendations*

That the Committee support:

1. Changing the existing, 18m long “45° Angle Parking – Rear to Kerb, Vehicles under 6m Only” zone on the west side of Cherry Street Ballina, north of Holden Lane to “60° Angle Parking – Rear to Kerb, Vehicles under 6m Only”.
2. Retaining the existing disabled parking bay at the northern end of 1 above but, changing to 60 degrees angle.
3. Designating the two northern parking bays of 1 above as 4P EV charging spaces (or other time as determined by Council).
4. Designating two kerbside parallel parking bays on the north side of Ross Street Lennox Head, centred on an electricity pole 42m west of Pacific Parade as 4P EV charging spaces.
5. Provision of associated signage, pavement markings and parking bay linemarking for 1, 2, 3 and 4 above, as generally described in the body of this report.
6. Parking signage to confirm with Standard Signs: R5-1-12n-Parking (1p-10p) Times (Various), Electric Vehicles Only While Charging.

#### Action to Date

Report being prepared for Council on future of proposal.

### **02/24-6.2 Proposed Pedestrian and Road Safety Improvements, Main Street and The Avenue, Alstonville**

#### *Recommendations*

That the Committee support

1. The proposed road and pedestrian safety improvements, associated regulatory signs and pavement markings, and additional marked pedestrian crossing as detailed on page 11, “Figure 5: Regulatory Signage and line marking included in the proposal” of the attachment to this report.
2. Additional scope to the works shown in Figure 5 to include:
  - a. Superseded No Parking Signage on The Avenue 10m North of the Daley Street intersection is to be replaced by current R5-400(R) sign.
  - b. The existing 2P Left parking sign on the same pole is to be retained.

#### Action to Date

Construction planned mid 2024

**Meeting Held 13 December 2023**

**12/23-6.1 Proposed 2H Parking Zone – Ballina Dental Clinic, Fox Street, Ballina**

*Recommendations*

1. Subject to provision of a detailed and compliant signs and pavement marking design, the Committee support provision of three linemarked, 2H timed parking spaces, east of the NSW Health Dental Clinic driveway on the south side of Fox Street, Ballina.
2. The 2H parking be operational Mondays – Fridays from 8am until 4.30pm.
3. That Ballina Shire Council conduct a review of parking on streets surrounding the hospital including both sides of Fox and Cherry Streets, and the hospital side of Moon and Bentinck Streets, with a view to formulating a Master Plan for the precinct.

*Action to Date*

- 1 and 2. Referred to Designers
3. Discussion commenced with hospital management and bus operators. Draft masterplan with parking controls and bus stops in Cherry Street in front of hospital being prepared for initial comments by stakeholders.

**Meeting Held 11 October 2023**

**10/23-6.1 Proposed No Stopping Zone, Wardell Road, Alstonville**

*Recommendations*

That the Committee supports both Options 2 and 3:

- Option 2 - through use of “No Stopping” yellow line, remove parking on the eastern side of Wardell Road between Daley Street and Coral Street, Alstonville
- Option 3, trial installation of a thermoplastic roundabout at this intersection.

With a preference for Option 3, subject to detailed design demonstrating the feasibility of this option and available funding.

*Action to Date*

Referred to Designers

**Meeting Held 14 June 2023**

**06/23-6.2 Proposed Parking Arrangements Tamar Street Ballina, Kerr to Grant Streets**

*Recommendations*

That the Committee support provision of rear to kerb angle parking, at a specific angle to be determined by Council, in Kerr Street between Kerr and Grant Streets, Ballina.

*Action to Date*

See report in this meeting’s agenda on partial implementation of Council’s response to the Ballina CBD Parking Study.

**Meeting Held 12 April 2023**



### **04/23-6.4 Request for Accessible Car Park Space at Shaws Bay**

#### *Recommendations*

That, subject to detailed design in compliance with AS 2890.5, the Committee support provision of an accessible parking space and shared area on the road related area on Lot 5 Section 88 DP 758047 as generally shown on the attachment to this report.

#### Action to Date

Tasked to designers

### **Meeting Held 14 December 2022**

### **12/22-7.1 Provision of Accessible Parking, Main Street, Alstonville**

#### *Recommendations*

That Council:

1. Check the possibility of disabled access parking in Main Street.
2. Investigate proposed disabled parking spaces in the rear carpark either side of the covered walkway.
3. Refer the matter to the Access Committee for further advice prior to resubmitting to the LTC.

#### Action to Date

1. & 2, Council designers are checking candidate spaces in Daley Street and in public carpark off Commercial Road.
3. Access Committee consulted, but no detailed advice provided.

#### Meeting with Alstonville Chamber of Commerce

The Road Safety Officer and Traffic Engineer met with representatives of Alstonville Chamber of Commerce on site 10 May 2023. The Chamber will further consider and advise Council of its preferred location for accessible parking. The Chamber will also provide advice on loading zone preferred locations and they requested more compliance action on timed parking. The Rangers have advised that due to staff/resource limitations, the 2H parking is difficult to provide compliance action (parked vehicles need to be monitored for 2 hours +), they advise that if timed parking was changed to 1H, compliance action is likely to be much more effective.

### **12/22-7.3 Traffic Issues Rifle Range Road, Wollongbar Village**

#### *Recommendations*

That Council:

1. Consider reconfiguration of the Plateau Drive Roundabout to inhibit high speed drive through on Rifle Range Road.
2. Conduct a behaviour campaign to deter speeding in Wollongbar.
3. Consider provision of centre line and edge line treatment including possible raised pavement markers to confine traffic and inhibit speeding.
4. Install traffic counters in Rifle Range Road to provide data for possible request to TfNSW for a speed zone review.
5. Provide Crash data to assist TfNSW in any speed zone review.

## **8.1 Schedule of Outstanding Resolutions of the Committee**

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### Action to Date

1. Referred to design section for consideration.
2. Facebook action taken by Road Safety Officer.
3. Additional centreline and edge linemarking to be done when contractors in the area.
4. Traffic count completed 100m east of Midway Ave, 19 January 2023 (see attachment). 85% speed 61.38 kph, median speed 56.62 kph, daily volume 3,136 vpd.
5. Crash data has already provided in report to Committee Delegates.

### **Meeting Held 13 April 2022**

#### **4/22-7.2 Four Way Cross Intersections – Ballina Island**

##### *Recommendations*

The Committee recommended that:

1. Council investigate an option for a centre median in Fox Street.
2. ....

### Action to Date

1. Design commenced for Fox Street/Martin Street intersection.

### **Meeting Held 8 December 2021**

#### **12/21-6.2 Proposed Loading Zone – Kalinga Street, West Ballina**

##### *Recommendation*

That the Committee support provision of a Loading Zone on the north side of Kalinga Street, West Ballina adjacent to No 79, generally as depicted on the above Ardill Payne plan subject to:

1. Submission to and approval by Council of detailed design plans.
2. The owner being responsible for all costs for the Loading Zone and associated works.

Note: Subject to further consultation being undertaken and reviewed with adjoining property owners.

### Action to Date

Proponent submitted S138 application, but had insufficient detail and returned to applicant.

### **Meeting Held 9 December 2020**

#### **12/20-7.2 Disability Parking – Ballina CBD Central Block**

##### *Recommendation*

The Committee approves creation of two additional disability car parking spaces in the Ballina CBD Central Block – one each on both east and west bound lanes.

### Action to Date

Design commenced.

## 8.1 Schedule of Outstanding Resolutions of the Committee

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### **12/20-7.3     Shaws Bay Parking – East of Hill Street, East Ballina**

#### *Recommendation*

The Committee approves creation of 4P area parking on both eastern and western sides of Hill Street, in Hill Street, Brighton Street, Park Street, The Serpentine and surrounding grassed areas of Shaws Bay recreation area.

#### *Action to Date*

Installation not commenced, pending further public consultation.

**Meeting Held 12 August 2020**

### **8/20-6.4     Proposed Additional Disabled Parking Space - Off Isabella Drive, Skennars Head**

#### *Committee Recommendation*

That subject to funding arrangements being provided to the satisfaction of Council, the Committee support provision of an additional disabled car parking space adjacent to the existing disabled car parking space in front of Holy Family School in the road related area off Isabella Drive, Skennars Head.

#### *Action to Date*

Awaiting response from school.

**Meeting Held 12 June 2019**

### **2/19-6.5     St Francis Xavier Catholic Primary School, Proposed Student Drop Off / Pick Up Zone - Martin Street, Ballina**

#### *Recommendation*

1. The Committee support a NO PARKING (8–9:30 am and 2:30–4pm School Days) student drop off/pick up zone in Martin Street, Ballina adjacent to St Francis Xavier Catholic Primary School as depicted on the attachment to this report.
2. Implementation of the zone to be deferred pending provision of funding by the school for necessary road shoulder pavement and sealing works, provision and erection of associated signage.

#### *Action to Date*

Implementation deferred pending funding and completion of associated construction works

## **RECOMMENDATIONS**

1. That the Committee note the information in the report regarding the Schedule of Outstanding Resolutions.

## **Attachment(s)**

Nil

9. Regulatory Matters on Classified Roads

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**9. Regulatory Matters on Classified Roads (GM's Delegate)**

Nil Items

10	Items Without Notice
11	Next Meeting

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**10. Items Without Notice**

**11. Next Meeting**

Next meeting is scheduled for Wednesday 14 August 2024 at 10:00 am.