

# West Culburra Beach Concept Plan

Transport and Accessibility Impact Assessment



Prepared by: GTA Consultants (NSW) Pty Ltd for Sealark Pty Ltd  
on 23/10/2020  
Reference: N186580  
Issue #: C

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### Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
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# 1. INTRODUCTION

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### 1.1. Background

The development proposed at West Culburra Beach involves a mixed use subdivision over approximately 47 hectares (ha) of land bounded to the north by the Crookhaven River, Lake Woollumboola and the existing urban area of Culburra Beach to the east, Jervis Bay National Park to the south and private property to the west. Shoalhaven Council has designated the land allotment which the site is located as the Culburra Beach Expansion Area.

GTA Consultants was previously commissioned by Realty Realizations Pty Ltd to complete a transport and accessibility impact assessment (GTA 2013 TIA) for the proposed development. Previously, the West Culburra Beach Development included a mixture of medium density housing types, ranging from small lots for the 55+ aged group to multi-storey units. The West Culburra Beach development Concept plan has now been updated.

The updated proposal comprises three key precincts, proposed to be constructed over a period of approximately 10 years. On completion, the West Culburra Beach Development is proposed to include:

- Residential: approximately 293 low density residential dwellings (244 residential lots, assuming 20% will be dual occupancy dwellings) totalling 22.97 hectares
- Industrial: 13 industrial lots, totalling 5.12 hectares.
- Town Centre: A town centre totalling approximately 13.58 hectares, including:
  - 95 medium density low-rise apartments
  - 45 integrated housing units, 3 shop-top housing and commercial/ retail units
  - A local sports facility.

Access to the residential and town centre development is proposed via three new roundabout intersections with Culburra Road, while a priority intersection is proposed for accessing the industrial development. It is proposed that the existing industrial area access at Strathstone Street will be closed with new access 30 metres east of the existing access point.

GTA Consultants was commissioned by Allen Price & Scarratts on behalf of Sealark Pty Ltd to undertake a Transport and Accessibility Impact Assessment (TAIA) for the updated West Culburra Beach Concept Plan, and in particular to address Section 5 (Traffic and Access) of the Director-General's Environmental Assessment Requirements (DGR's) dated 27 May 2010, presented in Section 1.2.1.

### 1.2. Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration for the following:

- existing traffic and parking conditions surrounding the site
- pedestrian and bicycle requirements
- service vehicle considerations
- the traffic generating characteristics of the proposed development
- suitability of the proposed access arrangements for the site
- the transport impact of the development proposal on the surrounding road network.

## INTRODUCTION

### 1.2.1. Response to Director-General's Requirements

The Director General's Requirements (DGRs) issued on 27 May 2010 are addressed in this report. As they relate to traffic and transport, the DGRs have been reproduced in Table 1.1, with the relevant section(s) of this report referenced.

Table 1.1: Response to DGRs

Traffic and Access	Response
5.1) Prepare a Transport and Accessibility Impact Study in accordance with Table 2.1 of the Roads and Maritime Guide to Traffic Generating Developments, having regard to the principles of the NSW Planning Guidelines for Walking and Cycling and the NSW State Plan (2010) to include:	
a) Details and analysis of proposed access to the site.	Section 4
b) Network modelling using TRACKS.	Section 2.8 & 7
c) Appropriate arrangements for the provision of road and public transport infrastructure needed to service the site. Specifically in relation to the Nowra/Culburra bus service, inclusive of the feasibility of the proposed diversion of the existing service, early provision of the service and funding.	Section 5.2
d) An assessment based on the current speed zonings, with consideration of safe spacing of intersections within 100km/h speed zones.	Section 0
e) An assessment of the impacts on the surrounding road network.	Section 7.3
5.2) Provide for a road network allows for (potential) future public access to the coastal foreshore.	Section 5.4
5.3) Demonstrate consistency of the proposal with the NSW Government's Integrating Land Use & Transport policy package.	Section 5

## 1.3. References

It is noted that Roads and Maritime Services is now integrated with Transport for NSW (TfNSW). For the purposes of this report, all references to the former Roads and Maritime Services have been retained for clarity.

In preparing this report, reference has been made to the following:

- an inspection of the site and its surrounds
- West Culburra Beach Subdivision Plan Transport and Accessibility Impact Assessment (Issue E), GTA Consultants, 2013 (GTA 2013 TIA)
- West Culburra Beach Subdivision Development Transport and Accessibility Impact Assessment Addendum Report, GTA Consultants, 2013
- Austroads Guide to Road Design, Part 3: Geometric Design (third edition) 2016
- Austroads Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections (third edition) 2017
- Austroads Guide to Road Design, Part 4B: Roundabouts (third edition) 2015
- Austroads Guide to Road Design, Part 6A: Paths for Walking and Cycling (second edition) 2017
- Integrating Land Use and Transport 2001, NSW Department of Urban Affairs and Planning
- Sydney's Cycling Future, Transport for NSW, 2013
- Future Transport 2056, Regional NSW Services and Infrastructure Plan, Transport for NSW, 2018
- Nowra Bomaderry Structure Plan 2006, Shoalhaven City Council
- NSW Bicycle Guidelines, Roads and Maritime Services, 2005

## INTRODUCTION

- NSW Speed Zoning Guidelines, Roads and Maritime Services, 2011
- NSW Walking and Cycling Program Guidelines 2019 – 2020, Roads and Maritime Services
- Roads and Maritime Traffic Modelling Guidelines, Roads and Maritime Services, 2013
- Shoalhaven City Council, Traffic and Transport Unit, Calculation of Traffic Growth Factors & Trip Generation Rates, correspondence dated 19 February 2013
- Shoalhaven Development Control Plan (SDCP 2014) Chapter G21 Car Parking Code 2014
- Shoalhaven City Council DCP, Culburra Beach Expansion Area 67 1996
- Shoalhaven City Council Draft DCP Culburra Beach Expansion Area DCP 67/ N13 under draft, being prepared by Shoalhaven City Council
- Shoalhaven Draft Local Environmental Plan (LEP) 2009
- Shoalhaven Local Environmental Plan (LEP) 2014
- Shoalhaven Integrated Transport Strategy, 2000
- Traffic and Parking Assessment - Proposed 18 Hole Championship Golf Course, Long Bow Point, Culburra Beach 2012, prepared by Traffic Solutions Pty Ltd
- Traffic Impact Assessment, Proposed Residential Planning Proposal, Callala Bay NSW (Revision 3), Stantec, 2019
- traffic surveys undertaken by Matrix Traffic and Transport (formerly Skyhigh) in May 2012 as referenced in the context of this report
- plans for the proposed development site prepared by Allen Price and Scarratts:
  - Proposed Mixed Use Concept Plan (Drawing Number 25405-210, Revision 08)
  - Preliminary Residential Precinct Layout Plan (Drawing Number 25405-101, Revision P1)
  - Preliminary Industrial Precinct Layout Plan (Drawing Number 25405-102, Revision P1)
  - Preliminary Town Centre Precinct Layout Plan (Drawing Number 25405-103, Revision P1)
  - Preliminary Overall Concept Roundabout 01 Design (Drawing Number 25405-104, Revision P6)
  - Preliminary Concept Roundabout 01 Design (Drawing Number 25405-105, Revision P6)
  - Roundabout 01,02 and 03 Vehicle Movement Layout Plan (Drawing Number 25405-106, 107, Revision P6,25405-112, Revision P1 and 25405-116, 117, Revision P1)
  - Preliminary Roundabout Sight Line Layout Plan (Drawing Number 25405-108, Revision P6, 25405 – 113, Revision P1 and 25405-118, Revision P1)
  - Preliminary Concept Industrial Entry and Exit Layout Plan (Drawing Number 25405-109, Revision P4)
  - Preliminary Concept Roundabout 02 Layout Plan and Design (Drawing Number 25405-110,111 Revision P1)
  - Preliminary Concept Roundabout 03 Layout and Design (Drawing Number 25405-114, 115 Revision P1)
  - Preliminary Typical Road Cross Sections Plan (Drawing Number 25405-119, 120, 121, 122,123 Revision P0)
  - Proposed Mixed use Concept Plan- Bus Routes (Drawing Number 25405-220, Revision 01)
  - Proposed Mixed use Concept Plan- Shared Footpath (Drawing Number 25405-221, Revision 01).
- other documents and data as referenced in this report.

## 2. EXISTING CONDITIONS

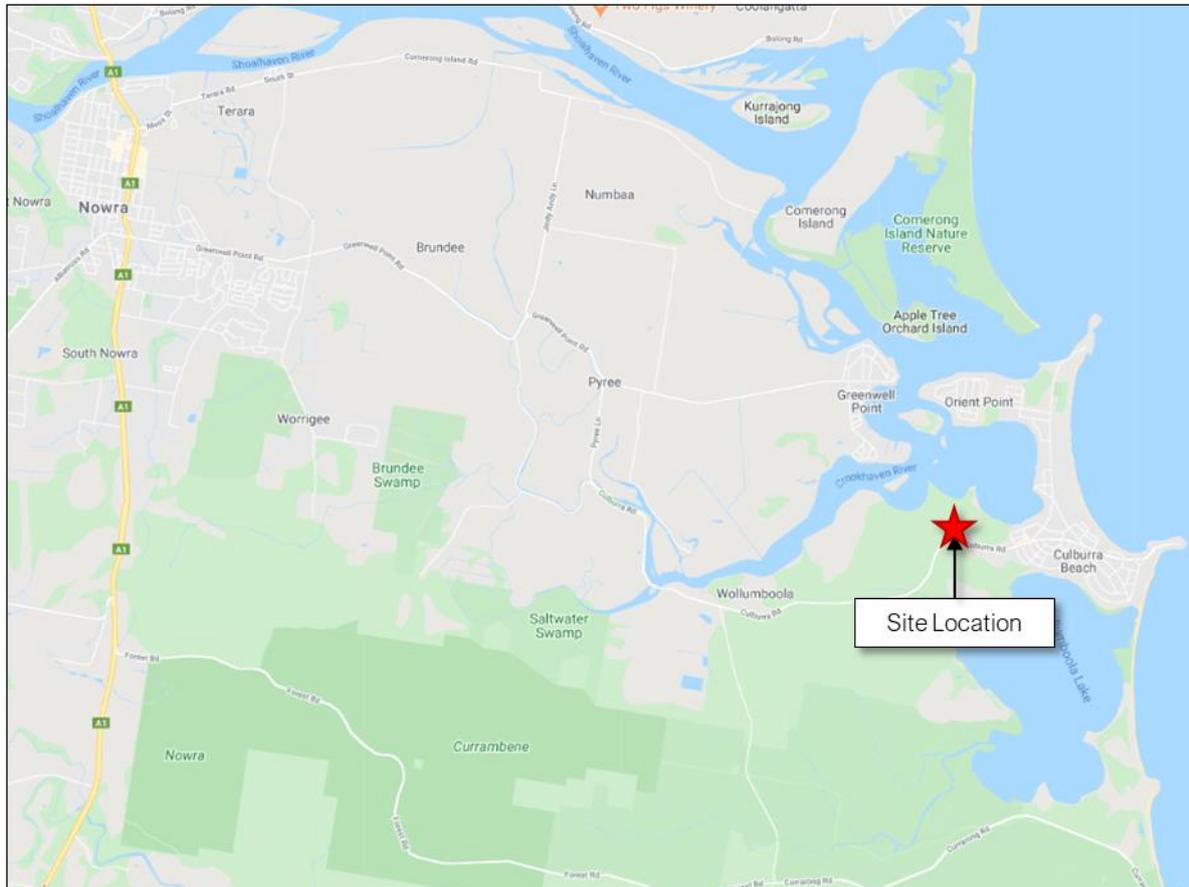
02

## EXISTING CONDITIONS

The subject site is located at Culburra Beach, 180 kilometres south of Sydney and 20 kilometres east of Nowra and covers an area of approximately 47 hectares. Under Shoalhaven LEP 2014, the site is located within a Deferred Matter (DM) Zone and is otherwise known as Lots 5 & 6 of DP1065111.

The surrounding properties predominantly include residential and commercial uses to the east. The location of the subject site and its surrounding environs is shown in Figure 2.1.

Figure 2.1: Subject Site and Environs



Basemap: Google MyMaps (accessed March 2020)

### 2.1. Existing Road Network

#### 2.1.1. Adjoining Roads

##### Princes Highway

The Princes Highway (A1) is generally aligned in a north-south direction between the Sydney CBD and the Victorian border. Across the Nowra Bridge, the road carries approximately 48,000<sup>1</sup> vehicles per day. As it pertains to the site, it is a two-way, divided 23 metres wide road set within an undefined/ variable road reserve, generally configured with two lanes in each direction with wide road shoulders. In the vicinity of the turn-off to Culburra Beach, the road is subject to 70km/h posted speed limit.

The Princes Highway is currently being upgraded between Berry and Bomaderry as part of a \$450 million planned upgrade along the Princes Highway Corridor. The Nowra Bridge over the Shoalhaven River is also planned to be upgraded, with construction works being recently awarded to a contractor.

##### Culburra Road

Culburra Road is a Regional Road generally aligned in an east-west direction and carries approximately 5,200 vehicles per day<sup>2</sup>. It is a two-way, 7-metre-wide road set within a 20 -metre-wide road reserve (approx.), configured with one traffic lane in each direction. Culburra Road is the key link between Culburra Beach and Nowra to the west and, in the vicinity of the site, is subject to a 100km/h posted speed limit and 80km/h elsewhere. North of Mayfield Road, the name of the road changes to Pyree Lane.

##### Pyree Lane

Pyree Lane is a Regional Road aligned in a north-south direction and carries approximately 5,200 vehicles per day<sup>2</sup>. It is a two-way, 6-metre-wide road set within a 22-metre-wide road reserve (approx.), configured with one traffic lane in each direction. Pyree Lane is the key link between Culburra Beach and Nowra to the west and is subject to an 80km/h posted speed limit. South of Mayfield Road, the name of the road changes to Culburra Road.

##### Coonemia Road

Coonemia Road is a Local Road to the west of the site and is aligned in a north-south direction. It is a two-way, 7-metre-wide road set within a 20-metre-wide road reserve (approx.), configured with one traffic lane in each direction and carries approximately 2,600 vehicles per day<sup>1</sup>. Coonemia Road links Culburra Beach and the coastal villages of Callala Bay, Callala Beach and Currarong to the south.

##### Greenwell Point Road/ Kalandar Street

Greenwell Point Road is a Regional Road aligned in an east-west direction. It is a two-way, 6-metre-wide road set within a 20-metre-wide road reserve (approx.), configured with one lane in each direction and carries approximately 6,000 vehicles per day<sup>2</sup>. Greenwell Point Road provides the sole road access between Nowra and the coastal village of Greenwell Point. West of McKay Street in East Nowra, the name of the road changes to Kalandar Street.

[1] Based on RMS Traffic Volume Viewer

[2] Based on the peak hour traffic counts undertaken by Skyhigh in May 2012 and assuming a peak-to-daily ratio of 8% for arterial roads and 10% for local roads.

## EXISTING CONDITIONS

### Forest Road

Forest Road is a local road aligned in an east-west direction. It is a two-way, 7-metre-wide road set within a 20-metre-wide road reserve (approx.), configured with one lane in each direction and carries approximately 2,600 vehicles per day<sup>2</sup>. Forest Road is the key link between the coastal villages of Callala, Currarong and the Princes Highway.

#### 2.1.2. Surrounding Intersections

The following key intersections currently exist in the vicinity of the site:

- Culburra Road/ Coonemia Road (unsignalised)
- Pyree Lane/ Greenwell Point Road (unsignalised)
- Princes Highway/ Kalandar Street (signalised)
- Princes Highway/ Moss Street (signalised)
- Princes Highway/ Forest Road (unsignalised).

## 2.2. Existing Traffic Volumes

GTA Consultants commissioned traffic movement counts, queue lengths and travel time surveys on key intersections and roads surrounding the site in May 2012 as part of the GTA 2013 TIA and are shown in Figure 2.2. The intersection traffic movement counts were undertaken by *Matrix Traffic and Transport Data* (formerly Skyhigh) during the following peak periods:

- Friday 04 May 2012:
  - 7:00am to 9:00am
  - 4:00pm to 6:00pm
- Saturday 05 May 2012:
  - 12:00pm to 2:00pm.

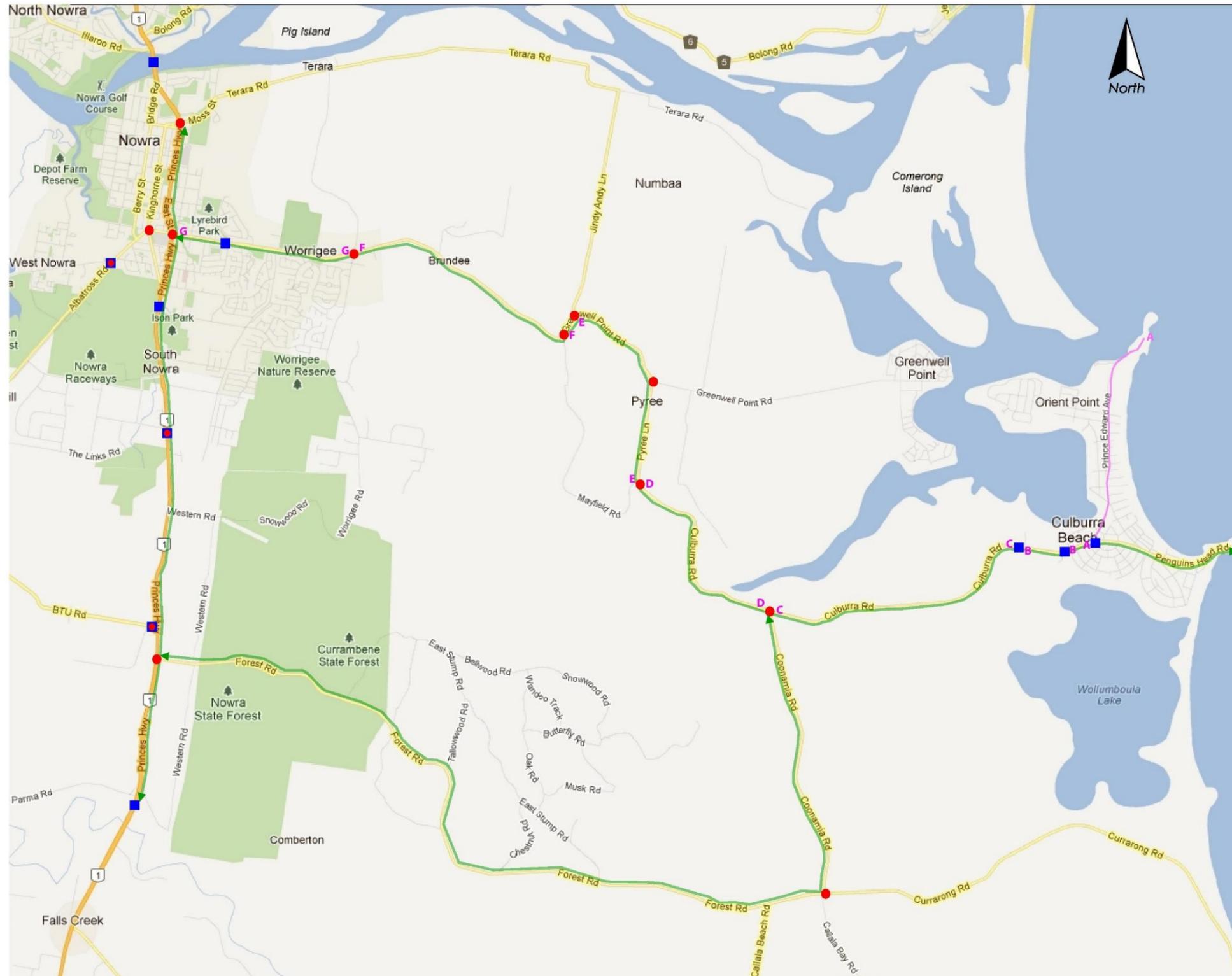
The existing weekday AM and PM peak hour traffic volumes are summarised in Figure 2.3 with Saturday peak hour traffic volumes summarised in Figure 2.4. Full results of the traffic movement counts are contained in Appendix A.

It is acknowledged that the survey data used as a basis for this assessment was collected some eight years ago (in 2012). However, the assessment and the corresponding results and conclusion are based on the 120<sup>th</sup> highest hour equivalent traffic volumes to account for seasonal traffic. Also, the growth rates applied are similar to the historical growth rates indicated by survey data. These are discussed further in detail in Section 2.8.1.

As such, the data informing study outcomes is still considered fit-for-purpose.

# EXISTING CONDITIONS

Figure 2.2: Traffic Count and Travel Time Survey Locations



## WEST CULBURRA DEVELOPMENT

Traffic Counts		
Road/Intersection	Location	Count
1.The Lake Circuit	W of Ingle Ring	Link
2.Culburra Rd	W of West Cres	Link
3.Culburra Rd	W of Strathstone St	Link
4.Culburra Rd/Coonamia Rd		Movement
5.Culburra Rd/Mayfield Rd		Movement
6.Pyree Ln/Greenwell Pt Rd		Movement
7.Greenwell Pt Rd/Jindy Andy Ln		Movement
8.Greenwell Pt Rd/Mayfield Rd		Movement
9.Greenwell Pt Rd/Millbank Rd		Movement
10.Kalendar St/Princes Hwy		Movement
11.Greenwell Pt Road	W of McKay St	Link
12.Coonamia Rd/Currarong Rd		Movement
13.Kalendar St/Kinghorne St		Movement
14.Princes Hwy	S of Kinghorne St	Link
15.Princes Hwy/Forest Rd		Movement
16.Coonamia Rd/Forest Rd		Movement
17.Princes Hwy/Moss St		Movement
18.Princes Hwy	S of Parma Road	Link
19.Princes Hwy	Shoalhaven River	Link
20.Albatross Rd	E of Yalwal Rd	Link/Movement
21.BTU Rd	W of Princes Hwy	Link/Movement
22.Princes Hwy	S of Central Ave	Link/Movement

Travel time survey		
1.Penguins Head Rd East to Princess Hwy via Greenwell Pt Rd		
2.Coonamia Road North to Princess Hwy via Forest Rd		
3.Princes Hwy between Moss St and Parma Road		

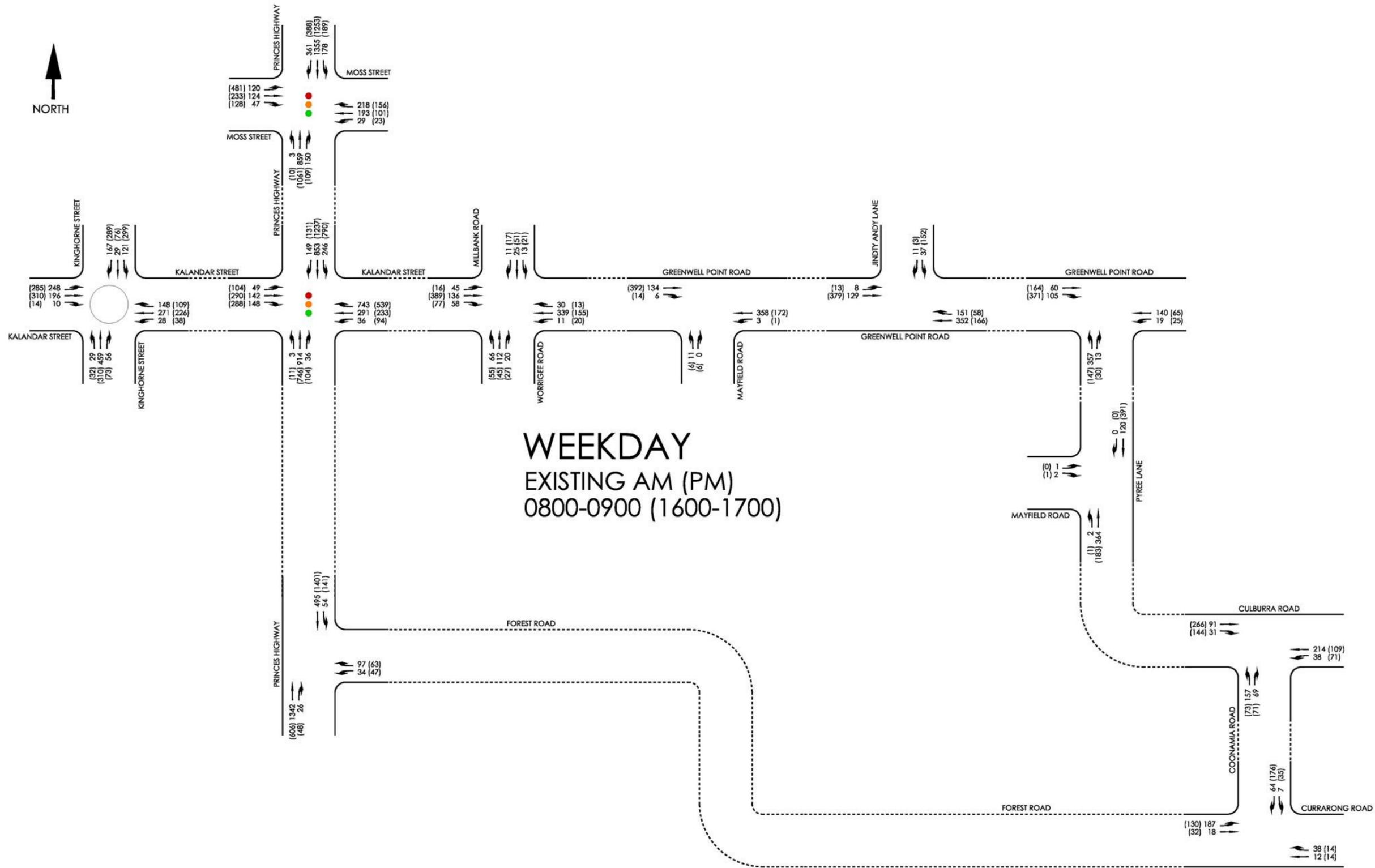
Sub-sections travel time		
A.Prince Edward Ave	Northern end to Culburra Rd	
B.Culburra Rd	West Cres to Strathstone St	
C.Culburra Rd	Strathstone St to Coonamia Rd	
D.Culburra Rd	Coonamia Rd to Mayfield Rd	
E.Pyree Ln	Mayfield Rd to Greenwell Pt Rd	
F.Greenwell Point Rd	Jindy Andy Ln to Millbank Rd	
G.Greenwell Point Rd/Kalendar St	Millbank Rd to Princes Hwy	

**Key**

<span style="color: blue;">■</span>	Classified Link Count (Tube count)
<span style="color: red;">●</span>	Turning movement Count
<span style="color: blue;">■</span>	Classified Link / Turning movement Count
<span style="color: green;">↔</span>	Main route travel time survey
<span style="color: magenta;">— A —</span>	Section travel time survey

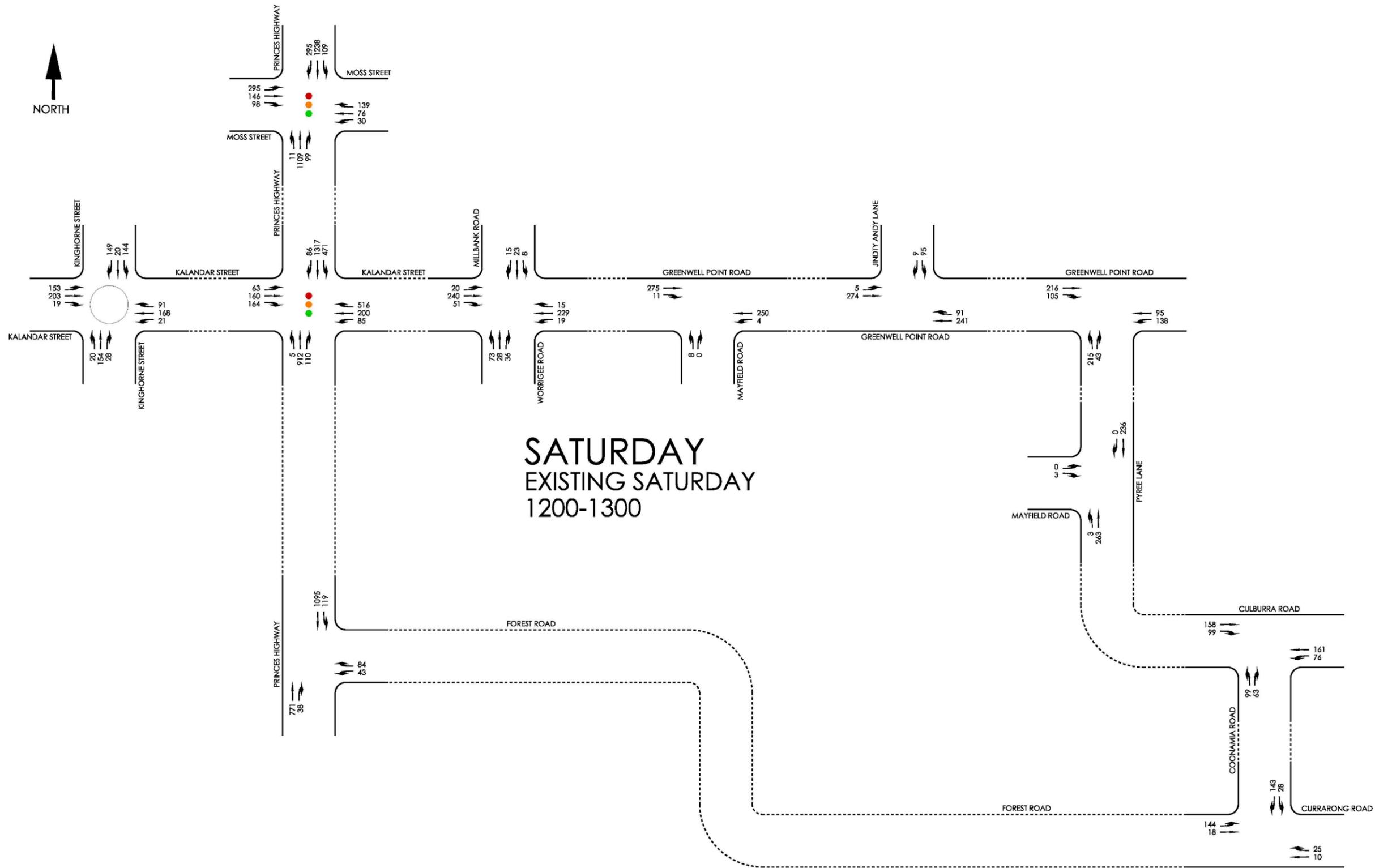
# EXISTING CONDITIONS

Figure 2.3: Existing AM/PM Peak Hour Traffic Volumes



EXISTING CONDITIONS

Figure 2.4: Existing Saturday Peak Hour Traffic Volumes



### 2.3. Relevant Policy and/or Case Studies

#### 2.3.1. Long Bow Point Golf Course, Traffic and Parking Assessment

A traffic and parking assessment was prepared by *Traffic Solutions Pty Ltd* in March 2012 to support a Development Application (DA) for a proposed 18 hole championship golf course at Long Bow Point, Culburra Beach. The proposed golf course is located west of the established residential areas of Culburra Beach on the southern side of Culburra Road as shown in Figure 2.5

Figure 2.5: Proposed Golf Course, Long Bow Point, Culburra Beach



Basemap: Google Maps (accessed March 2020)

Traffic generation estimates for the proposed golf course development were based on surveys undertaken on a Wednesday and Saturday at Nowra Golf Club. It was estimated that the proposed golf course would generate 33 and 53 vehicle movements (two-way) during the weekday AM and PM peak periods, and 66 vehicle movements (two-way) during a Saturday peak hour.

As GTA Consultants understands it, the SSD 8406 for the development has been refused by the Independent Planning Commission on 26 September 2012.

#### 2.3.2. Nowra Bomaderry Structure Plan

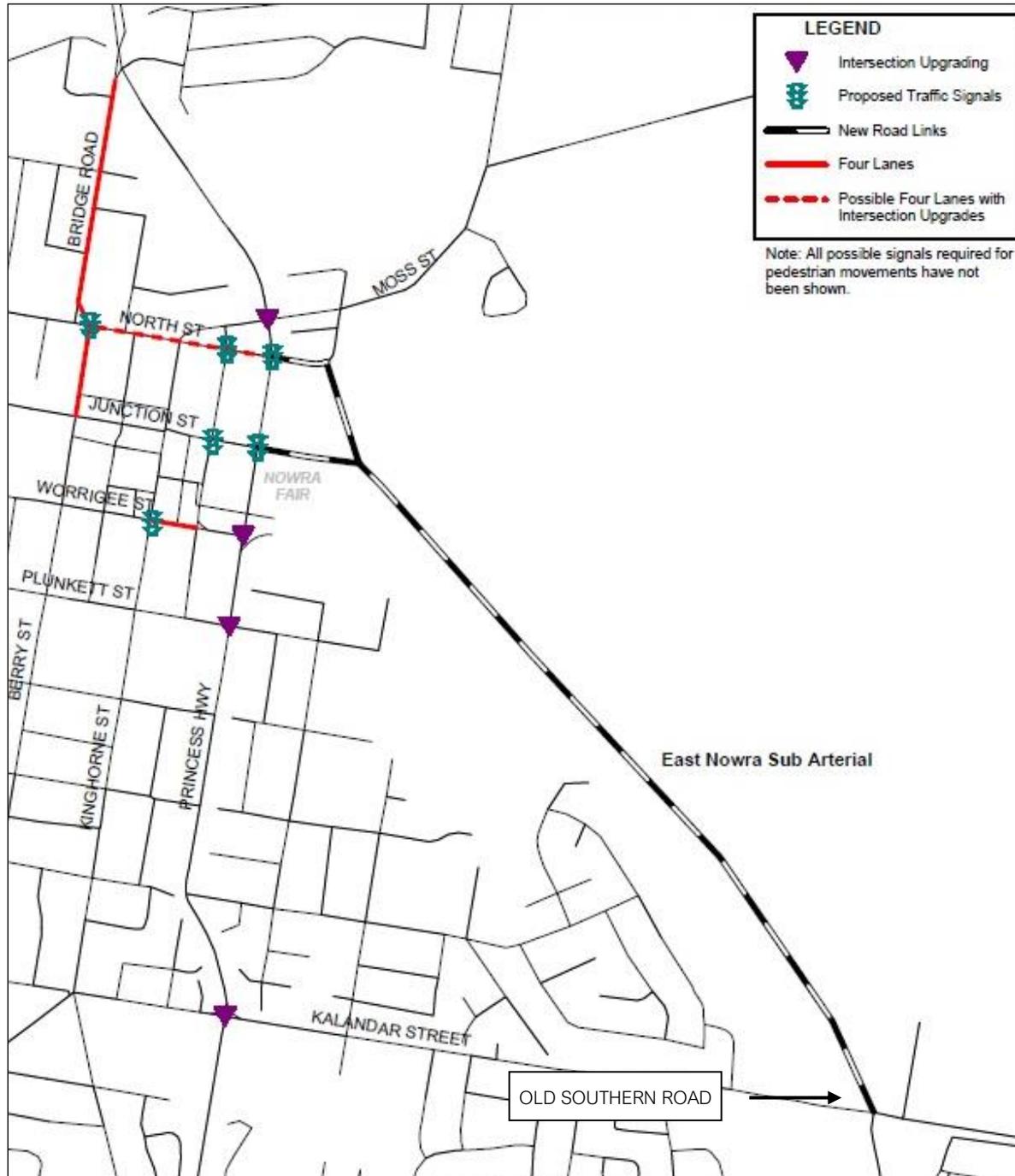
The *Nowra Bomaderry Structure Plan* was prepared and adopted by Shoalhaven City Council in October 2006 and was endorsed by NSW Department of Planning in 2008. The Structure Plan identified major infrastructure needs within the Nowra Bomaderry area. The East Nowra Sub-Arterial has been identified as one of the key infrastructure projects and Shoalhaven City Council is currently seeking funding opportunities for this project.

## EXISTING CONDITIONS

### East Nowra Sub-Arterial Road

The *East Nowra Sub Arterial Road (ENSA)* is proposed to connect Greenwell Point Road (in the vicinity of Old Southern Road) to the Princes Highway, at North Street and Junction Street. ENSA will provide a much-needed alternative connection to the highway from the East Nowra, Worrigea and coastal village areas. The link will relieve pressures along the Kalandar Street/ Princes Highway route to the Nowra CBD. One of the key identified aims for ENSA is to “Remove traffic from rural lanes such as Jindy Andy Lane and Millbank Road which have increased in traffic and have experienced high crash rates.” An indicative alignment of the ENSA is shown in Figure 2.6.

Figure 2.6: East Nowra Sub-Arterial (ENSA) Alignment



Source: Nowra CBD Transport Strategy, 2003 (Eppell Olsen and Partners)

### 2.3.3. Princes Highway Upgrade Program

The *Princes Highway Upgrade Program* is a series of planned upgrades along Princes Highway to improve safety and efficiency along the route. Current projects include the following:

- Albion Park Rail Bypass (scheduled for 2022 completion) - As of March 2020, access upgrades have been opened between Woollybutt and Durgadin Drive. The project serves to tie-in the existing Princes Highway at Dapto and Oak Flats and interchanges at the Illawara Highway and at Tongarra Road
- Princes Highway upgrade at Gerringong (completed)
- Foxground and Berry bypass (completed)
- Berry to Bomaderry upgrade (scheduled for 2022 completion) - As of February 2020, sections of the new alignment that form part of the overall Berry to Bombaderry project has started operation. These works having commenced in September 2018 and expected to be fully complete by 2022. The project does not allow for ramps near the sites access, but is expected to improve safety, increase capacity, improve traffic flow, deliver better and more reliable journeys and increase overtaking opportunities
- Nowra Bridge project (scheduled for 2024 completion) - As of February 2020, it has been announced that the nearby, and network-related Nowra Bridge has been commissioned for upgrades to better cater for heavy and over-weight vehicles, as well as the expansion from a two-way two-lane bridge to a two-way four-lane bridge
- Termeil Creek upgrade (completed)
- Burrill Lake Bridge (completed)
- Batemans Bay Bridge replacement project (scheduled for 2023 completion).

A 6.3km section of the Princes Highway has been upgraded since the GTA 2013 TIA between Kinghorne Street and Forest Road. Key features of the upgrade include:

- duplication of the Princes Highway from two to four traffic lanes
- realignment of the Princes Highway between Warra Warra Road and Forest Road, west of the road's previous alignment
- reconstruction of the Forest Road intersection to allow all turning movements
- relocation of the BTU Road intersection approximately 400 metres north of its former location
- new pedestrian and cycling facilities.

The Review of Environmental Factors (REF) for the project was completed in November 2009 and estimated a 2.5% linear growth rate in traffic volumes along this section of the Princes Highway, up to 2028. This growth rate was based on the recorded Annual Average Daily Traffic (AADT) counts taken on the Princes Highway (station number 07.707) over a five-year period, being 25,636 in 2003 to 27,888 in 2008. The REF projected traffic volumes are summarised in Table 2.1.

## EXISTING CONDITIONS

Table 2.1: Princes Highway Projected Traffic Volumes (Princes Highway Upgrade REF, 2009)

Year	Annual Average Daily Traffic (AADT)	Growth (%per annum)
2012	29,511	
2018	33,688	2.4%
2022	34,919	1.8%
2028	39,250	2.1%

The recorded Annual Average Daily Traffic (AADT) counts taken on the Princes Highway (station number 07051) for different years was obtained to understand the actual growth along Princes Highway and is presented in Table 2.2.

Table 2.2: Princes Highway AADT – South of Illaroo Road (RMS Traffic Volume Viewer)

Year	Annual Average Daily Traffic (AADT)	Growth (%per annum)
2011	48,626	
2015	51,676	1.6%
2017	53,580	1.7%

The per annum growth rate between 2011 and 2017 (1.7%) is similar to the growth rate projected between 2012 and 2022 (1.8%) along the Princes Highway, resulting in a good correlation between the projected growth rates in the REF and actual growth rates to-date.

Survey data (intersection turn counts) along key intersection at Princes Highway was collected by GTA for a different project in the Nowra Region. 2012 data was compared to the 2018 data at Princes Highway / Moss Street intersection. Growth rate between the 2012 and 2018 counts at Princes Highway was similar to that presented in Table 2.2.

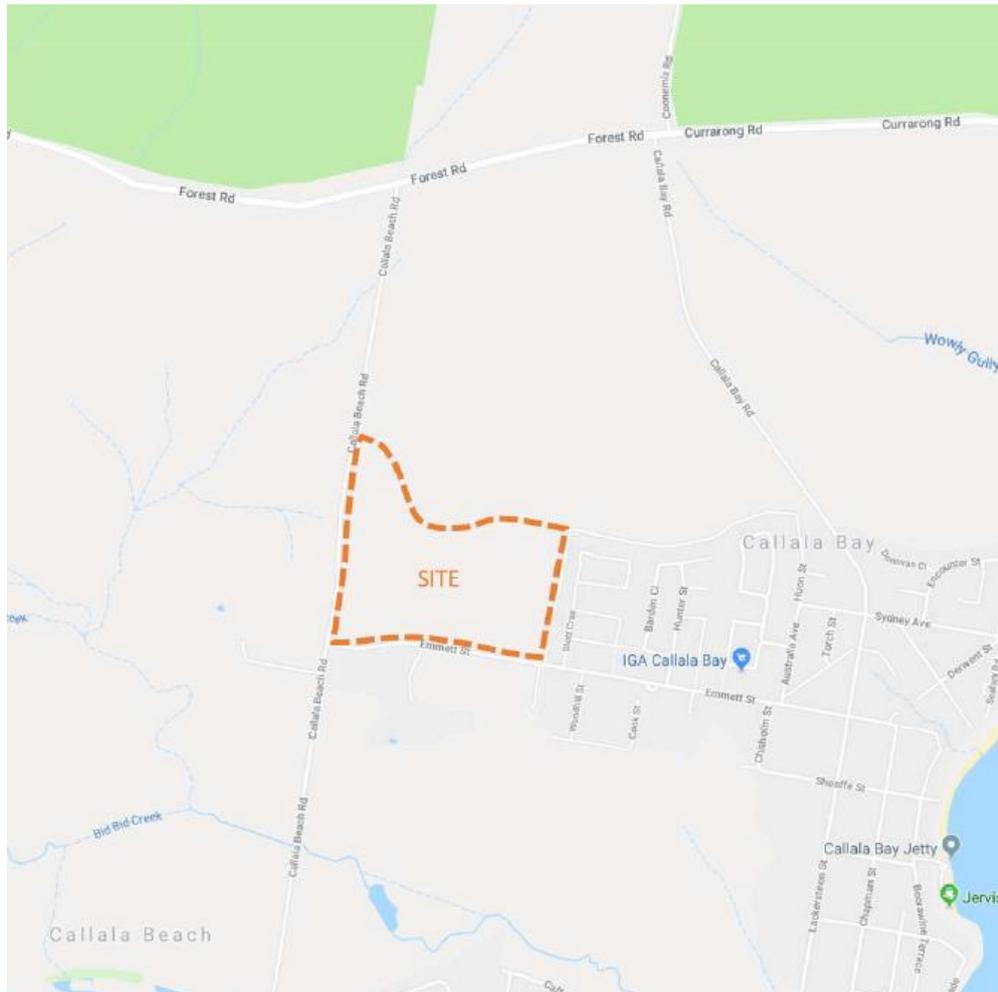
### 2.3.4. Callala Bay Residential Planning Proposal

A traffic impact assessment was prepared by Stantec in 2019 for a proposed Callala Bay residential development and associated planning proposal. The Callala Bay development site is approximately 8.5 kilometres south-west of the West Culburra Beach site and involves some 367 low-density dwellings. The proposal is expected to generate 261 trips in the AM peak hour and 287 trips in the PM peak hour. The report concluded that, with the additional development traffic, all intersections assessed continued to perform at good operating levels (Level of Service A) as the surrounding network has abundant capacity to accommodate the additional traffic.

The traffic analysis completed assessed local intersections, with the only overlap with the assessment in this report being the intersection of Forest Road and Callala Beach Road. Should this rezoning proceed, further cumulative assessment may be warranted for the Princes Highway/ Forest Road intersection. As subsequently identified in this report, additional traffic volumes at the Princes Highway / Forest Road intersection generated by the West Culburra Beach development is low. As such, the cumulative impacts of the Callala Bay residential planning proposal have not been considered further in this report.

## EXISTING CONDITIONS

Figure 2.7: Callala Bay residential planning proposal site location



Source: Traffic Impact Assessment, Proposed Residential Planning Proposal, Callala Bay NSW (Revision 3), Stantec, 2019

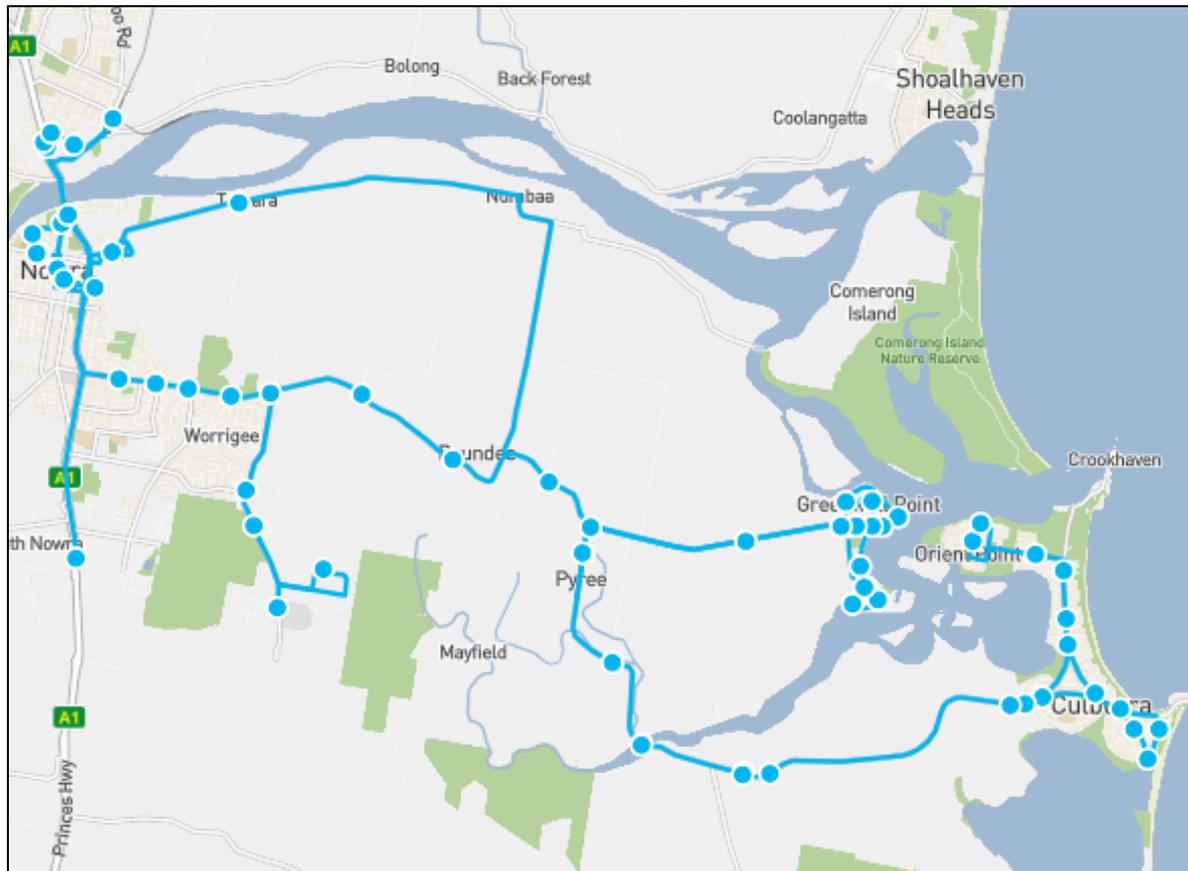
## 2.4. Existing Public Transport

The site is approximately 850 metres west of the Culburra Beach Police Station bus stop, serviced by Routes 110 and 111.

The two services combined provide up to 10 services per day in each direction and connects the local area of Culburra Beach with Greenwell Point, Nowra and Bomaderry, which also serves as a connection to the regional rail services at Bomaderry Station. The bus route is shown in Figure 2.8.

## EXISTING CONDITIONS

Figure 2.8: Bus Routes



Source: Transport for New South Wales, Mapbox and OpenStreetMap (accessed February 2020)

### 2.5. Existing Pedestrian Infrastructure

The nearest dedicated pedestrian infrastructure is located within the established residential areas and town centre of Culburra Beach, immediately east of the proposed development. The footpath network within the urban area of Culburra Beach is limited with many streets having wide verges instead of constructed footpaths.

### 2.6. Existing Cycle Infrastructure

The nearest dedicated cycle infrastructure to the site is a 2.5-metre-wide shared path adjacent to Prince Edward Avenue between The Lake Circuit and Penguins Head Road, connecting to the Culburra Beach town centre. This is shown in Figure 2.9.

## EXISTING CONDITIONS

Figure 2.9: Culburra Beach Bicycle Routes



Source: Shoalhaven Bike Map (2013) – Map 008, Shoalhaven City Council

## 2.7. Crash Analysis

GTA Consultants obtained vehicle crash data from Roads and Maritime for the following 11 key intersections between Culburra Beach and Nowra for the five-year period from 2014 to 2018 (crash statistics for year 2019 onwards are not yet available at the TfNSW website):

- Culburra Road/ Coonemia Road
- Culburra Road/ Mayfield Road
- Greenwell Point Road/ Pyree Lane
- Greenwell Point Road/ Jindy Andy Lane
- Greenwell Point Road/ Mayfield Road
- Greenwell Point Road/ Millbank Road/ Worrigea Road
- Princes Highway/ Kalandar Street
- Coonemia Road/ Currarong Road/ Forest Road
- Kalandar Street/ Kinghorne Street/ Albatross Road
- Princes Highway/ Forest Road
- Princes Highway/ Moss Street.

The crash history within 100 metres of the approaches to the above intersections were analysed to determine whether there any crash clusters or safety issues at these locations. The results of the crash analysis are presented in Table 2.3.

## EXISTING CONDITIONS

Table 2.3: Reported Crash Summary (January 2014 – December 2018)

Intersection No.	Intersection Name	No. of Crashes (within 100m of intersection)
1	Culburra Road/ Coonemia Road	5 (resulting in 8 people injured)
2	Culburra Road/ Mayfield Road	0
3	Greenwell Point Road/ Pyree Lane	4 (resulting in 3 people injured, 1 fatality)
4	Greenwell Point Road/ Jindy Andy Lane	2 (resulting in 1 person injured)
5	Greenwell Point Road/ Mayfield Road	4 (resulting in 1 person injured)
6	Greenwell Point Road/ Millbank Road/ Worrigee Road	3 (no injuries)
7	Princes Highway/ Kalandar Street	17 (resulting in 13 injured)
8	Coonemia Road/ Currarong Road/ Forest Road (includes Forest Road/ Callala Bay Road intersection)	1 (no injuries)
9	Kalandar Street/ Kinghorne Street	4 (resulting in 1 person injured)
10	Princes Highway/ Forest Road	3 (no injuries)
11	Princes Highway/ Moss Street	20 (resulting in 23 injured)

Table 2.3 presents that notable crash clusters occurred at Intersections 3 (Greenwell Point Road/ Pyree Lane), 7 (Princes Highway/ Kalandar Street) and 11 (Princes Highway/ Moss Street). Crash analysis has been carried out at these three intersections and these refer to the Road User Movement (RUM) code classification which is presented in Table 2.4.

# EXISTING CONDITIONS

Table 2.4: RUM Code Classification

PEDESTRIANS (on foot or in toy/pram)	VEHICLES FROM ADJACENT DIRECTION (intersections only)	VEHICLES FROM OPPOSING DIRECTION	VEHICLES FROM SAME DIRECTION	MANOEUVRING	OVERTAKING	ON PATH	OFF PATH, ON STRAIGHT	OFF PATH, ON CURVE OR TURNING	MISCELLANEOUS
NEAR SIDE 00	CROSS TRAFFIC 10	HEAD ON (not overtaking) 20	REAR END 30	U TURN 40	HEAD ON (including this vehicle) 50	PARKED 60	OFF CARRIAGEWAY TO LEFT 70	OFF CARRIAGEWAY LEFT ON RIGHT BEND 80	FELL IN / FROM VEHICLE 90
EMERGING 01	RIGHT FAR 11	RIGHT THROUGH 21	LEFT REAR 31	U TURN INTO FIXED OBJECT / PARKED VEHICLE 41	OUT OF CONTROL 51	DOUBLE PARKED 61	LEFT OFF CARRIAGEWAY INTO OBJECT / PARKED VEHICLE 71	OFF CARRIAGEWAY LEFT ON RIGHT BEND INTO OBJECT / PARKED VEHICLE 81	LOAD OR MISSILE STRUCK VEHICLE 91
FAR SIDE 02	LEFT FAR 12	LEFT THROUGH 22	RIGHT REAR 32	LEAVING PARKING 42	PULLING OUT 52	ACCIDENT OR BROKEN DOWN 62	OFF CARRIAGEWAY TO RIGHT 72	OFF CARRIAGEWAY RIGHT ON RIGHT BEND 82	STUCK TRAIN / AEROPANE 92
PLAYING, WORKING, LIVING, STANDING ON CARRIAGEWAY 03	RIGHT REAR 13	RIGHT / LEFT 23	LANE SIDE SWIPE 33	ENTERING PARKING 43	OVERTAKE TURNING 53	VEHICLE DOOR 63	RIGHT OFF CARRIAGEWAY INTO OBJECT / PARKED VEHICLE 73	OFF CARRIAGEWAY RIGHT ON RIGHT BEND INTO OBJECT / PARKED VEHICLE 83	PARKED VEHICLE RUN AWAY INTO OBJECT / PARKED VEHICLE 93
WALKING WITH TRAFFIC 04	TWO RIGHT TURNING 14	RIGHT / RIGHT 24	LANE CHANGE RIGHT (not overtaking) 34	PARKED VEHICLES ONLY 44	CUTTING IN 54	PERMANENT OBSTRUCTION ON CARRIAGEWAY 64	OUT OF CONTROL, ON CARRIAGEWAY 74	OFF CARRIAGEWAY RIGHT ON LEFT BEND 84	PARKED VEHICLE RUN AWAY INTO VEHICLE 94
FACING TRAFFIC 05	RIGHT / LEFT FAR 15	LEFT / LEFT 25	LANE CHANGE LEFT 35	REVERSING 45	PULLING OUT REAR END 55	TEMPORARY ROADWORKS 65	OFF END OF ROAD / T INTERSECTION 75	OFF CARRIAGEWAY RIGHT ON LEFT BEND INTO OBJECT / PARKED VEHICLE 85	STUCK WHILE BOARDING OR ALIGHTING VEHICLE 95
ON FOOTPATH / MEDIAN 06	LEFT REAR 16		RIGHT TURN SIDE SWIPE 36	REVERSING INTO FIXED OBJECT / PARKED VEHICLE 46		STUCK OBJECT ON CARRIAGEWAY 66	OFF CARRIAGEWAY LEFT ON LEFT BEND 86		
DRIVEWAY 07	LEFT / RIGHT FAR 17		LEFT TURN SIDE SWIPE 37	EMERGING FROM DRIVEWAY 47		ANIMAL (not vehicle) 67	OFF CARRIAGEWAY LEFT ON LEFT BEND INTO OBJECT / PARKED VEHICLE 87		
	TO LEFT TURNING 18			FROM FOOTPATH 48			OUT OF CONTROL, ON CARRIAGEWAY 88		
OTHER PEDESTRIAN 09	OTHER ADJACENT 19	OTHER OPPOSING 29	OTHER SAME DIRECTION 39	OTHER MANOEUVRING 49	OTHER OVERTAKING 59	OTHER ON PATH 69	OTHER STRAIGHT 79	OTHER CURVE 89	UNKNOWN 99

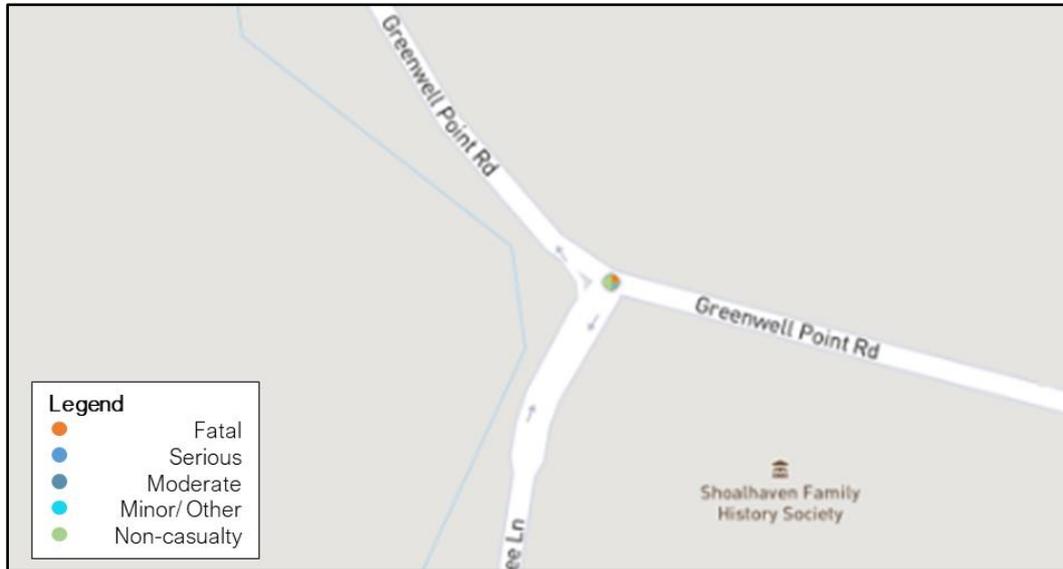
Source: Transport for NSW (accessed February 2020)

## EXISTING CONDITIONS

### 2.7.1. Greenwell Point Road/ Pyree Lane

The location and the severity of the incidents at this intersection is presented in Figure 2.10.

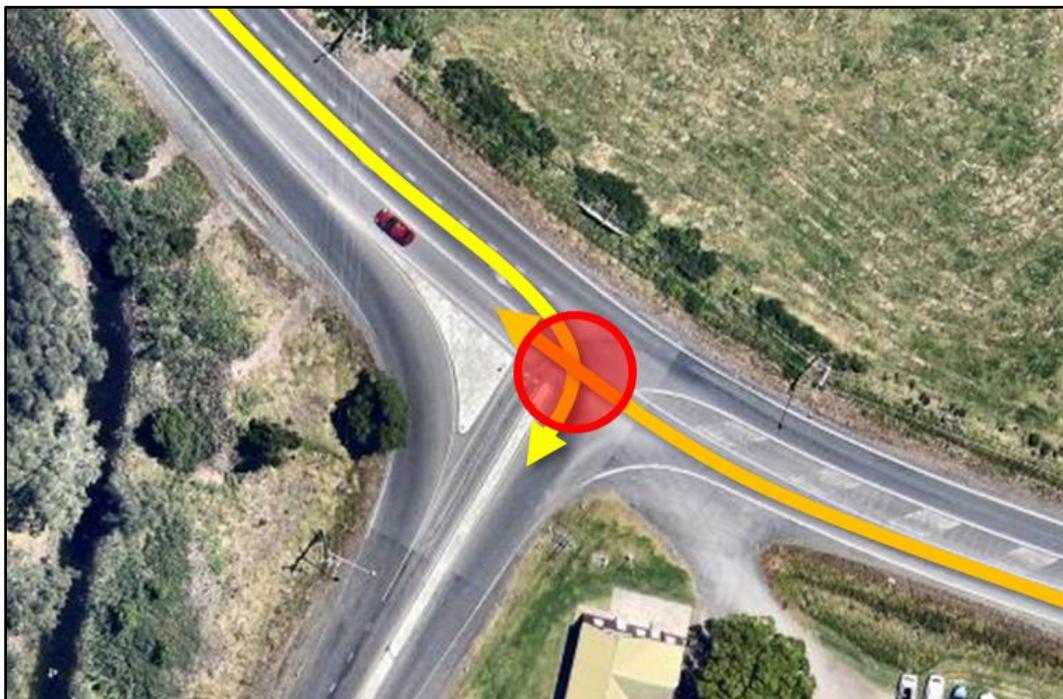
Figure 2.10: Crash Map – Greenwell Point Road/ Pyree Lane



Source: Centre for Road Safety, Transport for New South Wales (accessed March 2020)

A fatal crash of type RUM code 21 was recorded at this intersection which occurs between a turning vehicle and straight travelling vehicle as presented in Figure 2.11.

Figure 2.11: Collision at Greenwell Point Road/ Pyree Lane



Basemap: Nearmap (captured 2019)

## EXISTING CONDITIONS

The speed zone along Greenwell Point Road is 80 km/h. Local area traffic management treatment may be effective in reducing speeds, resulting in fewer, and less severe crashes. The RUM – 21 crash was an isolated incident and the intersection can be made safer via traffic management treatments at the intersection.

### 2.7.2. Princes Highway/ Kalandar Street

The location and the severity of the incidents at this intersection is presented Figure 2.12.

Figure 2.12: Crash Map – Princes Highway/ Kalandar Street



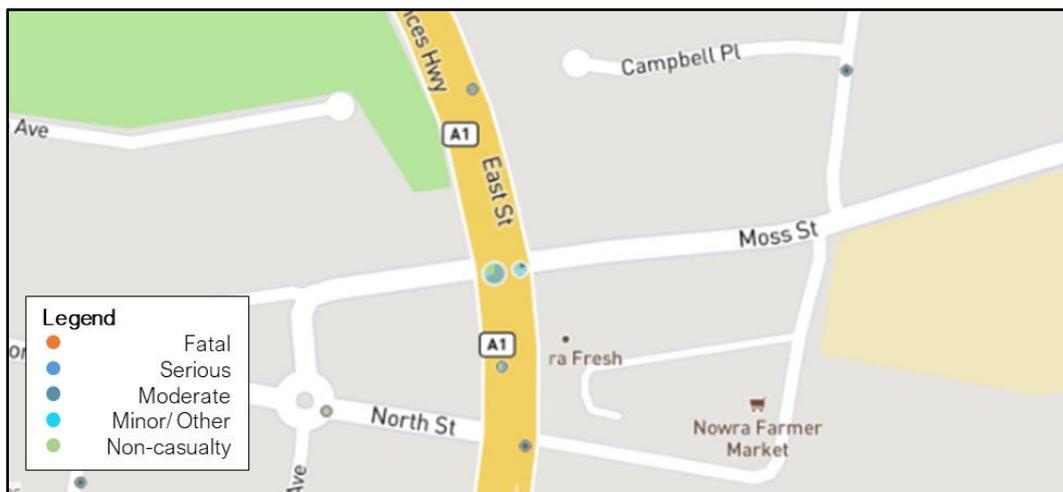
Source: Centre for Road Safety, Transport for New South Wales (accessed March 2020)

Majority of the crashes at this intersection are classified within the RUM codes 30 to 39, indicating that incidents are reported for vehicles travelling in the same direction. This suggests that driver behaviours may be unsafe at this intersection, which may be related to signal control planning encouraging unsafe manoeuvres or rapid breaking.

### 2.7.3. Princes Highway/ Moss Street

The location and the severity of the incidents at this intersection is presented in Figure 2.13.

Figure 2.13: Crash Map – Princes Highway/ Moss Street



Source: Centre for Road Safety, Transport for New South Wales (accessed March 2020)

## EXISTING CONDITIONS

The majority of crashes at this intersection are classified as either RUM code 21 or RUM code 30. It is noted that filter right turns are in operation at this intersection. Considering the RUM 21 classification, providing signalling for exclusive right turns may be beneficial, as filter right turn behaviour may be the cause for right-through collisions. It is also noted that Princes Highway is proposed to be upgraded just north of Moss street as part of the Nowra Bridge upgrade<sup>2</sup> Project.

### 2.8. Existing Intersection Operation

The DGRs stipulate that network modelling be undertaken using TRACKS modelling software to assess the current (and future) performance of the intersections in the study area.

TRACKS is a suite of software programs produced by Gabites Porter Consultants of Christchurch, New Zealand. The traffic authority has a TRACKS model of the area that is required for use as the basis of our analysis. However, GTA was unable to obtain a model prior to the 2013 TIA and this has not been revisited. On 14 May 2012, Scott Wells, Traffic and Transport Unit Manager, Shoalhaven City Council wrote:

*"There has been an ITUC meeting to discuss third party use of TRACKS models, I am yet to see the minutes, however there was general acceptance, subject to conditions. It was agreed there would be no fee for use however a condition would be to ensure the level of model validation in the area required for testing was improved prior to use. Engagement for that purpose would be by Council at your clients cost, the updated model and all data would be Council's. Once the model is updated and agreed sufficient for use for your purposes, and all costs to achieve the improved level of validation have been paid for, you could then use the model subject to conditions."*

Negotiations between GTA Consultants and Shoalhaven City Council took place for the release of the TRACKS model to undertake to the required network modelling. In subsequent correspondence Scott Wells wrote on 24 January 2013:

*"...we (Council Traffic Unit) never asked for TRACKS modelling, it was an RMS request for DPI to include in DGRs and this was included in the DGRs without consultation with Council. The only available TRACKS model that covers this area is an AADT model and there has never been specific validation in the area subject of assessment. This means without checking against field data there is no high level confidence in regards to the strategic distributions to/from the site and Princes Highway.... For the purposes of your study use of SIDRA at Princes Highway/Moss street and Princes Highway/Kalandar Street should suffice in my view".*

Consequently, assessment of the traffic impact of the proposed development has been undertaken using SIDRA INTERSECTION, a computer based modelling package which calculates intersection performance on an individual intersection basis. Conversely TRACKS software assesses traffic impacts on a network wide scale.

The commonly used measure of intersection performance, as defined by *RMS Traffic Modelling Guidelines (2013)*, is vehicle delay. SIDRA INTERSECTION determines the average delay that vehicles encounter and provides a measure of the level of service. Table 2.5 shows the criteria that SIDRA INTERSECTION adopts in assessing the level of service in line with the *RMS Traffic Modelling Guidelines (2013)*.

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<sup>2</sup> <https://www.rms.nsw.gov.au/projects/01documents/nowra-bridges-shoalhaven-river/nowra-bridge-project-app-g-landscape-character-and-visual-impact-assessment.pdf>

## EXISTING CONDITIONS

Table 2.5: SIDRA INTERSECTION Level-of-Service Criteria

Level of Service (LOS)	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Near capacity	Near capacity, accident study required
E	57 to 70	At capacity, at signals incidents will cause excessive delays	At capacity, requires other control mode
F	Greater than 70	Extra capacity required	Extreme delay, major treatment required

Source: Table 14.3 of RMS Traffic Modelling Guidelines (2013)

The road network under consideration as part of this assessment includes the following 11 intersections:

- Culburra Road/ Coonemia Road (priority controlled)
- Culburra Road/ Mayfield Road (priority controlled)
- Greenwell Point Road/ Pyree Lane (priority controlled)
- Greenwell Point Road/ Jindy Andy Lane (priority controlled)
- Greenwell Point Road/ Mayfield Road (priority controlled)
- Greenwell Point Road/ Millbank Road/ Worrigea Road (stop controlled)
- Princes Highway/ Kalandar Street (signalised)
- Coonemia Road/ Currarong Road/ Forest Road (priority controlled)
- Kalandar Street/ Kinghorne Street (roundabout)
- Princes Highway/ Forest Road (priority controlled)
- Princes Highway/ Moss Street (signalised).

### 2.8.1. Base Scenario - 120<sup>th</sup> Highest Annual Hour

As stated in Section 2.2, traffic volume data was collected in May 2012. Queuing at intersections was also recorded so that the base year model could be validated.

As the NSW South Coast is a popular tourist destination subject to influxes of tourists over long weekends and during school holidays, particularly during the summer school holidays. To reflect this seasonal increase in traffic volumes in the vicinity of the development site, the 120<sup>th</sup> highest annual hour (HH) has been used as the Design Hourly Volume (DHV) for the base traffic scenario as instructed by Scott Wells of Shoalhaven City Council in correspondence dated 24 January 2013:

*"We would also consider the assessment incomplete without undertaking adjustment of the surveyed flows to equivalent 120<sup>th</sup> HH demand flow levels consistent with AUSTRROADS guidelines".*

Use of the 120<sup>th</sup> HH as the DHV reflects a peak hour within the highest 1% of all hourly volumes recorded over a year and as such represents a period of high seasonal traffic volumes.

The traffic counts undertaken as part of this assessment were completed during a period of low tourist activity. Subsequently, the recorded peak hour traffic flows require application of an appropriate growth factor to represent the 120<sup>th</sup> HH.

## EXISTING CONDITIONS

### 2.8.2. Calculation of Growth Factors

The calculation of an appropriate growth factor to be applied to the May 2012 recorded traffic flows was undertaken by the Traffic and Transport Unit of Shoalhaven City Council. The growth factors were calculated by analysing 2008 annual hourly traffic volume data from Greenwell Point Road and Forest Road as well as data from the RMS permanent traffic count stations at Falls Creek, north of Jervis Bay Road (approximately 4km south of Forest Road, count station 07.053). The growth factors to be applied to the recorded May 2012 traffic flows are summarised below with further details of the calculation of growth factors contained in Appendix B:

**Table 2.6: Growth Factors to be Applied to May 2012 Recorded Flows to Calculate 120<sup>th</sup> HH Flows**

Road	Friday AM Peak Hour (8-9am)	Friday PM Peak Hour (4-5pm)	Saturday Peak Hour (12-1pm)
Local Roads & Traffic to/ from Princes Highway	1.12	1.41	1.25
Princes Highway through traffic (north-south movements)*	1.13	1.07	1.18

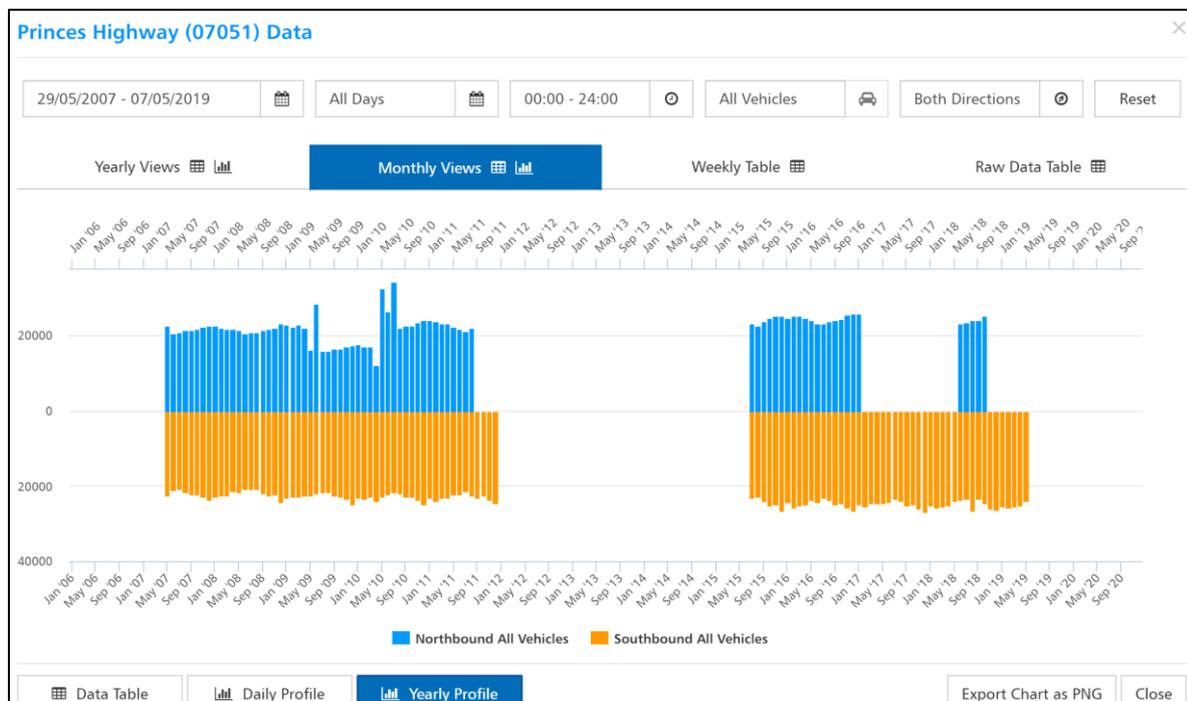
[1] \* Relates to the Princes Highway intersections with Moss Street, Kalandar Street and Forest Road.

Source: Shoalhaven City Council

Application of the growth factors shown in Table 2.6 to the surveyed May 2012 peak hour volumes and the equivalent 120<sup>th</sup> HH traffic flows were used for the base scenario assessments of the Friday AM, Friday PM and Saturday Peak hours.

Analysis of the annual hourly traffic across different years at RMS permanent count station at Princes Highway (south of Illaroo road) is presented in Figure 2.14.

**Figure 2.14: Yearly Profile – Princes Highway permanent count station**



Source: RMS NSW Traffic Volume Viewer (2020)

The graph indicates that the traffic volumes (especially during the peak season) are generally similar across different years (between 2011 and 2018) and also follow a similar trend with higher traffic during the holiday

## EXISTING CONDITIONS

season. It has therefore been assumed that the above assessment of the DHV is still relevant and has not been re-investigated in detail for the intervening period between 2012 and 2020.

### 2.8.3. Previous Modelling Results

The previous GTA 2013 TIA was carried out with Version 5 of SIDRA INTERSECTION software. Since then, the software has been upgraded with added functionality and algorithms. Upon updating the models to the latest Version 8 of SIDRA INTERSECTION, algorithmic changes to the software has altered some results reported in the GTA 2013 TIA. The Version 5 intersection modelling results for existing traffic conditions have been reproduced in Table 2.7, along with the updated Version 8 results.

**Table 2.7: Existing Network Performance -SIDRA INTERSECTION Version 5 and 8 results comparison**

Intersection	Peak	SIDRA INTERSECTION Version 5 Results				SIDRA INTERSECTION Version 8 Results			
		Degree of Saturation (DOS)	Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)	Degree of Saturation (DOS)	Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)
Culburra Road/ Coonemia Road	Friday AM	0.22	7	5	NA	0.13	11	4	A
	Friday PM	0.15	6	4	NA	0.13	11	4	A
	Saturday	0.14	7	3	NA	0.12	11	3	A
Culburra Road/ Mayfield Road	Friday AM	0.19	1	4	NA	0.06	12	0	A
	Friday PM	0.21	1	11	NA	0.01	34	0	C
	Saturday	0.14	1	7	NA	0.01	12	0	A
Greenwell Point Road/ Pyree Lane	Friday AM	0.22	9	7	NA	0.23	12	7	A
	Friday PM	0.56	10	37	NA	0.57	12	38	A
	Saturday	0.21	8	6	NA	0.22	12	6	A
Greenwell Point Road/ Jindy Andy Lane	Friday AM	0.23	4	7	NA	0.06	23	2	B
	Friday PM	0.22	4	6	NA	0.01	16	0	B
	Saturday	0.18	4	5	NA	0.03	16	1	B
Greenwell Point Road/ Mayfield Road	Friday AM	0.20	2	9	NA	0.02	13	0	A
	Friday PM	0.24	2	21	NA	0.03	19	1	B
	Saturday	0.17	2	15	NA	0.01	13	0	A
Greenwell Point Road/ Millbank Road/	Friday AM	0.39	8	15	NA	0.14	25	4	B
	Friday PM	0.24	6	7	NA	0.26	27	7	B

## EXISTING CONDITIONS

Intersection	Peak	SIDRA INTERSECTION Version 5 Results				SIDRA INTERSECTION Version 8 Results			
		Degree of Saturation (DOS)	Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)	Degree of Saturation (DOS)	Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)
Worrigeer Road	Saturday	0.15	6	4	NA	0.12	20	3	B
Princes Highway/ Kalandar Street	Friday AM	1.05	86	403	F	1.04	95	399	F
	Friday PM	1.10	120	>500	F	1.24	153	107	F
	Saturday	0.97	63	389	E	1.11	100	>500	F
Coonemia Road/ Currarong Road/ Forest Road	Friday AM	0.12	12	3	NA	0.10	9	3	A
	Friday PM	0.25	12	8	NA	0.26	9	9	A
	Saturday	0.20	12	6	NA	0.21	9	6	A
Kalandar Street/ Kinghamore Street	Friday AM	0.73	15	69	B	0.75	25	74	B
	Friday PM	0.77	16	78	B	0.77	20	78	B
	Saturday	0.37	10	18	A	0.38	12	18	A
Princes Highway/ Forest Road	Friday AM	0.74	2	5	NA	0.23	15	3	A
	Friday PM	0.77	5	17	NA	0.79	103	9	F
	Saturday	0.60	3	13	NA	0.70	62	9	E
Princes Highway/ Moss Street	Friday AM	1.03	89	388	F	1.01	84	350	F
	Friday PM	1.24	200	>500	F	1.16	132	472	F
	Saturday	0.89	50	200	D	0.92	57	243	E

In general, the 95<sup>th</sup> percentile queues are comparable between the two versions of SIDRA used in the GTA 2013 TIA and the updated assessment.

The Princes Highway and Forest Road intersection operates as a seagull intersection. The templates for a seagull-type intersection have changed between versions 5 and 8 of SIDRA INTERSECTION. The Princes Highway and Forest Road intersection has been modelled as a network to simulate the seagull operation. The following changes were made to match the intersection performance to observed queues and driver behaviour:

- Gap acceptance parameters were altered for PM peak period at this intersection to match the observed queues.
- A critical gap of 6 seconds instead of default 7 seconds was adopted for the right turn from Forest Road into Princes Highway.
- A follow-up headway of 3.5 seconds, instead of default 4 seconds was adopted for the right turn from Forest Road into Prince Highway.

## EXISTING CONDITIONS

On the basis of the above, Version 8 of SIDRA INTERSECTION has been adopted for the discussion of results and all subsequent analysis in this report.

It is noted that previously overall average results were reported for priority intersections. The *RMS Traffic Modelling Guidelines (2013)* mention that for priority intersections results should be reported for worst movement, and this has been updated moving forward.

### 2.8.4. Existing Intersection Operation

Table 2.7 summarises the intersection operation at all 11 intersections within the network. At priority intersections, the LOS of the worst turning movement has been reported while at signalised intersections an overall average is reported for the intersection.

On the basis of the above assessment, under equivalent 120<sup>th</sup> HH traffic volumes:

- Most priority-controlled intersections operate well during the three respective peak periods with minimal delays and queues on all approaches except for Princes Highway and Forest Road intersection
- The existing seagull intersection at Princes Highway and Forest Road experiences high (>100 seconds) delays for the Forest Road (east) approach. SIDRA INTERSECTION is limited in simulating dynamic arrival patterns that can be experienced on Regional Roads of this nature. Nonetheless, the queues experienced at this intersection is less than 20 metres long.
- The existing Princes Highway intersections at Kalandar Street and Moss Street experience long delays and queues during peak periods, particularly during the Friday AM and Friday PM peak hours. The other intersections in the study area currently operate satisfactorily.

## 2.9. Performance of Rural Road Network

GTA Consultants undertook an assessment of the existing local road network surrounding the development site to assess road design aspects (cross-section parameters) for compliance with Austroads Guidelines and Roads and Maritime Guidelines in relation to:

- lane widths
- rural turning lanes
- intersection configurations
- warrants for overtaking lanes.

As advised in correspondence from Scott Wells dated 19 February 2013, this assessment was to be limited to the local road network surrounding the site as a similar assessment of the State Road network in the vicinity of the site (i.e. the Princes Highway) was not required.

This issue is considered in further detail in Section 8 of this report.

## 3. DEVELOPMENT PROPOSAL

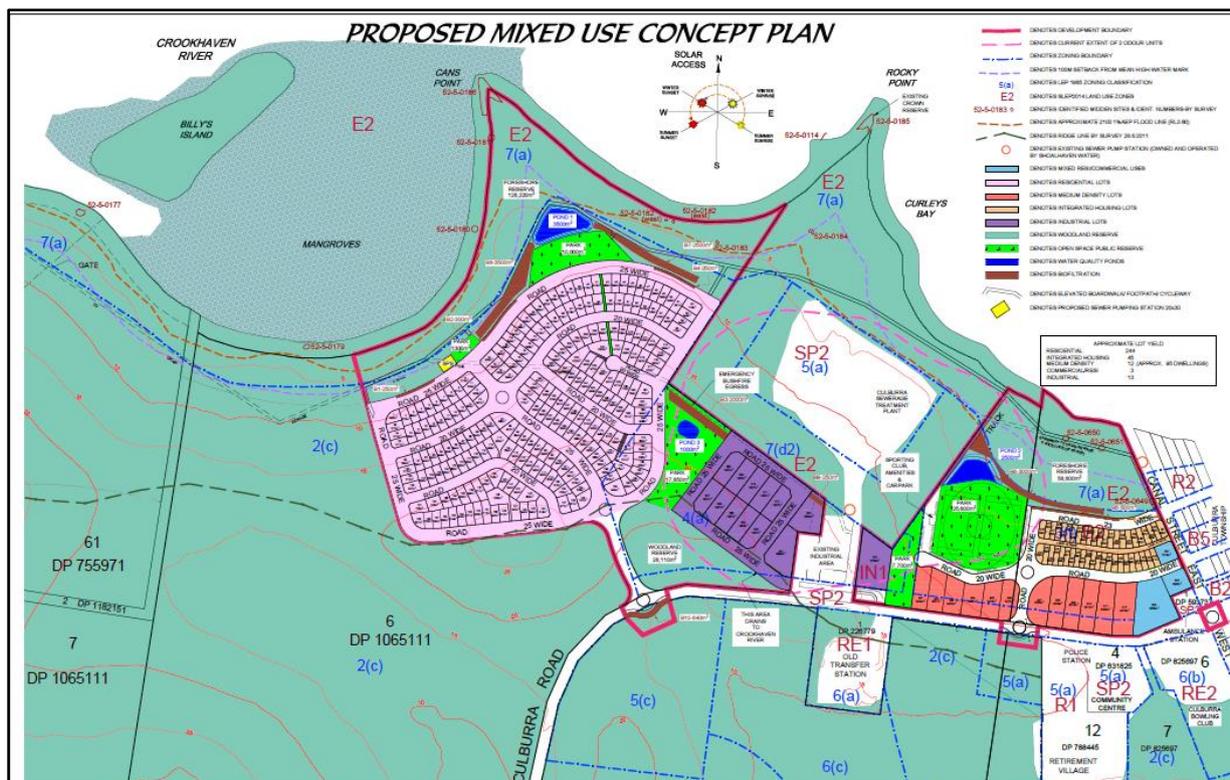
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## 3.1. Land Use

The proposed mixed-use subdivision development comprises three precincts as shown in Figure 3.1, referred to as:

- Residential Precinct: Residential area which has an indicative capacity of approximately 293 dwellings on 244 lots ranging from 500m<sup>2</sup> to 1,200m<sup>2</sup>.
- Industrial Precinct: Industrial area with 13 industrial lots located adjacent to the existing industrial area.
- Town Centre Precinct: Town centre area with a variety of development products including integrated housing and medium density low-rise apartments, as well as other commercial and recreation-orientated uses.

Figure 3.1: West Culburra Beach Concept Plan – Proposed Staging



Source: Drawing No. 26505 – 213, prepared by Allen Price & Scarratts Pty Ltd, dated 28/09/2020

A summary of the lot yield is presented in Table 3.1.

**Table 3.1: Approximate Lot Yield**

Classification	Yield
Residential Precinct: Low Density Housing	293 dwellings <sup>[1]</sup>
Industrial Precinct: Industrial Lots	13 lots
Town Centre Precinct: Integrated Housing	45 integrated dwellings
Town Centre Precinct: Medium Density	95 low-rise apartments
Town Centre Precinct: Retail/ Residential (Shop top housing)	3 shop-top mixed residential/ non-residential lots
Town Centre Precinct: Sports Ground	25,600m <sup>2</sup>

[1] Estimated from 244 residential lots, see Section 1.1

Approximately 36,850 square metres of parkland/ open space is also proposed. These areas are intended to provide amenity and separation for residents of the development and are not expected to generate any traffic on the surrounding road network.

It is anticipated that each development precinct will have an independent access to Culburra Road. The residential precinct proposes a roundabout intersection near the bend of Culburra Road, approximately 1100 metres west of the Culburra/ West Crescent intersection. The industrial precinct proposes an extension to the existing industrial area access, approximately 800 metres west of the Culburra Road/ West Crescent intersection. The town centre precinct proposes a roundabout intersection approximately 375 metres west of the Culburra Road/ West Crescent intersection.

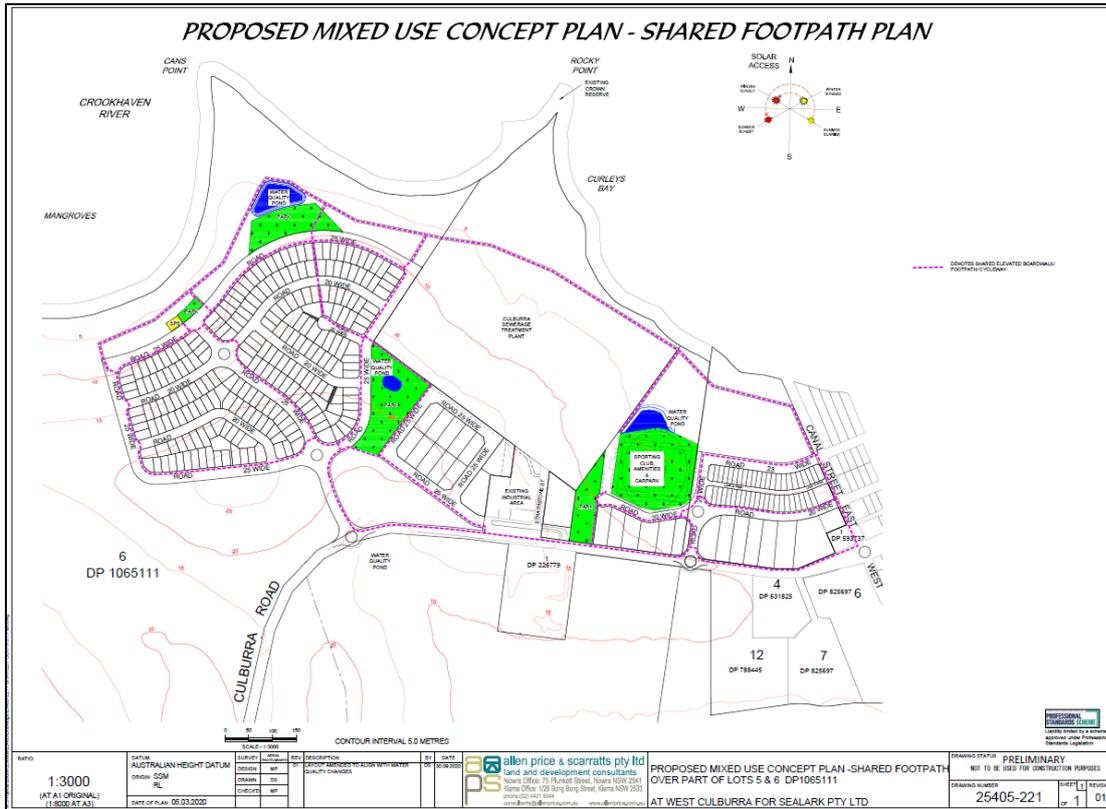
## 3.2. Pedestrian and Bicycle Facilities

An elevated shared path following the foreshore alignment, with focus on retaining access to the foreshore to the north is proposed as part of the updated proposal. In addition, shared paths are assigned for all roads with widths above 20 metres. The proposed shared path plan is shown in Figure 3.2.

As a minimum, a shared path would also be provided on the northern side of Culburra Road, to connect the subdivision with the town centre.

# DEVELOPMENT PROPOSAL

Figure 3.2: Pedestrian and Bicycle Path



Source: Drawing No. 25405 – 211, prepared by Allen Price & Scarratts Pty Ltd, dated 05/03/2020

Street patterns are in alignment with NSW Planning Guidelines for Walking and Cycling, as further discussed in Section 5.4.

## 3.3. Parking

The car parking requirements for different development types are contained in Shoalhaven City Council Car Parking Code (SDCP 2014: Chapter G21). It is anticipated that car parking for the development will be provided in accordance with the requirements of SDCP 2014: Chapter G21. The corresponding rates are provided in Table 3.2. For the purposes of analysis, it has been assumed that:

- all integrated/ medium density housing is between 55 metres and 86 metres in land size
- for industrial lots, 70% of the lot area (developable area) has been assumed to be the GFA.

All development products will have sufficient ability to provide the required car parking, noting on-street parking would be available for any non-residential overflow parking (including the sporting facilities) and visitor parking requirements.

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Table 3.2: SDCP 2014: Parking Requirements

Land Use	DCP Rate	Units OR m <sup>2</sup> GFA	DCP requirement
Residential	2 per dwelling	293 dwellings	586 spaces
Integrated Housing (between 55m <sup>2</sup> and 86m <sup>2</sup> land size)	1.5 per unit	45 dwellings	68 spaces
Medium Density	1.5 per dwelling	95 dwellings	143 spaces
Shop top housing	1.5 per dwelling	3 lots (approx. 24 dwellings) <sup>[2]</sup>	36 spaces
Commercial/Retail (shop top housing)	1 per 24m <sup>2</sup> GLFA	5,846m <sup>2</sup> <sup>[3]</sup>	244 spaces
Industrial (General)	1 per 100m <sup>2</sup> GFA	23,030m <sup>2</sup> <sup>[4]</sup>	230 spaces
Sports Oval	30 spaces per playing field (local playing field)	1 full-size oval	30 spaces

[2] assuming medium density for shop top housing, approx. 8 dwellings per lot

[3] GLFA = 75% of GFA, and GFA = 80% of developable lot area

[4] 70 % of the total developable area (32,900 m<sup>2</sup>)

## 4. VEHICLE ACCESS

04

### 4.1. Introduction

It is proposed that access to the site is provided via two new roundabouts from Culburra Road to serve the general residential precinct and the town centre precinct. An upgrade of the existing priority-controlled Canal Street East/ Culburra Road/ West Crescent intersection to a roundabout is also proposed at the eastern end of the site.

Access to the industrial precinct is proposed via an extension of Regmoore Close, which is currently accessed via the Strathstone Street/ Culburra Road priority-controlled intersection that provides access to the existing industrial area. It is proposed to close the existing Strathstone Street connection to Culburra Road, with Regmoore Close extended east by approximately 60 metres to form a new priority-controlled intersection with Culburra Road. An auxiliary left turn treatment is proposed for movements into the site from Culburra Road.

Concept designs for the intersections providing access to all three precincts have been prepared by Allen Price & Scarratts Pty Ltd and are reviewed in the following sections.

### 4.2. Intersection Assessment and Concept Design

#### 4.2.1. Roundabout Intersections

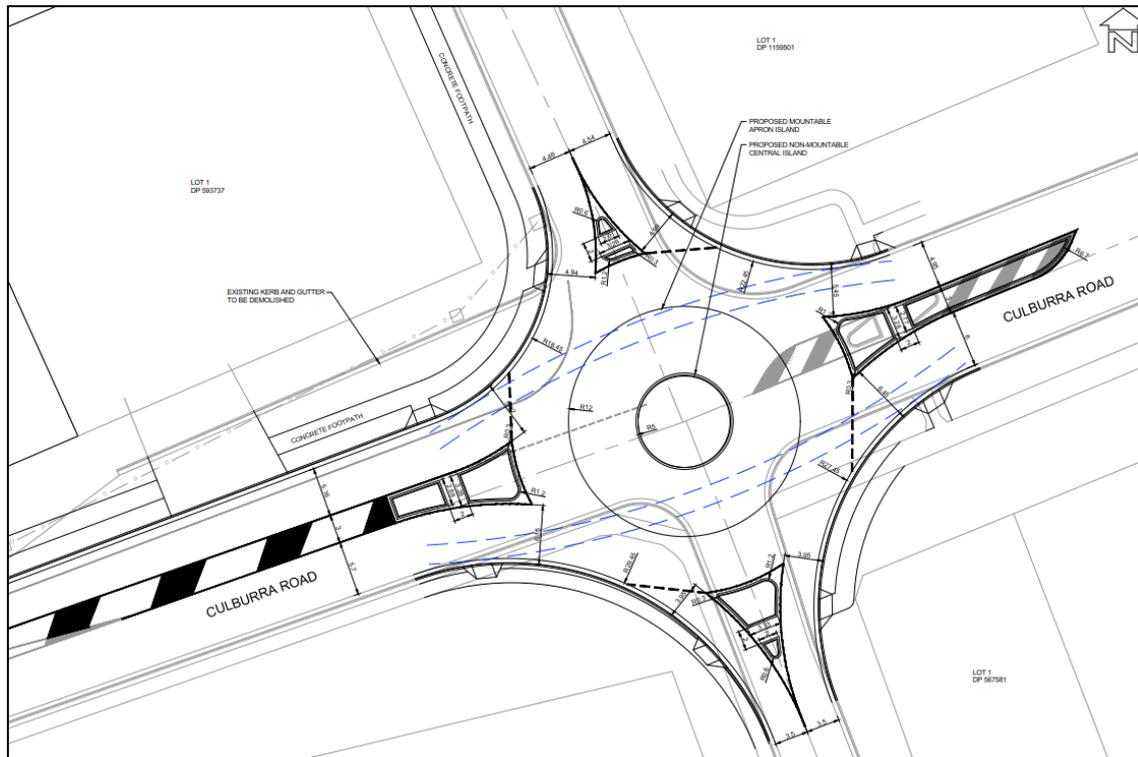
As a result of the modified subdivision proposal, three roundabouts are now proposed. The proposal consists of:

1. A roundabout at the Canal Street East/ Culburra Road/ West Crescent intersection, which comprises an upgrade of the existing priority-controlled intersection currently provided at this location
2. A new roundabout (referred to as the 'western roundabout' for the balance of our assessment) located approximately 1 kilometre west of the Canal Street East/ Culburra Road/ West Crescent intersection, and 320 metres west of the existing Strathstone Street / Culburra Road intersection, which will provide access to the residential precinct; and
3. A new roundabout (referred to as the 'eastern roundabout' for the balance of our assessment) located approximately 280 metres west of the Canal Street East/ Culburra Road / West Crescent intersection, which will provide access to the town centre precinct.

GTA has completed an assessment of the proposed intersections, with consideration given to the topography, sight distances and road geometry. Updated concept designs have been prepared by Allen Price & Scarratts, which are shown individually in Figure 4.1 to Figure 4.3. and as a full drawing set in Appendix E.

## VEHICLE ACCESS

Figure 4.1: Canal Street East/ Culburra Road/ Canal Street/ West Crescent Intersection upgrade



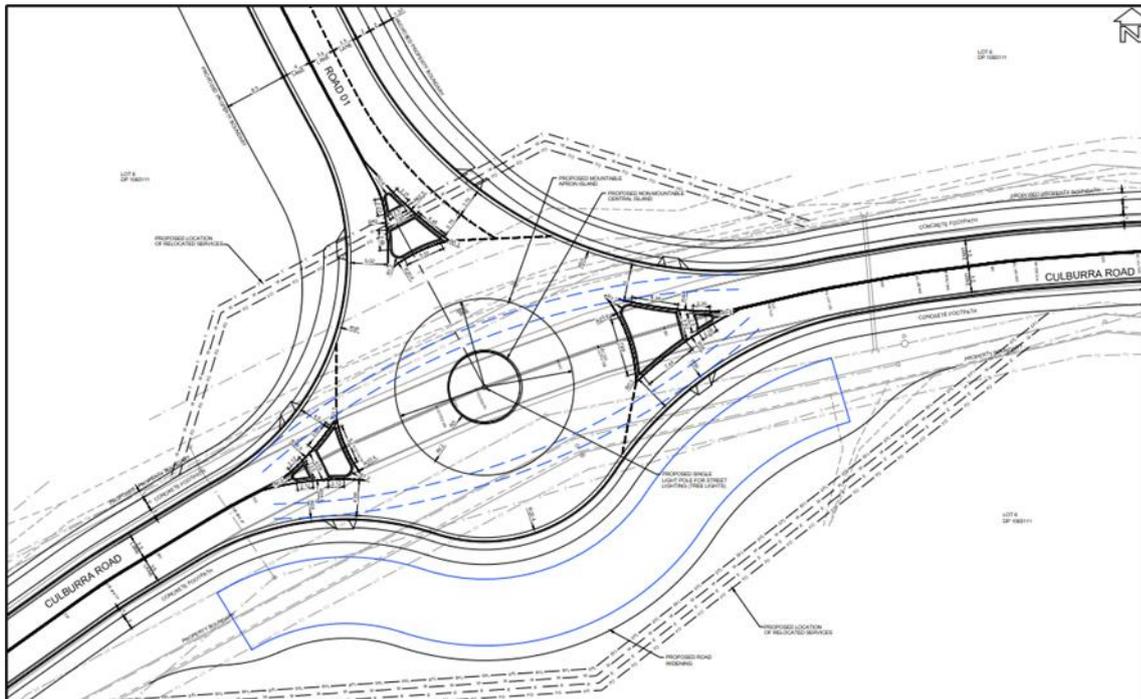
Source: Drawing No. 25405 – 115, Rev P1 prepared by Allen Price & Scarratts Pty Ltd, dated 03/2020

The proposed intersection upgrade replaces the existing at-grade priority-controlled intersection and will provide alternative access to the town centre. The roundabout consists of:

- a 10-metre (radius of five metres) diameter non-mountable central island surrounded by a 7 metre (radius of 12 metres) mountable apron
- single lane entries on all approaches
- a layout designed to accommodate a 19-metre-long articulated vehicle based on a Regional Collector Road/ Local Road intersection for all through, left-turn, and right-turn movements along Culburra Road, taking into consideration the industrial land uses located to the west of the proposed roundabout.

## VEHICLE ACCESS

Figure 4.2: Residential Access Preliminary Concept Layout ('Western Roundabout')



Source:

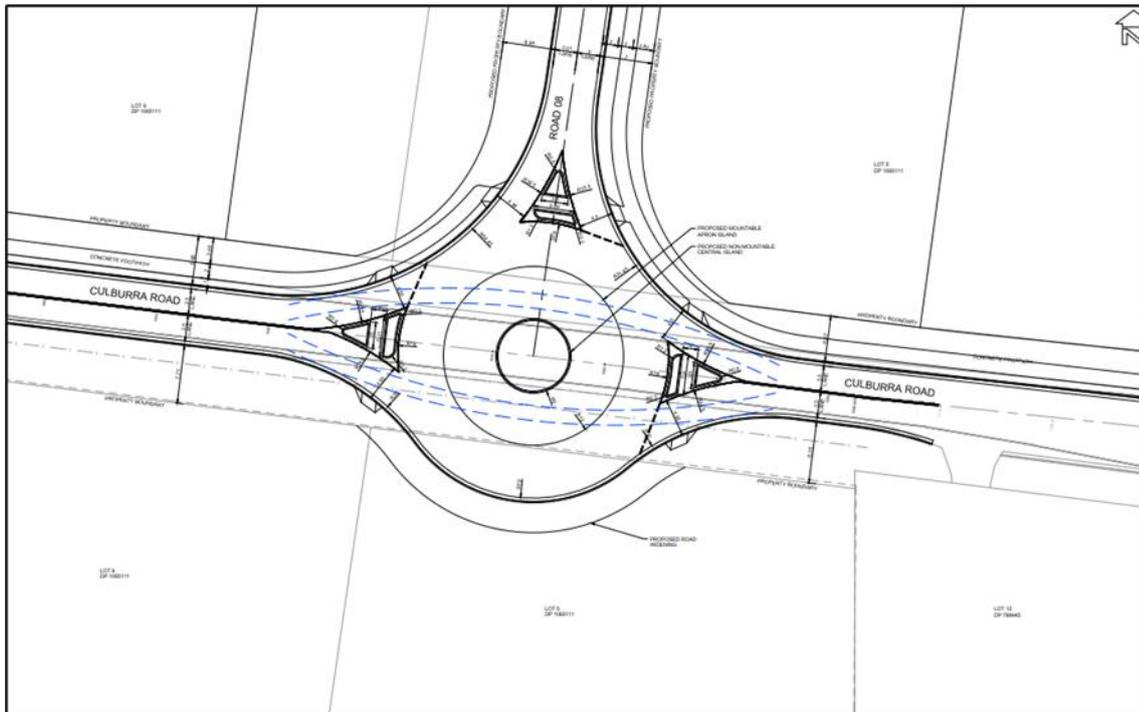
Drawing No. 25405 – 105 Rev P6, prepared by Allen Price & Scarratts Pty Ltd, dated 03/2020

The proposed 'Western roundabout' is located 320 metres west of the existing Strathstone Street/ Culburra Road intersection and will provide access to the future residential subdivision located to the north of the roundabout. The roundabout consists of:

- a 10-metre (radius of five metres) diameter non-mountable central island surrounded by a 7 metre (radius of 12 metres) mountable apron
- single lane entries on the east and west approaches and a two lane entry on the north approach
- a layout designed to accommodate a 19-metre-long articulated vehicle based on a Regional Collector Road/ Local Road intersection for all through, left-turn, and right-turn movements along Culburra Road, taking into consideration the industrial land uses located to the east of the proposed roundabout (it is noted that the layout drawings prepared by Allen Price & Scarratts indicate that the proposed layout can also accommodate the through movements of a 25m B-Double in each direction along Culburra Road).

## VEHICLE ACCESS

Figure 4.3: Town Centre Access Preliminary Concept Layout ('Eastern Roundabout')



Source: Drawing No. 25405 – 112 Rev P1, prepared by Allen Price & Scarratts Pty Ltd, dated 03/2020

The proposed 'Eastern roundabout' is located 280 metres west of the Canal Street East/ Culburra Road/ West Crescent intersection and will provide access to the future town centre subdivision located to the north of the roundabout. The roundabout consists of:

- a 10-metre (radius of five metres) diameter non-mountable central island surrounded by a 7 metre (radius of 12 metres) mountable apron
- single lane entries on all approaches
- a layout designed to accommodate a 19-metre-long articulated vehicle based on a Regional Collector Road/ Local Road intersection for all through, left-turn, and right-turn movements along Culburra Road, taking into consideration the industrial land uses located to the west of the proposed roundabout.

GTA has conducted a review of all three roundabout designs in accordance with the *Austrroads Guide to Road Design Part 4A (2017) (AGRD-4A)* and *Part 4B (2015) (AGRD-4B)* and further details on some of the design aspects are discussed in the following sections.

### Approach Sight Distance (ASD) Assessment

To review the viability of a roundabout, the approach sight distance (ASD) must be calculated (Criterion 1 of AGRD-4B). This is the minimum level of sight distance which must be available on the minor road approaches to all intersections to ensure that drivers are aware of the presence of an intersection. It is also desirable on the major road approaches and should be achieved where practicable.

Reference is made to Table 3.1 of AGRD-4A which provides the ASD values for cars. For the operating (85<sup>th</sup> percentile) speed,  $V$ , a speed of 90km/h has been adopted for Culburra Road for the eastern and western approaches to the western roundabout and 60km/h has been adopted for Culburra Road for the eastern and western approaches to the other roundabouts further to the east. An operating speed of 60km/h has been adopted for the other connecting collector roads at each intersection. See Section 4.3 for the rationale based on the proposed speed zoning changes.

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A reaction time,  $R_T$ , of 2.0 seconds has been adopted for operating speeds of 60km/h and 2.5 seconds for operating speeds of 90km/h, as per the most conservative values in Table 3.1 of AGRD-4A. This approach is more conservative than outlined in the TfNSW (previously RMS) *Supplement to Austroads Guide to Road Design Part 3 (2016)*, which adopts a reaction time of 1.5 seconds for all operating speeds 90km/h and lower.

The adopted coefficient of deceleration,  $d$ , is 0.36 for cars. This aligns with default AGRD-4A values and guidance in the TfNSW Supplement. For trucks which will also use each leg of these intersections, a value of 0.29 has been adopted for 'd', based on the default value used to assess truck stopping sight distances as per Table 5.6 in *Austroads Guide to Road Design Part 3 (2020)* (AGRD-3).

The longitudinal grade,  $a$ , is presumed to be 0%.

Adopting the parameters above, and referencing Table 3.1 of AGRD-4A for cars and Table 5.6 of AGRD-3 for trucks, the required ASD on each leg at each intersection is as follows (note – first value is for cars; second value shown in brackets is for trucks):

- Western Roundabout
  - Culburra Road (west) = 151 metres (172 metres)
  - Culburra Road (east) = 151 metres (172 metres)
  - Road 01 (north) = 73 metres (82 metres).
- Eastern Roundabout
  - Culburra Road (west) = 73 metres (82 metres)
  - Culburra Road (east) = 73 metres (82 metres)
  - Road 08 (north) = 73 metres (82 metres).
- Culburra Road/ Canal Street/ West Crescent Roundabout
  - Culburra Road (west) = 73 metres (82 metres)
  - Prince Edward Avenue (east) = 73 metres (82 metres)
  - Canal Street E (north) = 73 metres (82 metres)
  - West Crescent (south) = 73 metres (82 metres).

The above requirements are illustrated on the concept plans prepared by Allen Price & Scarratts (Appendix E), which have adopted the values associated with trucks as the worst case due to their longer stopping distances.

It is important to note that the ASD requirement will need to be checked against the vertical alignment and any adjacent obstructions to visibility (e.g. fencing, retaining walls or landscaping) as the design development progresses, to ensure that the combination of vertical and horizontal geometry meets the minimum distances calculated above.

### Minimum Gap Sight Distance (MGSD) Assessment

In addition to meeting the ASD requirements, each roundabout also needs to accommodate the Minimum Gap Sight Distance, MGSD, requirements in accordance with Criterion 2 of AGRD-4B.

The following parameters have been adopted based on the design speed for each of the approaches to the roundabout:

- Western Roundabout
  - Speed of vehicles from the approach to the right = 50km/h (Culburra Road)/ 30km/h (Road 01) (Section 3.2.2 of AGRD-4B)
  - Circulating speed = 30km/h (Figure 3.1 of AGRD-4B for arterial roads).

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- Eastern Roundabout
  - Speed of vehicles from the approach to the right = 30km/h (Section 3.2.2 of AGRD-4B)
  - Circulating speed = 20km/h (Figure 3.1 of AGRD-4B for local roads).
- Culburra Road/ Canal Street/ West Crescent Roundabout
  - Speed of vehicles from the approach to the right = 30km/h (Section 3.2.2 of AGRD-4B)
  - Circulating speed = 20km/h (Figure 3.1 of AGRD-4B for local roads).

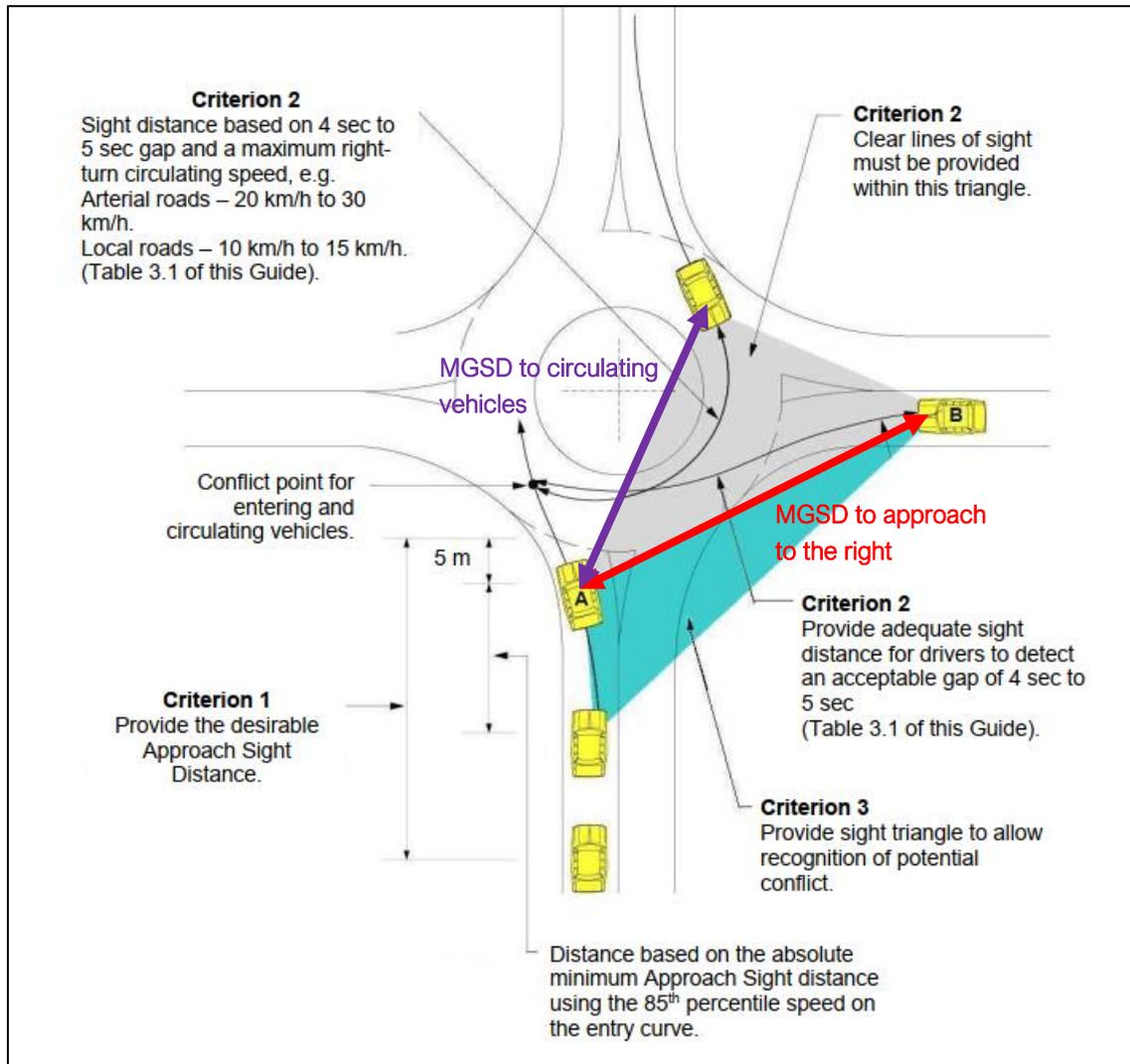
Therefore, the MGSD that should be provided based on the above assumptions and Table 3.1 of AGRD-4B is:

- Western Roundabout (critical acceptance gap of 5 seconds for arterial road roundabout)
  - MGSD to approach to the right = 70 metres (to Culburra Road)/ 42 metres (to Road 01)
  - MGSD to circulating vehicles = 42 metres.
- Eastern Roundabout (critical acceptance gap of 4 seconds for local road roundabout)
  - MGSD to approach to the right = 33 metres
  - MGSD to circulating vehicles = 22 metres.
- Culburra Road/ Canal Street/ West Crescent Roundabout
  - MGSD to approach to the right = 33 metres
  - MGSD to circulating vehicles = 22 metres.

These MGSD values have been illustrated on the concept plans prepared by Allen Price & Scarratts (Appendix E) for each of the proposed roundabouts to outline areas where sight lines need to be maintained. A mark-up of Figure 3.1 of AGRD-4B has been replicated in Figure 4.4 to illustrate the various MGSD measurements.

## VEHICLE ACCESS

Figure 4.4: Sight distance criteria for roundabouts, adopted from AGRD-4B, Figure 3.1



Source: AGRD-4B

### General

SDCP 2014 Chapter G11 requires the subdivision road network to connect with the external road network in a manner which maximises movement efficiency for all traffic routes. A roundabout will offer the most effective means of managing traffic at the intersection, minimising the average delay on all approaches.

#### 4.2.2. Industrial Precinct Access

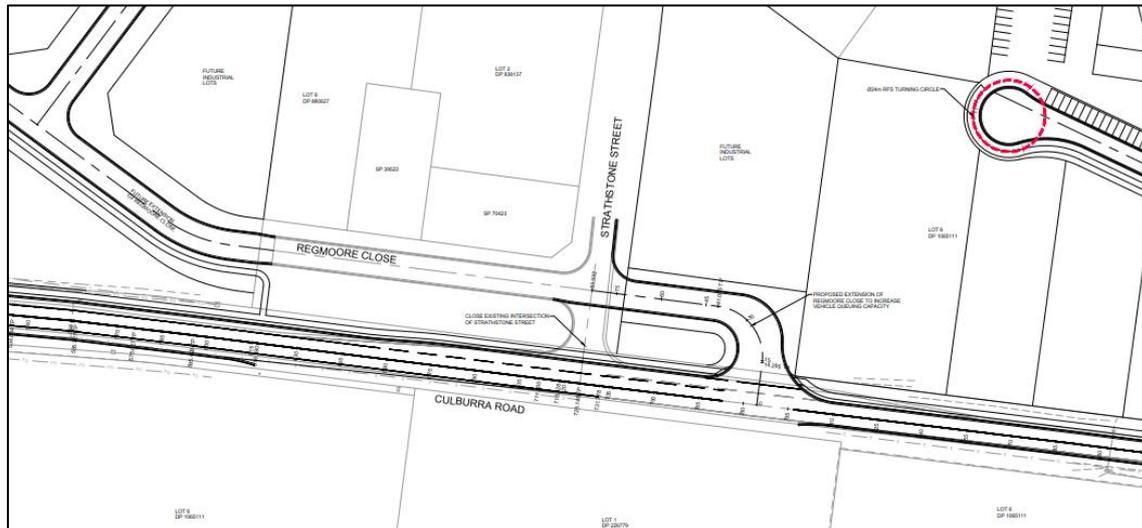
The proposed priority access to the industrial development is presented in Figure 4.5. It is proposed that the current Strathstone Street connection to Culburra Road will be closed, with access to Strathstone Street provided via Regmoore Close. Regmoore Close will be extended approximately 60 metres east to form a new priority-controlled intersection with Culburra Road. A 'Rural Auxiliary Left-turn Lane Treatment' (AUL) lane of approximately 141 metres is proposed to cater for access into the industrial precinct.

A review of the proposed AUL treatment, based on a design speed of 90km/h (refer section 4.3 for proposed speed zoning changes), indicates that the design exceeds the minimum diverge/ deceleration length of 125

## VEHICLE ACCESS

metres (based on stop condition at a comfortable deceleration of 2.5 metres per second) required in accordance with Table 5.2 of AGRD-4A. The proposed design of the AUL lane is therefore acceptable.

Figure 4.5: Proposed Access to Industrial Area



Source: Drawing No. 25405 – 109, prepared by Allen Price & Scarratts Pty Ltd, dated 03/2020

### Sight Distance

For this access, similar ASD values to those identified for the applicable roundabouts (i.e. based on an operating speed of 90km/h along Culburra Road and 60km/h on Regmoore Close) are required to be accommodated by the design. Accordingly, the ASD to be provided on each of the approaches is as follows (note – first value is for cars; second value shown in brackets is for trucks):

- Culburra Road (west) = 151 metres (172 metres)
- Culburra Road (east) = 151 metres (172 metres)
- Regmoore Close (north) = 73 metres (82 metres).

The above requirements are illustrated on the concept plans prepared by Allen Price & Scarratts (Appendix E), which have adopted the values associated with trucks as the worst case due to their longer stopping distances.

In addition to the above, Safe Intersection Sight Distance (SISD) must be achieved at this intersection. This is the minimum level of sight distance which should be provided on the major road at this type of intersection. While it utilises similar parameters to those previously discussed in relation to ASD in section 4.2.1, it is measured in a different way as described in AGRD-4A.

Based on a design speed,  $V$ , of 90km/h; a coefficient of deceleration,  $d$ , of 0.36; and a Reaction Time,  $R_r$ , of 2.5s; the SISD required to be provided in each direction along Culburra Road from Regmoore Close (as per Figure 3.2 and Table 3.2 of AGRD-4A) is 226m. This is the requirement for cars, with the equivalent value for trucks (based on a value for  $d$  of 0.29 as discussed previously) being 248m. The SISD requirements for trucks are also shown on the concept drawings prepared by Allen Price & Scarratts based on this advice.

Both the ASD requirements and also the SISD requirements will need to be checked against the vertical alignment and any adjacent obstructions to visibility (e.g. fencing, retaining walls or landscaping) as the design development progresses, to ensure that the combination of vertical and horizontal geometry meets the minimum distances calculated above.

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## Intersection Layout

Swept path analysis prepared for this intersection has identified the need for kerb modifications and line marking adjustments to accommodate simultaneous left-turn entry and exit and also right-turn entry and exit for two 20m-long articulated vehicles. This analysis is reproduced in Figure 4.6 and Figure 4.7. It is recommended that these modifications are considered further as part of the detailed design development, along with the potential need for westbound widening along Culburra Road to accommodate a Basic Right Turn (BAR) treatment (replicating the existing intersection treatment).

Figure 4.6: Left turns in/ out of Industrial Precinct for 20m articulated vehicles

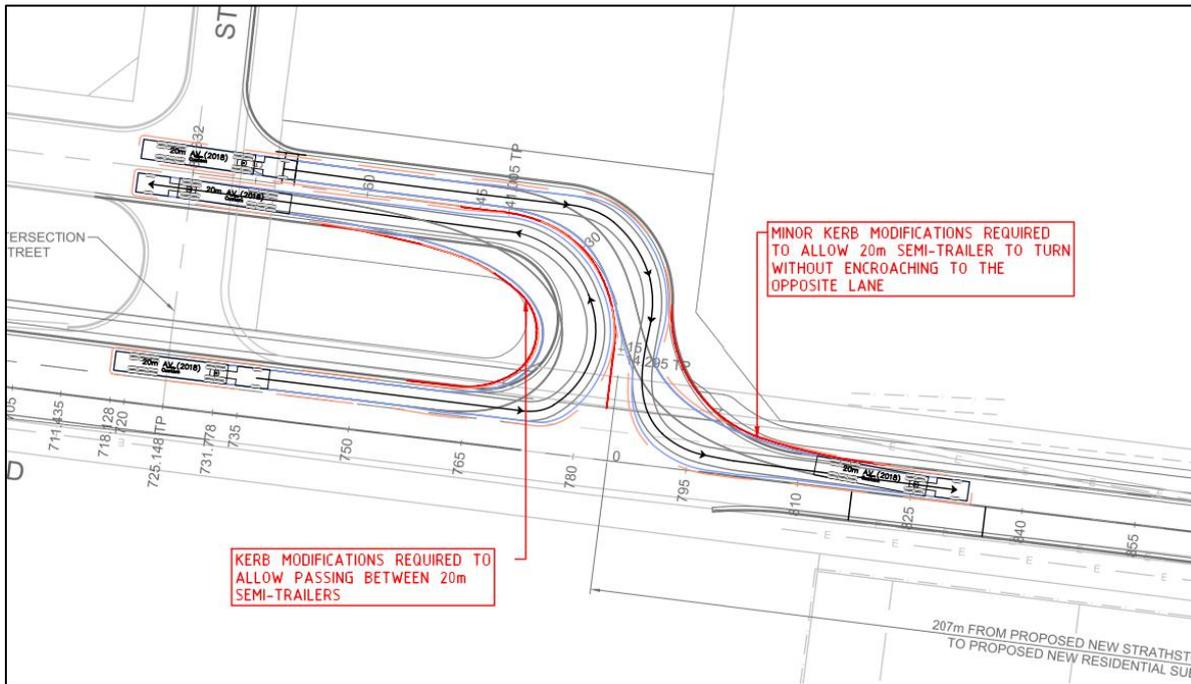
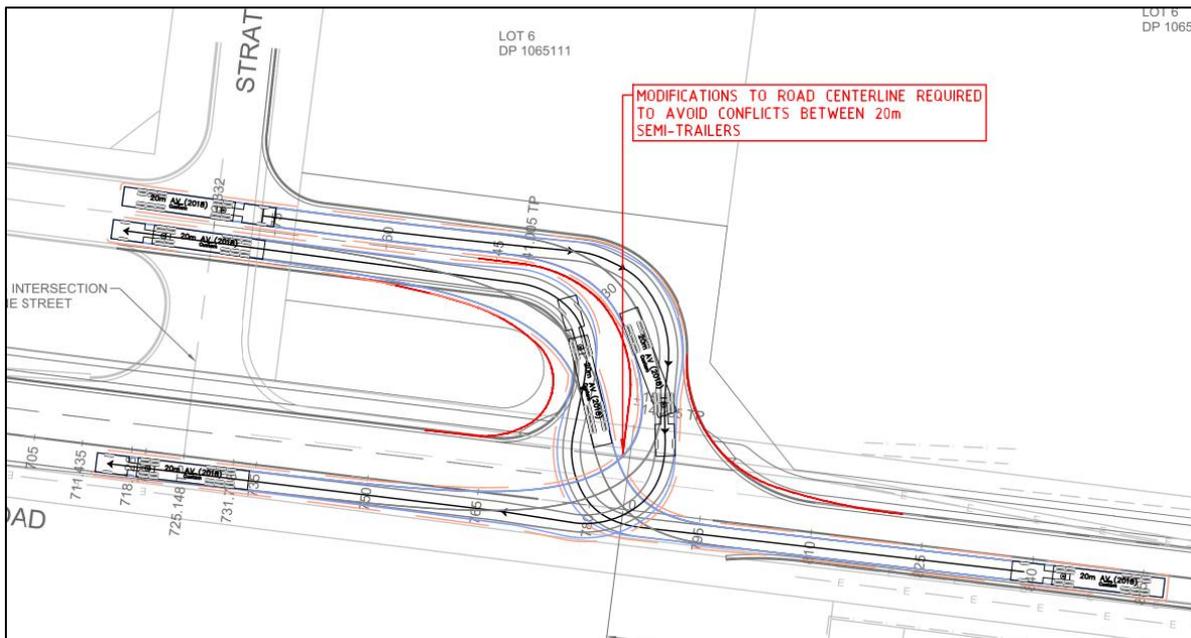


Figure 4.7: Right turns in/ out Industrial Precinct for 20m articulated vehicles



### 4.2.3. Summary of Design Review

A general design review has been undertaken for the intersections outlined above against Part 4A and Part 4B of the Austroads Guide to Road Design. It is noted that:

- The design is generally compliant with the relevant sections of the corresponding Austroads Guides, noting the potential kerb modifications required at the Industrial Precinct access as discussed above.
- Comments in relation to the specific sight distance requirements that need to be satisfied (as part of detailed design) at each intersection have been provided in the preceding sections.
- Swept path analysis has been prepared by Allen Price & Scarrats at each intersection, based on a 19-metre semi-trailer being able to perform all through, left-turn and right-turn manoeuvres without mounting of the central island (in the case of the roundabouts). This is the largest vehicle expected to service the majority of the development.
- Swept path assessments for a 25m B-Double have also been prepared by Allen Price & Scarrats at the Western roundabout (through movements only in each direction along Culburra Road) and at the industrial precinct access (left-in from Culburra Road and right-out onto Culburra Road only).
- The results are presented in Appendix E and demonstrate that the proposed designs are generally able to satisfactorily accommodate the turning requirements of these vehicles. The one exception is for the B-Double movements at the industrial access, where it is noted that the current design can only accommodate movement in one direction at a time. This is considered to be acceptable for the infrequent number of movements that will be made by these vehicles. However, minor changes to accommodate the simultaneous movement of semi-trailers at this intersection are recommended as discussed in section 4.2.2.

### 4.2.4. Road Widths

To determine the suitability of the proposed road widths, reference is made to the Shoalhaven City Council *Engineering Design Specifications* (February 1999). This document outlines, in Table D1.13, the minimum and maximum carriageway widths depending on the road hierarchy for residential subdivisions. An extract of this table is provided in Table 4.1.

**Table 4.1: Road hierarchy and design widths (extract from D1.13 of Shoalhaven City Council *Engineering Design Specifications*)**

Road Type	Maximum traffic volume (vpd)	Minimum Carriageway Width (metres)	Maximum Carriageway Width (metres)
Access Place	<150	3.5	3.7
Access Street (minor)	500	5.0	6.0
Local Street (up to 1000vpd)	1000	7.0	7.5
Local Street	2000	7.0	9.0
Collector Street	3000	7.0	9.0
Local Distributor Road	3000-6000	9.0	11.0

From the preliminary concept drawings, the following roads and road widths are identified and summarised in Table 4.2.

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Table 4.2: Road Widths

Location	Road number	Width (metres)	Adopted Classification	Alignment with Engineering Design Specifications
Residential Precinct	Road 01 (north of roundabout <sup>3</sup> )	8	Local Street	Yes
	Road 01 (south of roundabout)	11	Local Distributor Road	Yes
	Road 02	8	Collector Street	Yes
	Road 03	6	Local Street	Yes, (recommend widening to 7 metres)
	Road 04	6	Access Street (minor)	Yes
	Road 05	6	Access Street (minor)	Yes
	Road 06	6	Access Street (minor)	Yes
Industrial Precinct	Road 07	10	<i>Note 1</i>	<i>Note 1</i>
Town Centre Precinct	Road 08	7	Collector Street	Yes
	Road 09	7	Local Street	Yes
	Road 10	7	Collector Street	Yes
	Access Road 01	7	Local Street	Yes

Note 1: As the Engineering Design Specifications document outlines road widths for residential subdivisions, application of the guidance to the road for the industrial precinct is unsuitable. However, the proposed 10 metre road width is generally considered appropriate for the surrounding land use and larger design vehicles. It is recommended that a swept path assessment be prepared for 19-metre articulated vehicles to validate the suitability of the provided road width, particularly at the 90-degree bends.

Although Road 03 complies with the specifications, the location and connectivity could result in Road 03 functioning as a local road rather than an access street. Therefore, it is recommended that the road is widened by one metre or local area traffic management applied to reduce the likelihood of use by residents in adjacent streets. This can be addressed at the detailed design stage.

On this basis, the assessment presented in the above table confirms that all of the proposed roads comply with Council's *Engineering Design Specifications* document and are therefore acceptable.

### 4.2.5. Bus Access

A bus route is proposed within the residential precinct, with access into the precinct via Road 01 and operating as a clockwise loop via Road 02 which travels along the perimeter of the precinct. Road 02 has a road width of 8 metres (4 metre lanes each way) which is generally appropriate in catering for bus movements. However, it is recommended that a swept path assessment for buses is prepared to confirm the suitability of the road width at the bends.

Three bus bays are proposed along Road 02, each measuring 30 metres in length inclusive of the draw-in and draw-out tapers. This aligns with the standard bus stop length of 30 metres as provided in Section 3.7 of the NSW Government *State Transit Bus Infrastructure Guide Issue 2* (2011). This is appropriate, assuming that standard 12.5-metre-long buses are used for the precinct.

<sup>3</sup> This refers to the proposed roundabout connecting Road 01 and Road 02

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It is assumed, given the residential nature of the precinct, that the bus bays only need to accommodate a single bus at a time.

### 4.2.6. Emergency Vehicle Access

The NSW Rural Fire Service *Planning for Bush Fire Protection* (2019) outlines minimum access requirements for fire service vehicles.

The minimum carriageway width for the design fire truck is outlined in Table 4.3.

**Table 4.3: Extract from *Planning for Bush Fire Protection* (Table A3.2)**

Curve radius (inside edge in metres)	Swept path (metres)
<40	4.0
40-69	3.0
70-100	2.7
>100	2.5

The emergency egress routes provided to the industrial precinct are 4.0 metres wide. This is considered appropriate as it caters for the Rural Fire Truck swept path which requires a width of up to 4.0 metres depending on the curvature and alignment of the road.

Turning circles are also proposed at the end of the cul-de-sacs in the residential and town centre precincts. These are nominated as 24 metres wide in diameter which aligns with a Type A turning head as per Figure A3.3 of the *Planning for Bush Fire Protection* guideline. However, it is noted that the width of the roadway in the design is restricted to approximately 18.5 metres only. During design development, it is recommended that a 24-metre diameter manoeuvring space is provided (e.g. with a mountable section or allowance for overhang or similar) to accommodate a single-turn manoeuvre for the Rural Fire Truck. Departures from a standard 24-metre diameter cul-de-sac should be consulted with NSW RFS to ascertain the suitability of the design.

## 4.3. Speed Zonings

A 100 kilometres per hour speed zone is currently in place on Culburra Road, which commences approximately 360 metres west of the Canal Street East/ Culburra Road/ West Crescent intersection. Figure 4.8 shows the existing speed zoning in the vicinity of the development site.

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Figure 4.8: Culburra Road – Existing Speed Zoning



Background image source: NearMap (captured 2019)

Roads and Maritime Services (RMS) is responsible for all permanent speed zoning in NSW regardless of the classification of the road. RMS was consulted for the previous GTA 2013 TIA regarding the proposed speed changes, however, they did not support a reduction in the Culburra Road speed zone and considered the existing 100 kilometres per hour speed zone on this section of Culburra Road to be appropriate.

Based on the revised access arrangements and considering the overall development, it is considered that a reduction of the speed limit to 80 kilometres per hour between the 50km/h speed zone of the town centre, and extending to a point approximately 200 metres west of the proposed new 'western roundabout' at the western end of the development site, is appropriate and will offer improved safety outcomes. It is also noted that an existing advisory speed sign of 75 kilometres per hour is placed just before the bend at the western end for eastbound traffic and the natural topography is expected to reduce driver speed.

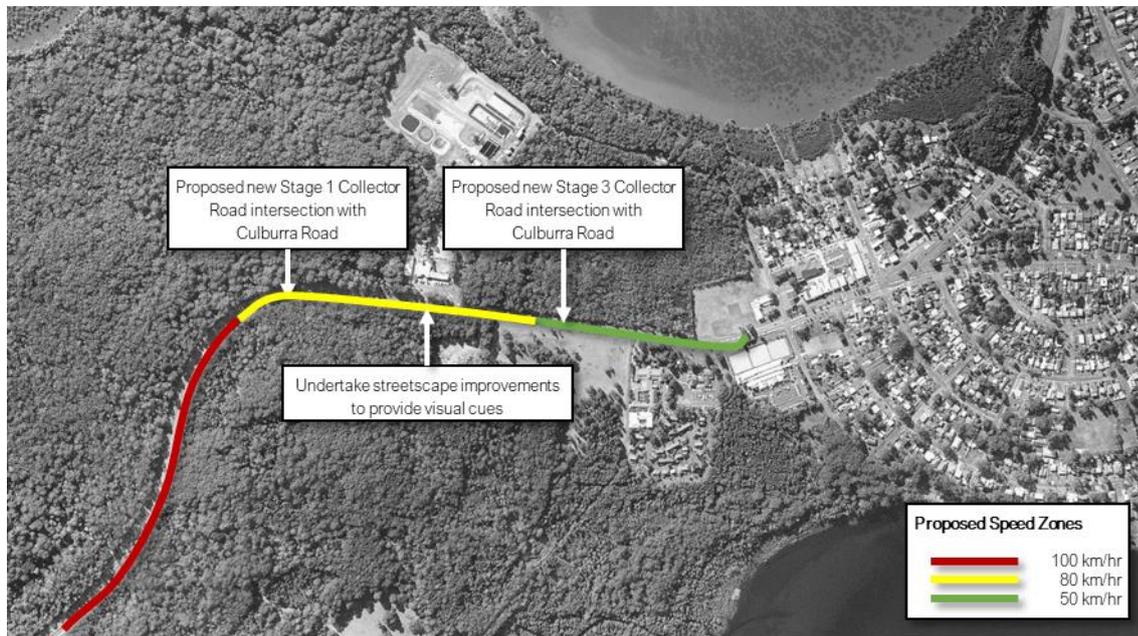
With the extension of the existing Culburra Beach urban footprint to the west as part of the proposed development, it is also appropriate to adjust the current interface between the existing 100 kilometres per hour (rural) speed zone and the 50 kilometres per hour (urban) speed zone. Noting that the second proposed roundabout ('eastern roundabout') is at the approximate location of the current change in speed zone, the following is recommended:

- Reduce the 100 kilometres per hour speed limit to 80 kilometres per hour prior to the proposed residential access roundabout ('western roundabout'), in conjunction with a new urban entry treatment. This would significantly improve road safety outcomes for turning movements at the three proposed development access points.
- Reduce the above 80 kilometres per hour speed limit to 50 kilometres per hour prior to the proposed town centre roundabout ('eastern roundabout'). This represents a minor change to the extent of the existing 50 kilometres per hour speed zone extent.
- Undertake streetscape improvements between the two roundabouts (in conjunction with the relevant development stage adjacent) in order to provide appropriate visual cues to drivers that they have entered the Culburra Beach urban area.

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Figure 4.9 depicts these proposed changes.

Figure 4.9: Culburra Road – Proposed Speed Zoning



Background Image Source: NearMap

### 4.4. Bicycle Parking & Associated Facilities

Bicycle parking for the site is governed by Australian Standard and Austroads guidelines as referenced in Section 5.11 P19 of Chapter G21 of the SDCP 2014. Neither provides rates for bicycle parking and end-of-trip facilities, hence reference is made to the NSW *Planning Guidelines for Walking and Cycling* 2004. An empirical assessment indicates that bicycle parking and end-of-trip facilities are not specifically required for the residential uses, however, bicycle parking and end-of-trip facilities should be provided for:

- employees of the industrial lots (3-5 percent for staff)
- employees of the commercial land uses (3-5 percent for staff)
- visitors, customers and patrons of the commercial land uses (5-10 percent for visitors).

# 5. SUSTAINABLE TRANSPORT INFRASTRUCTURE

# 05

## 5.1. Policy and Planning Guidelines

### 5.1.1. Future Transport 2056

*Future Transport 2056* outlines transportation goals for the whole of NSW, to be realised in 2056. The six key outcomes as outlined in the plan are:

- Customer experiences are seamless, interactive and personalised, supported by technology and data.
- The liveability, amenity and economic success of communities and places are enhanced by transport.
- The transport system powers NSW's future \$1.3 trillion economy and enables economic activity across the state.
- Every customer enjoys safe travel across a high performing, efficient network.
- Transport enables everyone to get the most out of life, wherever they live and whatever their age, ability or personal circumstances.
- The transport system is economically and environmentally sustainable, affordable for customers and supports emissions reduction.

Notable in the documentation is the creation of streetscapes depending on related land use – considering the residential and local centre usage of the site, the building of local streets and places for people, wherein cars travel slowly and may not have access to certain streets, would be encouraged.

#### Regional NSW Services Infrastructure Plan

*Regional NSW Services Infrastructure Plan* is an in-depth attachment to the *Future Transport 2056* documentation. The plan outlines a strategic investigation to increase access from inland NSW to Newcastle/ Sydney/ Wollongong. In the Illawarra – Shoalhaven region, the expansion of the 30-minute catchment for public transport will seek to improve the site's public transport access to its regional centre.

Existing transport networks involve connection regional centres to Sydney; however, future strategies involve the 'hub-and-spoke' model, involving inter-connection between regional centres. Moreover, the goal to shift mode share away from car usage suggests that better public transport can be expected near the site. In relation to design, the consideration of cycling and walking infrastructure will help in aligning the development with State Government objectives.

### 5.1.2. Integrating Land Use and Transport (2001)

Although partially superseded by *Future Transport 2056*, the NSW Department of Urban Affairs and Planning's *Integrating Land Use and Transport (2001)* policy package provided guidelines for planning and development which aim to encourage development that:

- increases access to public transport, walking and cycling
- encourages people to travel shorter distances and make fewer trips
- reduces car dependency.

The aim of integrating land use and transport is to ensure that urban structures, buildings for RMS, land use locations, development designs, subdivisions and street layouts achieve the following planning objectives:

- improving access to housing, jobs and services by walking, cycling and public transport
- increasing the choice of available transport and reducing dependence on cars
- reducing travel demand including the number of trips generated by development and the distances travelled, especially by car
- supporting the efficient and viable operation of public transport services.

*Integrating Land Use and Transport* identifies the following key transport planning concepts which recognise people's basic travel needs:

- **Convenience** — the transport mode needs to be easy to find and use, and to transfer from one mode to another.
- **Information** — reliable information at accessible locations is essential to encourage use of various travel alternatives.
- **Proximity** — transport facilities and services, such as cycle paths and bus services, need to be in close, convenient and obvious locations to people's trip origins and destinations.
- **Destination choice** — the more destinations that can be linked on a public transport route, the more attractive it will be.
- **Directness** — routes should take the shortest and least deviating course, with priority to achieve fast travel times for walking, cycling and public transport (e.g. pedestrian links, dedicated bus lanes, and bikeways).
- **Security** — the environment for walking and waiting needs to be comfortable and safe from personal attack or conflicts with traffic (e.g. waiting areas sheltered from the elements, natural surveillance, good lighting, bike lanes on major roads).

### NSW Walking and Cycling Program Guidelines (2004)

The *NSW Planning Guidelines for Walking and Cycling* (2004) aims to assist land-use planners and related professionals to improve consideration of walking and cycling. The guidelines have been designed to provide a walking and cycling focus to the NSW Government's *Integrating Land Use & Transport Planning* policy package.

## 5.2. Future Bus Routes

As discussed in Section 2.4, the site is serviced by 10 bus services per day, with no weekend or public holiday services.

Noting the existing policy and planning guidelines relevant to the site, it is anticipated that the Culburra Beach to Nowra bus services will be more frequent to accommodate new developments at the site, surrounding areas and the village centre of Orient Point. Moreover, alterations to the route may be implemented, critically to cover access to the village centre.

### 5.2.1. Consultation with Bus Operator

*Shoalhaven Integrated Transport Strategy* highlights the importance of early consultation with bus operators to ensure early provision of bus services in new residential developments which offers advantages for:

- the vendor – the availability of public transport can be a strong selling point
- the bus operator – if new families move into a new development and have a service available immediately it is likely that the operator will have regular patrons. Once a family has to purchase a second car it is unlikely that the family will use the bus again.

For the previous GTA 2013 TIA, Kennedy's Bus and Coach bus service was consulted as they are the provider of the Culburra Beach-Nowra service. Initial consultation indicated that the operator welcomes additional patronage within their normal bus operations and would be happy to extend their current service arrangements.

The operator highlighted the road geometry requirements for the development to allow for a minimum 12.5 to 13.5 metre long bus and noted that consideration needs to be given to the provision of disabled access for low floor wheelchair buses which will be compulsory on all route services by 2020.

Correspondence with Kennedy's Bus and Coach bus service is contained in Appendix F.

### 5.3. Bus Stops

*Integrating Land Use and Transport* outlines that public transport stops should be designed and managed to provide the following:

- good pedestrian access from surrounding areas, including direct, safe and well-lit street connections or pedestrian links, safe pedestrian crossings and clear lines of sight to the stop
- safe, well-lit and comfortable waiting areas with shelter and information on available services
- direct and convenient connections from the footpath to the shelter/ waiting area and from the shelter/ waiting area to the doors of the public transport vehicle, and vice versa
- clear identification of the public transport nodes and access points by attractive design and signage
- access for all users, including appropriate provision for people with disabilities
- bus stops with adequate lighting, shelter and passive security.

SDCP 2014 Chapter G11, P48 contains the requirements for the location and design of bus stops within subdivision developments:

- public transport stops provide for pedestrian safety, security, comfort and convenience
- bus stops are designed to prevent vehicles from overtaking a stationary bus, or vehicle speeds are reduced to ensure safe pedestrian crossing
- bus stops are located and designed to provide shelter, seats, adequate lighting and timetable information, are overlooked from nearby buildings, and are located to minimise adverse impact on the amenity of nearby dwellings.

SDCP 2014 Chapter G11, P47 suggests the following measures are considered as part of the development:

- routes for regular bus services are designed for a minimum pavement width of 9.0 metres
- bus stops are, or are planned for 400m spacings where the route serves residential development
- the siting of bus stops is related to the pedestrian path network.

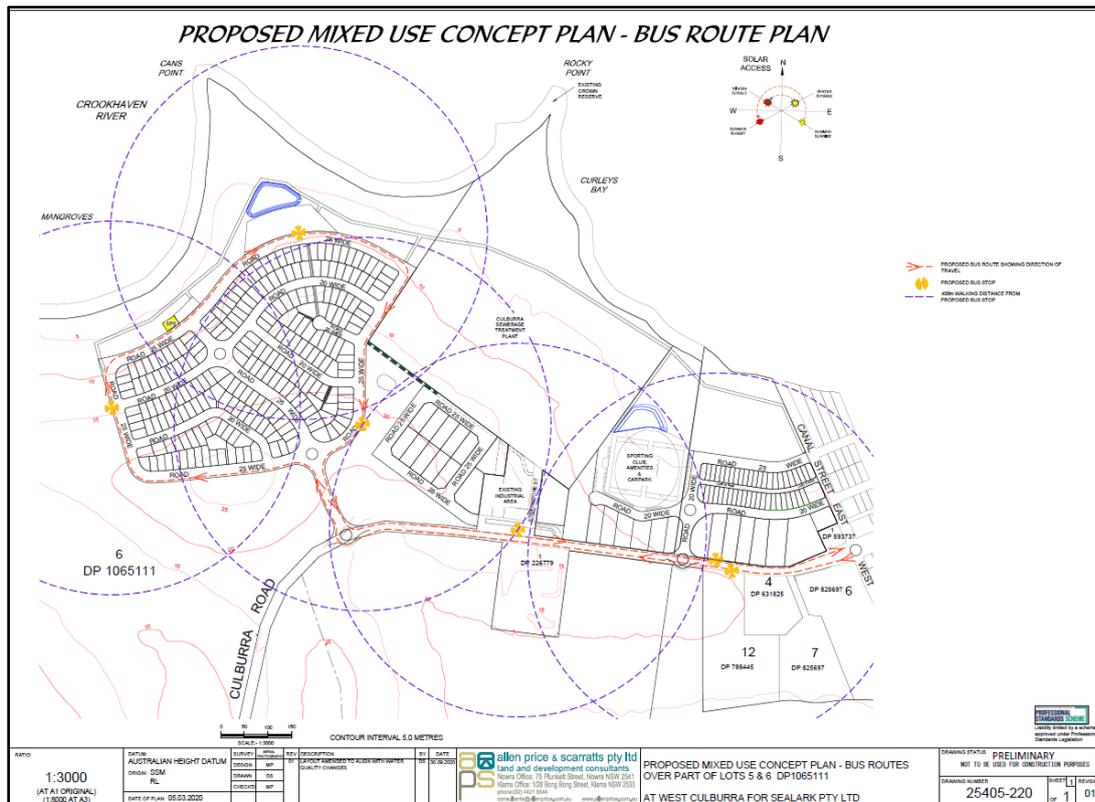
The location of bus stops is crucial to ensure ease of access for residents and in turn encourage the use of sustainable transport.

It is recommended that all new bus stops provide the following as a minimum:

- shelter
- seating
- lighting
- timetable information.

An indicative location plan of new bus stops is shown in Figure 5.1, subject to further discussion with TfNSW, the bus operator and other relevant stakeholders.

Figure 5.1: Indicative Bus Stop Location



Source: Drawing No. 25405 – 220, prepared by Allen Price & Scarratts Pty Ltd, updated 30/09/2020

## 5.4. Walking and Cycling Network

### 5.4.1. Street Pattern

Although most strategic consideration has been covered by *Future Transport 2056*, The *NSW Planning Guidelines for Walking and Cycling* highlights the importance of street pattern as a determinant of walkability and cyclability. Street pattern determines how far a person can travel by foot or by bicycle within a set timeframe, as well as the feel of a neighbourhood from a pedestrian's or cyclist's perspective. Local streets such as those proposed within residential, industrial and town centre precincts should be highly interconnected with many junctions onto main road making walking and cycling trips short and direct. In contrast, layouts with unconnected cul-de-sacs make walking and cycling trips longer and less interesting as sight lines are limited and there are few (if any) alternative route options available for any one trip as shown in Figure 5.2.

Figure 5.2: Street Patterns and Accessibility

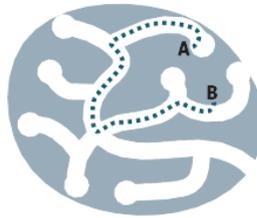
The 'perfect' street pattern for direct access to centres and public transport stops (Ref 5.10)



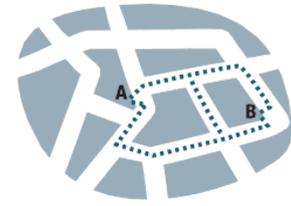
A more organic street pattern for direct access to centres and public transport stops (Ref 5.10)



Disconnected culs-de-sac design showing long walk from A to B and only one route available



Modified grid design showing shorter walk from A to B and several routes available



Source: NSW Planning Guidelines for Walking and Cycling

The indicative street layout for the development shown in Figure 3.2 has many similarities to the 'perfect' street pattern shown in Figure 5.2, offering many options for access through the development. This through site permeability is vital for encouraging walking and cycling for short trips within these precincts and to key destinations.

## 5.4.2. Key Destinations

The key walking and cycling destinations in proximity of development areas are likely to be:

- Culburra Beach shops – east of the development area
- Crookhaven River foreshore reserve – north of the development area
- public reserves throughout the proposed development
- beaches – east of the established urban area of Culburra.

Providing direct and easy walking and cycling access to these locations via dedicated, high quality facilities is imperative to promote walking. The indicative street layout shown in Figure 3.1 has numerous streets aligned in a north-south direction enabling direct walking access to the Crookhaven River foreshore reserves from within the development, as well as a dedicated boardwalk for access through the foreshore. The proposed public reserves shown as green in Figure 3.1 provide further options for direct walking and cycling access to the foreshore area, separated from vehicle traffic.

## 5.4.3. Walking and Cycling Infrastructure

The *Shoalhaven Integrated Transport Strategy* lists the following as a critical implementation action:

- **Action 4** – Build a network of cycleways and footpaths which link schools, shops, employment areas, bus interchanges and also link outlying villages to Park and Ride interchanges along the trunk corridor.

The foreshore route offers an excellent opportunity as a recreational walking and cycling route and to promote cycle tourism. This route is proposed to be a shared path. The connection of all routes to the established areas of Culburra Beach and in particular to the Culburra Beach shops is crucial in discouraging private car use for short trips within the area. The connection of this east-west connector to the existing footpath network requires further consideration. It is recommended that the walking and cycling network within the established areas of Culburra Beach be upgraded to provide a consistent standard of facility and in particular to improve access to the beaches, east of the town.

The provision of dedicated, high quality facilities adjacent to all proposed collector roads are imperative to improve accessibility within the development area. Proposed shared path layout plan is presented in Figure 3.2.

## 5.4.4. Design Requirements

SDCP 2014 Chapter G11 outlines the design requirements for walking and cycling infrastructure within subdivision developments. A minimum of a 1.2-metre-wide footpath is required on local and collector streets within a subdivision, seen in A38.2 of the DCP. As such it is anticipated that footpaths will be provided on both sides of all local streets within the subdivision at a minimum 1.2 metres wide.

The design requirements for bicycle and pedestrian facilities are included in the *NSW Bicycle Guidelines* and *Austroads Part 6A: Paths for Walking and Cycling* (2017). The width requirements for shared paths are summarised in Table 5.1. Bicycle facilities included as part of the development are proposed to be shared paths rather than separated paths given the moderate cyclist volumes expected and consistency with other facilities in the broader area.

Table 5.1: Shared Path Widths

	Suggested path width (m)		
	Local access path	Regional path <sup>(3)</sup>	Recreational path
Desirable minimum width	2.5	3.0	3.5
Minimum width – typical maximum	2.0 <sup>(1)</sup> – 3.0 <sup>(2)</sup>	2.5 <sup>(1)</sup> – 4.0 <sup>(2)</sup>	3.0 <sup>(1)</sup> – 4.0 <sup>(2)</sup>

1 A lesser width should only be adopted where cyclist volumes and operational speeds will remain low.

2 A greater width may be required where the numbers of cyclists and pedestrians are very high or there is a high probability of conflict between users (e.g. people walking dogs, in-line skaters etc.).

3 May be part of a principal bicycle network in some jurisdictions.

Source: Austroads Part 6A: Paths for Walking and Cycling 2017

## 5.5. Sustainable Transport Infrastructure Summary

- The development offers the opportunity to provide improved public transport services to all residents of Culburra Beach and Orient Point through higher frequency weekday bus services and the provision of weekend and public holiday services.
- The early provision of bus services for the development areas is considered paramount in promoting public transport usage. Initial consultation with the bus operator indicates that the operator welcomes additional patronage within their normal bus operations and would be happy to extend their current service arrangements.
- The indicative street layout offers many options for access through the development area, providing vital through site permeability. The street layout is consistent with the aims of the *NSW Planning Guidelines for Walking and Cycling* to promote walking and cycling, particularly for short trips.
- A minimum of a 1.2-metre-wide footpath is required on local and collector streets within a subdivision in-line with SDCP 2014 Chapter G11
- Future proposed cycleways will be conducive to promoting pedestrian and cyclist access, particularly for short trips, in accordance with *Future Transport 2056* (2018) and *Integrating Land Use and Transport* (2001) principles.
- For the shared path designated for the foreshore, it is recommended to provide a minimum 3 metre width given this intended to have broader regional connectivity.
- For the recommended shared path adjacent to Culburra Road, a minimum 2.5 metre width should be adopted.

# 6. LOADING & WASTE COLLECTION RESPONSE/ ASSESSMENT

# 06

## 6.1. Loading and Servicing Facilities

It is understood that refuse collection for the residential and mixed-use areas will involve kerbside collection by a 12.5-metre-long Council garbage vehicle, equivalent to a Heavy Rigid Vehicle (HRV). The proposed 20 – 25 metre road reserve widths would generally be able to accommodate kerbside parking.

For the industrial precinct, internal road design should allow for a minimum 20-metre-long articulated vehicle (AV), typically expected for industrial land uses.

For the town centre precinct of the development, largest design vehicle that is expected is a 12.5-metre-long Council garbage vehicle/ HRV. Kerbside waste collection is proposed and should be sufficient for servicing townhouses, commercial and retail purposes. Detailed loading design elements would be addressed at the subsequent Development Application stage.

All access intersections from Culburra Road have been designed to accommodate vehicles at least the dimension of a 12.5-metre-long heavy rigid vehicle, as discussed in Section 0

# 7. TRAFFIC IMPACT ASSESSMENT

07

## 7.1. Traffic Generation

### 7.1.1. Design Rates

Traffic generation estimates for the proposed development would usually be sourced from the *Guide to Traffic Generating Developments* (Roads and Maritime, 2002) and its addition, *TDT 2013/4a*, as well as previously determined area-specific rates (12S1231000 West Culburra Beach Subdivision Development Transport and Accessibility Impact Assessment Issue E). Estimates of peak hour and daily traffic volumes using this guide are set out in Table 7.1. For the purposes of trip generation, it has been assumed that:

- For mixed use, housing component has been assumed to be medium density, therefore based on this approximately 24 dwelling (over 3 lots) have been assumed.
- For the commercial/retail component of mixed use (shop top), the GFA has been assumed to be 80% of the developable lot area.
- For the industrial component, the GFA has been assumed to be 70 % of the total developable lot area

Table 7.1: Estimated Development Traffic Generation (RMS Rates)

Precinct	Land Use	Design Generation Rates		Traffic Generation Estimates (vehicles)	
		Peak Hour	Daily	Peak Hour	Daily
Residential Precinct	Residential (293 x detached houses)	0.71 – 0.78 vehicle movements/ dwelling	7.4 vehicle movements/ dwelling	208 – 229	2168
Industrial Precinct	Industrial (approx. 23,030m <sup>2</sup> GFA) <sup>[8]</sup>	0.39-1.3 vehicle movements/ 100m <sup>2</sup> GFA	3.78-11.99 vehicle movements/ 100m <sup>2</sup> GFA	90 - 299	871-2761
Town Centre Precinct	Residential (45 x townhouses (assumed))	0.5-0.65 vehicle movements/ dwelling	5.0 – 6.5 vehicle movements/ dwelling	23 – 29	225 – 293
	Residential (95 x apartments (assumed))	0.4 – 0.5 vehicle movements/ dwelling	4.0-5.0 vehicle movements/ dwelling	38 – 48	380 – 475
	Residential (3 lots x shop top housing, 24 dwellings) <sup>[6]</sup>	0.4-0.5 vehicle movements/ dwelling	4.0-5.0 vehicle movements/ dwelling	10 – 12	100-120
	Retail (approx. 5,846m <sup>2</sup> GLFA) <sup>[7]</sup>	20 vehicle movements/ 1000m <sup>2</sup> GLFA	314 vehicle movements/ 1000m <sup>2</sup> GLFA	88 <sup>[9]</sup>	1377
	Non-Residential (Sports facility)	N/A	N/A	N/A	N/A
<b>Total</b>				<b>457 – 705 vehicle movements/ hour</b>	

[5] Estimated rate based on a peak-daily ratio of 10%.

[6] assuming medium density for shop top housing.

[7] GLFA = 75% of GFA, and GFA = 80% of developable lot area for retail

[8] 70% of the total developable area (32,900 m<sup>2</sup>) for industrial lots

[9] Applied discount factor of 25% to account for internal trips

Both the retail and sports facility developments are expected to primarily serve internal trips. Therefore, these values are not included in the impact assessment as all trips would be contained in the subdivision local road network.

## 7.1.2. Empirical Traffic Generation Leaving the Culburra Beach Area

The Traffic and Transport Unit of Shoalhaven City Council previously provided empirical traffic generation rates for the established area of Culburra Beach. The trip rates were calculated by using traffic volume data from 2008 annual hourly counts on Greenwell Point Road and Forest Road and residential occupancy data from the 2011 census to determine the number of vehicle trips entering the regional road network (west of Culburra Beach) per occupied dwelling in the relevant peak hours. Table 7.2 summarises the empirical traffic generation rates.

**Table 7.2: Empirical Traffic Generation Rates (Shoalhaven City Council)**

Peak Hour Scenario	Traffic Generation Rate (vehicles per occupied dwelling per peak hour)
Friday AM	0.22
Friday PM	0.21
Saturday	0.23

Source: Shoalhaven City Council (Appendix B)

As shown in Table 7.2, based on analysis of the existing traffic generating characteristics of the established urban area of Culburra Beach, it is anticipated that the proposed development would generate 0.22, 0.21 and 0.23 vehicle trips per dwelling during the respective Friday AM, Friday PM and Saturday peak hours. As advised by Shoalhaven City Council these rates are based on detached dwellings and reductions could be justified for semi-detached or non-detached dwellings.

## 7.1.3. Applied Rates

### Residential

Application of the empirical traffic generation rates provided by Shoalhaven City Council to the proposed development results in an estimated traffic generation estimates as summarised in Table 7.3.

**Table 7.3: Estimated Development Traffic Generation (Shoalhaven City Council Empirical Traffic Generation Rates)**

Peak Hour Scenario	Traffic Generation Rate (Shoalhaven City Council)	Proposed Residential Dwellings (Maximum)	Traffic Generation Estimates (vehicles)
Friday AM	0.22	436 <sup>[10]</sup>	96
Friday PM	0.21		92
Saturday	0.23		100

[10] 293 detached houses, 45 integrated housing, 95 (medium density) low rise apartments, 3 shop top housing

As shown in Table 7.3, based on the adoption of the traffic generation rates provided by Shoalhaven City Council the proposed development is expected to generate 101, 96 and 105 vehicle trips during the respective Friday AM, Friday PM and Saturday peak hours on the regional road network (west of Culburra Beach).

It is noted that approximately one third of the residential dwellings proposed as part of the development are either semi-detached or non-detached (164 of the 457 total dwellings proposed), likely to house fewer residents than low-density, detached housing. As such the traffic generation estimates contained in Table 7.3 represents a

## TRAFFIC IMPACT ASSESSMENT

conservative estimate of the traffic that is likely to be generated by the development (i.e. greater than what could be expected).

Given the existing traffic generating characteristics of the established area of Culburra Beach on the regional road network (west of Culburra Beach) the adoption of the empirical traffic generation estimate is considered appropriate.

### Non-Residential

In the absence of Council-provided empirical data for non-residential developments, the rates outlined in the *Guide to Traffic Generating Developments' TDT 2014/04a* (RMS, 2013) have been adopted for the industrial development. The shop-top retail development is expected to generate internal trips only. In summary:

- 74 industrial trips are expected to be generated in the Friday AM period
- 90 industrial trips are expected to be generated in the Friday PM period
- no industrial trips are expected for the Saturday peak, as most industrial plants are expected to be closed in the weekend.

Table 7.4: Estimated Non-Residential Development Traffic Generation

Peak Hour Scenario	Traffic Generation Rate (Roads and Maritime)	Proposed GFA (m <sup>2</sup> )	Traffic Generation Estimates (vehicles)
Friday AM	0.32	23,030 m <sup>2</sup>	74
Friday PM	0.39		90

## 7.2. Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposed development will be influenced by a number of factors, including the:

- configuration of the arterial road network in the immediate vicinity of the site
- existing operation of intersections providing access between the local and arterial road network
- distribution of households in the vicinity of the site
- surrounding employment centres, retail centres and schools in relation to the site
- configuration of access points to the site.

The distribution and assignment of traffic generated by the proposed development has been informed by the following:

- analysis 2016 Census Journey to Work (JTW) Data
- analysis of the May 2012 Traffic Count Data
- consultation with Shoalhaven City Council's Traffic and Transport Unit.

### 7.2.1. 2016 Census Journey to Work Data

It is noted that the existing site is a greenfield, and the SA4 statistical area which it is zoned in does not have existing residential developments. Thus, no journey to work data is available for the site (SA1 – 1127415). West of the site, development exists with residential housing as the predominant zoning and infrastructure (SA1 – 1127406 and SA1 – 1127416). Considering the geographical and land use similarity, the nearby zones have been analysed to obtain an understanding of the travel patterns.

GTA Consultants undertook analysis of all trips made by the JTW mode of 'Car, as Driver', which represented 76% of all journeys to work in the travel zone. Destinations of these trips were grouped into four broad

## TRAFFIC IMPACT ASSESSMENT

geographical categories; north, south, east and west. There were also a number of trips that were classified as 'Unknown', 'Sydney Undefined', 'NSW Undefined' or 'No Fixed Address' in the data. These results were not statistically significant and have been excluded from the calculation.

Modal distribution has been determined in Table 7.5 and the trip destinations summarized in Table 7.6. Table 7.7 outlines where workers arrive from, if working in the Culburra Beach region.

**Table 7.5: Modal Distribution/ Method of Travel to Work (Journey to Work 2016)**

SA1 (UR)	1127416	1127406	Total	Mode Share (%)
Car, as driver	141	92	230	76%
Did not go to work	22	9	30	10%
Car, as passenger	7	3	18	6%
Not stated	5	0	5	2%
Walked only	4	9	11	4%
Worked at home	4	0	5	2%
Other	0	0	3	1%
<b>Total</b>	<b>183</b>	<b>113</b>	<b>302</b>	<b>100%</b>

**Table 7.6: Destination Nodes (Journey to Work 2016)**

SA4	SA3	SA2	1127416	1127406	Values
Illawarra	TOTAL		0	7	4
Capital Region	TOTAL		0	0	5
Southern Highlands and Shoalhaven	TOTAL		151	102	254
	Shoalhaven	TOTAL	151	102	254
		Berry	0	3	3
		Callala Bay	6	3	9
		Culburra Beach	51	32	83
		Huskisson	4	4	8
		North Nowra	11	9	20
		Nowra	151	102	127
	Southern Highlands	TOTAL	0	0	0
Sydney (Amalgamated)	TOTAL		10	3	13

# TRAFFIC IMPACT ASSESSMENT

Table 7.7: Origin Nodes (Journey to Work 2016)

SA4	SA3	SA2	1127416	1127406	Values
Illawarra	TOTAL		13	4	17
Southern Highlands and Shoalhaven	TOTAL		488	263	752
	Shoalhaven	TOTAL	487	263	745
		Berry	7	3	10
		Callala Bay	57	7	64
		Culburra Beach	323	170	490
		Huskisson	6	0	6
		North Nowra	27	28	52
		Nowra	39	39	78
		St Georges	16	4	20
		Sussex Inlet	4	0	4
		Tomerong	4	7	11
		Ulladulla	3	0	8
	Southern Highlands	TOTAL	3	0	3
Sydney (Amalgamated)	TOTAL		13	3	16

The directional distribution as calculated from JTW data is presented in Figure 7.1 and Figure 7.2.

Figure 7.1: Culburra Beach Residence, Going to Work – Directional Distribution



Figure 7.2: Culburra Beach Non-residential, Place of Work – Directional Distribution



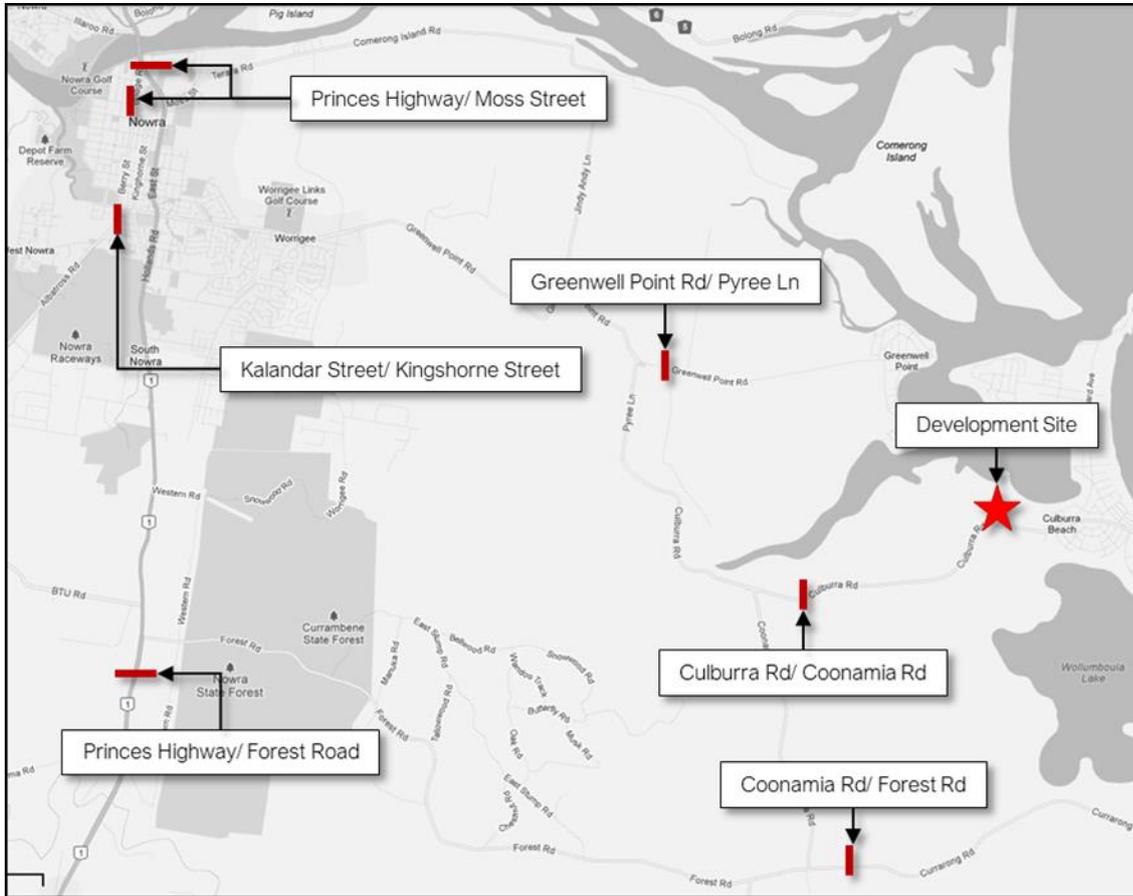
Basemap source: Google Maps (accessed February 2020)

### 7.2.2. May 2012 Traffic Count Data

The May 2012 traffic count data was analysed to determine the distribution of vehicles into and out of the road network under consideration. This was determined by calculating the percentage of vehicles entering or exiting this network during the respective peak hours based on the May 2012 intersection traffic counts. The six entry/exit points to the network are shown graphically in Figure 7.3 and includes the following intersections:

- North – Princes Highway/ Moss Street
- West – Princes Highway/ Moss Street, Kalandar Street/ Kinghorne Street
- South – Princes Highway/ Forest Road
- East – Greenwell Point/ Pyree, Culburra Road/ Coonemia Road and the Coonemia Road/ Currarong Road.

Figure 7.3: Directional Distribution Analysis – Road Network Entry/Exit Locations



Background Image Source: Google Maps

While this area does not represent a ‘closed’ network, whereby there are other entry and exit points to the road network, the analysis was undertaken to provide an indication of the existing directional distribution of vehicles into and out of the road network under consideration. The existing directional distribution of vehicles into and out of this road network during the Friday AM, Friday PM and Saturday peak hours is summarised in Table 7.8, Table 7.9 and Table 7.10 respectively.

Table 7.8: Existing Directional Distribution – Friday AM Peak Hour (May 2012 Traffic Counts)

Direction	Entry/Exit Location	Outbound		Inbound	
West	Moss Street	518	19%	260	7%
	Kinghorne Street	417	15%	405	10%
North	North of Moss Street	1085	40%	1680	42%
South	South of Forest Road	468	17%	1211	30%
East	Culburra Road	143	6%	225	6%
	Currarong Road	22	1%	45	1%
	Greenwell Point Road	66	2%	142	4%
<b>Total</b>		<b>2719</b>	<b>100%</b>	<b>3968</b>	<b>100%</b>

**Table 7.9: Existing Directional Distribution – Friday PM Peak Hour (May 2012 Traffic Counts)**

Direction	Entry/Exit Location	Outbound		Inbound	
West	Moss Street	383	10%	597	17%
	Kinghorne Street	388	10%	432	13%
North	North of Moss Street	1489	37%	1580	46%
South	South of Forest Road	1342	33%	600	17%
East	Culburra Road	239	6%	127	4%
	Currarong Road	48	1%	20	1%
	Greenwell Point Road	137	3%	64	2%
<b>Total</b>		<b>4026</b>	<b>100%</b>	<b>3420</b>	<b>100%</b>

**Table 7.10: Existing Directional Distribution – Saturday Peak Hour (May 2012 Traffic Counts)**

Direction	Entry/Exit Location	Outbound		Inbound	
West	Moss Street	266	8%	431	14%
	Kinghorne Street	269	8%	299	9%
North	North of Moss Street	1287	40%	1332	42%
South	South of Forest Road	962	30%	683	22%
East	Culburra Road	176	6%	190	6%
	Currarong Road	36	1%	28	1%
	Greenwell Point Road	207	7%	186	6%
<b>Total</b>		<b>3203</b>	<b>100%</b>	<b>3149</b>	<b>100%</b>

**7.2.3. Consultation with Shoalhaven City Council**

Shoalhaven City Council’s Traffic and Transport Unit was previously consulted extensively in relation to the directional distribution of traffic generated by the proposed development in an effort to gain an understanding of known local traffic patterns and key trip generators. In addition to the empirical traffic generation rates shown in Table 7.3, Council’s Traffic and Transport Unit provided directional splits for traffic generated by the development in the relevant peak hours as shown in Table 7.11.

**Table 7.11: Empirical Traffic Generation Rates and 120<sup>th</sup> HH Directional Splits (Shoalhaven City Council)**

Peak Hour Scenario	Traffic Generation Rate (Shoalhaven City Council)	Directional Split – 120 <sup>th</sup> HH	
		Outbound (westbound)	Inbound (eastbound)
Friday AM	0.22	76%	24%
Friday PM	0.21	25%	75%
Saturday	0.23	50%	50%

Source: Shoalhaven City Council (Appendix B of this report)

On the basis of the above, the directional distribution of traffic generated by the residential development on the road network west of Culburra Beach during the Friday AM, Friday PM and Saturday peak hours are summarised in Table 7.12, Table 7.13 and Table 7.14 respectively (the numbers in brackets in the 'Outbound' and 'Inbound' columns represent the corresponding number of vehicles).

The directional split presented in Table 7.11 is valid for residential development. Regarding commercial/retail and industrial lots, the peak direction is anticipated to be inbound for the AM peak and outbound for the PM peak. Therefore, for the industrial lots and the town centre the directional splits is assumed as follows:

- Friday AM – 75% inbound and 25% outbound
- Friday PM – 24% inbound and 76% outbound.

This distribution is also shown graphically in Figure 7.4, Figure 7.5 and Figure 7.6 for AM, PM and Saturday peaks respectively while the total and development volumes are presented in Figure 7.7, Figure 7.8 and Figure 7.9 for the AM, PM and Saturday peaks respectively.

Figure 7.4: Directional Distribution – Resi Friday AM Peak Hour, Non-Resi Friday PM Peak Hour

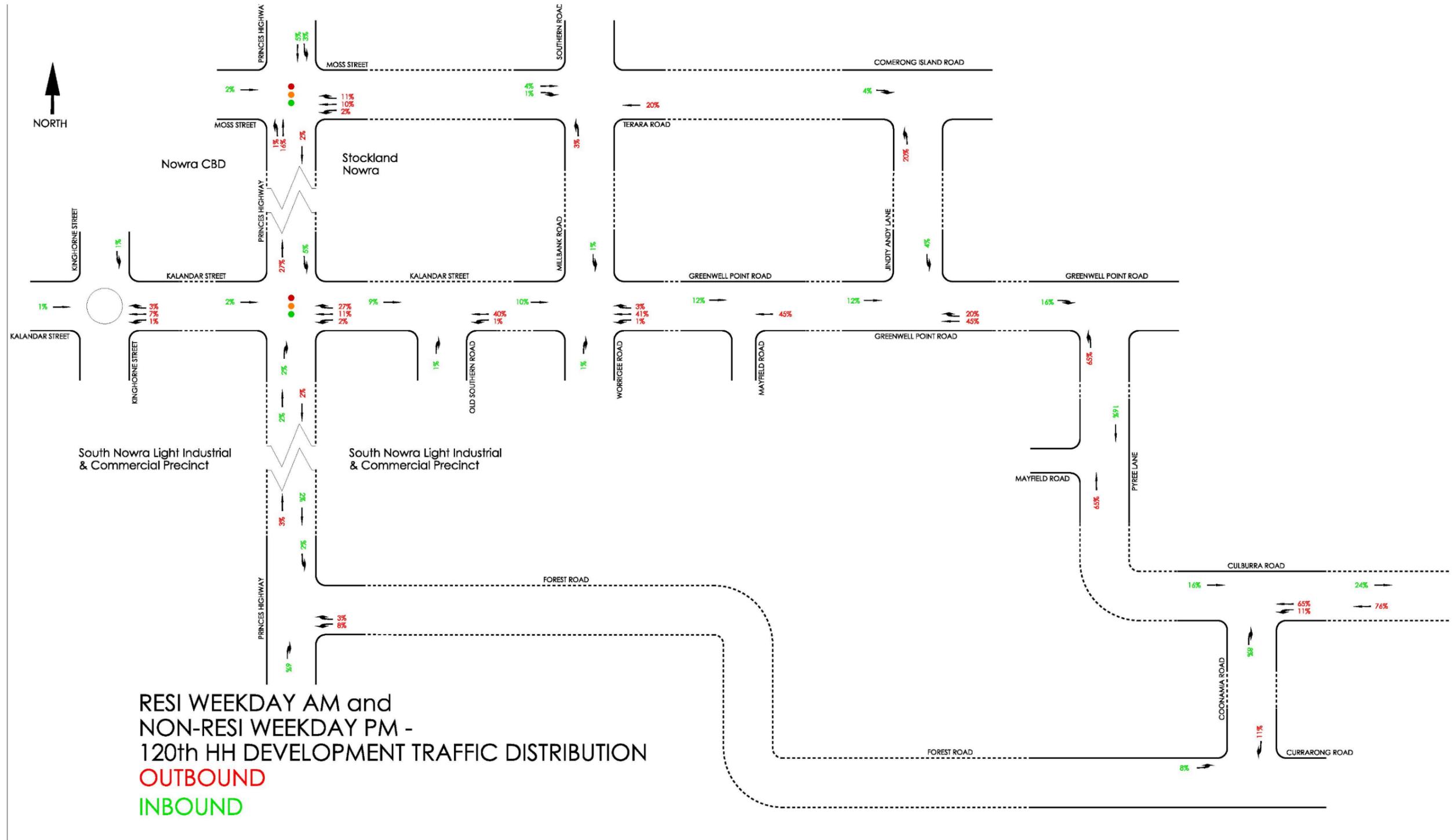


Figure 7.5: Directional Distribution – Resi Friday PM Peak Hour, Non-Resi Friday AM Peak Hour

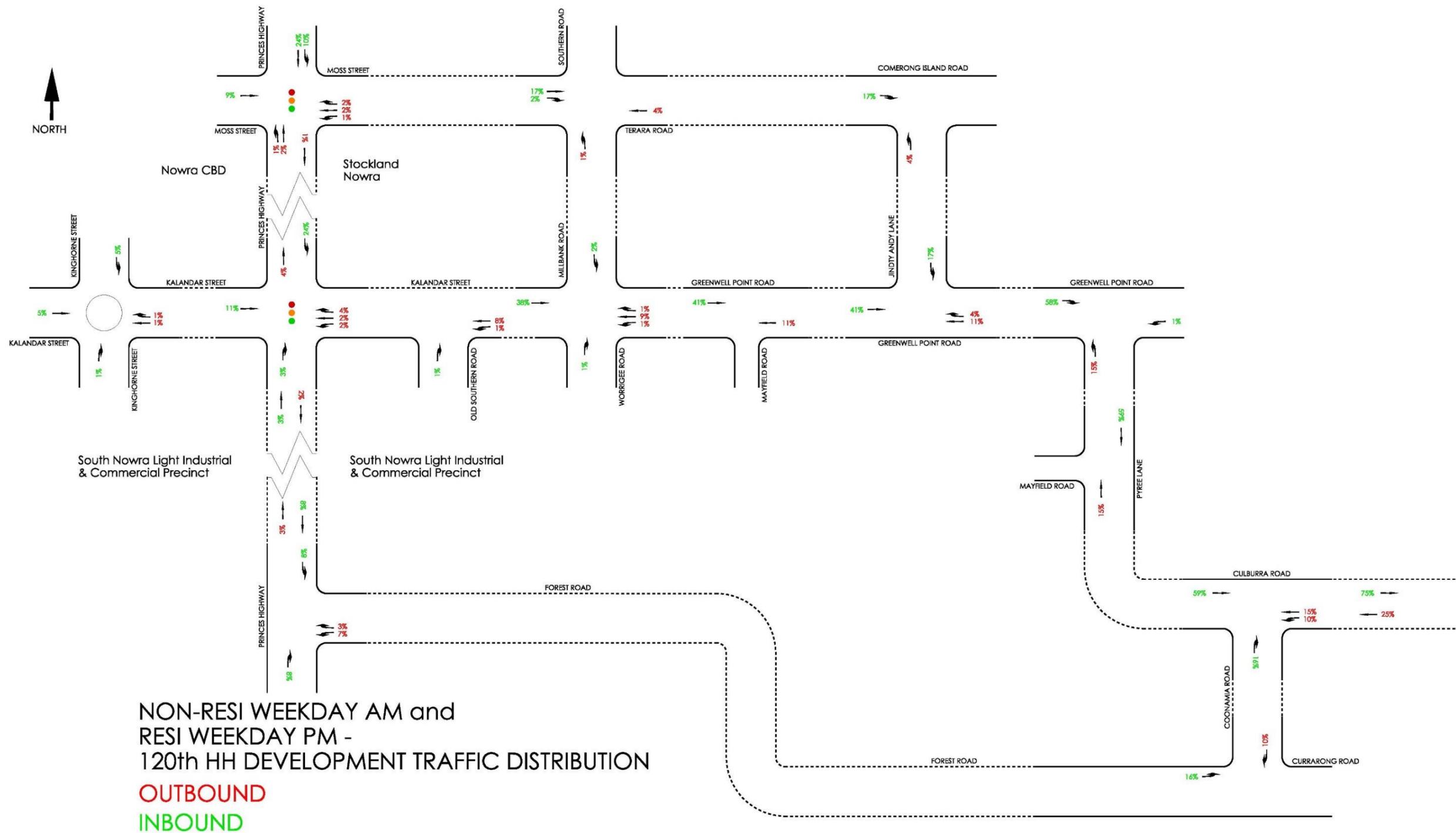


Figure 7.6: Directional Distribution – Saturday Peak Hour

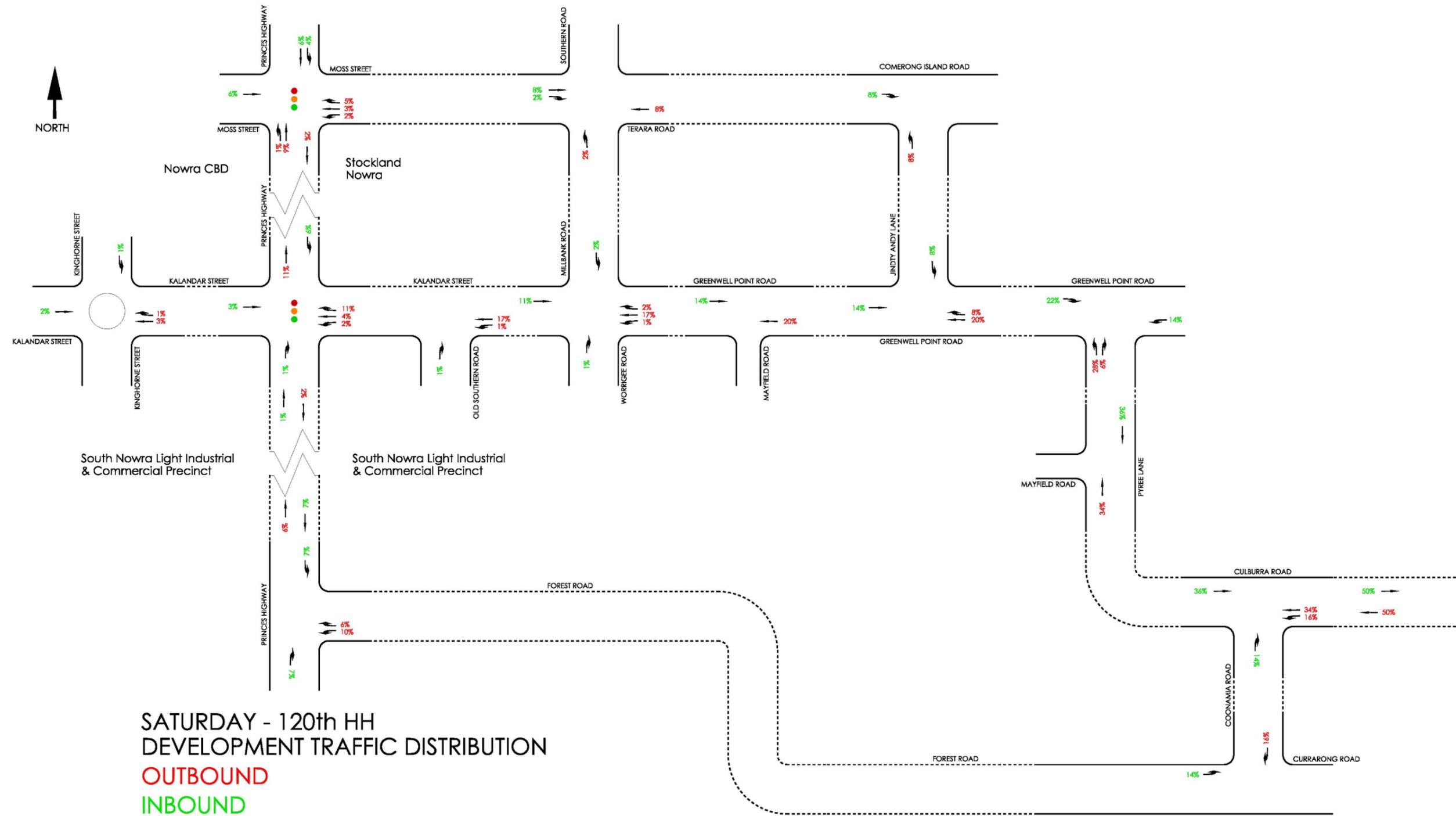


Figure 7.7: Total and Development Volumes – Friday AM Peak Hour

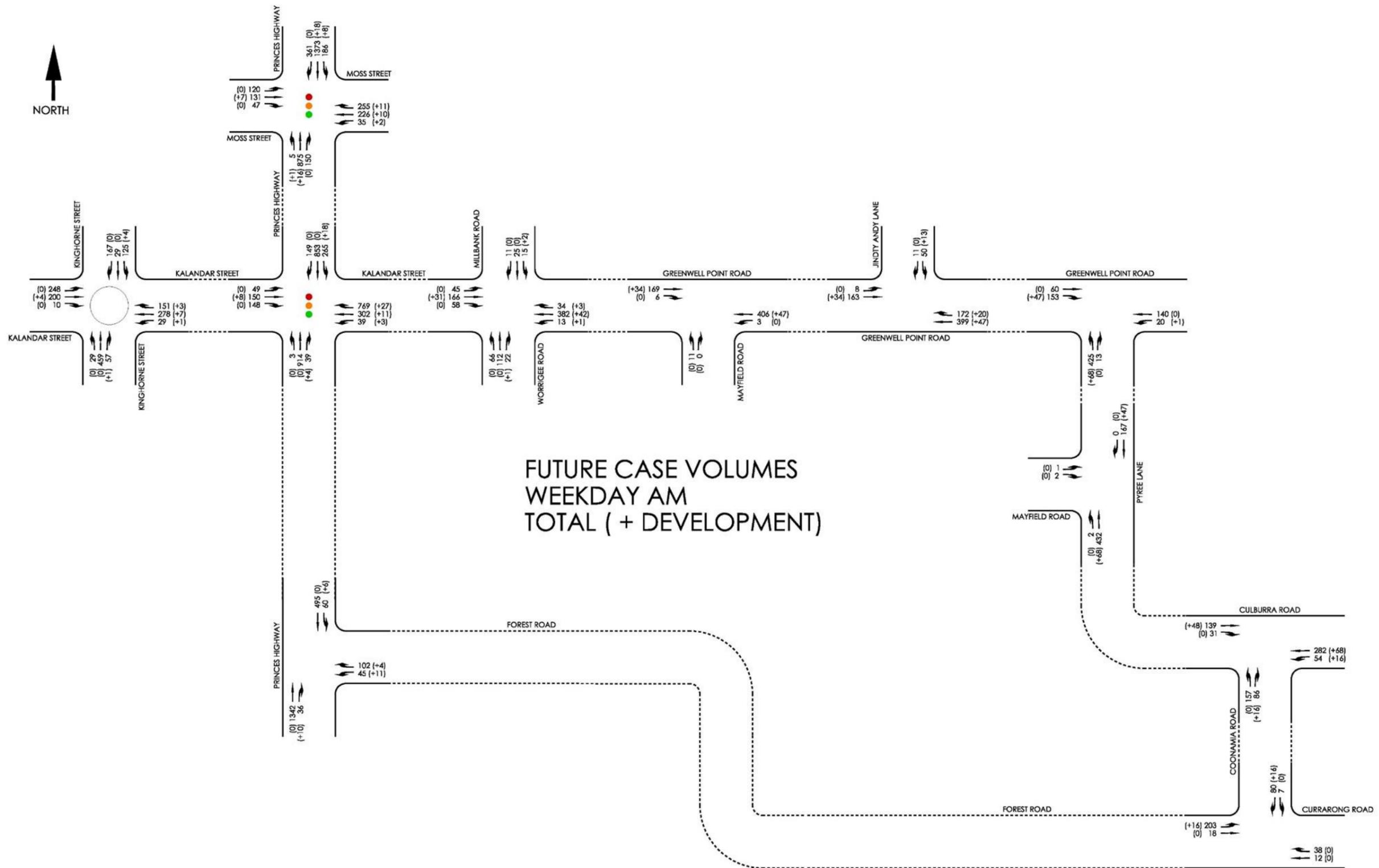


Figure 7.8: Total and Development Volumes – Friday PM Peak Hour

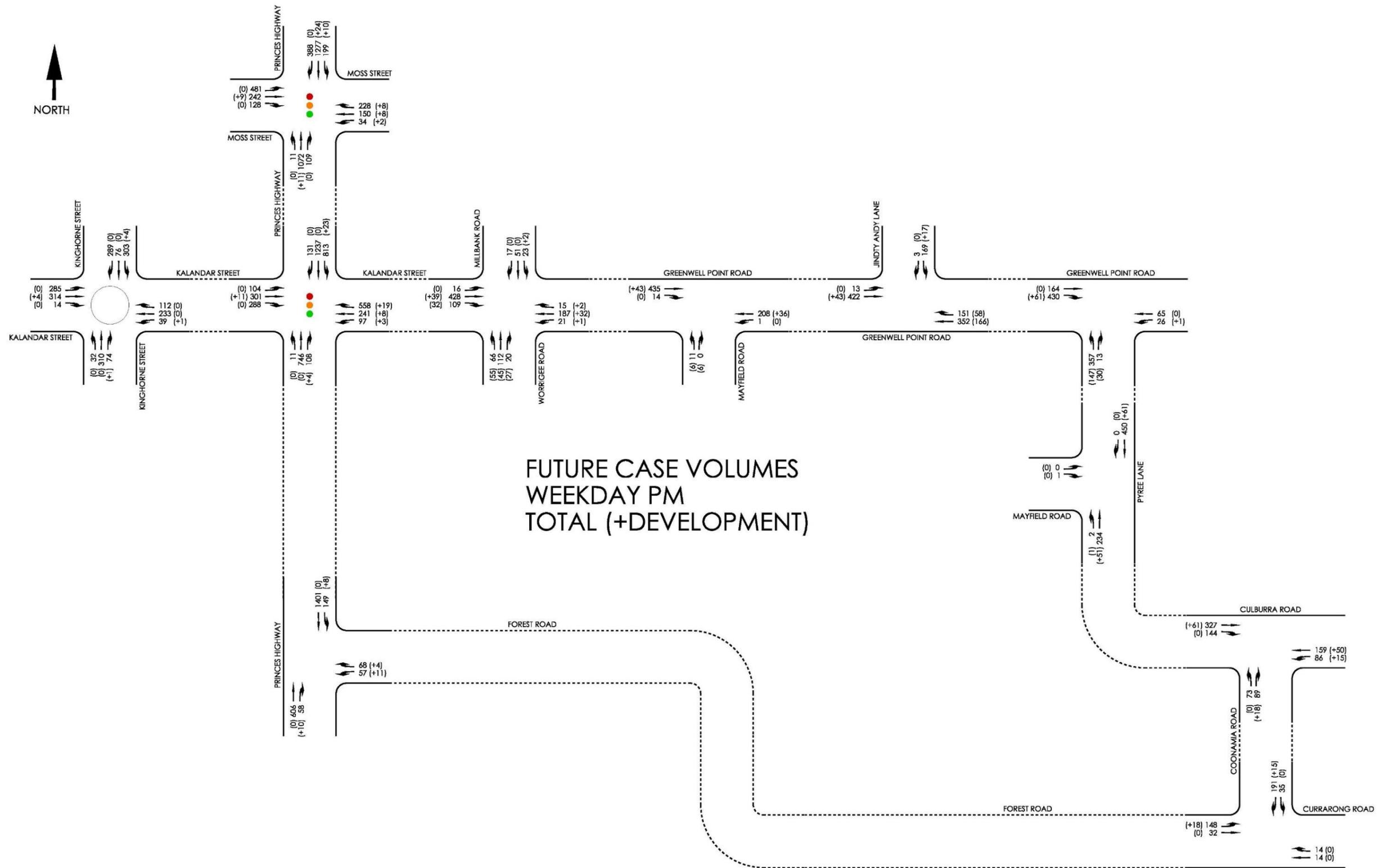


Figure 7.9: Total and Development Volumes – Saturday Peak Hour

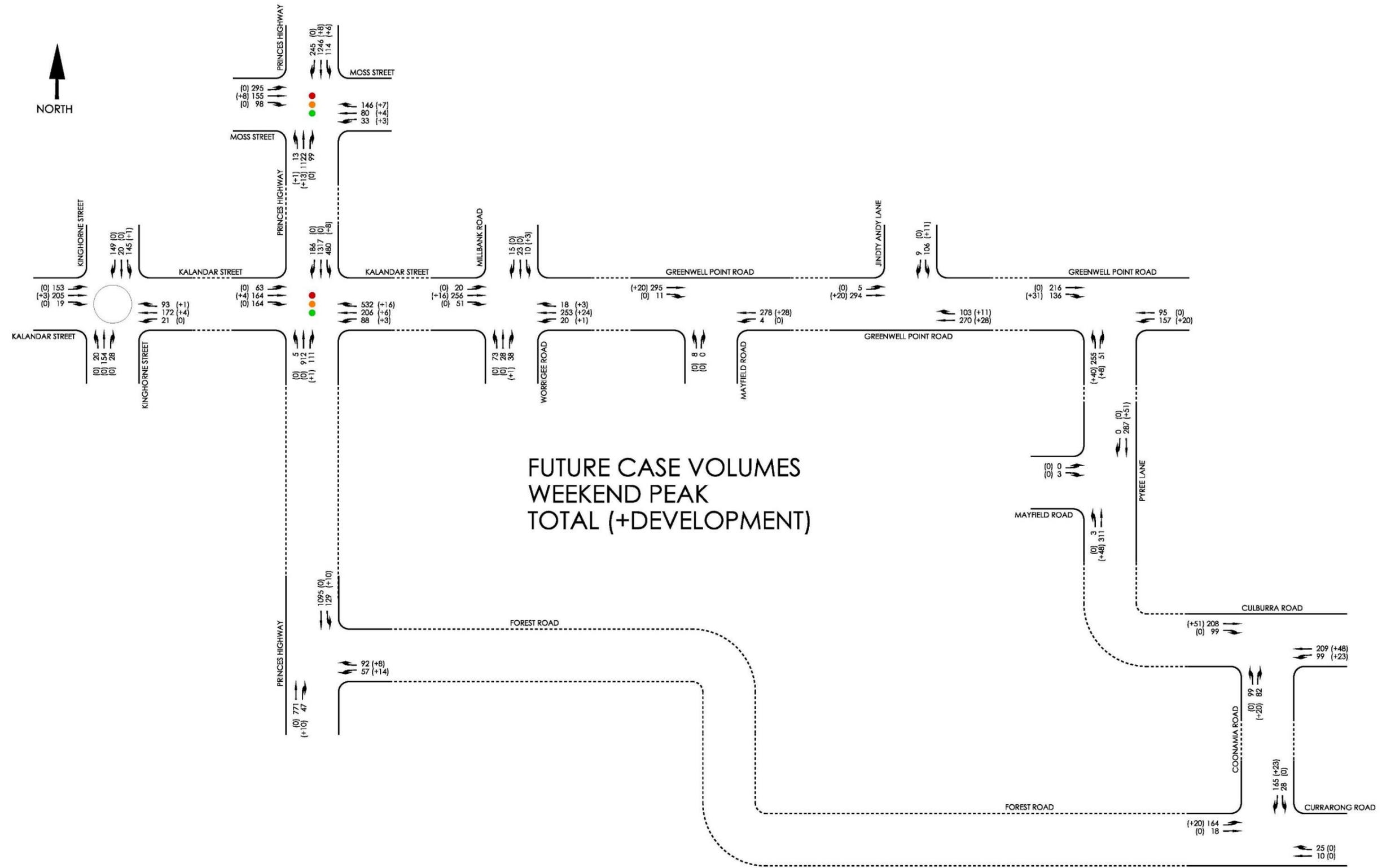


Table 7.12, Table 7.13 and Table 7.14 present the estimated increase in turning movements on the surrounding road network following full site development. Percentages are shown with traffic volumes presented in brackets.

**Table 7.12: Proposed Directional Distribution – Friday AM Peak Hour**

Direction	Route	Residential Outbound	Residential Inbound	Non-residential Outbound	Non-residential Inbound
West	West of Princes Highway (via Jindy Andy Lane)	10% (9)	2% (2)	2% (1)	9% (5)
	West of Princes Highway (via Millbank Road)				
	West of Princes Highway (via Kalandar Street)	11% (10)	2% (2)	3% (2)	11% (6)
North	North of the Shoalhaven River (via Jindy Andy Lane)	11% (10)	3% (3)	2% (1)	10% (5)
	North of the Shoalhaven River (via Millbank Road)				
	North of the Shoalhaven River (via Kalandar Street)	16% (15)	5% (5)	2% (1)	24% (14)
South	South of Forest Road	8% (7)	6% (5)	7% (4)	8% (5)
East	East of Princes Highway (via Jindy Andy Lane)	2% (2)	0% (0)	0% (0)	0% (0)
	East of Princes Highway (via Millbank Road)				
	East of Princes Highway (via Kalandar Street)	13% (12)	2% (2)	3% (2)	3% (2)
	East of Princes Highway (via Worrigeer Road or Old Southern Road)	2% (2)	2% (2)	2% (1)	2% (1)
	East of Princes Highway (via Forest Road)	3% (3)	2% (2)	3% (2)	8% (5)
<b>Total</b>		<b>76% (69)</b>	<b>24% (22)</b>	<b>25% (14)</b>	<b>75% (43)</b>

**Table 7.13: Proposed Directional Distribution – Friday PM Peak Hour**

Direction	Route	Residential Outbound	Residential Inbound	Non-residential Outbound	Non-residential Inbound
West	West of Princes Highway (via Jindy Andy Lane)	2% (2)	9% (8)	10% (6)	2% (1)
	West of Princes Highway (via Millbank Road)				
	West of Princes Highway (via Kalandar Street)	3% (3)	11% (10)	11% (6)	2% (1)
North	North of the Shoalhaven River (via Jindy Andy Lane)	2% (2)	10% (9)	11% (6)	3% (2)
	North of the Shoalhaven River (via Millbank Road)				
	North of the Shoalhaven River (via Kalandar Street)	2% (2)	24% (21)	16% (9)	5% (3)
South	South of Forest Road	7% (6)	8% (7)	8% (5)	6% (4)
East	East of Princes Highway (via Jindy Andy Lane)	1% (1)	0% (0)	2% (1)	0% (0)
	East of Princes Highway (via Millbank Road)				
	East of Princes Highway (via Kalandar Street)	3% (3)	3% (3)	13% (8)	2% (1)
	East of Princes Highway (via Worrigee Road or Old Southern Road)	2% (2)	2% (2)	2% (1)	2% (1)
	East of Princes Highway (via Forest Road)	3% (3)	8% (7)	3% (2)	2% (1)
<b>Total</b>		<b>25% (22)</b>	<b>75% (65)</b>	<b>76% (44)</b>	<b>24% (14)</b>

**Table 7.14: Proposed Directional Distribution – Saturday Peak Hour**

Direction	Route	Residential Outbound	Residential Inbound	Non-residential Outbound	Non-residential Inbound
West	West of Princes Highway (via Jindy Andy Lane)	3% (3)	6% (6)	3% (1)	6% (3)
	West of Princes Highway (via Millbank Road)				
	West of Princes Highway (via Kalandar Street)	5% (5)	3% (3)	5% (2)	3% (1)
North	North of the Shoalhaven River (via Jindy Andy Lane)	5% (5)	4% (4)	5% (2)	4% (2)
	North of the Shoalhaven River (via Millbank Road)				
	North of the Shoalhaven River (via Kalandar Street)	9% (8)	6% (6)	9% (4)	6% (3)
South	South of Forest Road	10% (9)	7% (7)	10% (5)	7% (3)
East	East of Princes Highway (via Jindy Andy Lane)	2% (2)	0% (0)	2% (1)	0% (0)
	East of Princes Highway (via Millbank Road)				
	East of Princes Highway (via Kalandar Street)	2% (2)	1% (1)	2% (1)	1% (1)
	East of Princes Highway (via Worrigeer Road or Old Southern Road)	2% (2)	2% (2)	2% (1)	2% (1)
	East of Princes Highway (via Forest Road)	6% (6)	7% (7)	6% (3)	7% (3)
	Greenwell Point	6% (6)	14% (12)	6% (3)	14% (7)
<b>Total</b>		<b>50% (48)</b>	<b>50% (48)</b>	<b>50% (23)</b>	<b>50% (23)</b>

### 7.3. Traffic Impact

The West Culburra Beach development will be the major source of growth in the Culburra Beach area over the next 10 years. It is anticipated that the development will be completed in stages, with full site development reached approx. 8 years after commencement.

An assessment of the impacts that the anticipated development traffic would have on the surrounding road network can be made by comparing intersection performance prior to and following full site development.

The proposed development is anticipated to generate an additional 174, 186 and 105 vehicle movements (two-way) on the road network west of Culburra Beach during the respective Friday AM, Friday PM and Saturday peak hours.

Table 7.15 presents a summary of intersection operating conditions following full site development while full results are contained in Appendix C.

**Table 7.15: Future Operating Conditions (Equivalent 120th HH plus Development Traffic)**

Intersection	Peak	SIDRA Version 8 Results			
		Degree of Saturation (DOS)	Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)
Culburra Road/ Coonemia Road	Friday AM	0.19	13	6	A
	Friday PM	0.19	13	5	A
	Saturday	0.17	12	5	A
Culburra Road/ Mayfield Road	Friday AM	0.01	15	0	B
	Friday PM	0.01	48	0	D
	Saturday	0.01	15	0	B
Greenwell Point Road/ Pyree Lane	Friday AM	0.36	15	14	B
	Friday PM	0.69	15	62	B
	Saturday	0.31	14	10	A
Greenwell Point Road/ Jindy Andy Lane	Friday AM	0.25	25	7	B
	Friday PM	0.01	19	0	B
	Saturday	0.03	18	1	B
Greenwell Point Road/ Mayfield Road	Friday AM	0.02	15	1	B
	Friday PM	0.04	21	1	B
	Saturday	0.01	15	0	A
Greenwell Point Road/ Millbank Road/ Worrigea Road	Friday AM	0.16	28	4	B
	Friday PM	0.30	31	9	C
	Saturday	0.13	21	4	B
Princes Highway/ Kalandar Street	Friday AM	1.06	103	457	F
	Friday PM	1.25	170	>500	F
	Saturday	1.11	105	>500	F
Coonemia Road/ Currarong Road/ Forest Road	Friday AM	0.12	9	4	A
	Friday PM	0.28	9	10	A
	Saturday	0.24	9	8	A
Kalandar Street/ Kingham Street	Friday AM	0.76	26	77	B
	Friday PM	0.78	20	81	B
	Saturday	0.38	12	19	A
Princes Highway/ Forest Road	Friday AM	0.25	15	3	B
	Friday PM	1.00	183	18	F
	Saturday	0.79	75	11	F
Princes Highway/ Moss Street	Friday AM	1.07	115	423	F
	Friday PM	1.21	123	394	F
	Saturday	0.96	55	230	D

On the basis of the above assessment, under equivalent 120<sup>th</sup> HH traffic volumes with the addition of traffic generated by the development:

- the local priority-controlled intersections operate satisfactorily, with minimal delays and queues on all approaches during the three respective peak periods
- with the additional development traffic, the intersections along Princes Highway at Kalandar Street, Forest Road and Moss Street will continue to operate at poor levels (LOS F) particularly during the Friday AM and Friday PM peak periods.

### 7.3.1. Princes Highway Signalised Intersections

Table 7.16 provides a summary of the increase in traffic volumes from development traffic at the key Princes Highway signalised intersections of Kalandar Street and Moss Street.

**Table 7.16: Signalised Intersection Traffic Volume Comparison**

Intersection	Existing Equivalent 120 <sup>th</sup> HH Traffic Volumes through Intersection (vehicles)			Development Traffic Increase through Intersection		
	Friday AM	Friday PM	Saturday	Friday AM	Friday PM	Saturday
Princes Highway/ Kalandar Street	3,575	4,473	4,089	68 (2%)	65 (1%)	38 (1%)
Princes Highway/ Moss Street	3,690	4,246	3,495	74 (2%)	73 (2%)	51 (1%)

As shown in Table 7.16, the addition of development traffic at the Princes Highway intersections of Kalandar Street and Moss Street represents only a marginal increase in the total volume of traffic travelling through the intersections following full site development. During the three peak hours examined, a maximum increase of 2% on existing traffic volumes is anticipated. It should also be noted that proposed East Nowra Sub-Arterial (Section 2.3.2) Road is expected to alleviate congestion at Greenwell Point Road by providing alternative route to Nowra and North -western Suburbs. At this stage, it is not clear what upgrades are proposed along Princes Highway as part of the *Nowra-Bomaderry Structure Plan*, however the plan is endorsed by the NSW Government. In reference to this, any mitigation works required at intersections along Princes Highway have not been tested as part of scope of this project and it is anticipated that these intersections will be upgraded as part of the Structure Plan.

## 7.3.2. Proposed Access at Culburra Road

At this concept stage, the layout of the proposed roundabout accesses to the residential and town centre precincts and the priority-controlled access to the industrial development are not finalised. The proposed development is anticipated to generate less than 100 trips within any peak hour. From the existing conditions assessment (Section 2.8) it is expected that the local network (with the exception of Princes Highway) will operate at good level of service (LoS A) indicating there is room to accommodate additional traffic.

As such, modelling of the proposed new accesses along Culburra Road has not been carried out, noting the proposed roundabouts have significant throughput capacity. However, given the low traffic volumes during typical road network peak hours, it is anticipated that the proposed accesses will operate at satisfactory levels with the full development traffic.

## 7.3.3. Internal Road Layout

The proposed internal road layout follows a typical pattern that is also generally consistent with the local area. The minimum road reserve width is 20 metres for local roads and 25 metres for the central collector road and perimeter road of the residential subdivision. These easily accommodate a 9-12-metre-wide carriageway and appropriate intersection arrangements for buses, waste collection vehicles and emergency vehicles.

Internal roundabouts within the residential precincts appropriately manage the key four-way intersections, minimise potential vehicle conflicts and reduce travel speeds.

The industrial area has a proposed 25-metre-wide road reserve which would satisfactorily accommodate the anticipated heavy vehicle activity with appropriate parking restrictions around curves.

On the basis of the above, it is expected that the internal road network will operate satisfactorily, with minimal queuing and/or delays.

# 8. RURAL ROAD ASSESSMENT

08

As part of the assessment, Shoalhaven City Council previously requested that GTA Consultants consider the following:

- Austroads cross-section warrants based on existing road characteristics.
- Annual Average Daily Traffic (AADT) of study roads to understand the expected impact on an average day.
- Peak Seasonal Daily Traffic (PSDT) to understand the expected impact during peak seasonal times of the year such as school holidays and across the summer period. This is based on the 120<sup>th</sup> highest hour.
- Warrants for overtaking lanes on roads in the study area.

GTA Consultants has responded to each assessment criteria as requested (noting references to updated guidance where necessary), which are set out in the following sections.

## 8.1. Austroads Cross-Section Warrants

Guidance on single lane rural road cross-sections have been sourced from *Austroads Guide to Road Design Part 3: Geometric Design* Table 4.5 which is reproduced in Figure 8.1.

Figure 8.1: Austroads Table 4.5: Single carriageway rural road widths (m)

Element	Design AADT				
	1–150	150–500	500–1000	1000–3000	> 3000
Traffic lanes <sup>(1)</sup>	3.7 (1 x 3.7)	6.2 (2 x 3.1)	6.2–7.0 (2 x 3.1/3.5)	7.0 (2 x 3.5)	7.0 (2 x 3.5)
Total shoulder	2.5	1.5	1.5	2.0	2.5
Minimum shoulder seal <small>(2),(3),(4),(5),(6)</small>	0	0.5	0.5	1.0	1.5
Total carriageway	8.7	9.2	9.2–10.0	11.0	12.0

- 1 Traffic lane widths include centrelines but are exclusive of edge-lines.
- 2 Where significant numbers of cyclists use the roadway, consideration should be given to fully sealing the shoulders. Suggest use of a maximum size 10 mm seal within a 20 km radius of towns.
- 3 Wider shoulder seals may be appropriate depending on requirements for maintenance costs, soil and climatic conditions or to accommodate the tracked width requirements for Large Combination Vehicles.
- 4 Short lengths of wider shoulder seal or lay-bys to be provided at suitable locations to provide for discretionary stops.
- 5 Full width shoulder seals may be appropriate adjacent to safety barriers and on the high side of superelevation.
- 6 A minimum 7.0 m seal should be provided on designated heavy vehicle routes (or where the AADT contains more than 15% heavy vehicles).

Source: Austroads Guide to Road Design Part 3 (2016)

GTA Consultants has reviewed each of the study area roads identified in Figure 8.2 based on information from aerial photography (Nearmap, Six Maps, Google), Google Street view and our previous site inspections of the study area, to categorise each section of road according to Figure 8.1. The results for rural sections of roads are summarised in Table 8.1 with the urban roads summarised in Table 8.2.

A rural road was considered any road without a formal kerb and an urban road was considered as any of those roads with a formal kerb passing through residential areas.

Table 8.1: Summary of Existing Rural Road Characteristics

Road	From	To	Urban / Rural	Speed Limit	Traffic Lane Width (m)	Average Sealed Shoulder (N/W)	Average Sealed Shoulder (S/E)	Average Gravel Shoulder (N/W)	Average Gravel Shoulder (S/E)	Total Carriageway Width	Rural Design AADT
Forest Road	Coonemia Road	Callala Beach Road	Rural	80	6	0	0	0.5	0.5	7	150 to 500
Forest Road	Callala Beach Road	East Stump Road	Rural	80/90/100	6	1	1	0	0	8	150 to 500
Forest Road	East Stump Road	Chestnut Road	Rural	100	6	0.5	0.5	1	1	9	150 to 500
Forest Road	Chestnut Road	Manuka Road	Rural	100	6	1	1	0.5	0.5	9	150 to 500
Forest Road	Manuka Road	Gimlet Road	Rural	100/90	6	1	1	1	1	10	150 to 500
Forest Road	Gimlet Road	Vineyard Road	Rural	90	6	1	1	1	1	10	150 to 500
Forest Road	Vineyard Road	Western Road	Rural	90	6	1	1	1	1	10	150 to 500
Forest Road	Western Road	Princes Highway	Rural	60	6	0	0	0	0	6	150 to 500
Comerong Island Road	Jindy Andy Lane	90 degree left turn	Rural	60	6	0	0	0	0	6	150 to 500
Comerong Island Road	90 degree left turn	Milbank Road	Rural	60/80	6	0	0	0	0	6	150 to 500
Terara Road	Milbank Road	Vondalga Crescent	Rural	50/60	6	0	0	0	0	6	150 to 500
Greenwell Point Road	West Street	Pyree Lane	Rural	100/80/50	5.4	0 to 0.3	0 to 0.3	0	0	5.4 to 6	150 to 500
Greenwell Point Road	Pyree Lane	Jindy Andy Lane	Rural	80	6.4	0.3 to 0.5	0.3 to 0.5	0	0	7 to 8.4	500 to 1000
Greenwell Point Road	Jindy Andy Lane	Apperleys Lane	Rural	80	6.2	0 to 0.3	0 to 0.3	0	0	6.2 to 6.8	150 to 500
Greenwell Point Road	Apperleys Lane	Worrigea Road	Rural	60/80	7	0.5 to 1	0.5 to 1	0	0	8 to 9	1000 to 3000
Greenwell Point Road	Worrigea Road	Old Southern Road	Rural	60	6.2	0 to 3m	0 to 2m	0	0	6.2 to 11.2	500 to 1000
Greenwell Point Road	Old Southern Road	Clipper Road	Rural	60	6.7	0.3	0.3	0	0	7.3	150 to 500

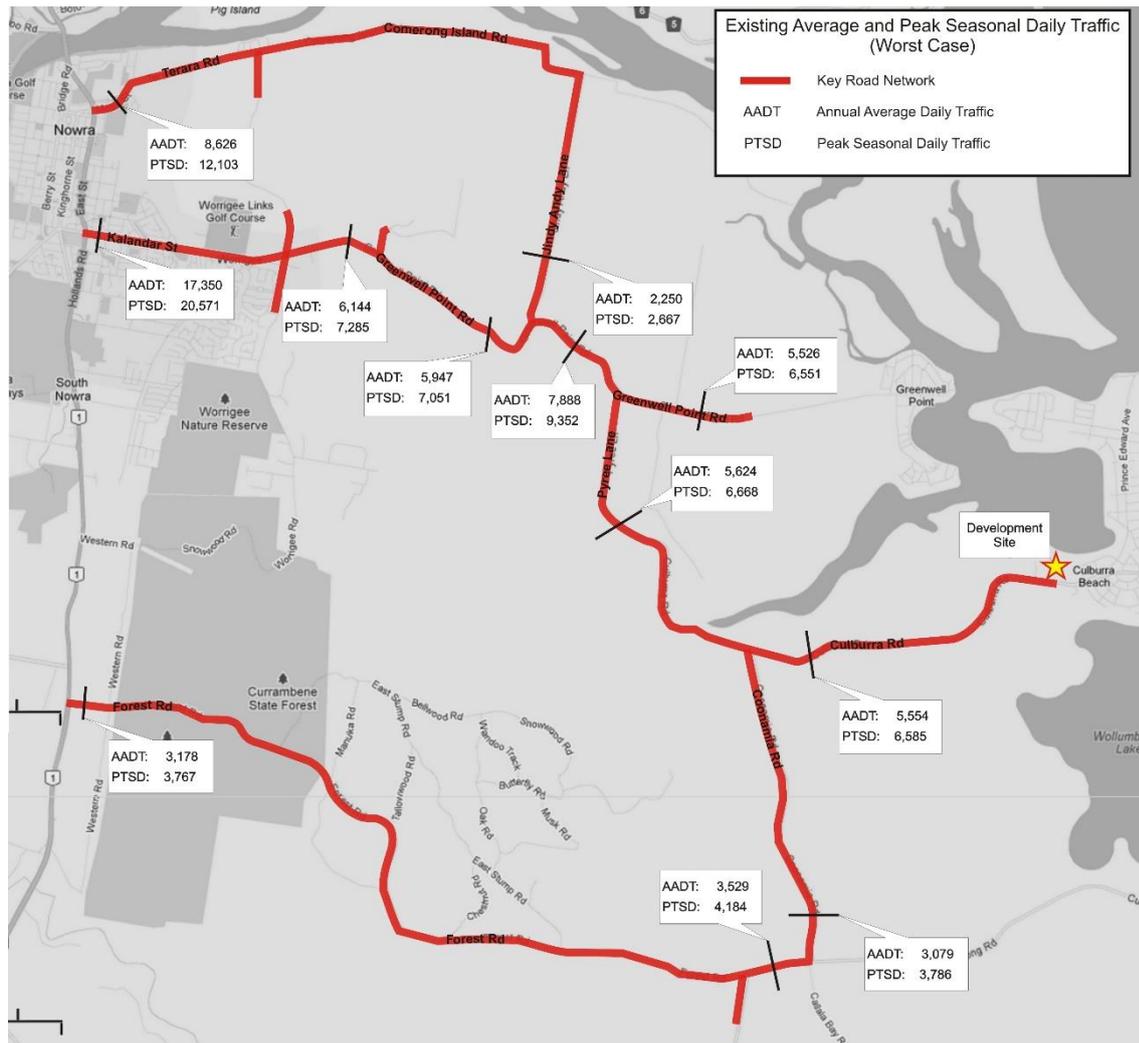
Table 8.2: Summary of Existing Urban Road Characteristics

Road	From	To	Urban / Rural	Speed Limit	Traffic Lane Width (m)	Average Sealed Shoulder (N/W)	Average Sealed Shoulder (S/E)	Average Gravel Shoulder (N/W)	Average Gravel Shoulder (S/E)	Total Carriageway Width	Rural Design AADT
Moss Street	Wondalga Crescent	Princes Highway	Urban	50	12	Kerb	Kerb	N/A	N/A	12	N/A
Greenwell Point Road	Clipper Road	McKay Street	Urban	60	12	Kerb	Kerb	N/A	N/A	12	N/A
Kalandar Street	McKay Street	Stuart Street	Urban	60	10.4	Kerb	Kerb	N/A	N/A	10.4	N/A
Kalandar Street	Stuart Street	Wallace Street	Urban	60	10.8	Kerb	Kerb	N/A	N/A	10.8	N/A
Kalandar Street	Wallace Street	Princes Highway	Urban	60	12	Kerb	Kerb	N/A	N/A	12	N/A

## 8.2. Existing Daily Traffic

Shoalhaven City Council provided GTA Consultants with peak to daily traffic conversion factors to apply to the May 2012 volumes counted at the study intersections to determine AADT and PSDT. These factors have been applied to the existing May 2012 turning movement volumes, and are shown in Figure 8.2. Shoalhaven City Council provided two conversion factors for both AADT and PSDT, and each were based on the Friday (8:00am-9:00am) or Saturday (12:00pm-1:00pm) peak hours. When applied to the turning volumes, in some cases the factors yielded different daily volumes. In these cases, as requested by Council, the higher or 'worst case' value has been selected for assessment.

Figure 8.2: Existing AADT and Seasonal Traffic Volumes



Base Map Source: maps.google.com.au

The existing daily traffic based on the factors provided by Shoalhaven City Council has been compared to the design capacity based on Austroads requirements. The comparison is provided in Table 8.3.

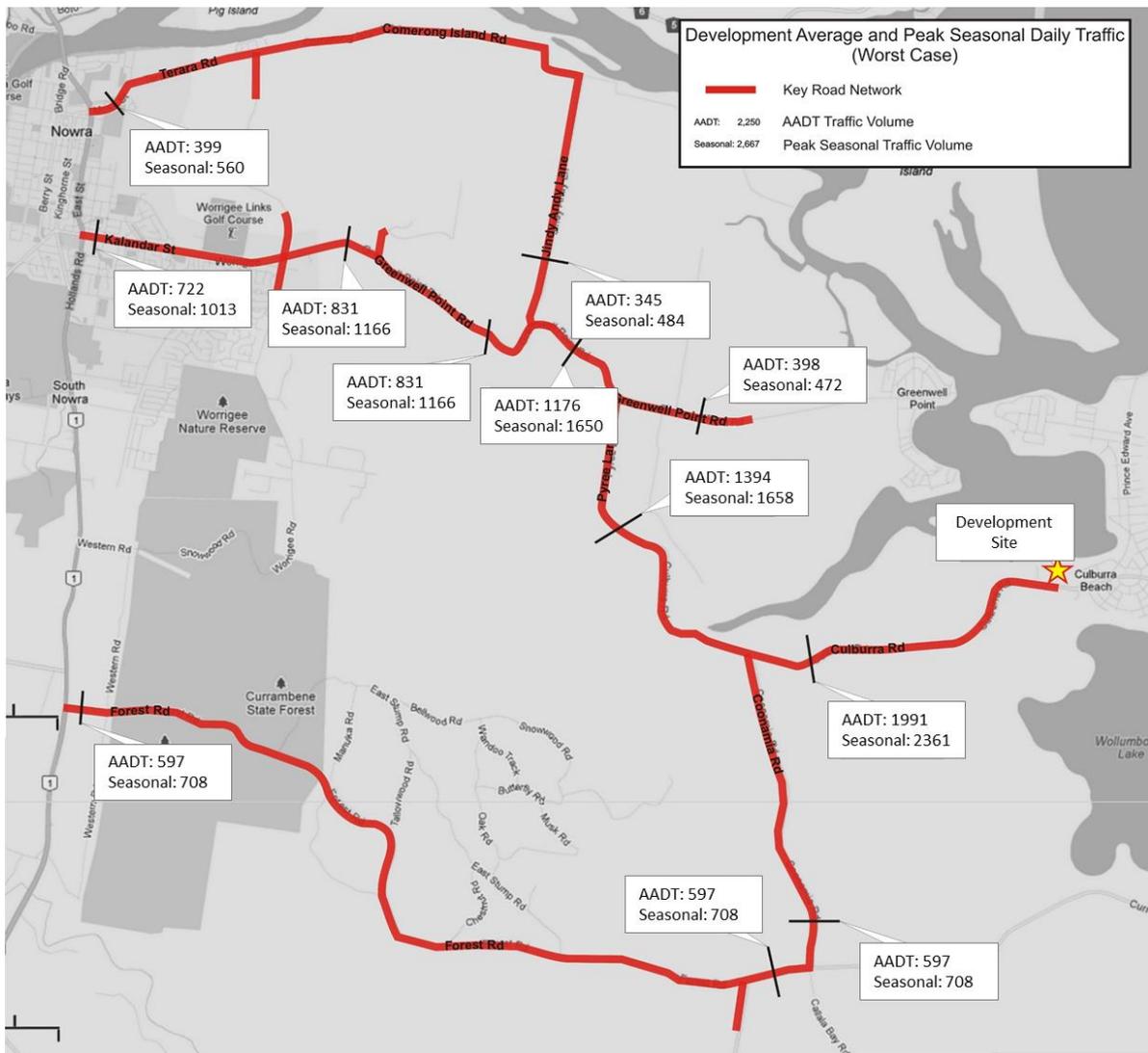
Table 8.3: Design AADT and Existing Daily Traffic

Road	From	To	Rural Design AADT	Existing AADT	Existing PSDT
Coonemia Road	Culburra Road	Forest Road	150 to 500	3,079	3,786
Forest Road	Coonemia Road	Callala Beach Road	150 to 500	3,529	4,184
Forest Road	Callala Beach Road	Princes Highway	150 to 500	3,178	3,767
Greenwell Point Road	West Street	Pyree Lane	150 to 500	5,526	6,551
Greenwell Point Road	Pyree Lane	Jindy Andy Lane	500 to 1000	7,888	9,352
Greenwell Point Road	Jindy Andy Lane	Apperleys Lane	150 to 1000	5,947	7,051
Greenwell Point Road	Apperleys Lane	Worrigea Road	1,000 to 3,000	6,144	7,285
Jindy Andy Lane	Greenwell Point Road	Comerong Island Road	150 to 500	2,250	2,667
Pyree Lane	Coonemia Road	Jindy Andy Lane	150 to 500	5,624	6,668

## 8.3. Anticipated Daily Development Traffic

The anticipated average and peak seasonal daily traffic has been estimated based on previous discussions with Council and investigations by GTA Consultants. The additional development traffic and expected future traffic post development is summarised in Figure 8.3 and Figure 8.4 respectively.

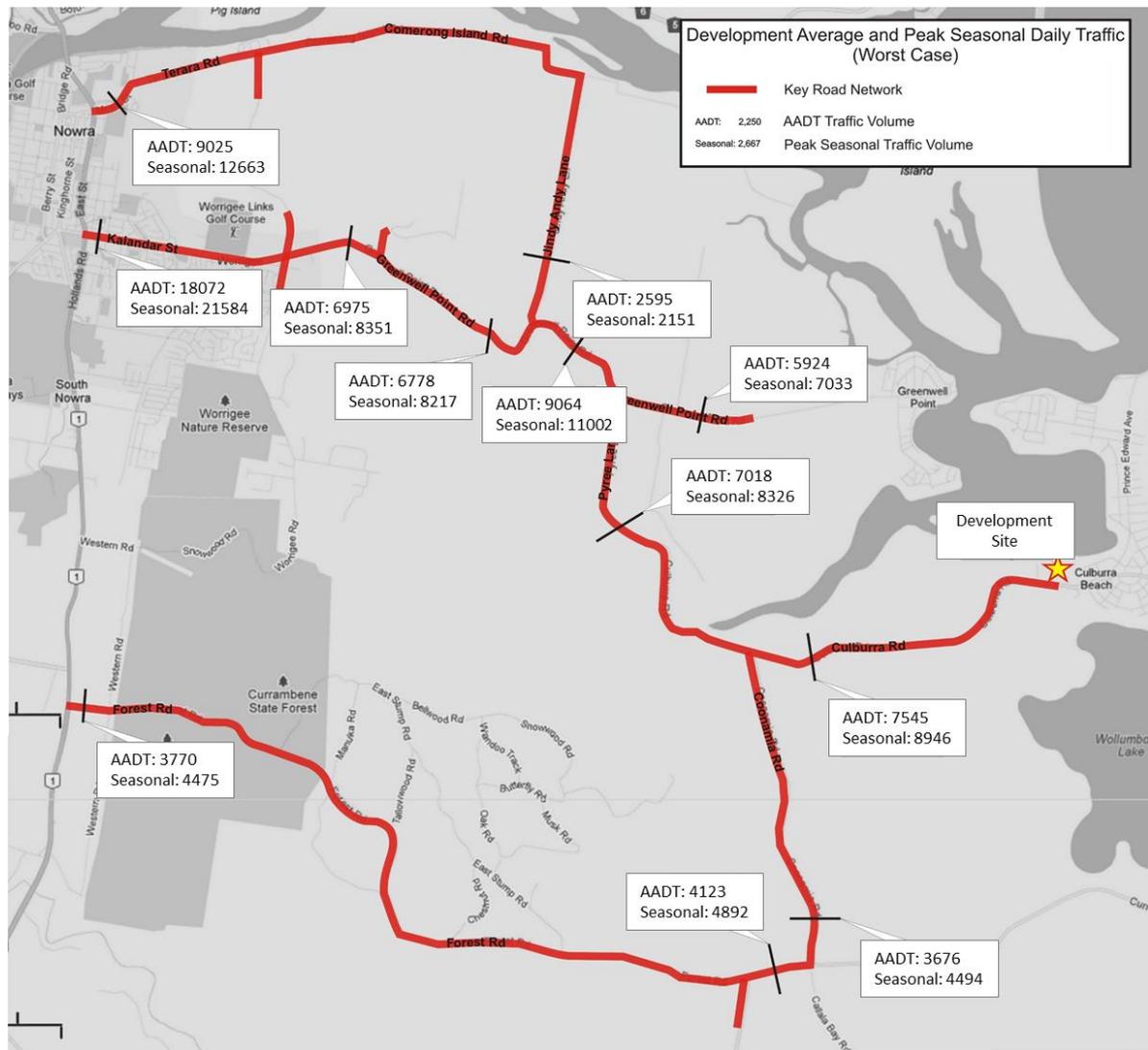
Figure 8.3: Anticipated Development Daily Traffic



Base Map Source: maps.google.com.au

The methods for calculating the traffic volumes generated by the development are explained in Section 7. According to GTA calculations, the worst case day for peak hour traffic generation onto the road network west of Culburra Beach was found to be Saturday and traffic distribution was assigned accordingly.

Figure 8.4: Anticipated Post Development Daily Traffic



Basemap source: maps.google.com.au (accessed February 2020)

Figure 8.3 and Figure 8.4 indicate that the rural road network surrounding Culburra Beach is expected to experience increases of between 345 and 1,991 vehicles on an average day, and between 472 and 2,361 vehicles at seasonal peaks. Culburra Road is expected to experience the greatest increases, originating directly from the development at 1,991 vpd (AADT) and 2,361 vpd (PSDT). Greenwell Point Road, Pyree Lane and Forest Road are also expected to see increased volumes.

However, it is also recognised that the performance of the road is more likely to be dictated by the peak hour performance of the intersections along its length. As shown in Section 7 the surveyed intersections Level of Service is unchanged with the addition of development traffic under 120<sup>th</sup> HH conditions.

### 8.4. Warrants for Overtaking Lanes

GTA Consultants has also investigated the warrants for overtaking lanes for the study roads identified in Figure 8.5. Guidance on the warrants and installation of overtaking lanes is provided in Austroads Guide to Road Design Part 3: Geometric Design Section 9.4 and Section 5.6.4.

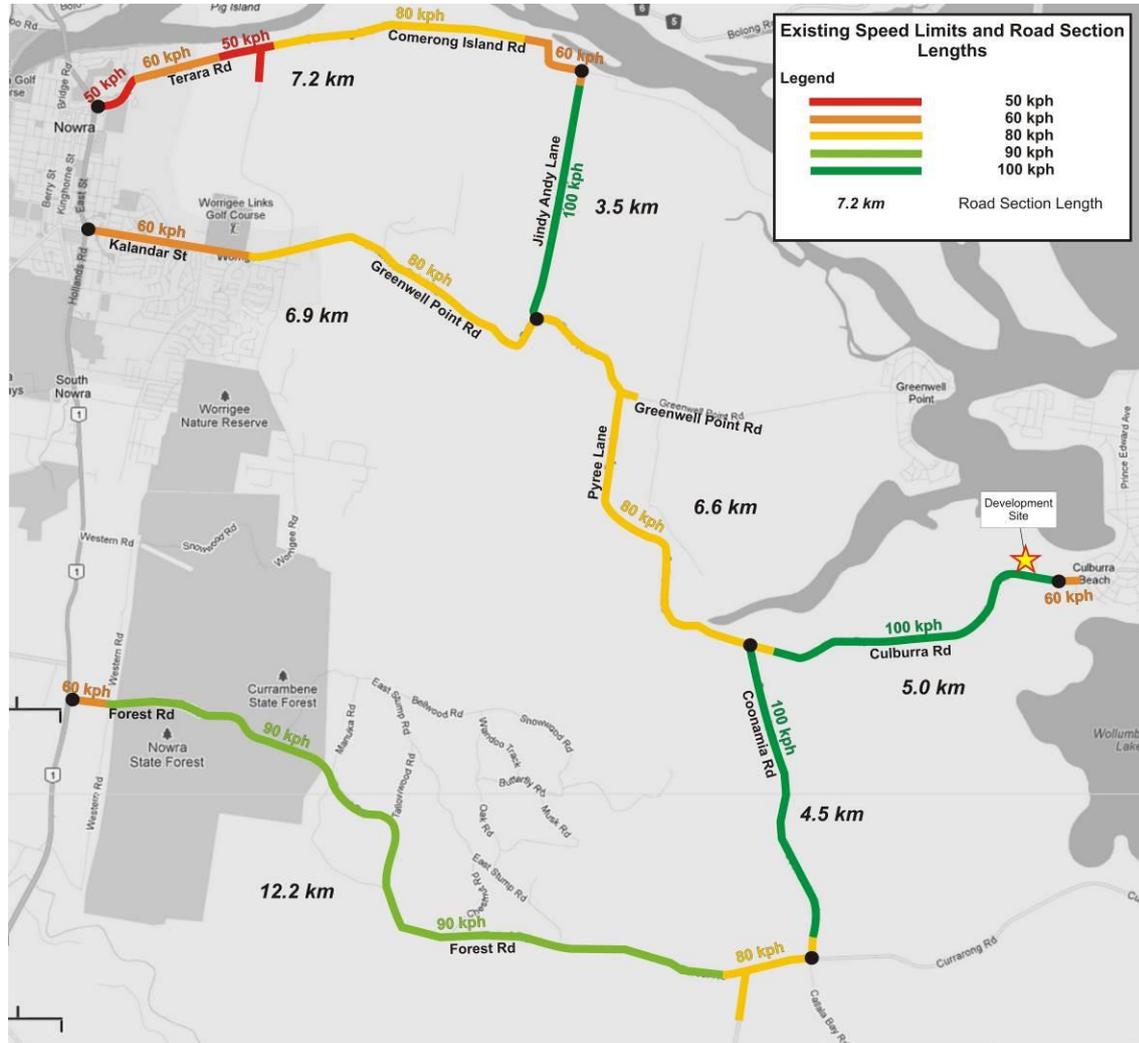
Section 9.4 notes that “in deciding whether an overtaking lane is warranted, the evaluation needs to be carried out over a significant route length and not be isolated to the particular length over which the additional lane may be constructed.”

# RURAL ROAD ASSESSMENT

Table 9.1 of Austroads Guide to Road Design Part 3: Geometric Design provides the traffic volume guidelines for providing overtaking lanes. The document also states that “Table 9.1 gives the current-year design volumes (AADT) at which overtaking lanes would normally be justified. These guidelines apply for short low-cost overtaking lanes at spacings of 10 to 15 km or more along a road in a given direction. If spacing is less than this, a specific cost benefit analysis will need to justify the construction at the shorter spacing.”

The existing speed limits and road section lengths are provided in Figure 8.5.

Figure 8.5: Existing Speed Limit and Road Section Lengths



Basemap source: maps.google.com.au (accessed February 2020)

Figure 8.5 shows that study roads contain a mixture of 50, 60, 80 and 100 kilometres per hour speed limits. Speed limits on all roads reduce as they approach the Princes Highway from the proposed development.

Typically, overtaking lanes are provided on high speed rural roads or where there are significant grades that could result in slow moving vehicles. The routes to and from the development from Princes Highway are mostly flat with minor grades with a single lane in each direction.

The longest stretch of existing rural road is 12.2 kilometres and that is through a previously upgraded section of Forest Road. For the vast majority of this road, double barrier lines are in place and sight distance is not sufficient for any overtaking.

The longest stretch of 100 kilometres per hour speed limit on Culburra Road is 5 kilometres and a review of that stretch shows there are only a couple of short sections (approximately 500 metres long) without barrier lines. None of those sections of Culburra Road are considered appropriate for an overtaking lane.

Coonemia Road are also a 100 kilometres per hour road, but its length is not considered long enough to warrant overtaking lanes.

Given the existing geometry and speed zones on the study roads, and the typical guidelines which suggest providing overtaking lanes every 10 to 15 kilometres, overtaking lanes are not considered necessary for any of the study roads and are not proposed to be provided.

### 8.5. Summary

The following conclusions from this rural road analysis can be drawn:

- The existing shoulder widths, including sealed shoulders, of the rural roads assessed do not meet the current Austroads guidance, which may have a road safety implication.
- Notwithstanding, the roads and intersections assessed are operating satisfactorily (analysis indicates that the intersections will continue to operate satisfactorily following completion of the development).
- An assessment of overtaking lanes on higher speed roads did not identify any locations where such treatments could be required (or easily introduced).

## 9. CONCLUSION

09

## 9.1. Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

1. The West Culburra Beach subdivision development involves approximately 47 ha on land west of the established area of Culburra Beach.
2. The subdivision comprises three precincts. On completion, the West Culburra Beach Development will include low and medium density residential dwellings, shop top housing, industrial lots and a sporting facility. While the residential subdivision is anticipated to be constructed first, construction of each development product is expected to be in response to market demand, noting all three stages (or parts thereof) can be constructed independently and concurrently if needed (from a traffic and transport perspective).
3. Access to the development is proposed from Culburra Road at three new roundabouts and the upgraded industrial area priority-controlled intersection.
4. GTA Consultants completed a design assessment of the three Culburra Road roundabouts proposed as part of the development. For improved road safety outcomes generally, it is recommended that the existing 100km/h speed limit is reduced to 80km/h to the west of the roundabout, with appropriate urban area entry treatment(s) provided. On this basis, the proposed roundabouts are suitable in both location and design.
5. The dedicated pedestrian/ cycle route proposed as part of the development is an east-west route along the foreshore area providing access to Culburra Beach shops. Connections to this route will be provided along the subdivision road network and the Culburra Road shared path.
6. It is recommended that all new bus stops provide shelter, seating, lighting, timetable information as a minimum.
7. A minimum of a 1.2-metre-wide footpath is required on local and collector streets within a subdivision in line with SDCP 2014 Chapter G11, reference A38.2.
8. For the pedestrian and cycle path along the Crookhaven River foreshore reserve associated within the development, it is recommended to provide a minimum 3 metre width given their potential as recreational routes.
9. The pedestrian and bicycle network has been designed to allow pedestrian and cycling access to all key origins and destinations within, and outside the vicinity of the site.
10. It is anticipated that refuse collection for the new development areas will be undertaken by a standard 12.5-metre-long Council garbage vehicle.
11. In total, 174, 186 and 105 trips are expected to be generated from both the residential and non-residential developments onto the wider road network in the Friday AM, Friday PM and Saturday peaks respectively.
12. In assessing intersection performance on the road network surrounding the site, growth factors were applied to the recorded traffic volumes (May 2012) to represent the equivalent 120<sup>th</sup> Highest Annual Hour (HH). This was done to reflect the significant seasonal increases in traffic volumes in the region.
13. Under equivalent 120<sup>th</sup> HH traffic volumes the performance, the additional development traffic has marginal impact on intersections surrounding the site.
14. Under equivalent 120<sup>th</sup> HH traffic volumes the Princes Highway intersections at Kalandar Street and Moss Street currently operate at poor levels, particularly during the Friday AM and Friday PM peak periods. The addition of development traffic at these intersections (which would compromise only 2% of the flow at these intersections) would not result in any discernible change in intersection performance.
15. Marginal increase in traffic is expected due to the development. However, local intersections are expected to operate at satisfactory levels.

## CONCLUSION

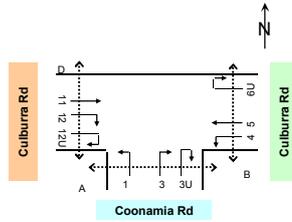
16. The existing shoulder widths, including sealed shoulders, of the rural roads assessed do not accord with current Austroads guidance.
17. Notwithstanding, the roads and intersections assessed are operating satisfactorily (Section 7 shows that the intersections will continue to operate satisfactorily following completion of the development).
18. An assessment of overtaking lanes on higher speed roads did not identify any locations where such treatments could be required (or easily introduced).

In conclusion, the additional development traffic has a marginal impact on the surrounding road network and the proposed access to each of the development precincts and the intersections within the regional network will continue to operate at satisfactory levels.

# A. SURVEY RESULTS

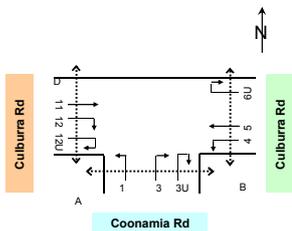


Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 1. Culburra Rd / Coonamia Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



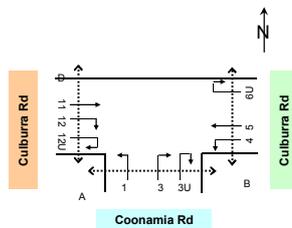
Approach	Coonamia Rd						Culburra Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	16	0	16	10	0	10	0	0	0	18	0	18	22	1	23	0	0	0
12:15 to 12:30	25	0	25	12	0	12	0	0	0	12	0	12	25	0	25	0	0	0
12:30 to 12:45	26	1	27	13	0	13	0	0	0	17	0	17	50	0	50	0	0	0
12:45 to 13:00	11	0	11	15	0	15	0	0	0	14	0	14	31	0	31	0	0	0
13:00 to 13:15	14	0	14	10	0	10	0	0	0	9	0	9	22	0	22	0	0	0
13:15 to 13:30	12	0	12	12	0	12	0	0	0	10	1	11	10	0	10	0	0	0
13:30 to 13:45	19	1	20	16	0	16	0	0	0	8	0	8	21	0	21	0	0	0
13:45 to 14:00	15	0	15	15	0	15	0	0	0	13	0	13	30	0	30	0	0	0
Totals	138	2	140	103	0	103	0	0	0	101	1	102	211	1	212	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 1. Culburra Rd / Coonamia Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Culburra Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	30	1	31	19	1	20	0	0	0
12:15 to 12:30	27	0	27	22	0	22	0	0	0
12:30 to 12:45	33	0	33	13	0	13	0	0	0
12:45 to 13:00	35	0	35	23	1	24	0	0	0
13:00 to 13:15	28	0	28	14	0	14	0	0	0
13:15 to 13:30	32	2	34	17	0	17	0	0	0
13:30 to 13:45	35	0	35	12	0	12	0	0	0
13:45 to 14:00	40	0	40	18	0	18	0	0	0
Totals	260	3	263	138	2	140	0	0	0

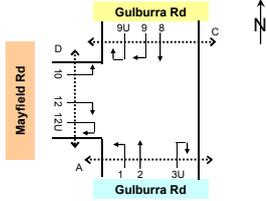
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 1. Culburra Rd / Coonamia Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Coonamia Rd						Culburra Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	78	1	79	50	0	50	0	0	0	61	0	61	128	1	129	0	0	0
12:15 to 13:15	76	1	77	50	0	50	0	0	0	52	0	52	128	0	128	0	0	0
12:30 to 13:30	63	1	64	50	0	50	0	0	0	50	1	51	113	0	113	0	0	0
12:45 to 13:45	56	1	57	53	0	53	0	0	0	41	1	42	84	0	84	0	0	0
13:00 to 14:00	60	1	61	53	0	53	0	0	0	40	1	41	83	0	83	0	0	0
Totals	138	2	140	103	0	103	0	0	0	101	1	102	211	1	212	0	0	0

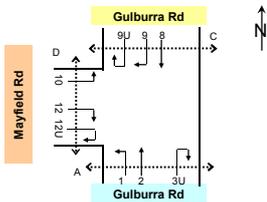
Approach	Culburra Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	125	1	126	77	2	79	0	0	0
12:15 to 13:15	123	0	123	72	1	73	0	0	0
12:30 to 13:30	128	2	130	67	1	68	0	0	0
12:45 to 13:45	130	2	132	66	1	67	0	0	0
13:00 to 14:00	135	2	137	61	0	61	0	0	0
Totals	260	3	263	138	2	140	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 2. Gulburra Rd / Mayfield Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



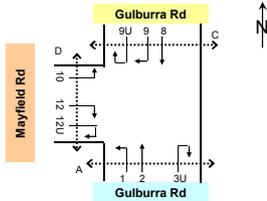
Approach	Gulburra Rd								
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	0	0	0	38	1	39	0	0	0
12:15 to 12:30	1	0	1	51	0	51	0	0	0
12:30 to 12:45	1	0	1	75	0	75	0	0	0
12:45 to 13:00	0	0	0	45	0	45	0	0	0
13:00 to 13:15	0	0	0	33	0	33	0	0	0
13:15 to 13:30	1	0	1	21	0	21	0	0	0
13:30 to 13:45	0	0	0	40	1	41	0	0	0
13:45 to 14:00	0	0	0	45	0	45	0	0	0
Totals	3	0	3	348	2	350	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 2. Gulburra Rd / Mayfield Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Gulburra Rd									Mayfield Rd								
	Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	47	0	47	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
12:15 to 12:30	45	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 to 12:45	57	0	57	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
12:45 to 13:00	39	1	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 to 13:15	44	1	45	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0
13:15 to 13:30	53	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 to 13:45	60	0	60	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
13:45 to 14:00	46	0	46	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Totals	391	2	393	0	1	1	0	0	0	0	0	0	5	0	5	0	0	0

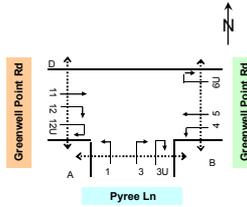
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 2. Gulburra Rd / Mayfield Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Gulburra Rd								
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	2	0	2	209	1	210	0	0	0
12:15 to 13:15	2	0	2	204	0	204	0	0	0
12:30 to 13:30	2	0	2	174	0	174	0	0	0
12:45 to 13:45	1	0	1	139	1	140	0	0	0
13:00 to 14:00	1	0	1	139	1	140	0	0	0
Totals	3	0	3	348	2	350	0	0	0

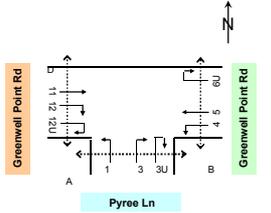
Approach	Gulburra Rd									Mayfield Rd								
	Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	188	1	189	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0
12:15 to 13:15	185	2	187	0	1	1	0	0	0	0	0	0	2	0	2	0	0	0
12:30 to 13:30	193	2	195	0	1	1	0	0	0	0	0	0	2	0	2	0	0	0
12:45 to 13:45	196	2	198	0	1	1	0	0	0	0	0	0	2	0	2	0	0	0
13:00 to 14:00	203	1	204	0	1	1	0	0	0	0	0	0	3	0	3	0	0	0
Totals	391	2	393	0	1	1	0	0	0	0	0	0	5	0	5	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 3. Greenwell Point Rd / Pyree Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



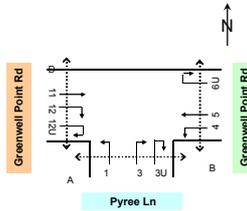
Approach	Pyree Ln						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	38	1	39	2	0	2	0	0	0	23	0	23	17	1	18	0	0	0
12:15 to 12:30	38	0	38	9	0	9	0	0	0	31	1	32	20	1	21	0	0	0
12:30 to 12:45	60	1	61	16	0	16	0	0	0	26	1	27	22	1	23	0	0	0
12:45 to 13:00	34	0	34	7	0	7	0	0	0	27	1	28	14	0	14	0	0	0
13:00 to 13:15	27	0	27	10	0	10	0	0	0	17	1	18	17	0	17	0	0	0
13:15 to 13:30	19	0	19	2	0	2	0	0	0	19	1	20	14	0	14	0	0	0
13:30 to 13:45	35	1	36	5	0	5	0	0	0	23	0	23	18	0	18	0	0	0
13:45 to 14:00	46	0	46	1	0	1	0	0	0	23	1	24	21	0	21	0	0	0
Totals	297	3	300	82	0	82	0	0	0	189	6	195	143	3	146	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 3. Greenwell Point Rd / Pyree Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	45	1	46	21	0	21	0	0	0
12:15 to 12:30	39	0	39	21	0	21	0	0	0
12:30 to 12:45	54	0	54	20	0	20	0	0	0
12:45 to 13:00	33	1	34	21	1	22	0	0	0
13:00 to 13:15	39	0	39	38	1	39	0	0	0
13:15 to 13:30	41	0	41	30	1	31	0	0	0
13:30 to 13:45	52	0	52	26	0	26	0	0	0
13:45 to 14:00	38	0	38	24	0	24	0	0	0
Totals	341	2	343	201	3	204	0	0	0

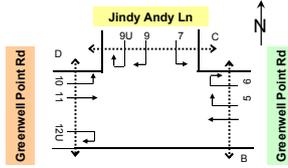
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 3. Greenwell Point Rd / Pyree Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Pyree Ln						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	370	2	372	34	0	34	0	0	0	107	3	110	73	3	76	0	0	0
12:15 to 13:15	159	1	160	42	0	42	0	0	0	101	4	105	73	2	75	0	0	0
12:30 to 13:30	140	1	141	35	0	35	0	0	0	89	4	93	67	1	68	0	0	0
12:45 to 13:45	115	1	116	24	0	24	0	0	0	86	3	89	63	0	63	0	0	0
13:00 to 14:00	127	1	128	18	0	18	0	0	0	82	3	85	70	0	70	0	0	0
Totals	297	3	300	82	0	82	0	0	0	189	6	195	143	3	146	0	0	0

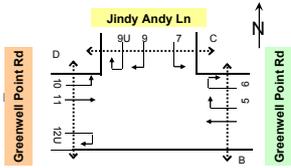
Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	171	1	172	83	1	84	0	0	0
12:15 to 13:15	165	1	166	100	2	102	0	0	0
12:30 to 13:30	167	1	168	109	3	112	0	0	0
12:45 to 13:45	165	1	166	115	3	118	0	0	0
13:00 to 14:00	170	0	170	118	2	120	0	0	0
Totals	341	2	343	201	3	204	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 4. Greenwell Point Rd / Jindy Andy Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



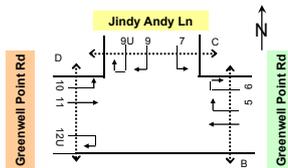
Approach	Direction	Greenwell Point Rd								
		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
		Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15		42	3	45	23	0	23	0	0	0
12:15 to 12:30		42	0	42	18	1	19	0	0	0
12:30 to 12:45		49	1	50	14	0	14	0	0	0
12:45 to 13:00		54	2	56	17	0	17	0	0	0
13:00 to 13:15		34	0	34	20	0	20	0	0	0
13:15 to 13:30		23	0	23	8	0	8	0	0	0
13:30 to 13:45		34	1	35	16	0	16	0	0	0
13:45 to 14:00		51	0	51	14	0	14	0	0	0
Totals		329	7	336	130	1	131	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 4. Greenwell Point Rd / Jindy Andy Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Jindy Andy Ln			Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	17	0	17	1	0	1	0	0	0	1	0	1	46	2	48	0	0	0
12:15 to 12:30	17	0	17	2	0	2	0	0	0	1	0	1	59	1	60	0	0	0
12:30 to 12:45	22	0	22	2	0	2	0	0	0	1	0	1	54	0	54	0	0	0
12:45 to 13:00	20	0	20	2	0	2	0	0	0	1	0	1	53	4	57	0	0	0
13:00 to 13:15	18	0	18	1	0	1	0	0	0	3	0	3	42	0	42	0	0	0
13:15 to 13:30	19	0	19	1	0	1	0	0	0	1	0	1	48	1	49	0	0	0
13:30 to 13:45	11	0	11	0	0	0	0	0	0	2	0	2	57	1	58	0	0	0
13:45 to 14:00	18	0	18	1	0	1	0	0	0	1	0	1	53	1	54	0	0	0
Totals	142	0	142	10	0	10	0	0	0	11	0	11	412	10	422	0	0	0

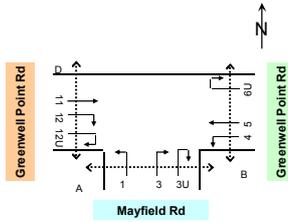
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 4. Greenwell Point Rd / Jindy Andy Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Direction	Greenwell Point Rd								
		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
		Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00		187	6	193	72	1	73	0	0	0
12:15 to 13:15		179	3	182	69	1	70	0	0	0
12:30 to 13:30		160	3	163	59	0	59	0	0	0
12:45 to 13:45		145	3	148	61	0	61	0	0	0
13:00 to 14:00		142	1	143	58	0	58	0	0	0
Totals		329	7	336	130	1	131	0	0	0

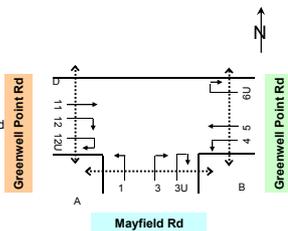
Approach	Jindy Andy Ln			Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	76	0	76	7	0	7	0	0	0	4	0	4	212	7	219	0	0	0
12:15 to 13:15	77	0	77	7	0	7	0	0	0	6	0	6	208	5	213	0	0	0
12:30 to 13:30	79	0	79	6	0	6	0	0	0	6	0	6	197	5	202	0	0	0
12:45 to 13:45	68	0	68	4	0	4	0	0	0	7	0	7	200	6	206	0	0	0
13:00 to 14:00	66	0	66	3	0	3	0	0	0	7	0	7	200	3	203	0	0	0
Totals	142	0	142	10	0	10	0	0	0	11	0	11	412	10	422	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



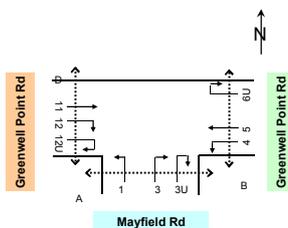
Approach	Mayfield Rd						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	1	0	1	0	0	0	0	0	0	0	0	0	46	1	47	0	0	0
12:15 to 12:30	1	0	1	0	0	0	0	0	0	0	0	44	0	44	0	0	0	
12:30 to 12:45	1	0	1	0	0	0	0	0	0	1	1	62	0	62	0	0	0	
12:45 to 13:00	3	0	3	0	0	0	0	1	1	2	46	1	47	0	0	0		
13:00 to 13:15	2	0	2	3	0	3	0	1	1	2	34	0	34	0	0	0		
13:15 to 13:30	4	0	4	0	0	0	0	0	0	0	25	0	25	0	0	0		
13:30 to 13:45	0	0	0	0	0	0	0	1	0	1	38	1	39	0	0	0		
13:45 to 14:00	0	0	0	0	0	0	0	2	0	2	49	0	49	0	0	0		
<b>Totals</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>3</b>	<b>8</b>	<b>344</b>	<b>3</b>	<b>347</b>	<b>0</b>	<b>0</b>	<b>0</b>		

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	53	1	54	0	0	0	0	0	0
12:15 to 12:30	58	0	58	5	0	5	0	0	0
12:30 to 12:45	58	1	59	1	0	1	0	0	0
12:45 to 13:00	47	2	49	3	0	3	0	0	0
13:00 to 13:15	46	1	47	1	0	1	0	0	0
13:15 to 13:30	45	1	46	2	0	2	0	0	0
13:30 to 13:45	67	0	67	0	0	0	0	0	0
13:45 to 14:00	46	2	48	1	0	1	0	0	0
<b>Totals</b>	<b>420</b>	<b>8</b>	<b>428</b>	<b>13</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>

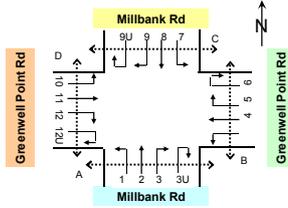
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : Hourly Summary



Approach	Mayfield Rd						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	6	0	6	0	0	0	1	2	3	198	2	200	0	0	0	0	0	0
12:15 to 13:15	7	0	7	3	0	3	2	3	5	186	1	187	0	0	0	0	0	0
12:30 to 13:30	10	0	10	3	0	3	2	3	5	167	1	168	0	0	0	0	0	0
12:45 to 13:45	9	0	9	3	0	3	3	2	5	143	2	145	0	0	0	0	0	0
13:00 to 14:00	6	0	6	3	0	3	4	1	5	146	1	147	0	0	0	0	0	0
<b>Totals</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>8</b>	<b>344</b>	<b>3</b>	<b>347</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

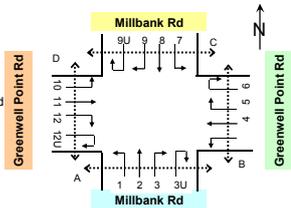
Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	216	4	220	9	0	9	0	0	0
12:15 to 13:15	209	4	213	10	0	10	0	0	0
12:30 to 13:30	196	5	201	7	0	7	0	0	0
12:45 to 13:45	205	4	209	6	0	6	0	0	0
13:00 to 14:00	204	4	208	4	0	4	0	0	0
<b>Totals</b>	<b>420</b>	<b>8</b>	<b>428</b>	<b>13</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 6. Greenwell Point Rd / Millbank Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



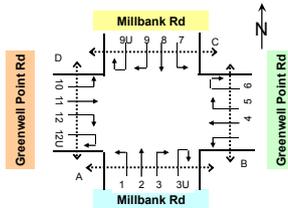
Approach	Millbank Rd												Greenwell Point Rd														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	19	0	19	7	0	7	6	0	6	0	0	0	3	37	2	39	2	0	2	0	0	0	0	0	0		
12:15 to 12:30	9	0	9	2	0	2	8	1	9	0	0	0	3	0	3	48	0	48	8	0	8	0	0	0	0		
12:30 to 12:45	15	0	15	6	0	6	11	0	11	0	0	0	4	1	5	60	0	60	0	0	0	0	0	0	0		
12:45 to 13:00	15	0	15	6	1	7	3	0	3	0	0	0	4	0	4	36	0	36	2	0	2	0	0	0	0		
13:00 to 13:15	6	0	6	7	0	7	6	0	6	0	0	0	4	0	4	33	0	33	3	0	3	0	0	0	0		
13:15 to 13:30	5	0	5	8	0	8	10	1	11	0	0	0	3	0	3	26	1	27	1	0	1	0	0	0	0		
13:30 to 13:45	9	0	9	7	1	8	6	0	6	0	0	0	5	0	5	35	1	36	1	1	2	0	0	0	0		
13:45 to 14:00	11	1	12	6	0	6	3	0	3	0	0	0	3	14	17	45	0	45	2	0	2	0	0	0	0		
Totals	89	1	90	49	2	51	53	2	55	0	0	0	29	15	44	320	4	324	19	1	20	0	0	0	0		

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 6. Greenwell Point Rd / Millbank Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Millbank Rd												Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	0	0	0	5	2	7	5	0	5	0	0	0	4	0	4	55	0	55	14	0	14	0	0	0	0		
12:15 to 12:30	2	0	2	2	0	2	4	0	4	0	0	0	1	0	1	52	0	52	7	0	7	0	0	0	0		
12:30 to 12:45	0	0	0	3	0	3	2	0	2	0	0	0	3	1	4	47	2	49	8	0	8	0	0	0	0		
12:45 to 13:00	3	1	4	6	0	6	1	0	1	0	0	0	7	0	7	36	0	36	12	0	12	0	0	0	0		
13:00 to 13:15	1	0	1	2	0	2	2	0	2	0	0	0	3	0	3	42	1	43	9	0	9	0	0	0	0		
13:15 to 13:30	2	0	2	6	0	6	3	0	3	0	0	0	7	0	7	47	1	48	10	0	10	0	0	0	0		
13:30 to 13:45	1	0	1	2	0	2	2	0	2	0	0	0	8	0	8	57	2	59	11	0	11	0	0	0	0		
13:45 to 14:00	1	0	1	3	0	3	3	0	3	0	0	0	4	0	4	49	1	50	11	0	11	0	0	0	0		
Totals	10	1	11	29	2	31	22	0	22	0	0	0	37	1	38	385	7	392	82	0	82	0	0	0	0		

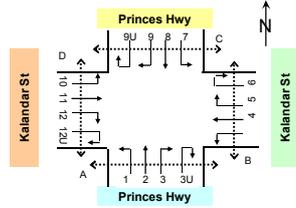
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 6. Greenwell Point Rd / Millbank Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Millbank Rd												Greenwell Point Rd														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	58	0	58	21	1	22	28	1	29	0	0	0	14	1	15	181	2	183	12	0	12	0	0	0	0		
12:15 to 13:15	45	0	45	21	1	22	28	1	29	0	0	0	15	1	16	177	0	177	13	0	13	0	0	0	0		
12:30 to 13:30	41	0	41	27	1	28	30	1	31	0	0	0	15	1	16	155	1	156	6	0	6	0	0	0	0		
12:45 to 13:45	35	0	35	28	2	30	25	1	26	0	0	0	16	0	16	130	2	132	7	1	8	0	0	0	0		
13:00 to 14:00	31	1	32	28	1	29	25	1	26	0	0	0	15	14	29	139	2	141	7	1	8	0	0	0	0		
Totals	89	1	90	49	2	51	53	2	55	0	0	0	29	15	44	320	4	324	19	1	20	0	0	0	0		

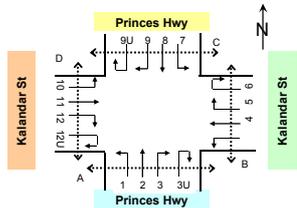
Approach	Millbank Rd												Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	5	1	6	16	2	18	12	0	12	0	0	0	15	1	16	190	2	192	41	0	41	0	0	0	0		
12:15 to 13:15	6	1	7	13	0	13	9	0	9	0	0	0	14	1	15	177	3	180	36	0	36	0	0	0	0		
12:30 to 13:30	6	1	7	17	0	17	8	0	8	0	0	0	20	1	21	172	4	176	39	0	39	0	0	0	0		
12:45 to 13:45	7	1	8	16	0	16	8	0	8	0	0	0	25	0	25	162	4	166	42	0	42	0	0	0	0		
13:00 to 14:00	5	0	5	13	0	13	10	0	10	0	0	0	22	0	22	195	5	200	41	0	41	0	0	0	0		
Totals	10	1	11	29	2	31	22	0	22	0	0	0	37	1	38	385	7	392	82	0	82	0	0	0	0		

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 7. Kalandar St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



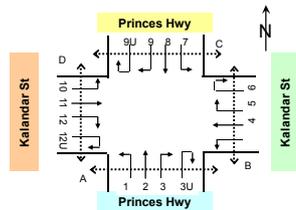
Approach	Princes Hwy												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	0	0	0	183	5	188	14	1	15	0	0	0	19	0	19	48	0	48	105	1	106	0	0	0	0	0	0
12:15 to 12:30	2	1	3	191	5	196	15	1	16	0	0	0	16	0	16	44	1	45	123	0	123	0	0	0	0	0	0
12:30 to 12:45	0	0	0	190	5	195	28	1	29	0	0	0	15	0	15	28	0	28	81	2	83	0	0	0	0	0	0
12:45 to 13:00	1	0	1	189	5	194	27	1	28	0	0	0	18	0	18	39	0	39	100	1	101	0	0	0	0	0	0
13:00 to 13:15	3	0	3	154	1	155	22	0	22	0	0	0	15	0	15	23	0	23	73	0	73	0	0	0	0	0	0
13:15 to 13:30	0	0	0	166	1	167	18	0	18	0	0	0	13	0	13	32	1	33	78	0	78	0	0	0	0	0	0
13:30 to 13:45	3	0	3	186	2	188	20	0	20	0	0	0	11	0	11	35	0	35	90	0	90	0	0	0	0	0	0
13:45 to 14:00	1	0	1	175	3	178	13	0	13	0	0	0	14	0	14	23	1	24	85	0	85	0	0	0	0	0	0
Totals	10	1	11	1434	27	1461	157	4	161	0	0	0	121	0	121	272	3	275	735	4	739	0	0	0	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 7. Kalandar St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Princes Hwy												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)		Direction 11 (Through)		Direction 12 (Right Turn)		Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
12:00 to 12:15	98	0	98	253	2	255	12	2	14	0	0	0	10	0	10	40	0	40	35	0	35	0	0	0
12:15 to 12:30	95	1	96	298	3	301	10	2	12	0	0	0	20	0	20	19	0	19	24	0	24	0	0	0
12:30 to 12:45	97	0	97	314	4	318	17	4	21	0	0	0	10	1	11	34	0	34	39	1	40	0	0	0
12:45 to 13:00	86	0	86	240	2	242	22	0	22	0	0	0	9	0	9	35	0	35	32	0	32	0	0	0
13:00 to 13:15	112	0	112	231	2	233	24	1	25	0	0	0	6	0	6	42	0	42	26	0	26	0	0	0
13:15 to 13:30	79	0	79	275	8	283	27	0	27	0	0	0	7	1	8	34	0	34	36	2	38	0	0	0
13:30 to 13:45	94	1	95	253	3	256	11	0	11	0	0	0	10	0	10	25	1	26	27	0	27	0	0	0
13:45 to 14:00	84	2	86	271	2	273	17	0	17	0	0	0	7	1	8	21	0	21	29	1	30	0	0	0
Totals	745	4	749	2135	26	2161	140	9	149	0	0	0	79	3	82	250	1	251	248	4	252	0	0	0

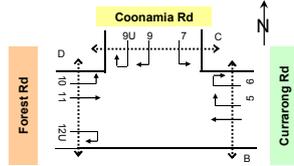
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 7. Kalandar St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Princes Hwy												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	3	1	4	753	20	773	84	4	88	0	0	0	68	0	68	159	1	160	409	4	413	0	0	0	0	0	0
12:15 to 13:15	6	1	7	724	16	740	92	3	95	0	0	0	64	0	64	134	1	135	377	3	380	0	0	0	0	0	0
12:30 to 13:30	4	0	4	699	12	711	95	2	97	0	0	0	61	0	61	122	1	123	332	3	335	0	0	0	0	0	0
12:45 to 13:45	7	0	7	695	9	704	87	1	88	0	0	0	57	0	57	129	1	130	341	1	342	0	0	0	0	0	0
13:00 to 14:00	7	0	7	681	7	688	73	0	73	0	0	0	53	0	53	113	2	115	326	0	326	0	0	0	0	0	0
Totals	10	1	11	1434	27	1461	157	4	161	0	0	0	121	0	121	272	3	275	735	4	739	0	0	0	0	0	0

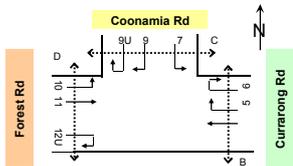
Approach	Princes Hwy												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)		Direction 11 (Through)		Direction 12 (Right Turn)		Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
12:00 to 13:00	376	1	377	1105	11	1116	61	8	69	0	0	0	49	1	50	128	0	128	130	1	131	0	0	0
12:15 to 13:15	390	1	391	1083	11	1094	73	7	80	0	0	0	45	1	46	130	0	130	121	1	122	0	0	0
12:30 to 13:30	374	0	374	1060	16	1076	90	5	95	0	0	0	32	2	34	145	0	145	133	3	136	0	0	0
12:45 to 13:45	371	1	372	999	15	1014	84	1	85	0	0	0	32	1	33	136	1	137	121	2	123	0	0	0
13:00 to 14:00	369	3	372	1030	15	1045	79	1	80	0	0	0	30	2	32	122	1	123	118	3	121	0	0	0
Totals	745	4	749	2135	26	2161	140	9	149	0	0	0	79	3	82	250	1	251	248	4	252	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 8. Forest Rd / Coonamia Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



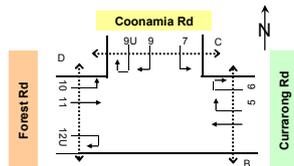
Approach	Direction	Time Period	Currarong Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15			1	0	1	5	0	5	0	0	0
12:15 to 12:30			3	0	3	6	0	6	0	0	0
12:30 to 12:45			3	0	3	5	0	5	0	0	0
12:45 to 13:00			1	0	1	4	0	4	0	0	0
13:00 to 13:15			2	0	2	3	0	3	0	0	0
13:15 to 13:30			1	0	1	5	0	5	0	0	0
13:30 to 13:45			2	0	2	7	0	7	0	0	0
13:45 to 14:00			3	0	3	5	0	5	0	0	0
Totals			16	0	16	40	0	40	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 8. Forest Rd / Coonamia Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Coonamia Rd						Forest Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	6	0	6	29	1	30	0	0	0	23	0	23	3	0	3	0	0	0
12:15 to 12:30	5	0	5	27	0	27	0	0	0	32	0	32	4	0	4	0	0	0
12:30 to 12:45	5	0	5	25	0	25	0	0	0	34	1	35	5	0	5	0	0	0
12:45 to 13:00	6	0	6	31	1	32	0	0	0	25	0	25	2	0	2	0	0	0
13:00 to 13:15	4	0	4	18	0	18	0	0	0	20	0	20	3	0	3	0	0	0
13:15 to 13:30	4	0	4	22	1	23	0	0	0	20	0	20	2	0	2	0	0	0
13:30 to 13:45	3	0	3	18	0	18	0	0	0	29	1	30	3	0	3	0	0	0
13:45 to 14:00	5	0	5	24	0	24	0	0	0	28	0	28	4	0	4	0	0	0
Totals	38	0	38	194	3	197	0	0	0	211	2	213	26	0	26	0	0	0

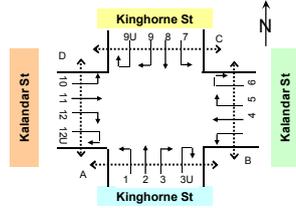
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 8. Forest Rd / Coonamia Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Direction	Time Period	Currarong Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00			8	0	8	20	0	20	0	0	0
12:15 to 13:15			9	0	9	18	0	18	0	0	0
12:30 to 13:30			7	0	7	17	0	17	0	0	0
12:45 to 13:45			6	0	6	19	0	19	0	0	0
13:00 to 14:00			8	0	8	20	0	20	0	0	0
Totals			16	0	16	40	0	40	0	0	0

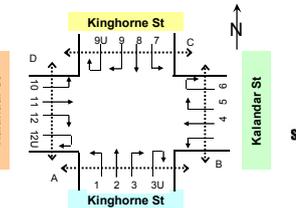
Approach	Coonamia Rd						Forest Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	22	0	22	112	2	114	0	0	0	114	1	115	14	0	14	0	0	0
12:15 to 13:15	20	0	20	101	1	102	0	0	0	111	1	112	14	0	14	0	0	0
12:30 to 13:30	19	0	19	96	2	98	0	0	0	99	1	100	12	0	12	0	0	0
12:45 to 13:45	17	0	17	89	2	91	0	0	0	94	1	95	10	0	10	0	0	0
13:00 to 14:00	16	0	16	82	1	83	0	0	0	97	1	98	12	0	12	0	0	0
Totals	38	0	38	194	3	197	0	0	0	211	2	213	26	0	26	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 9. Kalandar St / Kinghorne St  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



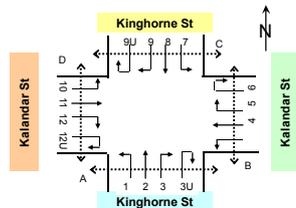
Approach	Kinghorne St												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	3	1	4	27	1	28	6	0	6	0	0	0	3	0	3	35	2	37	18	0	18	1	0	1	0	0	0
12:15 to 12:30	3	0	3	33	1	34	5	0	5	0	0	0	4	0	4	32	3	35	17	0	17	2	0	2	0	0	0
12:30 to 12:45	5	0	5	25	0	25	8	0	8	0	0	0	4	0	4	25	3	28	16	1	17	0	0	0	0	0	0
12:45 to 13:00	3	1	4	36	0	36	3	0	3	0	0	0	6	0	6	33	1	34	21	0	21	1	0	1	0	0	0
13:00 to 13:15	4	0	4	23	1	24	6	0	6	0	0	0	2	0	2	30	1	31	19	1	20	0	0	0	0	0	0
13:15 to 13:30	3	0	3	34	0	34	11	1	12	0	0	0	5	1	6	32	0	32	15	0	15	3	1	4	0	0	0
13:30 to 13:45	3	0	3	31	1	32	7	0	7	0	0	0	4	0	4	26	0	26	16	0	16	1	0	1	0	0	0
13:45 to 14:00	6	0	6	29	0	29	3	0	3	0	0	0	3	0	3	28	1	29	13	0	13	1	0	1	0	0	0
Totals	30	2	32	238	4	242	49	1	50	0	0	0	31	1	32	241	11	252	135	2	137	9	1	10	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 9. Kalandar St / Kinghorne St  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Kinghorne St												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)		Direction 11 (Through)		Direction 12 (Right Turn)		Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy				
12:00 to 12:15	32	1	33	3	0	3	21	1	22	1	0	1	24	0	24	41	0	41	2	1	3	1	0	1
12:15 to 12:30	28	0	28	4	0	4	27	0	27	0	0	0	28	1	29	34	0	34	3	0	3	0	0	0
12:30 to 12:45	27	0	27	6	0	6	29	2	31	1	1	2	32	0	32	45	1	46	5	1	6	1	1	2
12:45 to 13:00	31	0	31	3	0	3	35	0	35	0	0	0	36	1	37	41	0	41	3	1	4	0	0	0
13:00 to 13:15	27	0	27	2	0	2	26	1	27	2	0	2	27	1	28	40	1	41	5	0	5	2	0	2
13:15 to 13:30	26	0	26	5	0	5	28	2	30	0	1	1	26	0	26	33	1	34	4	0	4	0	1	1
13:30 to 13:45	26	0	26	3	0	3	33	0	33	2	0	2	25	1	26	29	1	30	3	0	3	2	0	2
13:45 to 14:00	27	1	28	3	0	3	29	1	30	1	0	1	30	1	31	27	1	28	5	1	6	1	0	1
Totals	224	2	226	29	0	29	228	7	235	7	2	9	228	5	233	290	5	295	30	3	33	7	2	9

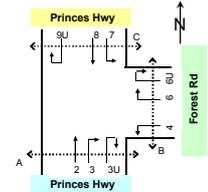
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 9. Kalandar St / Kinghorne St  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Kinghorne St												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	14	2	16	121	2	123	22	0	22	0	0	0	17	0	17	125	9	134	72	1	73	4	0	4	0	0	0
12:15 to 13:15	15	1	16	117	2	119	22	0	22	0	0	0	16	0	16	120	8	128	73	2	75	3	0	3	0	0	0
12:30 to 13:30	15	1	16	118	1	119	28	1	29	0	0	0	17	1	18	120	5	125	71	2	73	4	1	5	0	0	0
12:45 to 13:45	13	1	14	124	2	126	27	1	28	0	0	0	17	1	18	121	2	123	71	1	72	5	1	6	0	0	0
13:00 to 14:00	16	0	16	117	2	119	27	1	28	0	0	0	14	1	15	116	2	118	63	1	64	5	1	6	0	0	0
Totals	30	2	32	238	4	242	49	1	50	0	0	0	31	1	32	241	11	252	135	2	137	9	1	10	0	0	0

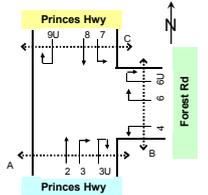
Approach	Kinghorne St												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)		Direction 11 (Through)		Direction 12 (Right Turn)		Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy				
12:00 to 13:00	118	1	119	16	0	16	112	3	115	2	1	3	120	2	122	161	1	162	13	2	15	2	1	3
12:15 to 13:15	113	0	113	15	0	15	117	3	120	3	1	4	123	3	126	160	2	162	16	1	17	3	1	4
12:30 to 13:30	111	0	111	16	0	16	118	5	123	3	2	5	121	2	123	159	3	162	17	1	18	3	2	5
12:45 to 13:45	110	0	110	13	0	13	122	3	125	4	1	5	114	3	117	143	3	146	15	1	16	4	1	5
13:00 to 14:00	106	1	107	13	0	13	116	4	120	5	1	6	108	3	111	129	4	133	17	1	18	5	1	6
Totals	224	2	226	29	0	29	228	7	235	7	2	9	228	5	233	290	5	295	30	3	33	7	2	9

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



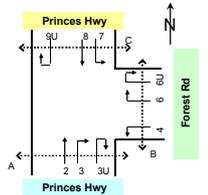
Approach	Princes Hwy									Forest Rd								
	Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	168	4	170	10	0	10	0	0	0	0	0	0	14	0	14	0	0	0
12:15 to 12:30	150	3	153	6	0	6	0	0	0	15	0	15	22	2	24	0	0	0
12:30 to 12:45	178	2	180	8	0	8	0	0	0	10	0	10	15	0	15	0	0	0
12:45 to 13:00	148	2	150	6	0	6	0	0	0	3	0	3	14	0	14	0	0	0
13:00 to 13:15	153	3	156	6	0	6	0	0	0	8	0	8	19	0	19	0	0	0
13:15 to 13:30	142	4	146	11	0	11	0	0	0	7	0	7	11	0	11	0	0	0
13:30 to 13:45	175	3	178	8	0	8	0	0	0	14	1	15	15	0	15	0	0	0
13:45 to 14:00	134	8	142	4	0	4	0	0	0	12	1	13	25	0	25	0	0	0
Totals	1246	29	1275	59	0	59	0	0	0	75	2	77	135	2	137	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



Approach	Princes Hwy								
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	17	0	17	206	4	210	0	0	0
12:15 to 12:30	22	0	22	242	4	246	0	0	0
12:30 to 12:45	34	0	34	249	4	253	0	0	0
12:45 to 13:00	22	0	22	215	4	219	0	0	0
13:00 to 13:15	25	0	25	197	2	199	0	0	0
13:15 to 13:30	19	0	19	203	4	207	0	0	0
13:30 to 13:45	19	0	19	234	4	238	0	0	0
13:45 to 14:00	22	0	22	239	2	241	0	0	0
Totals	180	0	180	1785	28	1813	0	0	0

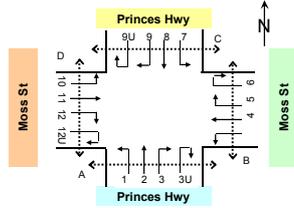
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : Hourly Summary



Approach	Princes Hwy									Forest Rd								
	Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	642	11	653	30	0	30	0	0	0	34	0	34	65	2	67	0	0	0
12:15 to 13:15	629	10	639	26	0	26	0	0	0	36	0	36	70	2	72	0	0	0
12:30 to 13:30	621	11	632	31	0	31	0	0	0	28	0	28	59	0	59	0	0	0
12:45 to 13:45	618	12	630	31	0	31	0	0	0	32	1	33	59	0	59	0	0	0
13:00 to 14:00	604	18	622	29	0	29	0	0	0	41	2	43	70	0	70	0	0	0
Totals	1246	29	1275	59	0	59	0	0	0	75	2	77	135	2	137	0	0	0

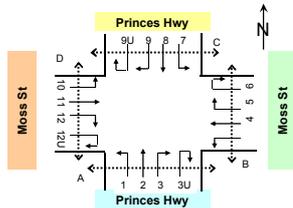
Approach	Princes Hwy								
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	85	0	85	912	16	928	0	0	0
12:15 to 13:15	103	0	103	803	14	817	0	0	0
12:30 to 13:30	100	0	100	864	14	878	0	0	0
12:45 to 13:45	85	0	85	849	14	863	0	0	0
13:00 to 14:00	85	0	85	873	12	885	0	0	0
Totals	480	0	480	4785	28	4813	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 11. Moss St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



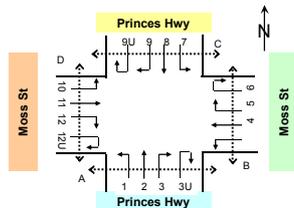
Approach	Princes Hwy									Moss St																	
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	5	0	5	232	9	241	25	0	25	0	0	0	6	0	6	12	0	12	24	1	25	0	0	0			
12:15 to 12:30	3	0	3	210	3	213	24	0	24	0	0	0	10	0	10	29	0	29	24	0	24	0	0	0			
12:30 to 12:45	0	0	0	242	6	248	14	0	14	0	0	0	5	0	5	12	0	12	27	0	27	0	0	0			
12:45 to 13:00	1	0	1	231	7	238	16	0	16	0	0	0	3	0	3	8	0	8	34	1	35	0	0	0			
13:00 to 13:15	3	0	3	173	1	174	20	0	20	0	0	0	6	0	6	14	0	14	24	1	25	0	0	0			
13:15 to 13:30	2	0	2	177	2	179	17	1	18	1	0	1	7	0	7	13	0	13	26	0	26	0	0	0			
13:30 to 13:45	3	0	3	230	5	235	12	0	12	1	0	1	7	0	7	12	0	12	22	0	22	0	0	0			
13:45 to 14:00	1	0	1	184	4	188	18	0	18	0	0	0	9	0	9	10	0	10	30	1	31	0	0	0			
Totals	18	0	18	1679	37	1716	146	1	147	2	0	2	50	0	50	110	0	110	211	4	215	0	0	0			

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 11. Moss St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Princes Hwy									Moss St																	
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	26	2	28	288	6	294	47	0	47	0	0	0	61	0	61	41	0	41	21	0	21	0	0	0			
12:15 to 12:30	21	0	21	245	5	250	65	2	67	0	0	0	58	0	58	35	0	35	22	0	22	0	0	0			
12:30 to 12:45	20	0	20	271	2	273	44	0	44	0	0	0	57	0	57	17	15	32	16	1	17	0	0	0			
12:45 to 13:00	18	0	18	229	3	232	38	0	38	0	0	0	60	0	60	24	0	24	19	0	19	0	0	0			
13:00 to 13:15	27	0	27	234	2	236	58	1	59	0	0	0	73	0	73	34	0	34	23	1	24	0	0	0			
13:15 to 13:30	17	0	17	271	6	277	54	0	54	0	0	0	57	0	57	18	0	18	13	2	15	0	0	0			
13:30 to 13:45	25	0	25	277	4	281	37	0	37	0	0	0	46	0	46	20	0	20	10	1	11	0	0	0			
13:45 to 14:00	25	0	25	271	3	274	58	0	58	0	0	0	51	0	51	34	0	34	11	0	11	0	0	0			
Totals	179	2	181	2086	31	2117	401	3	404	0	0	0	463	0	463	223	0	223	134	5	139	0	0	0			

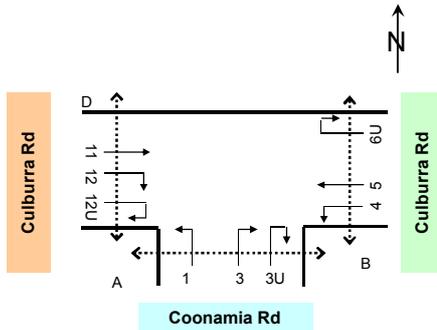
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 11. Moss St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Princes Hwy									Moss St																	
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	9	0	9	915	25	940	79	0	79	0	0	0	24	0	24	61	0	61	109	2	111	0	0	0			
12:15 to 13:15	7	0	7	856	17	873	74	0	74	0	0	0	24	0	24	63	0	63	109	2	111	0	0	0			
12:30 to 13:30	6	0	6	823	16	839	67	1	68	1	0	1	21	0	21	47	0	47	111	2	113	0	0	0			
12:45 to 13:45	9	0	9	811	15	826	65	1	66	2	0	2	23	0	23	47	0	47	106	2	108	0	0	0			
13:00 to 14:00	9	0	9	764	12	776	67	1	68	2	0	2	26	0	26	49	0	49	102	2	104	0	0	0			
Totals	18	0	18	1679	37	1716	146	1	147	2	0	2	50	0	50	110	0	110	211	4	215	0	0	0			

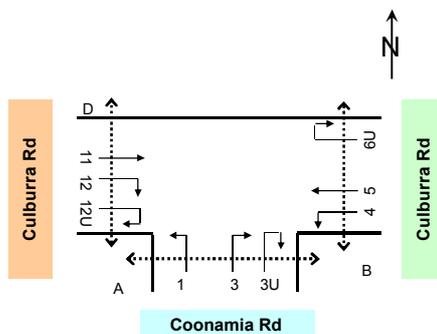
Approach	Princes Hwy									Moss St																	
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	85	2	87	1033	16	1049	194	2	196	0	0	0	236	0	236	117	0	117	77	1	78	0	0	0			
12:15 to 13:15	86	0	86	979	12	991	205	3	208	0	0	0	248	0	248	110	0	110	79	2	81	0	0	0			
12:30 to 13:30	82	0	82	1005	13	1018	194	1	195	0	0	0	247	0	247	93	0	93	70	4	74	0	0	0			
12:45 to 13:45	87	0	87	1011	15	1026	187	1	188	0	0	0	236	0	236	96	0	96	65	4	69	0	0	0			
13:00 to 14:00	94	0	94	1053	15	1068	207	1	208	0	0	0	227	0	227	106	0	106	57	4	61	0	0	0			
Totals	179	2	181	2086	31	2117	401	3	404	0	0	0	463	0	463	223	0	223	134	5	139	0	0	0			

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 1. Culburra Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Coonamia Rd									Culburra Rd								
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	14	1	15	3	0	3	0	0	0	12	0	12	29	3	32	0	0	0
7:15 to 7:30	19	0	19	8	1	9	0	0	0	14	1	15	39	0	39	0	0	0
7:30 to 7:45	24	4	28	7	0	7	0	0	0	8	1	9	57	2	59	0	0	0
7:45 to 8:00	34	1	35	8	1	9	0	0	0	4	1	5	52	3	55	0	0	0
8:00 to 8:15	45	0	45	13	1	14	0	0	0	10	1	11	52	1	53	0	0	0
8:15 to 8:30	34	0	34	14	1	15	0	0	0	11	0	11	44	2	46	0	0	0
8:30 to 8:45	32	0	32	17	1	18	0	0	0	5	0	5	53	3	56	0	0	0
8:45 to 9:00	29	0	29	14	1	15	0	0	0	7	0	7	35	1	36	0	0	0
AM Totals	231	6	237	84	6	90	0	0	0	71	4	75	361	15	376	0	0	0
16:00 to 16:15	20	2	22	16	0	16	0	0	0	15	0	15	26	1	27	0	0	0
16:15 to 16:30	16	1	17	10	0	10	0	0	0	14	1	15	13	0	13	0	0	0
16:30 to 16:45	5	0	5	12	1	13	0	0	0	11	0	11	17	1	18	0	0	0
16:45 to 17:00	7	1	8	11	0	11	0	0	0	9	0	9	19	0	19	0	0	0
17:00 to 17:15	8	0	8	10	0	10	0	0	0	13	0	13	26	0	26	1	0	1
17:15 to 17:30	15	0	15	8	0	8	0	0	0	10	0	10	22	0	22	0	0	0
17:30 to 17:45	10	0	10	8	0	8	0	0	0	7	0	7	15	0	15	0	0	0
17:45 to 18:00	7	1	8	11	0	11	0	0	0	9	0	9	12	0	12	0	0	0
PM Totals	88	5	93	86	1	87	0	0	0	88	1	89	150	2	152	1	0	1

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 1. Culburra Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data

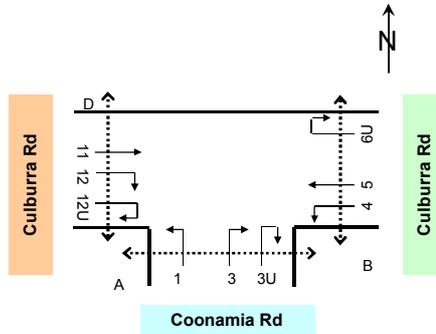


Approach	Culburra Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	7	7	14	3	1	4	0	0	0
7:15 to 7:30	6	4	10	3	3	6	0	0	0
7:30 to 7:45	13	4	17	4	2	6	0	0	0
7:45 to 8:00	15	0	15	2	0	2	0	0	0
8:00 to 8:15	10	2	12	6	1	7	0	0	0
8:15 to 8:30	18	5	23	6	0	6	0	0	0
8:30 to 8:45	21	0	21	8	0	8	0	0	0
8:45 to 9:00	22	3	25	7	0	7	0	0	0
AM Totals	112	25	137	39	7	46	0	0	0

16:00 to 16:15
16:15 to 16:30
16:30 to 16:45
16:45 to 17:00
17:00 to 17:15
17:15 to 17:30
17:30 to 17:45
17:45 to 18:00
PM Totals

42	1	43	25	2	27	0	0	0
41	1	42	30	1	31	0	0	0
56	0	56	23	1	24	0	0	0
48	0	48	20	0	20	0	0	0
44	0	44	31	0	31	0	0	0
55	0	55	32	0	32	0	0	0
58	1	59	29	0	29	0	0	0
50	2	52	32	0	32	0	0	0
394	5	399	222	4	226	0	0	0

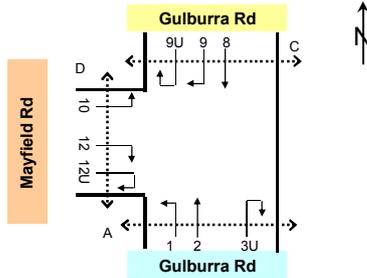
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 1. Culburra Rd / Coonamia Rd  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Coonamia Rd						Culburra Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	91	6	97	26	2	28	0	0	0	38	3	41	177	8	185	0	0	0
7:15 to 8:15	122	5	127	36	3	39	0	0	0	36	4	40	200	6	206	0	0	0
7:30 to 8:30	137	5	142	42	3	45	0	0	0	33	3	36	205	8	213	0	0	0
7:45 to 8:45	145	1	146	52	4	56	0	0	0	30	2	32	201	9	210	0	0	0
8:00 to 9:00	140	0	140	58	4	62	0	0	0	33	1	34	184	7	191	0	0	0
AM Totals	231	6	237	84	6	90	0	0	0	71	4	75	361	15	376	0	0	0
16:00 to 17:00	48	4	52	49	1	50	0	0	0	49	1	50	75	2	77	0	0	0
16:15 to 17:15	36	2	38	43	1	44	0	0	0	47	1	48	75	1	76	1	0	1
16:30 to 17:30	35	1	36	41	1	42	0	0	0	43	0	43	84	1	85	1	0	1
16:45 to 17:45	40	1	41	37	0	37	0	0	0	39	0	39	82	0	82	1	0	1
17:00 to 18:00	40	1	41	37	0	37	0	0	0	39	0	39	75	0	75	1	0	1
PM Totals	88	5	93	86	1	87	0	0	0	88	1	89	150	2	152	1	0	1

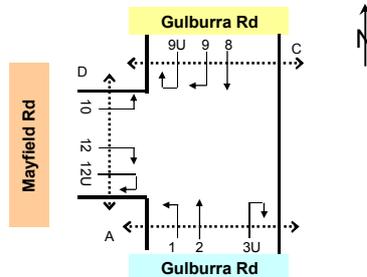
Approach	Culburra Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	41	15	56	12	6	18	0	0	0
7:15 to 8:15	44	10	54	15	6	21	0	0	0
7:30 to 8:30	56	11	67	18	3	21	0	0	0
7:45 to 8:45	64	7	71	22	1	23	0	0	0
8:00 to 9:00	71	10	81	27	1	28	0	0	0
AM Totals	112	25	137	39	7	46	0	0	0
16:00 to 17:00	187	2	189	98	4	102	0	0	0
16:15 to 17:15	189	1	190	104	2	106	0	0	0
16:30 to 17:30	203	0	203	106	1	107	0	0	0
16:45 to 17:45	205	1	206	112	0	112	0	0	0
17:00 to 18:00	207	3	210	124	0	124	0	0	0
PM Totals	394	5	399	222	4	226	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 2. Gulburra Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Gulburra Rd								
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	0	0	0	43	4	47	0	0	0
7:15 to 7:30	0	0	0	58	0	58	0	0	0
7:30 to 7:45	0	1	1	83	5	88	0	0	0
7:45 to 8:00	0	0	0	86	4	90	0	0	0
8:00 to 8:15	0	0	0	92	2	94	0	0	0
8:15 to 8:30	1	0	1	81	1	82	0	0	0
8:30 to 8:45	0	0	0	85	3	88	0	0	0
8:45 to 9:00	1	0	1	60	1	61	0	0	0
<b>AM Totals</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>588</b>	<b>20</b>	<b>608</b>	<b>0</b>	<b>0</b>	<b>0</b>
16:00 to 16:15	0	0	0	46	3	49	0	0	0
16:15 to 16:30	1	0	1	28	1	29	0	0	0
16:30 to 16:45	0	0	0	22	1	23	0	0	0
16:45 to 17:00	0	0	0	28	1	29	0	0	0
17:00 to 17:15	0	0	0	32	0	32	1	0	1
17:15 to 17:30	0	0	0	38	0	38	0	0	0
17:30 to 17:45	0	0	0	25	0	25	0	0	0
17:45 to 18:00	0	0	0	20	0	20	0	0	0
<b>PM Totals</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>239</b>	<b>6</b>	<b>245</b>	<b>1</b>	<b>0</b>	<b>1</b>

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 2. Gulburra Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data

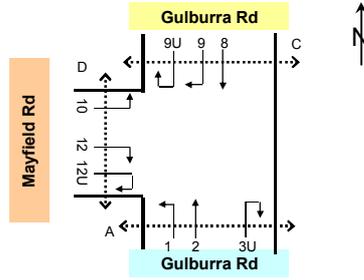


Approach	Gulburra Rd									Mayfield Rd								
	Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	11	9	20	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0
7:15 to 7:30	16	10	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 to 7:45	12	1	13	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
7:45 to 8:00	18	1	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 to 8:15	18	4	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 to 8:30	28	1	29	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
8:30 to 8:45	34	1	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 to 9:00	20	1	21	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0
<b>AM Totals</b>	<b>157</b>	<b>28</b>	<b>185</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>
16:00 to 16:15	62	3	65	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
16:15 to 16:30	71	1	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30 to 16:45	76	1	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 to 17:00	63	0	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00 to 17:15	84	0	84	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0

17:15 to 17:30	89	0	89	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 to 17:45	83	1	84	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45 to 18:00	76	1	77	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Totals	604	7	611	0	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0
1	0	1	0	0	0	0
0	0	0	0	0	0	0
2	1	3	0	0	0	0

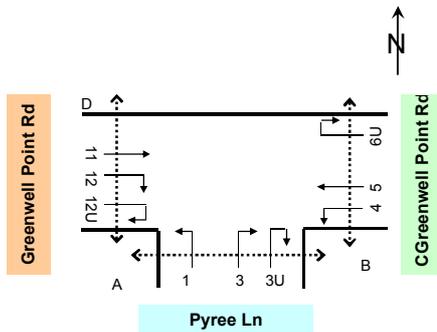
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 2. Gulburra Rd / Mayfield Rd  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Gulburra Rd								
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	0	1	1	270	13	283	0	0	0
7:15 to 8:15	0	1	1	319	11	330	0	0	0
7:30 to 8:30	1	1	2	342	12	354	0	0	0
7:45 to 8:45	1	0	1	344	10	354	0	0	0
8:00 to 9:00	2	0	2	318	7	325	0	0	0
AM Totals	2	1	3	588	20	608	0	0	0
16:00 to 17:00	1	0	1	124	6	130	0	0	0
16:15 to 17:15	1	0	1	110	3	113	1	0	1
16:30 to 17:30	0	0	0	120	2	122	1	0	1
16:45 to 17:45	0	0	0	123	1	124	1	0	1
17:00 to 18:00	0	0	0	115	0	115	1	0	1
PM Totals	1	0	1	239	6	245	1	0	1

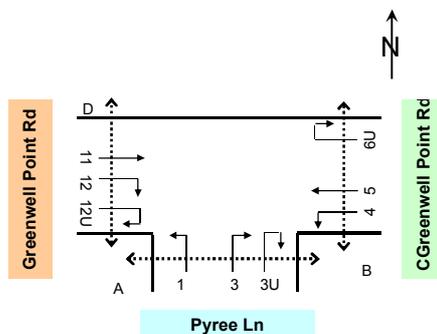
Approach	Gulburra Rd										Mayfield Rd							
	Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	57	21	78	0	0	0	0	0	0	1	2	3	1	0	1	0	0	0
7:15 to 8:15	64	16	80	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
7:30 to 8:30	76	7	83	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0
7:45 to 8:45	98	7	105	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
8:00 to 9:00	100	7	107	0	0	0	0	0	0	1	0	1	2	0	2	0	0	0
AM Totals	157	28	185	0	0	0	0	0	0	2	2	4	3	0	3	0	0	0
16:00 to 17:00	272	5	277	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
16:15 to 17:15	294	2	296	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
16:30 to 17:30	312	1	313	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
16:45 to 17:45	319	1	320	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0
17:00 to 18:00	332	2	334	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0
PM Totals	604	7	611	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 3. Greenwell Point Rd / Pyree Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Pyree Ln									CGreenwell Point Rd								
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	43	2	45	1	5	6	0	0	0	1	0	1	26	0	26	0	0	0
7:15 to 7:30	58	0	58	2	0	2	0	0	0	4	1	5	12	1	13	0	0	0
7:30 to 7:45	81	4	85	2	0	2	0	0	0	3	0	3	33	0	33	0	0	0
7:45 to 8:00	79	5	84	2	0	2	0	0	0	3	1	4	24	2	26	0	0	0
8:00 to 8:15	100	1	101	2	0	2	0	0	0	7	2	9	37	2	39	0	0	0
8:15 to 8:30	76	2	78	2	0	2	0	0	0	1	0	1	24	3	27	0	0	0
8:30 to 8:45	76	2	78	4	1	5	0	0	0	5	0	5	27	1	28	0	0	0
8:45 to 9:00	61	1	62	3	0	3	0	0	0	2	0	2	30	1	31	0	0	0
<b>AM Totals</b>	<b>574</b>	<b>17</b>	<b>591</b>	<b>18</b>	<b>6</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>4</b>	<b>30</b>	<b>213</b>	<b>10</b>	<b>223</b>	<b>0</b>	<b>0</b>	<b>0</b>
16:00 to 16:15	42	3	45	5	0	5	0	0	0	7	0	7	13	0	13	0	0	0
16:15 to 16:30	18	1	19	7	0	7	0	0	0	4	0	4	12	1	13	0	0	0
16:30 to 16:45	18	1	19	3	0	3	0	0	0	7	0	7	10	0	10	0	0	0
16:45 to 17:00	20	1	21	6	0	6	0	0	0	0	0	0	9	1	10	0	0	0
17:00 to 17:15	30	3	33	0	0	0	0	0	0	4	0	4	12	0	12	0	0	0
17:15 to 17:30	34	0	34	3	0	3	0	0	0	3	0	3	12	0	12	0	0	0
17:30 to 17:45	22	0	22	5	0	5	0	0	0	5	1	6	13	0	13	0	0	0
17:45 to 18:00	14	1	15	4	0	4	0	0	0	1	0	1	8	0	8	0	0	0
<b>PM Totals</b>	<b>198</b>	<b>10</b>	<b>208</b>	<b>33</b>	<b>0</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>1</b>	<b>32</b>	<b>89</b>	<b>2</b>	<b>91</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 3. Greenwell Point Rd / Pyree Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data

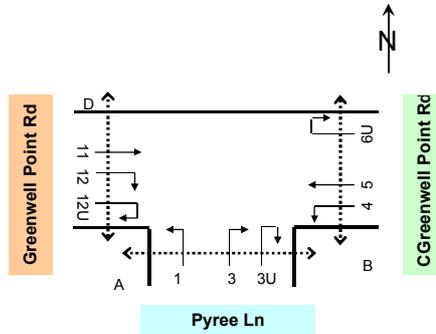


Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	10	6	16	11	11	22	0	0	0
7:15 to 7:30	15	2	17	11	8	19	0	0	0
7:30 to 7:45	7	2	9	10	0	10	0	0	0
7:45 to 8:00	10	1	11	15	1	16	0	0	0
8:00 to 8:15	10	1	11	17	5	22	0	0	0
8:15 to 8:30	13	0	13	26	0	26	0	0	0
8:30 to 8:45	13	0	13	28	1	29	0	0	0
8:45 to 9:00	15	2	17	16	1	17	0	0	0
<b>AM Totals</b>	<b>93</b>	<b>14</b>	<b>107</b>	<b>134</b>	<b>27</b>	<b>161</b>	<b>0</b>	<b>0</b>	<b>0</b>

16:00 to 16:15
16:15 to 16:30
16:30 to 16:45
16:45 to 17:00
17:00 to 17:15
17:15 to 17:30
17:30 to 17:45
17:45 to 18:00
PM Totals

30	1	31	62	2	64	0	0	0
25	0	25	67	1	68	0	0	0
32	1	33	68	1	69	0	0	0
27	0	27	62	0	62	0	0	0
25	0	25	84	0	84	0	0	0
22	0	22	84	0	84	0	0	0
25	0	25	82	0	82	0	0	0
19	1	20	61	2	63	0	0	0
205	3	208	570	6	576	0	0	0

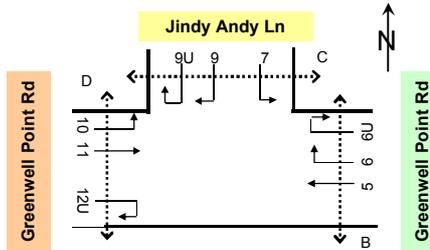
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 3. Greenwell Point Rd / Pyree Ln  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Pyree Ln						CGreenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	261	11	272	7	5	12	0	0	0	11	2	13	95	3	98	0	0	0
7:15 to 8:15	318	10	328	8	0	8	0	0	0	17	4	21	106	5	111	0	0	0
7:30 to 8:30	336	12	348	8	0	8	0	0	0	14	3	17	118	7	125	0	0	0
7:45 to 8:45	331	10	341	10	1	11	0	0	0	16	3	19	112	8	120	0	0	0
8:00 to 9:00	313	6	319	11	1	12	0	0	0	15	2	17	118	7	125	0	0	0
AM Totals	574	17	591	18	6	24	0	0	0	26	4	30	213	10	223	0	0	0
16:00 to 17:00	98	6	104	21	0	21	0	0	0	18	0	18	44	2	46	0	0	0
16:15 to 17:15	86	6	92	16	0	16	0	0	0	15	0	15	43	2	45	0	0	0
16:30 to 17:30	102	5	107	12	0	12	0	0	0	14	0	14	43	1	44	0	0	0
16:45 to 17:45	106	4	110	14	0	14	0	0	0	12	1	13	46	1	47	0	0	0
17:00 to 18:00	100	4	104	12	0	12	0	0	0	13	1	14	45	0	45	0	0	0
PM Totals	198	10	208	33	0	33	0	0	0	31	1	32	89	2	91	0	0	0

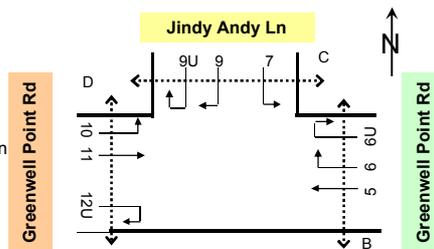
Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	42	11	53	47	20	67	0	0	0
7:15 to 8:15	42	6	48	53	14	67	0	0	0
7:30 to 8:30	40	4	44	68	6	74	0	0	0
7:45 to 8:45	46	2	48	86	7	93	0	0	0
8:00 to 9:00	51	3	54	87	7	94	0	0	0
AM Totals	93	14	107	134	27	161	0	0	0
16:00 to 17:00	114	2	116	259	4	263	0	0	0
16:15 to 17:15	109	1	110	281	2	283	0	0	0
16:30 to 17:30	106	1	107	298	1	299	0	0	0
16:45 to 17:45	99	0	99	312	0	312	0	0	0
17:00 to 18:00	91	1	92	311	2	313	0	0	0
PM Totals	205	3	208	570	6	576	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 4. Greenwell Point Rd / Jindy Andy Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Direction	Time Period	Greenwell Point Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15			53	1	54	13	0	13	0	0	0
7:15 to 7:30			43	2	45	16	0	16	0	0	0
7:30 to 7:45			81	4	85	25	0	25	0	0	0
7:45 to 8:00			77	6	83	32	1	33	0	0	0
8:00 to 8:15			92	6	98	38	0	38	0	0	0
8:15 to 8:30			74	4	78	33	0	33	0	0	0
8:30 to 8:45			65	2	67	36	1	37	0	0	0
8:45 to 9:00			68	3	71	27	0	27	0	0	0
AM Totals			553	28	581	220	2	222	0	0	0
16:00 to 16:15			36	3	39	11	1	12	0	0	0
16:15 to 16:30			31	2	33	15	0	15	0	0	0
16:30 to 16:45			22	1	23	8	0	8	0	0	0
16:45 to 17:00			22	1	23	6	0	6	0	0	0
17:00 to 17:15			29	1	30	4	0	4	1	0	1
17:15 to 17:30			38	0	38	14	0	14	0	0	0
17:30 to 17:45			27	0	27	7	0	7	0	0	0
17:45 to 18:00			24	1	25	7	0	7	0	0	0
PM Totals			229	9	238	72	1	73	1	0	1

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 4. Greenwell Point Rd / Jindy Andy Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



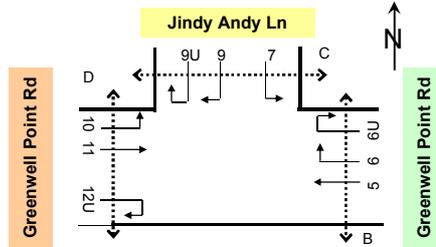
Approach	Jindy Andy Ln						Greenwell Point Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	3	0	3	1	0	1	0	0	0	1	1	2	15	17	32	0	0	0
7:15 to 7:30	5	0	5	0	0	0	0	0	0	1	1	2	20	14	34	0	0	0
7:30 to 7:45	1	1	2	0	0	0	0	0	0	0	1	1	16	3	19	0	0	0
7:45 to 8:00	3	0	3	0	1	1	0	0	0	1	0	1	22	5	27	0	0	0
8:00 to 8:15	8	0	8	3	1	4	0	0	0	2	0	2	19	5	24	0	0	0
8:15 to 8:30	5	0	5	0	0	0	0	0	0	0	0	0	32	0	32	0	0	0
8:30 to 8:45	10	1	11	1	0	1	0	0	0	2	2	4	33	2	35	0	0	0
8:45 to 9:00	9	0	9	3	2	5	1	0	1	0	1	1	21	3	24	0	0	0
AM Totals	44	2	46	8	4	12	1	0	1	7	6	13	178	49	227	0	0	0

16:00 to 16:15	27	1	28
16:15 to 16:30	24	1	25
16:30 to 16:45	28	0	28
16:45 to 17:00	27	0	27
17:00 to 17:15	32	0	32
17:15 to 17:30	37	0	37
17:30 to 17:45	26	0	26
17:45 to 18:00	23	1	24
PM Totals	224	3	227

0	0	0	0	0	0	3	0	3	65	2	67
1	0	1	0	0	0	1	1	2	67	0	67
0	0	0	0	0	0	3	0	3	73	3	76
1	0	1	0	0	0	1	0	1	59	0	59
3	0	3	0	0	0	1	0	1	77	0	77
2	0	2	0	0	0	1	0	1	79	0	79
1	0	1	0	0	0	3	0	3	77	0	77
1	0	1	0	0	0	1	0	1	64	2	66
9	0	9	0	0	0	14	1	15	561	7	568

0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

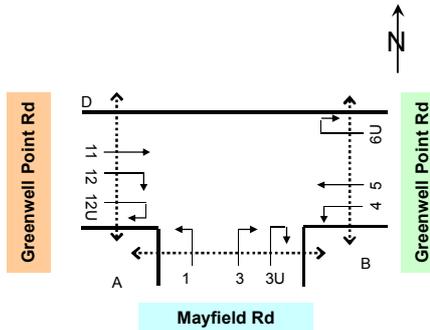
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 4. Greenwell Point Rd / Jindy Andy Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Direction	Time Period	Greenwell Point Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00			254	13	267	86	1	87	0	0	0
7:15 to 8:15			293	18	311	111	1	112	0	0	0
7:30 to 8:30			324	20	344	128	1	129	0	0	0
7:45 to 8:45			308	18	326	139	2	141	0	0	0
8:00 to 9:00			299	15	314	134	1	135	0	0	0
AM Totals			553	28	581	220	2	222	0	0	0
16:00 to 17:00			111	7	118	40	1	41	0	0	0
16:15 to 17:15			104	5	109	33	0	33	1	0	1
16:30 to 17:30			111	3	114	32	0	32	1	0	1
16:45 to 17:45			116	2	118	31	0	31	1	0	1
17:00 to 18:00			118	2	120	32	0	32	1	0	1
PM Totals			229	9	238	72	1	73	1	0	1

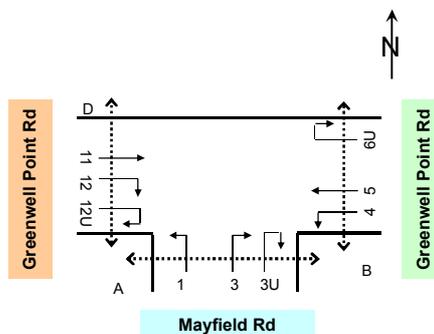
Approach	Jindy Andy Ln						Greenwell Point Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	12	1	13	1	1	2	0	0	0	3	3	6	73	39	112	0	0	0
7:15 to 8:15	17	1	18	3	2	5	0	0	0	4	2	6	77	27	104	0	0	0
7:30 to 8:30	17	1	18	3	2	5	0	0	0	3	1	4	89	13	102	0	0	0
7:45 to 8:45	26	1	27	4	2	6	0	0	0	5	2	7	106	12	118	0	0	0
8:00 to 9:00	32	1	33	7	3	10	1	0	1	4	3	7	105	10	115	0	0	0
AM Totals	44	2	46	8	4	12	1	0	1	7	6	13	178	49	227	0	0	0
16:00 to 17:00	106	2	108	2	0	2	0	0	0	8	1	9	264	5	269	0	0	0
16:15 to 17:15	111	1	112	5	0	5	0	0	0	6	1	7	276	3	279	0	0	0
16:30 to 17:30	124	0	124	6	0	6	0	0	0	6	0	6	288	3	291	0	0	0
16:45 to 17:45	122	0	122	7	0	7	0	0	0	6	0	6	292	0	292	0	0	0
17:00 to 18:00	118	1	119	7	0	7	0	0	0	6	0	6	297	2	299	0	0	0
PM Totals	224	3	227	9	0	9	0	0	0	14	1	15	561	7	568	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Mayfield Rd									Greenwell Point Rd								
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	0	0	0	0	0	0	0	0	0	0	0	0	52	1	53	0	0	0
7:15 to 7:30	0	0	0	0	0	0	0	0	0	0	0	0	44	2	46	0	0	0
7:30 to 7:45	1	1	2	0	1	1	0	0	0	0	0	0	80	3	83	0	0	0
7:45 to 8:00	7	0	7	0	0	0	0	0	0	0	0	0	73	7	80	0	0	0
8:00 to 8:15	2	0	2	0	0	0	0	0	0	1	0	1	100	4	104	0	2	2
8:15 to 8:30	3	0	3	0	0	0	0	0	0	0	0	0	73	3	76	0	0	0
8:30 to 8:45	2	0	2	0	0	0	0	0	0	0	0	0	63	1	64	0	0	0
8:45 to 9:00	3	0	3	0	0	0	0	0	0	2	0	2	72	4	76	0	0	0
<b>AM Totals</b>	<b>18</b>	<b>1</b>	<b>19</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>557</b>	<b>25</b>	<b>582</b>	<b>0</b>	<b>2</b>	<b>2</b>
16:00 to 16:15	1	0	1	1	0	1	0	0	0	0	0	0	36	3	39	1	0	1
16:15 to 16:30	1	0	1	0	1	1	0	0	0	1	0	1	31	2	33	0	0	0
16:30 to 16:45	1	0	1	2	0	2	0	0	0	0	0	0	23	1	24	0	0	0
16:45 to 17:00	1	0	1	0	0	0	0	0	0	0	0	0	25	1	26	0	0	0
17:00 to 17:15	0	0	0	0	0	0	0	0	0	1	0	1	30	1	31	0	0	0
17:15 to 17:30	5	0	5	0	0	0	0	0	0	1	0	1	42	0	42	0	0	0
17:30 to 17:45	0	0	0	0	0	0	0	0	0	0	0	0	27	0	27	0	0	0
17:45 to 18:00	5	0	5	0	0	0	0	0	0	0	0	0	28	1	29	0	0	0
<b>PM Totals</b>	<b>14</b>	<b>0</b>	<b>14</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>242</b>	<b>9</b>	<b>251</b>	<b>1</b>	<b>0</b>	<b>1</b>

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data

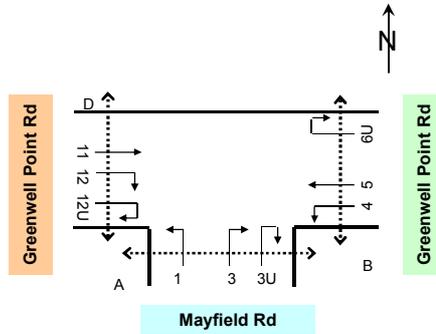


Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	16	18	34	1	0	1	0	0	0
7:15 to 7:30	21	15	36	1	0	1	0	0	0
7:30 to 7:45	15	4	19	0	0	0	0	0	0
7:45 to 8:00	23	4	27	1	0	1	0	0	0
8:00 to 8:15	20	5	25	1	0	1	0	0	0
8:15 to 8:30	34	0	34	0	0	0	0	0	0
8:30 to 8:45	33	3	36	2	0	2	0	0	0
8:45 to 9:00	22	3	25	2	0	2	0	0	0
<b>AM Totals</b>	<b>184</b>	<b>52</b>	<b>236</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>

16:00 to 16:15
16:15 to 16:30
16:30 to 16:45
16:45 to 17:00
17:00 to 17:15
17:15 to 17:30
17:30 to 17:45
17:45 to 18:00
PM Totals

65	2	67	0	0	0	0	0	0
72	0	72	4	0	4	0	0	0
73	2	75	3	0	3	0	0	0
64	0	64	3	0	3	0	0	0
76	0	76	2	0	2	0	0	0
79	0	79	1	0	1	0	0	0
83	0	83	4	0	4	0	0	0
62	2	64	3	0	3	0	0	0
574	6	580	20	0	20	0	0	0

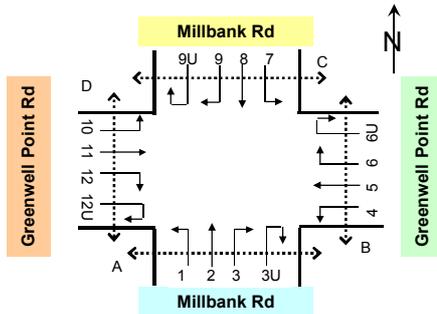
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Mayfield Rd						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	8	1	9	0	1	1	0	0	0	0	0	0	249	13	262	0	0	0
7:15 to 8:15	10	1	11	0	1	1	0	0	0	1	0	1	297	16	313	0	2	2
7:30 to 8:30	13	1	14	0	1	1	0	0	0	1	0	1	326	17	343	0	2	2
7:45 to 8:45	14	0	14	0	0	0	0	0	0	1	0	1	309	15	324	0	2	2
8:00 to 9:00	10	0	10	0	0	0	0	0	0	3	0	3	308	12	320	0	2	2
AM Totals	18	1	19	0	1	1	0	0	0	3	0	3	557	25	582	0	2	2
16:00 to 17:00	4	0	4	3	1	4	0	0	0	1	0	1	115	7	122	1	0	1
16:15 to 17:15	3	0	3	2	1	3	0	0	0	2	0	2	109	5	114	0	0	0
16:30 to 17:30	7	0	7	2	0	2	0	0	0	2	0	2	120	3	123	0	0	0
16:45 to 17:45	6	0	6	0	0	0	0	0	0	2	0	2	124	2	126	0	0	0
17:00 to 18:00	10	0	10	0	0	0	0	0	0	2	0	2	127	2	129	0	0	0
PM Totals	14	0	14	3	1	4	0	0	0	3	0	3	242	9	251	1	0	1

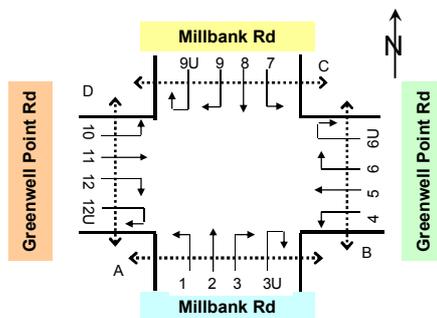
Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	75	41	116	3	0	3	0	0	0
7:15 to 8:15	79	28	107	3	0	3	0	0	0
7:30 to 8:30	92	13	105	2	0	2	0	0	0
7:45 to 8:45	110	12	122	4	0	4	0	0	0
8:00 to 9:00	109	11	120	5	0	5	0	0	0
AM Totals	184	52	236	8	0	8	0	0	0
16:00 to 17:00	274	4	278	10	0	10	0	0	0
16:15 to 17:15	285	2	287	12	0	12	0	0	0
16:30 to 17:30	292	2	294	9	0	9	0	0	0
16:45 to 17:45	302	0	302	10	0	10	0	0	0
17:00 to 18:00	300	2	302	10	0	10	0	0	0
PM Totals	574	6	580	20	0	20	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 6. Greenwell Point Rd / Millbank Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Millbank Rd												Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	6	0	6	4	2	6	0	2	2	0	0	0	5	0	5	47	2	49	7	0	7	0	0	0
7:15 to 7:30	7	1	8	4	0	4	1	1	2	0	0	0	5	0	5	43	0	43	8	1	9	0	0	0
7:30 to 7:45	9	1	10	2	0	2	3	0	3	0	0	0	3	0	3	81	6	87	7	0	7	0	0	0
7:45 to 8:00	21	1	22	9	0	9	2	0	2	0	0	0	4	3	7	73	4	77	3	1	4	0	0	0
8:00 to 8:15	18	2	20	19	3	22	4	0	4	0	0	0	3	0	3	100	1	101	4	2	6	0	0	0
8:15 to 8:30	15	1	16	30	0	30	8	0	8	0	0	0	1	0	1	59	2	61	5	0	5	0	0	0
8:30 to 8:45	8	0	8	35	0	35	4	0	4	0	0	0	2	0	2	70	3	73	13	0	13	0	0	0
8:45 to 9:00	15	0	15	13	0	13	2	0	2	0	0	0	4	0	4	65	3	68	3	0	3	0	0	0
AM Totals	99	6	105	116	5	121	24	3	27	0	0	0	27	3	30	538	21	559	50	4	54	0	0	0
16:00 to 16:15	10	0	10	4	0	4	2	0	2	0	0	0	5	0	5	38	3	41	2	0	2	0	0	0
16:15 to 16:30	9	0	9	12	0	12	6	0	6	0	0	0	3	0	3	21	2	23	3	0	3	0	0	0
16:30 to 16:45	7	0	7	7	0	7	7	1	8	0	0	0	4	0	4	22	1	23	2	0	2	0	0	0
16:45 to 17:00	13	0	13	9	0	9	3	0	3	0	0	0	1	1	2	23	0	23	2	0	2	0	0	0
17:00 to 17:15	9	1	10	7	0	7	10	0	10	0	0	0	8	0	8	26	0	26	4	0	4	0	0	0
17:15 to 17:30	5	0	5	4	0	4	6	0	6	0	0	0	3	0	3	32	0	32	3	0	3	0	0	0
17:30 to 17:45	9	0	9	7	0	7	6	0	6	0	0	0	3	0	3	32	0	32	1	1	2	0	0	0
17:45 to 18:00	11	0	11	6	0	6	5	0	5	0	0	0	2	0	2	20	1	21	6	0	6	0	0	0
PM Totals	73	1	74	56	0	56	45	1	46	0	0	0	29	1	30	214	7	221	23	1	24	0	0	0

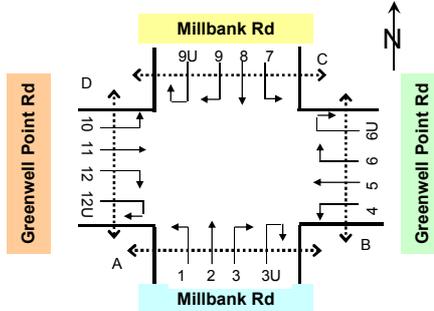
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 6. Greenwell Point Rd / Millbank Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Millbank Rd												Greenwell Point Rd											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	2	1	3	1	0	1	1	1	2	0	0	0	3	0	3	20	8	28	2	0	2	0	0	0
7:15 to 7:30	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	16	6	22	1	1	2	0	0	0
7:30 to 7:45	3	0	3	0	0	0	4	0	4	0	0	0	2	0	2	16	4	20	6	1	7	0	0	0
7:45 to 8:00	3	0	3	2	0	2	0	0	0	0	0	0	2	0	2	20	4	24	5	0	5	0	0	0
8:00 to 8:15	4	0	4	3	1	4	2	0	2	0	0	0	11	1	12	23	2	25	3	0	3	0	0	0
8:15 to 8:30	1	0	1	8	1	9	2	0	2	0	0	0	14	0	14	32	4	36	5	0	5	0	0	0
8:30 to 8:45	3	0	3	6	1	7	3	0	3	0	0	0	9	0	9	23	1	24	5	1	6	0	0	0
8:45 to 9:00	2	2	4	2	0	2	3	0	3	0	0	0	3	2	5	32	4	36	36	2	38	0	0	0
AM Totals	18	3	21	22	4	26	16	1	17	0	0	0	44	3	47	182	33	215	63	5	68	0	0	0

16:00 to 16:15	2	0	2	9	1	10	4	0	4	0	0	0	4	0	4	72	0	72	21	0	21	0	0	0
16:15 to 16:30	5	0	5	9	0	9	3	0	3	0	0	0	3	0	3	69	1	70	17	1	18	0	0	0
16:30 to 16:45	2	0	2	8	0	8	3	0	3	0	0	0	3	0	3	67	1	68	19	0	19	0	0	0
16:45 to 17:00	6	0	6	9	0	9	2	0	2	0	0	0	1	0	1	66	0	66	19	0	19	0	0	0
17:00 to 17:15	4	0	4	8	0	8	2	0	2	0	0	0	4	0	4	64	1	65	21	0	21	0	0	0
17:15 to 17:30	2	0	2	8	0	8	4	0	4	0	0	0	2	0	2	83	0	83	22	1	23	0	0	0
17:30 to 17:45	2	0	2	8	0	8	4	0	4	0	0	0	1	0	1	71	5	76	15	0	15	0	0	0
17:45 to 18:00	4	0	4	6	0	6	0	0	0	0	0	0	3	0	3	57	0	57	17	0	17	0	0	0
PM Totals	27	0	27	65	1	66	22	0	22	0	0	0	21	0	21	549	8	557	151	2	153	0	0	0

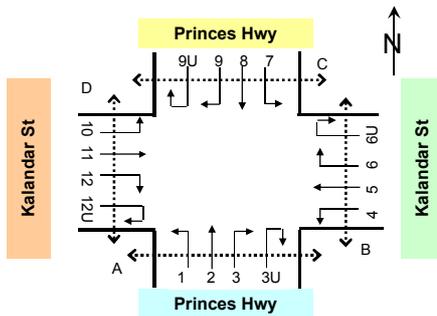
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 6. Greenwell Point Rd / Millbank Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Millbank Rd												Greenwell Point Rd														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	43	3	46	19	2	21	6	3	9	0	0	0	17	3	20	244	12	256	25	2	27	0	0	0			
7:15 to 8:15	55	5	60	34	3	37	10	1	11	0	0	0	15	3	18	297	11	308	22	4	26	0	0	0			
7:30 to 8:30	63	5	68	60	3	63	17	0	17	0	0	0	11	3	14	313	13	326	19	3	22	0	0	0			
7:45 to 8:45	62	4	66	93	3	96	18	0	18	0	0	0	10	3	13	302	10	312	25	3	28	0	0	0			
8:00 to 9:00	56	3	59	97	3	100	18	0	18	0	0	0	10	0	10	294	9	303	25	2	27	0	0	0			
AM Totals	99	6	105	116	5	121	24	3	27	0	0	0	27	3	30	538	21	559	50	4	54	0	0	0			
16:00 to 17:00	39	0	39	32	0	32	18	1	19	0	0	0	13	1	14	104	6	110	9	0	9	0	0	0			
16:15 to 17:15	38	1	39	35	0	35	26	1	27	0	0	0	16	1	17	92	3	95	11	0	11	0	0	0			
16:30 to 17:30	34	1	35	27	0	27	26	1	27	0	0	0	16	1	17	103	1	104	11	0	11	0	0	0			
16:45 to 17:45	36	1	37	27	0	27	25	0	25	0	0	0	15	1	16	113	0	113	10	1	11	0	0	0			
17:00 to 18:00	34	1	35	24	0	24	27	0	27	0	0	0	16	0	16	110	1	111	14	1	15	0	0	0			
PM Totals	73	1	74	56	0	56	45	1	46	0	0	0	29	1	30	214	7	221	23	1	24	0	0	0			

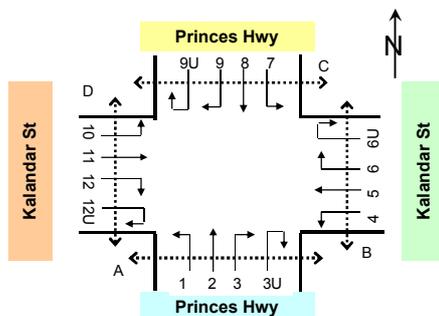
Approach	Millbank Rd												Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	8	1	9	3	1	4	6	1	7	0	0	0	7	0	7	72	22	94	14	2	16	0	0	0			
7:15 to 8:15	10	0	10	5	2	7	7	0	7	0	0	0	15	1	16	75	16	91	15	2	17	0	0	0			
7:30 to 8:30	11	0	11	13	2	15	8	0	8	0	0	0	29	1	30	91	14	105	19	1	20	0	0	0			
7:45 to 8:45	11	0	11	19	3	22	7	0	7	0	0	0	36	1	37	98	11	109	18	1	19	0	0	0			
8:00 to 9:00	10	2	12	19	3	22	10	0	10	0	0	0	37	3	40	110	11	121	49	3	52	0	0	0			
AM Totals	18	3	21	22	4	26	16	1	17	0	0	0	44	3	47	182	33	215	63	5	68	0	0	0			
16:00 to 17:00	15	0	15	35	1	36	12	0	12	0	0	0	11	0	11	274	2	276	76	1	77	0	0	0			
16:15 to 17:15	17	0	17	34	0	34	10	0	10	0	0	0	11	0	11	266	3	269	76	1	77	0	0	0			
16:30 to 17:30	14	0	14	33	0	33	11	0	11	0	0	0	10	0	10	280	2	282	81	1	82	0	0	0			
16:45 to 17:45	14	0	14	33	0	33	12	0	12	0	0	0	8	0	8	284	6	290	77	1	78	0	0	0			
17:00 to 18:00	12	0	12	30	0	30	10	0	10	0	0	0	10	0	10	275	6	281	75	1	76	0	0	0			
PM Totals	27	0	27	65	1	66	22	0	22	0	0	0	21	0	21	549	8	557	151	2	153	0	0	0			

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 7. Kalandar St / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy												Kalandar St											
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	0	0	0	67	23	90	5	2	7	0	0	0	9	1	10	35	0	35	47	2	49	0	0	0
7:15 to 7:30	0	0	0	120	4	124	9	0	9	0	0	0	6	1	7	36	2	38	78	0	78	0	0	0
7:30 to 7:45	1	0	1	136	20	156	6	0	6	0	0	0	8	0	8	29	0	29	83	3	86	0	0	0
7:45 to 8:00	0	0	0	164	7	171	6	1	7	0	0	0	13	1	14	62	0	62	114	0	114	0	0	0
8:00 to 8:15	1	0	1	184	15	199	9	0	9	0	0	0	5	0	5	47	1	48	130	5	135	0	0	0
8:15 to 8:30	1	0	1	185	8	193	4	0	4	0	0	0	7	0	7	75	2	77	172	6	178	0	0	0
8:30 to 8:45	1	0	1	200	10	210	11	0	11	0	0	0	8	2	10	64	0	64	182	5	187	0	0	0
8:45 to 9:00	0	0	0	195	12	207	8	0	8	0	0	0	9	1	10	66	5	71	160	3	163	0	0	0
AM Totals	4	0	4	1251	99	1350	58	3	61	0	0	0	65	6	71	414	10	424	966	24	990	0	0	0
16:00 to 16:15	5	0	5	163	6	169	18	0	18	0	0	0	18	1	19	44	0	44	101	3	104	0	0	0
16:15 to 16:30	0	0	0	184	4	188	22	1	23	0	0	0	15	0	15	42	1	43	88	1	89	0	0	0
16:30 to 16:45	1	0	1	161	2	163	22	0	22	0	0	0	18	0	18	35	2	37	98	3	101	0	0	0
16:45 to 17:00	2	0	2	171	6	177	11	0	11	0	0	0	15	0	15	40	1	41	88	0	88	0	0	0
17:00 to 17:15	1	0	1	156	4	160	16	2	18	0	0	0	20	1	21	44	1	45	99	0	99	0	0	0
17:15 to 17:30	0	0	0	130	2	132	14	0	14	0	0	0	19	0	19	47	1	48	110	1	111	0	0	0
17:30 to 17:45	1	0	1	162	5	167	15	0	15	0	0	0	13	0	13	38	0	38	91	1	92	0	0	0
17:45 to 18:00	3	0	3	126	4	130	10	0	10	0	0	0	15	0	15	51	0	51	100	0	100	0	0	0
PM Totals	13	0	13	1253	33	1286	128	3	131	0	0	0	133	2	135	341	6	347	775	9	784	0	0	0

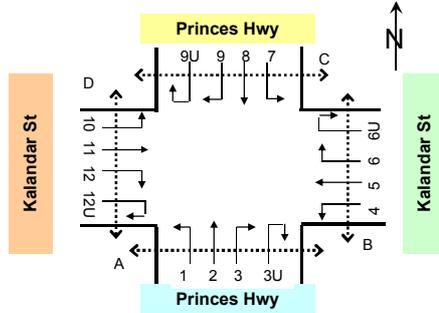
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 7. Kalandar St / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	22	5	27	101	15	116	18	2	20	0	0	0	2	2	4	11	5	16	19	0	19	0	0	0
7:15 to 7:30	29	4	33	118	17	135	9	1	10	0	0	0	3	2	5	12	1	13	19	0	19	0	0	0
7:30 to 7:45	21	2	23	151	15	166	18	3	21	0	0	0	11	1	12	11	3	14	14	1	15	0	0	0
7:45 to 8:00	41	2	43	178	12	190	21	0	21	0	0	0	6	2	8	14	1	15	28	0	28	0	0	0
8:00 to 8:15	49	2	51	195	10	205	27	4	31	0	0	0	8	2	10	20	1	21	34	4	38	0	0	0
8:15 to 8:30	40	2	42	185	12	197	35	5	40	0	0	0	10	2	12	26	0	26	33	1	34	0	0	0
8:30 to 8:45	46	5	51	150	16	166	33	2	35	0	0	0	12	1	13	27	0	27	30	0	30	0	0	0
8:45 to 9:00	69	7	76	170	17	187	23	4	27	0	0	0	8	1	9	52	1	53	28	2	30	0	0	0
AM Totals	317	29	346	1248	114	1362	184	21	205	0	0	0	60	13	73	173	12	185	205	8	213	0	0	0

16:00 to 16:15	150	6	156	289	8	297	29	2	31	0	0	0	15	3	18	55	0	55	61	1	62	0	0	0
16:15 to 16:30	128	0	128	259	8	267	20	1	21	0	0	0	24	1	25	49	0	49	53	0	53	0	0	0
16:30 to 16:45	128	0	128	268	7	275	22	2	24	0	0	0	15	3	18	50	0	50	50	1	51	0	0	0
16:45 to 17:00	148	0	148	304	13	317	17	0	17	0	0	0	13	0	13	52	0	52	38	0	38	0	0	0
17:00 to 17:15	149	1	150	284	4	288	15	1	16	0	0	0	16	0	16	67	0	67	45	0	45	0	0	0
17:15 to 17:30	156	2	158	282	6	288	12	0	12	0	0	0	8	0	8	47	1	48	44	0	44	0	0	0
17:30 to 17:45	157	4	161	280	7	287	22	1	23	0	0	0	8	0	8	51	2	53	38	0	38	0	0	0
17:45 to 18:00	127	3	130	258	7	265	10	1	11	0	0	0	10	2	12	52	0	52	41	0	41	0	0	0
PM Totals	1143	16	1159	2224	60	2284	147	8	155	0	0	0	109	9	118	423	3	426	370	2	372	0	0	0

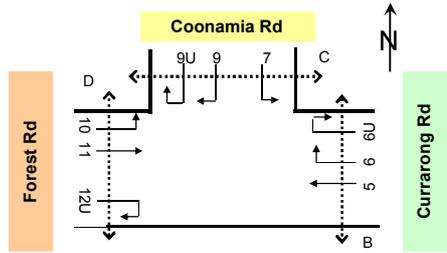
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 7. Kalendar St / Princes Hwy  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Princes Hwy												Kalendar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	1	0	1	487	54	541	26	3	29	0	0	0	36	3	39	162	2	164	322	5	327	0	0	0			
7:15 to 8:15	2	0	2	604	46	650	30	1	31	0	0	0	32	2	34	174	3	177	405	8	413	0	0	0			
7:30 to 8:30	3	0	3	669	50	719	25	1	26	0	0	0	33	1	34	213	3	216	499	14	513	0	0	0			
7:45 to 8:45	3	0	3	733	40	773	30	1	31	0	0	0	33	3	36	248	3	251	598	16	614	0	0	0			
8:00 to 9:00	3	0	3	764	45	809	32	0	32	0	0	0	29	3	32	252	8	260	644	19	663	0	0	0			
AM Totals	4	0	4	1251	99	1350	58	3	61	0	0	0	65	6	71	414	10	424	966	24	990	0	0	0			
16:00 to 17:00	8	0	8	679	18	697	73	1	74	0	0	0	66	1	67	161	4	165	375	7	382	0	0	0			
16:15 to 17:15	4	0	4	672	16	688	71	3	74	0	0	0	68	1	69	161	5	166	373	4	377	0	0	0			
16:30 to 17:30	4	0	4	618	14	632	63	2	65	0	0	0	72	1	73	166	5	171	395	4	399	0	0	0			
16:45 to 17:45	4	0	4	619	17	636	56	2	58	0	0	0	67	1	68	169	3	172	388	2	390	0	0	0			
17:00 to 18:00	5	0	5	574	15	589	55	2	57	0	0	0	67	1	68	180	2	182	400	2	402	0	0	0			
PM Totals	13	0	13	1253	33	1286	128	3	131	0	0	0	133	2	135	341	6	347	775	9	784	0	0	0			

Approach	Princes Hwy												Kalendar St														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	113	13	126	548	59	607	66	6	72	0	0	0	22	7	29	48	10	58	80	1	81	0	0	0			
7:15 to 8:15	140	10	150	642	54	696	75	8	83	0	0	0	28	7	35	57	6	63	95	5	100	0	0	0			
7:30 to 8:30	151	8	159	709	49	758	101	12	113	0	0	0	35	7	42	71	5	76	109	6	115	0	0	0			
7:45 to 8:45	176	11	187	708	50	758	116	11	127	0	0	0	36	7	43	87	2	89	125	5	130	0	0	0			
8:00 to 9:00	204	16	220	700	55	755	118	15	133	0	0	0	38	6	44	125	2	127	125	7	132	0	0	0			
AM Totals	317	29	346	1248	114	1362	184	21	205	0	0	0	60	13	73	173	12	185	205	8	213	0	0	0			
16:00 to 17:00	554	6	560	1120	36	1156	88	5	93	0	0	0	67	7	74	206	0	206	202	2	204	0	0	0			
16:15 to 17:15	553	1	554	1115	32	1147	74	4	78	0	0	0	68	4	72	218	0	218	186	1	187	0	0	0			
16:30 to 17:30	581	3	584	1138	30	1168	66	3	69	0	0	0	52	3	55	216	1	217	177	1	178	0	0	0			
16:45 to 17:45	610	7	617	1150	30	1180	66	2	68	0	0	0	45	0	45	217	3	220	165	0	165	0	0	0			
17:00 to 18:00	589	10	599	1104	24	1128	59	3	62	0	0	0	42	2	44	217	3	220	168	0	168	0	0	0			
PM Totals	1143	16	1159	2224	60	2284	147	8	155	0	0	0	109	9	118	423	3	426	370	2	372	0	0	0			

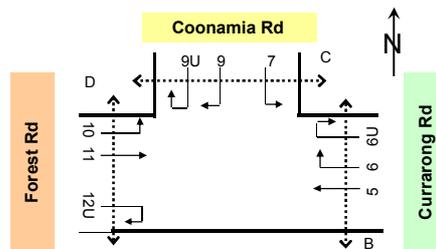
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 8. Forest Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



**SKYHIGH - THE TRAFFIC SURVEY COMPANY**

Approach	Direction	Time Period	Currarong Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15			3	0	3	5	0	5	0	0	0
7:15 to 7:30			5	0	5	4	0	4	0	0	0
7:30 to 7:45			6	0	6	6	0	6	0	0	0
7:45 to 8:00			2	0	2	5	0	5	0	0	0
8:00 to 8:15			6	0	6	8	0	8	0	0	0
8:15 to 8:30			2	0	2	8	0	8	0	0	0
8:30 to 8:45			2	0	2	10	0	10	0	0	0
8:45 to 9:00			1	0	1	8	0	8	0	0	0
<b>AM Totals</b>			<b>27</b>	<b>0</b>	<b>27</b>	<b>54</b>	<b>0</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>0</b>
16:00 to 16:15			4	0	4	2	0	2	0	0	0
16:15 to 16:30			2	0	2	2	0	2	0	0	0
16:30 to 16:45			2	0	2	2	0	2	0	0	0
16:45 to 17:00			2	0	2	4	0	4	0	0	0
17:00 to 17:15			2	0	2	3	0	3	0	0	0
17:15 to 17:30			2	0	2	5	0	5	0	0	0
17:30 to 17:45			1	0	1	2	0	2	0	0	0
17:45 to 18:00			3	0	3	4	0	4	0	0	0
<b>PM Totals</b>			<b>18</b>	<b>0</b>	<b>18</b>	<b>24</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 8. Forest Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



**SKYHIGH - THE TRAFFIC SURVEY COMPANY**

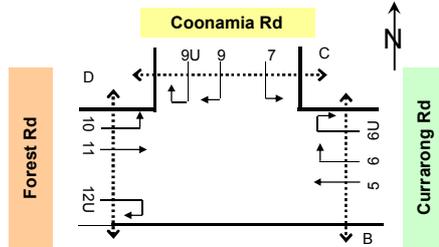
Approach	Coonamia Rd						Forest Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	2	0	2	13	0	13	0	0	0	12	1	13	3	0	3	0	0	0
7:15 to 7:30	4	0	4	12	0	12	0	0	0	27	1	28	2	0	2	0	0	0
7:30 to 7:45	3	0	3	10	0	10	0	0	0	25	3	28	2	0	2	0	0	0
7:45 to 8:00	1	0	1	7	0	7	0	0	0	38	1	39	4	0	4	0	0	0
8:00 to 8:15	0	0	0	13	0	13	0	0	0	48	1	49	1	1	2	0	0	0
8:15 to 8:30	1	0	1	14	1	15	0	0	0	41	1	42	4	0	4	0	0	0
8:30 to 8:45	2	0	2	16	0	16	0	0	0	39	1	40	6	0	6	0	0	0
8:45 to 9:00	3	0	3	13	0	13	0	0	0	36	0	36	4	0	4	0	0	0
<b>AM Totals</b>	<b>16</b>	<b>0</b>	<b>16</b>	<b>98</b>	<b>1</b>	<b>99</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>266</b>	<b>9</b>	<b>275</b>	<b>26</b>	<b>1</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>

16:00 to 16:15	9	0	9
16:15 to 16:30	9	0	9
16:30 to 16:45	4	0	4
16:45 to 17:00	3	0	3
17:00 to 17:15	6	0	6
17:15 to 17:30	4	0	4
17:30 to 17:45	9	0	9
17:45 to 18:00	5	0	5
PM Totals	49	0	49

32	2	34	0	0	0	32	2	34	9	0	9
32	2	34	0	0	0	26	1	27	7	1	8
28	0	28	0	0	0	15	1	16	3	0	3
28	1	29	0	0	0	14	1	15	3	0	3
35	0	35	0	0	0	18	0	18	2	0	2
42	0	42	0	0	0	19	0	19	4	0	4
25	0	25	0	0	0	16	1	17	4	0	4
33	0	33	0	0	0	15	0	15	5	0	5
255	5	260	0	0	0	155	6	161	37	1	38

0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

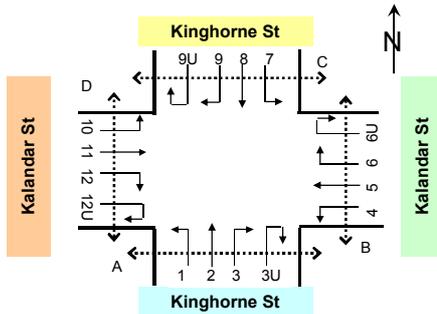
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 8. Forest Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Direction	Time Period	Currarong Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00			16	0	16	20	0	20	0	0	0
7:15 to 8:15			19	0	19	23	0	23	0	0	0
7:30 to 8:30			16	0	16	27	0	27	0	0	0
7:45 to 8:45			12	0	12	31	0	31	0	0	0
8:00 to 9:00			11	0	11	34	0	34	0	0	0
AM Totals			27	0	27	54	0	54	0	0	0
16:00 to 17:00			10	0	10	10	0	10	0	0	0
16:15 to 17:15			8	0	8	11	0	11	0	0	0
16:30 to 17:30			8	0	8	14	0	14	0	0	0
16:45 to 17:45			7	0	7	14	0	14	0	0	0
17:00 to 18:00			8	0	8	14	0	14	0	0	0
PM Totals			18	0	18	24	0	24	0	0	0

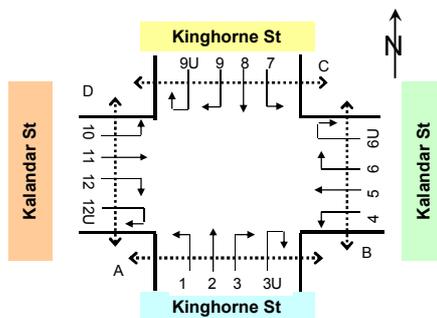
Approach	Coonamia Rd						Forest Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	10	0	10	42	0	42	0	0	0	102	6	108	11	0	11	0	0	0
7:15 to 8:15	8	0	8	42	0	42	0	0	0	138	6	144	9	1	10	0	0	0
7:30 to 8:30	5	0	5	44	1	45	0	0	0	152	6	158	11	1	12	0	0	0
7:45 to 8:45	4	0	4	50	1	51	0	0	0	166	4	170	15	1	16	0	0	0
8:00 to 9:00	6	0	6	56	1	57	0	0	0	164	3	167	15	1	16	0	0	0
AM Totals	16	0	16	98	1	99	0	0	0	266	9	275	26	1	27	0	0	0
16:00 to 17:00	25	0	25	120	5	125	0	0	0	87	5	92	22	1	23	0	0	0
16:15 to 17:15	22	0	22	123	3	126	0	0	0	73	3	76	15	1	16	0	0	0
16:30 to 17:30	17	0	17	133	1	134	0	0	0	66	2	68	12	0	12	0	0	0
16:45 to 17:45	22	0	22	130	1	131	0	0	0	67	2	69	13	0	13	0	0	0
17:00 to 18:00	24	0	24	135	0	135	0	0	0	68	1	69	15	0	15	0	0	0
PM Totals	49	0	49	255	5	260	0	0	0	155	6	161	37	1	38	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 9. Kalandar St / Kinghorne St  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Kinghorne St												Kalandar St											
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	3	2	5	21	1	22	6	1	7	0	0	0	1	0	1	47	2	49	4	0	4	0	0	0
7:15 to 7:30	5	3	8	37	0	37	8	0	8	0	0	0	2	0	2	34	2	36	11	1	12	0	0	0
7:30 to 7:45	6	0	6	55	1	56	4	1	5	0	0	0	8	0	8	28	3	31	11	0	11	0	0	0
7:45 to 8:00	6	0	6	71	2	73	5	1	6	0	0	0	6	0	6	49	0	49	27	0	27	0	0	0
8:00 to 8:15	3	1	4	87	3	90	11	0	11	0	0	0	5	0	5	49	4	53	21	1	22	0	0	0
8:15 to 8:30	7	0	7	106	4	110	10	0	10	0	0	0	5	0	5	70	5	75	41	1	42	0	0	0
8:30 to 8:45	7	1	8	109	2	111	14	0	14	0	0	0	3	0	3	54	2	56	41	0	41	0	0	0
8:45 to 9:00	7	0	7	94	5	99	15	0	15	0	0	0	12	0	12	49	9	58	26	1	27	0	0	0
AM Totals	44	7	51	580	18	598	73	3	76	0	0	0	42	0	42	380	27	407	182	4	186	0	0	0
16:00 to 16:15	3	0	3	69	0	69	15	0	15	0	0	0	9	0	9	43	4	47	24	0	24	0	0	0
16:15 to 16:30	7	1	8	73	1	74	21	0	21	0	0	0	8	0	8	35	2	37	20	0	20	0	0	0
16:30 to 16:45	4	0	4	44	0	44	9	0	9	1	0	1	5	1	6	39	2	41	13	0	13	0	0	0
16:45 to 17:00	8	0	8	33	0	33	7	0	7	0	0	0	4	0	4	35	0	35	19	1	20	1	0	1
17:00 to 17:15	3	1	4	40	1	41	10	0	10	0	0	0	5	0	5	27	2	29	23	0	23	0	0	0
17:15 to 17:30	8	0	8	43	0	43	10	0	10	0	0	0	7	0	7	32	2	34	15	0	15	0	0	0
17:30 to 17:45	3	0	3	32	0	32	13	1	14	0	0	0	14	0	14	36	1	37	18	0	18	1	0	1
17:45 to 18:00	1	0	1	32	0	32	15	0	15	0	0	0	6	0	6	30	1	31	23	0	23	1	0	1
PM Totals	37	2	39	366	2	368	100	1	101	1	0	1	58	1	59	277	14	291	155	1	156	3	0	3

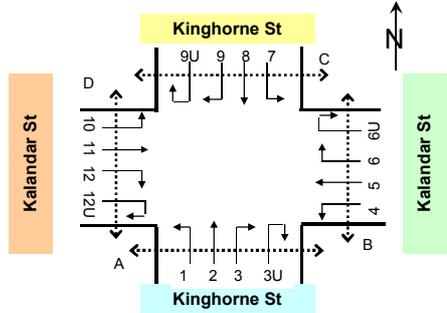
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 9. Kalandar St / Kinghorne St  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Kinghorne St												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	9	1	10	2	0	2	110	1	111	0	0	0	19	0	19	15	5	20	0	1	1	0	0	0
7:15 to 7:30	15	1	16	2	0	2	101	1	102	0	0	0	27	1	28	10	2	12	2	0	2	0	0	0
7:30 to 7:45	12	1	13	4	0	4	42	1	43	0	0	0	27	2	29	21	3	24	1	0	1	0	0	0
7:45 to 8:00	18	0	18	6	0	6	52	2	54	0	0	0	33	0	33	21	3	24	0	0	0	0	0	0
8:00 to 8:15	19	1	20	7	0	7	35	1	36	0	0	0	43	1	44	45	7	52	1	1	2	0	0	0
8:15 to 8:30	16	0	16	3	0	3	39	2	41	2	0	2	54	3	57	35	3	38	1	0	1	0	0	0
8:30 to 8:45	20	0	20	7	0	7	38	1	39	1	0	1	63	3	66	38	1	39	3	0	3	0	0	0
8:45 to 9:00	49	3	52	9	0	9	32	1	33	2	0	2	51	3	54	44	2	46	2	1	3	0	0	0
AM Totals	158	7	165	40	0	40	449	10	459	5	0	5	317	13	330	229	26	255	10	3	13	0	0	0

16:00 to 16:15	60	1	61	14	1	15	52	2	54	1	0	1	65	0	65	53	2	55	2	0	2	0	0	0
16:15 to 16:30	48	0	48	15	0	15	49	3	52	1	0	1	58	1	59	61	1	62	3	0	3	0	0	0
16:30 to 16:45	47	1	48	16	1	17	45	2	47	0	0	0	42	1	43	61	1	62	4	0	4	0	0	0
16:45 to 17:00	55	0	55	7	0	7	52	0	52	0	0	0	35	0	35	41	0	41	1	0	1	0	0	0
17:00 to 17:15	75	0	75	16	0	16	42	2	44	0	0	0	50	2	52	56	1	57	3	0	3	0	0	0
17:15 to 17:30	46	0	46	12	0	12	53	2	55	2	0	2	40	0	40	42	0	42	4	0	4	0	0	0
17:30 to 17:45	49	0	49	9	0	9	53	1	54	0	0	0	31	1	32	50	1	51	0	0	0	0	0	0
17:45 to 18:00	39	0	39	10	0	10	35	1	36	0	0	0	46	1	47	37	1	38	1	0	1	0	0	0
PM Totals	419	2	421	99	2	101	381	13	394	4	0	4	367	6	373	401	7	408	18	0	18	0	0	0

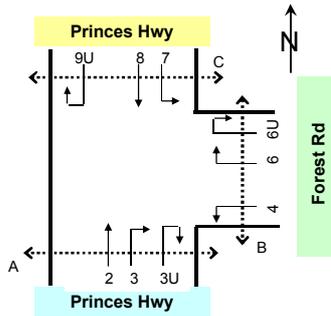
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 9. Kalandar St / Kinghorne St  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Kinghorne St												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	20	5	25	184	4	188	23	3	26	0	0	0	17	0	17	158	7	165	53	1	54	0	0	0			
7:15 to 8:15	20	4	24	250	6	256	28	2	30	0	0	0	21	0	21	160	9	169	70	2	72	0	0	0			
7:30 to 8:30	22	1	23	319	10	329	30	2	32	0	0	0	24	0	24	196	12	208	100	2	102	0	0	0			
7:45 to 8:45	23	2	25	373	11	384	40	1	41	0	0	0	19	0	19	222	11	233	130	2	132	0	0	0			
8:00 to 9:00	24	2	26	396	14	410	50	0	50	0	0	0	25	0	25	222	20	242	129	3	132	0	0	0			
AM Totals	44	7	51	580	18	598	73	3	76	0	0	0	42	0	42	380	27	407	182	4	186	0	0	0			
16:00 to 17:00	22	1	23	219	1	220	52	0	52	1	0	1	26	1	27	152	8	160	76	1	77	1	0	1			
16:15 to 17:15	22	2	24	190	2	192	47	0	47	1	0	1	22	1	23	136	6	142	75	1	76	1	0	1			
16:30 to 17:30	23	1	24	160	1	161	36	0	36	1	0	1	21	1	22	133	6	139	70	1	71	1	0	1			
16:45 to 17:45	22	1	23	148	1	149	40	1	41	0	0	0	30	0	30	130	5	135	75	1	76	2	0	2			
17:00 to 18:00	15	1	16	147	1	148	48	1	49	0	0	0	32	0	32	125	6	131	79	0	79	2	0	2			
PM Totals	37	2	39	366	2	368	100	1	101	1	0	1	58	1	59	277	14	291	155	1	156	3	0	3			

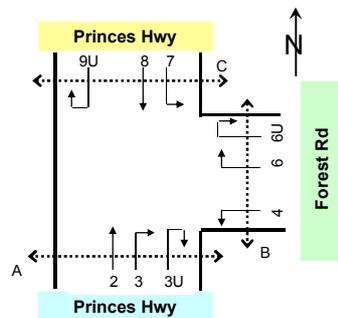
Approach	Kinghorne St												Kalandar St														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	54	3	57	14	0	14	305	5	310	0	0	0	106	3	109	67	13	80	3	1	4	0	0	0			
7:15 to 8:15	64	3	67	19	0	19	230	5	235	0	0	0	130	4	134	97	15	112	4	1	5	0	0	0			
7:30 to 8:30	65	2	67	20	0	20	168	6	174	2	0	2	157	6	163	122	16	138	3	1	4	0	0	0			
7:45 to 8:45	73	1	74	23	0	23	164	6	170	3	0	3	193	7	200	139	14	153	5	1	6	0	0	0			
8:00 to 9:00	104	4	108	26	0	26	144	5	149	5	0	5	211	10	221	162	13	175	7	2	9	0	0	0			
AM Totals	158	7	165	40	0	40	449	10	459	5	0	5	317	13	330	229	26	255	10	3	13	0	0	0			
16:00 to 17:00	210	2	212	52	2	54	198	7	205	2	0	2	200	2	202	216	4	220	10	0	10	0	0	0			
16:15 to 17:15	225	1	226	54	1	55	188	7	195	1	0	1	185	4	189	219	3	222	11	0	11	0	0	0			
16:30 to 17:30	223	1	224	51	1	52	192	6	198	2	0	2	167	3	170	200	2	202	12	0	12	0	0	0			
16:45 to 17:45	225	0	225	44	0	44	200	5	205	2	0	2	156	3	159	189	2	191	8	0	8	0	0	0			
17:00 to 18:00	209	0	209	47	0	47	183	6	189	2	0	2	167	4	171	185	3	188	8	0	8	0	0	0			
PM Totals	419	2	421	99	2	101	381	13	394	4	0	4	367	6	373	401	7	408	18	0	18	0	0	0			

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy									Forest Rd								
	Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	211	10	221	4	0	4	0	0	0	5	0	5	22	0	22	0	0	0
7:15 to 7:30	248	10	258	5	0	5	0	0	0	9	0	9	34	0	34	0	0	0
7:30 to 7:45	287	11	298	5	0	5	1	0	1	10	0	10	26	0	26	0	0	0
7:45 to 8:00	334	16	350	6	1	7	0	0	0	7	3	10	29	1	30	0	0	0
8:00 to 8:15	342	9	351	5	1	6	0	0	0	8	0	8	26	0	26	0	0	0
8:15 to 8:30	285	10	295	3	0	3	0	0	0	10	0	10	21	0	21	0	0	0
8:30 to 8:45	277	8	285	8	2	10	0	0	0	8	1	9	24	1	25	0	0	0
8:45 to 9:00	247	10	257	4	0	4	0	0	0	3	0	3	14	1	15	0	0	0
<b>AM Totals</b>	<b>2231</b>	<b>84</b>	<b>2315</b>	<b>40</b>	<b>4</b>	<b>44</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>60</b>	<b>4</b>	<b>64</b>	<b>196</b>	<b>3</b>	<b>199</b>	<b>0</b>	<b>0</b>	<b>0</b>
16:00 to 16:15	125	10	135	8	1	9	0	0	0	10	0	10	9	0	9	0	0	0
16:15 to 16:30	157	12	169	11	0	11	0	0	0	10	0	10	12	1	13	0	0	0
16:30 to 16:45	139	6	145	6	0	6	0	0	0	6	0	6	5	0	5	0	0	0
16:45 to 17:00	111	6	117	8	0	8	0	0	0	7	0	7	18	0	18	0	0	0
17:00 to 17:15	107	6	113	5	0	5	0	0	0	6	1	7	6	0	6	0	0	0
17:15 to 17:30	122	5	127	7	0	7	0	0	0	7	0	7	7	0	7	0	0	0
17:30 to 17:45	120	4	124	5	0	5	0	0	0	3	0	3	13	0	13	0	0	0
17:45 to 18:00	82	4	86	3	0	3	0	0	0	4	0	4	12	0	12	0	0	0
<b>PM Totals</b>	<b>963</b>	<b>53</b>	<b>1016</b>	<b>53</b>	<b>1</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53</b>	<b>1</b>	<b>54</b>	<b>82</b>	<b>1</b>	<b>83</b>	<b>0</b>	<b>0</b>	<b>0</b>

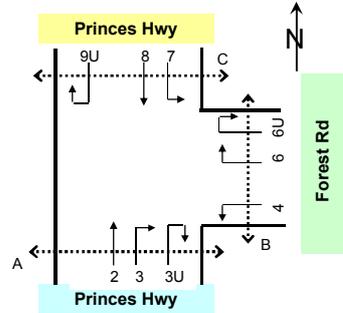
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy								
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	8	2	10	69	25	94	0	0	0
7:15 to 7:30	9	2	11	73	22	95	0	0	0
7:30 to 7:45	12	3	15	84	18	102	0	0	0
7:45 to 8:00	15	1	16	90	9	99	0	0	0
8:00 to 8:15	12	2	14	102	18	120	0	0	0
8:15 to 8:30	13	2	15	77	16	93	0	0	0
8:30 to 8:45	11	0	11	99	17	116	0	0	0
8:45 to 9:00	8	0	8	90	19	109	0	0	0
<b>AM Totals</b>	<b>88</b>	<b>12</b>	<b>100</b>	<b>684</b>	<b>144</b>	<b>828</b>	<b>0</b>	<b>0</b>	<b>0</b>

16:00 to 16:15	20	0	20	359	10	369	0	0	0
16:15 to 16:30	28	2	30	306	10	316	0	0	0
16:30 to 16:45	29	0	29	279	5	284	1	0	1
16:45 to 17:00	21	0	21	339	1	340	0	0	0
17:00 to 17:15	32	1	33	340	8	348	0	0	0
17:15 to 17:30	29	0	29	324	7	331	0	0	0
17:30 to 17:45	30	0	30	294	5	299	0	0	0
17:45 to 18:00	16	1	17	263	4	267	0	0	0
PM Totals	205	4	209	2504	50	2554	1	0	1

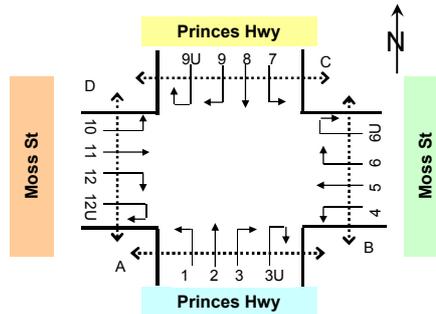
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Princes Hwy									Forest Rd								
	Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	1080	47	1127	20	1	21	1	0	1	31	3	34	111	1	112	0	0	0
7:15 to 8:15	1211	46	1257	21	2	23	1	0	1	34	3	37	115	1	116	0	0	0
7:30 to 8:30	1248	46	1294	19	2	21	1	0	1	35	3	38	102	1	103	0	0	0
7:45 to 8:45	1238	43	1281	22	4	26	0	0	0	33	4	37	100	2	102	0	0	0
8:00 to 9:00	1151	37	1188	20	3	23	0	0	0	29	1	30	85	2	87	0	0	0
AM Totals	2231	84	2315	40	4	44	1	0	1	60	4	64	196	3	199	0	0	0
16:00 to 17:00	532	34	566	33	1	34	0	0	0	33	0	33	44	1	45	0	0	0
16:15 to 17:15	514	30	544	30	0	30	0	0	0	29	1	30	41	1	42	0	0	0
16:30 to 17:30	479	23	502	26	0	26	0	0	0	26	1	27	36	0	36	0	0	0
16:45 to 17:45	460	21	481	25	0	25	0	0	0	23	1	24	44	0	44	0	0	0
17:00 to 18:00	431	19	450	20	0	20	0	0	0	20	1	21	38	0	38	0	0	0
PM Totals	963	53	1016	53	1	54	0	0	0	53	1	54	82	1	83	0	0	0

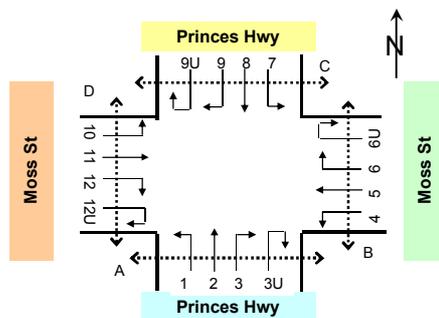
Approach	Princes Hwy								
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	44	8	52	316	74	390	0	0	0
7:15 to 8:15	48	8	56	349	67	416	0	0	0
7:30 to 8:30	52	8	60	353	61	414	0	0	0
7:45 to 8:45	51	5	56	368	60	428	0	0	0
8:00 to 9:00	44	4	48	368	70	438	0	0	0
AM Totals	88	12	100	684	144	828	0	0	0
16:00 to 17:00	98	2	100	1283	26	1309	1	0	1
16:15 to 17:15	110	3	113	1264	24	1288	1	0	1
16:30 to 17:30	111	1	112	1282	21	1303	1	0	1
16:45 to 17:45	112	1	113	1297	21	1318	0	0	0
17:00 to 18:00	107	2	109	1221	24	1245	0	0	0
PM Totals	205	4	209	2504	50	2554	1	0	1

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 11. Moss St / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy												Moss St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	0	0	0	95	26	121	3	0	3	0	0	0	3	0	3	13	0	13	6	0	6	0	0	0			
7:15 to 7:30	2	0	2	138	11	149	5	1	6	0	0	0	2	0	2	5	0	5	19	5	24	0	0	0			
7:30 to 7:45	0	0	0	145	22	167	4	1	5	0	0	0	4	0	4	18	0	18	36	0	36	0	0	0			
7:45 to 8:00	0	0	0	153	12	165	9	0	9	0	0	0	1	0	1	33	0	33	23	0	23	0	0	0			
8:00 to 8:15	0	0	0	143	16	159	12	2	14	0	0	0	5	0	5	37	3	40	42	1	43	0	0	0			
8:15 to 8:30	0	0	0	188	15	203	22	3	25	0	0	0	4	1	5	41	2	43	42	4	46	0	0	0			
8:30 to 8:45	3	0	3	202	13	215	47	0	47	0	0	0	8	0	8	48	3	51	66	5	71	0	0	0			
8:45 to 9:00	0	0	0	169	14	183	48	0	48	0	0	0	11	0	11	59	0	59	58	0	58	0	0	0			
AM Totals	5	0	5	1233	129	1362	150	7	157	0	0	0	38	1	39	254	8	262	292	15	307	0	0	0			
16:00 to 16:15	2	0	2	250	8	258	21	0	21	1	0	1	5	0	5	28	0	28	51	2	53	0	0	0			
16:15 to 16:30	1	0	1	216	8	224	22	0	22	0	0	0	6	1	7	31	0	31	37	0	37	0	0	0			
16:30 to 16:45	0	0	0	273	11	284	21	0	21	0	0	0	5	0	5	23	0	23	34	1	35	0	0	0			
16:45 to 17:00	4	0	4	222	4	226	13	0	13	0	0	0	6	0	6	19	0	19	31	0	31	0	0	0			
17:00 to 17:15	0	0	0	272	4	276	9	0	9	0	0	0	2	0	2	18	0	18	28	1	29	0	0	0			
17:15 to 17:30	1	0	1	239	3	242	21	0	21	0	0	0	1	0	1	11	0	11	27	0	27	0	0	0			
17:30 to 17:45	1	0	1	217	6	223	11	0	11	1	0	1	2	0	2	25	0	25	32	0	32	0	0	0			
17:45 to 18:00	1	0	1	194	6	200	7	0	7	0	0	0	0	0	0	15	0	15	25	0	25	0	0	0			
PM Totals	10	0	10	1883	50	1933	125	0	125	2	0	2	27	1	28	170	0	170	265	4	269	0	0	0			

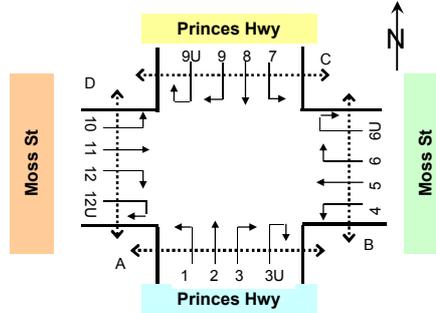
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 11. Moss St / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy												Moss St														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	9	1	10	214	22	236	34	2	36	0	0	0	10	0	10	0	0	0	2	1	3	0	0	0			
7:15 to 7:30	6	1	7	220	16	236	27	2	29	0	0	0	13	1	14	7	1	8	5	1	6	0	0	0			
7:30 to 7:45	14	1	15	247	15	262	57	3	60	0	0	0	16	2	18	7	0	7	5	2	7	0	0	0			
7:45 to 8:00	23	1	24	282	19	301	82	4	86	0	0	0	16	0	16	10	1	11	7	0	7	0	0	0			
8:00 to 8:15	27	0	27	271	17	288	72	0	72	0	0	0	21	4	25	20	0	20	6	2	8	0	0	0			
8:15 to 8:30	43	2	45	289	23	312	74	3	77	0	0	0	30	3	33	25	2	27	9	1	10	0	0	0			
8:30 to 8:45	39	4	43	261	15	276	73	5	78	0	0	0	20	2	22	34	2	36	14	2	16	0	0	0			
8:45 to 9:00	42	2	44	296	27	323	91	4	95	0	0	0	25	2	27	28	0	28	8	0	8	0	0	0			
AM Totals	203	12	215	2080	154	2234	510	23	533	0	0	0	151	14	165	131	6	137	56	9	65	0	0	0			

16:00 to 16:15	28	1	29	267	15	282	81	1	82	0	0	0	85	0	85	40	0	40	20	0	20	0	0	0
16:15 to 16:30	36	2	38	273	6	279	69	1	70	0	0	0	91	2	93	42	0	42	28	1	29	0	0	0
16:30 to 16:45	31	1	32	343	13	356	62	0	62	0	0	0	65	2	67	27	0	27	14	0	14	0	0	0
16:45 to 17:00	34	1	35	247	7	254	61	0	61	0	0	0	96	0	96	56	0	56	28	0	28	1	0	1
17:00 to 17:15	35	1	36	308	7	315	74	0	74	0	0	0	83	0	83	51	0	51	35	1	36	0	0	0
17:15 to 17:30	25	0	25	273	10	283	48	1	49	0	0	0	70	1	71	32	0	32	17	0	17	0	0	0
17:30 to 17:45	33	0	33	280	7	287	58	1	59	0	0	0	78	0	78	32	0	32	25	0	25	0	0	0
17:45 to 18:00	19	0	19	268	10	278	47	0	47	0	0	0	60	0	60	26	0	26	15	0	15	0	0	0
PM Totals	241	6	247	2259	75	2334	500	4	504	0	0	0	628	5	633	306	0	306	182	2	184	1	0	1

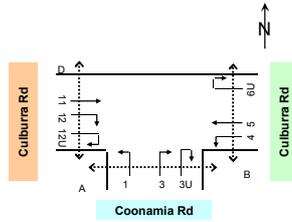
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 11. Moss St / Princes Hwy  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Princes Hwy												Moss St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	2	0	2	531	71	602	21	2	23	0	0	0	10	0	10	69	0	69	84	5	89	0	0	0			
7:15 to 8:15	2	0	2	579	61	640	30	4	34	0	0	0	12	0	12	93	3	96	120	6	126	0	0	0			
7:30 to 8:30	0	0	0	629	65	694	47	6	53	0	0	0	14	1	15	129	5	134	143	5	148	0	0	0			
7:45 to 8:45	3	0	3	686	56	742	90	5	95	0	0	0	18	1	19	159	8	167	173	10	183	0	0	0			
8:00 to 9:00	3	0	3	702	58	760	129	5	134	0	0	0	28	1	29	185	8	193	208	10	218	0	0	0			
AM Totals	5	0	5	1233	129	1362	150	7	157	0	0	0	38	1	39	254	8	262	292	15	307	0	0	0			
16:00 to 17:00	7	0	7	961	31	992	77	0	77	1	0	1	22	1	23	101	0	101	153	3	156	0	0	0			
16:15 to 17:15	5	0	5	983	27	1010	65	0	65	0	0	0	19	1	20	91	0	91	130	2	132	0	0	0			
16:30 to 17:30	5	0	5	1006	22	1028	64	0	64	0	0	0	14	0	14	71	0	71	120	2	122	0	0	0			
16:45 to 17:45	6	0	6	950	17	967	54	0	54	1	0	1	11	0	11	73	0	73	118	1	119	0	0	0			
17:00 to 18:00	3	0	3	922	19	941	48	0	48	1	0	1	5	0	5	69	0	69	112	1	113	0	0	0			
PM Totals	10	0	10	1883	50	1933	125	0	125	2	0	2	27	1	28	170	0	170	265	4	269	0	0	0			

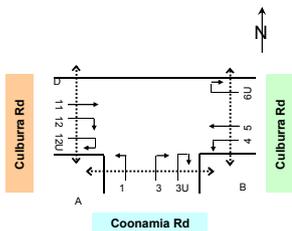
Approach	Princes Hwy												Moss St														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	52	4	56	963	72	1035	200	11	211	0	0	0	55	3	58	24	2	26	19	4	23	0	0	0			
7:15 to 8:15	70	3	73	1020	67	1087	238	9	247	0	0	0	66	7	73	44	2	46	23	5	28	0	0	0			
7:30 to 8:30	107	4	111	1089	74	1163	285	10	295	0	0	0	83	9	92	62	3	65	27	5	32	0	0	0			
7:45 to 8:45	132	7	139	1103	74	1177	301	12	313	0	0	0	87	9	96	89	5	94	36	5	41	0	0	0			
8:00 to 9:00	151	8	159	1117	82	1199	310	12	322	0	0	0	96	11	107	107	4	111	37	5	42	0	0	0			
AM Totals	203	12	215	2080	154	2234	510	23	533	0	0	0	151	14	165	131	6	137	56	9	65	0	0	0			
16:00 to 17:00	129	5	134	1130	41	1171	273	2	275	0	0	0	337	4	341	165	0	165	90	1	91	1	0	1			
16:15 to 17:15	136	5	141	1171	33	1204	266	1	267	0	0	0	335	4	339	176	0	176	105	2	107	1	0	1			
16:30 to 17:30	125	3	128	1171	37	1208	245	1	246	0	0	0	314	3	317	166	0	166	94	1	95	1	0	1			
16:45 to 17:45	127	2	129	1108	31	1139	241	2	243	0	0	0	327	1	328	171	0	171	105	1	106	1	0	1			
17:00 to 18:00	112	1	113	1129	34	1163	227	2	229	0	0	0	291	1	292	141	0	141	92	1	93	0	0	0			
PM Totals	241	6	247	2259	75	2334	500	4	504	0	0	0	628	5	633	306	0	306	182	2	184	1	0	1			

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 1. Culburra Rd / Coonamia Rd  
  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



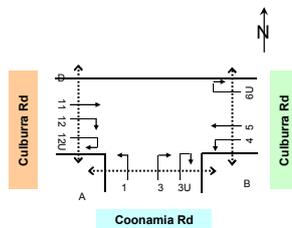
Approach	Coonamia Rd						Culburra Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	16	0	16	10	0	10	0	0	0	18	0	18	22	1	23	0	0	0
12:15 to 12:30	25	0	25	12	0	12	0	0	0	12	0	12	25	0	25	0	0	0
12:30 to 12:45	26	1	27	13	0	13	0	0	0	17	0	17	50	0	50	0	0	0
12:45 to 13:00	11	0	11	15	0	15	0	0	0	14	0	14	31	0	31	0	0	0
13:00 to 13:15	14	0	14	10	0	10	0	0	0	9	0	9	22	0	22	0	0	0
13:15 to 13:30	12	0	12	12	0	12	0	0	0	10	1	11	10	0	10	0	0	0
13:30 to 13:45	19	1	20	16	0	16	0	0	0	8	0	8	21	0	21	0	0	0
13:45 to 14:00	15	0	15	15	0	15	0	0	0	13	0	13	30	0	30	0	0	0
<b>Totals</b>	<b>138</b>	<b>2</b>	<b>140</b>	<b>103</b>	<b>0</b>	<b>103</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>1</b>	<b>102</b>	<b>211</b>	<b>1</b>	<b>212</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 1. Culburra Rd / Coonamia Rd  
  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



Approach	Culburra Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	30	1	31	19	1	20	0	0	0
12:15 to 12:30	27	0	27	22	0	22	0	0	0
12:30 to 12:45	33	0	33	13	0	13	0	0	0
12:45 to 13:00	35	0	35	23	1	24	0	0	0
13:00 to 13:15	28	0	28	14	0	14	0	0	0
13:15 to 13:30	32	2	34	17	0	17	0	0	0
13:30 to 13:45	35	0	35	12	0	12	0	0	0
13:45 to 14:00	40	0	40	18	0	18	0	0	0
<b>Totals</b>	<b>260</b>	<b>3</b>	<b>263</b>	<b>138</b>	<b>2</b>	<b>140</b>	<b>0</b>	<b>0</b>	<b>0</b>

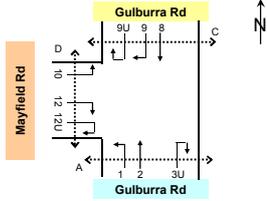
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 1. Culburra Rd / Coonamia Rd  
  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : Hourly Summary



Approach	Coonamia Rd						Culburra Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	78	1	79	50	0	50	0	0	0	61	0	61	128	1	129	0	0	0
12:15 to 13:15	76	1	77	50	0	50	0	0	0	52	0	52	128	0	128	0	0	0
12:30 to 13:30	63	1	64	50	0	50	0	0	0	50	1	51	113	0	113	0	0	0
12:45 to 13:45	56	1	57	53	0	53	0	0	0	41	1	42	84	0	84	0	0	0
13:00 to 14:00	60	1	61	53	0	53	0	0	0	40	1	41	83	0	83	0	0	0
<b>Totals</b>	<b>138</b>	<b>2</b>	<b>140</b>	<b>103</b>	<b>0</b>	<b>103</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>1</b>	<b>102</b>	<b>211</b>	<b>1</b>	<b>212</b>	<b>0</b>	<b>0</b>	<b>0</b>

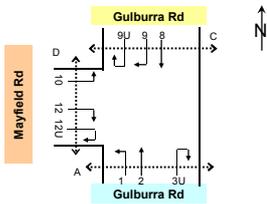
Approach	Culburra Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	125	1	126	77	2	79	0	0	0
12:15 to 13:15	123	0	123	72	1	73	0	0	0
12:30 to 13:30	128	2	130	67	1	68	0	0	0
12:45 to 13:45	130	2	132	66	1	67	0	0	0
13:00 to 14:00	135	2	137	61	0	61	0	0	0
<b>Totals</b>	<b>260</b>	<b>3</b>	<b>263</b>	<b>138</b>	<b>2</b>	<b>140</b>	<b>0</b>	<b>0</b>	<b>0</b>

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 2. Gulburra Rd / Mayfield Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



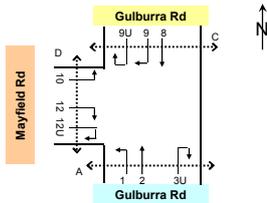
Approach	Gulburra Rd								
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	0	0	0	38	1	39	0	0	0
12:15 to 12:30	1	0	1	51	0	51	0	0	0
12:30 to 12:45	1	0	1	75	0	75	0	0	0
12:45 to 13:00	0	0	0	45	0	45	0	0	0
13:00 to 13:15	0	0	0	33	0	33	0	0	0
13:15 to 13:30	1	0	1	21	0	21	0	0	0
13:30 to 13:45	0	0	0	40	1	41	0	0	0
13:45 to 14:00	0	0	0	45	0	45	0	0	0
Totals	3	0	3	348	2	350	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 2. Gulburra Rd / Mayfield Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Gulburra Rd									Mayfield Rd								
	Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	47	0	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 to 12:30	45	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 to 12:45	57	0	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 to 13:00	39	1	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 to 13:15	44	1	45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
13:15 to 13:30	53	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 to 13:45	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 to 14:00	46	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	391	2	393	0	1	1	0	0	0	0	0	0	0	0	0	5	0	5

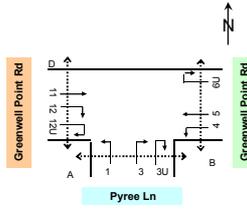
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 2. Gulburra Rd / Mayfield Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Gulburra Rd								
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	2	0	2	209	1	210	0	0	0
12:15 to 13:15	2	0	2	204	0	204	0	0	0
12:30 to 13:30	2	0	2	174	0	174	0	0	0
12:45 to 13:45	1	0	1	139	1	140	0	0	0
13:00 to 14:00	1	0	1	139	1	140	0	0	0
Totals	3	0	3	348	2	350	0	0	0

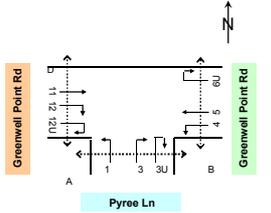
Approach	Gulburra Rd									Mayfield Rd								
	Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	188	1	189	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
12:15 to 13:15	185	2	187	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
12:30 to 13:30	193	2	195	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
12:45 to 13:45	196	2	198	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
13:00 to 14:00	203	1	204	0	1	1	0	0	0	0	0	0	0	0	0	3	0	3
Totals	391	2	393	0	1	1	0	0	0	0	0	0	0	0	0	5	0	5

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 3. Greenwell Point Rd / Pyree Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



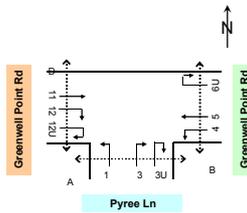
Approach	Pyree Ln						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	38	1	39	2	0	2	0	0	0	23	0	23	17	1	18	0	0	0
12:15 to 12:30	38	0	38	9	0	9	0	0	0	31	1	32	20	1	21	0	0	0
12:30 to 12:45	60	1	61	16	0	16	0	0	0	26	1	27	22	1	23	0	0	0
12:45 to 13:00	34	0	34	7	0	7	0	0	0	27	1	28	14	0	14	0	0	0
13:00 to 13:15	27	0	27	10	0	10	0	0	0	17	1	18	17	0	17	0	0	0
13:15 to 13:30	19	0	19	2	0	2	0	0	0	19	1	20	14	0	14	0	0	0
13:30 to 13:45	35	1	36	5	0	5	0	0	0	23	0	23	18	0	18	0	0	0
13:45 to 14:00	46	0	46	1	0	1	0	0	0	23	1	24	21	0	21	0	0	0
Totals	297	3	300	82	0	82	0	0	0	189	6	195	143	3	146	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 3. Greenwell Point Rd / Pyree Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	45	1	46	21	0	21	0	0	0
12:15 to 12:30	39	0	39	21	0	21	0	0	0
12:30 to 12:45	54	0	54	20	0	20	0	0	0
12:45 to 13:00	33	1	34	21	1	22	0	0	0
13:00 to 13:15	39	0	39	38	1	39	0	0	0
13:15 to 13:30	41	0	41	30	1	31	0	0	0
13:30 to 13:45	52	0	52	26	0	26	0	0	0
13:45 to 14:00	38	0	38	24	0	24	0	0	0
Totals	341	2	343	201	3	204	0	0	0

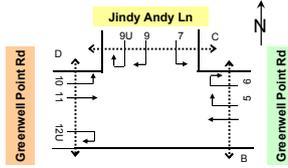
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 3. Greenwell Point Rd / Pyree Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Pyree Ln						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	370	2	372	34	0	34	0	0	0	107	3	110	73	3	76	0	0	0
12:15 to 13:15	159	1	160	42	0	42	0	0	0	101	4	105	73	2	75	0	0	0
12:30 to 13:30	140	1	141	35	0	35	0	0	0	89	4	93	67	1	68	0	0	0
12:45 to 13:45	115	1	116	24	0	24	0	0	0	86	3	89	63	0	63	0	0	0
13:00 to 14:00	127	1	128	18	0	18	0	0	0	82	3	85	70	0	70	0	0	0
Totals	297	3	300	82	0	82	0	0	0	189	6	195	143	3	146	0	0	0

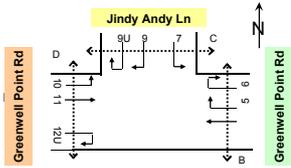
Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	171	1	172	83	1	84	0	0	0
12:15 to 13:15	165	1	166	100	2	102	0	0	0
12:30 to 13:30	167	1	168	109	3	112	0	0	0
12:45 to 13:45	165	1	166	115	3	118	0	0	0
13:00 to 14:00	170	0	170	118	2	120	0	0	0
Totals	341	2	343	201	3	204	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 4. Greenwell Point Rd / Jindy Andy Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



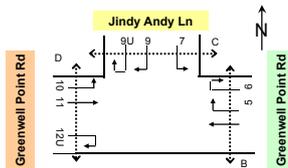
Approach	Direction	Greenwell Point Rd								
		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
		Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15		42	3	45	23	0	23	0	0	0
12:15 to 12:30		42	0	42	18	1	19	0	0	0
12:30 to 12:45		49	1	50	14	0	14	0	0	0
12:45 to 13:00		54	2	56	17	0	17	0	0	0
13:00 to 13:15		34	0	34	20	0	20	0	0	0
13:15 to 13:30		23	0	23	8	0	8	0	0	0
13:30 to 13:45		34	1	35	16	0	16	0	0	0
13:45 to 14:00		51	0	51	14	0	14	0	0	0
Totals		329	7	336	130	1	131	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 4. Greenwell Point Rd / Jindy Andy Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Jindy Andy Ln			Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	17	0	17	1	0	1	0	0	0	1	0	1	46	2	48	0	0	0
12:15 to 12:30	17	0	17	2	0	2	0	0	0	1	0	1	59	1	60	0	0	0
12:30 to 12:45	22	0	22	2	0	2	0	0	0	1	0	1	54	0	54	0	0	0
12:45 to 13:00	20	0	20	2	0	2	0	0	0	1	0	1	53	4	57	0	0	0
13:00 to 13:15	18	0	18	1	0	1	0	0	0	3	0	3	42	0	42	0	0	0
13:15 to 13:30	19	0	19	1	0	1	0	0	0	1	0	1	48	1	49	0	0	0
13:30 to 13:45	11	0	11	0	0	0	0	0	0	2	0	2	57	1	58	0	0	0
13:45 to 14:00	18	0	18	1	0	1	0	0	0	1	0	1	53	1	54	0	0	0
Totals	142	0	142	10	0	10	0	0	0	11	0	11	412	10	422	0	0	0

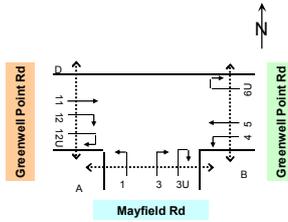
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 4. Greenwell Point Rd / Jindy Andy Ln  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Direction	Greenwell Point Rd								
		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
		Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00		187	6	193	72	1	73	0	0	0
12:15 to 13:15		179	3	182	69	1	70	0	0	0
12:30 to 13:30		160	3	163	59	0	59	0	0	0
12:45 to 13:45		145	3	148	61	0	61	0	0	0
13:00 to 14:00		142	1	143	58	0	58	0	0	0
Totals		329	7	336	130	1	131	0	0	0

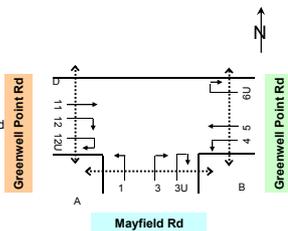
Approach	Jindy Andy Ln			Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	76	0	76	7	0	7	0	0	0	4	0	4	212	7	219	0	0	0
12:15 to 13:15	77	0	77	7	0	7	0	0	0	6	0	6	208	5	213	0	0	0
12:30 to 13:30	79	0	79	6	0	6	0	0	0	6	0	6	197	5	202	0	0	0
12:45 to 13:45	68	0	68	4	0	4	0	0	0	7	0	7	200	6	206	0	0	0
13:00 to 14:00	66	0	66	3	0	3	0	0	0	7	0	7	200	3	203	0	0	0
Totals	142	0	142	10	0	10	0	0	0	11	0	11	412	10	422	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



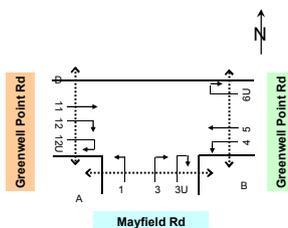
Approach	Mayfield Rd						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	1	0	1	0	0	0	0	0	0	0	0	0	46	1	47	0	0	0
12:15 to 12:30	1	0	1	0	0	0	0	0	0	0	0	0	44	0	44	0	0	0
12:30 to 12:45	1	0	1	0	0	0	0	0	0	1	1	2	62	0	62	0	0	0
12:45 to 13:00	3	0	3	0	0	0	0	1	1	2	46	1	47	0	47	0	0	0
13:00 to 13:15	2	0	2	3	3	6	0	1	1	2	34	0	34	0	34	0	0	0
13:15 to 13:30	4	0	4	0	0	0	0	0	0	0	25	0	25	0	25	0	0	0
13:30 to 13:45	0	0	0	0	0	0	1	0	1	38	1	39	0	0	39	0	0	0
13:45 to 14:00	0	0	0	0	0	0	2	0	2	49	0	49	0	0	49	0	0	0
Totals	12	0	12	3	0	3	0	0	0	5	3	8	344	3	347	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	53	1	54	0	0	0	0	0	0
12:15 to 12:30	58	0	58	5	0	5	0	0	0
12:30 to 12:45	58	1	59	1	0	1	0	0	0
12:45 to 13:00	47	2	49	3	0	3	0	0	0
13:00 to 13:15	46	1	47	1	0	1	0	0	0
13:15 to 13:30	45	1	46	2	0	2	0	0	0
13:30 to 13:45	67	0	67	0	0	0	0	0	0
13:45 to 14:00	46	2	48	1	0	1	0	0	0
Totals	420	8	428	13	0	13	0	0	0

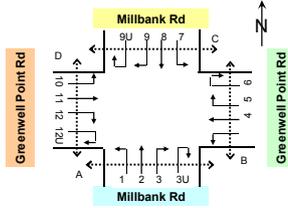
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : Hourly Summary



Approach	Mayfield Rd						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	6	0	6	0	0	0	1	2	3	198	2	200	0	0	0	0	0	0
12:15 to 13:15	7	0	7	3	0	3	2	3	5	186	1	187	0	0	0	0	0	0
12:30 to 13:30	10	0	10	3	0	3	2	3	5	167	1	168	0	0	0	0	0	0
12:45 to 13:45	9	0	9	3	0	3	3	2	5	143	2	145	0	0	0	0	0	0
13:00 to 14:00	6	0	6	3	0	3	4	1	5	146	1	147	0	0	0	0	0	0
Totals	12	0	12	3	0	3	5	3	8	344	3	347	0	0	0	0	0	0

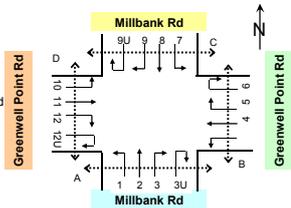
Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	216	4	220	9	0	9	0	0	0
12:15 to 13:15	209	4	213	10	0	10	0	0	0
12:30 to 13:30	196	5	201	7	0	7	0	0	0
12:45 to 13:45	205	4	209	6	0	6	0	0	0
13:00 to 14:00	204	4	208	4	0	4	0	0	0
Totals	420	8	428	13	0	13	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 6. Greenwell Point Rd / Millbank Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



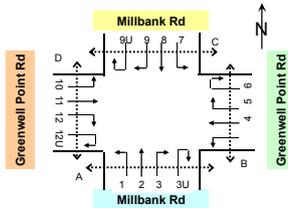
Approach	Millbank Rd												Greenwell Point Rd														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	19	0	19	7	0	7	6	0	6	0	0	0	3	37	2	39	2	0	2	0	0	0	0	0	0		
12:15 to 12:30	9	0	9	2	0	2	8	1	9	0	0	0	3	0	3	48	0	48	8	0	8	0	0	0	0		
12:30 to 12:45	15	0	15	6	0	6	11	0	11	0	0	0	4	1	5	60	0	60	0	0	0	0	0	0	0		
12:45 to 13:00	15	0	15	6	1	7	3	0	3	0	0	0	4	0	4	36	0	36	2	0	2	0	0	0	0		
13:00 to 13:15	6	0	6	7	0	7	6	0	6	0	0	0	4	0	4	33	0	33	3	0	3	0	0	0	0		
13:15 to 13:30	5	0	5	8	0	8	10	1	11	0	0	0	3	0	3	26	1	27	1	0	1	0	0	0	0		
13:30 to 13:45	9	0	9	7	1	8	6	0	6	0	0	0	5	0	5	35	1	36	1	1	2	0	0	0	0		
13:45 to 14:00	11	1	12	6	0	6	3	0	3	0	0	0	3	14	17	45	0	45	2	0	2	0	0	0	0		
Totals	89	1	90	49	2	51	53	2	55	0	0	0	29	15	44	320	4	324	19	1	20	0	0	0	0		

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 6. Greenwell Point Rd / Millbank Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Millbank Rd												Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	0	0	0	5	2	7	5	0	5	0	0	0	4	0	4	55	0	55	14	0	14	0	0	0	0		
12:15 to 12:30	2	0	2	2	0	2	4	0	4	0	0	0	1	0	1	52	0	52	7	0	7	0	0	0	0		
12:30 to 12:45	0	0	0	3	0	3	2	0	2	0	0	0	3	1	4	47	2	49	8	0	8	0	0	0	0		
12:45 to 13:00	3	1	4	6	0	6	1	0	1	0	0	0	7	0	7	36	0	36	12	0	12	0	0	0	0		
13:00 to 13:15	1	0	1	2	0	2	2	0	2	0	0	0	3	0	3	42	1	43	9	0	9	0	0	0	0		
13:15 to 13:30	2	0	2	6	0	6	3	0	3	0	0	0	7	0	7	47	1	48	10	0	10	0	0	0	0		
13:30 to 13:45	1	0	1	2	0	2	2	0	2	0	0	0	8	0	8	57	2	59	11	0	11	0	0	0	0		
13:45 to 14:00	1	0	1	3	0	3	3	0	3	0	0	0	4	0	4	49	1	50	11	0	11	0	0	0	0		
Totals	10	1	11	29	2	31	22	0	22	0	0	0	37	1	38	385	7	392	82	0	82	0	0	0	0		

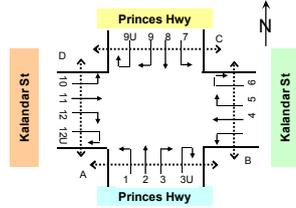
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 6. Greenwell Point Rd / Millbank Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Millbank Rd												Greenwell Point Rd														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	58	0	58	21	1	22	28	1	29	0	0	0	14	1	15	181	2	183	12	0	12	0	0	0	0		
12:15 to 13:15	45	0	45	21	1	22	28	1	29	0	0	0	15	1	16	177	0	177	13	0	13	0	0	0	0		
12:30 to 13:30	41	0	41	27	1	28	30	1	31	0	0	0	15	1	16	155	1	156	6	0	6	0	0	0	0		
12:45 to 13:45	35	0	35	28	2	30	25	1	26	0	0	0	16	0	16	130	2	132	7	1	8	0	0	0	0		
13:00 to 14:00	31	1	32	28	1	29	25	1	26	0	0	0	15	14	29	139	2	141	7	1	8	0	0	0	0		
Totals	89	1	90	49	2	51	53	2	55	0	0	0	29	15	44	320	4	324	19	1	20	0	0	0	0		

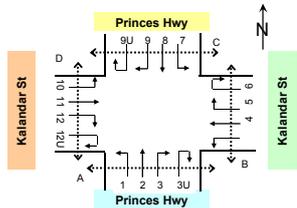
Approach	Millbank Rd												Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	5	1	6	16	2	18	12	0	12	0	0	0	15	1	16	190	2	192	41	0	41	0	0	0	0		
12:15 to 13:15	6	1	7	13	0	13	9	0	9	0	0	0	14	1	15	177	3	180	36	0	36	0	0	0	0		
12:30 to 13:30	6	1	7	17	0	17	8	0	8	0	0	0	20	1	21	172	4	176	39	0	39	0	0	0	0		
12:45 to 13:45	7	1	8	16	0	16	8	0	8	0	0	0	25	0	25	162	4	166	42	0	42	0	0	0	0		
13:00 to 14:00	5	0	5	13	0	13	10	0	10	0	0	0	22	0	22	195	5	200	41	0	41	0	0	0	0		
Totals	10	1	11	29	2	31	22	0	22	0	0	0	37	1	38	385	7	392	82	0	82	0	0	0	0		

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 7. Kalandar St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



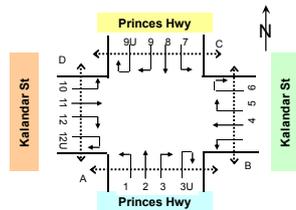
Approach	Princes Hwy												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	0	0	0	183	5	188	14	1	15	0	0	0	19	0	19	48	0	48	105	1	106	0	0	0	0	0	0
12:15 to 12:30	2	1	3	191	5	196	15	1	16	0	0	0	16	0	16	44	1	45	123	0	123	0	0	0	0	0	0
12:30 to 12:45	0	0	0	190	5	195	28	1	29	0	0	0	15	0	15	28	0	28	81	2	83	0	0	0	0	0	0
12:45 to 13:00	1	0	1	189	5	194	27	1	28	0	0	0	18	0	18	39	0	39	100	1	101	0	0	0	0	0	0
13:00 to 13:15	3	0	3	154	1	155	22	0	22	0	0	0	15	0	15	23	0	23	73	0	73	0	0	0	0	0	0
13:15 to 13:30	0	0	0	166	1	167	18	0	18	0	0	0	13	0	13	32	1	33	78	0	78	0	0	0	0	0	0
13:30 to 13:45	3	0	3	186	2	188	20	0	20	0	0	0	11	0	11	35	0	35	90	0	90	0	0	0	0	0	0
13:45 to 14:00	1	0	1	175	3	178	13	0	13	0	0	0	14	0	14	23	1	24	85	0	85	0	0	0	0	0	0
Totals	10	1	11	1434	27	1461	157	4	161	0	0	0	121	0	121	272	3	275	735	4	739	0	0	0	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 7. Kalandar St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Princes Hwy												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)		Direction 11 (Through)		Direction 12 (Right Turn)		Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
12:00 to 12:15	98	0	98	253	2	255	12	2	14	0	0	0	10	0	10	40	0	40	35	0	35	0	0	0
12:15 to 12:30	95	1	96	298	3	301	10	2	12	0	0	0	20	0	20	19	0	19	24	0	24	0	0	0
12:30 to 12:45	97	0	97	314	4	318	17	4	21	0	0	0	10	1	11	34	0	34	39	1	40	0	0	0
12:45 to 13:00	86	0	86	240	2	242	22	0	22	0	0	0	9	0	9	35	0	35	32	0	32	0	0	0
13:00 to 13:15	112	0	112	231	2	233	24	1	25	0	0	0	6	0	6	42	0	42	26	0	26	0	0	0
13:15 to 13:30	79	0	79	275	8	283	27	0	27	0	0	0	7	1	8	34	0	34	36	2	38	0	0	0
13:30 to 13:45	94	1	95	253	3	256	11	0	11	0	0	0	10	0	10	25	1	26	27	0	27	0	0	0
13:45 to 14:00	84	2	86	271	2	273	17	0	17	0	0	0	7	1	8	21	0	21	29	1	30	0	0	0
Totals	745	4	749	2135	26	2161	140	9	149	0	0	0	79	3	82	250	1	251	248	4	252	0	0	0

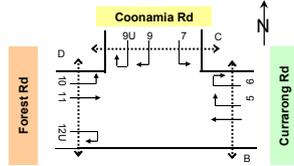
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 7. Kalandar St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Princes Hwy												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	3	1	4	753	20	773	84	4	88	0	0	0	68	0	68	159	1	160	409	4	413	0	0	0	0	0	0
12:15 to 13:15	6	1	7	724	16	740	92	3	95	0	0	0	64	0	64	134	1	135	377	3	380	0	0	0	0	0	0
12:30 to 13:30	4	0	4	699	12	711	95	2	97	0	0	0	61	0	61	122	1	123	332	3	335	0	0	0	0	0	0
12:45 to 13:45	7	0	7	695	9	704	87	1	88	0	0	0	57	0	57	129	1	130	341	1	342	0	0	0	0	0	0
13:00 to 14:00	7	0	7	681	7	688	73	0	73	0	0	0	53	0	53	113	2	115	326	0	326	0	0	0	0	0	0
Totals	10	1	11	1434	27	1461	157	4	161	0	0	0	121	0	121	272	3	275	735	4	739	0	0	0	0	0	0

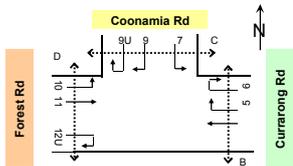
Approach	Princes Hwy												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)		Direction 11 (Through)		Direction 12 (Right Turn)		Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
12:00 to 13:00	376	1	377	1105	11	1116	61	8	69	0	0	0	49	1	50	128	0	128	130	1	131	0	0	0
12:15 to 13:15	390	1	391	1083	11	1094	73	7	80	0	0	0	45	1	46	130	0	130	121	1	122	0	0	0
12:30 to 13:30	374	0	374	1060	16	1076	90	5	95	0	0	0	32	2	34	145	0	145	133	3	136	0	0	0
12:45 to 13:45	371	1	372	999	15	1014	84	1	85	0	0	0	32	1	33	136	1	137	121	2	123	0	0	0
13:00 to 14:00	369	3	372	1030	15	1045	79	1	80	0	0	0	30	2	32	122	1	123	118	3	121	0	0	0
Totals	745	4	749	2135	26	2161	140	9	149	0	0	0	79	3	82	250	1	251	248	4	252	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 8. Forest Rd / Coonamia Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



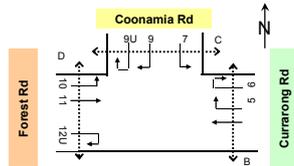
Approach	Direction	Time Period	Currarong Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15			1	0	1	5	0	5	0	0	0
12:15 to 12:30			3	0	3	6	0	6	0	0	0
12:30 to 12:45			3	0	3	5	0	5	0	0	0
12:45 to 13:00			1	0	1	4	0	4	0	0	0
13:00 to 13:15			2	0	2	3	0	3	0	0	0
13:15 to 13:30			1	0	1	5	0	5	0	0	0
13:30 to 13:45			2	0	2	7	0	7	0	0	0
13:45 to 14:00			3	0	3	5	0	5	0	0	0
Totals			16	0	16	40	0	40	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 8. Forest Rd / Coonamia Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Coonamia Rd						Forest Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	6	0	6	29	1	30	0	0	0	23	0	23	3	0	3	0	0	0
12:15 to 12:30	5	0	5	27	0	27	0	0	0	32	0	32	4	0	4	0	0	0
12:30 to 12:45	5	0	5	25	0	25	0	0	0	34	1	35	5	0	5	0	0	0
12:45 to 13:00	6	0	6	31	1	32	0	0	0	25	0	25	2	0	2	0	0	0
13:00 to 13:15	4	0	4	18	0	18	0	0	0	20	0	20	3	0	3	0	0	0
13:15 to 13:30	4	0	4	22	1	23	0	0	0	20	0	20	2	0	2	0	0	0
13:30 to 13:45	3	0	3	18	0	18	0	0	0	29	1	30	3	0	3	0	0	0
13:45 to 14:00	5	0	5	24	0	24	0	0	0	28	0	28	4	0	4	0	0	0
Totals	38	0	38	194	3	197	0	0	0	211	2	213	26	0	26	0	0	0

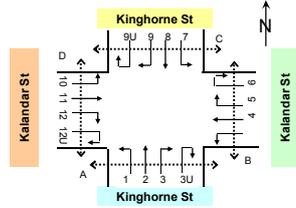
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 8. Forest Rd / Coonamia Rd  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Direction	Time Period	Currarong Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00			8	0	8	20	0	20	0	0	0
12:15 to 13:15			9	0	9	18	0	18	0	0	0
12:30 to 13:30			7	0	7	17	0	17	0	0	0
12:45 to 13:45			6	0	6	19	0	19	0	0	0
13:00 to 14:00			8	0	8	20	0	20	0	0	0
Totals			16	0	16	40	0	40	0	0	0

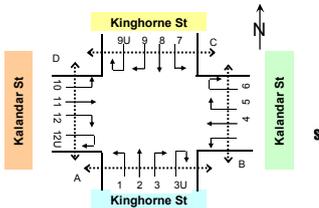
Approach	Coonamia Rd						Forest Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	22	0	22	112	2	114	0	0	0	114	1	115	14	0	14	0	0	0
12:15 to 13:15	20	0	20	101	1	102	0	0	0	111	1	112	14	0	14	0	0	0
12:30 to 13:30	19	0	19	96	2	98	0	0	0	99	1	100	12	0	12	0	0	0
12:45 to 13:45	17	0	17	89	2	91	0	0	0	94	1	95	10	0	10	0	0	0
13:00 to 14:00	16	0	16	82	1	83	0	0	0	97	1	98	12	0	12	0	0	0
Totals	38	0	38	194	3	197	0	0	0	211	2	213	26	0	26	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 9. Kalandar St / Kinghorne St  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



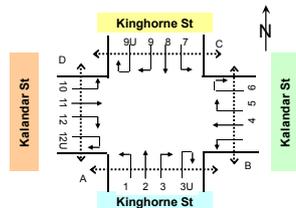
Approach	Kinghorne St												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	3	1	4	27	1	28	6	0	6	0	0	0	3	0	3	35	2	37	18	0	18	1	0	1	0	0	0
12:15 to 12:30	3	0	3	33	1	34	5	0	5	0	0	0	4	0	4	32	3	35	17	0	17	2	0	2	0	0	0
12:30 to 12:45	5	0	5	25	0	25	8	0	8	0	0	0	4	0	4	25	3	28	16	1	17	0	0	0	0	0	0
12:45 to 13:00	3	1	4	36	0	36	3	0	3	0	0	0	6	0	6	33	1	34	21	0	21	1	0	1	0	0	0
13:00 to 13:15	4	0	4	23	1	24	6	0	6	0	0	0	2	0	2	30	1	31	19	1	20	0	0	0	0	0	0
13:15 to 13:30	3	0	3	34	0	34	11	1	12	0	0	0	5	1	6	32	0	32	15	0	15	3	1	4	0	0	0
13:30 to 13:45	3	0	3	31	1	32	7	0	7	0	0	0	4	0	4	26	0	26	16	0	16	1	0	1	0	0	0
13:45 to 14:00	6	0	6	29	0	29	3	0	3	0	0	0	3	0	3	28	1	29	13	0	13	1	0	1	0	0	0
Totals	30	2	32	238	4	242	49	1	50	0	0	0	31	1	32	241	11	252	135	2	137	9	1	10	0	0	0

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 9. Kalandar St / Kinghorne St  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Kinghorne St												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)		Direction 11 (Through)		Direction 12 (Right Turn)		Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
12:00 to 12:15	32	1	33	3	0	3	21	1	22	1	0	1	24	0	24	41	0	41	2	1	3	1	0	1
12:15 to 12:30	28	0	28	4	0	4	27	0	27	0	0	0	28	1	29	34	0	34	3	0	3	0	0	0
12:30 to 12:45	27	0	27	6	0	6	29	2	31	1	1	2	32	0	32	45	1	46	5	1	6	1	1	2
12:45 to 13:00	31	0	31	3	0	3	35	0	35	0	0	0	36	1	37	41	0	41	3	1	4	0	0	0
13:00 to 13:15	27	0	27	2	0	2	26	1	27	2	0	2	27	1	28	40	1	41	5	0	5	2	0	2
13:15 to 13:30	26	0	26	5	0	5	28	2	30	0	1	1	26	0	26	33	1	34	4	0	4	0	1	1
13:30 to 13:45	26	0	26	3	0	3	33	0	33	2	0	2	25	1	26	29	1	30	3	0	3	2	0	2
13:45 to 14:00	27	1	28	3	0	3	29	1	30	1	0	1	30	1	31	27	1	28	5	1	6	1	0	1
Totals	224	2	226	29	0	29	228	7	235	7	2	9	228	5	233	290	5	295	30	3	33	7	2	9

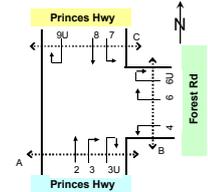
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 9. Kalandar St / Kinghorne St  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Kinghorne St												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	14	2	16	121	2	123	22	0	22	0	0	0	17	0	17	125	9	134	72	1	73	4	0	4	0	0	0
12:15 to 13:15	15	1	16	117	2	119	22	0	22	0	0	0	16	0	16	120	8	128	73	2	75	3	0	3	0	0	0
12:30 to 13:30	15	1	16	118	1	119	28	1	29	0	0	0	17	1	18	120	5	125	71	2	73	4	1	5	0	0	0
12:45 to 13:45	13	1	14	124	2	126	27	1	28	0	0	0	17	1	18	121	2	123	71	1	72	5	1	6	0	0	0
13:00 to 14:00	16	0	16	117	2	119	27	1	28	0	0	0	14	1	15	116	2	118	63	1	64	5	1	6	0	0	0
Totals	30	2	32	238	4	242	49	1	50	0	0	0	31	1	32	241	11	252	135	2	137	9	1	10	0	0	0

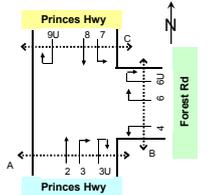
Approach	Kinghorne St												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)		Direction 11 (Through)		Direction 12 (Right Turn)		Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
12:00 to 13:00	118	1	119	16	0	16	112	3	115	2	1	3	120	2	122	161	1	162	13	2	15	2	1	3
12:15 to 13:15	113	0	113	15	0	15	117	3	120	3	1	4	123	3	126	160	2	162	16	1	17	3	1	4
12:30 to 13:30	111	0	111	16	0	16	118	5	123	3	2	5	121	2	123	159	3	162	17	1	18	3	2	5
12:45 to 13:45	110	0	110	13	0	13	122	3	125	4	1	5	114	3	117	143	3	146	15	1	16	4	1	5
13:00 to 14:00	106	1	107	13	0	13	116	4	120	5	1	6	108	3	111	129	4	133	17	1	18	5	1	6
Totals	224	2	226	29	0	29	228	7	235	7	2	9	228	5	233	290	5	295	30	3	33	7	2	9

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



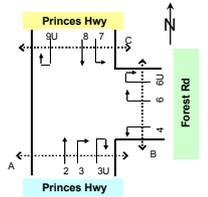
Approach	Princes Hwy									Forest Rd								
	Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	168	4	170	10	0	10	0	0	0	0	0	0	14	0	14	0	0	0
12:15 to 12:30	150	3	153	6	0	6	0	0	0	15	0	15	22	2	24	0	0	0
12:30 to 12:45	178	2	180	8	0	8	0	0	0	10	0	10	15	0	15	0	0	0
12:45 to 13:00	148	2	150	6	0	6	0	0	0	3	0	3	14	0	14	0	0	0
13:00 to 13:15	153	3	156	6	0	6	0	0	0	8	0	8	19	0	19	0	0	0
13:15 to 13:30	142	4	146	11	0	11	0	0	0	7	0	7	11	0	11	0	0	0
13:30 to 13:45	175	3	178	8	0	8	0	0	0	14	1	15	15	0	15	0	0	0
13:45 to 14:00	134	8	142	4	0	4	0	0	0	12	1	13	25	0	25	0	0	0
<b>Totals</b>	<b>1246</b>	<b>29</b>	<b>1275</b>	<b>59</b>	<b>0</b>	<b>59</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>2</b>	<b>77</b>	<b>135</b>	<b>2</b>	<b>137</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : 15 mins Data



Approach	Princes Hwy								
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	17	0	17	206	4	210	0	0	0
12:15 to 12:30	22	0	22	242	4	246	0	0	0
12:30 to 12:45	34	0	34	249	4	253	0	0	0
12:45 to 13:00	22	0	22	215	4	219	0	0	0
13:00 to 13:15	25	0	25	197	2	199	0	0	0
13:15 to 13:30	19	0	19	203	4	207	0	0	0
13:30 to 13:45	19	0	19	234	4	238	0	0	0
13:45 to 14:00	22	0	22	239	2	241	0	0	0
<b>Totals</b>	<b>180</b>	<b>0</b>	<b>180</b>	<b>1785</b>	<b>28</b>	<b>1813</b>	<b>0</b>	<b>0</b>	<b>0</b>

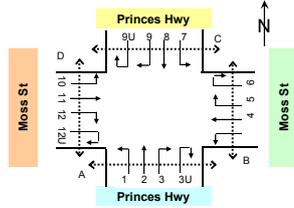
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
**Day/Date** : Sat, 5th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
 : Hourly Summary



Approach	Princes Hwy									Forest Rd								
	Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	642	11	653	30	0	30	0	0	0	34	0	34	65	2	67	0	0	0
12:15 to 13:15	629	10	639	26	0	26	0	0	0	36	0	36	70	2	72	0	0	0
12:30 to 13:30	621	11	632	31	0	31	0	0	0	28	0	28	59	0	59	0	0	0
12:45 to 13:45	618	12	630	31	0	31	0	0	0	32	1	33	59	0	59	0	0	0
13:00 to 14:00	604	18	622	29	0	29	0	0	0	41	2	43	70	0	70	0	0	0
<b>Totals</b>	<b>1246</b>	<b>29</b>	<b>1275</b>	<b>59</b>	<b>0</b>	<b>59</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>2</b>	<b>77</b>	<b>135</b>	<b>2</b>	<b>137</b>	<b>0</b>	<b>0</b>	<b>0</b>

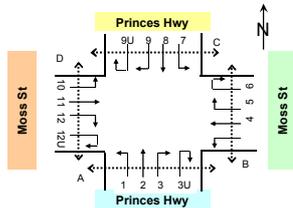
Approach	Princes Hwy								
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	85	0	85	912	16	928	0	0	0
12:15 to 13:15	103	0	103	803	14	817	0	0	0
12:30 to 13:30	100	0	100	864	14	878	0	0	0
12:45 to 13:45	85	0	85	849	14	863	0	0	0
13:00 to 14:00	85	0	85	873	12	885	0	0	0
<b>Totals</b>	<b>180</b>	<b>0</b>	<b>180</b>	<b>1785</b>	<b>28</b>	<b>1813</b>	<b>0</b>	<b>0</b>	<b>0</b>

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 11. Moss St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



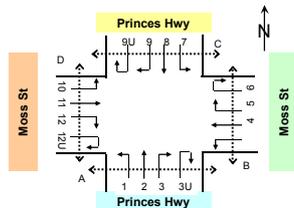
Approach	Princes Hwy												Moss St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	5	0	5	232	9	241	25	0	25	0	0	0	6	0	6	12	0	12	24	1	25	0	0	0			
12:15 to 12:30	3	0	3	210	3	213	24	0	24	0	0	0	10	0	10	29	0	29	24	0	24	0	0	0			
12:30 to 12:45	0	0	0	242	6	248	14	0	14	0	0	0	5	0	5	12	0	12	27	0	27	0	0	0			
12:45 to 13:00	1	0	1	231	7	238	16	0	16	0	0	0	3	0	3	8	0	8	34	1	35	0	0	0			
13:00 to 13:15	3	0	3	173	1	174	20	0	20	0	0	0	6	0	6	14	0	14	24	1	25	0	0	0			
13:15 to 13:30	2	0	2	177	2	179	17	1	18	1	0	1	7	0	7	13	0	13	26	0	26	0	0	0			
13:30 to 13:45	3	0	3	230	5	235	12	0	12	1	0	1	7	0	7	12	0	12	22	0	22	0	0	0			
13:45 to 14:00	1	0	1	184	4	188	18	0	18	0	0	0	9	0	9	10	0	10	30	1	31	0	0	0			
Totals	18	0	18	1679	37	1716	146	1	147	2	0	2	50	0	50	110	0	110	211	4	215	0	0	0			

Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 11. Moss St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : 15 mins Data



Approach	Princes Hwy												Moss St														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 12:15	26	2	28	288	6	294	47	0	47	0	0	0	61	0	61	41	0	41	21	0	21	0	0	0			
12:15 to 12:30	21	0	21	245	5	250	65	2	67	0	0	0	58	0	58	35	0	35	22	0	22	0	0	0			
12:30 to 12:45	20	0	20	271	2	273	44	0	44	0	0	0	57	0	57	17	15	32	16	1	17	0	0	0			
12:45 to 13:00	18	0	18	229	3	232	38	0	38	0	0	0	60	0	60	24	0	24	19	0	19	0	0	0			
13:00 to 13:15	27	0	27	234	2	236	58	1	59	0	0	0	73	0	73	34	0	34	23	1	24	0	0	0			
13:15 to 13:30	17	0	17	271	6	277	54	0	54	0	0	0	57	0	57	18	0	18	13	2	15	0	0	0			
13:30 to 13:45	25	0	25	277	4	281	37	0	37	0	0	0	46	0	46	20	0	20	10	1	11	0	0	0			
13:45 to 14:00	25	0	25	271	3	274	58	0	58	0	0	0	51	0	51	34	0	34	11	0	11	0	0	0			
Totals	179	2	181	2086	31	2117	401	3	404	0	0	0	463	0	463	223	0	223	134	5	139	0	0	0			

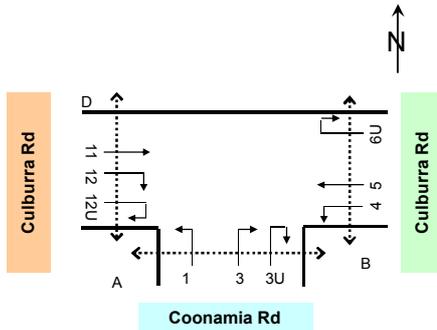
Job No. : N790  
 Client : Realty Realizations  
 Suburb : Nowra  
 Location : 11. Moss St / Princes Hwy  
 Day/Date : Sat, 5th May 2012  
 Weather : Fine  
 Description : Classified Intersection Count  
 : Hourly Summary



Approach	Princes Hwy												Moss St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	9	0	9	915	25	940	79	0	79	0	0	0	24	0	24	61	0	61	109	2	111	0	0	0			
12:15 to 13:15	7	0	7	856	17	873	74	0	74	0	0	0	24	0	24	63	0	63	109	2	111	0	0	0			
12:30 to 13:30	6	0	6	823	16	839	67	1	68	1	0	1	21	0	21	47	0	47	111	2	113	0	0	0			
12:45 to 13:45	9	0	9	811	15	826	65	1	66	2	0	2	23	0	23	47	0	47	106	2	108	0	0	0			
13:00 to 14:00	9	0	9	764	12	776	67	1	68	2	0	2	26	0	26	49	0	49	102	2	104	0	0	0			
Totals	18	0	18	1679	37	1716	146	1	147	2	0	2	50	0	50	110	0	110	211	4	215	0	0	0			

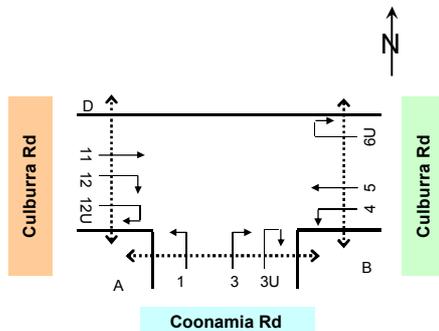
Approach	Princes Hwy												Moss St														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
12:00 to 13:00	85	2	87	1033	16	1049	194	2	196	0	0	0	236	0	236	117	0	117	77	1	78	0	0	0			
12:15 to 13:15	86	0	86	979	12	991	205	3	208	0	0	0	248	0	248	110	0	110	79	2	81	0	0	0			
12:30 to 13:30	82	0	82	1005	13	1018	194	1	195	0	0	0	247	0	247	93	0	93	70	4	74	0	0	0			
12:45 to 13:45	87	0	87	1011	15	1026	187	1	188	0	0	0	236	0	236	96	0	96	65	4	69	0	0	0			
13:00 to 14:00	94	0	94	1053	15	1068	207	1	208	0	0	0	227	0	227	106	0	106	57	4	61	0	0	0			
Totals	179	2	181	2086	31	2117	401	3	404	0	0	0	463	0	463	223	0	223	134	5	139	0	0	0			

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 1. Culburra Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Coonamia Rd									Culburra Rd								
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	14	1	15	3	0	3	0	0	0	12	0	12	29	3	32	0	0	0
7:15 to 7:30	19	0	19	8	1	9	0	0	0	14	1	15	39	0	39	0	0	0
7:30 to 7:45	24	4	28	7	0	7	0	0	0	8	1	9	57	2	59	0	0	0
7:45 to 8:00	34	1	35	8	1	9	0	0	0	4	1	5	52	3	55	0	0	0
8:00 to 8:15	45	0	45	13	1	14	0	0	0	10	1	11	52	1	53	0	0	0
8:15 to 8:30	34	0	34	14	1	15	0	0	0	11	0	11	44	2	46	0	0	0
8:30 to 8:45	32	0	32	17	1	18	0	0	0	5	0	5	53	3	56	0	0	0
8:45 to 9:00	29	0	29	14	1	15	0	0	0	7	0	7	35	1	36	0	0	0
AM Totals	231	6	237	84	6	90	0	0	0	71	4	75	361	15	376	0	0	0
16:00 to 16:15	20	2	22	16	0	16	0	0	0	15	0	15	26	1	27	0	0	0
16:15 to 16:30	16	1	17	10	0	10	0	0	0	14	1	15	13	0	13	0	0	0
16:30 to 16:45	5	0	5	12	1	13	0	0	0	11	0	11	17	1	18	0	0	0
16:45 to 17:00	7	1	8	11	0	11	0	0	0	9	0	9	19	0	19	0	0	0
17:00 to 17:15	8	0	8	10	0	10	0	0	0	13	0	13	26	0	26	1	0	1
17:15 to 17:30	15	0	15	8	0	8	0	0	0	10	0	10	22	0	22	0	0	0
17:30 to 17:45	10	0	10	8	0	8	0	0	0	7	0	7	15	0	15	0	0	0
17:45 to 18:00	7	1	8	11	0	11	0	0	0	9	0	9	12	0	12	0	0	0
PM Totals	88	5	93	86	1	87	0	0	0	88	1	89	150	2	152	1	0	1

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 1. Culburra Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data

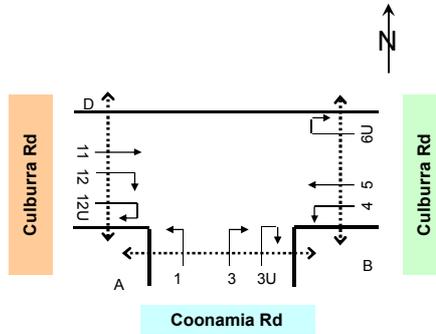


Approach	Culburra Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	7	7	14	3	1	4	0	0	0
7:15 to 7:30	6	4	10	3	3	6	0	0	0
7:30 to 7:45	13	4	17	4	2	6	0	0	0
7:45 to 8:00	15	0	15	2	0	2	0	0	0
8:00 to 8:15	10	2	12	6	1	7	0	0	0
8:15 to 8:30	18	5	23	6	0	6	0	0	0
8:30 to 8:45	21	0	21	8	0	8	0	0	0
8:45 to 9:00	22	3	25	7	0	7	0	0	0
AM Totals	112	25	137	39	7	46	0	0	0

16:00 to 16:15
16:15 to 16:30
16:30 to 16:45
16:45 to 17:00
17:00 to 17:15
17:15 to 17:30
17:30 to 17:45
17:45 to 18:00
PM Totals

42	1	43	25	2	27	0	0	0
41	1	42	30	1	31	0	0	0
56	0	56	23	1	24	0	0	0
48	0	48	20	0	20	0	0	0
44	0	44	31	0	31	0	0	0
55	0	55	32	0	32	0	0	0
58	1	59	29	0	29	0	0	0
50	2	52	32	0	32	0	0	0
394	5	399	222	4	226	0	0	0

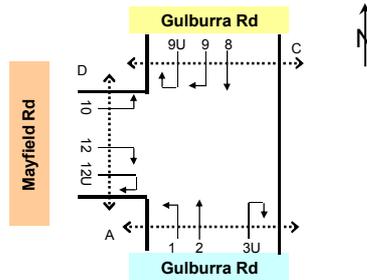
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 1. Culburra Rd / Coonamia Rd  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Coonamia Rd						Culburra Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	91	6	97	26	2	28	0	0	0	38	3	41	177	8	185	0	0	0
7:15 to 8:15	122	5	127	36	3	39	0	0	0	36	4	40	200	6	206	0	0	0
7:30 to 8:30	137	5	142	42	3	45	0	0	0	33	3	36	205	8	213	0	0	0
7:45 to 8:45	145	1	146	52	4	56	0	0	0	30	2	32	201	9	210	0	0	0
8:00 to 9:00	140	0	140	58	4	62	0	0	0	33	1	34	184	7	191	0	0	0
AM Totals	231	6	237	84	6	90	0	0	0	71	4	75	361	15	376	0	0	0
16:00 to 17:00	48	4	52	49	1	50	0	0	0	49	1	50	75	2	77	0	0	0
16:15 to 17:15	36	2	38	43	1	44	0	0	0	47	1	48	75	1	76	1	0	1
16:30 to 17:30	35	1	36	41	1	42	0	0	0	43	0	43	84	1	85	1	0	1
16:45 to 17:45	40	1	41	37	0	37	0	0	0	39	0	39	82	0	82	1	0	1
17:00 to 18:00	40	1	41	37	0	37	0	0	0	39	0	39	75	0	75	1	0	1
PM Totals	88	5	93	86	1	87	0	0	0	88	1	89	150	2	152	1	0	1

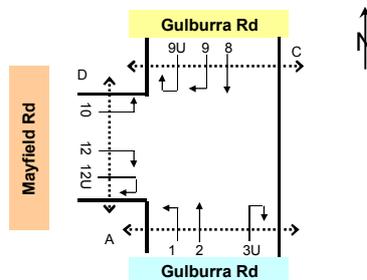
Approach	Culburra Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	41	15	56	12	6	18	0	0	0
7:15 to 8:15	44	10	54	15	6	21	0	0	0
7:30 to 8:30	56	11	67	18	3	21	0	0	0
7:45 to 8:45	64	7	71	22	1	23	0	0	0
8:00 to 9:00	71	10	81	27	1	28	0	0	0
AM Totals	112	25	137	39	7	46	0	0	0
16:00 to 17:00	187	2	189	98	4	102	0	0	0
16:15 to 17:15	189	1	190	104	2	106	0	0	0
16:30 to 17:30	203	0	203	106	1	107	0	0	0
16:45 to 17:45	205	1	206	112	0	112	0	0	0
17:00 to 18:00	207	3	210	124	0	124	0	0	0
PM Totals	394	5	399	222	4	226	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 2. Gulburra Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Gulburra Rd								
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	0	0	0	43	4	47	0	0	0
7:15 to 7:30	0	0	0	58	0	58	0	0	0
7:30 to 7:45	0	1	1	83	5	88	0	0	0
7:45 to 8:00	0	0	0	86	4	90	0	0	0
8:00 to 8:15	0	0	0	92	2	94	0	0	0
8:15 to 8:30	1	0	1	81	1	82	0	0	0
8:30 to 8:45	0	0	0	85	3	88	0	0	0
8:45 to 9:00	1	0	1	60	1	61	0	0	0
<b>AM Totals</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>588</b>	<b>20</b>	<b>608</b>	<b>0</b>	<b>0</b>	<b>0</b>
16:00 to 16:15	0	0	0	46	3	49	0	0	0
16:15 to 16:30	1	0	1	28	1	29	0	0	0
16:30 to 16:45	0	0	0	22	1	23	0	0	0
16:45 to 17:00	0	0	0	28	1	29	0	0	0
17:00 to 17:15	0	0	0	32	0	32	1	0	1
17:15 to 17:30	0	0	0	38	0	38	0	0	0
17:30 to 17:45	0	0	0	25	0	25	0	0	0
17:45 to 18:00	0	0	0	20	0	20	0	0	0
<b>PM Totals</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>239</b>	<b>6</b>	<b>245</b>	<b>1</b>	<b>0</b>	<b>1</b>

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 2. Gulburra Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data

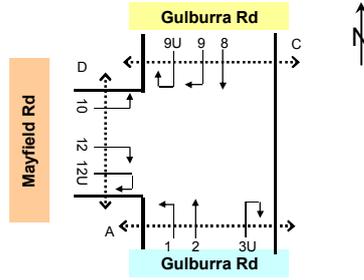


Approach	Gulburra Rd									Mayfield Rd								
	Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	11	9	20	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0
7:15 to 7:30	16	10	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 to 7:45	12	1	13	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
7:45 to 8:00	18	1	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 to 8:15	18	4	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 to 8:30	28	1	29	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
8:30 to 8:45	34	1	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 to 9:00	20	1	21	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0
<b>AM Totals</b>	<b>157</b>	<b>28</b>	<b>185</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>
16:00 to 16:15	62	3	65	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
16:15 to 16:30	71	1	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30 to 16:45	76	1	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 to 17:00	63	0	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00 to 17:15	84	0	84	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0

17:15 to 17:30	89	0	89	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 to 17:45	83	1	84	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45 to 18:00	76	1	77	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Totals	604	7	611	0	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0
1	0	1	0	0	0	0
0	0	0	0	0	0	0
2	1	3	0	0	0	0

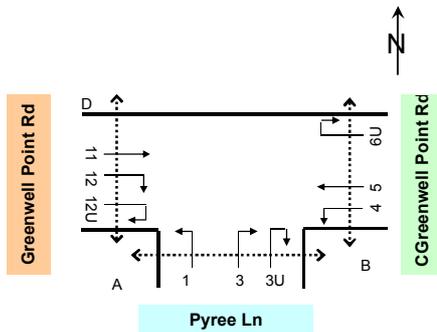
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 2. Gulburra Rd / Mayfield Rd  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Gulburra Rd								
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	0	1	1	270	13	283	0	0	0
7:15 to 8:15	0	1	1	319	11	330	0	0	0
7:30 to 8:30	1	1	2	342	12	354	0	0	0
7:45 to 8:45	1	0	1	344	10	354	0	0	0
8:00 to 9:00	2	0	2	318	7	325	0	0	0
AM Totals	2	1	3	588	20	608	0	0	0
16:00 to 17:00	1	0	1	124	6	130	0	0	0
16:15 to 17:15	1	0	1	110	3	113	1	0	1
16:30 to 17:30	0	0	0	120	2	122	1	0	1
16:45 to 17:45	0	0	0	123	1	124	1	0	1
17:00 to 18:00	0	0	0	115	0	115	1	0	1
PM Totals	1	0	1	239	6	245	1	0	1

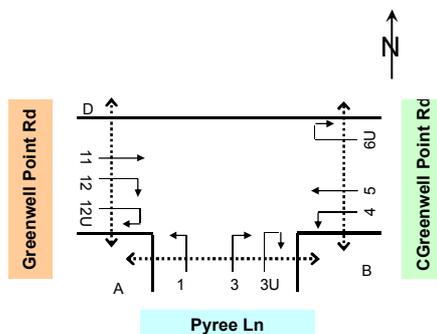
Approach	Gulburra Rd										Mayfield Rd							
	Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	57	21	78	0	0	0	0	0	0	1	2	3	1	0	1	0	0	0
7:15 to 8:15	64	16	80	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
7:30 to 8:30	76	7	83	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0
7:45 to 8:45	98	7	105	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
8:00 to 9:00	100	7	107	0	0	0	0	0	0	1	0	1	2	0	2	0	0	0
AM Totals	157	28	185	0	0	0	0	0	0	2	2	4	3	0	3	0	0	0
16:00 to 17:00	272	5	277	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
16:15 to 17:15	294	2	296	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
16:30 to 17:30	312	1	313	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
16:45 to 17:45	319	1	320	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0
17:00 to 18:00	332	2	334	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0
PM Totals	604	7	611	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 3. Greenwell Point Rd / Pyree Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Pyree Ln									CGreenwell Point Rd								
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	43	2	45	1	5	6	0	0	0	1	0	1	26	0	26	0	0	0
7:15 to 7:30	58	0	58	2	0	2	0	0	0	4	1	5	12	1	13	0	0	0
7:30 to 7:45	81	4	85	2	0	2	0	0	0	3	0	3	33	0	33	0	0	0
7:45 to 8:00	79	5	84	2	0	2	0	0	0	3	1	4	24	2	26	0	0	0
8:00 to 8:15	100	1	101	2	0	2	0	0	0	7	2	9	37	2	39	0	0	0
8:15 to 8:30	76	2	78	2	0	2	0	0	0	1	0	1	24	3	27	0	0	0
8:30 to 8:45	76	2	78	4	1	5	0	0	0	5	0	5	27	1	28	0	0	0
8:45 to 9:00	61	1	62	3	0	3	0	0	0	2	0	2	30	1	31	0	0	0
<b>AM Totals</b>	<b>574</b>	<b>17</b>	<b>591</b>	<b>18</b>	<b>6</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>4</b>	<b>30</b>	<b>213</b>	<b>10</b>	<b>223</b>	<b>0</b>	<b>0</b>	<b>0</b>
16:00 to 16:15	42	3	45	5	0	5	0	0	0	7	0	7	13	0	13	0	0	0
16:15 to 16:30	18	1	19	7	0	7	0	0	0	4	0	4	12	1	13	0	0	0
16:30 to 16:45	18	1	19	3	0	3	0	0	0	7	0	7	10	0	10	0	0	0
16:45 to 17:00	20	1	21	6	0	6	0	0	0	0	0	0	9	1	10	0	0	0
17:00 to 17:15	30	3	33	0	0	0	0	0	0	4	0	4	12	0	12	0	0	0
17:15 to 17:30	34	0	34	3	0	3	0	0	0	3	0	3	12	0	12	0	0	0
17:30 to 17:45	22	0	22	5	0	5	0	0	0	5	1	6	13	0	13	0	0	0
17:45 to 18:00	14	1	15	4	0	4	0	0	0	1	0	1	8	0	8	0	0	0
<b>PM Totals</b>	<b>198</b>	<b>10</b>	<b>208</b>	<b>33</b>	<b>0</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>1</b>	<b>32</b>	<b>89</b>	<b>2</b>	<b>91</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 3. Greenwell Point Rd / Pyree Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data

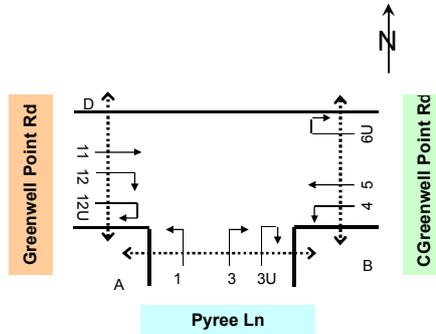


Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	10	6	16	11	11	22	0	0	0
7:15 to 7:30	15	2	17	11	8	19	0	0	0
7:30 to 7:45	7	2	9	10	0	10	0	0	0
7:45 to 8:00	10	1	11	15	1	16	0	0	0
8:00 to 8:15	10	1	11	17	5	22	0	0	0
8:15 to 8:30	13	0	13	26	0	26	0	0	0
8:30 to 8:45	13	0	13	28	1	29	0	0	0
8:45 to 9:00	15	2	17	16	1	17	0	0	0
<b>AM Totals</b>	<b>93</b>	<b>14</b>	<b>107</b>	<b>134</b>	<b>27</b>	<b>161</b>	<b>0</b>	<b>0</b>	<b>0</b>

16:00 to 16:15
16:15 to 16:30
16:30 to 16:45
16:45 to 17:00
17:00 to 17:15
17:15 to 17:30
17:30 to 17:45
17:45 to 18:00
PM Totals

30	1	31	62	2	64	0	0	0
25	0	25	67	1	68	0	0	0
32	1	33	68	1	69	0	0	0
27	0	27	62	0	62	0	0	0
25	0	25	84	0	84	0	0	0
22	0	22	84	0	84	0	0	0
25	0	25	82	0	82	0	0	0
19	1	20	61	2	63	0	0	0
205	3	208	570	6	576	0	0	0

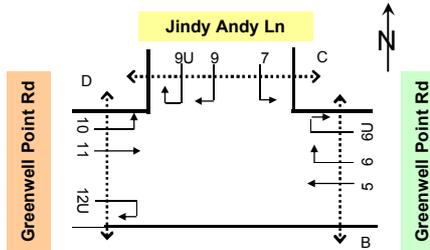
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 3. Greenwell Point Rd / Pyree Ln  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Pyree Ln						CGreenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	261	11	272	7	5	12	0	0	0	11	2	13	95	3	98	0	0	0
7:15 to 8:15	318	10	328	8	0	8	0	0	0	17	4	21	106	5	111	0	0	0
7:30 to 8:30	336	12	348	8	0	8	0	0	0	14	3	17	118	7	125	0	0	0
7:45 to 8:45	331	10	341	10	1	11	0	0	0	16	3	19	112	8	120	0	0	0
8:00 to 9:00	313	6	319	11	1	12	0	0	0	15	2	17	118	7	125	0	0	0
AM Totals	574	17	591	18	6	24	0	0	0	26	4	30	213	10	223	0	0	0
16:00 to 17:00	98	6	104	21	0	21	0	0	0	18	0	18	44	2	46	0	0	0
16:15 to 17:15	86	6	92	16	0	16	0	0	0	15	0	15	43	2	45	0	0	0
16:30 to 17:30	102	5	107	12	0	12	0	0	0	14	0	14	43	1	44	0	0	0
16:45 to 17:45	106	4	110	14	0	14	0	0	0	12	1	13	46	1	47	0	0	0
17:00 to 18:00	100	4	104	12	0	12	0	0	0	13	1	14	45	0	45	0	0	0
PM Totals	198	10	208	33	0	33	0	0	0	31	1	32	89	2	91	0	0	0

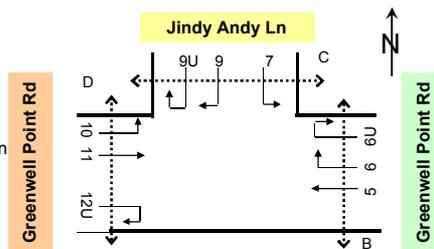
Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	42	11	53	47	20	67	0	0	0
7:15 to 8:15	42	6	48	53	14	67	0	0	0
7:30 to 8:30	40	4	44	68	6	74	0	0	0
7:45 to 8:45	46	2	48	86	7	93	0	0	0
8:00 to 9:00	51	3	54	87	7	94	0	0	0
AM Totals	93	14	107	134	27	161	0	0	0
16:00 to 17:00	114	2	116	259	4	263	0	0	0
16:15 to 17:15	109	1	110	281	2	283	0	0	0
16:30 to 17:30	106	1	107	298	1	299	0	0	0
16:45 to 17:45	99	0	99	312	0	312	0	0	0
17:00 to 18:00	91	1	92	311	2	313	0	0	0
PM Totals	205	3	208	570	6	576	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 4. Greenwell Point Rd / Jindy Andy Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Direction	Time Period	Greenwell Point Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15			53	1	54	13	0	13	0	0	0
7:15 to 7:30			43	2	45	16	0	16	0	0	0
7:30 to 7:45			81	4	85	25	0	25	0	0	0
7:45 to 8:00			77	6	83	32	1	33	0	0	0
8:00 to 8:15			92	6	98	38	0	38	0	0	0
8:15 to 8:30			74	4	78	33	0	33	0	0	0
8:30 to 8:45			65	2	67	36	1	37	0	0	0
8:45 to 9:00			68	3	71	27	0	27	0	0	0
AM Totals			553	28	581	220	2	222	0	0	0
16:00 to 16:15			36	3	39	11	1	12	0	0	0
16:15 to 16:30			31	2	33	15	0	15	0	0	0
16:30 to 16:45			22	1	23	8	0	8	0	0	0
16:45 to 17:00			22	1	23	6	0	6	0	0	0
17:00 to 17:15			29	1	30	4	0	4	1	0	1
17:15 to 17:30			38	0	38	14	0	14	0	0	0
17:30 to 17:45			27	0	27	7	0	7	0	0	0
17:45 to 18:00			24	1	25	7	0	7	0	0	0
PM Totals			229	9	238	72	1	73	1	0	1

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 4. Greenwell Point Rd / Jindy Andy Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



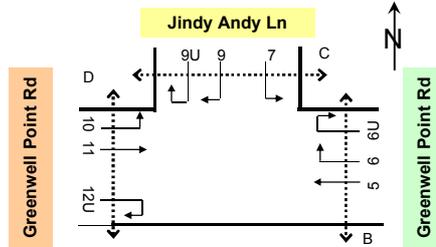
Approach	Jindy Andy Ln						Greenwell Point Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	3	0	3	1	0	1	0	0	0	1	1	2	15	17	32	0	0	0
7:15 to 7:30	5	0	5	0	0	0	0	0	0	1	1	2	20	14	34	0	0	0
7:30 to 7:45	1	1	2	0	0	0	0	0	0	0	1	1	16	3	19	0	0	0
7:45 to 8:00	3	0	3	0	1	1	0	0	0	1	0	1	22	5	27	0	0	0
8:00 to 8:15	8	0	8	3	1	4	0	0	0	2	0	2	19	5	24	0	0	0
8:15 to 8:30	5	0	5	0	0	0	0	0	0	0	0	0	32	0	32	0	0	0
8:30 to 8:45	10	1	11	1	0	1	0	0	0	2	2	4	33	2	35	0	0	0
8:45 to 9:00	9	0	9	3	2	5	1	0	1	0	1	1	21	3	24	0	0	0
AM Totals	44	2	46	8	4	12	1	0	1	7	6	13	178	49	227	0	0	0

16:00 to 16:15	27	1	28
16:15 to 16:30	24	1	25
16:30 to 16:45	28	0	28
16:45 to 17:00	27	0	27
17:00 to 17:15	32	0	32
17:15 to 17:30	37	0	37
17:30 to 17:45	26	0	26
17:45 to 18:00	23	1	24
PM Totals	224	3	227

0	0	0	0	0	0	3	0	3	65	2	67
1	0	1	0	0	0	1	1	2	67	0	67
0	0	0	0	0	0	3	0	3	73	3	76
1	0	1	0	0	0	1	0	1	59	0	59
3	0	3	0	0	0	1	0	1	77	0	77
2	0	2	0	0	0	1	0	1	79	0	79
1	0	1	0	0	0	3	0	3	77	0	77
1	0	1	0	0	0	1	0	1	64	2	66
9	0	9	0	0	0	14	1	15	561	7	568

0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

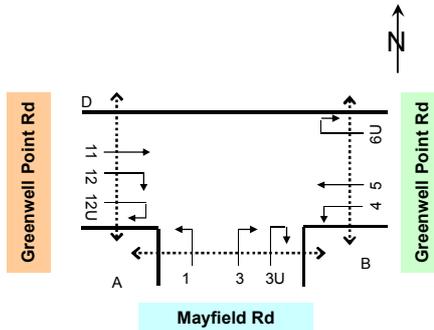
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 4. Greenwell Point Rd / Jindy Andy Ln  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Direction	Time Period	Greenwell Point Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00			254	13	267	86	1	87	0	0	0
7:15 to 8:15			293	18	311	111	1	112	0	0	0
7:30 to 8:30			324	20	344	128	1	129	0	0	0
7:45 to 8:45			308	18	326	139	2	141	0	0	0
8:00 to 9:00			299	15	314	134	1	135	0	0	0
AM Totals			553	28	581	220	2	222	0	0	0
16:00 to 17:00			111	7	118	40	1	41	0	0	0
16:15 to 17:15			104	5	109	33	0	33	1	0	1
16:30 to 17:30			111	3	114	32	0	32	1	0	1
16:45 to 17:45			116	2	118	31	0	31	1	0	1
17:00 to 18:00			118	2	120	32	0	32	1	0	1
PM Totals			229	9	238	72	1	73	1	0	1

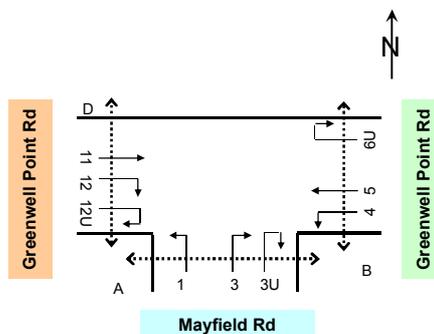
Approach	Jindy Andy Ln						Greenwell Point Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	12	1	13	1	1	2	0	0	0	3	3	6	73	39	112	0	0	0
7:15 to 8:15	17	1	18	3	2	5	0	0	0	4	2	6	77	27	104	0	0	0
7:30 to 8:30	17	1	18	3	2	5	0	0	0	3	1	4	89	13	102	0	0	0
7:45 to 8:45	26	1	27	4	2	6	0	0	0	5	2	7	106	12	118	0	0	0
8:00 to 9:00	32	1	33	7	3	10	1	0	1	4	3	7	105	10	115	0	0	0
AM Totals	44	2	46	8	4	12	1	0	1	7	6	13	178	49	227	0	0	0
16:00 to 17:00	106	2	108	2	0	2	0	0	0	8	1	9	264	5	269	0	0	0
16:15 to 17:15	111	1	112	5	0	5	0	0	0	6	1	7	276	3	279	0	0	0
16:30 to 17:30	124	0	124	6	0	6	0	0	0	6	0	6	288	3	291	0	0	0
16:45 to 17:45	122	0	122	7	0	7	0	0	0	6	0	6	292	0	292	0	0	0
17:00 to 18:00	118	1	119	7	0	7	0	0	0	6	0	6	297	2	299	0	0	0
PM Totals	224	3	227	9	0	9	0	0	0	14	1	15	561	7	568	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Mayfield Rd									Greenwell Point Rd								
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	0	0	0	0	0	0	0	0	0	0	0	0	52	1	53	0	0	0
7:15 to 7:30	0	0	0	0	0	0	0	0	0	0	0	0	44	2	46	0	0	0
7:30 to 7:45	1	1	2	0	1	1	0	0	0	0	0	0	80	3	83	0	0	0
7:45 to 8:00	7	0	7	0	0	0	0	0	0	0	0	0	73	7	80	0	0	0
8:00 to 8:15	2	0	2	0	0	0	0	0	0	1	0	1	100	4	104	0	2	2
8:15 to 8:30	3	0	3	0	0	0	0	0	0	0	0	0	73	3	76	0	0	0
8:30 to 8:45	2	0	2	0	0	0	0	0	0	0	0	0	63	1	64	0	0	0
8:45 to 9:00	3	0	3	0	0	0	0	0	0	2	0	2	72	4	76	0	0	0
<b>AM Totals</b>	<b>18</b>	<b>1</b>	<b>19</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>557</b>	<b>25</b>	<b>582</b>	<b>0</b>	<b>2</b>	<b>2</b>
16:00 to 16:15	1	0	1	1	0	1	0	0	0	0	0	0	36	3	39	1	0	1
16:15 to 16:30	1	0	1	0	1	1	0	0	0	1	0	1	31	2	33	0	0	0
16:30 to 16:45	1	0	1	2	0	2	0	0	0	0	0	0	23	1	24	0	0	0
16:45 to 17:00	1	0	1	0	0	0	0	0	0	0	0	0	25	1	26	0	0	0
17:00 to 17:15	0	0	0	0	0	0	0	0	0	1	0	1	30	1	31	0	0	0
17:15 to 17:30	5	0	5	0	0	0	0	0	0	1	0	1	42	0	42	0	0	0
17:30 to 17:45	0	0	0	0	0	0	0	0	0	0	0	0	27	0	27	0	0	0
17:45 to 18:00	5	0	5	0	0	0	0	0	0	0	0	0	28	1	29	0	0	0
<b>PM Totals</b>	<b>14</b>	<b>0</b>	<b>14</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>242</b>	<b>9</b>	<b>251</b>	<b>1</b>	<b>0</b>	<b>1</b>

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data

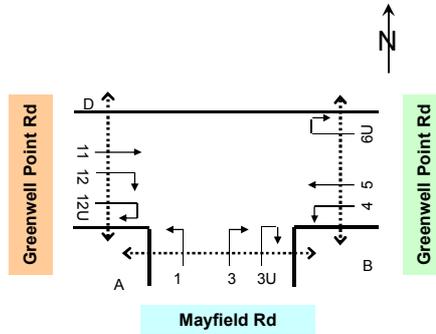


Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	16	18	34	1	0	1	0	0	0
7:15 to 7:30	21	15	36	1	0	1	0	0	0
7:30 to 7:45	15	4	19	0	0	0	0	0	0
7:45 to 8:00	23	4	27	1	0	1	0	0	0
8:00 to 8:15	20	5	25	1	0	1	0	0	0
8:15 to 8:30	34	0	34	0	0	0	0	0	0
8:30 to 8:45	33	3	36	2	0	2	0	0	0
8:45 to 9:00	22	3	25	2	0	2	0	0	0
<b>AM Totals</b>	<b>184</b>	<b>52</b>	<b>236</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>

16:00 to 16:15
16:15 to 16:30
16:30 to 16:45
16:45 to 17:00
17:00 to 17:15
17:15 to 17:30
17:30 to 17:45
17:45 to 18:00
PM Totals

65	2	67	0	0	0	0	0	0
72	0	72	4	0	4	0	0	0
73	2	75	3	0	3	0	0	0
64	0	64	3	0	3	0	0	0
76	0	76	2	0	2	0	0	0
79	0	79	1	0	1	0	0	0
83	0	83	4	0	4	0	0	0
62	2	64	3	0	3	0	0	0
574	6	580	20	0	20	0	0	0

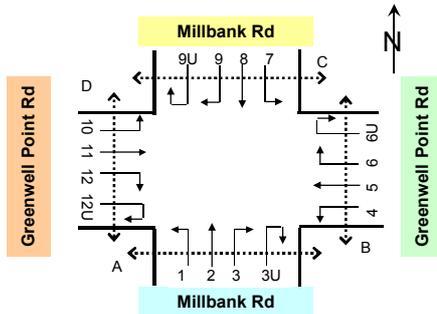
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 5. Greenwell Point Rd / Mayfield Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Mayfield Rd						Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	8	1	9	0	1	1	0	0	0	0	0	0	249	13	262	0	0	0
7:15 to 8:15	10	1	11	0	1	1	0	0	0	1	0	1	297	16	313	0	2	2
7:30 to 8:30	13	1	14	0	1	1	0	0	0	1	0	1	326	17	343	0	2	2
7:45 to 8:45	14	0	14	0	0	0	0	0	0	1	0	1	309	15	324	0	2	2
8:00 to 9:00	10	0	10	0	0	0	0	0	0	3	0	3	308	12	320	0	2	2
AM Totals	18	1	19	0	1	1	0	0	0	3	0	3	557	25	582	0	2	2
16:00 to 17:00	4	0	4	3	1	4	0	0	0	1	0	1	115	7	122	1	0	1
16:15 to 17:15	3	0	3	2	1	3	0	0	0	2	0	2	109	5	114	0	0	0
16:30 to 17:30	7	0	7	2	0	2	0	0	0	2	0	2	120	3	123	0	0	0
16:45 to 17:45	6	0	6	0	0	0	0	0	0	2	0	2	124	2	126	0	0	0
17:00 to 18:00	10	0	10	0	0	0	0	0	0	2	0	2	127	2	129	0	0	0
PM Totals	14	0	14	3	1	4	0	0	0	3	0	3	242	9	251	1	0	1

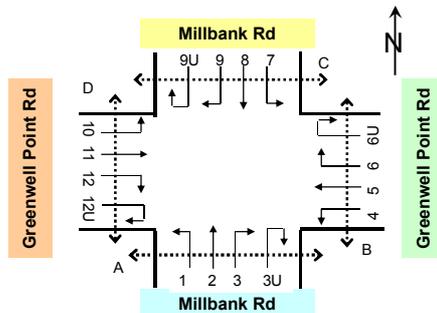
Approach	Greenwell Point Rd								
	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	75	41	116	3	0	3	0	0	0
7:15 to 8:15	79	28	107	3	0	3	0	0	0
7:30 to 8:30	92	13	105	2	0	2	0	0	0
7:45 to 8:45	110	12	122	4	0	4	0	0	0
8:00 to 9:00	109	11	120	5	0	5	0	0	0
AM Totals	184	52	236	8	0	8	0	0	0
16:00 to 17:00	274	4	278	10	0	10	0	0	0
16:15 to 17:15	285	2	287	12	0	12	0	0	0
16:30 to 17:30	292	2	294	9	0	9	0	0	0
16:45 to 17:45	302	0	302	10	0	10	0	0	0
17:00 to 18:00	300	2	302	10	0	10	0	0	0
PM Totals	574	6	580	20	0	20	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 6. Greenwell Point Rd / Millbank Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Millbank Rd												Greenwell Point Rd											
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	6	0	6	4	2	6	0	2	2	0	0	0	5	0	5	47	2	49	7	0	7	0	0	0
7:15 to 7:30	7	1	8	4	0	4	1	1	2	0	0	0	5	0	5	43	0	43	8	1	9	0	0	0
7:30 to 7:45	9	1	10	2	0	2	3	0	3	0	0	0	3	0	3	81	6	87	7	0	7	0	0	0
7:45 to 8:00	21	1	22	9	0	9	2	0	2	0	0	0	4	3	7	73	4	77	3	1	4	0	0	0
8:00 to 8:15	18	2	20	19	3	22	4	0	4	0	0	0	3	0	3	100	1	101	4	2	6	0	0	0
8:15 to 8:30	15	1	16	30	0	30	8	0	8	0	0	0	1	0	1	59	2	61	5	0	5	0	0	0
8:30 to 8:45	8	0	8	35	0	35	4	0	4	0	0	0	2	0	2	70	3	73	13	0	13	0	0	0
8:45 to 9:00	15	0	15	13	0	13	2	0	2	0	0	0	4	0	4	65	3	68	3	0	3	0	0	0
AM Totals	99	6	105	116	5	121	24	3	27	0	0	0	27	3	30	538	21	559	50	4	54	0	0	0
16:00 to 16:15	10	0	10	4	0	4	2	0	2	0	0	0	5	0	5	38	3	41	2	0	2	0	0	0
16:15 to 16:30	9	0	9	12	0	12	6	0	6	0	0	0	3	0	3	21	2	23	3	0	3	0	0	0
16:30 to 16:45	7	0	7	7	0	7	7	1	8	0	0	0	4	0	4	22	1	23	2	0	2	0	0	0
16:45 to 17:00	13	0	13	9	0	9	3	0	3	0	0	0	1	1	2	23	0	23	2	0	2	0	0	0
17:00 to 17:15	9	1	10	7	0	7	10	0	10	0	0	0	8	0	8	26	0	26	4	0	4	0	0	0
17:15 to 17:30	5	0	5	4	0	4	6	0	6	0	0	0	3	0	3	32	0	32	3	0	3	0	0	0
17:30 to 17:45	9	0	9	7	0	7	6	0	6	0	0	0	3	0	3	32	0	32	1	1	2	0	0	0
17:45 to 18:00	11	0	11	6	0	6	5	0	5	0	0	0	2	0	2	20	1	21	6	0	6	0	0	0
PM Totals	73	1	74	56	0	56	45	1	46	0	0	0	29	1	30	214	7	221	23	1	24	0	0	0

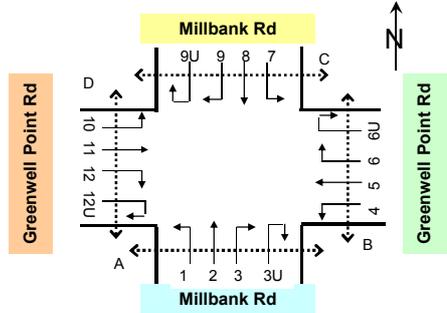
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 6. Greenwell Point Rd / Millbank Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Millbank Rd												Greenwell Point Rd											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	2	1	3	1	0	1	1	1	2	0	0	0	3	0	3	20	8	28	2	0	2	0	0	0
7:15 to 7:30	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	16	6	22	1	1	2	0	0	0
7:30 to 7:45	3	0	3	0	0	0	4	0	4	0	0	0	2	0	2	16	4	20	6	1	7	0	0	0
7:45 to 8:00	3	0	3	2	0	2	0	0	0	0	0	0	2	0	2	20	4	24	5	0	5	0	0	0
8:00 to 8:15	4	0	4	3	1	4	2	0	2	0	0	0	11	1	12	23	2	25	3	0	3	0	0	0
8:15 to 8:30	1	0	1	8	1	9	2	0	2	0	0	0	14	0	14	32	4	36	5	0	5	0	0	0
8:30 to 8:45	3	0	3	6	1	7	3	0	3	0	0	0	9	0	9	23	1	24	5	1	6	0	0	0
8:45 to 9:00	2	2	4	2	0	2	3	0	3	0	0	0	3	2	5	32	4	36	36	2	38	0	0	0
AM Totals	18	3	21	22	4	26	16	1	17	0	0	0	44	3	47	182	33	215	63	5	68	0	0	0

16:00 to 16:15	2	0	2	9	1	10	4	0	4	0	0	0	4	0	4	72	0	72	21	0	21	0	0	0
16:15 to 16:30	5	0	5	9	0	9	3	0	3	0	0	0	3	0	3	69	1	70	17	1	18	0	0	0
16:30 to 16:45	2	0	2	8	0	8	3	0	3	0	0	0	3	0	3	67	1	68	19	0	19	0	0	0
16:45 to 17:00	6	0	6	9	0	9	2	0	2	0	0	0	1	0	1	66	0	66	19	0	19	0	0	0
17:00 to 17:15	4	0	4	8	0	8	2	0	2	0	0	0	4	0	4	64	1	65	21	0	21	0	0	0
17:15 to 17:30	2	0	2	8	0	8	4	0	4	0	0	0	2	0	2	83	0	83	22	1	23	0	0	0
17:30 to 17:45	2	0	2	8	0	8	4	0	4	0	0	0	1	0	1	71	5	76	15	0	15	0	0	0
17:45 to 18:00	4	0	4	6	0	6	0	0	0	0	0	0	3	0	3	57	0	57	17	0	17	0	0	0
PM Totals	27	0	27	65	1	66	22	0	22	0	0	0	21	0	21	549	8	557	151	2	153	0	0	0

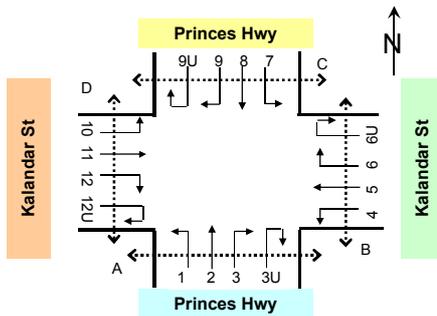
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 6. Greenwell Point Rd / Millbank Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Millbank Rd												Greenwell Point Rd														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	43	3	46	19	2	21	6	3	9	0	0	0	17	3	20	244	12	256	25	2	27	0	0	0			
7:15 to 8:15	55	5	60	34	3	37	10	1	11	0	0	0	15	3	18	297	11	308	22	4	26	0	0	0			
7:30 to 8:30	63	5	68	60	3	63	17	0	17	0	0	0	11	3	14	313	13	326	19	3	22	0	0	0			
7:45 to 8:45	62	4	66	93	3	96	18	0	18	0	0	0	10	3	13	302	10	312	25	3	28	0	0	0			
8:00 to 9:00	56	3	59	97	3	100	18	0	18	0	0	0	10	0	10	294	9	303	25	2	27	0	0	0			
AM Totals	99	6	105	116	5	121	24	3	27	0	0	0	27	3	30	538	21	559	50	4	54	0	0	0			
16:00 to 17:00	39	0	39	32	0	32	18	1	19	0	0	0	13	1	14	104	6	110	9	0	9	0	0	0			
16:15 to 17:15	38	1	39	35	0	35	26	1	27	0	0	0	16	1	17	92	3	95	11	0	11	0	0	0			
16:30 to 17:30	34	1	35	27	0	27	26	1	27	0	0	0	16	1	17	103	1	104	11	0	11	0	0	0			
16:45 to 17:45	36	1	37	27	0	27	25	0	25	0	0	0	15	1	16	113	0	113	10	1	11	0	0	0			
17:00 to 18:00	34	1	35	24	0	24	27	0	27	0	0	0	16	0	16	110	1	111	14	1	15	0	0	0			
PM Totals	73	1	74	56	0	56	45	1	46	0	0	0	29	1	30	214	7	221	23	1	24	0	0	0			

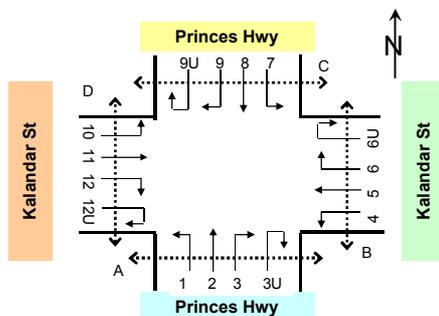
Approach	Millbank Rd												Greenwell Point Rd														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	8	1	9	3	1	4	6	1	7	0	0	0	7	0	7	72	22	94	14	2	16	0	0	0			
7:15 to 8:15	10	0	10	5	2	7	7	0	7	0	0	0	15	1	16	75	16	91	15	2	17	0	0	0			
7:30 to 8:30	11	0	11	13	2	15	8	0	8	0	0	0	29	1	30	91	14	105	19	1	20	0	0	0			
7:45 to 8:45	11	0	11	19	3	22	7	0	7	0	0	0	36	1	37	98	11	109	18	1	19	0	0	0			
8:00 to 9:00	10	2	12	19	3	22	10	0	10	0	0	0	37	3	40	110	11	121	49	3	52	0	0	0			
AM Totals	18	3	21	22	4	26	16	1	17	0	0	0	44	3	47	182	33	215	63	5	68	0	0	0			
16:00 to 17:00	15	0	15	35	1	36	12	0	12	0	0	0	11	0	11	274	2	276	76	1	77	0	0	0			
16:15 to 17:15	17	0	17	34	0	34	10	0	10	0	0	0	11	0	11	266	3	269	76	1	77	0	0	0			
16:30 to 17:30	14	0	14	33	0	33	11	0	11	0	0	0	10	0	10	280	2	282	81	1	82	0	0	0			
16:45 to 17:45	14	0	14	33	0	33	12	0	12	0	0	0	8	0	8	284	6	290	77	1	78	0	0	0			
17:00 to 18:00	12	0	12	30	0	30	10	0	10	0	0	0	10	0	10	275	6	281	75	1	76	0	0	0			
PM Totals	27	0	27	65	1	66	22	0	22	0	0	0	21	0	21	549	8	557	151	2	153	0	0	0			

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 7. Kalandar St / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy												Kalandar St											
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	0	0	0	67	23	90	5	2	7	0	0	0	9	1	10	35	0	35	47	2	49	0	0	0
7:15 to 7:30	0	0	0	120	4	124	9	0	9	0	0	0	6	1	7	36	2	38	78	0	78	0	0	0
7:30 to 7:45	1	0	1	136	20	156	6	0	6	0	0	0	8	0	8	29	0	29	83	3	86	0	0	0
7:45 to 8:00	0	0	0	164	7	171	6	1	7	0	0	0	13	1	14	62	0	62	114	0	114	0	0	0
8:00 to 8:15	1	0	1	184	15	199	9	0	9	0	0	0	5	0	5	47	1	48	130	5	135	0	0	0
8:15 to 8:30	1	0	1	185	8	193	4	0	4	0	0	0	7	0	7	75	2	77	172	6	178	0	0	0
8:30 to 8:45	1	0	1	200	10	210	11	0	11	0	0	0	8	2	10	64	0	64	182	5	187	0	0	0
8:45 to 9:00	0	0	0	195	12	207	8	0	8	0	0	0	9	1	10	66	5	71	160	3	163	0	0	0
AM Totals	4	0	4	1251	99	1350	58	3	61	0	0	0	65	6	71	414	10	424	966	24	990	0	0	0
16:00 to 16:15	5	0	5	163	6	169	18	0	18	0	0	0	18	1	19	44	0	44	101	3	104	0	0	0
16:15 to 16:30	0	0	0	184	4	188	22	1	23	0	0	0	15	0	15	42	1	43	88	1	89	0	0	0
16:30 to 16:45	1	0	1	161	2	163	22	0	22	0	0	0	18	0	18	35	2	37	98	3	101	0	0	0
16:45 to 17:00	2	0	2	171	6	177	11	0	11	0	0	0	15	0	15	40	1	41	88	0	88	0	0	0
17:00 to 17:15	1	0	1	156	4	160	16	2	18	0	0	0	20	1	21	44	1	45	99	0	99	0	0	0
17:15 to 17:30	0	0	0	130	2	132	14	0	14	0	0	0	19	0	19	47	1	48	110	1	111	0	0	0
17:30 to 17:45	1	0	1	162	5	167	15	0	15	0	0	0	13	0	13	38	0	38	91	1	92	0	0	0
17:45 to 18:00	3	0	3	126	4	130	10	0	10	0	0	0	15	0	15	51	0	51	100	0	100	0	0	0
PM Totals	13	0	13	1253	33	1286	128	3	131	0	0	0	133	2	135	341	6	347	775	9	784	0	0	0

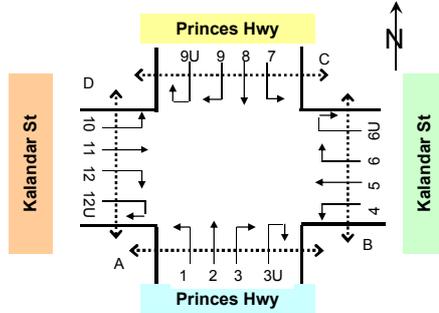
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 7. Kalandar St / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	22	5	27	101	15	116	18	2	20	0	0	0	2	2	4	11	5	16	19	0	19	0	0	0
7:15 to 7:30	29	4	33	118	17	135	9	1	10	0	0	0	3	2	5	12	1	13	19	0	19	0	0	0
7:30 to 7:45	21	2	23	151	15	166	18	3	21	0	0	0	11	1	12	11	3	14	14	1	15	0	0	0
7:45 to 8:00	41	2	43	178	12	190	21	0	21	0	0	0	6	2	8	14	1	15	28	0	28	0	0	0
8:00 to 8:15	49	2	51	195	10	205	27	4	31	0	0	0	8	2	10	20	1	21	34	4	38	0	0	0
8:15 to 8:30	40	2	42	185	12	197	35	5	40	0	0	0	10	2	12	26	0	26	33	1	34	0	0	0
8:30 to 8:45	46	5	51	150	16	166	33	2	35	0	0	0	12	1	13	27	0	27	30	0	30	0	0	0
8:45 to 9:00	69	7	76	170	17	187	23	4	27	0	0	0	8	1	9	52	1	53	28	2	30	0	0	0
AM Totals	317	29	346	1248	114	1362	184	21	205	0	0	0	60	13	73	173	12	185	205	8	213	0	0	0

16:00 to 16:15	150	6	156	289	8	297	29	2	31	0	0	0	15	3	18	55	0	55	61	1	62	0	0	0
16:15 to 16:30	128	0	128	259	8	267	20	1	21	0	0	0	24	1	25	49	0	49	53	0	53	0	0	0
16:30 to 16:45	128	0	128	268	7	275	22	2	24	0	0	0	15	3	18	50	0	50	50	1	51	0	0	0
16:45 to 17:00	148	0	148	304	13	317	17	0	17	0	0	0	13	0	13	52	0	52	38	0	38	0	0	0
17:00 to 17:15	149	1	150	284	4	288	15	1	16	0	0	0	16	0	16	67	0	67	45	0	45	0	0	0
17:15 to 17:30	156	2	158	282	6	288	12	0	12	0	0	0	8	0	8	47	1	48	44	0	44	0	0	0
17:30 to 17:45	157	4	161	280	7	287	22	1	23	0	0	0	8	0	8	51	2	53	38	0	38	0	0	0
17:45 to 18:00	127	3	130	258	7	265	10	1	11	0	0	0	10	2	12	52	0	52	41	0	41	0	0	0
PM Totals	1143	16	1159	2224	60	2284	147	8	155	0	0	0	109	9	118	423	3	426	370	2	372	0	0	0

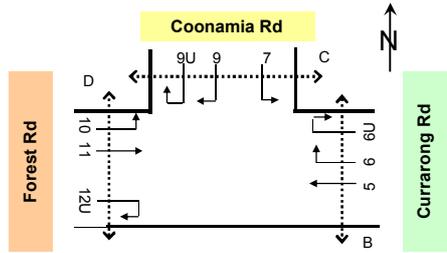
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 7. Kalendar St / Princes Hwy  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Princes Hwy												Kalendar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	1	0	1	487	54	541	26	3	29	0	0	0	36	3	39	162	2	164	322	5	327	0	0	0			
7:15 to 8:15	2	0	2	604	46	650	30	1	31	0	0	0	32	2	34	174	3	177	405	8	413	0	0	0			
7:30 to 8:30	3	0	3	669	50	719	25	1	26	0	0	0	33	1	34	213	3	216	499	14	513	0	0	0			
7:45 to 8:45	3	0	3	733	40	773	30	1	31	0	0	0	33	3	36	248	3	251	598	16	614	0	0	0			
8:00 to 9:00	3	0	3	764	45	809	32	0	32	0	0	0	29	3	32	252	8	260	644	19	663	0	0	0			
AM Totals	4	0	4	1251	99	1350	58	3	61	0	0	0	65	6	71	414	10	424	966	24	990	0	0	0			
16:00 to 17:00	8	0	8	679	18	697	73	1	74	0	0	0	66	1	67	161	4	165	375	7	382	0	0	0			
16:15 to 17:15	4	0	4	672	16	688	71	3	74	0	0	0	68	1	69	161	5	166	373	4	377	0	0	0			
16:30 to 17:30	4	0	4	618	14	632	63	2	65	0	0	0	72	1	73	166	5	171	395	4	399	0	0	0			
16:45 to 17:45	4	0	4	619	17	636	56	2	58	0	0	0	67	1	68	169	3	172	388	2	390	0	0	0			
17:00 to 18:00	5	0	5	574	15	589	55	2	57	0	0	0	67	1	68	180	2	182	400	2	402	0	0	0			
PM Totals	13	0	13	1253	33	1286	128	3	131	0	0	0	133	2	135	341	6	347	775	9	784	0	0	0			

Approach	Princes Hwy												Kalendar St														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	113	13	126	548	59	607	66	6	72	0	0	0	22	7	29	48	10	58	80	1	81	0	0	0			
7:15 to 8:15	140	10	150	642	54	696	75	8	83	0	0	0	28	7	35	57	6	63	95	5	100	0	0	0			
7:30 to 8:30	151	8	159	709	49	758	101	12	113	0	0	0	35	7	42	71	5	76	109	6	115	0	0	0			
7:45 to 8:45	176	11	187	708	50	758	116	11	127	0	0	0	36	7	43	87	2	89	125	5	130	0	0	0			
8:00 to 9:00	204	16	220	700	55	755	118	15	133	0	0	0	38	6	44	125	2	127	125	7	132	0	0	0			
AM Totals	317	29	346	1248	114	1362	184	21	205	0	0	0	60	13	73	173	12	185	205	8	213	0	0	0			
16:00 to 17:00	554	6	560	1120	36	1156	88	5	93	0	0	0	67	7	74	206	0	206	202	2	204	0	0	0			
16:15 to 17:15	553	1	554	1115	32	1147	74	4	78	0	0	0	68	4	72	218	0	218	186	1	187	0	0	0			
16:30 to 17:30	581	3	584	1138	30	1168	66	3	69	0	0	0	52	3	55	216	1	217	177	1	178	0	0	0			
16:45 to 17:45	610	7	617	1150	30	1180	66	2	68	0	0	0	45	0	45	217	3	220	165	0	165	0	0	0			
17:00 to 18:00	589	10	599	1104	24	1128	59	3	62	0	0	0	42	2	44	217	3	220	168	0	168	0	0	0			
PM Totals	1143	16	1159	2224	60	2284	147	8	155	0	0	0	109	9	118	423	3	426	370	2	372	0	0	0			

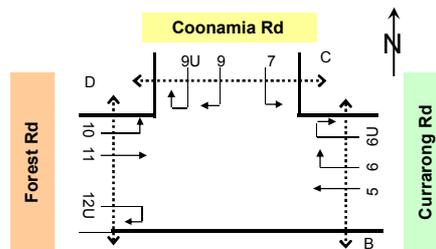
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 8. Forest Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



**SKYHIGH - THE TRAFFIC SURVEY COMPANY**

Approach	Direction	Time Period	Currarong Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15			3	0	3	5	0	5	0	0	0
7:15 to 7:30			5	0	5	4	0	4	0	0	0
7:30 to 7:45			6	0	6	6	0	6	0	0	0
7:45 to 8:00			2	0	2	5	0	5	0	0	0
8:00 to 8:15			6	0	6	8	0	8	0	0	0
8:15 to 8:30			2	0	2	8	0	8	0	0	0
8:30 to 8:45			2	0	2	10	0	10	0	0	0
8:45 to 9:00			1	0	1	8	0	8	0	0	0
AM Totals			27	0	27	54	0	54	0	0	0
16:00 to 16:15			4	0	4	2	0	2	0	0	0
16:15 to 16:30			2	0	2	2	0	2	0	0	0
16:30 to 16:45			2	0	2	2	0	2	0	0	0
16:45 to 17:00			2	0	2	4	0	4	0	0	0
17:00 to 17:15			2	0	2	3	0	3	0	0	0
17:15 to 17:30			2	0	2	5	0	5	0	0	0
17:30 to 17:45			1	0	1	2	0	2	0	0	0
17:45 to 18:00			3	0	3	4	0	4	0	0	0
PM Totals			18	0	18	24	0	24	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 8. Forest Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



**SKYHIGH - THE TRAFFIC SURVEY COMPANY**

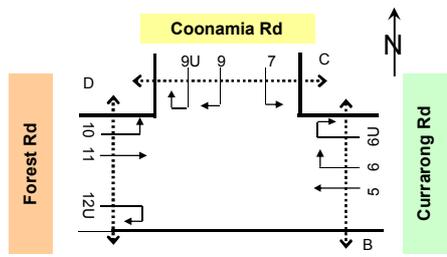
Approach	Coonamia Rd						Forest Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	2	0	2	13	0	13	0	0	0	12	1	13	3	0	3	0	0	0
7:15 to 7:30	4	0	4	12	0	12	0	0	0	27	1	28	2	0	2	0	0	0
7:30 to 7:45	3	0	3	10	0	10	0	0	0	25	3	28	2	0	2	0	0	0
7:45 to 8:00	1	0	1	7	0	7	0	0	0	38	1	39	4	0	4	0	0	0
8:00 to 8:15	0	0	0	13	0	13	0	0	0	48	1	49	1	1	2	0	0	0
8:15 to 8:30	1	0	1	14	1	15	0	0	0	41	1	42	4	0	4	0	0	0
8:30 to 8:45	2	0	2	16	0	16	0	0	0	39	1	40	6	0	6	0	0	0
8:45 to 9:00	3	0	3	13	0	13	0	0	0	36	0	36	4	0	4	0	0	0
AM Totals	16	0	16	98	1	99	0	0	0	266	9	275	26	1	27	0	0	0

16:00 to 16:15	9	0	9
16:15 to 16:30	9	0	9
16:30 to 16:45	4	0	4
16:45 to 17:00	3	0	3
17:00 to 17:15	6	0	6
17:15 to 17:30	4	0	4
17:30 to 17:45	9	0	9
17:45 to 18:00	5	0	5
PM Totals	49	0	49

32	2	34	0	0	0	32	2	34	9	0	9
32	2	34	0	0	0	26	1	27	7	1	8
28	0	28	0	0	0	15	1	16	3	0	3
28	1	29	0	0	0	14	1	15	3	0	3
35	0	35	0	0	0	18	0	18	2	0	2
42	0	42	0	0	0	19	0	19	4	0	4
25	0	25	0	0	0	16	1	17	4	0	4
33	0	33	0	0	0	15	0	15	5	0	5
255	5	260	0	0	0	155	6	161	37	1	38

0	0	0
0	0	0
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0	0	0

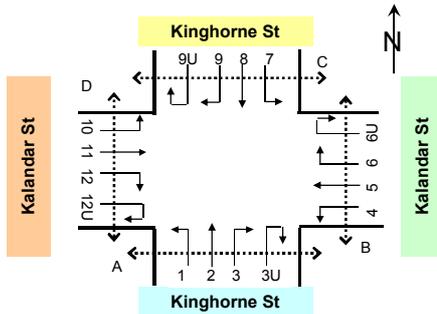
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 8. Forest Rd / Coonamia Rd  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: Hourly Summary



Approach	Direction	Time Period	Currarong Rd								
			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00			16	0	16	20	0	20	0	0	0
7:15 to 8:15			19	0	19	23	0	23	0	0	0
7:30 to 8:30			16	0	16	27	0	27	0	0	0
7:45 to 8:45			12	0	12	31	0	31	0	0	0
8:00 to 9:00			11	0	11	34	0	34	0	0	0
AM Totals			27	0	27	54	0	54	0	0	0
16:00 to 17:00			10	0	10	10	0	10	0	0	0
16:15 to 17:15			8	0	8	11	0	11	0	0	0
16:30 to 17:30			8	0	8	14	0	14	0	0	0
16:45 to 17:45			7	0	7	14	0	14	0	0	0
17:00 to 18:00			8	0	8	14	0	14	0	0	0
PM Totals			18	0	18	24	0	24	0	0	0

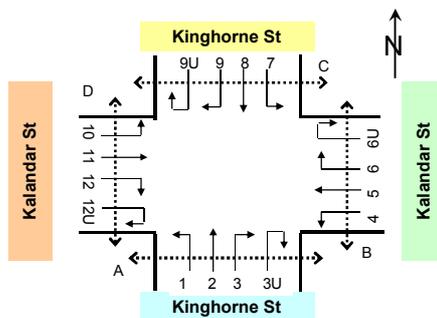
Approach	Coonamia Rd						Forest Rd											
	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	10	0	10	42	0	42	0	0	0	102	6	108	11	0	11	0	0	0
7:15 to 8:15	8	0	8	42	0	42	0	0	0	138	6	144	9	1	10	0	0	0
7:30 to 8:30	5	0	5	44	1	45	0	0	0	152	6	158	11	1	12	0	0	0
7:45 to 8:45	4	0	4	50	1	51	0	0	0	166	4	170	15	1	16	0	0	0
8:00 to 9:00	6	0	6	56	1	57	0	0	0	164	3	167	15	1	16	0	0	0
AM Totals	16	0	16	98	1	99	0	0	0	266	9	275	26	1	27	0	0	0
16:00 to 17:00	25	0	25	120	5	125	0	0	0	87	5	92	22	1	23	0	0	0
16:15 to 17:15	22	0	22	123	3	126	0	0	0	73	3	76	15	1	16	0	0	0
16:30 to 17:30	17	0	17	133	1	134	0	0	0	66	2	68	12	0	12	0	0	0
16:45 to 17:45	22	0	22	130	1	131	0	0	0	67	2	69	13	0	13	0	0	0
17:00 to 18:00	24	0	24	135	0	135	0	0	0	68	1	69	15	0	15	0	0	0
PM Totals	49	0	49	255	5	260	0	0	0	155	6	161	37	1	38	0	0	0

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 9. Kalandar St / Kinghorne St  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Kinghorne St												Kalandar St											
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	3	2	5	21	1	22	6	1	7	0	0	0	1	0	1	47	2	49	4	0	4	0	0	0
7:15 to 7:30	5	3	8	37	0	37	8	0	8	0	0	0	2	0	2	34	2	36	11	1	12	0	0	0
7:30 to 7:45	6	0	6	55	1	56	4	1	5	0	0	0	8	0	8	28	3	31	11	0	11	0	0	0
7:45 to 8:00	6	0	6	71	2	73	5	1	6	0	0	0	6	0	6	49	0	49	27	0	27	0	0	0
8:00 to 8:15	3	1	4	87	3	90	11	0	11	0	0	0	5	0	5	49	4	53	21	1	22	0	0	0
8:15 to 8:30	7	0	7	106	4	110	10	0	10	0	0	0	5	0	5	70	5	75	41	1	42	0	0	0
8:30 to 8:45	7	1	8	109	2	111	14	0	14	0	0	0	3	0	3	54	2	56	41	0	41	0	0	0
8:45 to 9:00	7	0	7	94	5	99	15	0	15	0	0	0	12	0	12	49	9	58	26	1	27	0	0	0
AM Totals	44	7	51	580	18	598	73	3	76	0	0	0	42	0	42	380	27	407	182	4	186	0	0	0
16:00 to 16:15	3	0	3	69	0	69	15	0	15	0	0	0	9	0	9	43	4	47	24	0	24	0	0	0
16:15 to 16:30	7	1	8	73	1	74	21	0	21	0	0	0	8	0	8	35	2	37	20	0	20	0	0	0
16:30 to 16:45	4	0	4	44	0	44	9	0	9	1	0	1	5	1	6	39	2	41	13	0	13	0	0	0
16:45 to 17:00	8	0	8	33	0	33	7	0	7	0	0	0	4	0	4	35	0	35	19	1	20	1	0	1
17:00 to 17:15	3	1	4	40	1	41	10	0	10	0	0	0	5	0	5	27	2	29	23	0	23	0	0	0
17:15 to 17:30	8	0	8	43	0	43	10	0	10	0	0	0	7	0	7	32	2	34	15	0	15	0	0	0
17:30 to 17:45	3	0	3	32	0	32	13	1	14	0	0	0	14	0	14	36	1	37	18	0	18	1	0	1
17:45 to 18:00	1	0	1	32	0	32	15	0	15	0	0	0	6	0	6	30	1	31	23	0	23	1	0	1
PM Totals	37	2	39	366	2	368	100	1	101	1	0	1	58	1	59	277	14	291	155	1	156	3	0	3

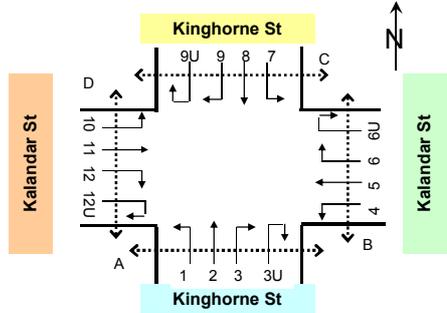
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 9. Kalandar St / Kinghorne St  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Kinghorne St												Kalandar St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	9	1	10	2	0	2	110	1	111	0	0	0	19	0	19	15	5	20	0	1	1	0	0	0
7:15 to 7:30	15	1	16	2	0	2	101	1	102	0	0	0	27	1	28	10	2	12	2	0	2	0	0	0
7:30 to 7:45	12	1	13	4	0	4	42	1	43	0	0	0	27	2	29	21	3	24	1	0	1	0	0	0
7:45 to 8:00	18	0	18	6	0	6	52	2	54	0	0	0	33	0	33	21	3	24	0	0	0	0	0	0
8:00 to 8:15	19	1	20	7	0	7	35	1	36	0	0	0	43	1	44	45	7	52	1	1	2	0	0	0
8:15 to 8:30	16	0	16	3	0	3	39	2	41	2	0	2	54	3	57	35	3	38	1	0	1	0	0	0
8:30 to 8:45	20	0	20	7	0	7	38	1	39	1	0	1	63	3	66	38	1	39	3	0	3	0	0	0
8:45 to 9:00	49	3	52	9	0	9	32	1	33	2	0	2	51	3	54	44	2	46	2	1	3	0	0	0
AM Totals	158	7	165	40	0	40	449	10	459	5	0	5	317	13	330	229	26	255	10	3	13	0	0	0

16:00 to 16:15	60	1	61	14	1	15	52	2	54	1	0	1	65	0	65	53	2	55	2	0	2	0	0	0
16:15 to 16:30	48	0	48	15	0	15	49	3	52	1	0	1	58	1	59	61	1	62	3	0	3	0	0	0
16:30 to 16:45	47	1	48	16	1	17	45	2	47	0	0	0	42	1	43	61	1	62	4	0	4	0	0	0
16:45 to 17:00	55	0	55	7	0	7	52	0	52	0	0	0	35	0	35	41	0	41	1	0	1	0	0	0
17:00 to 17:15	75	0	75	16	0	16	42	2	44	0	0	0	50	2	52	56	1	57	3	0	3	0	0	0
17:15 to 17:30	46	0	46	12	0	12	53	2	55	2	0	2	40	0	40	42	0	42	4	0	4	0	0	0
17:30 to 17:45	49	0	49	9	0	9	53	1	54	0	0	0	31	1	32	50	1	51	0	0	0	0	0	0
17:45 to 18:00	39	0	39	10	0	10	35	1	36	0	0	0	46	1	47	37	1	38	1	0	1	0	0	0
PM Totals	419	2	421	99	2	101	381	13	394	4	0	4	367	6	373	401	7	408	18	0	18	0	0	0

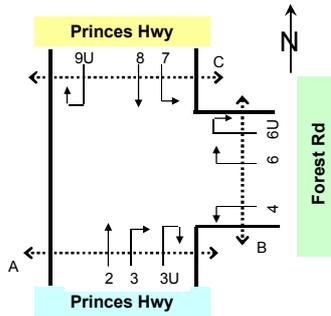
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 9. Kalandar St / Kinghorne St  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Kinghorne St												Kalandar St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	20	5	25	184	4	188	23	3	26	0	0	0	17	0	17	158	7	165	53	1	54	0	0	0			
7:15 to 8:15	20	4	24	250	6	256	28	2	30	0	0	0	21	0	21	160	9	169	70	2	72	0	0	0			
7:30 to 8:30	22	1	23	319	10	329	30	2	32	0	0	0	24	0	24	196	12	208	100	2	102	0	0	0			
7:45 to 8:45	23	2	25	373	11	384	40	1	41	0	0	0	19	0	19	222	11	233	130	2	132	0	0	0			
8:00 to 9:00	24	2	26	396	14	410	50	0	50	0	0	0	25	0	25	222	20	242	129	3	132	0	0	0			
AM Totals	44	7	51	580	18	598	73	3	76	0	0	0	42	0	42	380	27	407	182	4	186	0	0	0			
16:00 to 17:00	22	1	23	219	1	220	52	0	52	1	0	1	26	1	27	152	8	160	76	1	77	1	0	1			
16:15 to 17:15	22	2	24	190	2	192	47	0	47	1	0	1	22	1	23	136	6	142	75	1	76	1	0	1			
16:30 to 17:30	23	1	24	160	1	161	36	0	36	1	0	1	21	1	22	133	6	139	70	1	71	1	0	1			
16:45 to 17:45	22	1	23	148	1	149	40	1	41	0	0	0	30	0	30	130	5	135	75	1	76	2	0	2			
17:00 to 18:00	15	1	16	147	1	148	48	1	49	0	0	0	32	0	32	125	6	131	79	0	79	2	0	2			
PM Totals	37	2	39	366	2	368	100	1	101	1	0	1	58	1	59	277	14	291	155	1	156	3	0	3			

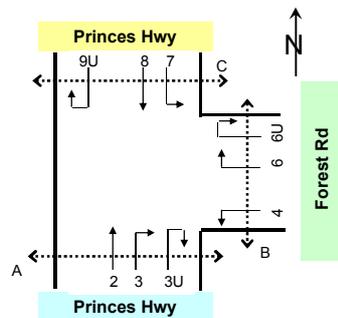
Approach	Kinghorne St												Kalandar St														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	54	3	57	14	0	14	305	5	310	0	0	0	106	3	109	67	13	80	3	1	4	0	0	0			
7:15 to 8:15	64	3	67	19	0	19	230	5	235	0	0	0	130	4	134	97	15	112	4	1	5	0	0	0			
7:30 to 8:30	65	2	67	20	0	20	168	6	174	2	0	2	157	6	163	122	16	138	3	1	4	0	0	0			
7:45 to 8:45	73	1	74	23	0	23	164	6	170	3	0	3	193	7	200	139	14	153	5	1	6	0	0	0			
8:00 to 9:00	104	4	108	26	0	26	144	5	149	5	0	5	211	10	221	162	13	175	7	2	9	0	0	0			
AM Totals	158	7	165	40	0	40	449	10	459	5	0	5	317	13	330	229	26	255	10	3	13	0	0	0			
16:00 to 17:00	210	2	212	52	2	54	198	7	205	2	0	2	200	2	202	216	4	220	10	0	10	0	0	0			
16:15 to 17:15	225	1	226	54	1	55	188	7	195	1	0	1	185	4	189	219	3	222	11	0	11	0	0	0			
16:30 to 17:30	223	1	224	51	1	52	192	6	198	2	0	2	167	3	170	200	2	202	12	0	12	0	0	0			
16:45 to 17:45	225	0	225	44	0	44	200	5	205	2	0	2	156	3	159	189	2	191	8	0	8	0	0	0			
17:00 to 18:00	209	0	209	47	0	47	183	6	189	2	0	2	167	4	171	185	3	188	8	0	8	0	0	0			
PM Totals	419	2	421	99	2	101	381	13	394	4	0	4	367	6	373	401	7	408	18	0	18	0	0	0			

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy									Forest Rd								
	Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	211	10	221	4	0	4	0	0	0	5	0	5	22	0	22	0	0	0
7:15 to 7:30	248	10	258	5	0	5	0	0	0	9	0	9	34	0	34	0	0	0
7:30 to 7:45	287	11	298	5	0	5	1	0	1	10	0	10	26	0	26	0	0	0
7:45 to 8:00	334	16	350	6	1	7	0	0	0	7	3	10	29	1	30	0	0	0
8:00 to 8:15	342	9	351	5	1	6	0	0	0	8	0	8	26	0	26	0	0	0
8:15 to 8:30	285	10	295	3	0	3	0	0	0	10	0	10	21	0	21	0	0	0
8:30 to 8:45	277	8	285	8	2	10	0	0	0	8	1	9	24	1	25	0	0	0
8:45 to 9:00	247	10	257	4	0	4	0	0	0	3	0	3	14	1	15	0	0	0
AM Totals	2231	84	2315	40	4	44	1	0	1	60	4	64	196	3	199	0	0	0
16:00 to 16:15	125	10	135	8	1	9	0	0	0	10	0	10	9	0	9	0	0	0
16:15 to 16:30	157	12	169	11	0	11	0	0	0	10	0	10	12	1	13	0	0	0
16:30 to 16:45	139	6	145	6	0	6	0	0	0	6	0	6	5	0	5	0	0	0
16:45 to 17:00	111	6	117	8	0	8	0	0	0	7	0	7	18	0	18	0	0	0
17:00 to 17:15	107	6	113	5	0	5	0	0	0	6	1	7	6	0	6	0	0	0
17:15 to 17:30	122	5	127	7	0	7	0	0	0	7	0	7	7	0	7	0	0	0
17:30 to 17:45	120	4	124	5	0	5	0	0	0	3	0	3	13	0	13	0	0	0
17:45 to 18:00	82	4	86	3	0	3	0	0	0	4	0	4	12	0	12	0	0	0
PM Totals	963	53	1016	53	1	54	0	0	0	53	1	54	82	1	83	0	0	0

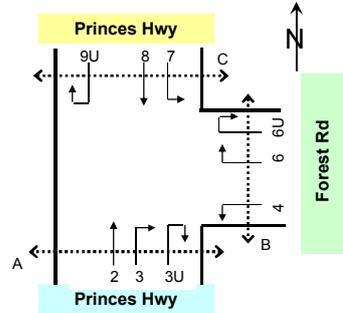
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy								
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	8	2	10	69	25	94	0	0	0
7:15 to 7:30	9	2	11	73	22	95	0	0	0
7:30 to 7:45	12	3	15	84	18	102	0	0	0
7:45 to 8:00	15	1	16	90	9	99	0	0	0
8:00 to 8:15	12	2	14	102	18	120	0	0	0
8:15 to 8:30	13	2	15	77	16	93	0	0	0
8:30 to 8:45	11	0	11	99	17	116	0	0	0
8:45 to 9:00	8	0	8	90	19	109	0	0	0
AM Totals	88	12	100	684	144	828	0	0	0

16:00 to 16:15	20	0	20	359	10	369	0	0	0
16:15 to 16:30	28	2	30	306	10	316	0	0	0
16:30 to 16:45	29	0	29	279	5	284	1	0	1
16:45 to 17:00	21	0	21	339	1	340	0	0	0
17:00 to 17:15	32	1	33	340	8	348	0	0	0
17:15 to 17:30	29	0	29	324	7	331	0	0	0
17:30 to 17:45	30	0	30	294	5	299	0	0	0
17:45 to 18:00	16	1	17	263	4	267	0	0	0
PM Totals	205	4	209	2504	50	2554	1	0	1

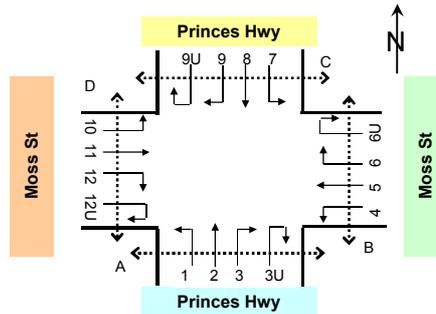
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 10. Forest Rd / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Princes Hwy									Forest Rd								
	Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	1080	47	1127	20	1	21	1	0	1	31	3	34	111	1	112	0	0	0
7:15 to 8:15	1211	46	1257	21	2	23	1	0	1	34	3	37	115	1	116	0	0	0
7:30 to 8:30	1248	46	1294	19	2	21	1	0	1	35	3	38	102	1	103	0	0	0
7:45 to 8:45	1238	43	1281	22	4	26	0	0	0	33	4	37	100	2	102	0	0	0
8:00 to 9:00	1151	37	1188	20	3	23	0	0	0	29	1	30	85	2	87	0	0	0
AM Totals	2231	84	2315	40	4	44	1	0	1	60	4	64	196	3	199	0	0	0
16:00 to 17:00	532	34	566	33	1	34	0	0	0	33	0	33	44	1	45	0	0	0
16:15 to 17:15	514	30	544	30	0	30	0	0	0	29	1	30	41	1	42	0	0	0
16:30 to 17:30	479	23	502	26	0	26	0	0	0	26	1	27	36	0	36	0	0	0
16:45 to 17:45	460	21	481	25	0	25	0	0	0	23	1	24	44	0	44	0	0	0
17:00 to 18:00	431	19	450	20	0	20	0	0	0	20	1	21	38	0	38	0	0	0
PM Totals	963	53	1016	53	1	54	0	0	0	53	1	54	82	1	83	0	0	0

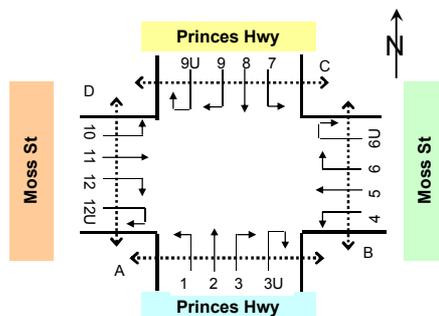
Approach	Princes Hwy								
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9U (U Turn)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	44	8	52	316	74	390	0	0	0
7:15 to 8:15	48	8	56	349	67	416	0	0	0
7:30 to 8:30	52	8	60	353	61	414	0	0	0
7:45 to 8:45	51	5	56	368	60	428	0	0	0
8:00 to 9:00	44	4	48	368	70	438	0	0	0
AM Totals	88	12	100	684	144	828	0	0	0
16:00 to 17:00	98	2	100	1283	26	1309	1	0	1
16:15 to 17:15	110	3	113	1264	24	1288	1	0	1
16:30 to 17:30	111	1	112	1282	21	1303	1	0	1
16:45 to 17:45	112	1	113	1297	21	1318	0	0	0
17:00 to 18:00	107	2	109	1221	24	1245	0	0	0
PM Totals	205	4	209	2504	50	2554	1	0	1

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 11. Moss St / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy												Moss St														
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	0	0	0	95	26	121	3	0	3	0	0	0	3	0	3	13	0	13	6	0	6	0	0	0			
7:15 to 7:30	2	0	2	138	11	149	5	1	6	0	0	0	2	0	2	5	0	5	19	5	24	0	0	0			
7:30 to 7:45	0	0	0	145	22	167	4	1	5	0	0	0	4	0	4	18	0	18	36	0	36	0	0	0			
7:45 to 8:00	0	0	0	153	12	165	9	0	9	0	0	0	1	0	1	33	0	33	23	0	23	0	0	0			
8:00 to 8:15	0	0	0	143	16	159	12	2	14	0	0	0	5	0	5	37	3	40	42	1	43	0	0	0			
8:15 to 8:30	0	0	0	188	15	203	22	3	25	0	0	0	4	1	5	41	2	43	42	4	46	0	0	0			
8:30 to 8:45	3	0	3	202	13	215	47	0	47	0	0	0	8	0	8	48	3	51	66	5	71	0	0	0			
8:45 to 9:00	0	0	0	169	14	183	48	0	48	0	0	0	11	0	11	59	0	59	58	0	58	0	0	0			
AM Totals	5	0	5	1233	129	1362	150	7	157	0	0	0	38	1	39	254	8	262	292	15	307	0	0	0			
16:00 to 16:15	2	0	2	250	8	258	21	0	21	1	0	1	5	0	5	28	0	28	51	2	53	0	0	0			
16:15 to 16:30	1	0	1	216	8	224	22	0	22	0	0	0	6	1	7	31	0	31	37	0	37	0	0	0			
16:30 to 16:45	0	0	0	273	11	284	21	0	21	0	0	0	5	0	5	23	0	23	34	1	35	0	0	0			
16:45 to 17:00	4	0	4	222	4	226	13	0	13	0	0	0	6	0	6	19	0	19	31	0	31	0	0	0			
17:00 to 17:15	0	0	0	272	4	276	9	0	9	0	0	0	2	0	2	18	0	18	28	1	29	0	0	0			
17:15 to 17:30	1	0	1	239	3	242	21	0	21	0	0	0	1	0	1	11	0	11	27	0	27	0	0	0			
17:30 to 17:45	1	0	1	217	6	223	11	0	11	1	0	1	2	0	2	25	0	25	32	0	32	0	0	0			
17:45 to 18:00	1	0	1	194	6	200	7	0	7	0	0	0	0	0	0	15	0	15	25	0	25	0	0	0			
PM Totals	10	0	10	1883	50	1933	125	0	125	2	0	2	27	1	28	170	0	170	265	4	269	0	0	0			

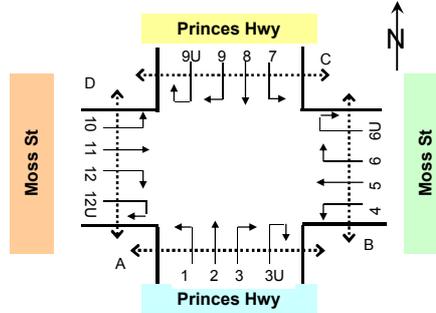
**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 11. Moss St / Princes Hwy  
  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
: 15 mins Data



Approach	Princes Hwy												Moss St														
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 7:15	9	1	10	214	22	236	34	2	36	0	0	0	10	0	10	0	0	0	2	1	3	0	0	0			
7:15 to 7:30	6	1	7	220	16	236	27	2	29	0	0	0	13	1	14	7	1	8	5	1	6	0	0	0			
7:30 to 7:45	14	1	15	247	15	262	57	3	60	0	0	0	16	2	18	7	0	7	5	2	7	0	0	0			
7:45 to 8:00	23	1	24	282	19	301	82	4	86	0	0	0	16	0	16	10	1	11	7	0	7	0	0	0			
8:00 to 8:15	27	0	27	271	17	288	72	0	72	0	0	0	21	4	25	20	0	20	6	2	8	0	0	0			
8:15 to 8:30	43	2	45	289	23	312	74	3	77	0	0	0	30	3	33	25	2	27	9	1	10	0	0	0			
8:30 to 8:45	39	4	43	261	15	276	73	5	78	0	0	0	20	2	22	34	2	36	14	2	16	0	0	0			
8:45 to 9:00	42	2	44	296	27	323	91	4	95	0	0	0	25	2	27	28	0	28	8	0	8	0	0	0			
AM Totals	203	12	215	2080	154	2234	510	23	533	0	0	0	151	14	165	131	6	137	56	9	65	0	0	0			

16:00 to 16:15	28	1	29	267	15	282	81	1	82	0	0	0	85	0	85	40	0	40	20	0	20	0	0	0
16:15 to 16:30	36	2	38	273	6	279	69	1	70	0	0	0	91	2	93	42	0	42	28	1	29	0	0	0
16:30 to 16:45	31	1	32	343	13	356	62	0	62	0	0	0	65	2	67	27	0	27	14	0	14	0	0	0
16:45 to 17:00	34	1	35	247	7	254	61	0	61	0	0	0	96	0	96	56	0	56	28	0	28	1	0	1
17:00 to 17:15	35	1	36	308	7	315	74	0	74	0	0	0	83	0	83	51	0	51	35	1	36	0	0	0
17:15 to 17:30	25	0	25	273	10	283	48	1	49	0	0	0	70	1	71	32	0	32	17	0	17	0	0	0
17:30 to 17:45	33	0	33	280	7	287	58	1	59	0	0	0	78	0	78	32	0	32	25	0	25	0	0	0
17:45 to 18:00	19	0	19	268	10	278	47	0	47	0	0	0	60	0	60	26	0	26	15	0	15	0	0	0
PM Totals	241	6	247	2259	75	2334	500	4	504	0	0	0	628	5	633	306	0	306	182	2	184	1	0	1

**Job No.** : N790  
**Client** : Realty Realizations  
**Suburb** : Nowra  
**Location** : 11. Moss St / Princes Hwy  
**Day/Date** : Fri, 4th May 2012  
**Weather** : Fine  
**Description** : Classified Intersection Count  
**Hourly Summary**



Approach	Princes Hwy												Moss St											
	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	2	0	2	531	71	602	21	2	23	0	0	0	10	0	10	69	0	69	84	5	89	0	0	0
7:15 to 8:15	2	0	2	579	61	640	30	4	34	0	0	0	12	0	12	93	3	96	120	6	126	0	0	0
7:30 to 8:30	0	0	0	629	65	694	47	6	53	0	0	0	14	1	15	129	5	134	143	5	148	0	0	0
7:45 to 8:45	3	0	3	686	56	742	90	5	95	0	0	0	18	1	19	159	8	167	173	10	183	0	0	0
8:00 to 9:00	3	0	3	702	58	760	129	5	134	0	0	0	28	1	29	185	8	193	208	10	218	0	0	0
AM Totals	5	0	5	1233	129	1362	150	7	157	0	0	0	38	1	39	254	8	262	292	15	307	0	0	0
16:00 to 17:00	7	0	7	961	31	992	77	0	77	1	0	1	22	1	23	101	0	101	153	3	156	0	0	0
16:15 to 17:15	5	0	5	983	27	1010	65	0	65	0	0	0	19	1	20	91	0	91	130	2	132	0	0	0
16:30 to 17:30	5	0	5	1006	22	1028	64	0	64	0	0	0	14	0	14	71	0	71	120	2	122	0	0	0
16:45 to 17:45	6	0	6	950	17	967	54	0	54	1	0	1	11	0	11	73	0	73	118	1	119	0	0	0
17:00 to 18:00	3	0	3	922	19	941	48	0	48	1	0	1	5	0	5	69	0	69	112	1	113	0	0	0
PM Totals	10	0	10	1883	50	1933	125	0	125	2	0	2	27	1	28	170	0	170	265	4	269	0	0	0

Approach	Princes Hwy												Moss St											
	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
7:00 to 8:00	52	4	56	963	72	1035	200	11	211	0	0	0	55	3	58	24	2	26	19	4	23	0	0	0
7:15 to 8:15	70	3	73	1020	67	1087	238	9	247	0	0	0	66	7	73	44	2	46	23	5	28	0	0	0
7:30 to 8:30	107	4	111	1089	74	1163	285	10	295	0	0	0	83	9	92	62	3	65	27	5	32	0	0	0
7:45 to 8:45	132	7	139	1103	74	1177	301	12	313	0	0	0	87	9	96	89	5	94	36	5	41	0	0	0
8:00 to 9:00	151	8	159	1117	82	1199	310	12	322	0	0	0	96	11	107	107	4	111	37	5	42	0	0	0
AM Totals	203	12	215	2080	154	2234	510	23	533	0	0	0	151	14	165	131	6	137	56	9	65	0	0	0
16:00 to 17:00	129	5	134	1130	41	1171	273	2	275	0	0	0	337	4	341	165	0	165	90	1	91	1	0	1
16:15 to 17:15	136	5	141	1171	33	1204	266	1	267	0	0	0	335	4	339	176	0	176	105	2	107	1	0	1
16:30 to 17:30	125	3	128	1171	37	1208	245	1	246	0	0	0	314	3	317	166	0	166	94	1	95	1	0	1
16:45 to 17:45	127	2	129	1108	31	1139	241	2	243	0	0	0	327	1	328	171	0	171	105	1	106	1	0	1
17:00 to 18:00	112	1	113	1129	34	1163	227	2	229	0	0	0	291	1	292	141	0	141	92	1	93	0	0	0
PM Totals	241	6	247	2259	75	2334	500	4	504	0	0	0	628	5	633	306	0	306	182	2	184	1	0	1

# B. CALCULATION OF TRAFFIC GROWTH FACTORS & TRIP GENERATION RATES (SHOALHAVEN CITY COUNCIL)

# B

## Justin Murphy

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**From:** Ken Hollyoak  
**Sent:** Wednesday, 20 February 2013 9:21 AM  
**To:** Wayne Johnson; Justin Murphy  
**Subject:** FW: UPDATED Trip Generation Analysis - Culburra 3A Development - assumptions for traffic study  
**Attachments:** Hourly Data 2004 07053 Falls Creek Correction.xls; Greenwell Point Rd Annual Analysis based on 2008.xlsx; Forest Rd Annual Analysis based on 2008.xlsx; Culburra Traffic Gen Analysis.xlsx

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**From:** Wells, Scott [mailto:WELLSS@shoalhaven.nsw.gov.au]  
**Sent:** Tuesday, 19 February 2013 6:37 PM  
**To:** Ken Hollyoak  
**Cc:** Britton, John; Williams, Brett; 'MILLET Chris P'  
**Subject:** UPDATED Trip Generation Analysis - Culburra 3A Development - assumptions for traffic study

Hi Ken

The following is summary of our analysis of external traffic generation rates to be applied, and what adjustments are required in our view to the May 2012 base survey data you are intending to use as basis for your analysis. The spreadsheet used to base this analysis summary is attached (Culburra Traffic Gen analysis) and the annual traffic data used to derive AADT and 120<sup>th</sup> HH factors are also attached (Greenwell Pt Rd and Forest Rd for local adjustment factors, Princes Highway Falls Creek for Highway adjustment factors).

The analysis is detailed, undertaken by our Transport Engineer. I have reviewed and support the findings. The impact of the development is likely to be considerable and we have undertaken the analysis to ensure the analysis of the developments impacts is sufficiently detailed, robust and realistic in order for Council and RMS to better understand the developments likely impacts.

As previously stated this area is objected to significant seasonal fluctuations in traffic levels, thus the request to consider an AADT scenario as well as 120<sup>th</sup> HH scenario in accordance with RMS guidelines and AUSTROADS.

### **Peak Hour Development Traffic Generation**

To be applied to proposed residential development – these rates are based on detached dwellings, reduction may need to be considered for any proposed non-detached dwellings. Note this is for external regional traffic distribution only. Directional split data obtained from examining local road annual data in equivalent AADT & 120<sup>th</sup> Highest Annual Hour periods.

<b>Peak Hour Scenario</b>	<b>Factor</b> (vehicles per hour per occupied dwelling)	<b>Directional Split – AADT</b> (eastbound / westbound)	<b>Directional Split – 120<sup>th</sup> HH</b> (eastbound / westbound)
<b>Friday AM</b>	0.22	22% / 78%	24% / 76%
<b>Friday PM</b>	0.21	65% / 35%	75% / 25%
<b>Saturday MD</b>	0.23	53% / 47%	50% / 50%

*Note: The balance of peak hour trips per dwelling (in accordance with RTA's Guide to Traffic Generating Developments) must be assigned to/from Culburra to complete the external distribution analysis.*

### **Survey Data Conversion Rates for Peak Hour Traffic Volumes – NON-HIGHWAY DATA – Based on Local Peaks**

These factors convert 1-hour data from the applicants May 2012 surveys to theoretical AADT & Seasonal Peak flows for the intersection analysis. These factors apply to all surveyed local road peak hour flows, including all movements to/from the Highway, but not north-south through movements on the Highway (refer factors below for highway analysis). The additional factors for Friday (3-4pm) & Saturday (8-9am) are provided for separate analysis as the local and highway peaks do not coincide at these times. Note the Friday AM peak (8-9am) for local & Highway traffic coincided, therefore separate analysis is not required. Because of the conflicting peak times our recommendation is for all of the following scenarios to be assessed for worst case in each of the AADT and 120<sup>th</sup> HH scenarios.

Peak Hour Scenario AADT Analysis	Factor (converts 2012 survey data to theoretical AADT values – <u>LOS C</u> target for intersection analysis)
Friday AM (8-9am)	0.92
Friday PM (2-3pm)	1.10*
Saturday MD (12-1pm)	1.11
Friday PM (3-4pm)	1.10
Saturday AM (8-9am)	1.07

Peak Hour Scenario Seasonal Peak (120 <sup>th</sup> HH) Analysis	Factor (converts 2012 survey data to theoretical Seasonal Peak values i.e. 120 <sup>th</sup> Highest Annual Hour – <u>LOS D</u> target for intersection analysis)
Friday AM (8-9am)	1.12
Friday PM (2-3pm)	1.41*
Saturday MD (12-1pm)	1.25
Friday PM (3-4pm)	1.41
Saturday MD (8-9am)	1.17

\* Note: the Friday PM 1-hour analysis has also been factored to account for the actual local peak which occurred between 2-3pm, rather than the 4-5pm peak reported in the 2012 survey data, which was approx 15% lower than the 2-3pm volume (local roads analysis).

\* Note: the above factors are derived from the combined analysis of annual traffic data from the Greenwell Point Road and Forest Road data.

### **Survey Data Conversion Rates for Peak Hour Traffic Volumes – PRINCES HIGHWAY DATA – Based on Local & Highway Peaks**

This converts 1-hour data from May 2012 survey to theoretical AADT & Seasonal Peak flows for intersection analysis. These factors apply only to all surveyed north-south through movements on the Highway for analysis based on either local (Coastal Villages) or Highway peak hour flows. The additional factors for Friday (3-4pm) & Saturday (8-9am) are provided for separate analysis as the local and highway peaks do not coincide at these times. Note the Friday AM peak (8-9am) for local & Highway traffic coincided, therefore separate analysis is not required. Because of the conflicting peak times our recommendation is for all of the following scenarios to be assessed for worst case in each of the AADT and 120<sup>th</sup> HH scenarios.

Peak Hour Scenario AADT Analysis	Factor (converts 2012 survey data to theoretical AADT values – <u>LOS C</u> target for intersection analysis)
Friday AM (8-9am)	0.88
Friday PM (2-3pm)**	0.89
Saturday MD (12-1pm) <sup>†</sup>	1.27
Friday PM (3-4pm)	0.88
Saturday AM (8-9am)	1.32

Peak Hour Scenario Seasonal Peak (120 <sup>th</sup> HH)	Factor (converts 2012 survey data to theoretical Seasonal
--	--

<b>Analysis</b>	<b>Peak values i.e. 120<sup>th</sup> Highest Annual Hour – LOS D target for intersection analysis)</b>
<b>Friday AM (8-9am)</b>	1.25
<b>Friday PM (2-3pm)**</b>	1.13
<b>Saturday MD (12-1pm)†</b>	1.37
<b>Friday PM (3-4pm)</b>	1.15
<b>Saturday MD (8-9am)</b>	1.43

*Note: The above factors are based on a permanent count station on the Princes Highway at Falls Creek (ie outside of the Nowra Urban Area) which is subject to AADT volumes of approx 20,000 veh/day. As the Princes Highway through the Nowra Urban Area is subject to volumes approximately twice as high (ie 40,000 veh/day), the influence of these factors can be reduced by half for analysis of the urban Princes Highway intersections (ie at Kalandar Street & Moss Street). This results in the following factors (reading down the page): 0.94, 0.95, 1.14, 0.94, 1.16, 1.13, 1.07, 1.18, 1.07 & 1.21 for urban area intersection analysis, and it is our view that it would be appropriate for the latter factors to be applied to all north-south through movements on the Highway to avoid un-justified increases or decreases to through-flows on the Highway for analysis.*

*\*\* Note: the Friday PM peak hour on the Princes Highway at Falls Creek was 3-4pm, differed from both the surveyed peak (4-5pm) and the local peak (2-3pm). Accordingly, separate factors for undertaking a “Highway” peak hour analysis are also provided (the actual likely Friday PM peak hour).*

*† Note: the Saturday peak hour on the Princes Highway at Falls Creek occurred between 8-9am, which was different to the local peak (12-1pm). Accordingly, separate factors for undertaking a “Highway” peak hour analysis are also provided (the actual likely Saturday peak hour).*

### **Survey Data Conversion Rates for “Daily” Traffic Volumes – NON-HIGHWAY DATA**

These factors convert the applicant’s May 2012 survey data to theoretical daily flows from AADT & Seasonal Peak (120<sup>th</sup> Highest Annual Hour) equivalent peak hour flow levels. This is required to be undertaken to assess road design aspects (cross-section parameters) ie lane widths, clear zones, overtaking lanes etc for all scenarios including BOTH with / without the development.

This analysis is for local roads only, ie cross section assessment is not required to be undertaken on the Princes Highway.

The factors were determined by combining a peak-to-daily factor for each of the 6 scenarios (determined by analysing 2008 AADT & Seasonal peak-to-daily factors separately) with a conversion factor for either Friday or Saturday, which compared the equivalent survey dates in 2008 (based on proximity to School Holidays) to the AADT & Seasonal (120<sup>th</sup> HH) volumes accordingly.

Because of the conflicting peak times our recommendation is for all of the following scenarios to be assessed for worst case in each of the AADT and 120<sup>th</sup> HH daily flow scenarios.

<b>AADT Peak-to-Daily Factors</b> (applies to surveyed 1-hour data from May 2012)	<b>Factor</b> (converts 2012 survey data to theoretical Annual Average Daily volume level)
<b>Friday AM (8-9am)</b>	10.22
<b>Saturday MD (12-1pm)</b>	14.06

<b>Seasonal Peak-to-Daily Factors</b> (applies to surveyed 1-hour data from May 2012)	<b>Factor</b> (converts 2012 survey data to theoretical Seasonal Peak (120 <sup>th</sup> HH) equivalent daily volume level)
<b>Friday AM (8-9am)</b>	14.34
<b>Saturday MD (12-1pm)</b>	16.67

*\* Note: the actual Friday PM local peak occurred between 2-3pm, rather than the 4-5pm peak reported in the 2012 survey data, which was approx 15% lower than the 2-3pm volume. Accordingly the adjustment has only been applied to the Friday AM data, although only one daily flow calculation is required for the Friday in any case.*

*\* Note: the above factors are to be applied direct to the base 2012 May survey data (local roads only).*

*\* Note: the above factors are to calculate base daily flow levels for the AADT and 120<sup>th</sup> HH equivalent daily flow scenarios. Your assessment will need to take into account the case with / without the development. To estimate the developments external daily traffic generation, refer to the top table for peak hour generation rates and use the same ratio of (external regional peak hour generation / RMS peak hour generation) to the RMS daily traffic generation rates to estimate external regional daily traffic generation. Similar to the peak hour analysis the balance of daily trips (between the RMS daily rate and the external regional daily development traffic) will then be assigned to/from Culburra Village to assess those more local impacts, in addition to the regional road impact analysis.*

I hope all of that makes sense. We have tried to explain it in as simple terms as possible. We don't want to over complicate the assessment, but we do have an obligation to Council and the local community that the assessment has been undertaken correctly.

In regards to the future analysis scenario Council has adopted an ID forecast data set which provides population and dwelling projections in 5 year increments to 2036.

In addition to the above we will review this forecast data to provide our best advice in regards to an appropriate background traffic growth rate to apply for your assessment of future impacts. Ie as previously advised your analysis will need to consider a more realistic future time upon which the development will fully impact the surrounding road network. A ten year assessment is supported as industry practice however the growth rate to be applied needs to be agreed. We will review our ID data and provide advice in the coming days.

We will also provide our advice regarding external traffic distribution when you can clarify some of the points raised in my previous email and accordingly provide the additional information required.

Hope all of this helps, and I apologise for the delay.

I would expect the RMS will now review this advice and indicate whether they concur to this component of the study assumptions, as they will need to do for the distribution assumptions.

**Kind Regards,  
Scott Wells**

**Traffic & Transport Unit Manager  
Shoalhaven City Council**

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☎ 02 4429 3312 | 📠 02 4429 3312

✉ [wells@shoalhaven.nsw.gov.au](mailto:wells@shoalhaven.nsw.gov.au)

🌐 <http://shoalhaven.nsw.gov.au>

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**From 2008 Annual Counts on Forest Rd & Greenwell Point Rd**

Forest Rd AADT: 2131 (FOREST ROAD 550m EAST OF PRINCES HIGHWAY)  
 Greenwell Point Rd AADT: 6003 (GREENWELL POINT ROAD 737m WEST OF PYREE LANE)  
 Combined Data AADT: 8134  
 Combined Equivalent Census Day: 7576 (occurred on Tuesday 12th Aug 2008 - equivalent day to 2011 Census day on 9th Aug 2011)

Forest Rd 120th HH: 232 2008-04-29 16:00:00 Tuesday  
 Greenwell Point Rd 120th HH: 669 2008-03-24 13:00:00 Monday  
 Combined Data 120th HH: 885 2008-01-25 13:00:00 Friday (based on combining hourly data from each site to determine total 120th HH)

Equivalent Census Night Occupied Dwellings: 3324 (based on 2011 Census Enumerated population - where people were on Census night)  
*Note: see separate tab for methodology to calculate number of "equivalent" dwellings*

Equivalent 2011 Combined AADT: 8632 (2% compound growth assumed)  
 Equivalent 2011 Combined Census Day Volume: 8040 (2% compound growth assumed)

**External Traffic Generation: 2.4 Average Daily Trips per Occupied Dwelling**

Equivalent 2011 AADT Occupied Dwellings: 3569 Theoretical number of occupied dwellings for AADT traffic rates

Fri AADT AM Peak to Daily Factor: 9.0% (based on Fridays with volumes close to AADT volume of 8,134 veh/day)  
 Fri AADT PM Peak to Daily Factor: 8.5% (based on Fridays with volumes close to AADT volume of 8,134 veh/day)  
 Sat AADT MD Peak to Daily Factor: 9.6% (based on Saturdays with volumes close to AADT volume of 8,134 veh/day)

Fri Seasonal Peak AM Peak to Daily Factor: 7.6% (based on Friday 25th Jan - date of 120th HH and 2nd highest Friday observed in 2008)  
 Fri Seasonal Peak PM Peak to Daily Factor: 7.8% (based on Friday 25th Jan - date of 120th HH and 2nd highest Friday observed in 2008)  
 Sat Seasonal Peak MD Peak to Daily Factor: 9.6% (based on Saturday 26th Jan - 3rd highest Saturday observed in 2008)

**Fri AADT AM External Traffic Generation: 0.22 Vehicles per Hour per Occupied Dwelling**  
**Fri AADT PM External Traffic Generation: 0.21 Vehicles per Hour per Occupied Dwelling**  
**Sat AADT MD External Traffic Generation: 0.23 Vehicles per Hour per Occupied Dwelling**

Daily volume Friday 9th May 2008: 8826 Vehicles  
**9th May 2008 to 2008 AADT Conversion Factor: 0.92 This factor should be applied to the survey data from Fri 4th May 2012**  
**9th May 2008 to Seasonal Peak Conversion Factor: 1.35 This factor should be applied to the survey data from Fri 4th May 2012**  
 Daily volume Saturday 10th May 2008: 7438 Vehicles  
**10th May 2008 to 2008 AADT Conversion Factor: 1.09 This factor should be applied to the survey data from Sat 5th May 2012**  
**10th May 2008 to Seasonal Peak Conversion Factor: 1.60 This factor should be applied to the survey data from Sat 5th May 2012**

AM Peak Friday 9th May 2008: 792 8-9am (equivalent day to date of survey Friday 4th May 2012 - based on proximity to school holidays)  
 PM Peak Friday 9th May 2008: 741 2-3pm (equivalent day to date of survey Friday 4th May 2012 - based on proximity to school holidays)  
 MD Peak Saturday 10th May 2008: 706 12-1pm (equivalent day to date of survey Saturday 5th May 2012 - based on proximity to school holidays)

3-4pm volume Fri 9th May 2008: 738 3-4pm **HW1 Peak Hour**  
 4-5pm volume Fri 9th May 2008: 628 4-5pm (equivalent peak hour to survey data 4-5pm - lower than actual 2-3pm peak)  
**PM Peak Hour Conversion Factor: 1.18 (converts reported 4-5pm data to actual 2-3pm local peak)**

HW1 Peak 8-9am Sat 8th May 2004: 487 8-9am **HW1 Peak Hour**

**Fri AM Peak Conversion Factor for AADT Analysis: 0.92 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)**  
**Fri PM Peak Conversion Factor for AADT Analysis: 1.10 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)**  
**Sat MD Peak Conversion Factor for AADT Analysis: 1.11 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)**

Daily volume on Friday 25th January 2008: 11885 (Day that 120th Highest Annual Hour Occurred)  
 120th Highest Annual Hour to Daily Traffic Ratio: 7.4% Use this figure to convert 2012 120th HH to Daily Volumes for cross-section design analysis

**Fri AM Peak Conversion Factor for Seasonal Peak Analysis: 1.12 (Converts consultant's 2012 survey data to Seasonal Peak values for LOS D analysis)**  
**Fri PM Peak Conversion Factor for Seasonal Peak Analysis: 1.41 (Converts consultant's 2012 survey data to Seasonal Peak values for LOS D analysis)**  
**Sat MD Peak Conversion Factor for Seasonal Peak Analysis: 1.25 (Converts consultant's 2012 survey data to Seasonal Peak values for LOS D analysis)**

**HW1 Analysis**

Falls Creek 2004 Data  
 2004 AADT: 18845 (Count Station 07053 at Falls Creek North of Jervis Bay Road)  
 2004 Average Fridays: 22373 (Better comparison due to wide daily variation)  
 2004 Average Saturdays: 17181 (Better comparison due to wide daily variation)

Falls Creek 120th HH: 1965 Thursday 8th Jan, 2004 12pm-1pm

HW1 Fri AADT AM Peak to Daily Factor: 7.3% (based on Fridays with volumes close to the Average Friday volume of 22,373 veh/day)  
 HW1 Fri AADT PM Peak to Daily Factor: 8.2% (based on Fridays with volumes close to the Average Friday volume of 22,373 veh/day)  
 HW1 Sat AADT MD Peak to Daily Factor: 9.7% (based on Saturdays with volumes close to Average Saturday volume of 17,181 veh/day)

Daily Volume Friday 7th May 2004: 21007 Vehicles (equivalent day to Friday 4th May 2012 survey date)  
**7th May 2004 to 2004 AADT Conversion Factor: 0.90 This factor should be applied to the survey data from Fri 4th May 2012**  
 Daily volume Saturday 8th May 2004: 16561 Vehicles  
**8th May 2004 to 2004 AADT Conversion Factor: 1.14 This factor should be applied to the survey data from Sat 5th May 2012**

AM Local Culburra Peak Friday 7th May 2004: 1567 8-9am (Same as **HW1 peak**)  
 PM Local Culburra Peak Friday 7th May 2004: 1603 2-3pm (HW1 peak occurred 3-4pm - see below)  
 MD Local Culburra Peak Saturday 8th May 2004: 1436 12-1pm (HW1 peak occurred 8-9am - see below)

HW1 Peak 3-4pm Fri 7th May 2004: 1759 3-4pm **HW1 Peak Hour**  
 HW1 4-5pm volume Fri 7th May 2004: 1732 4-5pm (To compare to collected data)  
**PM Peak Hour Conversion Factor: 0.93 (converts reported 4-5pm data to actual 2-3pm local peak)**

HW1 Peak 8-9am Sat 8th May 2004: 1671 8-9am **HW1 Peak** Hour

**Fri AM Peak Conversion Factor for AADT Analysis:** 0.88 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)  
**Fri PM Peak Conversion Factor for AADT Analysis:** 0.89 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)  
**Sat MD Peak Conversion Factor for AADT Analysis:** 1.27 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)

Daily volume on Thursday 8th January 2004: 23295 (Day that 120th Highest Annual Hour Occurred)  
120th Highest Annual Hour to Daily Traffic Ratio: 8.4% Use this figure to convert 2012 120th HH to Daily Volumes for cross-section design analysis

**Fri AM Peak Conversion Factor for Seasonal Peak Analysis:** 1.25 (Converts consultant's 2012 survey data to Seasonal Peak values for LOS D analysis)  
**Fri PM Peak Conversion Factor for Seasonal Peak Analysis:** 1.13 (Converts consultant's 2012 survey data to Seasonal Peak values for LOS D analysis)  
**Sat MD Peak Conversion Factor for Seasonal Peak Analysis:** 1.37 (Converts consultant's 2012 survey data to Seasonal Peak values for LOS D analysis)

#### HW1 Analysis - factors for Different Highway Peaks

##### Local Road (i.e. Non-Highway) Flows

**Fri PM Highway 3-4pm Conversion Factor for AADT Analysis:** 1.10 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)  
**Sat AM Highway 8-9am Conversion Factor for AADT Analysis:** 1.07 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)

**Fri PM Highway 3-4pm Conversion Factor for 120th HH Analysis:** 1.41 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)  
**at AM Highway 8-9am Conversion Factor for 120th HH Analysis:** 1.17 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)

##### Highway North-South Flows

**Fri PM Highway 3-4pm Conversion Factor for AADT Analysis:** 0.88 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)  
**Sat AM Highway 8-9am Conversion Factor for AADT Analysis:** 1.32 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)

**Fri PM Highway 3-4pm Conversion Factor for 120th HH Analysis:** 1.15 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)  
**at AM Highway 8-9am Conversion Factor for 120th HH Analysis:** 1.43 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)

##### Local Peak Comparison to HW1 Peak

Forest Rd + Greenwell Point Rd Friday AM 792 (8-9am) Forest Rd + Greenwell Point Rd LOCAL Fri AM Peak (SAME AS HW1 PEAK)

Forest Rd + Greenwell Point Rd Friday PM 741 (2-3pm) Forest Rd + Greenwell Point Rd LOCAL Fri PM Peak  
738 (3-4pm) Forest Rd + Greenwell Point Rd 3-4pm volume

**Local to HW1 peak Conversion Factor:** 1.00 (Converts LOCAL Peak data to HW1 peak for Highway intersection analysis)

Forest Rd + Greenwell Point Rd Saturday MD 706 (12-1pm) Forest Rd + Greenwell Point Rd LOCAL Sat MD Peak  
487 (8-9am) Forest Rd + Greenwell Point Rd 8-9am volume

**Local to HW1 peak Conversion Factor:** 0.69 (Converts LOCAL Peak data to HW1 peak for Highway intersection analysis)

##### 50% Reduction Factor for HW1 intersections in Nowra Urban Area - ie at Kalandar St & Moss St

**Fri AM Peak Conversion Factor for AADT Analysis:** 0.94 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)  
**Fri PM Peak Conversion Factor for AADT Analysis:** 0.95 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)  
**Sat MD Peak Conversion Factor for AADT Analysis:** 1.14 (Converts consultant's 2012 survey data to AADT values for LOS C analysis)

**Fri AM Peak Conversion Factor for Seasonal Peak Analysis:** 1.13 (Converts consultant's 2012 survey data to Seasonal Peak values for LOS D analysis)  
**Fri PM Peak Conversion Factor for Seasonal Peak Analysis:** 1.07 (Converts consultant's 2012 survey data to Seasonal Peak values for LOS D analysis)  
**Sat MD Peak Conversion Factor for Seasonal Peak Analysis:** 1.18 (Converts consultant's 2012 survey data to Seasonal Peak values for LOS D analysis)

Date	Forest Rd			Greenwell Point Road			Combined		
	Combined	E-bound W-bound	% E % W	Combined	E-bound W-bound	% E % W	Combined	E-bound W-bound	% E % W
<b>Fri 29-Aug-08 AM Peak</b>	180	54 126	30% 70%	556	105 451	19% 81%	<b>736</b>	<b>159 577</b>	<b>22% 78%</b>
<b>Fri 29-Aug-08 PM Peak</b>	167	112 55	67% 33%	562	364 198	65% 35%	<b>729</b>	<b>476 253</b>	<b>65% 35%</b>
<b>Sat 30-Aug-08 MD Peak</b>	186	94 92	51% 49%	490	261 229	53% 47%	<b>676</b>	<b>355 321</b>	<b>53% 47%</b>
<b>Fri 25-Jan-08 AM Peak</b>	204	61 143	30% 70%	561	121 440	22% 78%	<b>765</b>	<b>182 583</b>	<b>24% 76%</b>
<b>Fri 25-Jan-08 PM Peak</b>	226	160 66	71% 29%	700	530 170	76% 24%	<b>926</b>	<b>690 236</b>	<b>75% 25%</b>
<b>Sat 26-Jan-08 MD Peak</b>	239	125 114	52% 48%	764	380 384	50% 50%	<b>1003</b>	<b>505 498</b>	<b>50% 50%</b>

*Note: Split data obtained directly from MetroCount data files*

region_id	Occupied_	Unoccupied	Total_private_dwellings_Dwellings								
1127301	27	3	0	0	0	0	0	0	0	30	41
1127302	171	0	6	0	0	0	0	0	0	177	529
1127303	155	0	4	0	0	0	0	0	0	159	411
1127304	118	0	0	0	0	0	0	0	0	118	177
1127305	153	4	0	0	0	0	0	0	0	157	261
1127306	141	0	8	0	0	0	0	0	0	149	243
1127307	190	0	0	0	0	0	0	0	0	190	237
1127308	169	0	0	0	0	0	0	0	0	169	213
1127309	55	0	0	0	0	0	0	0	0	55	157
1127310	141	0	0	0	0	0	0	0	0	141	396
1127311	0	0	0	0	0	0	0	0	0	0	0
1127312	49	0	0	3	0	0	3	0	0	52	84
1127401	112	0	0	0	0	0	0	0	0	112	150
1127402	27	0	0	0	0	0	0	0	0	27	27
1127403	121	7	0	0	0	3	3	0	0	131	317
1127404	127	3	0	0	0	0	0	0	0	130	240
1127405	91	3	0	0	0	0	0	0	0	94	202
1127406	109	35	11	0	0	4	4	0	0	159	248
1127407	152	0	0	0	0	0	0	0	0	152	294
1127408	212	0	0	3	0	0	3	0	0	215	370
1127409	85	3	0	17	0	0	17	0	0	105	128
1127410	121	5	17	0	0	0	0	0	0	143	188
1127411	146	0	4	6	0	0	6	0	0	156	189
1127412	126	0	5	3	0	0	3	0	0	134	215
1127413	122	0	0	0	0	0	0	0	0	122	196
1127415	0	0	0	0	0	0	0	0	0	0	0
1127416	229	40	0	0	0	0	0	0	0	269	415
	3149	103	55	32	0	7	39	0	0	3346	5928

Census (enumerated) total Occupied Private Dwellings: 3379 57%  
Census (enumerated) total Vacant Private Dwellings: 2582 43%  
TOTAL (enumerated) Private Dwellings: 5961

Detached Occupied Dwellings: 3182 94%  
Occupied Medium Density Dwellings: 197 6%

Equivalent Occupied Dwellings: 3324 (Determined by multiplying MD dwellings by ratio of daily traffic generation rates)  
Equivalent Vacant Dwellings: 2431  
Total Equivalent Dwellings: 5755

98.645th percentile Dwelling Occupancy: 5723 Equivalent to 120th Highest Hour seasonal peak

← Note: 3,379 includes the net addition of 33 dwellings which was determined by adding the number of rural dwellings that were part of another SA1 zone but still serviced by Greenwell Point Rd (+42), and subtracting the number of rural dwellings included within tallied SA1 zones but not serviced by either Greenwell Point Rd or Forest Rd (-9).

# C. SIDRA INTERSECTION RESULTS



# USER REPORT FOR SITE

 Project: 200225sid-N186580 West Culburra Subdivision

Template: GTA Appendix

## Site: 1 [1. Culburra -Coonamia (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Culburra Road-Coonamia Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Coonamia Rd												
1	L2	165	0.0	0.180	9.3	LOS A	0.7	4.9	0.38	0.69	0.38	68.1
3	R2	73	6.5	0.130	11.3	LOS A	0.5	3.8	0.48	0.74	0.48	63.4
Approach		238	2.0	0.180	9.9	LOS A	0.7	4.9	0.41	0.70	0.41	66.6
East: Culburra Rd (E)												
4	L2	40	2.9	0.022	7.0	LOS A	0.0	0.0	0.00	0.63	0.00	64.4
5	T1	225	3.7	0.118	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
Approach		265	3.6	0.118	1.1	NA	0.0	0.0	0.00	0.09	0.00	77.1
West: Culburra Rd (W)												
11	T1	96	12.3	0.053	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
12	R2	33	3.6	0.030	8.0	LOS A	0.1	0.8	0.35	0.62	0.35	66.4
Approach		128	10.1	0.053	2.0	NA	0.1	0.8	0.09	0.16	0.09	76.0
All Vehicles		632	4.3	0.180	4.6	NA	0.7	4.9	0.17	0.34	0.17	72.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [1. Culburra -Coonamia (Ex Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Culburra Road-Coonamia Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Coonamia Rd												
1	L2	77	7.7	0.078	8.8	LOS A	0.3	2.2	0.27	0.63	0.27	65.8
3	R2	75	2.0	0.134	11.3	LOS A	0.5	3.8	0.49	0.75	0.49	64.8
Approach		152	4.9	0.134	10.1	LOS A	0.5	3.8	0.38	0.69	0.38	65.3
East: Culburra Rd (E)												
4	L2	75	2.0	0.041	7.0	LOS A	0.0	0.0	0.00	0.63	0.00	64.7
5	T1	115	2.6	0.060	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
Approach		189	2.4	0.060	2.8	NA	0.0	0.0	0.00	0.25	0.00	73.2
West: Culburra Rd (W)												
11	T1	280	1.1	0.145	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
12	R2	152	3.9	0.129	7.7	LOS A	0.5	3.9	0.31	0.63	0.31	66.4
Approach		432	2.1	0.145	2.7	NA	0.5	3.9	0.11	0.22	0.11	74.6
All Vehicles		773	2.7	0.145	4.2	NA	0.5	3.9	0.14	0.32	0.14	72.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [1. Culburra -Coonamia (Ex Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Culburra Road-Coonamia Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Coonamia Rd												
1	L2	104	1.3	0.109	9.0	LOS A	0.4	2.9	0.33	0.66	0.33	67.9
3	R2	66	0.0	0.119	11.3	LOS A	0.5	3.2	0.49	0.75	0.49	65.5
Approach		171	0.8	0.119	9.9	LOS A	0.5	3.2	0.39	0.69	0.39	66.9
East: Culburra Rd (E)												
4	L2	80	0.0	0.043	6.9	LOS A	0.0	0.0	0.00	0.63	0.00	65.4
5	T1	169	0.8	0.087	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
Approach		249	0.5	0.087	2.2	NA	0.0	0.0	0.00	0.20	0.00	74.6
West: Culburra Rd (W)												
11	T1	166	0.8	0.086	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
12	R2	104	2.5	0.094	7.9	LOS A	0.4	2.7	0.35	0.64	0.35	66.7
Approach		271	1.5	0.094	3.1	NA	0.4	2.7	0.14	0.25	0.14	74.3
All Vehicles		691	1.0	0.119	4.4	NA	0.5	3.2	0.15	0.34	0.15	72.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [2. Culburra-Mayfield (Ex Fri AM-120th HH)]

Culburra Road-Mayfield Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Existing  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Culburra Road (S)												
1	L2	2	0.0	0.198	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.5
2	T1	383	0.0	0.198	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
Approach		385	0.0	0.198	0.1	NA	0.0	0.0	0.00	0.00	0.00	79.8
North: Culburra Road (N)												
8	T1	126	0.0	0.066	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	79.8
9	R2	1	0.0	0.066	8.7	LOS A	0.0	0.1	0.01	0.01	0.01	66.1
Approach		127	0.0	0.066	0.1	NA	0.0	0.1	0.01	0.01	0.01	79.7
West: Mayfield Road												
10	L2	1	0.0	0.001	7.5	LOS A	0.0	0.0	0.42	0.56	0.42	56.9
12	R2	2	0.0	0.006	12.0	LOS A	0.0	0.1	0.58	0.68	0.58	52.8
Approach		3	0.0	0.006	10.5	LOS A	0.0	0.1	0.53	0.64	0.53	54.1
All Vehicles		516	0.0	0.198	0.1	NA	0.0	0.1	0.01	0.01	0.01	79.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## ▼ Site: 1 [2. Culburra-Mayfield (Ex Fri PM-120th HH)]

Culburra Road-Mayfield Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Existing  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Culburra Road (S)												
1	L2	1	0.0	0.102	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.6
2	T1	193	4.6	0.102	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
Approach		194	4.6	0.102	0.0	NA	0.0	0.0	0.00	0.00	0.00	79.9
North: Culburra Road (N)												
8	T1	412	1.8	0.214	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	79.9
9	R2	1	0.0	0.214	7.8	LOS A	0.0	0.1	0.00	0.00	0.00	66.2
Approach		413	1.8	0.214	0.0	NA	0.0	0.1	0.00	0.00	0.00	79.9
West: Mayfield Road												
10	L2	1	0.0	0.001	6.4	LOS A	0.0	0.0	0.29	0.53	0.29	57.6
12	R2	1	100.0	0.009	33.5	LOS C	0.0	0.4	0.81	0.86	0.81	34.6
Approach		2	50.0	0.009	19.9	LOS B	0.0	0.4	0.55	0.69	0.55	43.3
All Vehicles		608	2.9	0.214	0.1	NA	0.0	0.4	0.00	0.00	0.00	79.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## ▼ Site: 1 [2. Culburra-Mayfield (Ex Sat-120th HH)]

Culburra Road-Mayfield Road  
 Saturday - Equivalent 120th HH  
 Existing  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Culburra Road (S)												
1	L2	3	0.0	0.144	7.0	LOS A	0.0	0.0	0.00	0.01	0.00	74.5
2	T1	277	0.5	0.144	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.8
Approach		280	0.5	0.144	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.7
North: Culburra Road (N)												
8	T1	248	0.5	0.129	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	79.9
9	R2	1	0.0	0.129	8.1	LOS A	0.0	0.1	0.00	0.00	0.00	66.1
Approach		249	0.5	0.129	0.0	NA	0.0	0.1	0.00	0.00	0.00	79.8
West: Mayfield Road												
10	L2	1	0.0	0.001	6.9	LOS A	0.0	0.0	0.36	0.54	0.36	57.4
12	R2	3	0.0	0.008	12.2	LOS A	0.0	0.2	0.58	0.70	0.58	52.7
Approach		4	0.0	0.008	10.8	LOS A	0.0	0.2	0.52	0.66	0.52	53.8
All Vehicles		534	0.5	0.144	0.2	NA	0.0	0.2	0.01	0.01	0.01	79.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### Site: 1 [3. Greenwell Pt-Pyree (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Pyree Lane  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pyreen Ln												
1	L2	376	1.9	0.205	7.6	LOS A	0.0	0.0	0.00	0.60	0.00	65.6
3	R2	14	8.3	0.025	9.9	LOS A	0.1	0.7	0.44	0.67	0.44	59.2
Approach		389	2.1	0.205	7.7	LOS A	0.1	0.7	0.02	0.60	0.02	65.4
East: Greenwell Pt Rd (E)												
4	L2	20	66.7	0.094	8.2	LOS A	0.0	0.0	0.00	0.08	0.00	53.0
5	T1	147	5.6	0.094	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	79.4
Approach		167	12.9	0.094	1.0	NA	0.0	0.0	0.00	0.08	0.00	74.9
West: Greenwell Pt Rd (W)												
11	T1	63	5.6	0.034	6.1	LOS A	0.0	0.0	0.00	0.60	0.00	64.9
12	R2	111	7.4	0.230	12.4	LOS A	0.9	7.0	0.56	0.82	0.56	57.7
Approach		174	6.8	0.230	10.1	LOS A	0.9	7.0	0.36	0.74	0.36	60.1
All Vehicles		731	5.7	0.230	6.7	NA	0.9	7.0	0.09	0.51	0.09	65.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### Site: 1 [3. Greenwell Pt-Pyree (Ex Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Pyree Lane  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pyreen Ln												
1	L2	155	5.8	0.087	7.7	LOS A	0.0	0.0	0.00	0.60	0.00	64.4
3	R2	32	0.0	0.078	13.1	LOS A	0.3	2.0	0.58	0.82	0.58	58.4
Approach		186	4.8	0.087	8.6	LOS A	0.3	2.0	0.10	0.64	0.10	63.3
East: Greenwell Pt Rd (E)												
4	L2	26	0.0	0.050	6.9	LOS A	0.0	0.0	0.00	0.18	0.00	71.7
5	T1	68	4.3	0.050	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	76.6
Approach		95	3.1	0.050	1.9	NA	0.0	0.0	0.00	0.18	0.00	75.2
West: Greenwell Pt Rd (W)												
11	T1	173	1.7	0.090	6.1	LOS A	0.0	0.0	0.00	0.59	0.00	66.2
12	R2	391	1.5	0.567	11.8	LOS A	5.4	37.9	0.57	0.79	0.76	59.7
Approach		563	1.6	0.567	10.0	LOS A	5.4	37.9	0.40	0.73	0.53	61.6
All Vehicles		844	2.5	0.567	8.8	NA	5.4	37.9	0.29	0.65	0.37	63.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### Site: 1 [3. Greenwell Pt-Pyree (Ex Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Pyree Lane  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pyreen Ln												
1	L2	226	1.2	0.123	7.6	LOS A	0.0	0.0	0.00	0.60	0.00	65.9
3	R2	45	0.0	0.078	9.7	LOS A	0.3	2.1	0.46	0.71	0.46	61.8
Approach		272	1.0	0.123	8.0	LOS A	0.3	2.1	0.08	0.62	0.08	65.1
East: Greenwell Pt Rd (E)												
4	L2	145	2.7	0.132	7.0	LOS A	0.0	0.0	0.00	0.38	0.00	67.8
5	T1	100	3.9	0.132	0.0	LOS A	0.0	0.0	0.00	0.38	0.00	73.3
Approach		245	3.2	0.132	4.2	NA	0.0	0.0	0.00	0.38	0.00	69.9
West: Greenwell Pt Rd (W)												
11	T1	227	1.2	0.117	6.0	LOS A	0.0	0.0	0.00	0.59	0.00	66.3
12	R2	109	1.2	0.218	11.9	LOS A	0.9	6.2	0.55	0.81	0.55	59.8
Approach		337	1.2	0.218	7.9	LOS A	0.9	6.2	0.18	0.66	0.18	64.1
All Vehicles		854	1.7	0.218	6.9	NA	0.9	6.2	0.10	0.57	0.10	66.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [4. Greenwell Pt-Jindy Andy (Ex Fri AM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Jindy Andy Lane  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Greenwell Point Road (NE)												
25	T1	371	4.8	0.197	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
26	R2	159	0.7	0.223	8.6	LOS A	1.0	6.9	0.37	0.66	0.37	63.0
Approach		529	3.6	0.223	2.6	NA	1.0	6.9	0.11	0.20	0.11	74.0
NorthWest: Jindy Andy Lane												
27	L2	39	3.0	0.038	7.7	LOS A	0.1	1.0	0.25	0.60	0.25	63.2
29	R2	12	30.0	0.056	22.7	LOS B	0.2	1.6	0.75	0.91	0.75	45.2
Approach		51	9.2	0.056	11.1	LOS A	0.2	1.6	0.37	0.67	0.37	58.0
SouthWest: Greenwell Point Road (SW)												
30	L2	8	42.9	0.079	7.7	LOS A	0.0	0.0	0.00	0.04	0.00	59.1
31	T1	136	8.7	0.079	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	79.5
Approach		144	10.7	0.079	0.5	NA	0.0	0.0	0.00	0.04	0.00	77.9
All Vehicles		724	5.4	0.223	2.8	NA	1.0	6.9	0.11	0.20	0.11	73.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
 Vehicle movement LOS values are based on average delay per movement.  
 Minor Road Approach LOS values are based on average delay for all vehicle movements.  
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.  
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.  
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [4. Greenwell Pt-Jindy Andy (Ex Fri PM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Jindy Andy Lane  
 Friday AM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Greenwell Point Road (NE)												
25	T1	175	5.9	0.094	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
26	R2	61	2.4	0.141	12.9	LOS A	0.5	3.8	0.57	0.83	0.57	58.3
Approach		236	5.0	0.141	3.3	NA	0.5	3.8	0.15	0.22	0.15	72.9
NorthWest: Jindy Andy Lane												
27	L2	160	1.9	0.217	9.8	LOS A	0.8	5.9	0.50	0.77	0.50	61.6
29	R2	3	0.0	0.011	16.1	LOS B	0.0	0.3	0.67	0.78	0.67	55.7
Approach		163	1.8	0.217	10.0	LOS A	0.8	5.9	0.50	0.77	0.50	61.5
SouthWest: Greenwell Point Road (SW)												
30	L2	14	11.1	0.215	7.2	LOS A	0.0	0.0	0.00	0.02	0.00	69.6
31	T1	399	1.9	0.215	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	79.6
Approach		413	2.2	0.215	0.3	NA	0.0	0.0	0.00	0.02	0.00	79.2
All Vehicles		812	2.9	0.217	3.1	NA	0.8	5.9	0.14	0.23	0.14	73.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

▼ Site: 1 [4. Greenwell Pt-Jindy Andy (Ex Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Jindy Andy Lane  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Greenwell Point Road (NE)												
25	T1	254	3.1	0.134	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
26	R2	96	1.4	0.173	10.7	LOS A	0.7	4.9	0.50	0.76	0.50	60.7
Approach		349	2.6	0.173	2.9	NA	0.7	4.9	0.14	0.21	0.14	73.6
NorthWest: Jindy Andy Lane												
27	L2	100	0.0	0.115	8.6	LOS A	0.4	3.0	0.40	0.68	0.40	63.5
29	R2	9	0.0	0.030	15.9	LOS B	0.1	0.7	0.66	0.83	0.66	55.9
Approach		109	0.0	0.115	9.3	LOS A	0.4	3.0	0.42	0.69	0.42	62.7
SouthWest: Greenwell Point Road (SW)												
30	L2	5	0.0	0.154	7.0	LOS A	0.0	0.0	0.00	0.01	0.00	74.4
31	T1	288	3.2	0.154	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.7
Approach		294	3.1	0.154	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.6
All Vehicles		753	2.4	0.173	2.8	NA	0.7	4.9	0.12	0.20	0.12	73.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

▽ Site: 1 [5. Greenwell Pt-Mayfield (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Mayfield Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Mayfield Road												
21	L2	12	0.0	0.018	7.7	LOS A	0.1	0.4	0.45	0.64	0.45	56.4
23	R2	1	0.0	0.018	12.9	LOS A	0.1	0.4	0.45	0.64	0.45	56.1
Approach		13	0.0	0.018	8.1	LOS A	0.1	0.4	0.45	0.64	0.45	56.4
NorthEast: Greenwell Point Road (NE)												
24	L2	3	0.0	0.200	7.0	LOS A	0.0	0.0	0.00	0.01	0.00	74.5
25	T1	377	3.8	0.200	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.8
Approach		380	3.7	0.200	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.8
SouthWest: Greenwell Point Road (SW)												
31	T1	141	9.2	0.090	0.6	LOS A	0.2	1.4	0.09	0.03	0.09	78.0
32	R2	6	0.0	0.090	11.9	LOS A	0.2	1.4	0.09	0.03	0.09	64.4
Approach		147	8.8	0.090	1.1	NA	0.2	1.4	0.09	0.03	0.09	77.3
All Vehicles		540	5.0	0.200	0.5	NA	0.2	1.4	0.03	0.03	0.03	78.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [5. Greenwell Pt-Mayfield (Ex Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Mayfield Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Mayfield Road												
21	L2	6	0.0	0.033	6.4	LOS A	0.1	0.9	0.49	0.66	0.49	52.9
23	R2	6	25.0	0.033	18.7	LOS B	0.1	0.9	0.49	0.66	0.49	47.3
Approach		13	12.5	0.033	12.5	LOS A	0.1	0.9	0.49	0.66	0.49	50.0
NorthEast: Greenwell Point Road (NE)												
24	L2	1	0.0	0.097	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.6
25	T1	181	5.7	0.097	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
Approach		182	5.7	0.097	0.0	NA	0.0	0.0	0.00	0.00	0.00	79.9
SouthWest: Greenwell Point Road (SW)												
31	T1	413	1.4	0.236	0.2	LOS A	0.3	2.2	0.05	0.02	0.05	79.1
32	R2	15	0.0	0.236	9.1	LOS A	0.3	2.2	0.05	0.02	0.05	65.1
Approach		427	1.4	0.236	0.5	NA	0.3	2.2	0.05	0.02	0.05	78.5
All Vehicles		622	2.9	0.236	0.6	NA	0.3	2.2	0.04	0.03	0.04	78.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [5. Greenwell Pt-Mayfield (Ex Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Mayfield Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Mayfield Road												
21	L2	8	0.0	0.012	6.8	LOS A	0.0	0.3	0.38	0.59	0.38	56.9
23	R2	1	0.0	0.012	13.2	LOS A	0.0	0.3	0.38	0.59	0.38	56.5
Approach		9	0.0	0.012	7.5	LOS A	0.0	0.3	0.38	0.59	0.38	56.9
NorthEast: Greenwell Point Road (NE)												
24	L2	4	66.7	0.139	8.2	LOS A	0.0	0.0	0.00	0.01	0.00	53.1
25	T1	263	1.0	0.139	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.9
Approach		267	2.0	0.139	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.3
SouthWest: Greenwell Point Road (SW)												
31	T1	289	1.8	0.170	0.3	LOS A	0.3	2.0	0.06	0.03	0.06	78.8
32	R2	12	0.0	0.170	10.2	LOS A	0.3	2.0	0.06	0.03	0.06	64.9
Approach		301	1.7	0.170	0.7	NA	0.3	2.0	0.06	0.03	0.06	78.1
All Vehicles		578	1.9	0.170	0.6	NA	0.3	2.0	0.04	0.03	0.04	78.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [6. Greenwell Pt-Millbank-Worrige (Ex Fri AM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Millbank Road-Worrige Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Worrige Road												
1	L2	69	5.1	0.091	10.5	LOS A	0.3	2.4	0.44	0.92	0.44	54.1
2	T1	118	3.0	0.406	20.8	LOS B	2.0	14.5	0.76	1.08	1.04	47.4
3	R2	21	0.0	0.406	22.4	LOS B	2.0	14.5	0.76	1.08	1.04	48.0
Approach		208	3.4	0.406	17.5	LOS B	2.0	14.5	0.66	1.03	0.84	49.5
East: Greenwell Point Road (E)												
4	L2	12	0.0	0.193	7.0	LOS A	0.0	0.0	0.00	0.02	0.00	74.3
5	T1	357	3.0	0.193	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	79.5
6	R2	32	7.4	0.028	7.8	LOS A	0.1	0.8	0.30	0.61	0.30	61.6
Approach		400	3.2	0.193	0.8	NA	0.1	0.8	0.02	0.07	0.02	77.6
North: Millbank Road												
7	L2	14	16.7	0.015	10.6	LOS A	0.1	0.4	0.29	0.88	0.29	58.0
8	T1	26	13.6	0.135	19.2	LOS B	0.5	3.7	0.73	1.01	0.73	48.9
9	R2	12	0.0	0.135	24.6	LOS B	0.5	3.7	0.73	1.01	0.73	53.7
Approach		52	11.4	0.135	18.1	LOS B	0.5	3.7	0.61	0.97	0.61	52.1
West: Greenwell Point Road (W)												
10	L2	47	7.5	0.105	7.1	LOS A	0.0	0.0	0.00	0.16	0.00	69.0
11	T1	143	9.1	0.105	0.0	LOS A	0.0	0.0	0.00	0.16	0.00	77.0
12	R2	61	5.8	0.065	8.7	LOS A	0.3	1.8	0.44	0.68	0.44	56.9
Approach		252	8.0	0.105	3.5	NA	0.3	1.8	0.11	0.29	0.11	69.6
All Vehicles		912	5.0	0.406	6.3	NA	2.0	14.5	0.22	0.40	0.27	65.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [6. Greenwell Pt-Millbank-Worrige (Ex Fri PM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Millbank Road-Worrige Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Worrige Road												
1	L2	58	0.0	0.058	8.9	LOS A	0.2	1.5	0.29	0.88	0.29	56.3
2	T1	47	0.0	0.249	19.7	LOS B	1.0	6.9	0.77	1.02	0.85	47.6
3	R2	21	5.3	0.249	25.9	LOS B	1.0	6.9	0.77	1.02	0.85	46.6
Approach		126	0.9	0.249	15.8	LOS B	1.0	6.9	0.55	0.96	0.59	51.0
East: Greenwell Point Road (E)												
4	L2	21	7.1	0.099	7.1	LOS A	0.0	0.0	0.00	0.07	0.00	70.5
5	T1	163	5.5	0.099	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	78.6
6	R2	14	0.0	0.015	8.7	LOS A	0.1	0.4	0.45	0.65	0.45	63.1
Approach		198	5.3	0.099	1.4	NA	0.1	0.4	0.03	0.11	0.03	76.4
North: Millbank Road												
7	L2	22	0.0	0.030	11.3	LOS A	0.1	0.7	0.45	0.89	0.45	61.7
8	T1	54	2.8	0.259	21.3	LOS B	1.0	7.3	0.77	1.02	0.87	48.0
9	R2	18	0.0	0.259	26.7	LOS B	1.0	7.3	0.77	1.02	0.87	52.1
Approach		94	1.6	0.259	19.9	LOS B	1.0	7.3	0.70	0.99	0.77	51.5
West: Greenwell Point Road (W)												
10	L2	17	0.0	0.221	7.0	LOS A	0.0	0.0	0.00	0.03	0.00	74.2
11	T1	409	0.7	0.221	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	79.4
12	R2	115	1.3	0.097	7.6	LOS A	0.4	2.8	0.31	0.62	0.31	57.8
Approach		541	0.8	0.221	1.9	NA	0.4	2.8	0.06	0.15	0.06	73.4
All Vehicles		959	1.8	0.259	5.4	NA	1.0	7.3	0.18	0.33	0.20	67.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [6. Greenwell Pt-Millbank-Worrige (Ex Sat-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Millbank Road-Worrige Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Worrige Road												
1	L2	77	0.0	0.084	9.4	LOS A	0.3	2.1	0.35	0.89	0.35	56.0
2	T1	29	4.5	0.192	15.9	LOS B	0.7	5.2	0.67	1.00	0.67	49.7
3	R2	38	3.4	0.192	17.8	LOS B	0.7	5.2	0.67	1.00	0.67	49.8
Approach		144	1.8	0.192	12.9	LOS A	0.7	5.2	0.50	0.94	0.50	52.9
East: Greenwell Point Road (E)												
4	L2	20	6.7	0.136	7.1	LOS A	0.0	0.0	0.00	0.05	0.00	71.0
5	T1	241	1.1	0.136	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	79.1
6	R2	16	0.0	0.014	7.9	LOS A	0.1	0.4	0.35	0.61	0.35	63.7
Approach		277	1.4	0.136	1.0	NA	0.1	0.4	0.02	0.08	0.02	77.4
North: Millbank Road												
7	L2	8	16.7	0.010	11.2	LOS A	0.0	0.3	0.36	0.87	0.36	57.6
8	T1	24	11.1	0.119	17.3	LOS B	0.4	3.2	0.67	1.01	0.67	50.6
9	R2	16	0.0	0.119	19.5	LOS B	0.4	3.2	0.67	1.01	0.67	55.7
Approach		48	8.5	0.119	17.0	LOS B	0.4	3.2	0.62	0.98	0.62	53.3
West: Greenwell Point Road (W)												
10	L2	21	6.3	0.143	7.1	LOS A	0.0	0.0	0.00	0.05	0.00	71.2
11	T1	253	1.0	0.143	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	79.1
12	R2	54	0.0	0.049	7.9	LOS A	0.2	1.3	0.35	0.63	0.35	57.7
Approach		327	1.2	0.143	1.8	NA	0.2	1.3	0.06	0.15	0.06	74.0
All Vehicles		797	1.8	0.192	4.4	NA	0.7	5.2	0.16	0.32	0.16	68.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [7. Princes Hwy-Kalandar (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Kalandar Street

Friday AM (0800-0900) - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 135 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing

Reference Phase: Phase A

Input Phase Sequence: A, D, E, F, F1\*, F2\*

Output Phase Sequence: A, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	3	0.0	0.981	101.7	LOS F	42.1	308.7	1.00	1.16	1.78	21.3
2	T1	962	5.6	0.981	90.7	LOS F	42.1	308.7	1.00	1.15	1.59	25.5
3	R2	38	0.0	0.212	68.5	LOS E	2.4	16.5	0.96	0.73	0.96	25.0
Approach		1003	5.3	0.981	89.9	LOS F	42.1	308.7	1.00	1.14	1.56	25.5
East: Kalandar St (E)												
4	L2	38	9.4	1.021	100.6	LOS F	47.6	343.1	1.00	1.18	1.58	16.5
5	T1	306	3.1	1.021	95.0	LOS F	47.6	343.1	1.00	1.18	1.58	14.1
6	R2	782	2.9	1.021	113.3	LOS F	55.6	398.6	1.00	1.16	1.58	17.1
Approach		1126	3.1	1.021	107.9	LOS F	55.6	398.6	1.00	1.16	1.58	16.3
North: Princes Hwy (N)												
7	L2	259	7.3	0.187	6.8	LOS A	0.3	2.4	0.03	0.59	0.03	56.1
8	T1	898	7.3	1.039	120.4	LOS F	47.1	350.2	1.00	1.30	1.63	20.9
9	R2	157	11.3	0.962	100.5	LOS F	13.1	100.2	1.00	1.02	1.59	20.3
Approach		1314	7.8	1.039	95.6	LOS F	47.1	350.2	0.81	1.13	1.31	23.2
West: Kalandar St (W)												
10	L2	52	13.6	0.672	64.4	LOS E	12.7	92.7	0.99	0.83	1.01	28.0
11	T1	149	1.6	0.672	58.5	LOS E	12.7	92.7	0.99	0.83	1.01	23.3
12	R2	156	5.3	0.560	63.5	LOS E	9.7	70.8	0.98	0.81	0.98	26.9
Approach		357	4.9	0.672	61.6	LOS E	12.7	92.7	0.99	0.82	0.99	25.7
All Vehicles		3800	5.5	1.039	94.6	LOS F	55.6	398.6	0.93	1.11	1.43	21.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [7. Princes Hwy-Kalandar (Ex Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Kalandar Street

Friday PM (1600-1700) - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 115 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing

Reference Phase: Phase A

Input Phase Sequence: A, D, E, F, F1\*, F2\*

Output Phase Sequence: A, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	12	0.0	0.665	44.8	LOS D	18.6	133.0	0.84	0.75	1.16	35.3
2	T1	785	2.6	0.665	35.9	LOS C	18.6	133.0	0.83	0.73	0.99	41.4
3	R2	109	1.4	0.856	72.9	LOS F	6.9	48.8	1.00	0.92	1.39	24.1
Approach		906	2.4	0.856	40.5	LOS C	18.6	133.0	0.85	0.75	1.04	38.7
East: Kalandar St (E)												
4	L2	99	1.5	1.182	217.1	LOS F	53.5	380.8	1.00	1.60	2.52	9.8
5	T1	245	2.4	1.182	211.5	LOS F	53.5	380.8	1.00	1.60	2.52	8.1
6	R2	567	1.8	1.182	229.4	LOS F	58.5	415.9	1.00	1.55	2.52	9.9
Approach		912	2.0	1.182	223.2	LOS F	58.5	415.9	1.00	1.57	2.52	9.4
North: Princes Hwy (N)												
7	L2	832	1.1	0.657	8.8	LOS A	5.2	36.4	0.18	0.70	0.30	54.1
8	T1	1302	3.1	1.242	269.9	LOS F	106.6	766.3	1.00	2.05	2.72	11.1
9	R2	138	5.4	1.125	188.8	LOS F	15.6	113.9	1.00	1.30	2.42	12.5
Approach		2272	2.5	1.242	169.4	LOS F	106.6	766.3	0.70	1.51	1.82	14.9
West: Kalandar St (W)												
10	L2	109	9.5	1.164	218.4	LOS F	52.3	373.9	1.00	1.80	2.45	11.4
11	T1	305	0.0	1.164	212.6	LOS F	52.3	373.9	1.00	1.80	2.45	8.8
12	R2	303	1.0	0.900	69.1	LOS E	19.7	139.2	1.00	0.98	1.33	25.9
Approach		718	1.9	1.164	152.9	LOS F	52.3	373.9	1.00	1.46	1.98	13.6
All Vehicles		4807	2.3	1.242	152.8	LOS F	106.6	766.3	0.83	1.37	1.83	15.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [7. Princes Hwy-Kalandar (Ex Sat-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Kalandar Street

Saturday - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 135 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing

Reference Phase: Phase A

Input Phase Sequence: A, D, E, F, F1\*, F2\*

Output Phase Sequence: A, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	5	25.0	0.693	44.3	LOS D	25.3	181.0	0.80	0.72	1.11	33.4
2	T1	960	2.6	0.693	34.5	LOS C	25.3	181.0	0.77	0.69	0.94	42.1
3	R2	116	4.5	1.086	169.1	LOS F	12.9	94.0	1.00	1.18	2.10	12.9
Approach		1081	2.9	1.086	49.0	LOS D	25.3	181.0	0.80	0.74	1.06	35.3
East: Kalandar St (E)												
4	L2	89	0.0	1.057	127.6	LOS F	39.3	276.4	1.00	1.25	1.78	14.4
5	T1	211	0.6	1.057	122.0	LOS F	39.3	276.4	1.00	1.25	1.78	12.0
6	R2	543	1.0	1.057	141.0	LOS F	44.5	314.0	1.00	1.22	1.79	14.6
Approach		843	0.8	1.057	134.8	LOS F	44.5	314.0	1.00	1.23	1.78	14.0
North: Princes Hwy (N)												
7	L2	496	0.3	0.358	7.0	LOS A	0.9	6.2	0.03	0.60	0.03	56.1
8	T1	1386	1.0	1.110	162.5	LOS F	94.2	664.6	0.99	1.57	1.88	16.7
9	R2	91	11.6	0.904	89.5	LOS F	6.9	53.2	1.00	0.96	1.51	21.9
Approach		1973	1.3	1.110	120.1	LOS F	94.2	664.6	0.75	1.30	1.40	19.8
West: Kalandar St (W)												
10	L2	66	2.0	0.761	67.0	LOS E	15.5	109.0	1.00	0.89	1.09	27.4
11	T1	168	0.0	0.761	61.4	LOS E	15.5	109.0	1.00	0.89	1.09	22.5
12	R2	173	0.8	0.601	63.8	LOS E	10.8	76.0	0.98	0.81	0.98	27.1
Approach		407	0.6	0.761	63.3	LOS E	15.5	109.0	0.99	0.86	1.04	25.4
All Vehicles		4304	1.5	1.110	99.7	LOS F	94.2	664.6	0.83	1.10	1.36	21.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [8. Coonamia-Currarong-Forest (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Coonamia Road- Currarong Road-Forest Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Currarong Road												
5	T1	13	0.0	0.041	0.8	LOS A	0.2	1.2	0.31	0.49	0.31	83.7
6	R2	40	0.0	0.041	8.5	LOS A	0.2	1.2	0.31	0.49	0.31	76.2
Approach		53	0.0	0.041	6.7	NA	0.2	1.2	0.31	0.49	0.31	77.9
North: Coonamia Road												
7	L2	7	0.0	0.007	8.3	LOS A	0.0	0.2	0.22	0.60	0.22	74.0
9	R2	67	1.8	0.097	9.2	LOS A	0.4	2.7	0.36	0.67	0.36	71.5
Approach		75	1.6	0.097	9.1	LOS A	0.4	2.7	0.34	0.66	0.34	71.7
West: Forest Road												
10	L2	197	1.8	0.117	7.9	LOS A	0.0	0.0	0.00	0.61	0.00	74.8
11	T1	19	6.3	0.117	0.0	LOS A	0.0	0.0	0.00	0.61	0.00	83.6
Approach		216	2.2	0.117	7.2	NA	0.0	0.0	0.00	0.61	0.00	75.5
All Vehicles		343	1.7	0.117	7.5	NA	0.4	2.7	0.12	0.60	0.12	75.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [8. Coonamia-Currarong-Forest (Ex Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Coonamia Road- Currarong Road-Forest Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Currarong Road												
5	T1	15	0.0	0.020	0.5	LOS A	0.1	0.6	0.24	0.32	0.24	88.1
6	R2	15	0.0	0.020	8.3	LOS A	0.1	0.6	0.24	0.32	0.24	79.8
Approach		29	0.0	0.020	4.4	NA	0.1	0.6	0.24	0.32	0.24	83.8
North: Coonamia Road												
7	L2	37	0.0	0.034	8.3	LOS A	0.1	0.9	0.21	0.61	0.21	74.0
9	R2	185	4.0	0.256	9.2	LOS A	1.2	8.5	0.36	0.67	0.36	70.8
Approach		222	3.3	0.256	9.0	LOS A	1.2	8.5	0.34	0.66	0.34	71.3
West: Forest Road												
10	L2	137	5.4	0.094	8.0	LOS A	0.0	0.0	0.00	0.54	0.00	74.8
11	T1	34	4.3	0.094	0.0	LOS A	0.0	0.0	0.00	0.54	0.00	85.3
Approach		171	5.2	0.094	6.4	NA	0.0	0.0	0.00	0.54	0.00	76.7
All Vehicles		422	3.9	0.256	7.6	NA	1.2	8.5	0.19	0.59	0.19	74.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [8. Coonamia-Currarong-Forest (Ex Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Coonamia Road- Currarong Road-Forest Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Currarong Road												
5	T1	11	0.0	0.027	0.6	LOS A	0.1	0.8	0.27	0.45	0.27	84.7
6	R2	26	0.0	0.027	8.3	LOS A	0.1	0.8	0.27	0.45	0.27	77.0
Approach		37	0.0	0.027	6.1	NA	0.1	0.8	0.27	0.45	0.27	79.1
North: Coonamia Road												
7	L2	29	0.0	0.027	8.3	LOS A	0.1	0.7	0.19	0.61	0.19	74.1
9	R2	151	1.8	0.205	8.9	LOS A	0.9	6.4	0.34	0.66	0.34	71.8
Approach		180	1.5	0.205	8.8	LOS A	0.9	6.4	0.32	0.66	0.32	72.2
West: Forest Road												
10	L2	152	0.9	0.092	7.9	LOS A	0.0	0.0	0.00	0.59	0.00	75.5
11	T1	19	0.0	0.092	0.0	LOS A	0.0	0.0	0.00	0.59	0.00	84.0
Approach		171	0.8	0.092	7.0	NA	0.0	0.0	0.00	0.59	0.00	76.4
All Vehicles		387	1.0	0.205	7.8	NA	0.9	6.4	0.17	0.61	0.17	74.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [9. Kalandar St-Kinghorne St (Ex Fri AM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Kalandar Street-Kinghorne Street-Albatross Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Kinghorne Street												
1b	L3	31	7.7	0.730	17.4	LOS B	10.3	74.0	0.99	1.13	1.46	45.5
2	T1	483	3.4	0.730	17.1	LOS B	10.3	74.0	0.99	1.13	1.46	46.7
3	R2	59	0.0	0.730	20.8	LOS B	10.3	74.0	0.99	1.13	1.46	46.6
Approach		573	3.3	0.730	17.5	LOS B	10.3	74.0	0.99	1.13	1.46	46.6
East: Kalandar Street												
4	L2	29	0.0	0.429	5.7	LOS A	2.7	20.2	0.46	0.62	0.46	52.4
4a	L1	285	8.3	0.429	5.8	LOS A	2.7	20.2	0.46	0.62	0.46	53.0
6	R2	156	2.3	0.429	9.9	LOS A	2.7	20.2	0.46	0.62	0.46	53.2
Approach		471	5.8	0.429	7.1	LOS A	2.7	20.2	0.46	0.62	0.46	53.0
North: Kinghorne Street												
7	L2	127	3.7	0.334	6.1	LOS A	2.3	16.5	0.59	0.68	0.59	51.8
8	T1	31	0.0	0.334	6.3	LOS A	2.3	16.5	0.59	0.68	0.59	53.0
9a	R1	176	3.4	0.334	9.3	LOS A	2.3	16.5	0.59	0.68	0.59	52.2
Approach		334	3.2	0.334	7.8	LOS A	2.3	16.5	0.59	0.68	0.59	52.1
SouthWest: Albatross Road												
30a	L1	261	4.5	0.753	19.1	LOS B	10.1	74.2	1.00	1.22	1.55	44.6
32a	R1	206	7.4	0.753	22.7	LOS B	10.1	74.2	1.00	1.22	1.55	44.3
32b	R3	11	22.2	0.753	25.4	LOS B	10.1	74.2	1.00	1.22	1.55	44.4
Approach		478	6.2	0.753	20.8	LOS B	10.1	74.2	1.00	1.22	1.55	44.5
All Vehicles		1855	4.6	0.753	14.0	LOS A	10.3	74.2	0.79	0.94	1.07	48.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
 Vehicle movement LOS values are based on average delay per movement.  
 Intersection and Approach LOS values are based on average delay for all vehicle movements.  
 Roundabout Capacity Model: SIDRA Standard.  
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.  
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [9. Kalandar St-Kinghorne St (Ex Fri PM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Kalandar Street-Kinghorne Street-Albatross Road  
 Friday AM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Kinghorne Street												
1b	L3	34	0.0	0.572	12.3	LOS A	5.6	39.3	0.90	0.97	1.10	48.4
2	T1	326	0.0	0.572	12.3	LOS A	5.6	39.3	0.90	0.97	1.10	49.6
3	R2	77	0.0	0.572	16.1	LOS B	5.6	39.3	0.90	0.97	1.10	49.4
Approach		437	0.0	0.572	13.0	LOS A	5.6	39.3	0.90	0.97	1.10	49.5
East: Kalandar Street												
4	L2	40	0.0	0.435	7.0	LOS A	2.9	20.1	0.62	0.72	0.62	51.9
4a	L1	238	0.0	0.435	6.9	LOS A	2.9	20.1	0.62	0.72	0.62	52.6
6	R2	115	0.0	0.435	11.1	LOS A	2.9	20.1	0.62	0.72	0.62	52.7
Approach		393	0.0	0.435	8.1	LOS A	2.9	20.1	0.62	0.72	0.62	52.6
North: Kinghorne Street												
7	L2	315	0.0	0.764	12.3	LOS A	10.9	76.2	0.97	1.01	1.28	48.2
8	T1	80	0.0	0.764	12.6	LOS A	10.9	76.2	0.97	1.01	1.28	49.1
9a	R1	304	0.0	0.764	15.5	LOS B	10.9	76.2	0.97	1.01	1.28	48.6
Approach		699	0.0	0.764	13.7	LOS A	10.9	76.2	0.97	1.01	1.28	48.5
SouthWest: Albatross Road												
30a	L1	300	0.0	0.771	14.7	LOS B	11.2	78.3	1.00	1.11	1.43	47.1
32a	R1	326	0.0	0.771	18.0	LOS B	11.2	78.3	1.00	1.11	1.43	46.9
32b	R3	15	0.0	0.771	19.9	LOS B	11.2	78.3	1.00	1.11	1.43	47.5
Approach		641	0.0	0.771	16.5	LOS B	11.2	78.3	1.00	1.11	1.43	47.0
All Vehicles		2169	0.0	0.771	13.4	LOS A	11.2	78.3	0.90	0.98	1.17	48.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [9. Kalandar St-Kinghorne St (Ex Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Kalandar Street-Kinghorne Street-Albatross Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Kinghorne Street												
1b	L3	21	12.5	0.225	7.5	LOS A	1.4	10.0	0.60	0.66	0.60	51.2
2	T1	162	1.6	0.225	7.2	LOS A	1.4	10.0	0.60	0.66	0.60	53.0
3	R2	29	0.0	0.225	11.0	LOS A	1.4	10.0	0.60	0.66	0.60	52.8
Approach		213	2.5	0.225	7.8	LOS A	1.4	10.0	0.60	0.66	0.60	52.8
East: Kalandar Street												
4	L2	22	0.0	0.266	5.4	LOS A	1.4	10.5	0.38	0.59	0.38	52.7
4a	L1	177	6.7	0.266	5.4	LOS A	1.4	10.5	0.38	0.59	0.38	53.3
6	R2	96	1.4	0.266	9.6	LOS A	1.4	10.5	0.38	0.59	0.38	53.5
Approach		295	4.5	0.266	6.8	LOS A	1.4	10.5	0.38	0.59	0.38	53.3
North: Kinghorne Street												
7	L2	152	0.8	0.312	5.9	LOS A	2.0	14.3	0.53	0.65	0.53	52.2
8	T1	21	0.0	0.312	6.1	LOS A	2.0	14.3	0.53	0.65	0.53	53.3
9a	R1	157	2.6	0.312	9.1	LOS A	2.0	14.3	0.53	0.65	0.53	52.6
Approach		329	1.6	0.312	7.5	LOS A	2.0	14.3	0.53	0.65	0.53	52.4
SouthWest: Albatross Road												
30a	L1	161	1.4	0.375	6.1	LOS A	2.6	18.3	0.57	0.67	0.57	52.5
32a	R1	214	0.6	0.375	9.4	LOS A	2.6	18.3	0.57	0.67	0.57	52.2
32b	R3	20	13.3	0.375	11.6	LOS A	2.6	18.3	0.57	0.67	0.57	52.4
Approach		395	1.6	0.375	8.1	LOS A	2.6	18.3	0.57	0.67	0.57	52.3
All Vehicles		1232	2.4	0.375	7.6	LOS A	2.6	18.3	0.52	0.65	0.52	52.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

Site: 1 [10a. Princes Hwy-Forest (Ex Fri AM-120th HH)]

Network: 1 [10. Princes Hwy-Forest (Ex Fri AM-120th HH)]

Site Category: -  
Giveway / Yield (Two-Way)

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	Aver. Back of Queue	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed	
		Total veh/h	HV %	Total veh/h	HV %									v/c
South: Princes Highway														
3	R2	27	11.5	27	11.5	0.037	11.2	LOS A	0.1	0.4	0.52	0.74	0.52	66.4
Approach		27	11.5	27	11.5	0.037	11.2	NA	0.1	0.4	0.52	0.74	0.52	66.4
East: Forest Road														
4	L2	36	2.9	36	2.9	0.029	8.8	LOS A	0.0	0.3	0.34	0.63	0.34	71.4
6a	R1	102	2.1	102	2.1	0.234	14.5	LOS A	0.4	2.7	0.65	0.87	0.68	56.3
Approach		138	2.3	138	2.3	0.234	13.0	LOS A	0.4	2.7	0.57	0.81	0.60	61.6
North: Princes Highway														
7	L2	58	9.1	58	9.1	0.038	8.6	LOS A	0.1	0.5	0.09	0.61	0.09	70.7
8	T1	521	16.0	521	16.0	0.147	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	99.9
Approach		579	15.3	579	15.3	0.147	0.9	LOS A	0.1	0.5	0.01	0.06	0.01	95.9
All Vehicles		744	12.7	744	12.7	0.234	3.5	NA	0.4	2.7	0.13	0.22	0.14	88.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).  
Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# USER REPORT FOR NETWORK SITE

Project: 200225sid-N186580 West Culburra Subdivision

Template: Default Site User Report (2)

Site: 1 [10a. Princes Hwy-Forest (Ex Fri PM-120th HH)]

Network: 2 [10. Princes Hwy-Forest (Ex Fri PM-120th HH)]

Site Category: -  
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total	Arrival Flows HV	Flows HV	Deg. Satn	Average Delay	Level of Service	Aver. Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Aver. Cycles	Average Speed	
		veh/h	% veh/h	%	v/c	sec		veh	m				km/h	
South: Princes Highway														
3	R2	51	2.1	51	2.1	0.207	23.5	LOS B	0.3	2.0	0.87	0.96	0.92	56.1
Approach		51	2.1	51	2.1	0.207	23.5	NA	0.3	2.0	0.87	0.96	0.92	56.1
East: Forest Road														
4	L2	49	0.0	49	0.0	0.063	11.1	LOS A	0.1	0.6	0.57	0.80	0.57	70.6
6a	R1	66	1.6	66	1.6	0.788	102.5	LOS F	1.3	9.3	0.98	1.11	1.75	15.3
Approach		116	0.9	116	0.9	0.788	63.5	LOS E	1.3	9.3	0.81	0.98	1.25	28.7
North: Princes Highway														
7	L2	148	2.1	148	2.1	0.095	8.5	LOS A	0.2	1.2	0.13	0.60	0.13	72.7
8	T1	1475	2.0	1475	2.0	0.383	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	99.7
Approach		1623	2.0	1623	2.0	0.383	0.8	LOS A	0.2	1.2	0.01	0.06	0.01	96.4
All Vehicles		1789	1.9	1789	1.9	0.788	5.5	NA	1.3	9.3	0.09	0.14	0.12	85.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# USER REPORT FOR NETWORK SITE

 Project: 200225sid-N186580 West Culburra Subdivision

Template: Default Site User Report (2)

 Site: 1 [10a. Princes Hwy-Forest (Ex Sat-120th HH)]

 Network: 4 [10. Princes Hwy-Forest (Ex Sat-120th HH)]

Site Category: -  
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total	Arrival Flows HV	Flows HV	Deg. Satn	Average Delay	Level of Service	Aver. Back of Queue Vehicles	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed		
		veh/h	%	veh/h	%	v/c	sec	veh	m			km/h		
South: Princes Highway														
3	R2	40	0.0	40	0.0	0.117	17.8	LOS B	0.2	1.1	0.78	0.93	0.78	62.5
Approach		40	0.0	40	0.0	0.117	17.8	NA	0.2	1.1	0.78	0.93	0.78	62.5
East: Forest Road														
4	L2	45	0.0	45	0.0	0.050	10.2	LOS A	0.1	0.5	0.51	0.74	0.51	71.8
6a	R1	88	3.6	88	3.6	0.703	62.3	LOS E	1.3	9.0	0.96	1.10	1.65	23.0
Approach		134	2.4	134	2.4	0.703	44.7	LOS D	1.3	9.0	0.81	0.98	1.27	34.9
North: Princes Highway														
7	L2	125	0.0	125	0.0	0.079	8.4	LOS A	0.1	0.9	0.11	0.60	0.11	74.6
8	T1	1153	1.7	1153	1.7	0.299	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	99.8
Approach		1278	1.6	1278	1.6	0.299	0.9	LOS A	0.1	0.9	0.01	0.06	0.01	96.6
All Vehicles		1452	1.6	1452	1.6	0.703	5.4	NA	1.3	9.0	0.11	0.17	0.15	85.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\N18600-18699\N186580 West Culburra Concept Plan\Modelling\200225sid-N186580 West Culburra Subdivision.sip8

# USER REPORT FOR SITE

 Project: 200225sid-N186580 West Culburra Subdivision

Template: GTA Appendix

## Site: 1 [11. Princes Hwy-Moss (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Moss Street

Friday AM (0800-0900) - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing/timing

Reference Phase: Phase A

Input Phase Sequence: A, D, E, F, F1\*, F2\*

Output Phase Sequence: A, D, E, F, F1\*

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	3	0.0	0.872	70.2	LOS E	19.4	144.3	1.00	0.96	1.19	28.8
2	T1	904	7.6	0.944	72.3	LOS F	23.3	173.9	1.00	1.02	1.30	29.4
3	R2	158	3.7	0.946	92.2	LOS F	12.2	88.5	1.00	1.01	1.55	23.6
Approach		1065	7.0	0.946	75.2	LOS F	23.3	173.9	1.00	1.02	1.33	28.3
East: Moss St (E)												
4	L2	34	3.4	0.373	49.2	LOS D	8.8	63.4	0.88	0.74	0.88	32.7
5	T1	227	4.1	1.013	73.6	LOS F	33.7	245.1	0.93	0.96	1.22	24.6
6	R2	257	4.6	1.013	117.5	LOS F	33.7	245.1	1.00	1.26	1.67	20.0
Approach		518	4.3	1.013	93.8	LOS F	33.7	245.1	0.96	1.09	1.42	22.5
North: Princes Hwy (N)												
7	L2	187	5.0	1.010	82.9	LOS F	41.1	303.4	1.00	1.12	1.48	21.9
8	T1	1426	6.8	1.010	92.0	LOS F	47.2	349.6	1.00	1.21	1.50	24.1
9	R2	380	3.7	0.975	97.5	LOS F	32.3	233.3	1.00	1.05	1.49	22.8
Approach		1994	6.1	1.010	92.2	LOS F	47.2	349.6	1.00	1.17	1.49	23.6
West: Moss St (W)												
10	L2	126	10.3	0.179	18.1	LOS B	2.8	21.4	0.67	0.72	0.67	42.2
11	T1	131	3.6	0.507	51.1	LOS D	10.3	76.0	0.95	0.79	0.95	29.3
12	R2	49	11.9	0.507	55.8	LOS D	10.3	76.0	0.95	0.79	0.95	30.4
Approach		306	7.7	0.507	38.3	LOS C	10.3	76.0	0.83	0.76	0.83	33.7
All Vehicles		3883	6.2	1.013	83.5	LOS F	47.2	349.6	0.98	1.09	1.39	25.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [11. Princes Hwy-Moss (Ex Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Moss Street

Friday PM (1600-1700) - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 135 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing/timing

Reference Phase: Phase A

Input Phase Sequence: A, D, E, F, F1\*, F2\*

Output Phase Sequence: A, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	11	0.0	0.812	62.2	LOS E	22.7	162.9	0.98	0.90	1.05	30.7
2	T1	1117	3.1	0.878	60.1	LOS E	26.5	190.4	0.99	0.94	1.12	32.6
3	R2	115	0.0	0.321	57.2	LOS E	6.5	45.8	0.91	0.78	0.91	30.5
Approach		1242	2.8	0.878	59.8	LOS E	26.5	190.4	0.99	0.93	1.10	32.3
East: Moss St (E)												
4	L2	34	4.3	0.353	55.7	LOS D	7.4	52.1	0.91	0.75	0.91	30.8
5	T1	149	0.0	0.959	64.7	LOS E	23.7	167.9	0.94	0.88	1.12	26.2
6	R2	232	1.9	0.959	92.6	LOS F	23.7	167.9	1.00	1.12	1.48	23.3
Approach		415	1.4	0.959	79.6	LOS F	23.7	167.9	0.97	1.00	1.30	24.8
North: Princes Hwy (N)												
7	L2	199	3.7	1.149	189.1	LOS F	56.1	404.9	1.00	1.41	2.10	13.1
8	T1	1319	3.5	1.149	197.6	LOS F	65.5	472.0	1.00	1.56	2.10	13.9
9	R2	408	0.7	1.148	214.9	LOS F	54.1	380.8	1.00	1.31	2.18	12.8
Approach		1926	2.9	1.149	200.4	LOS F	65.5	472.0	1.00	1.49	2.11	13.6
West: Moss St (W)												
10	L2	506	1.2	0.675	22.5	LOS B	14.9	105.0	0.87	0.83	0.87	41.4
11	T1	245	0.0	1.164	222.9	LOS F	52.4	367.8	1.00	1.74	2.27	12.0
12	R2	135	1.1	1.164	227.4	LOS F	52.4	367.8	1.00	1.74	2.27	12.4
Approach		886	0.8	1.164	109.1	LOS F	52.4	367.8	0.93	1.22	1.47	20.3
All Vehicles		4469	2.3	1.164	132.0	LOS F	65.5	472.0	0.98	1.24	1.63	18.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [11. Princes Hwy-Moss (Ex Sat-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Moss Street

Saturday - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 135 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing/timing

Reference Phase: Phase A

Input Phase Sequence: A, D, E, F, F1\*, F2\*

Output Phase Sequence: A, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	12	0.0	0.729	54.4	LOS D	21.3	152.5	0.92	0.80	0.93	32.8
2	T1	1167	2.7	0.789	50.3	LOS D	24.4	175.0	0.95	0.84	0.98	35.7
3	R2	104	0.0	0.361	62.1	LOS E	6.2	43.6	0.94	0.78	0.94	29.3
Approach		1283	2.4	0.789	51.3	LOS D	24.4	175.0	0.95	0.84	0.97	35.0
East: Moss St (E)												
4	L2	32	0.0	0.170	49.3	LOS D	3.9	27.0	0.84	0.70	0.84	32.7
5	T1	80	0.0	0.463	47.2	LOS D	10.7	75.5	0.88	0.74	0.88	29.8
6	R2	146	1.8	0.463	54.5	LOS D	10.7	75.5	0.92	0.79	0.92	30.8
Approach		258	1.0	0.463	51.6	LOS D	10.7	75.5	0.90	0.77	0.90	30.7
North: Princes Hwy (N)												
7	L2	115	2.3	0.917	73.0	LOS F	33.8	240.3	1.00	1.05	1.46	27.8
8	T1	1303	1.5	0.917	65.3	LOS E	34.2	242.7	1.00	1.03	1.27	31.0
9	R2	258	1.0	0.899	80.8	LOS F	19.3	136.4	1.00	0.96	1.31	25.5
Approach		1676	1.5	0.917	68.2	LOS E	34.2	242.7	1.00	1.02	1.29	29.8
West: Moss St (W)												
10	L2	311	0.0	0.491	24.0	LOS B	8.9	62.1	0.84	0.80	0.84	40.9
11	T1	154	0.0	0.728	57.6	LOS E	16.4	115.3	1.00	0.87	1.04	27.7
12	R2	103	1.3	0.728	62.1	LOS E	16.4	115.3	1.00	0.87	1.04	29.4
Approach		567	0.2	0.728	40.0	LOS C	16.4	115.3	0.91	0.83	0.93	34.1
All Vehicles		3784	1.6	0.917	57.1	LOS E	34.2	242.7	0.96	0.91	1.10	32.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## ▽ Site: 1 [1. Culburra -Coonamia (Future Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Culburra Road-Coonamia Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Coonamia Rd												
1	L2	165	0.0	0.199	9.9	LOS A	0.8	5.4	0.44	0.73	0.44	67.4
3	R2	91	7.0	0.189	13.0	LOS A	0.7	5.5	0.55	0.82	0.55	61.5
Approach		256	2.5	0.199	11.0	LOS A	0.8	5.5	0.48	0.76	0.48	65.2
East: Culburra Rd (E)												
4	L2	57	3.7	0.031	7.0	LOS A	0.0	0.0	0.00	0.63	0.00	64.1
5	T1	297	4.3	0.156	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
Approach		354	4.2	0.156	1.1	NA	0.0	0.0	0.00	0.10	0.00	76.9
West: Culburra Rd (W)												
11	T1	146	12.9	0.082	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
12	R2	33	3.2	0.033	8.5	LOS A	0.1	0.9	0.42	0.65	0.42	66.2
Approach		179	11.2	0.082	1.5	NA	0.1	0.9	0.08	0.12	0.08	77.0
All Vehicles		788	5.2	0.199	4.4	NA	0.8	5.5	0.17	0.32	0.17	72.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [1. Culburra -Coonamia (Future Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Culburra Road-Coonamia Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Coonamia Rd												
1	L2	77	8.2	0.084	9.3	LOS A	0.3	2.3	0.33	0.66	0.33	65.4
3	R2	94	2.2	0.186	12.5	LOS A	0.7	5.3	0.54	0.81	0.54	63.4
Approach		171	4.9	0.186	11.0	LOS A	0.7	5.3	0.45	0.74	0.45	64.3
East: Culburra Rd (E)												
4	L2	91	2.3	0.050	7.0	LOS A	0.0	0.0	0.00	0.63	0.00	64.6
5	T1	167	2.5	0.087	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
Approach		258	2.4	0.087	2.5	NA	0.0	0.0	0.00	0.22	0.00	73.8
West: Culburra Rd (W)												
11	T1	344	1.2	0.179	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
12	R2	152	4.2	0.139	8.1	LOS A	0.6	4.2	0.38	0.65	0.38	66.1
Approach		496	2.1	0.179	2.5	NA	0.6	4.2	0.11	0.20	0.11	75.1
All Vehicles		924	2.7	0.186	4.1	NA	0.7	5.3	0.14	0.31	0.14	72.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [1. Culburra -Coonamia (Future SAT-120th HH)]

13S1231000 - West Culburra Subdivision  
 Culburra Road-Coonamia Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Coonamia Rd												
1	L2	104	1.0	0.117	9.4	LOS A	0.4	3.1	0.38	0.68	0.38	67.7
3	R2	86	0.0	0.172	12.4	LOS A	0.7	4.7	0.54	0.81	0.54	64.1
Approach		191	0.6	0.172	10.8	LOS A	0.7	4.7	0.45	0.74	0.45	66.0
East: Culburra Rd (E)												
4	L2	104	0.0	0.056	6.9	LOS A	0.0	0.0	0.00	0.63	0.00	65.4
5	T1	220	1.0	0.114	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
Approach		324	0.6	0.114	2.2	NA	0.0	0.0	0.00	0.20	0.00	74.6
West: Culburra Rd (W)												
11	T1	219	1.0	0.114	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
12	R2	104	3.0	0.102	8.4	LOS A	0.4	2.9	0.41	0.67	0.41	66.3
Approach		323	1.6	0.114	2.7	NA	0.4	2.9	0.13	0.22	0.13	75.0
All Vehicles		838	1.0	0.172	4.4	NA	0.7	4.7	0.15	0.33	0.15	72.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## ▽ Site: 1 [2. Culburra-Mayfield (Future Fri AM-120th HH)]

Culburra Road-Mayfield Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Future - Full Site Development  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Culburra Road (S)												
1	L2	2	0.0	0.234	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.5
2	T1	455	0.0	0.234	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
Approach		457	0.0	0.234	0.1	NA	0.0	0.0	0.00	0.00	0.00	79.8
North: Culburra Road (N)												
8	T1	176	0.0	0.091	0.0	LOS A	0.0	0.1	0.01	0.00	0.01	79.9
9	R2	1	0.0	0.091	9.2	LOS A	0.0	0.1	0.01	0.00	0.01	66.1
Approach		177	0.0	0.091	0.1	NA	0.0	0.1	0.01	0.00	0.01	79.8
West: Mayfield Road												
10	L2	1	0.0	0.002	8.1	LOS A	0.0	0.0	0.47	0.58	0.47	56.4
12	R2	2	0.0	0.007	15.0	LOS B	0.0	0.2	0.67	0.75	0.67	50.7
Approach		3	0.0	0.007	12.7	LOS A	0.0	0.2	0.60	0.69	0.60	52.5
All Vehicles		637	0.0	0.234	0.1	NA	0.0	0.2	0.01	0.01	0.01	79.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## ▼ Site: 1 [2. Culburra-Mayfield (Future Fri PM-120th HH)]

Culburra Road-Mayfield Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Future - Full Site Development  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Culburra Road (S)												
1	L2	1	0.0	0.131	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.6
2	T1	246	4.7	0.131	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
Approach		247	4.7	0.131	0.0	NA	0.0	0.0	0.00	0.00	0.00	79.9
North: Culburra Road (N)												
8	T1	474	2.0	0.247	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	80.0
9	R2	1	0.0	0.247	8.2	LOS A	0.0	0.1	0.00	0.00	0.00	66.2
Approach		475	2.0	0.247	0.0	NA	0.0	0.1	0.00	0.00	0.00	79.9
West: Mayfield Road												
10	L2	1	0.0	0.001	6.7	LOS A	0.0	0.0	0.34	0.53	0.34	57.5
12	R2	1	100.0	0.013	48.4	LOS D	0.0	0.5	0.87	0.95	0.87	30.3
Approach		2	50.0	0.013	27.5	LOS B	0.0	0.5	0.60	0.74	0.60	39.7
All Vehicles		724	3.1	0.247	0.1	NA	0.0	0.5	0.00	0.00	0.00	79.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## ▽ Site: 1 [2. Culburra-Mayfield (Future-120th HH)]

Culburra Road-Mayfield Road  
 Saturday - Equivalent 120th HH  
 Future - Full Site Development  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Culburra Road (S)												
1	L2	3	0.0	0.170	7.0	LOS A	0.0	0.0	0.00	0.01	0.00	74.5
2	T1	327	0.6	0.170	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.8
Approach		331	0.6	0.170	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.8
North: Culburra Road (N)												
8	T1	302	0.7	0.157	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	79.9
9	R2	1	0.0	0.157	8.5	LOS A	0.0	0.1	0.00	0.00	0.00	66.1
Approach		303	0.7	0.157	0.0	NA	0.0	0.1	0.00	0.00	0.00	79.9
West: Mayfield Road												
10	L2	1	0.0	0.001	7.2	LOS A	0.0	0.0	0.39	0.55	0.39	57.3
12	R2	3	0.0	0.010	14.6	LOS B	0.0	0.2	0.66	0.76	0.66	51.0
Approach		4	0.0	0.010	12.7	LOS A	0.0	0.2	0.59	0.70	0.59	52.4
All Vehicles		638	0.7	0.170	0.1	NA	0.0	0.2	0.01	0.01	0.01	79.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### Site: 1 [3. Greenwell Pt-Pyree (Future Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Pyree Lane  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pyreen Ln												
1	L2	447	2.1	0.245	7.6	LOS A	0.0	0.0	0.00	0.60	0.00	65.5
3	R2	14	7.7	0.027	10.6	LOS A	0.1	0.7	0.48	0.70	0.48	58.7
Approach		461	2.3	0.245	7.7	LOS A	0.1	0.7	0.01	0.60	0.01	65.3
East: Greenwell Pt Rd (E)												
4	L2	21	65.0	0.095	8.1	LOS A	0.0	0.0	0.00	0.08	0.00	53.3
5	T1	147	5.7	0.095	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	79.4
Approach		168	13.1	0.095	1.0	NA	0.0	0.0	0.00	0.08	0.00	74.8
West: Greenwell Pt Rd (W)												
11	T1	63	5.0	0.033	6.1	LOS A	0.0	0.0	0.00	0.59	0.00	65.1
12	R2	161	7.8	0.362	14.8	LOS B	1.9	13.8	0.63	0.91	0.79	55.4
Approach		224	7.0	0.362	12.4	LOS A	1.9	13.8	0.45	0.82	0.57	57.8
All Vehicles		854	5.7	0.362	7.6	NA	1.9	13.8	0.13	0.56	0.16	64.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### Site: 1 [3. Greenwell Pt-Pyree (Future Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Pyree Lane  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pyreen Ln												
1	L2	207	5.6	0.116	7.7	LOS A	0.0	0.0	0.00	0.60	0.00	64.5
3	R2	32	0.0	0.089	14.7	LOS B	0.3	2.2	0.63	0.87	0.63	57.0
Approach		239	4.8	0.116	8.6	LOS A	0.3	2.2	0.08	0.64	0.08	63.4
East: Greenwell Pt Rd (E)												
4	L2	27	0.0	0.051	6.9	LOS A	0.0	0.0	0.00	0.19	0.00	71.6
5	T1	68	4.6	0.051	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	76.5
Approach		96	3.3	0.051	2.0	NA	0.0	0.0	0.00	0.19	0.00	75.1
West: Greenwell Pt Rd (W)												
11	T1	173	1.8	0.090	6.1	LOS A	0.0	0.0	0.00	0.59	0.00	66.1
12	R2	453	1.6	0.687	14.8	LOS B	8.7	62.0	0.70	0.93	1.13	56.9
Approach		625	1.7	0.687	12.4	LOS A	8.7	62.0	0.51	0.84	0.82	59.2
All Vehicles		960	2.6	0.687	10.4	NA	8.7	62.0	0.35	0.72	0.56	61.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### Site: 1 [3. Greenwell Pt-Pyree (Future Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Pyree Lane  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pyreen Ln												
1	L2	268	1.2	0.146	7.6	LOS A	0.0	0.0	0.00	0.60	0.00	65.8
3	R2	54	0.0	0.099	10.4	LOS A	0.4	2.6	0.49	0.74	0.49	61.1
Approach		322	1.0	0.146	8.1	LOS A	0.4	2.6	0.08	0.63	0.08	65.0
East: Greenwell Pt Rd (E)												
4	L2	165	2.5	0.143	7.0	LOS A	0.0	0.0	0.00	0.40	0.00	67.6
5	T1	100	4.2	0.143	0.0	LOS A	0.0	0.0	0.00	0.40	0.00	73.0
Approach		265	3.2	0.143	4.4	NA	0.0	0.0	0.00	0.40	0.00	69.5
West: Greenwell Pt Rd (W)												
11	T1	227	0.9	0.117	6.0	LOS A	0.0	0.0	0.00	0.59	0.00	66.4
12	R2	143	1.5	0.307	13.6	LOS A	1.4	10.1	0.61	0.88	0.70	58.1
Approach		371	1.1	0.307	9.0	LOS A	1.4	10.1	0.23	0.70	0.27	62.9
All Vehicles		958	1.6	0.307	7.4	NA	1.4	10.1	0.12	0.59	0.13	65.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## ▽ Site: 1 [4. Greenwell Pt-Jindy Andy (Future Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Jindy Andy Lane  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Greenwell Point Road (NE)												
25	T1	420	5.0	0.224	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
26	R2	181	0.6	0.270	9.3	LOS A	1.2	8.5	0.44	0.70	0.44	62.4
Approach		601	3.7	0.270	2.8	NA	1.2	8.5	0.13	0.21	0.13	73.7
NorthWest: Jindy Andy Lane												
27	L2	12	9.1	0.012	8.0	LOS A	0.0	0.3	0.29	0.60	0.29	61.2
29	R2	53	6.0	0.247	24.6	LOS B	0.9	6.7	0.80	0.95	0.89	48.2
Approach		64	6.6	0.247	21.6	LOS B	0.9	6.7	0.71	0.89	0.79	50.1
SouthWest: Greenwell Point Road (SW)												
30	L2	8	37.5	0.100	7.6	LOS A	0.0	0.0	0.00	0.03	0.00	60.6
31	T1	174	9.1	0.100	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	79.6
Approach		182	10.4	0.100	0.4	NA	0.0	0.0	0.00	0.03	0.00	78.4
All Vehicles		847	5.3	0.270	3.7	NA	1.2	8.5	0.15	0.22	0.15	72.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## ▽ Site: 1 [4. Greenwell Pt-Jindy Andy (Future Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Jindy Andy Lane  
 Friday AM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Greenwell Point Road (NE)												
25	T1	213	5.9	0.114	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	80.0
26	R2	77	2.7	0.197	14.2	LOS A	0.7	5.3	0.61	0.86	0.61	56.9
Approach		289	5.1	0.197	3.8	NA	0.7	5.3	0.16	0.23	0.16	72.2
NorthWest: Jindy Andy Lane												
27	L2	178	1.8	0.257	10.5	LOS A	1.0	7.3	0.54	0.82	0.56	61.0
29	R2	3	0.0	0.013	19.1	LOS B	0.0	0.3	0.73	0.83	0.73	53.3
Approach		181	1.7	0.257	10.6	LOS A	1.0	7.3	0.54	0.82	0.56	60.9
SouthWest: Greenwell Point Road (SW)												
30	L2	14	7.7	0.238	7.1	LOS A	0.0	0.0	0.00	0.02	0.00	71.0
31	T1	444	1.9	0.238	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	79.6
Approach		458	2.1	0.238	0.2	NA	0.0	0.0	0.00	0.02	0.00	79.3
All Vehicles		928	2.9	0.257	3.4	NA	1.0	7.3	0.16	0.24	0.16	72.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

▽ Site: 1 [4. Greenwell Pt-Jindy Andy (Future Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Jindy Andy Lane  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Greenwell Point Road (NE)												
25	T1	284	3.0	0.150	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
26	R2	108	1.0	0.204	11.1	LOS A	0.8	5.8	0.53	0.78	0.53	60.4
Approach		393	2.4	0.204	3.1	NA	0.8	5.8	0.15	0.22	0.15	73.4
NorthWest: Jindy Andy Lane												
27	L2	112	0.0	0.132	8.8	LOS A	0.5	3.4	0.42	0.69	0.42	63.3
29	R2	9	0.0	0.034	17.6	LOS B	0.1	0.8	0.70	0.87	0.70	54.5
Approach		121	0.0	0.132	9.5	LOS A	0.5	3.4	0.44	0.71	0.44	62.5
SouthWest: Greenwell Point Road (SW)												
30	L2	5	0.0	0.165	7.0	LOS A	0.0	0.0	0.00	0.01	0.00	74.4
31	T1	309	3.1	0.165	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.7
Approach		315	3.0	0.165	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.6
All Vehicles		828	2.3	0.204	2.9	NA	0.8	5.8	0.13	0.21	0.13	73.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

▼ Site: 1 [5. Greenwell Pt-Mayfield (Future Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Mayfield Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Mayfield Road												
21	L2	12	0.0	0.020	8.1	LOS A	0.1	0.5	0.48	0.66	0.48	55.9
23	R2	1	0.0	0.020	15.2	LOS B	0.1	0.5	0.48	0.66	0.48	55.6
Approach		13	0.0	0.020	8.7	LOS A	0.1	0.5	0.48	0.66	0.48	55.9
NorthEast: Greenwell Point Road (NE)												
24	L2	3	0.0	0.226	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.5
25	T1	427	3.9	0.226	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
Approach		431	3.9	0.226	0.1	NA	0.0	0.0	0.00	0.00	0.00	79.8
SouthWest: Greenwell Point Road (SW)												
31	T1	178	9.5	0.112	0.7	LOS A	0.2	1.7	0.08	0.02	0.08	78.0
32	R2	6	0.0	0.112	13.3	LOS A	0.2	1.7	0.08	0.02	0.08	64.4
Approach		184	9.1	0.112	1.1	NA	0.2	1.7	0.08	0.02	0.08	77.5
All Vehicles		627	5.4	0.226	0.6	NA	0.2	1.7	0.03	0.02	0.03	78.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [5. Greenwell Pt-Mayfield (Future Fri PM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Mayfield Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Mayfield Road												
21	L2	6	0.0	0.036	6.6	LOS A	0.1	0.9	0.54	0.69	0.54	52.0
23	R2	6	16.7	0.036	20.8	LOS B	0.1	0.9	0.54	0.69	0.54	48.2
Approach		13	8.3	0.036	13.7	LOS A	0.1	0.9	0.54	0.69	0.54	50.0
NorthEast: Greenwell Point Road (NE)												
24	L2	1	0.0	0.117	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.6
25	T1	219	5.8	0.117	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
Approach		220	5.7	0.117	0.0	NA	0.0	0.0	0.00	0.00	0.00	79.9
SouthWest: Greenwell Point Road (SW)												
31	T1	458	1.6	0.261	0.2	LOS A	0.4	2.5	0.05	0.02	0.05	79.1
32	R2	15	0.0	0.261	9.8	LOS A	0.4	2.5	0.05	0.02	0.05	65.1
Approach		473	1.6	0.261	0.5	NA	0.4	2.5	0.05	0.02	0.05	78.5
All Vehicles		705	3.0	0.261	0.6	NA	0.4	2.5	0.04	0.03	0.04	78.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
 Vehicle movement LOS values are based on average delay per movement.  
 Minor Road Approach LOS values are based on average delay for all vehicle movements.  
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.  
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.  
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

▽ Site: 1 [5. Greenwell Pt-Mayfield (Future Sat-120th HH) ]

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Mayfield Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Mayfield Road												
21	L2	8	0.0	0.013	7.0	LOS A	0.0	0.3	0.41	0.60	0.41	56.6
23	R2	1	0.0	0.013	14.5	LOS A	0.0	0.3	0.41	0.60	0.41	56.3
Approach		9	0.0	0.013	7.8	LOS A	0.0	0.3	0.41	0.60	0.41	56.6
NorthEast: Greenwell Point Road (NE)												
24	L2	4	75.0	0.155	8.3	LOS A	0.0	0.0	0.00	0.01	0.00	51.3
25	T1	293	1.1	0.155	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	79.9
Approach		297	2.1	0.155	0.1	NA	0.0	0.0	0.00	0.01	0.00	79.3
SouthWest: Greenwell Point Road (SW)												
31	T1	311	1.7	0.182	0.4	LOS A	0.3	2.2	0.07	0.02	0.07	78.7
32	R2	12	0.0	0.182	10.8	LOS A	0.3	2.2	0.07	0.02	0.07	64.8
Approach		322	1.6	0.182	0.8	NA	0.3	2.2	0.07	0.02	0.07	78.1
All Vehicles		628	1.8	0.182	0.6	NA	0.3	2.2	0.04	0.03	0.04	78.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [6. Greenwell Pt-Millbank-Worrige (Future Fri AM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Millbank Road-Worrige Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Worrige Road												
1	L2	69	4.5	0.097	10.9	LOS A	0.3	2.5	0.47	0.94	0.47	54.0
2	T1	118	2.7	0.486	25.1	LOS B	2.5	17.7	0.83	1.12	1.23	44.9
3	R2	23	0.0	0.486	27.5	LOS B	2.5	17.7	0.83	1.12	1.23	45.3
Approach		211	3.0	0.486	20.7	LOS B	2.5	17.7	0.71	1.06	0.98	47.6
East: Greenwell Point Road (E)												
4	L2	14	0.0	0.218	7.0	LOS A	0.0	0.0	0.00	0.02	0.00	74.2
5	T1	402	3.1	0.218	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	79.5
6	R2	34	3.1	0.030	7.8	LOS A	0.1	0.8	0.33	0.61	0.33	62.8
Approach		449	3.0	0.218	0.8	NA	0.1	0.8	0.02	0.07	0.02	77.8
North: Millbank Road												
7	L2	16	20.0	0.018	11.0	LOS A	0.1	0.5	0.32	0.88	0.32	56.9
8	T1	26	12.0	0.159	21.4	LOS B	0.6	4.2	0.77	1.00	0.77	47.3
9	R2	12	0.0	0.159	28.4	LOS B	0.6	4.2	0.77	1.00	0.77	51.7
Approach		54	11.8	0.159	19.9	LOS B	0.6	4.2	0.64	0.97	0.64	50.7
West: Greenwell Point Road (W)												
10	L2	47	6.7	0.124	7.1	LOS A	0.0	0.0	0.00	0.14	0.00	69.7
11	T1	178	8.9	0.124	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	77.4
12	R2	61	5.2	0.069	9.1	LOS A	0.3	1.9	0.47	0.71	0.47	56.7
Approach		285	7.8	0.124	3.1	NA	0.3	1.9	0.10	0.26	0.10	70.6
All Vehicles		999	4.8	0.486	6.7	NA	2.5	17.7	0.22	0.38	0.28	65.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [6. Greenwell Pt-Millbank-Worrige (Future Fri PM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Millbank Road-Worrige Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Worrige Road												
1	L2	58	0.0	0.060	9.1	LOS A	0.2	1.5	0.32	0.88	0.32	56.1
2	T1	47	0.0	0.337	24.0	LOS B	1.4	9.7	0.83	1.05	1.02	44.6
3	R2	29	3.6	0.337	31.3	LOS C	1.4	9.7	0.83	1.05	1.02	44.0
Approach		135	0.8	0.337	19.2	LOS B	1.4	9.7	0.61	0.98	0.72	48.8
East: Greenwell Point Road (E)												
4	L2	22	9.5	0.117	7.1	LOS A	0.0	0.0	0.00	0.07	0.00	69.7
5	T1	197	5.3	0.117	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	78.8
6	R2	16	0.0	0.018	9.0	LOS A	0.1	0.5	0.47	0.67	0.47	62.8
Approach		235	5.4	0.117	1.3	NA	0.1	0.5	0.03	0.11	0.03	76.5
North: Millbank Road												
7	L2	24	0.0	0.035	11.6	LOS A	0.1	0.8	0.47	0.90	0.47	61.4
8	T1	54	2.0	0.303	24.6	LOS B	1.2	8.6	0.82	1.03	0.97	45.8
9	R2	18	0.0	0.303	31.4	LOS C	1.2	8.6	0.82	1.03	0.97	49.6
Approach		96	1.1	0.303	22.6	LOS B	1.2	8.6	0.73	1.00	0.84	49.7
West: Greenwell Point Road (W)												
10	L2	17	0.0	0.243	7.0	LOS A	0.0	0.0	0.00	0.02	0.00	74.2
11	T1	451	0.7	0.243	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	79.5
12	R2	115	0.9	0.100	7.8	LOS A	0.4	2.9	0.34	0.63	0.34	57.7
Approach		582	0.7	0.243	1.8	NA	0.4	2.9	0.07	0.14	0.07	73.8
All Vehicles		1047	1.8	0.337	5.8	NA	1.4	9.7	0.19	0.32	0.21	67.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [6. Greenwell Pt-Millbank-Worrigea (Future Sat-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Greenwell Point Road-Millbank Road-Worrigea Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Worrigea Road												
1	L2	77	0.0	0.087	9.5	LOS A	0.3	2.2	0.37	0.89	0.37	55.9
2	T1	29	3.6	0.215	17.1	LOS B	0.8	5.9	0.71	1.01	0.74	48.9
3	R2	40	2.6	0.215	19.3	LOS B	0.8	5.9	0.71	1.01	0.74	49.0
Approach		146	1.4	0.215	13.7	LOS A	0.8	5.9	0.53	0.95	0.55	52.4
East: Greenwell Point Road (E)												
4	L2	21	5.0	0.149	7.0	LOS A	0.0	0.0	0.00	0.05	0.00	71.7
5	T1	266	1.2	0.149	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	79.1
6	R2	19	0.0	0.018	8.0	LOS A	0.1	0.5	0.37	0.62	0.37	63.7
Approach		306	1.4	0.149	1.0	NA	0.1	0.5	0.02	0.08	0.02	77.4
North: Millbank Road												
7	L2	11	20.0	0.014	11.6	LOS A	0.0	0.4	0.38	0.87	0.38	56.6
8	T1	24	13.0	0.131	18.8	LOS B	0.5	3.6	0.70	1.01	0.70	49.7
9	R2	16	0.0	0.131	20.9	LOS B	0.5	3.6	0.70	1.01	0.70	54.6
Approach		51	10.4	0.131	17.9	LOS B	0.5	3.6	0.64	0.98	0.64	52.5
West: Greenwell Point Road (W)												
10	L2	21	5.0	0.152	7.0	LOS A	0.0	0.0	0.00	0.05	0.00	71.7
11	T1	269	1.2	0.152	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	79.1
12	R2	54	0.0	0.050	8.0	LOS A	0.2	1.3	0.37	0.64	0.37	57.6
Approach		344	1.2	0.152	1.7	NA	0.2	1.3	0.06	0.14	0.06	74.3
All Vehicles		847	1.9	0.215	4.5	NA	0.8	5.9	0.16	0.31	0.16	68.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [7. Princes Hwy-Kalandar (Future Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Kalandar Street

Friday AM (0800-0900) - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 135 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing

Reference Phase: Phase A

Input Phase Sequence: A, D, E, F, F1\*, F2\*

Output Phase Sequence: A, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	3	0.0	0.983	102.5	LOS F	42.4	310.7	1.00	1.16	1.79	21.2
2	T1	962	5.6	0.983	91.5	LOS F	42.4	310.7	1.00	1.16	1.59	25.4
3	R2	41	0.0	0.230	68.7	LOS E	2.6	18.0	0.96	0.74	0.96	25.0
Approach		1006	5.3	0.983	90.6	LOS F	42.4	310.7	1.00	1.14	1.57	25.4
East: Kalandar St (E)												
4	L2	41	10.3	1.059	126.6	LOS F	55.6	400.9	1.00	1.26	1.74	14.3
5	T1	318	3.3	1.059	121.0	LOS F	55.6	400.9	1.00	1.26	1.74	12.0
6	R2	809	2.9	1.059	138.8	LOS F	63.7	456.8	1.00	1.23	1.75	14.7
Approach		1168	3.2	1.059	133.5	LOS F	63.7	456.8	1.00	1.24	1.75	14.0
North: Princes Hwy (N)												
7	L2	279	7.2	0.202	6.9	LOS A	0.4	2.7	0.03	0.59	0.03	56.0
8	T1	898	7.3	1.043	123.2	LOS F	47.8	355.8	1.00	1.31	1.65	20.5
9	R2	157	11.4	0.963	100.8	LOS F	13.1	100.5	1.00	1.02	1.59	20.3
Approach		1334	7.7	1.043	96.3	LOS F	47.8	355.8	0.80	1.13	1.30	23.1
West: Kalandar St (W)												
10	L2	52	14.3	0.701	65.3	LOS E	13.4	97.7	1.00	0.85	1.04	27.9
11	T1	158	1.3	0.701	59.3	LOS E	13.4	97.7	1.00	0.85	1.04	23.1
12	R2	156	5.4	0.560	63.5	LOS E	9.7	70.9	0.98	0.81	0.98	26.9
Approach		365	4.9	0.701	62.0	LOS E	13.4	97.7	0.99	0.83	1.01	25.5
All Vehicles		3874	5.5	1.059	102.8	LOS F	63.7	456.8	0.93	1.14	1.48	20.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [7. Princes Hwy-Kalandar (Future Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Kalandar Street

Friday PM (1600-1700) - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 135 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing

Reference Phase: Phase A

Input Phase Sequence: A, D, E, F, F1\*, F2\*

Output Phase Sequence: A, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	12	0.0	0.647	48.2	LOS D	21.5	153.8	0.82	0.73	1.12	33.9
2	T1	785	2.5	0.647	39.0	LOS C	21.5	153.8	0.79	0.70	0.96	40.0
3	R2	114	0.9	0.693	74.5	LOS F	7.7	54.2	1.00	0.82	1.09	23.8
Approach		911	2.3	0.693	43.6	LOS D	21.5	153.8	0.82	0.72	0.97	37.4
East: Kalandar St (E)												
4	L2	102	1.0	1.232	266.2	LOS F	65.8	468.3	1.00	1.61	2.50	8.3
5	T1	254	2.5	1.232	260.7	LOS F	65.8	468.3	1.00	1.61	2.50	6.8
6	R2	587	1.8	1.232	279.1	LOS F	71.4	507.2	1.00	1.55	2.51	8.4
Approach		943	1.9	1.232	272.8	LOS F	71.4	507.2	1.00	1.57	2.51	7.9
North: Princes Hwy (N)												
7	L2	856	1.1	0.667	8.4	LOS A	4.6	32.4	0.13	0.68	0.26	54.6
8	T1	1302	3.1	1.249	282.0	LOS F	119.5	858.6	0.99	1.97	2.49	10.6
9	R2	138	5.3	0.880	83.9	LOS F	10.2	74.8	1.00	0.93	1.37	23.0
Approach		2296	2.5	1.249	168.1	LOS F	119.5	858.6	0.67	1.43	1.59	14.9
West: Kalandar St (W)												
10	L2	109	9.6	1.234	285.3	LOS F	66.0	471.5	1.00	1.91	2.53	9.0
11	T1	317	0.0	1.234	279.5	LOS F	66.0	471.5	1.00	1.91	2.53	6.9
12	R2	303	1.0	0.925	83.5	LOS F	23.6	167.0	1.00	1.00	1.35	23.1
Approach		729	1.9	1.234	198.9	LOS F	66.0	471.5	1.00	1.53	2.04	10.9
All Vehicles		4879	2.2	1.249	169.7	LOS F	119.5	858.6	0.81	1.34	1.72	14.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [ 7. Princes Hwy-Kalandar (Future Sat-120th HH) ]

13S1231000 - West Culburra Subdivision

Princes Highway-Kalandar Street

Saturday - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 135 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing

Reference Phase: Phase A

Input Phase Sequence: A, D, E, F, F1\*, F2\*

Output Phase Sequence: A, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	5	20.0	0.693	44.2	LOS D	25.3	181.2	0.80	0.72	1.11	33.9
2	T1	960	2.6	0.693	34.5	LOS C	25.3	181.2	0.77	0.69	0.94	42.1
3	R2	117	4.5	1.096	176.2	LOS F	13.4	97.2	1.00	1.19	2.14	12.5
Approach		1082	2.9	1.096	49.9	LOS D	25.3	181.2	0.80	0.74	1.07	34.9
East: Kalandar St (E)												
4	L2	93	0.0	1.089	151.3	LOS F	44.5	312.9	1.00	1.32	1.92	12.8
5	T1	217	0.5	1.089	145.7	LOS F	44.5	312.9	1.00	1.32	1.92	10.6
6	R2	560	0.9	1.089	164.3	LOS F	49.7	350.5	1.00	1.29	1.92	13.0
Approach		869	0.7	1.089	158.3	LOS F	49.7	350.5	1.00	1.30	1.92	12.4
North: Princes Hwy (N)												
7	L2	505	0.2	0.365	7.0	LOS A	0.9	6.4	0.03	0.60	0.03	56.1
8	T1	1386	1.0	1.112	164.0	LOS F	94.7	668.7	0.99	1.58	1.89	16.6
9	R2	91	11.6	0.904	89.5	LOS F	6.9	53.2	1.00	0.96	1.51	21.9
Approach		1982	1.3	1.112	120.6	LOS F	94.7	668.7	0.75	1.30	1.40	19.7
West: Kalandar St (W)												
10	L2	66	1.6	0.775	67.6	LOS E	15.9	111.7	1.00	0.90	1.10	27.3
11	T1	173	0.0	0.775	62.0	LOS E	15.9	111.7	1.00	0.90	1.10	22.4
12	R2	173	0.6	0.600	63.8	LOS E	10.8	75.9	0.98	0.81	0.98	27.1
Approach		412	0.5	0.775	63.6	LOS E	15.9	111.7	0.99	0.86	1.05	25.3
All Vehicles		4345	1.5	1.112	105.1	LOS F	94.7	668.7	0.83	1.12	1.39	20.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

▼ **Site: 1 [8. Coonamia-Currarong-Forest (Future Fri AM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Coonamia Road- Currarong Road-Forest Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Currarong Road												
5	T1	13	0.0	0.042	0.9	LOS A	0.2	1.2	0.33	0.49	0.33	83.6
6	R2	40	0.0	0.042	8.6	LOS A	0.2	1.2	0.33	0.49	0.33	76.1
Approach		53	0.0	0.042	6.7	NA	0.2	1.2	0.33	0.49	0.33	77.8
North: Coonamia Road												
7	L2	7	0.0	0.007	8.4	LOS A	0.0	0.2	0.23	0.60	0.23	73.9
9	R2	84	1.3	0.123	9.4	LOS A	0.5	3.5	0.37	0.68	0.37	71.4
Approach		92	1.1	0.123	9.3	LOS A	0.5	3.5	0.36	0.67	0.36	71.6
West: Forest Road												
10	L2	214	2.0	0.127	7.9	LOS A	0.0	0.0	0.00	0.61	0.00	74.7
11	T1	19	5.6	0.127	0.0	LOS A	0.0	0.0	0.00	0.61	0.00	83.5
Approach		233	2.3	0.127	7.3	NA	0.0	0.0	0.00	0.61	0.00	75.3
All Vehicles		377	1.7	0.127	7.7	NA	0.5	3.5	0.13	0.61	0.13	74.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

▽ Site: 1 [8. Coonamia-Currarong-Forest (Future Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Coonamia Road- Currarong Road-Forest Road  
 Friday PM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Currarong Road												
5	T1	15	0.0	0.020	0.6	LOS A	0.1	0.6	0.26	0.32	0.26	88.0
6	R2	15	0.0	0.020	8.4	LOS A	0.1	0.6	0.26	0.32	0.26	79.7
Approach		29	0.0	0.020	4.5	NA	0.1	0.6	0.26	0.32	0.26	83.6
North: Coonamia Road												
7	L2	37	0.0	0.034	8.3	LOS A	0.1	0.9	0.22	0.61	0.22	74.0
9	R2	201	4.2	0.283	9.4	LOS A	1.3	9.6	0.39	0.68	0.39	70.5
Approach		238	3.5	0.283	9.2	LOS A	1.3	9.6	0.36	0.67	0.36	71.0
West: Forest Road												
10	L2	156	5.4	0.105	8.0	LOS A	0.0	0.0	0.00	0.55	0.00	74.6
11	T1	34	3.1	0.105	0.0	LOS A	0.0	0.0	0.00	0.55	0.00	85.0
Approach		189	5.0	0.105	6.6	NA	0.0	0.0	0.00	0.55	0.00	76.3
All Vehicles		457	3.9	0.283	7.8	NA	1.3	9.6	0.20	0.60	0.20	73.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## ▽ Site: 1 [8. Coonamia-Currarong-Forest (Future Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Coonamia Road- Currarong Road-Forest Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Currarong Road												
5	T1	11	0.0	0.028	0.7	LOS A	0.1	0.8	0.29	0.45	0.29	84.6
6	R2	26	0.0	0.028	8.4	LOS A	0.1	0.8	0.29	0.45	0.29	76.9
Approach		37	0.0	0.028	6.2	NA	0.1	0.8	0.29	0.45	0.29	78.9
North: Coonamia Road												
7	L2	29	0.0	0.027	8.3	LOS A	0.1	0.7	0.21	0.61	0.21	74.0
9	R2	174	1.8	0.240	9.1	LOS A	1.1	7.7	0.37	0.67	0.37	71.5
Approach		203	1.6	0.240	9.0	LOS A	1.1	7.7	0.34	0.67	0.34	71.9
West: Forest Road												
10	L2	173	0.6	0.103	7.9	LOS A	0.0	0.0	0.00	0.60	0.00	75.5
11	T1	19	0.0	0.103	0.0	LOS A	0.0	0.0	0.00	0.60	0.00	83.8
Approach		192	0.5	0.103	7.1	NA	0.0	0.0	0.00	0.60	0.00	76.2
All Vehicles		432	1.0	0.240	7.9	NA	1.1	7.7	0.19	0.62	0.19	74.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Site: 1 [9. Kalandar St-Kinghorne St (Future Fri AM-120th HH)]**

13S1231000 - West Culburra Subdivision  
 Kalandar Street-Kinghorne Street-Albatross Road  
 Friday AM (0800-0900) - Equivalent 120th HH  
 Site Category: (None)  
 Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Kinghorne Street												
1b	L3	31	6.9	0.739	18.0	LOS B	10.7	76.9	1.00	1.15	1.50	45.1
2	T1	483	3.5	0.739	17.8	LOS B	10.7	76.9	1.00	1.15	1.50	46.3
3	R2	60	0.0	0.739	21.5	LOS B	10.7	76.9	1.00	1.15	1.50	46.2
Approach		574	3.3	0.739	18.2	LOS B	10.7	76.9	1.00	1.15	1.50	46.2
East: Kalandar Street												
4	L2	31	0.0	0.439	5.7	LOS A	2.8	20.9	0.47	0.62	0.47	52.4
4a	L1	293	8.3	0.439	5.8	LOS A	2.8	20.9	0.47	0.62	0.47	52.9
6	R2	159	2.0	0.439	9.9	LOS A	2.8	20.9	0.47	0.62	0.47	53.2
Approach		482	5.7	0.439	7.2	LOS A	2.8	20.9	0.47	0.62	0.47	53.0
North: Kinghorne Street												
7	L2	132	4.0	0.341	6.2	LOS A	2.3	16.9	0.59	0.68	0.59	51.8
8	T1	31	0.0	0.341	6.3	LOS A	2.3	16.9	0.59	0.68	0.59	53.0
9a	R1	176	3.6	0.341	9.4	LOS A	2.3	16.9	0.59	0.68	0.59	52.2
Approach		338	3.4	0.341	7.8	LOS A	2.3	16.9	0.59	0.68	0.59	52.1
SouthWest: Albatross Road												
30a	L1	261	4.4	0.764	19.9	LOS B	10.5	77.3	1.00	1.23	1.59	44.2
32a	R1	211	7.5	0.764	23.4	LOS B	10.5	77.3	1.00	1.23	1.59	43.9
32b	R3	11	20.0	0.764	26.0	LOS B	10.5	77.3	1.00	1.23	1.59	44.1
Approach		482	6.1	0.764	21.6	LOS B	10.5	77.3	1.00	1.23	1.59	44.1
All Vehicles		1876	4.7	0.764	14.4	LOS A	10.7	77.3	0.79	0.95	1.09	48.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
 Vehicle movement LOS values are based on average delay per movement.  
 Intersection and Approach LOS values are based on average delay for all vehicle movements.  
 Roundabout Capacity Model: SIDRA Standard.  
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.  
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [9. Kalandar St-Kinghorne St (Future Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision  
 Kalandar Street-Kinghorne Street-Albatross Road  
 Friday AM (1600-1700) - Equivalent 120th HH  
 Site Category: (None)  
 Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Kinghorne Street												
1b	L3	34	0.0	0.579	12.6	LOS A	5.8	40.4	0.91	0.99	1.12	48.2
2	T1	326	0.0	0.579	12.6	LOS A	5.8	40.4	0.91	0.99	1.12	49.4
3	R2	78	0.0	0.579	16.5	LOS B	5.8	40.4	0.91	0.99	1.12	49.2
Approach		438	0.0	0.579	13.3	LOS A	5.8	40.4	0.91	0.99	1.12	49.3
East: Kalandar Street												
4	L2	41	0.0	0.448	7.0	LOS A	3.0	21.0	0.63	0.72	0.63	51.9
4a	L1	245	0.0	0.448	6.9	LOS A	3.0	21.0	0.63	0.72	0.63	52.6
6	R2	118	0.0	0.448	11.2	LOS A	3.0	21.0	0.63	0.72	0.63	52.7
Approach		404	0.0	0.448	8.1	LOS A	3.0	21.0	0.63	0.72	0.63	52.6
North: Kinghorne Street												
7	L2	319	0.0	0.773	12.7	LOS A	11.3	78.9	0.98	1.03	1.31	47.9
8	T1	80	0.0	0.773	13.0	LOS A	11.3	78.9	0.98	1.03	1.31	48.8
9a	R1	304	0.0	0.773	15.9	LOS B	11.3	78.9	0.98	1.03	1.31	48.3
Approach		703	0.0	0.773	14.1	LOS A	11.3	78.9	0.98	1.03	1.31	48.2
SouthWest: Albatross Road												
30a	L1	300	0.0	0.780	15.1	LOS B	11.6	81.0	1.00	1.13	1.46	46.8
32a	R1	331	0.0	0.780	18.5	LOS B	11.6	81.0	1.00	1.13	1.46	46.6
32b	R3	15	0.0	0.780	20.4	LOS B	11.6	81.0	1.00	1.13	1.46	47.2
Approach		645	0.0	0.780	17.0	LOS B	11.6	81.0	1.00	1.13	1.46	46.7
All Vehicles		2191	0.0	0.780	13.7	LOS A	11.6	81.0	0.91	0.99	1.19	48.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [9. Kalandar St-Kinghorne St (Future Sat-120th HH)]

13S1231000 - West Culburra Subdivision  
 Kalandar Street-Kinghorne Street-Albatross Road  
 Saturday - Equivalent 120th HH  
 Site Category: (None)  
 Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Kinghorne Street												
1b	L3	21	10.0	0.227	7.5	LOS A	1.4	10.0	0.60	0.66	0.60	51.3
2	T1	162	1.3	0.227	7.2	LOS A	1.4	10.0	0.60	0.66	0.60	53.0
3	R2	29	0.0	0.227	11.1	LOS A	1.4	10.0	0.60	0.66	0.60	52.8
Approach		213	2.0	0.227	7.8	LOS A	1.4	10.0	0.60	0.66	0.60	52.8
East: Kalandar Street												
4	L2	22	0.0	0.272	5.4	LOS A	1.5	10.8	0.38	0.59	0.38	52.7
4a	L1	181	7.0	0.272	5.4	LOS A	1.5	10.8	0.38	0.59	0.38	53.3
6	R2	98	1.1	0.272	9.6	LOS A	1.5	10.8	0.38	0.59	0.38	53.5
Approach		301	4.5	0.272	6.8	LOS A	1.5	10.8	0.38	0.59	0.38	53.3
North: Kinghorne Street												
7	L2	153	0.7	0.314	5.9	LOS A	2.0	14.4	0.53	0.66	0.53	52.2
8	T1	21	0.0	0.314	6.2	LOS A	2.0	14.4	0.53	0.66	0.53	53.3
9a	R1	157	2.7	0.314	9.2	LOS A	2.0	14.4	0.53	0.66	0.53	52.6
Approach		331	1.6	0.314	7.5	LOS A	2.0	14.4	0.53	0.66	0.53	52.4
SouthWest: Albatross Road												
30a	L1	161	1.3	0.378	6.1	LOS A	2.6	18.5	0.57	0.67	0.57	52.5
32a	R1	216	0.5	0.378	9.4	LOS A	2.6	18.5	0.57	0.67	0.57	52.2
32b	R3	20	10.5	0.378	11.6	LOS A	2.6	18.5	0.57	0.67	0.57	52.5
Approach		397	1.3	0.378	8.2	LOS A	2.6	18.5	0.57	0.67	0.57	52.3
All Vehicles		1241	2.3	0.378	7.6	LOS A	2.6	18.5	0.52	0.65	0.52	52.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# USER REPORT FOR NETWORK SITE

Project: 200225sid-N186580 West Culburra Subdivision

Template: Default Site User Report (2)

Site: 1 [10a. Princes Hwy-Forest (Future Fri AM-120th HH)]

Network: 5 [10. Princes Hwy-Forest (Future Fri AM-120th HH)]

Site Category: -  
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total	Arrival Flows HV	Flows Total	Flows HV	Deg. Satn	Average Delay	Level of Service	Aver. Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Aver. Cycles	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Princes Highway														
3	R2	38	8.3	38	8.3	0.051	11.0	LOS A	0.1	0.6	0.52	0.75	0.52	67.5
Approach		38	8.3	38	8.3	0.051	11.0	NA	0.1	0.6	0.52	0.75	0.52	67.5
East: Forest Road														
4	L2	47	2.2	47	2.2	0.038	8.8	LOS A	0.1	0.4	0.35	0.64	0.35	71.6
6a	R1	107	2.0	107	2.0	0.250	14.9	LOS B	0.4	2.9	0.66	0.88	0.72	55.6
Approach		155	2.0	155	2.0	0.250	13.0	LOS A	0.4	2.9	0.56	0.81	0.60	62.0
North: Princes Highway														
7	L2	63	8.3	63	8.3	0.042	8.7	LOS A	0.1	0.5	0.11	0.60	0.11	70.9
8	T1	521	16.0	521	16.0	0.147	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	99.9
Approach		584	15.1	584	15.1	0.147	0.9	LOS A	0.1	0.5	0.01	0.07	0.01	95.6
All Vehicles		777	12.2	777	12.2	0.250	3.8	NA	0.4	2.9	0.15	0.25	0.16	87.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# USER REPORT FOR NETWORK SITE

Project: 200225sid-N186580 West Culburra Subdivision

Template: Default Site User Report (2)

Site: 1 [10a. Princes Hwy-Forest (Future Fri PM-120th HH)]

Network: 6 [10. Princes Hwy-Forest (Future Fri PM-120th HH)]

Site Category: -  
Giveway / Yield (Two-Way)

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total	Arrival Flows HV	Flows HV	Deg. Satn	Average Delay	Level of Service	Aver. Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Aver. Cycles	No. Average Speed	Average
		veh/h	% veh/h	%	v/c	sec		veh	m				km/h	
South: Princes Highway														
3	R2	61	1.7	61	1.7	0.249	24.1	LOS B	0.3	2.4	0.88	0.97	0.97	55.6
Approach		61	1.7	61	1.7	0.249	24.1	NA	0.3	2.4	0.88	0.97	0.97	55.6
East: Forest Road														
4	L2	60	0.0	60	0.0	0.076	11.1	LOS A	0.1	0.8	0.57	0.81	0.57	70.5
6a	R1	72	1.5	72	1.5	0.872	126.0	LOS F	1.7	11.8	0.99	1.17	2.11	12.8
Approach		132	0.8	132	0.8	0.872	73.6	LOS F	1.7	11.8	0.80	1.01	1.41	26.2
North: Princes Highway														
7	L2	157	2.0	157	2.0	0.102	8.6	LOS A	0.2	1.2	0.15	0.60	0.15	72.7
8	T1	1475	2.0	1475	2.0	0.383	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	99.7
Approach		1632	2.0	1632	2.0	0.383	0.9	LOS A	0.2	1.2	0.01	0.06	0.01	96.2
All Vehicles		1824	1.9	1824	1.9	0.872	6.9	NA	1.7	11.8	0.10	0.16	0.15	82.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# USER REPORT FOR NETWORK SITE

Project: 200225sid-N186580 West Culburra Subdivision

Template: Default Site User Report (2)

Site: 1 [10a. Princes Hwy-Forest (Future Fri PM-120th HH)]

Network: 6 [10. Princes Hwy-Forest (Future Fri PM-120th HH)]

Site Category: -  
Giveway / Yield (Two-Way)

Movement Performance - Vehicles														
Mov ID	Turn	Demand Flows Total	Arrival Flows HV	Flows Total	Flows HV	Deg. Satn	Average Delay	Level of Service	Aver. Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Princes Highway														
3	R2	61	1.7	61	1.7	0.249	24.1	LOS B	0.3	2.4	0.88	0.97	0.97	55.6
Approach		61	1.7	61	1.7	0.249	24.1	NA	0.3	2.4	0.88	0.97	0.97	55.6
East: Forest Road														
4	L2	60	0.0	60	0.0	0.076	11.1	LOS A	0.1	0.8	0.57	0.81	0.57	70.5
6a	R1	72	1.5	72	1.5	0.872	126.0	LOS F	1.7	11.8	0.99	1.17	2.11	12.8
Approach		132	0.8	132	0.8	0.872	73.6	LOS F	1.7	11.8	0.80	1.01	1.41	26.2
North: Princes Highway														
7	L2	157	2.0	157	2.0	0.102	8.6	LOS A	0.2	1.2	0.15	0.60	0.15	72.7
8	T1	1475	2.0	1475	2.0	0.383	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	99.7
Approach		1632	2.0	1632	2.0	0.383	0.9	LOS A	0.2	1.2	0.01	0.06	0.01	96.2
All Vehicles		1824	1.9	1824	1.9	0.872	6.9	NA	1.7	11.8	0.10	0.16	0.15	82.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Organisation: GTA CONSULTANTS | Created: Thursday, 19 March 2020 6:10:45 PM

Project: P:\N18600-18699\N186580 West Culburra Concept Plan\Modelling\200225sid-N186580 West Culburra Subdivision.sip8

# USER REPORT FOR SITE

 **Project: 200225sid-N186580 West Culburra Subdivision**

**Template: GTA Appendix**

## **Site: 1 [11. Princes Hwy-Moss (Future Fri AM-120th HH)]**

13S1231000 - West Culburra Subdivision

Princes Highway-Moss Street

Friday AM (0800-0900) - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 135 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing/timing

Reference Phase: Phase A

Input Phase Sequence: A, B, D, E, F, F1\*, F2\*

Output Phase Sequence: A, B, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	5	0.0	0.967	95.2	LOS F	24.0	178.7	1.00	1.09	1.59	24.0
2	T1	921	7.7	1.046	115.5	LOS F	31.7	236.7	1.00	1.21	1.67	21.6
3	R2	158	4.0	0.738	72.3	LOS F	10.6	76.9	1.00	0.85	1.10	27.1
Approach		1084	7.1	1.046	109.1	LOS F	31.7	236.7	1.00	1.15	1.59	22.2
East: Moss St (E)												
4	L2	37	2.9	0.396	51.3	LOS D	9.6	69.8	0.89	0.75	0.89	32.2
5	T1	238	4.4	1.074	92.4	LOS F	42.1	306.6	0.94	1.02	1.32	21.7
6	R2	268	4.7	1.074	158.6	LOS F	42.1	306.6	1.00	1.39	1.89	16.2
Approach		543	4.5	1.074	122.3	LOS F	42.1	306.6	0.97	1.19	1.57	18.9
North: Princes Hwy (N)												
7	L2	196	4.8	1.065	121.9	LOS F	51.7	380.7	1.00	1.25	1.70	17.6
8	T1	1445	6.8	1.065	130.3	LOS F	57.1	423.1	1.00	1.36	1.71	19.0
9	R2	380	3.6	1.049	116.3	LOS F	32.0	230.8	1.00	1.14	1.77	17.5
Approach		2021	6.0	1.065	126.9	LOS F	57.1	423.1	1.00	1.31	1.72	18.6
West: Moss St (W)												
10	L2	126	10.0	0.177	18.1	LOS B	3.0	22.8	0.66	0.71	0.66	42.3
11	T1	138	3.8	0.543	53.7	LOS D	11.2	82.6	0.95	0.79	0.95	28.7
12	R2	49	12.8	0.543	58.9	LOS E	11.2	82.6	0.96	0.80	0.96	29.6
Approach		314	7.7	0.543	40.2	LOS C	11.2	82.6	0.84	0.76	0.84	33.1
All Vehicles		3962	6.2	1.074	114.5	LOS F	57.1	423.1	0.98	1.20	1.59	20.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [11. Princes Hwy-Moss (Future Fri PM-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Moss Street

Friday PM (1600-1700) - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing/timing

Reference Phase: Phase A

Input Phase Sequence: A, B, D, E, F, F1\*, F2\*

Output Phase Sequence: A, B, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	12	0.0	1.070	135.8	LOS F	33.3	239.3	1.00	1.28	1.85	17.4
2	T1	1128	3.1	1.158	183.2	LOS F	49.4	354.7	1.00	1.49	2.12	14.9
3	R2	115	0.0	0.454	61.3	LOS E	6.6	46.2	0.97	0.79	0.97	29.5
Approach		1255	2.8	1.158	171.6	LOS F	49.4	354.7	1.00	1.42	2.02	15.6
East: Moss St (E)												
4	L2	36	2.9	0.339	50.3	LOS D	7.0	49.1	0.90	0.74	0.90	32.4
5	T1	158	0.0	0.919	55.2	LOS D	21.4	151.7	0.94	0.86	1.08	28.1
6	R2	240	1.8	0.919	75.0	LOS F	21.4	151.7	1.00	1.06	1.37	26.3
Approach		434	1.2	0.919	65.7	LOS E	21.4	151.7	0.97	0.96	1.22	27.4
North: Princes Hwy (N)												
7	L2	209	4.0	0.981	87.3	LOS F	41.7	301.2	1.00	1.17	1.67	24.9
8	T1	1344	3.5	0.981	80.9	LOS F	42.0	302.8	1.00	1.16	1.47	27.4
9	R2	408	0.8	1.152	193.4	LOS F	44.2	311.7	1.00	1.33	2.29	12.8
Approach		1962	3.0	1.152	105.0	LOS F	44.2	311.7	1.00	1.20	1.66	22.0
West: Moss St (W)												
10	L2	506	1.2	0.637	19.9	LOS B	13.1	92.8	0.84	0.82	0.84	42.6
11	T1	255	0.0	1.212	257.3	LOS F	56.2	394.0	1.00	1.95	2.56	10.8
12	R2	135	0.8	1.212	261.9	LOS F	56.2	394.0	1.00	1.95	2.56	11.0
Approach		896	0.8	1.212	123.8	LOS F	56.2	394.0	0.91	1.31	1.59	18.7
All Vehicles		4546	2.3	1.212	123.3	LOS F	56.2	394.0	0.98	1.26	1.70	19.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 1 [11. Princes Hwy-Moss (Future Sat-120th HH)]

13S1231000 - West Culburra Subdivision

Princes Highway-Moss Street

Saturday - Equivalent 120th HH

Site Category: (None)

Signals - Fixed Time Coordinated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

### Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: GTA - RMS/Video survey phasing/timing

Reference Phase: Phase A

Input Phase Sequence: A, B, D, E, F, F1\*, F2\*

Output Phase Sequence: A, B, D, E, F

(\* Variable Phase)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Princes Hwy (S)												
1	L2	14	0.0	0.889	69.4	LOS E	25.7	184.1	1.00	0.99	1.32	28.9
2	T1	1181	2.7	0.962	73.6	LOS F	32.1	230.0	1.00	1.06	1.35	29.1
3	R2	104	0.0	0.561	68.7	LOS E	6.5	45.7	1.00	0.79	1.00	27.8
Approach		1299	2.4	0.962	73.2	LOS F	32.1	230.0	1.00	1.04	1.32	28.9
East: Moss St (E)												
4	L2	35	0.0	0.186	48.6	LOS D	4.0	28.0	0.85	0.70	0.85	32.9
5	T1	84	0.0	0.506	46.7	LOS D	11.0	78.3	0.89	0.75	0.89	29.9
6	R2	154	2.1	0.506	54.0	LOS D	11.0	78.3	0.94	0.80	0.94	30.9
Approach		273	1.2	0.506	51.1	LOS D	11.0	78.3	0.91	0.77	0.91	30.8
North: Princes Hwy (N)												
7	L2	120	2.6	0.783	51.2	LOS D	26.0	184.6	0.92	0.87	1.22	33.3
8	T1	1312	1.5	0.783	43.8	LOS D	26.6	188.7	0.93	0.84	1.02	37.9
9	R2	258	0.8	0.956	68.3	LOS E	15.3	107.8	1.00	1.02	1.52	27.9
Approach		1689	1.5	0.956	48.1	LOS D	26.6	188.7	0.94	0.87	1.11	35.6
West: Moss St (W)												
10	L2	311	0.0	0.435	20.9	LOS B	7.5	52.2	0.79	0.78	0.79	42.4
11	T1	163	0.0	0.726	54.8	LOS D	16.3	114.6	1.00	0.87	1.04	28.3
12	R2	103	1.0	0.726	59.3	LOS E	16.3	114.6	1.00	0.87	1.04	30.1
Approach		577	0.2	0.726	37.3	LOS C	16.3	114.6	0.88	0.82	0.90	34.9
All Vehicles		3838	1.6	0.962	55.2	LOS D	32.1	230.0	0.95	0.91	1.14	32.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

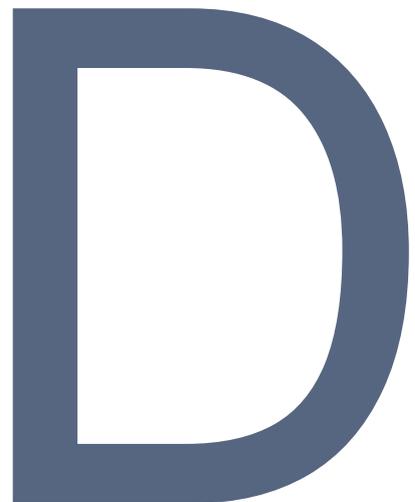
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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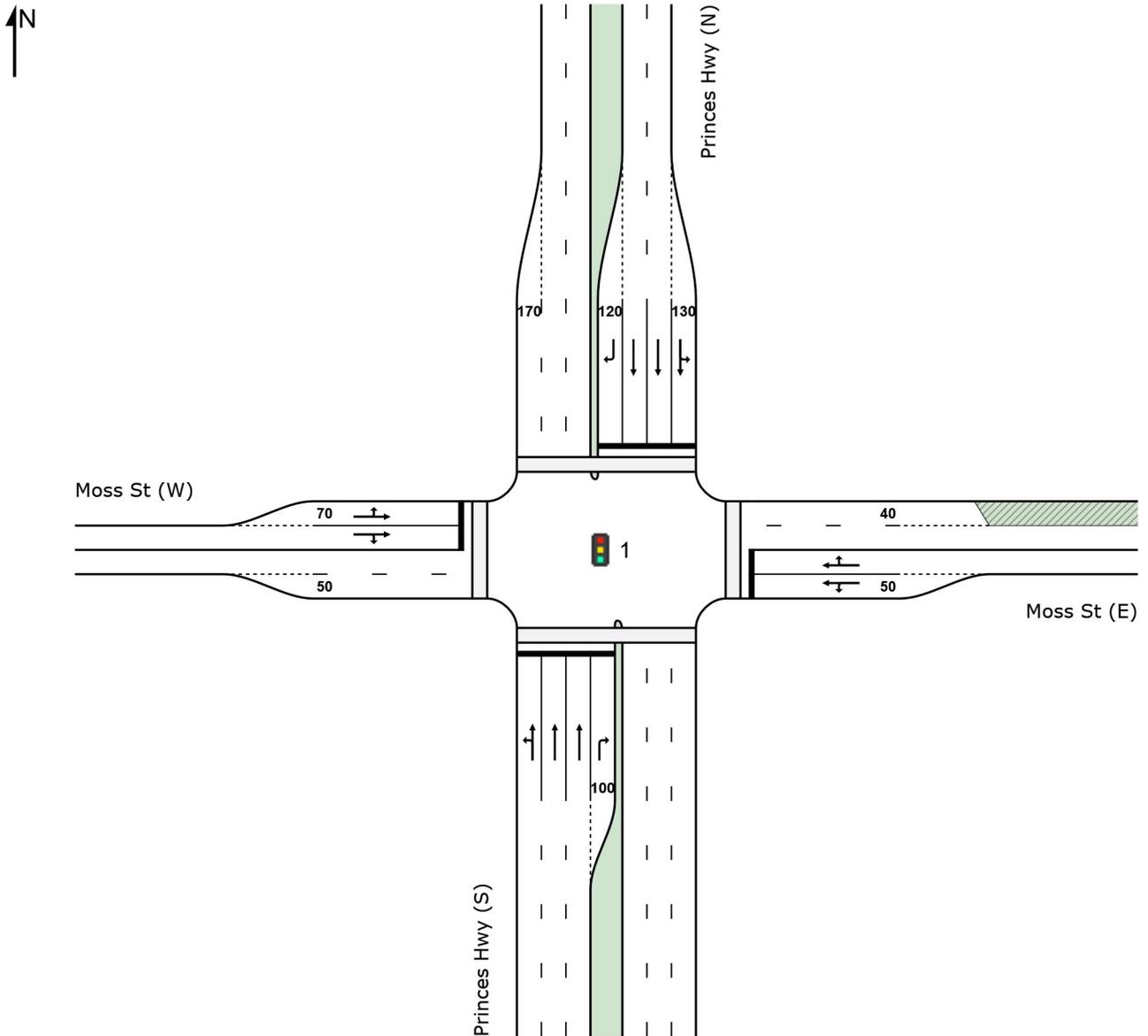
# D. SIDRA INTERSECTION LAYOUTS



# SITE LAYOUT

## Site: 1 [11. Princes Hwy-Moss (Ex Fri AM-120th HH)]

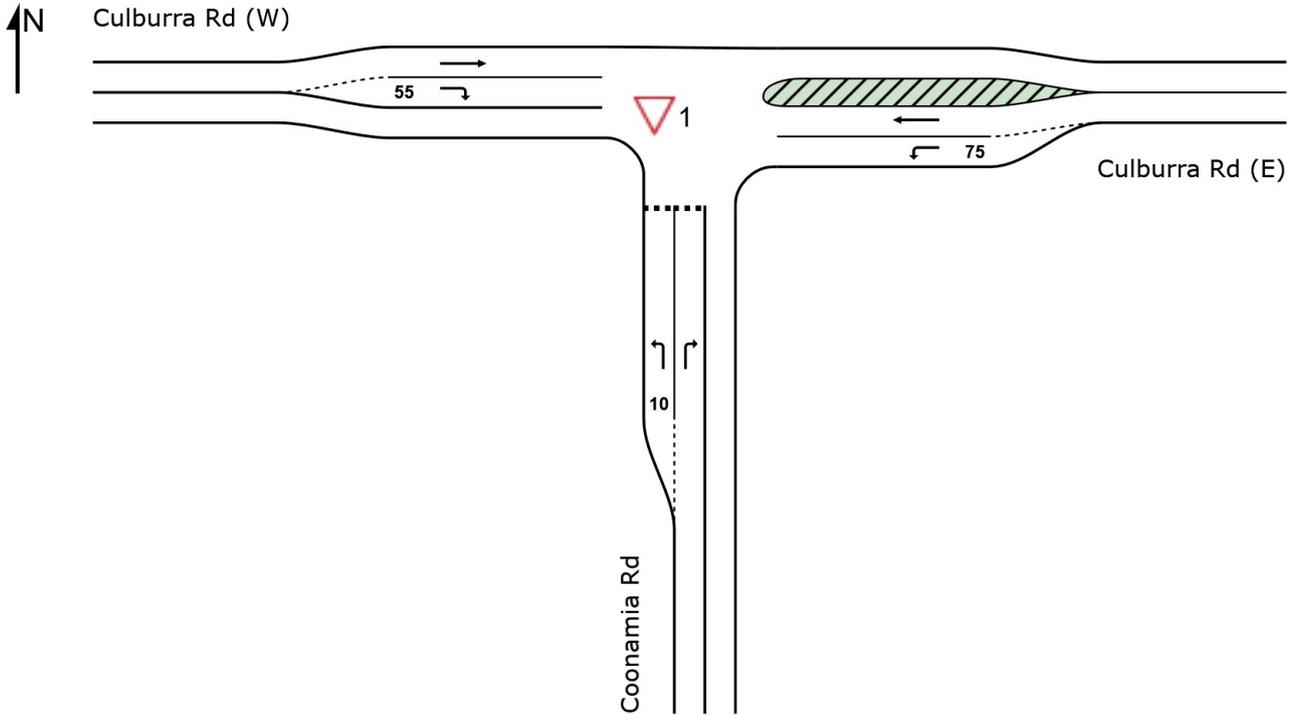
13S1231000 - West Culburra Subdivision  
Princes Highway-Moss Street  
Friday AM (0800-0900) - Equivalent 120th HH  
Site Category: (None)  
Signals - Fixed Time Coordinated



# SITE LAYOUT

## ▽ Site: 1 [1. Culburra -Coonamia (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
Culburra Road-Coonamia Road  
Friday AM (0800-0900) - Equivalent 120th HH  
Site Category: (None)  
Giveaway / Yield (Two-Way)



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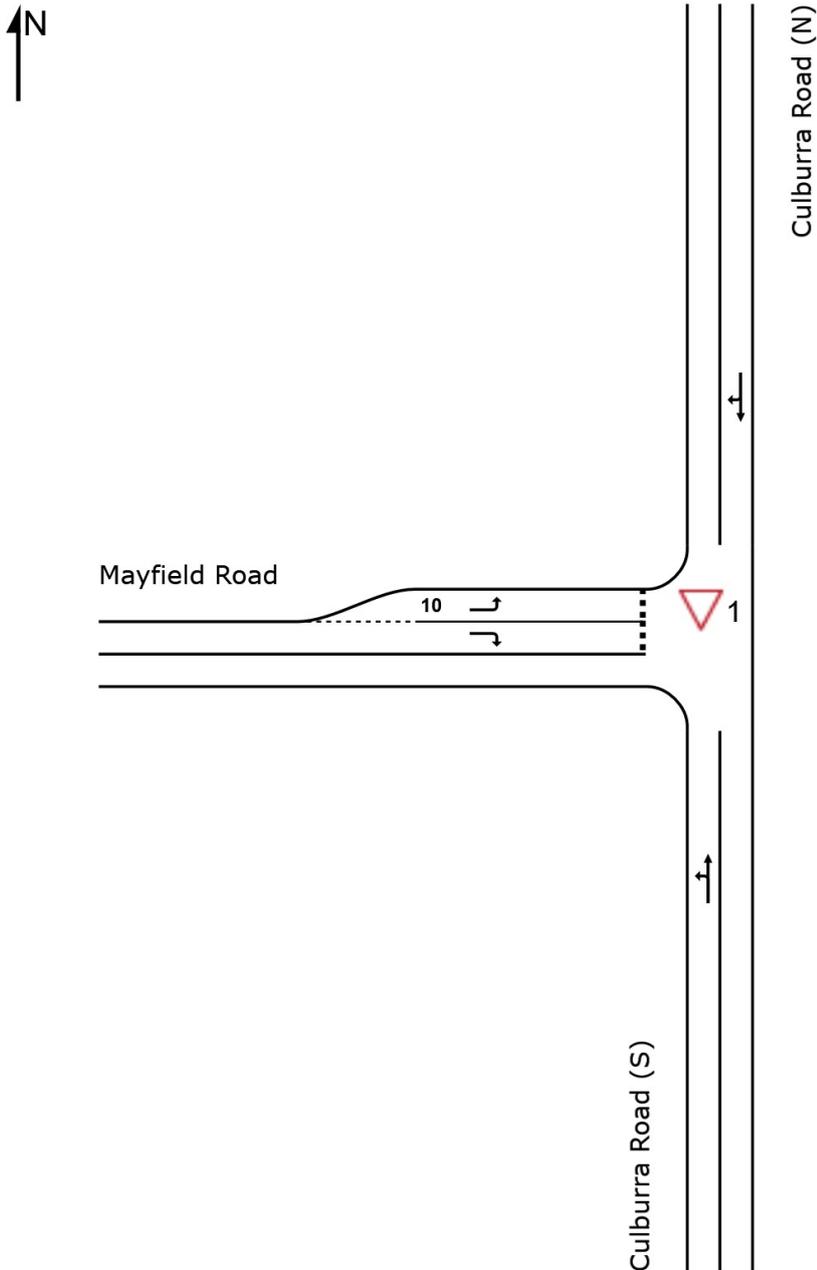
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Project: \\gta.com.au\projectfiles\ProjectFilesSyd\N18600-18699\N186580 West Culburra Concept Plan\Modelling\200225sid-N186580 West Culburra Subdivision.sip8

# SITE LAYOUT

## ▽ Site: 1 [2. Culburra-Mayfield (Ex Fri AM-120th HH)]

Culburra Road-Mayfield Road  
Friday AM (0800-0900) - Equivalent 120th HH  
Existing  
Site Category: (None)  
Giveaway / Yield (Two-Way)

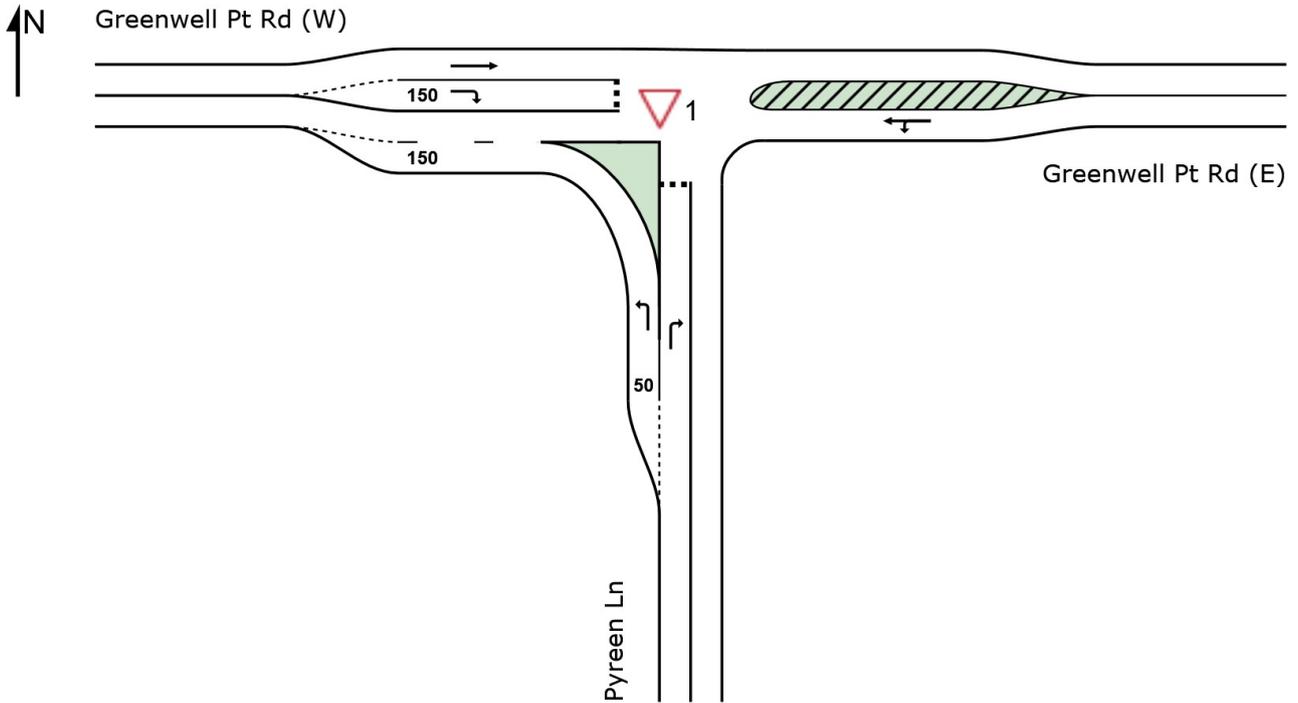




# SITE LAYOUT

## ▽ Site: 1 [3. Greenwell Pt-Pyree (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
Greenwell Point Road-Pyree Lane  
Friday AM (0800-0900) - Equivalent 120th HH  
Site Category: (None)  
Giveaway / Yield (Two-Way)



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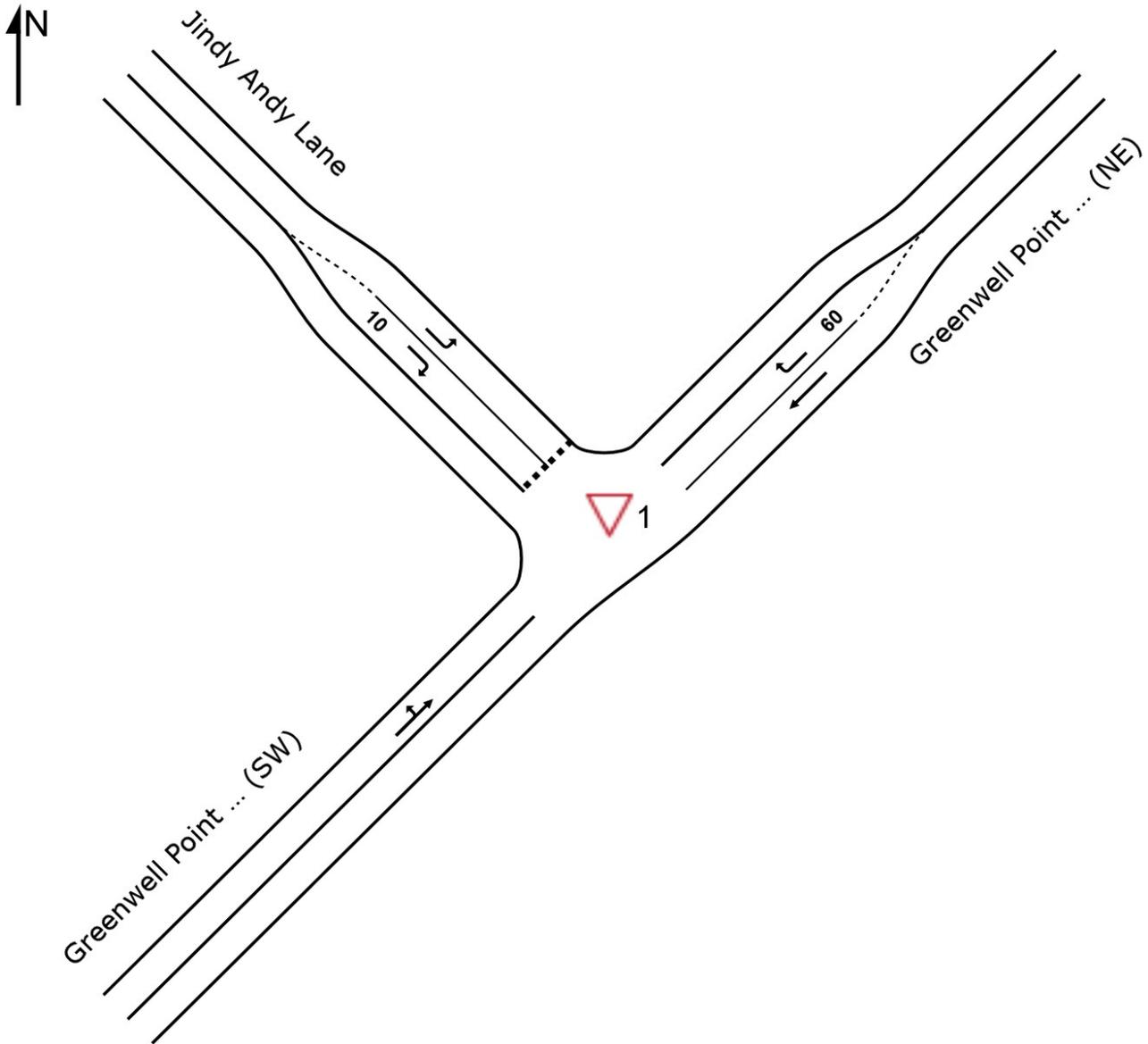
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Project: \\gta.com.au\projectfiles\ProjectFilesSyd\N18600-18699\N186580 West Culburra Concept Plan\Modelling\200225sid-N186580 West Culburra Subdivision.sip8

# SITE LAYOUT

## ▽ Site: 1 [4. Greenwell Pt-Jindy Andy (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
Greenwell Point Road-Jindy Andy Lane  
Friday AM (0800-0900) - Equivalent 120th HH  
Site Category: (None)  
Giveaway / Yield (Two-Way)



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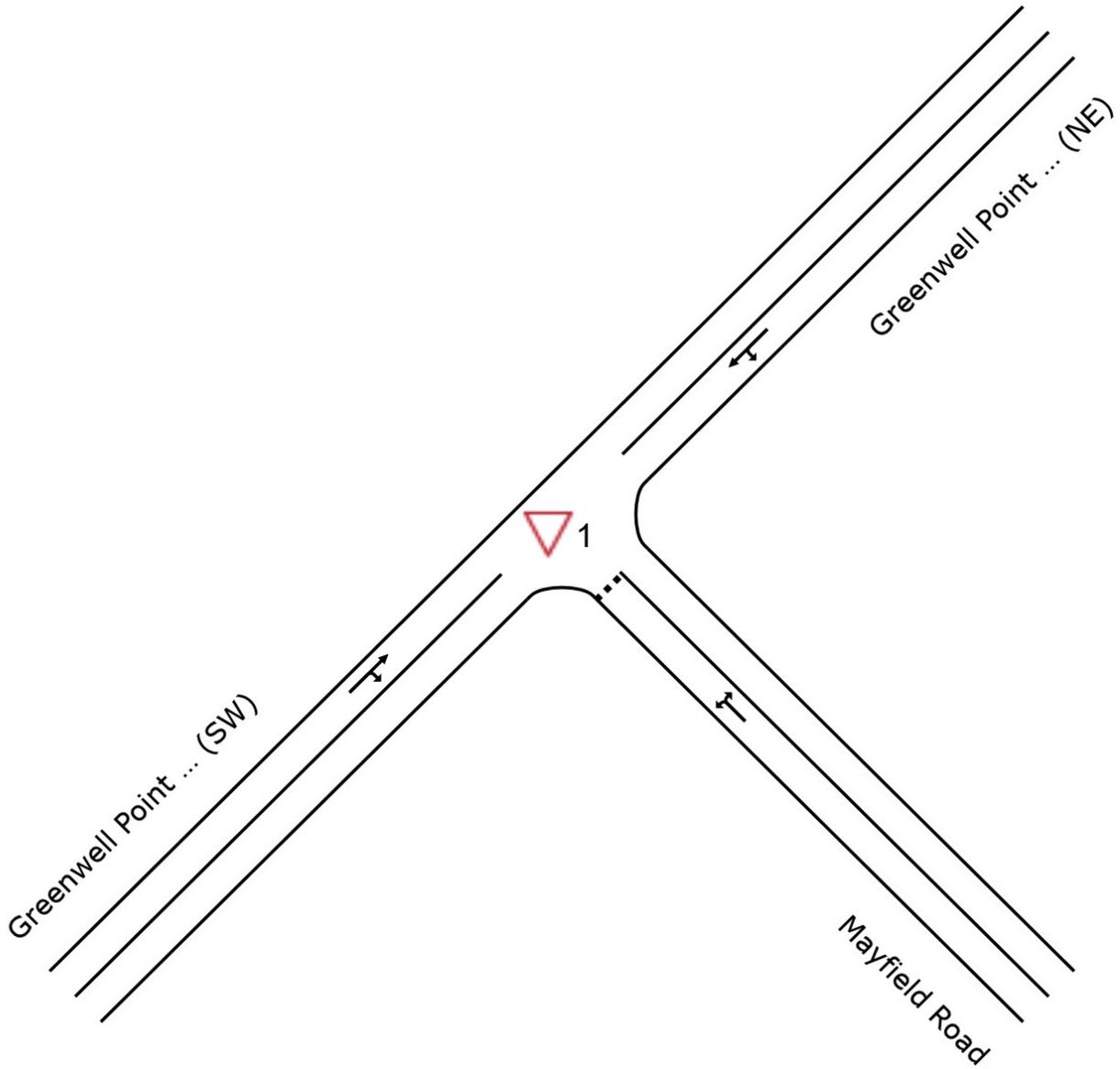
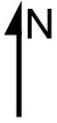
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Project: \\gta.com.au\projectfiles\ProjectFilesSyd\N18600-18699\N186580 West Culburra Concept Plan\Modelling\200225sid-N186580 West Culburra Subdivision.sip8

# SITE LAYOUT

## ▽ Site: 1 [5. Greenwell Pt-Mayfield (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
Greenwell Point Road-Mayfield Road  
Friday AM (0800-0900) - Equivalent 120th HH  
Site Category: (None)  
Giveaway / Yield (Two-Way)



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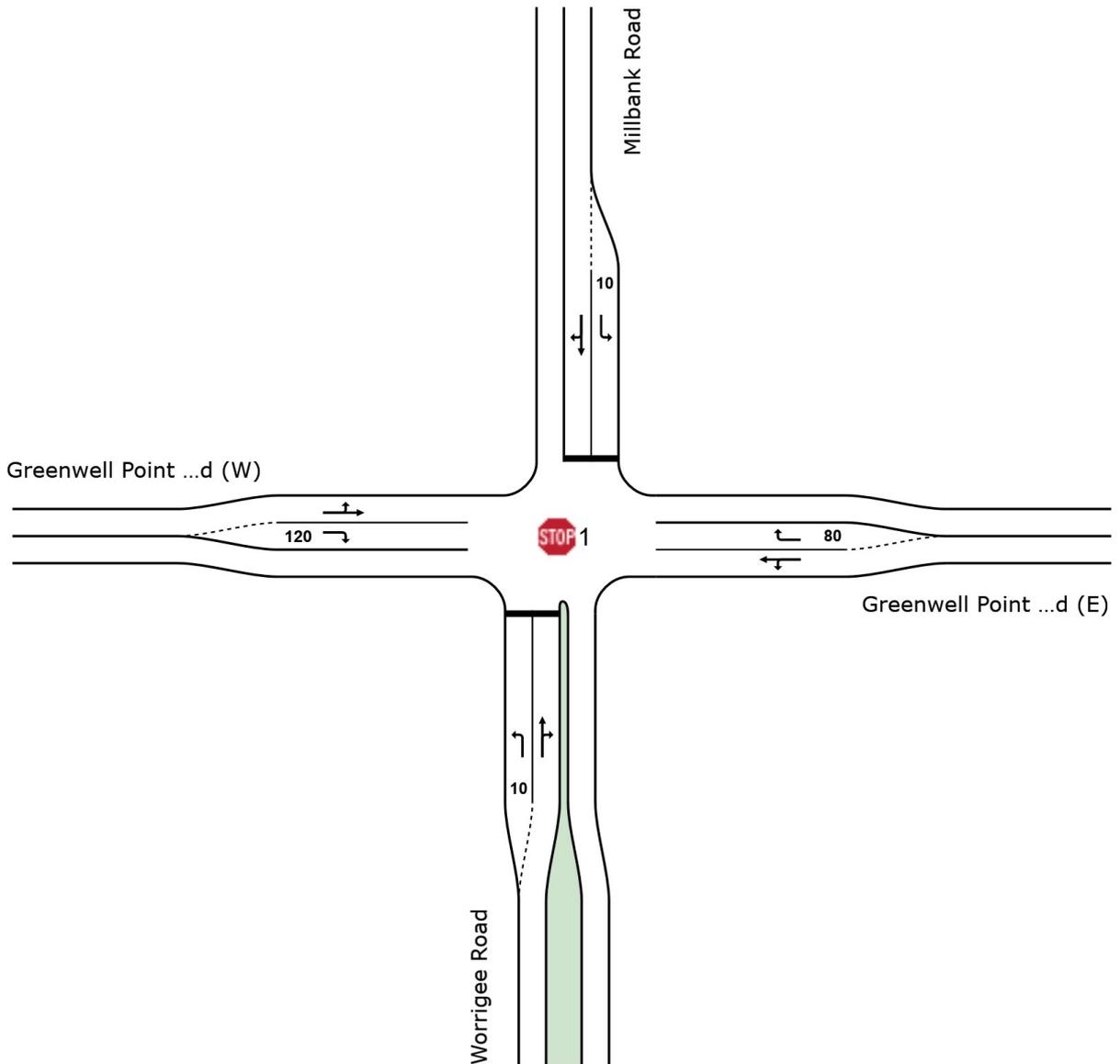
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Project: \\gta.com.au\projectfiles\ProjectFilesSyd\N18600-18699\N186580 West Culburra Concept Plan\Modelling\200225sid-N186580 West Culburra Subdivision.sip8

# SITE LAYOUT

## Site: 1 [6. Greenwell Pt-Millbank-Worrigeer (Ex Fri AM-120th HH)]

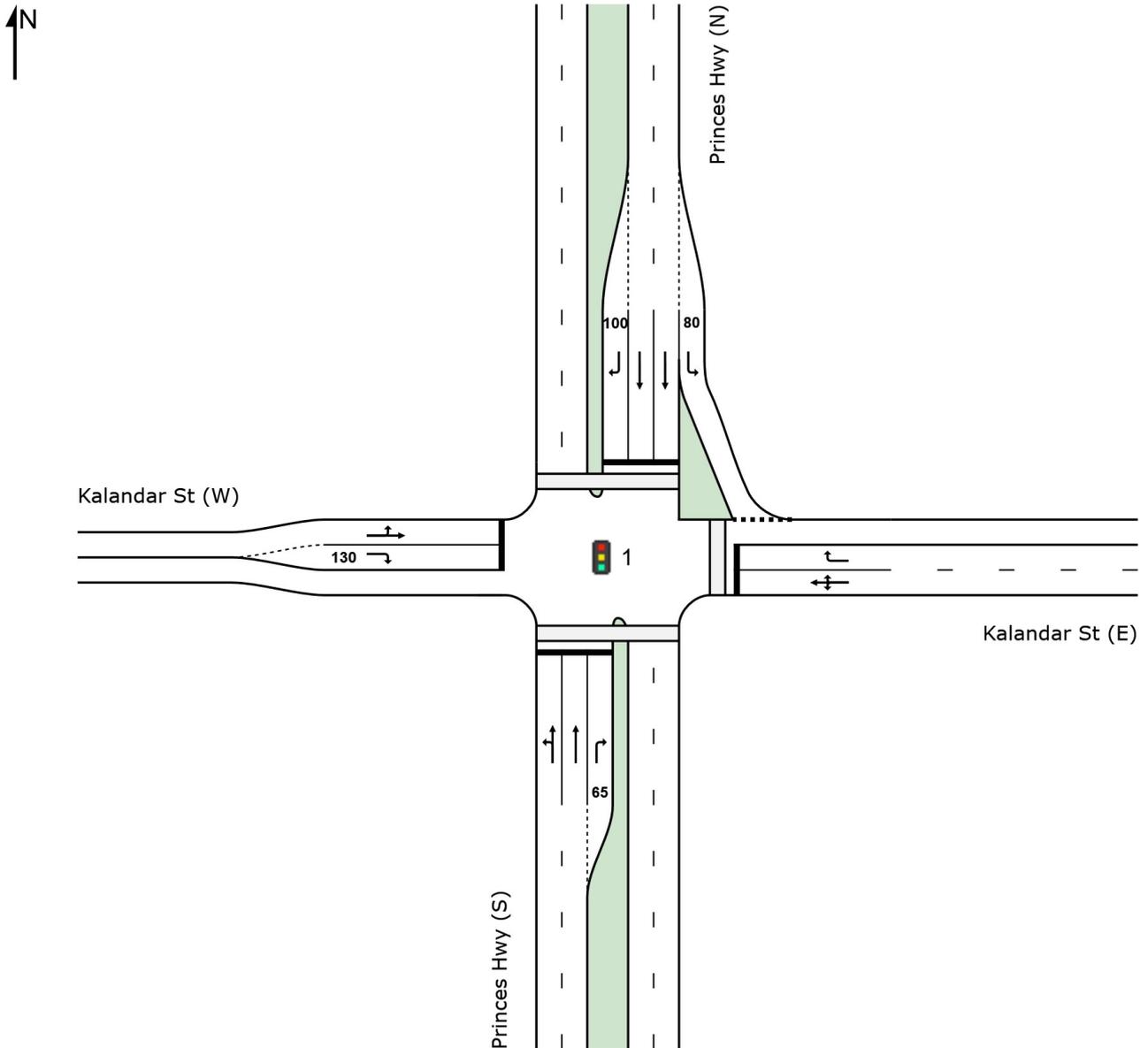
13S1231000 - West Culburra Subdivision  
Greenwell Point Road-Millbank Road-Worrigeer Road  
Friday AM (0800-0900) - Equivalent 120th HH  
Site Category: (None)  
Stop (Two-Way)



# SITE LAYOUT

## Site: 1 [7. Princes Hwy-Kalandar (Ex Fri AM-120th HH)]

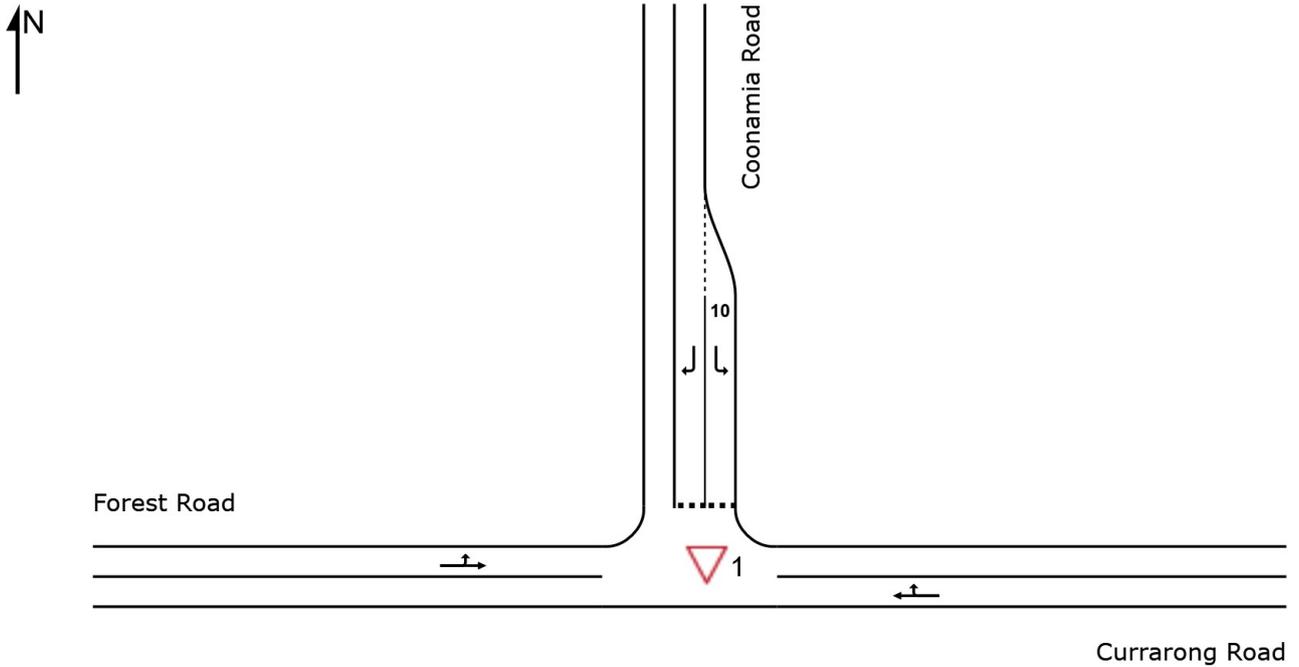
13S1231000 - West Culburra Subdivision  
Princes Highway-Kalandar Street  
Friday AM (0800-0900) - Equivalent 120th HH  
Site Category: (None)  
Signals - Fixed Time Coordinated



# SITE LAYOUT

## ▽ Site: 1 [8. Coonamia-Currarong-Forest (Ex Fri AM-120th HH)]

13S1231000 - West Culburra Subdivision  
Coonamia Road- Currarong Road-Forest Road  
Friday AM (0800-0900) - Equivalent 120th HH  
Site Category: (None)  
Giveaway / Yield (Two-Way)



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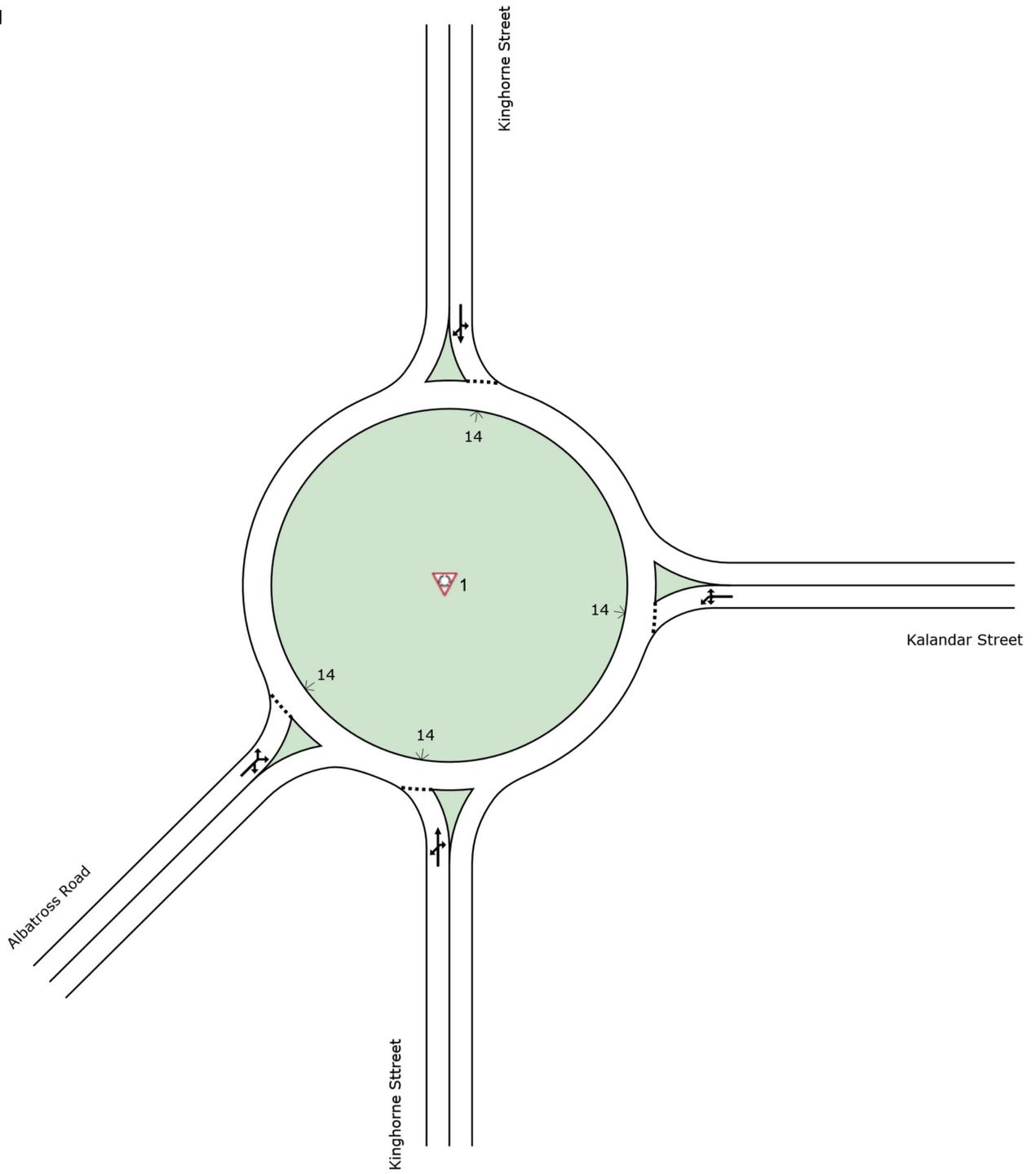
Project: \\gta.com.au\projectfiles\ProjectFilesSyd\N18600-18699\N186580 West Culburra Concept Plan\Modelling\200225sid-N186580 West Culburra Subdivision.sip8

## SITE LAYOUT

### Site: 1 [9. Kalendar St-Kinghorne St (Ex Fri AM-120th HH)]

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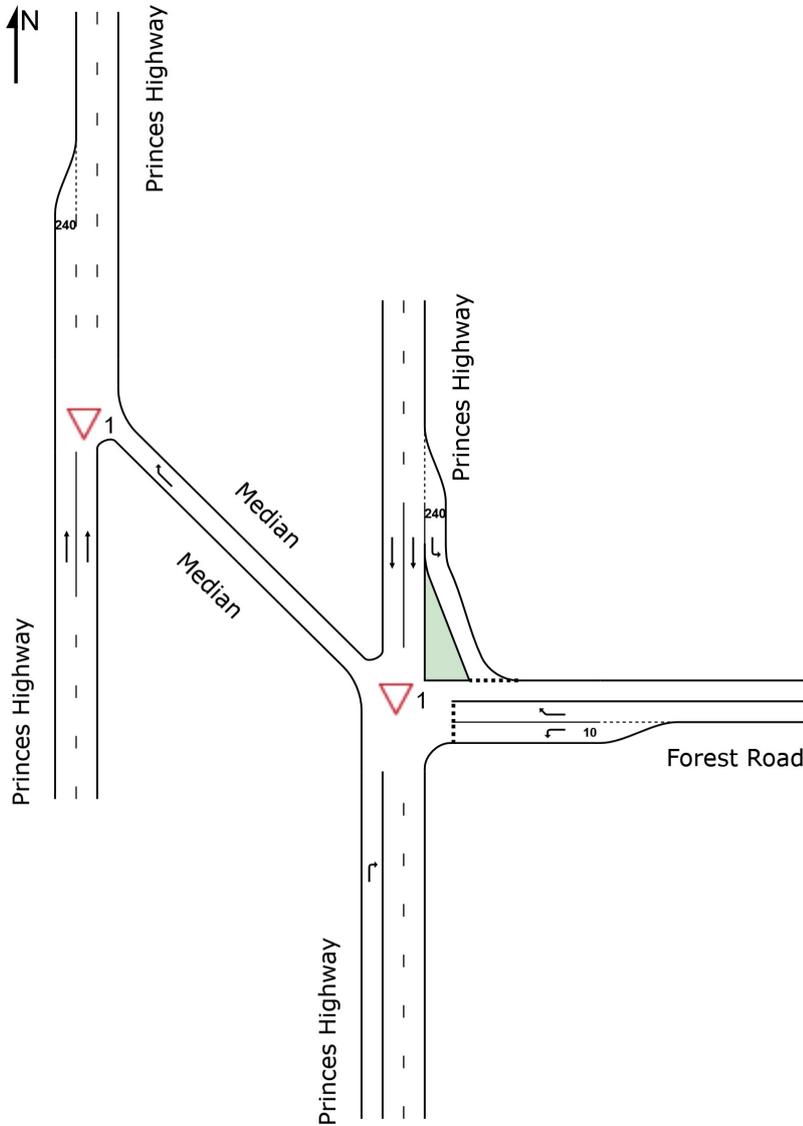
13S1231000 - West Culburra Subdivision  
Kalendar Street-Kinghorne Street-Albatross Road  
Friday AM (0800-0900) - Equivalent 120th HH  
Site Category: (None)  
Roundabout



# NETWORK LAYOUT

Network: 1 [10. Princes Hwy-Forest (Ex Fri AM-120th HH)]

Network Category: -



SITES IN NETWORK		
Site ID	CCG ID	Site Name
▽1	NA	10a. Princes Hwy-Forest (Ex Fri AM-120th HH)
▽1	NA	10b. Princes Hwy-Forest (Ex Fri AM-120th HH)

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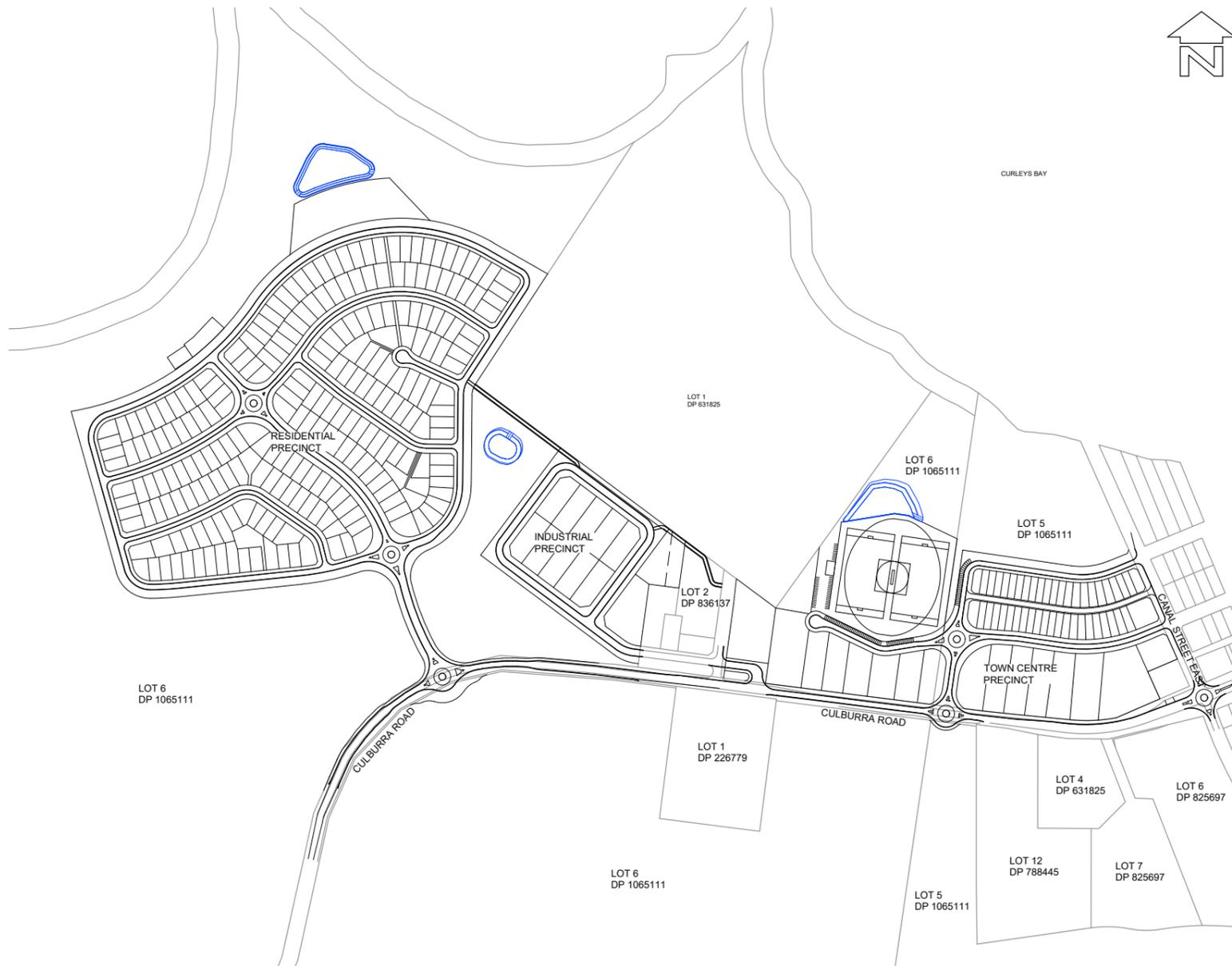
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# E. PRELIMINARY INTERSECTION CONCEPT DESIGN

# E

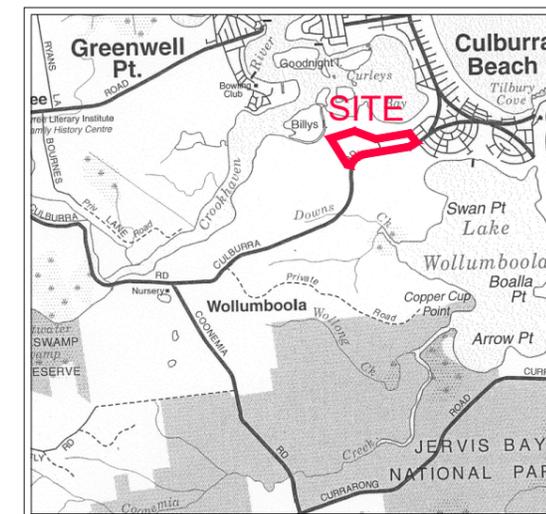
# PRELIMINARY ENGINEERING DRAWINGS FOR PROPOSED MIXED-USE SUBDIVISION AT WEST CULBURRA



SITE LAYOUT PLAN  
SCALE 1:4000

## DRAWING SCHEDULE

25405-100	COVER SHEET AND INDEX PLAN
25405-101	PRELIMINARY RESIDENTIAL PRECINCT LAYOUT PLAN
25405-102	PRELIMINARY INDUSTRIAL PRECINCT LAYOUT PLAN
25405-103	PRELIMINARY TOWN CENTRE PRECINCT LAYOUT PLAN
25405-104	PRELIMINARY OVERALL CONCEPT ROUNDABOUT 01 DESIGN
25405-105	PRELIMINARY CONCEPT ROUNDABOUT 01 DESIGN
25405-106	ROUNDABOUT 01 VEHICLE MOVEMENT LAYOUT PLAN SHEET 01
25405-107	ROUNDABOUT 01 VEHICLE MOVEMENT LAYOUT PLAN SHEET 02
25405-108	PRELIMINARY ROUNDABOUT 01 SIGHT LINE LAYOUT PLAN
25405-109	PRELIMINARY CONCEPT INDUSTRIAL ENTRY AND EXIT LAYOUT PLAN
25405-110	PRELIMINARY CONCEPT INDUSTRIAL ENTRY AND EXIT VEHICLE MOVEMENTS AND SIGHT DISTANCE LAYOUT PLAN
25405-111	PRELIMINARY CONCEPT ROUNDABOUT 02 LAYOUT PLAN
25405-112	PRELIMINARY CONCEPT ROUNDABOUT 02 DESIGN
25405-113	ROUNDABOUT 02 VEHICLE MOVEMENT LAYOUT PLAN
25405-114	PRELIMINARY ROUNDABOUT 02 SIGHT LINE LAYOUT PLAN
25405-115	PRELIMINARY CONCEPT ROUNDABOUT 03 LAYOUT PLAN
25405-116	PRELIMINARY CONCEPT ROUNDABOUT 03 DESIGN
25405-117	ROUNDABOUT 03 VEHICLE MOVEMENT LAYOUT PLAN SHEET 01
25405-118	ROUNDABOUT 03 VEHICLE MOVEMENT LAYOUT PLAN SHEET 02
25405-119	PRELIMINARY ROUNDABOUT 03 SIGHT LINE LAYOUT PLAN
25405-120	PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN SHEET 01
25405-121	PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN SHEET 02
25405-122	PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN SHEET 03
25405-123	PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN SHEET 04
25405-124	PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN SHEET 05
25405-125	WESTERN POND CONCEPT LAYOUT PLAN
25405-126	CENTRAL POND CONCEPT LAYOUT PLAN
25405-127	EASTERN POND CONCEPT LAYOUT PLAN
25405-128	TYPICAL WESTERN AND EASTERN POND CROSS SECTIONS PLAN



LOCALITY PLAN  
MAP DRAWN & PUBLISHED BY  
CARTODRAFT AUST P/L



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BEWARE!

THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL BE RESPONSIBLE, AT THE CONTRACTOR'S EXPENSE, FOR ANY REPAIRS TO DAMAGE CAUSED DURING CONSTRUCTION.

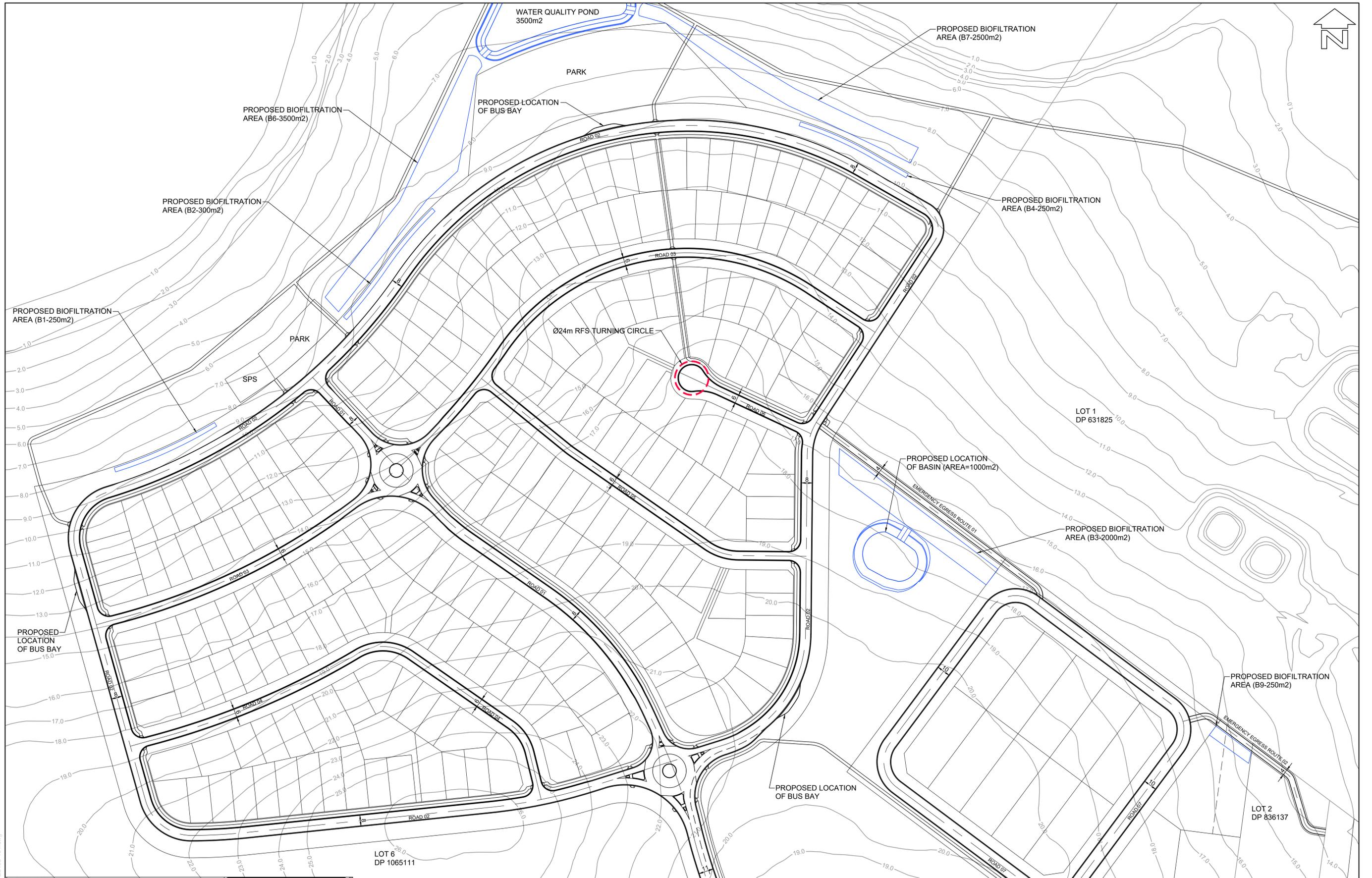


RATIO:	DATUM:	SURVEY	APS	REV	DESCRIPTION	BY	DATE
1:4000 (AT A1 ORIGINAL)	AUSTRALIAN HEIGHT DATUM ORIGIN: SSM RL DATE OF PLAN: MARCH 2020	DESIGN DRAWN CHECK'D	CJG CJG MJP	=			

**aps** allen price & scarratts pty ltd  
land and development consultants  
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Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533  
phone: (02) 4421 6544  
consultants@allenprice.com.au www.allenprice.com.au

COVER SHEET AND INDEX PLAN  
OVER CULBURRA ROAD  
AT CULBURRA BEACH  
FOR SEALARK PTY LTD

DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER <b>25405-100</b>	SHEET <b>1</b> OF <b>29</b> REVISION <b>P6</b>



**BEWARE!**  
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0 10 20 30 40 50  
 SCALE:- 1:1250

**PROFESSIONAL STANDARDS SCHEME**  
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RATIO:  
**1:1250**  
 (AT A1 ORIGINAL)

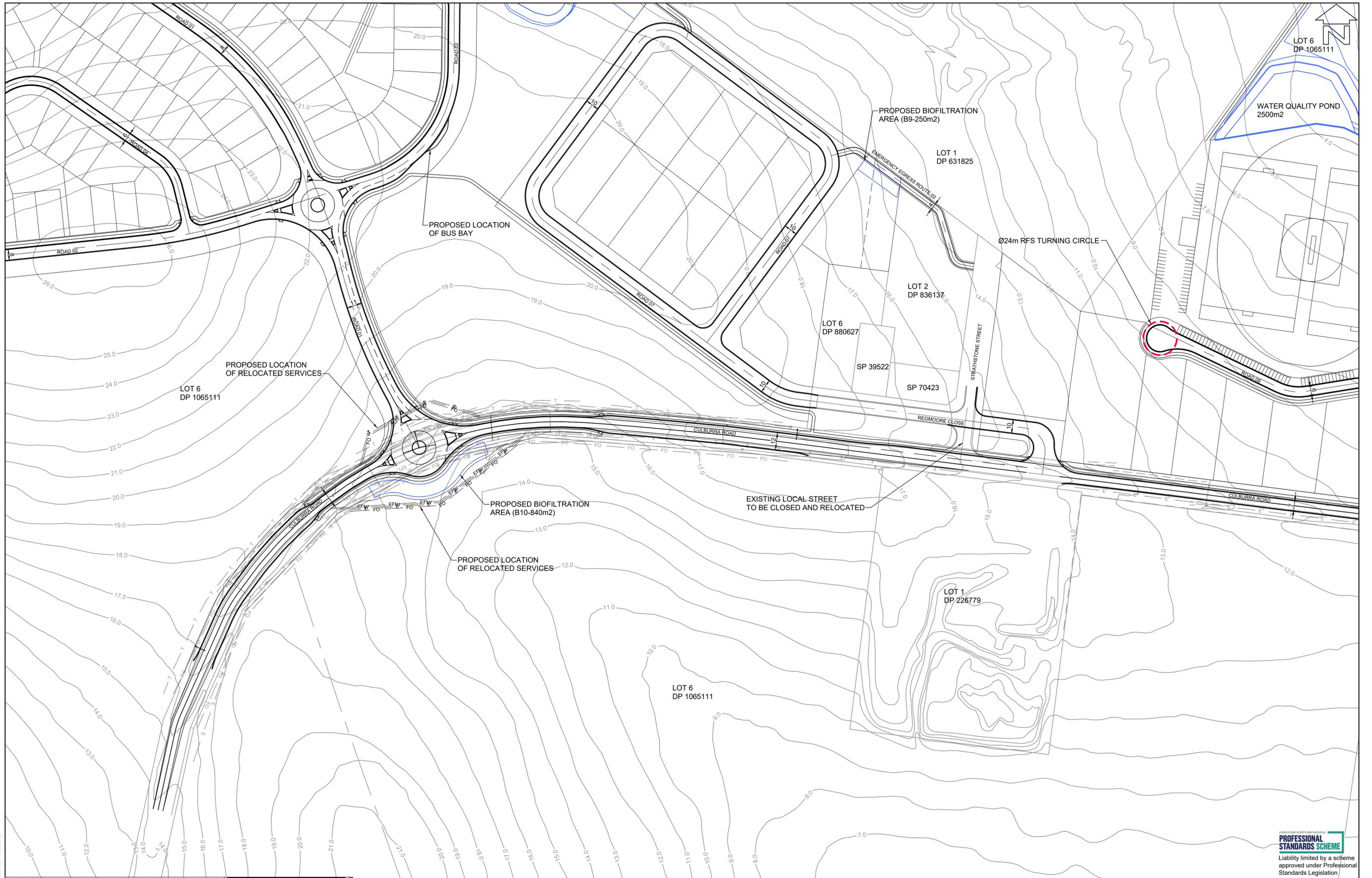
DATUM:  
 AUSTRALIAN HEIGHT DATUM  
 ORIGIN: SSM  
 RL  
 DATE OF PLAN: MARCH 2020

SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	C/JG				
DRAWN	C/JG				
CHECK'D	MJP				

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 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533  
 phone:(02) 4421 6544  
 consultants@allenprice.com.au www.allenprice.com.au

**PRELIMINARY RESIDENTIAL PRECINCT LAYOUT PLAN**  
**OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD**

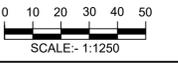
DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER <b>25405-101</b>	SHEET <b>2</b> OF <b>29</b> REVISION <b>P1</b>



LOT 6 DP 1065111

WATER QUALITY POND 2500m<sup>2</sup>

PROFESSIONAL STANDARDS SCHEME  
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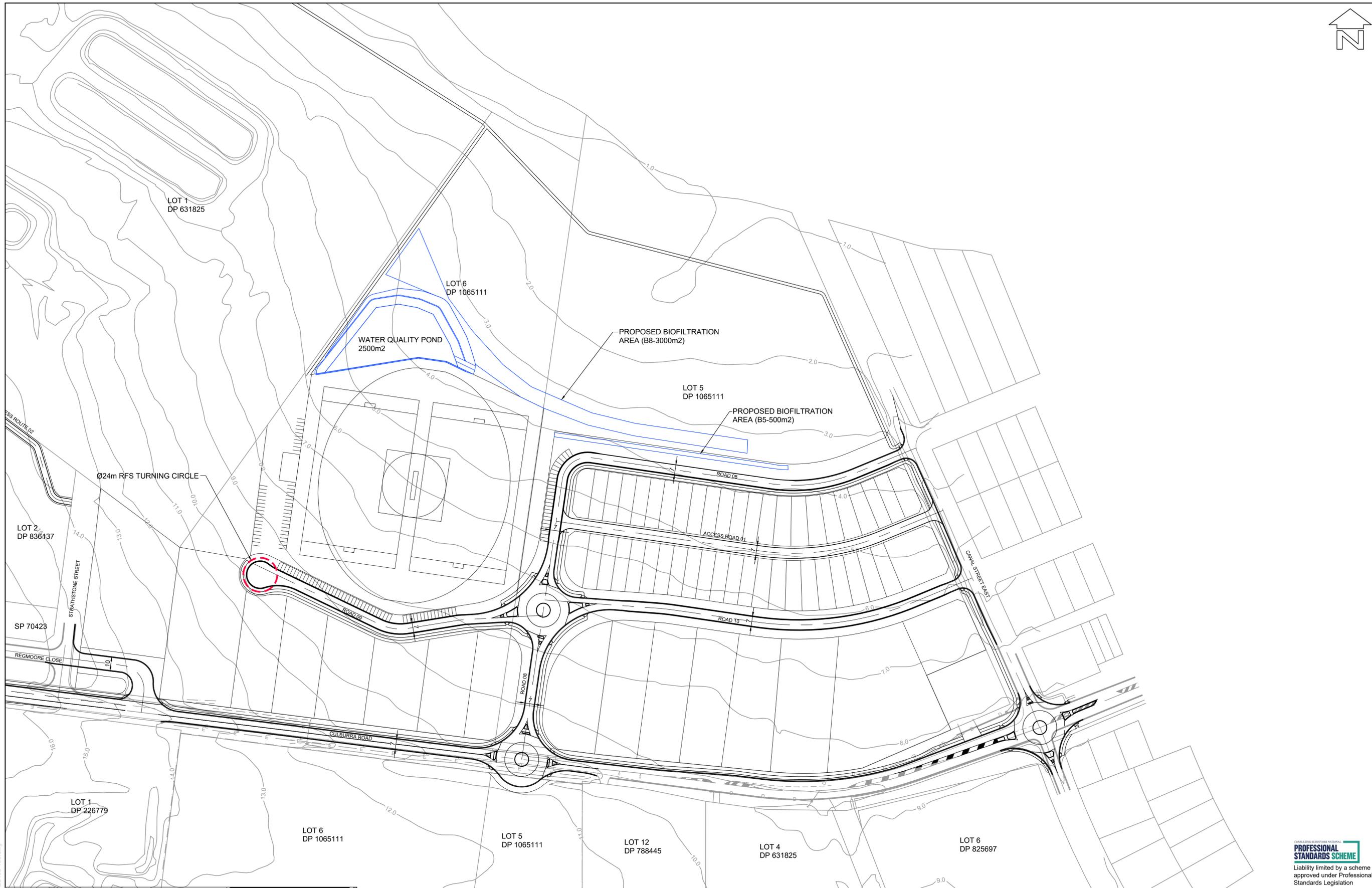


**BEWARE!**

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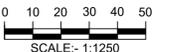
RATIO: <b>1:1250</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY	APS	REV	DESCRIPTION	BY	DATE	<b>allen price &amp; scarratts pty ltd</b> land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone:(02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	<b>PRELIMINARY INDUSTRIAL PRECINCT LAYOUT PLAN</b>  <b>OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DESIGN CJG	APS CJG	=						DRAWING NUMBER <b>25405-102</b>
	DATE OF PLAN: MARCH 2020	DRAWN CJG								



**BEWARE!**  
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**PROFESSIONAL STANDARDS SCHEME**  
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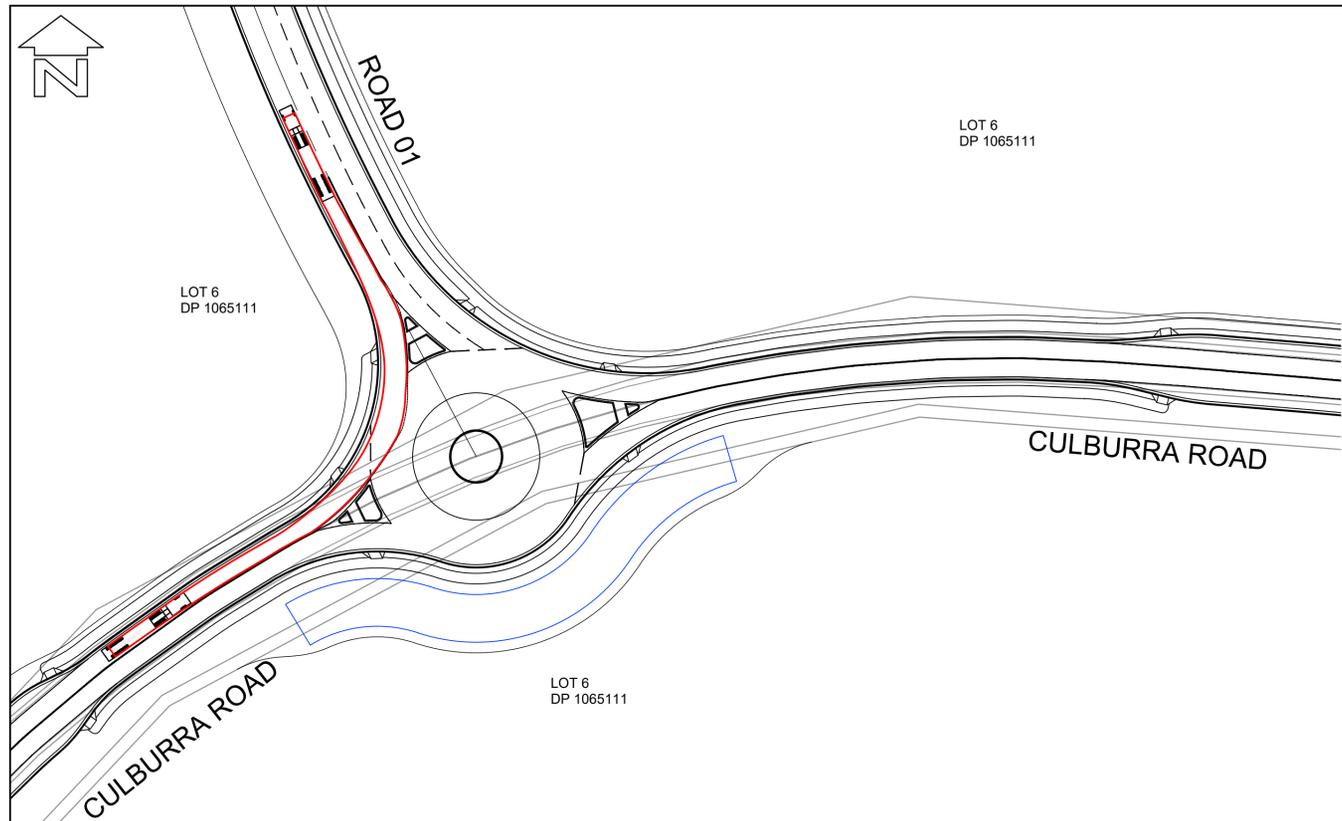


RATIO: <b>1:1250</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY DESIGN	APS CJG	REV =	DESCRIPTION	BY	DATE	<b>allen price &amp; scarratts pty ltd</b> land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone:(02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	<b>PRELIMINARY TOWN CENTRE PRECINCT LAYOUT PLAN</b>  <b>OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DRAWN CHECK'D	CJG MJP							DRAWING NUMBER <b>25405-103</b>
DATE OF PLAN: MARCH 2020										

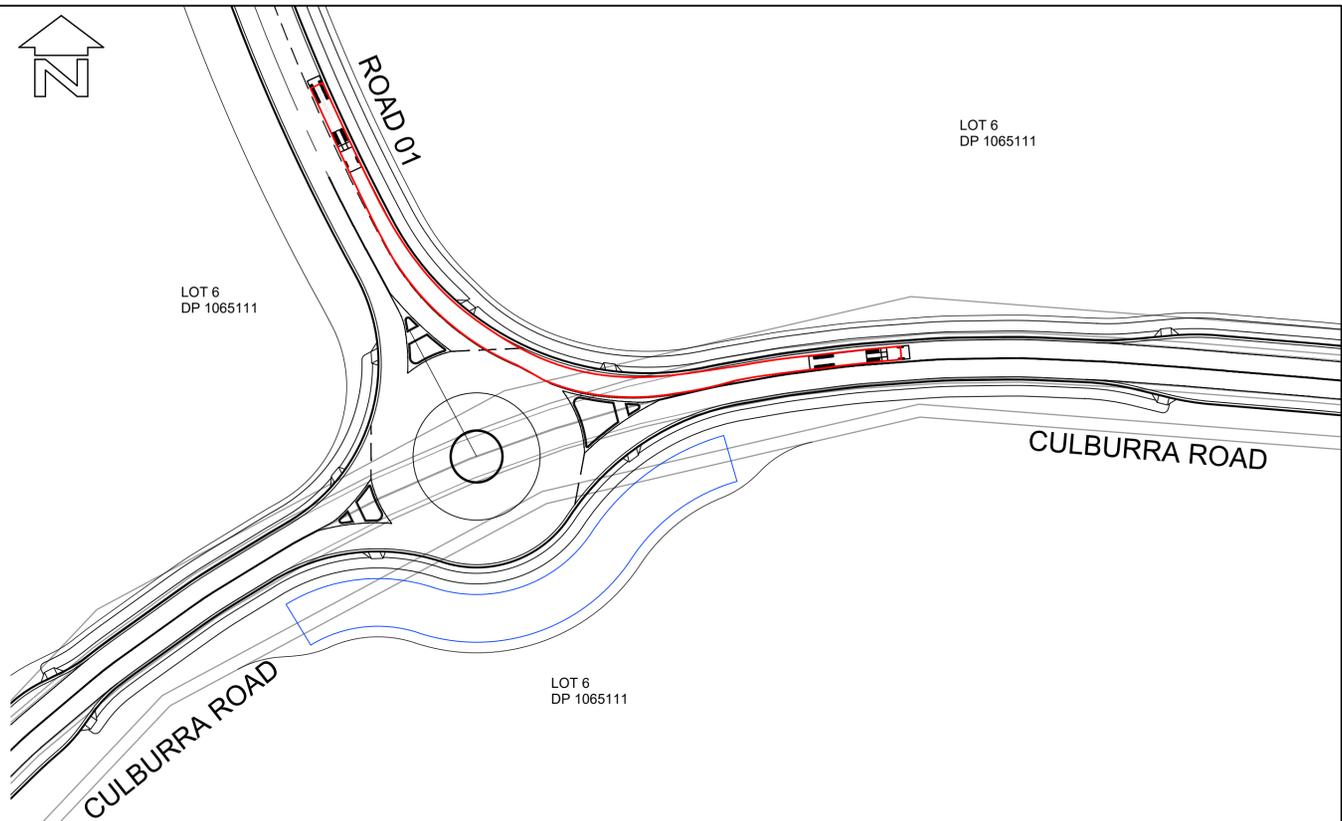
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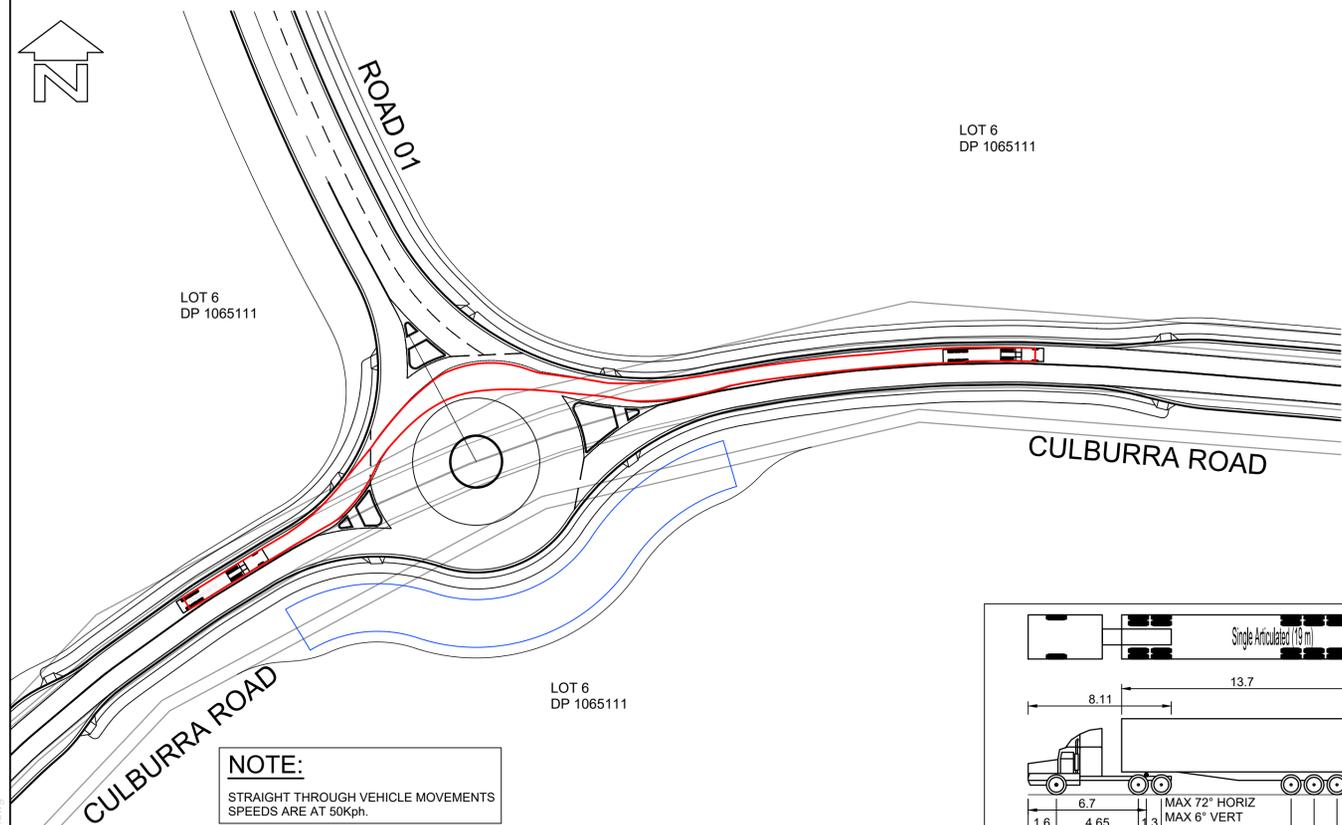




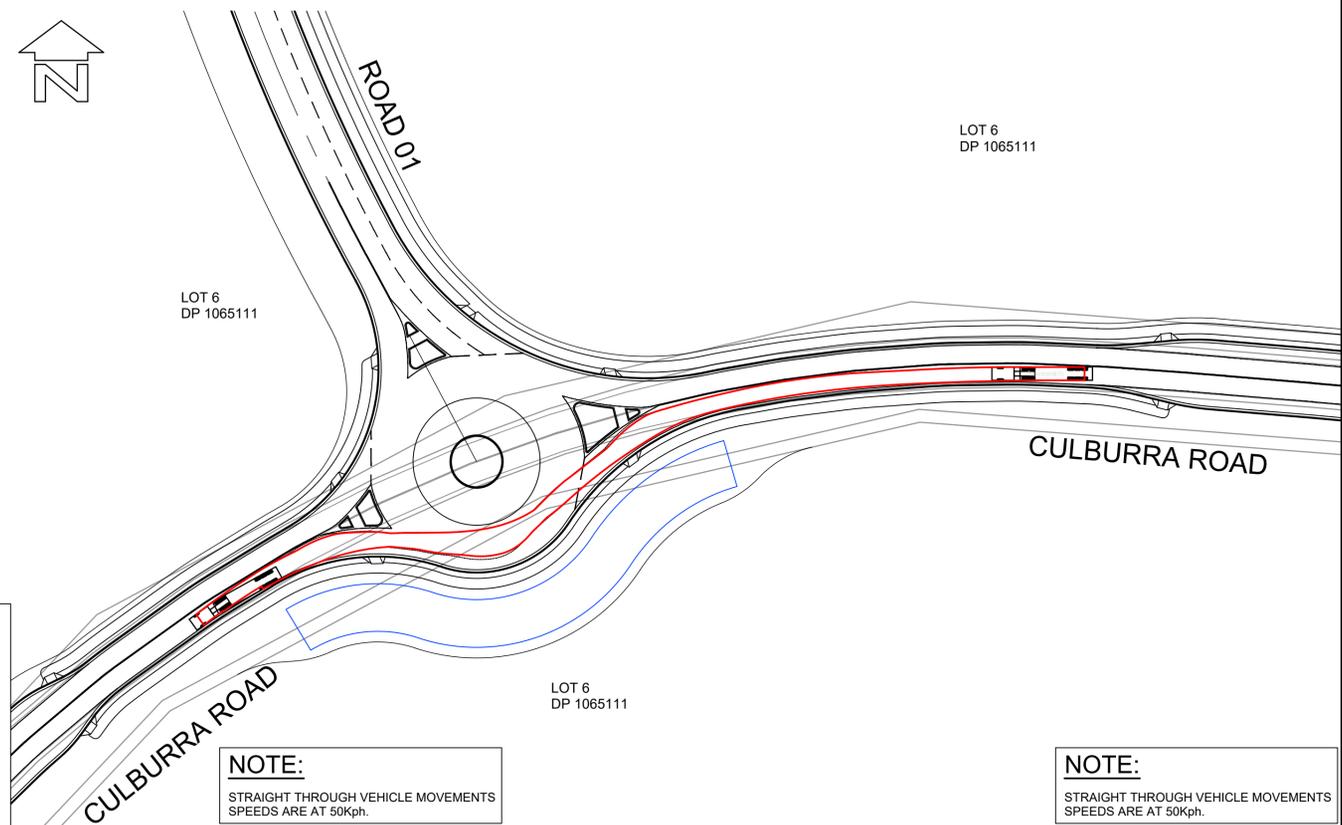
LAYOUT PLAN  
SCALE 1:750



LAYOUT PLAN  
SCALE 1:750



LAYOUT PLAN  
SCALE 1:750

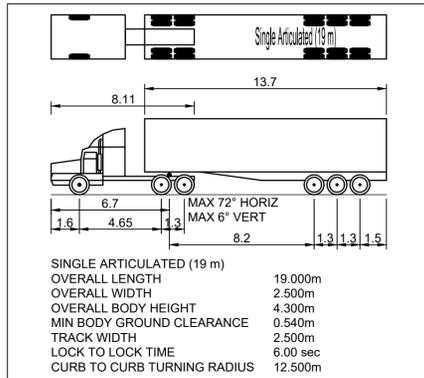


LAYOUT PLAN  
SCALE 1:750

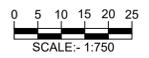
**NOTE:**  
STRAIGHT THROUGH VEHICLE MOVEMENTS  
SPEEDS ARE AT 50kph.

**NOTE:**  
STRAIGHT THROUGH VEHICLE MOVEMENTS  
SPEEDS ARE AT 50kph.

**NOTE:**  
STRAIGHT THROUGH VEHICLE MOVEMENTS  
SPEEDS ARE AT 50kph.



**VEHICLE MANOEUVRE LEGEND:**  
 - - - - - PATH OF OUTER FRONT WHEEL (FORWARD MOVEMENT)  
 - - - - - SWEEP PATH OF VEHICLE BODY (FORWARD MOVEMENT)  
 THIS DRAWING HAS BEEN PREPARED USING MODELING COMPUTER SOFTWARE AUTODESK VEHICLE TRACKING 2016. THE VEHICLE USED IS BASED UPON DATA PROVIDED BY AUSTRROADS 2013 FOR A SINGLE ARTICULATED (19.0m) TRAVELING AT 20km/hr AND INCORPORATES A REASONABLE DEGREE OF TOLERANCE. HOWEVER IT IS NOT POSSIBLE TO ACCOUNT FOR ALL VEHICLE TYPES/ CHARACTERISTICS AND/OR DRIVER ABILITY.



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RATIO:  
**1:750**  
(AT A1 ORIGINAL)

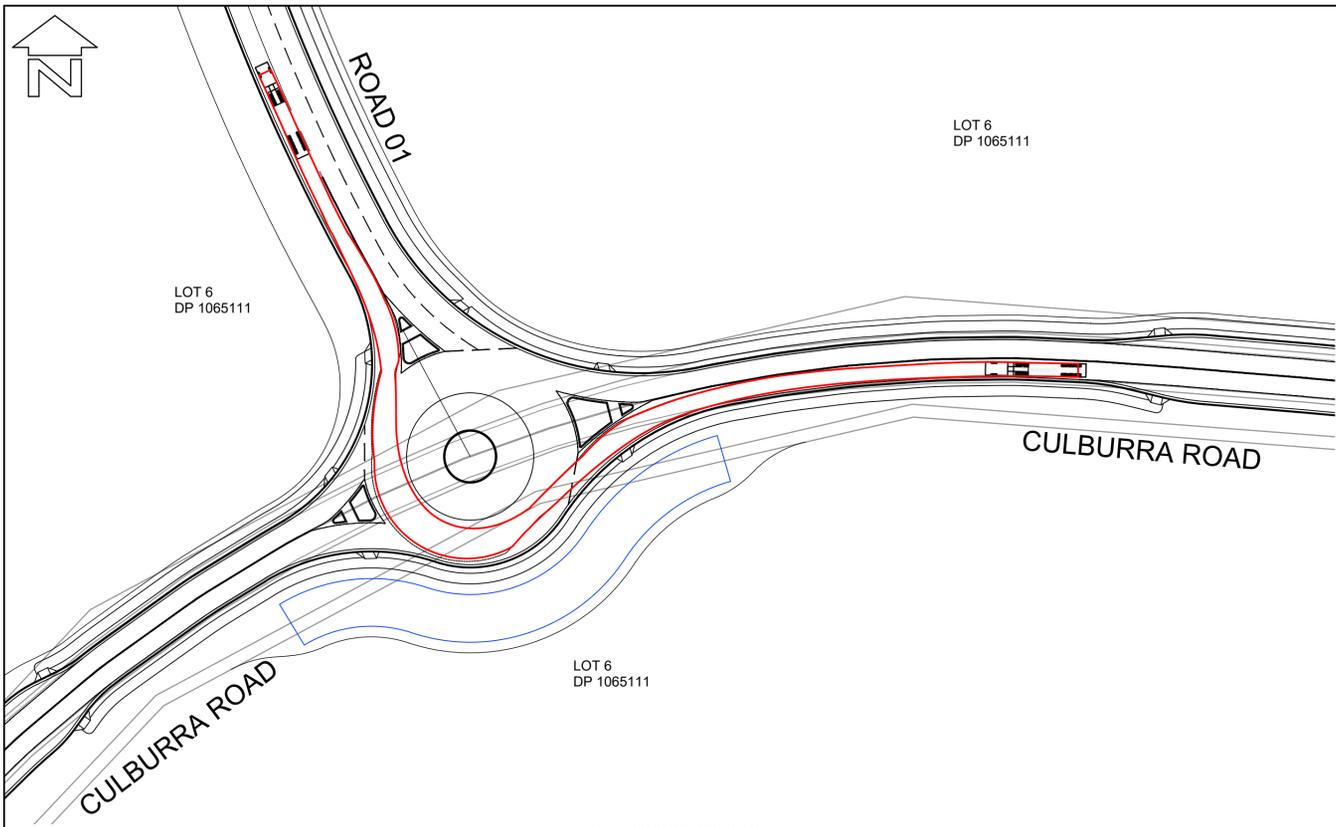
DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: MARCH 2020

SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	CJG				
DRAWN	CJG				
CHECK'D	MJP				

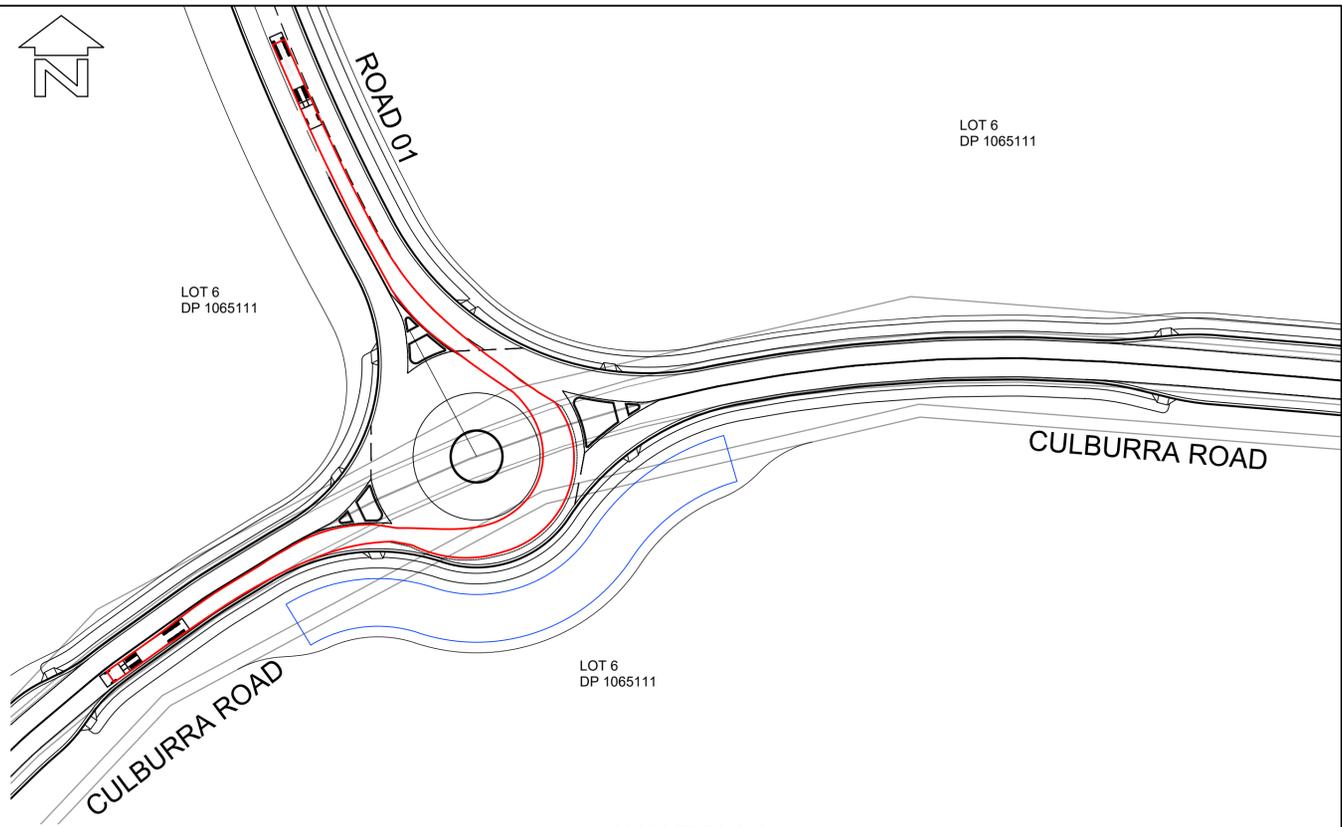
**aps** allen price & scarratts pty ltd  
land and development consultants  
Nowra Office: 75 Plunkett Street, Nowra NSW 2541  
Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533  
phone:(02) 4421 6544  
consultants@allenprice.com.au www.allenprice.com.au

**ROUNDAABOUT 01 VEHICLE MOVEMENT LAYOUT PLAN  
SHEET 01  
OVER CULBURRA ROAD  
AT CULBURRA BEACH  
FOR SEALARK PTY LTD**

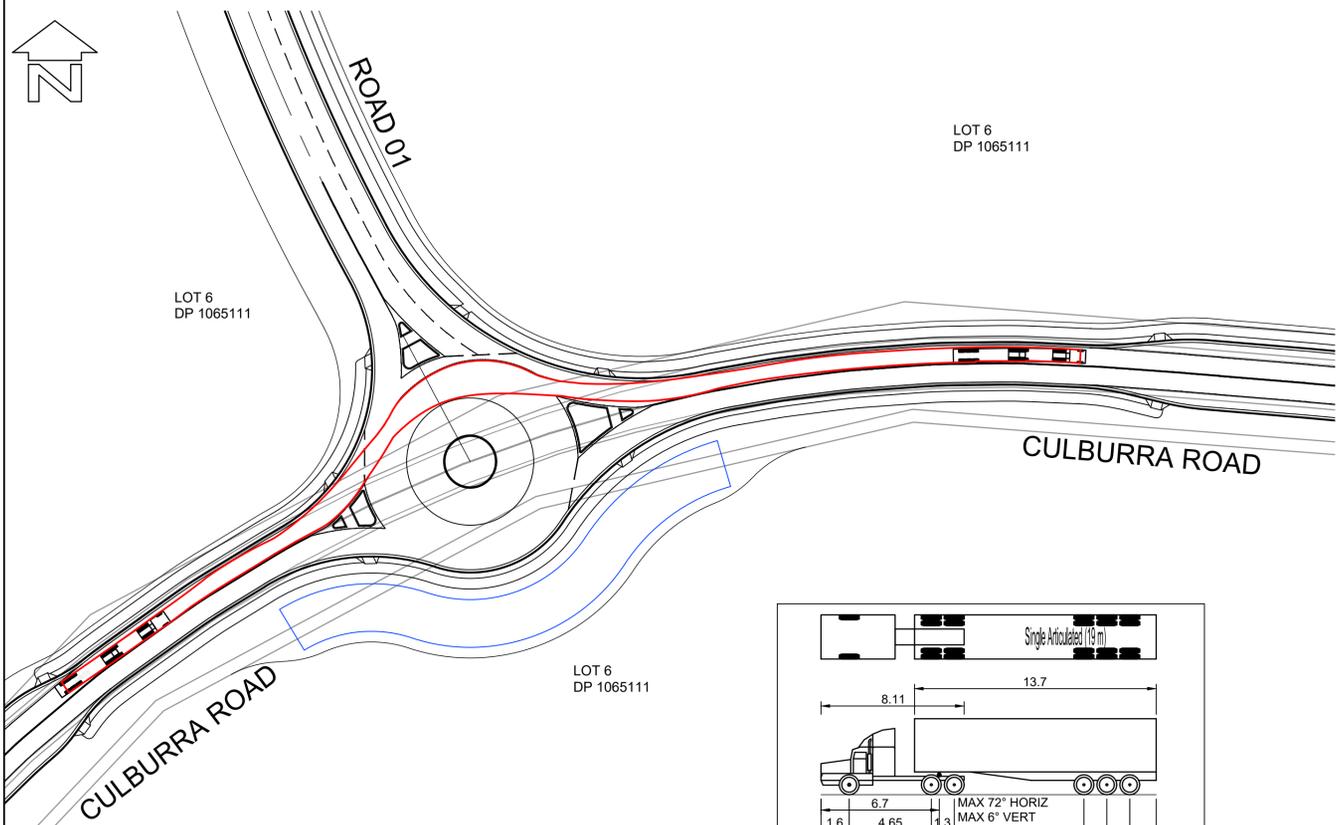
DRAWING STATUS  
**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES  
DRAWING NUMBER  
**25405-106**  
SHEET **7** OF **29** REVISION  
**P6**



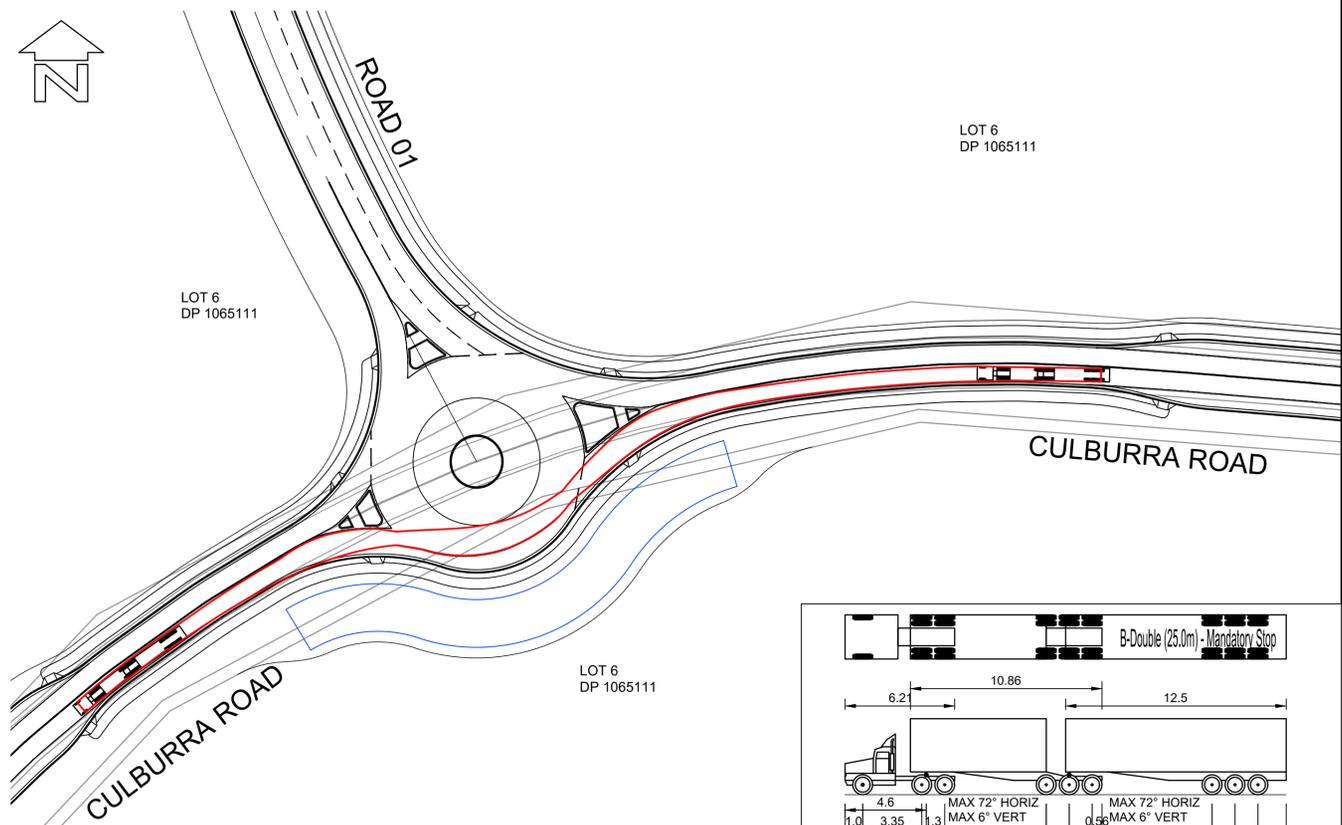
LAYOUT PLAN  
SCALE 1:750



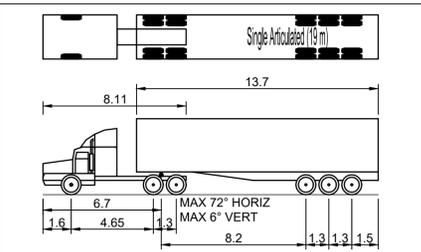
LAYOUT PLAN  
SCALE 1:750



LAYOUT PLAN  
SCALE 1:750



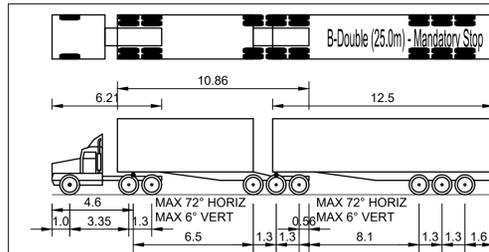
LAYOUT PLAN  
SCALE 1:750



SINGLE ARTICULATED (19 m)	19.000m
OVERALL LENGTH	2.500m
OVERALL WIDTH	4.300m
OVERALL BODY HEIGHT	0.540m
MIN BODY GROUND CLEARANCE	2.500m
TRACK WIDTH	6.00 sec
LOCK TO LOCK TIME	12.500m
CURB TO CURB TURNING RADIUS	

**VEHICLE MANOEUVRE LEGEND:**

- - - - - PATH OF OUTER FRONT WHEEL (FORWARD MOVEMENT)  
 - - - - - SWEEP PATH OF VEHICLE BODY (FORWARD MOVEMENT)  
 THIS DRAWING HAS BEEN PREPARED USING MODELING COMPUTER SOFTWARE AUTODESK VEHICLE TRACKING 2016. THE VEHICLE USED IS BASED UPON DATA PROVIDED BY AUSTRROADS 2013 FOR A SINGLE ARTICULATED (19.0m) TRAVELING AT 20km/hr AND INCORPORATES A REASONABLE DEGREE OF TOLERANCE. HOWEVER IT IS NOT POSSIBLE TO ACCOUNT FOR ALL VEHICLE TYPES/ CHARACTERISTICS AND/OR DRIVER ABILITY.

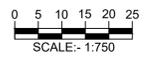


B-DOUBLE (25.0m) - MANDATORY STOP	25.000m
OVERALL LENGTH	2.500m
OVERALL WIDTH	4.300m
OVERALL BODY HEIGHT	0.540m
MIN BODY GROUND CLEARANCE	2.500m
TRACK WIDTH	6.00 sec
LOCK TO LOCK TIME	12.500m
CURB TO CURB TURNING RADIUS	



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RATIO:  
**1:750**  
(AT A1 ORIGINAL)

DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: MARCH 2020

SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	CJG				
DRAWN	CJG				
CHECK'D	MJP				

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land and development consultants  
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Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533  
phone:(02) 4421 6544  
consultants@allenprice.com.au www.allenprice.com.au

**ROUNDAABOUT 01 VEHICLE MOVEMENT LAYOUT PLAN**  
**SHEET 02**  
**OVER CULBURRA ROAD**  
**AT CULBURRA BEACH**  
**FOR SEALARK PTY LTD**

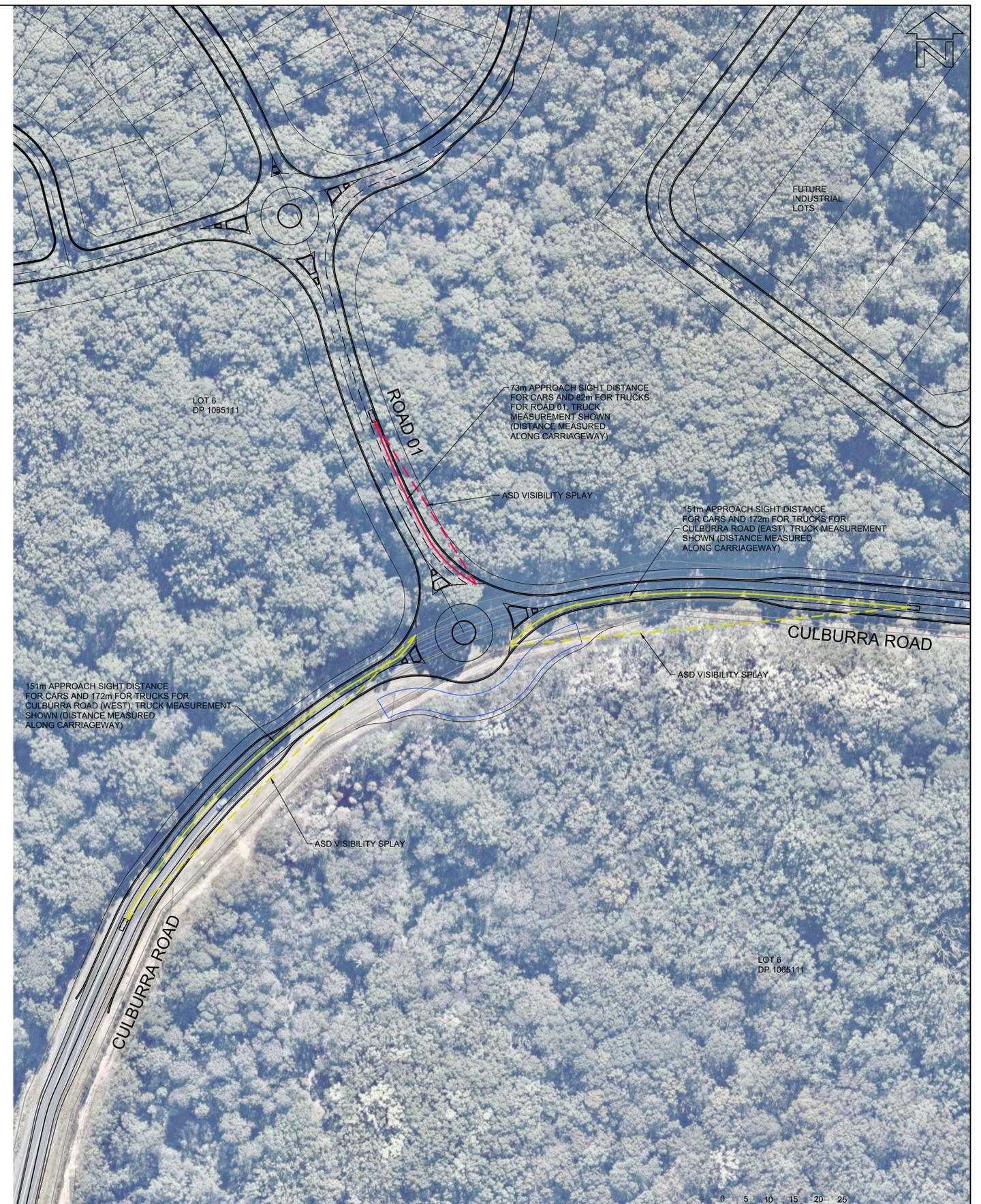
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**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES  
DRAWING NUMBER  
**25405-107**  
SHEET **8** OF **29**  
REVISION  
**P6**



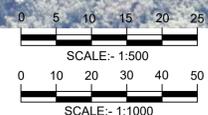
LAYOUT PLAN  
SCALE 1:500



LAYOUT PLAN  
SCALE 1:500



LAYOUT PLAN  
SCALE 1:1000



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RATIO:  
**AS NOTED**  
(AT A1 ORIGINAL)

DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: MARCH 2020

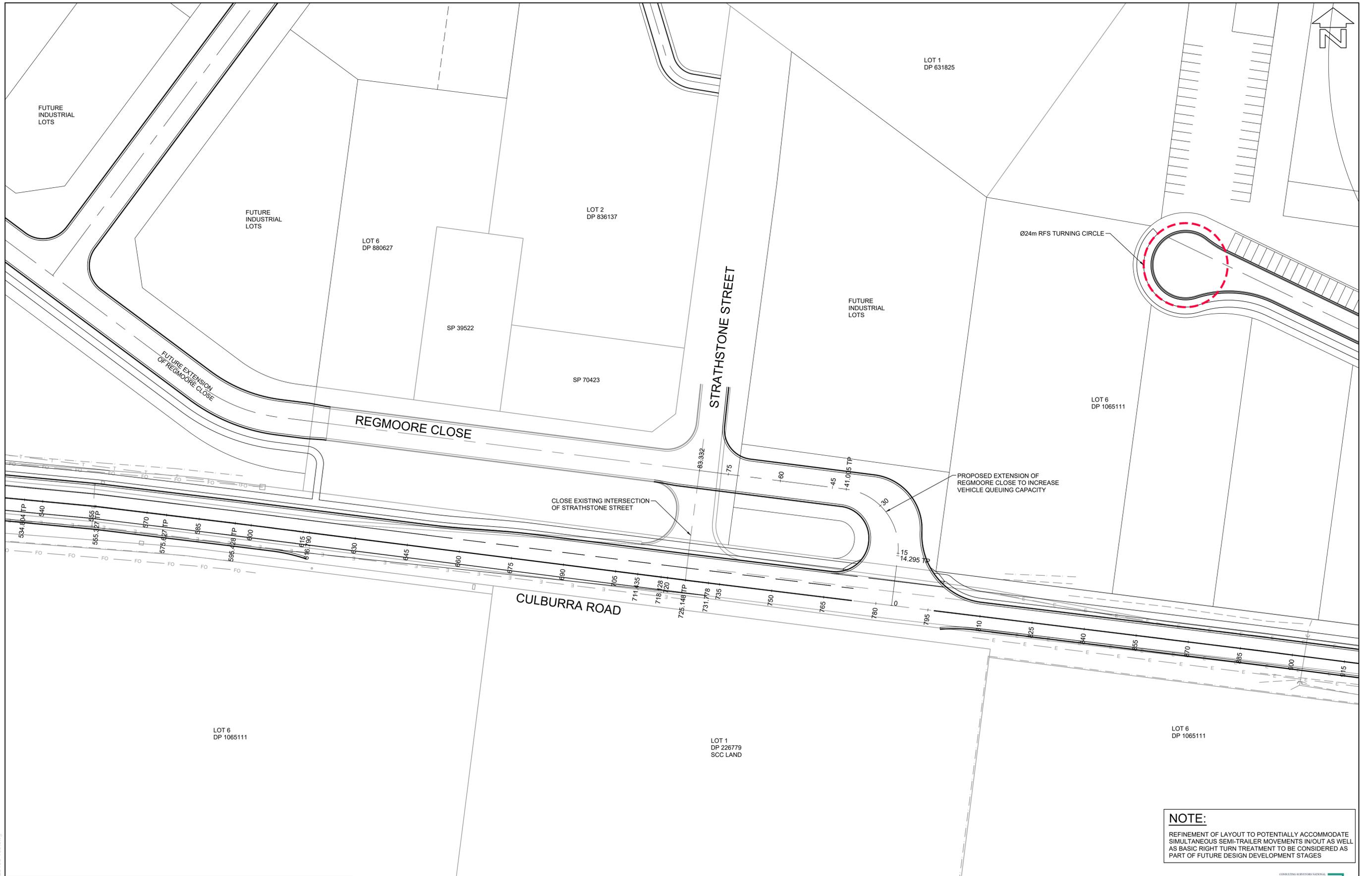
SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	CJG				
DRAWN	CJG				
CHECK'D	MJP				

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consultants@allenprice.com.au www.allenprice.com.au

PRELIMINARY ROUNDABOUT 01 SIGHT LINE LAYOUT PLAN  
OVER CULBURRA ROAD  
AT CULBURRA BEACH  
FOR SEALARK PTY LTD

DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER <b>25405-108</b>	SHEET <b>9</b> OF <b>29</b> REVISION <b>P6</b>

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**NOTE:**  
 REFINEMENT OF LAYOUT TO POTENTIALLY ACCOMMODATE SIMULTANEOUS SEMI-TRAILER MOVEMENTS IN/OUT AS WELL AS BASIC RIGHT TURN TREATMENT TO BE CONSIDERED AS PART OF FUTURE DESIGN DEVELOPMENT STAGES

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**LAYOUT PLAN**  
 SCALE 1:500

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RATIO:  
**1:500**  
 (AT A1 ORIGINAL)

DATUM:  
 AUSTRALIAN HEIGHT DATUM  
 ORIGIN: SSM  
 RL  
 DATE OF PLAN: MARCH 2020

SURVEY	APS
DESIGN	CJG
DRAWN	CJG
CHECK'D	MJP

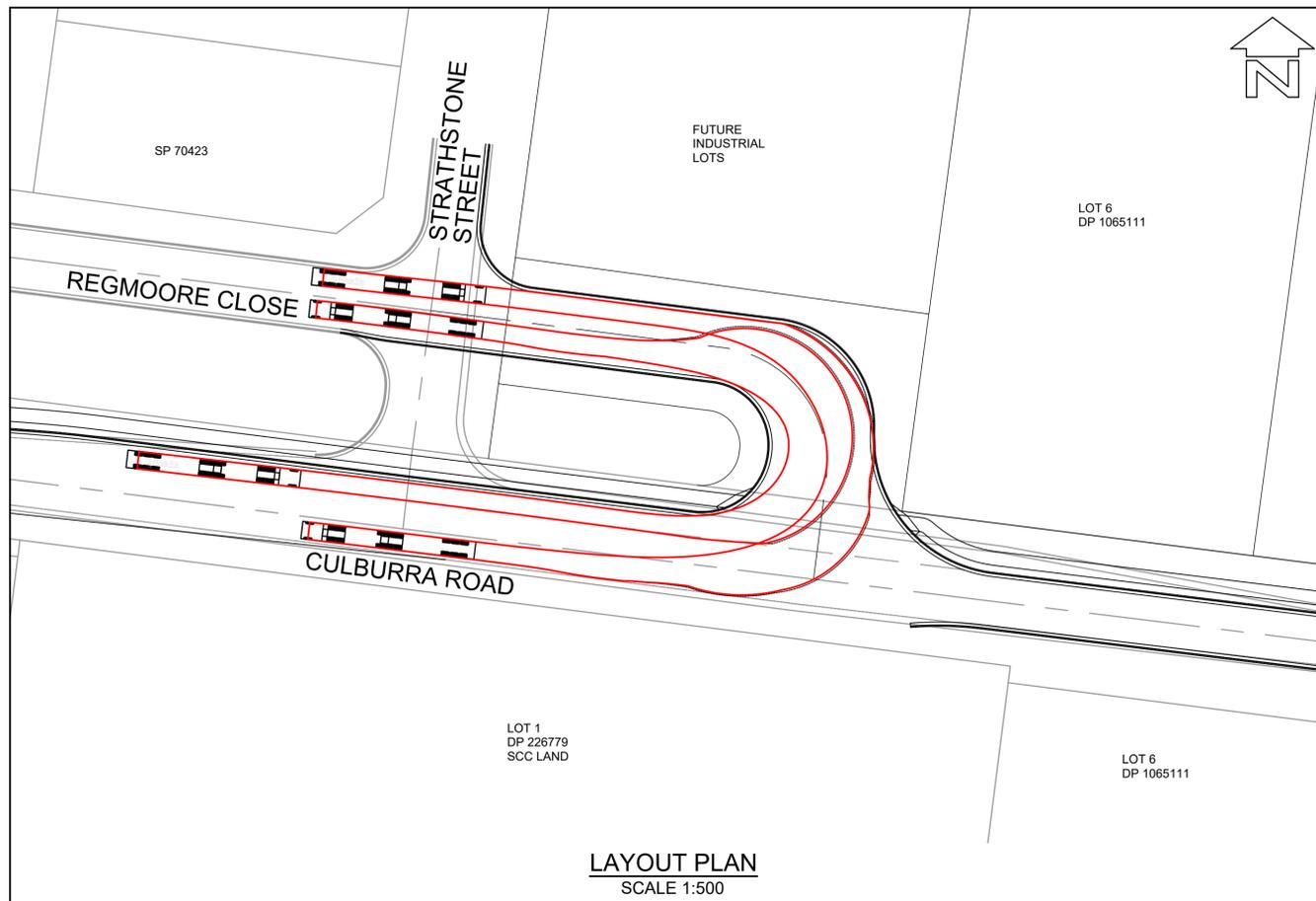
REV	DESCRIPTION	BY	DATE

**aps** **allen price & scarratts pty ltd**  
 land and development consultants  
 Nowra Office: 75 Plunkett Street, Nowra NSW 2541  
 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533  
 phone: (02) 4421 6544  
 consultants@allenprice.com.au www.allenprice.com.au

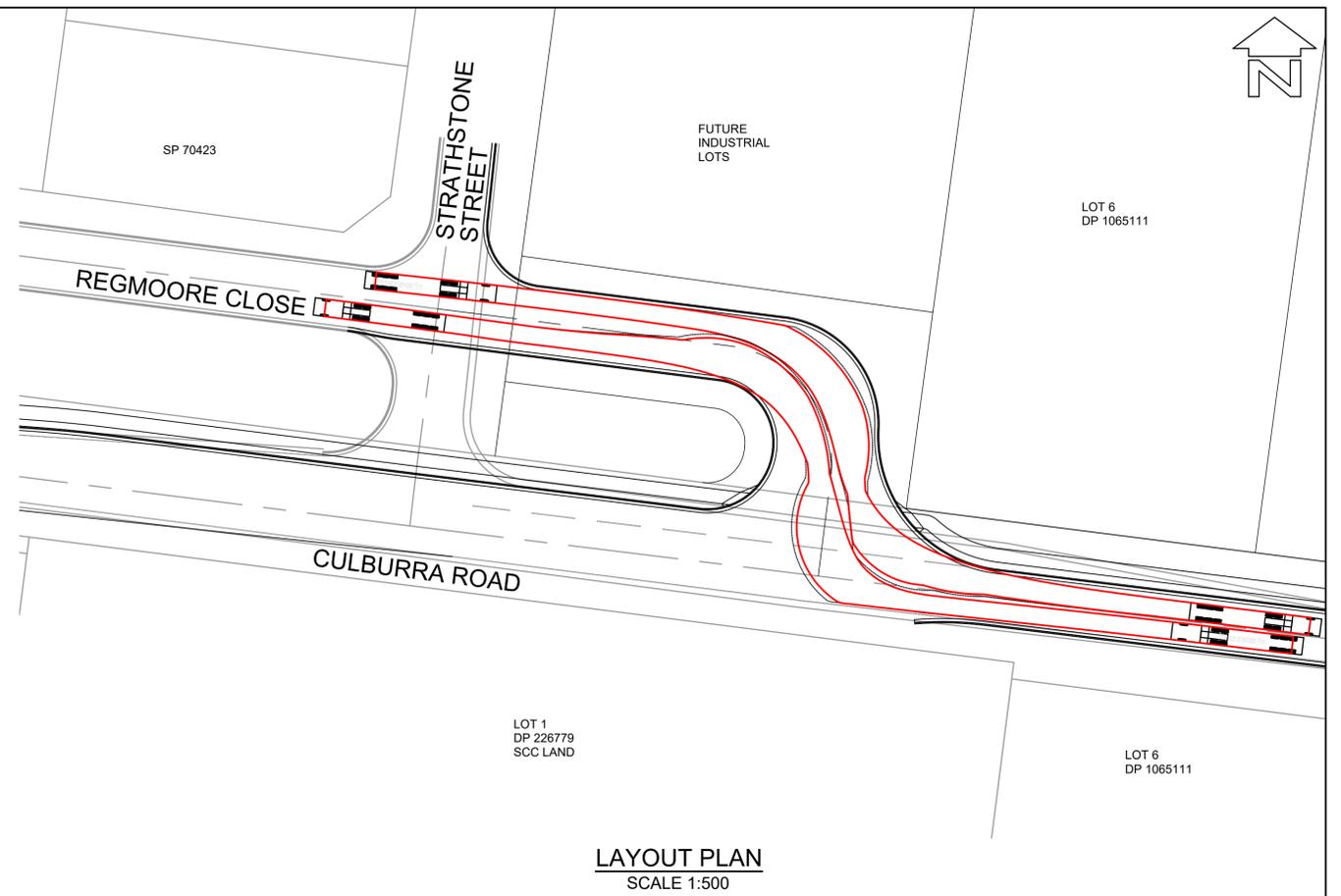
**PRELIMINARY CONCEPT INDUSTRIAL ENTRY AND EXIT LAYOUT PLAN OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD**

DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER <b>25405-109</b>	SHEET <b>10</b> OF <b>29</b> REVISION <b>P4</b>

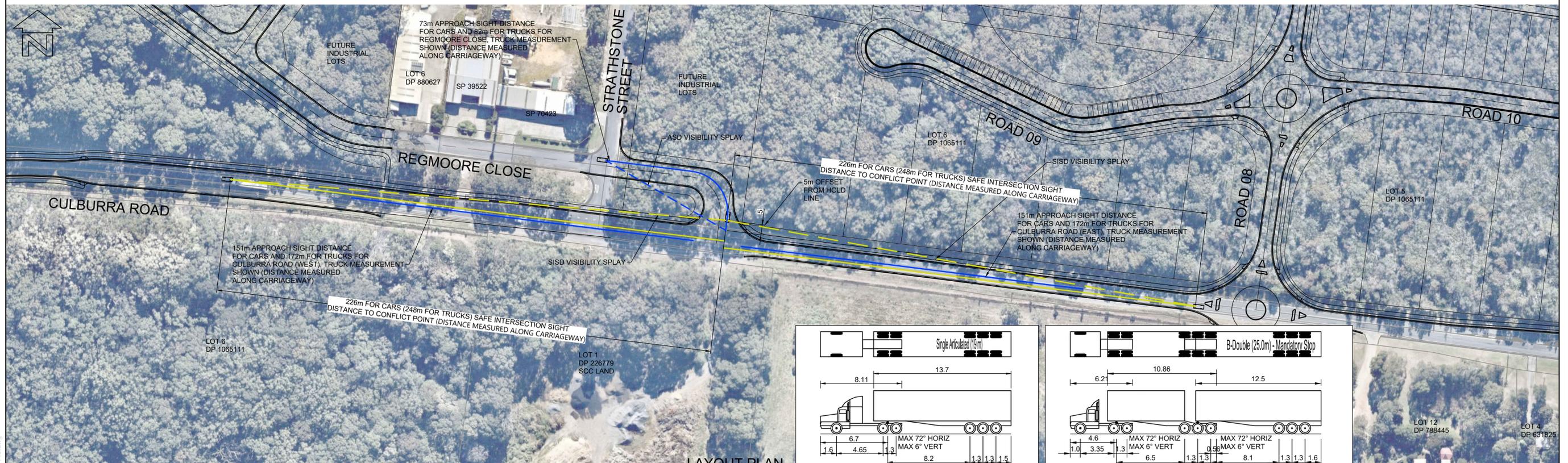
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LAYOUT PLAN  
SCALE 1:500



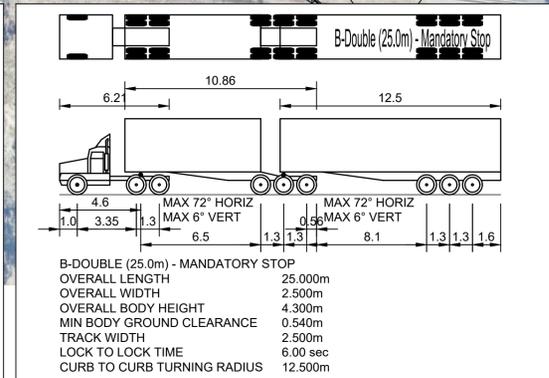
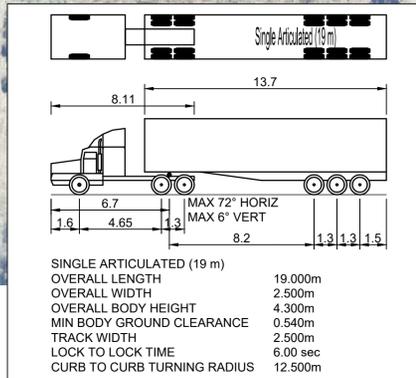
LAYOUT PLAN  
SCALE 1:500



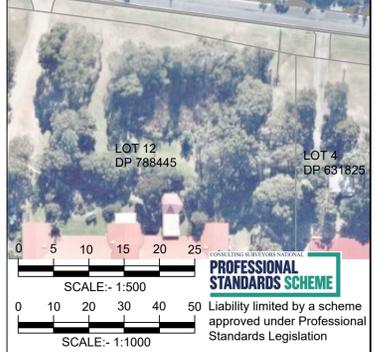
LAYOUT PLAN  
SCALE 1:1000

VEHICLE MANOEUVRE LEGEND:

--- PATH OF OUTER FRONT WHEEL (FORWARD MOVEMENT)  
 - - - SWEEP PATH OF VEHICLE BODY (FORWARD MOVEMENT)  
 THIS DRAWING HAS BEEN PREPARED USING MODELING COMPUTER SOFTWARE AUTODESK VEHICLE TRACKING 2016. THE VEHICLE USED IS BASED UPON DATA PROVIDED BY AUSTRROADS 2013 FOR A B-DOUBLE (25.0m) AND SINGLE ARTICULATED (19.0m) TRAVELING AT 20km/hr AND INCORPORATES A REASONABLE DEGREE OF TOLERANCE. HOWEVER IT IS NOT POSSIBLE TO ACCOUNT FOR ALL VEHICLE TYPES/ CHARACTERISTICS AND/OR DRIVER ABILITY.



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RATIO:  
**AS NOTED**  
(AT A1 ORIGINAL)

DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: MARCH 2020

SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	CJG				
DRAWN	CJG				
CHECK'D	MJP				

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 land and development consultants  
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 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533  
 phone: (02) 4421 6544  
 consultants@allenprice.com.au www.allenprice.com.au

**PRELIMINARY CONCEPT INDUSTRIAL ENTRY AND EXIT VEHICLE MOVEMENTS AND SIGHT DISTANCE LAYOUT PLAN OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD**

DRAWING STATUS: **PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION PURPOSES  
 DRAWING NUMBER: **25405-110**  
 SHEET **11** OF **29** REVISION **P0**



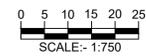
LAYOUT PLAN  
SCALE 1:750

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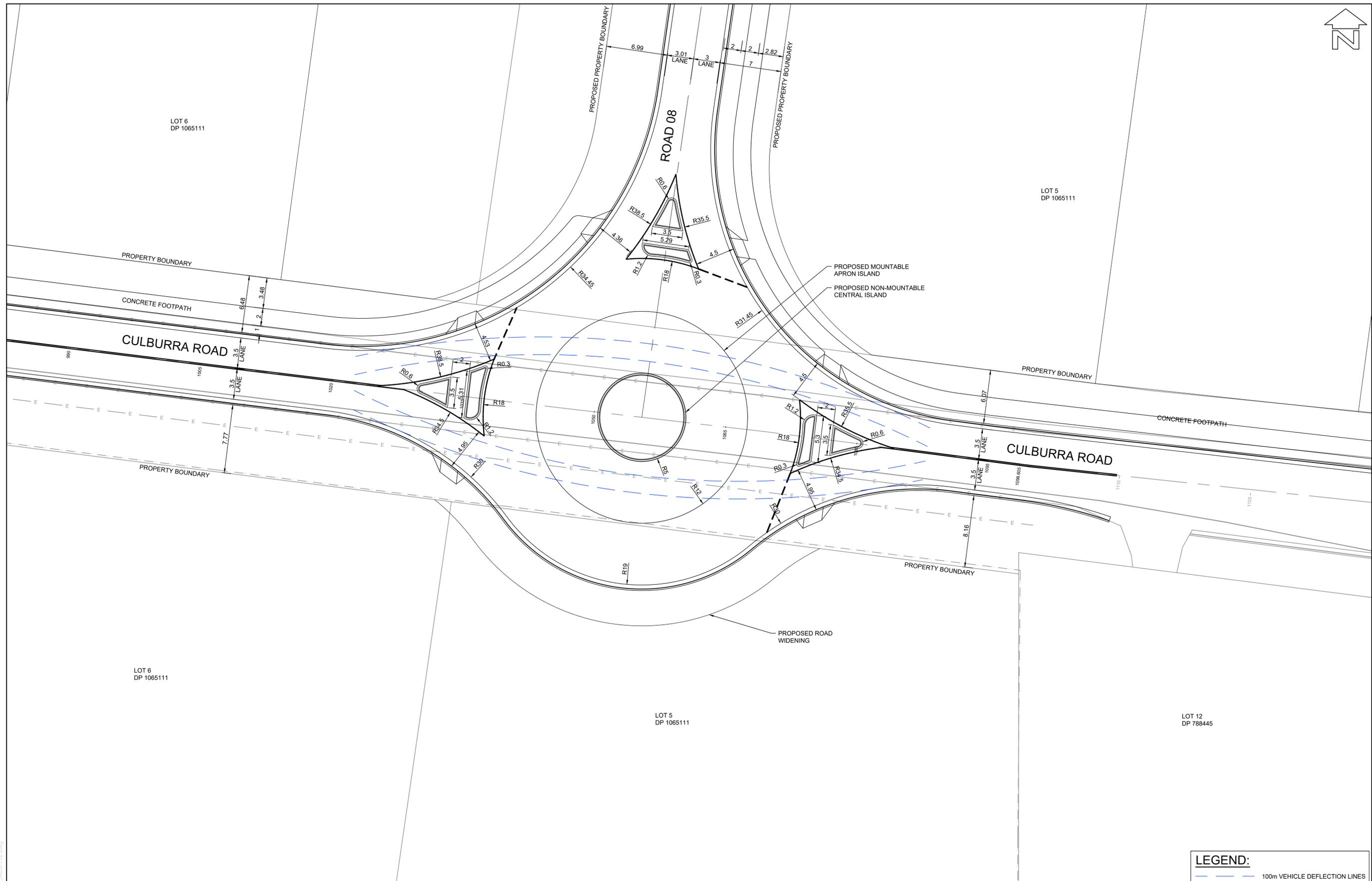
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SCALE:- 1:750

RATIO: <b>1:750</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY	APS	REV	DESCRIPTION	BY	DATE	 <b>allen price &amp; scarratts pty ltd</b> land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone:(02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	<b>PRELIMINARY CONCEPT ROUNDABOUT 02 LAYOUT PLAN</b>  <b>OVER CULBURRA ROAD</b> <b>AT CULBURRA BEACH</b> <b>FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DESIGN CJG	CHECK'D MJP							DRAWING NUMBER <b>25405-111</b>
DATE OF PLAN: MARCH 2020										

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LAYOUT PLAN  
SCALE 1:200

**LEGEND:**  
 100m VEHICLE DEFLECTION LINES

0 2.5 5.0 7.5 10  
 SCALE:- 1:200  
**PROFESSIONAL STANDARDS SCHEME**  
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RATIO:  
**1:200**  
 (AT A1 ORIGINAL)

DATUM:  
 AUSTRALIAN HEIGHT DATUM  
 ORIGIN: SSM  
 RL  
 DATE OF PLAN: MARCH 2020

SURVEY	APS
DESIGN	CJG
DRAWN	CJG
CHECK'D	MJP

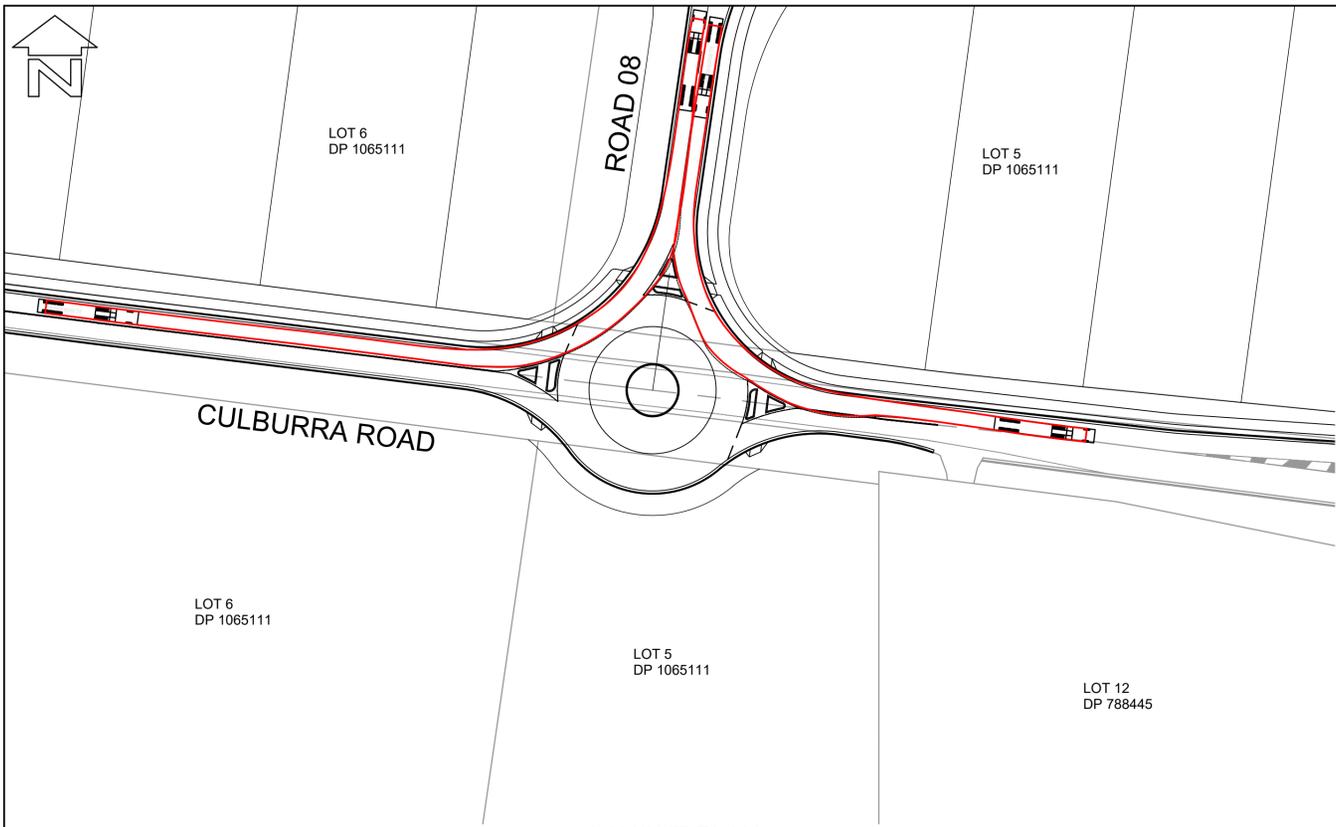
REV	DESCRIPTION	BY	DATE

**aps** allen price & scarratts pty ltd  
 land and development consultants  
 Nowra Office: 75 Plunkett Street, Nowra NSW 2541  
 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533  
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 consultants@allenprice.com.au www.allenprice.com.au

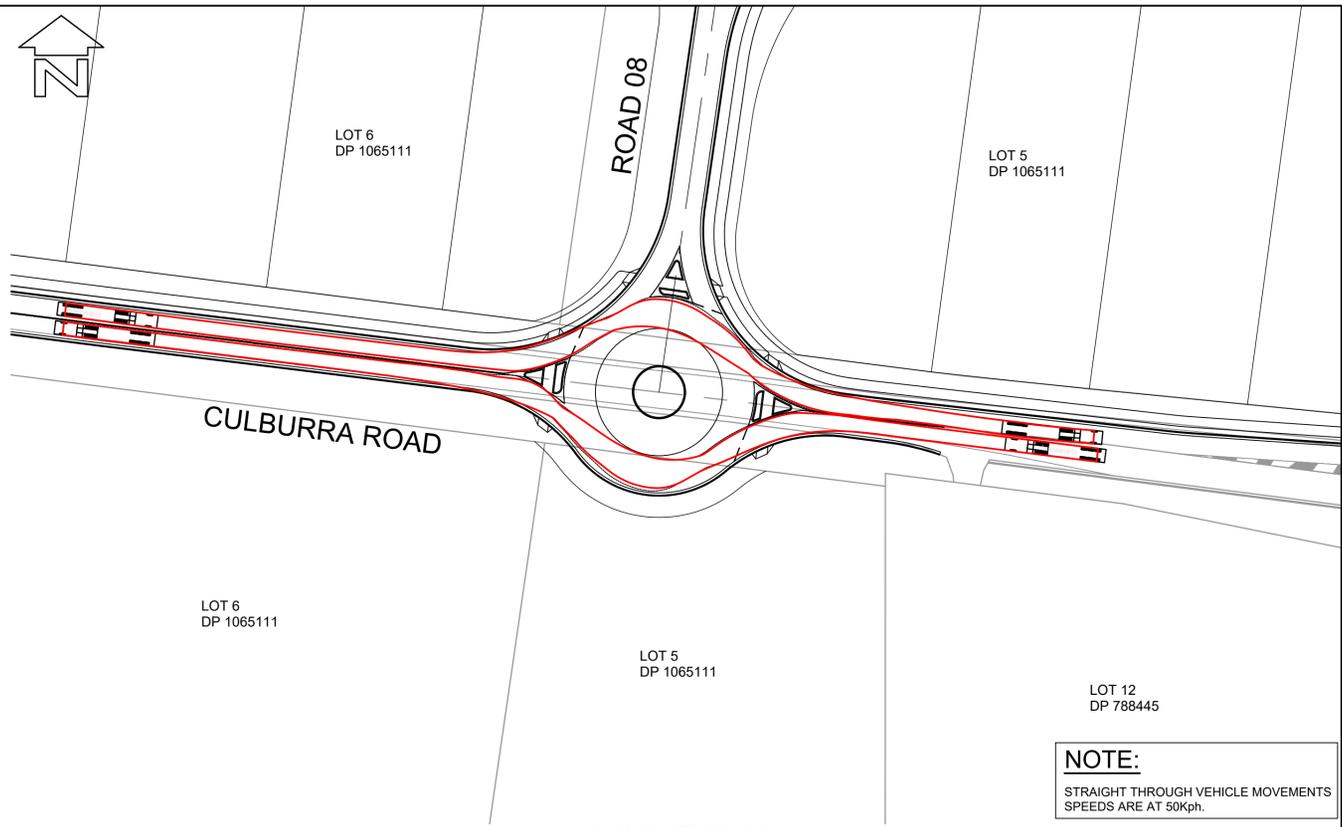
PRELIMINARY CONCEPT ROUNDABOUT 02 DESIGN  
 OVER CULBURRA ROAD  
 AT CULBURRA BEACH  
 FOR SEALARK PTY LTD

DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER <b>25405-112</b>	SHEET <b>13</b> REVISION <b>29</b> P1

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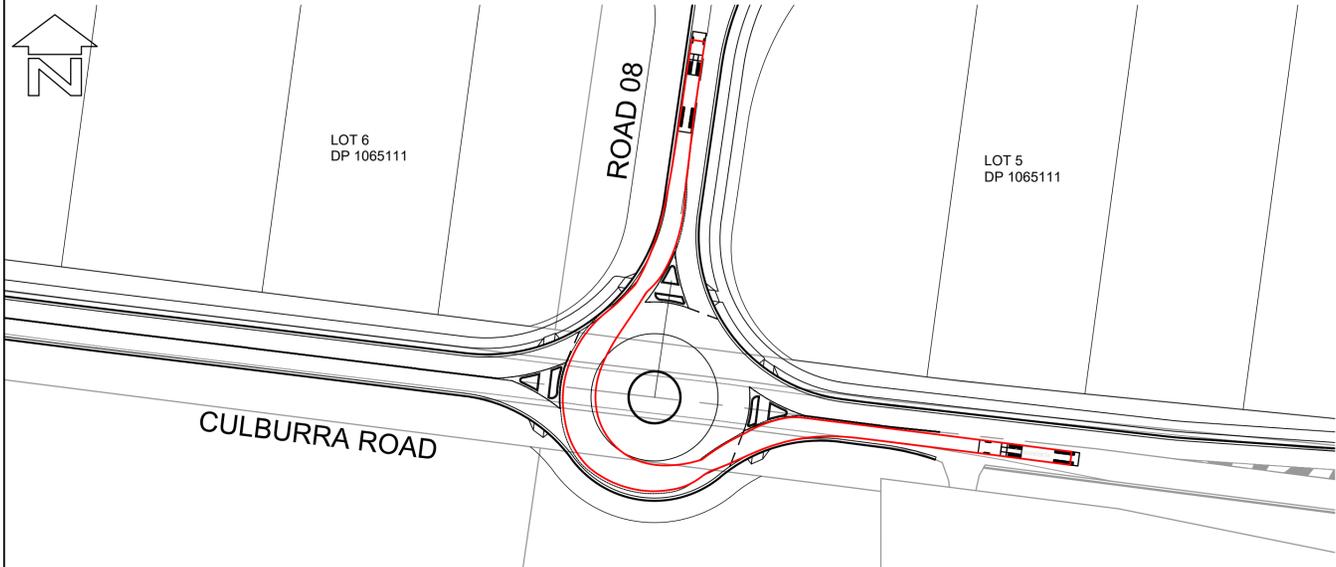


LAYOUT PLAN  
SCALE 1:750

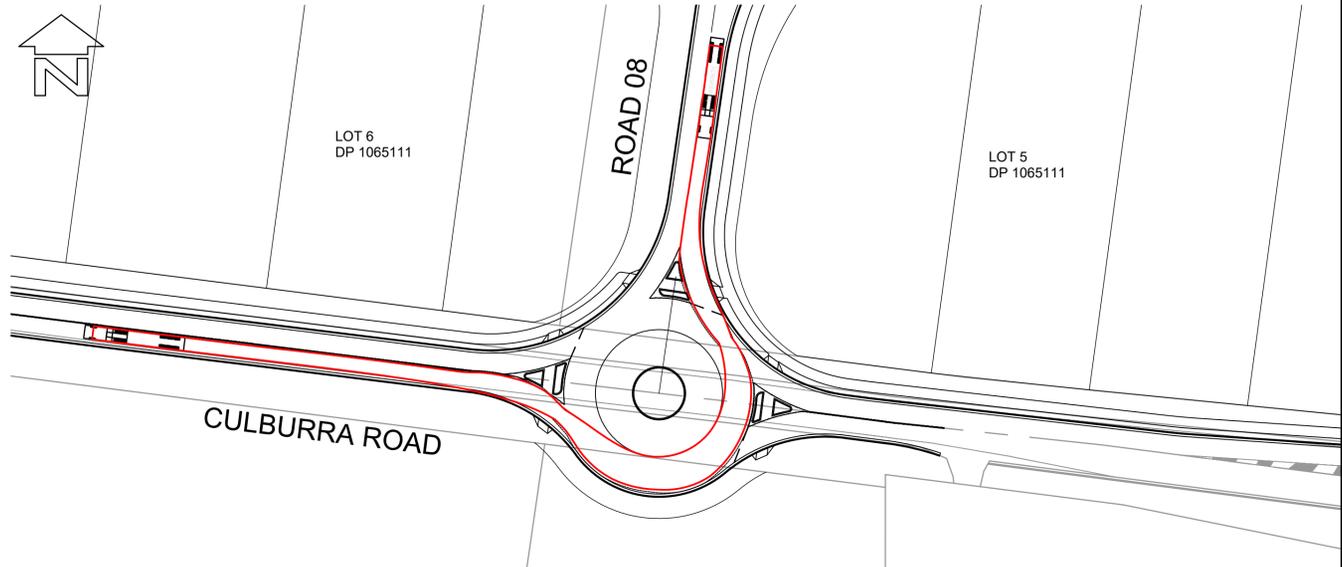


LAYOUT PLAN  
SCALE 1:750

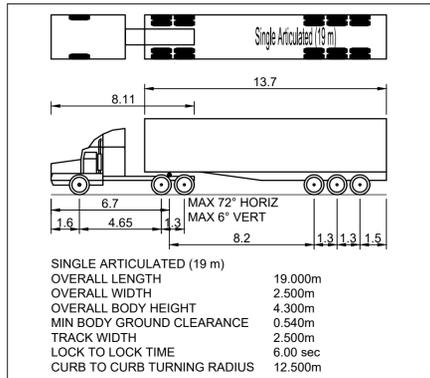
**NOTE:**  
STRAIGHT THROUGH VEHICLE MOVEMENTS  
SPEEDS ARE AT 50Kph.



LAYOUT PLAN  
SCALE 1:750



LAYOUT PLAN  
SCALE 1:750



SINGLE ARTICULATED (19 m)  
OVERALL LENGTH 19.000m  
OVERALL WIDTH 2.500m  
OVERALL BODY HEIGHT 4.300m  
MIN BODY GROUND CLEARANCE 0.540m  
TRACK WIDTH 2.500m  
LOCK TO LOCK TIME 6.00 sec  
CURB TO CURB TURNING RADIUS 12.500m

**VEHICLE MANOEUVRE LEGEND:**

— PATH OF OUTER FRONT WHEEL (FORWARD MOVEMENT)  
- - - - - SWEEP PATH OF VEHICLE BODY (FORWARD MOVEMENT)  
THIS DRAWING HAS BEEN PREPARED USING MODELING COMPUTER SOFTWARE AUTODESK VEHICLE TRACKING 2016. THE VEHICLE USED IS BASED UPON DATA PROVIDED BY AUSTRROADS 2013 FOR A SINGLE ARTICULATED (19.0m) TRAVELING AT 20km/hr AND INCORPORATES A REASONABLE DEGREE OF TOLERANCE. HOWEVER IT IS NOT POSSIBLE TO ACCOUNT FOR ALL VEHICLE TYPES/ CHARACTERISTICS AND/OR DRIVER ABILITY.



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RATIO:  
**1:750**  
(AT A1 ORIGINAL)

DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: MARCH 2020

SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	CJG				
DRAWN	CJG				
CHECK'D	MJP				

**aps** allen price & scarratts pty ltd  
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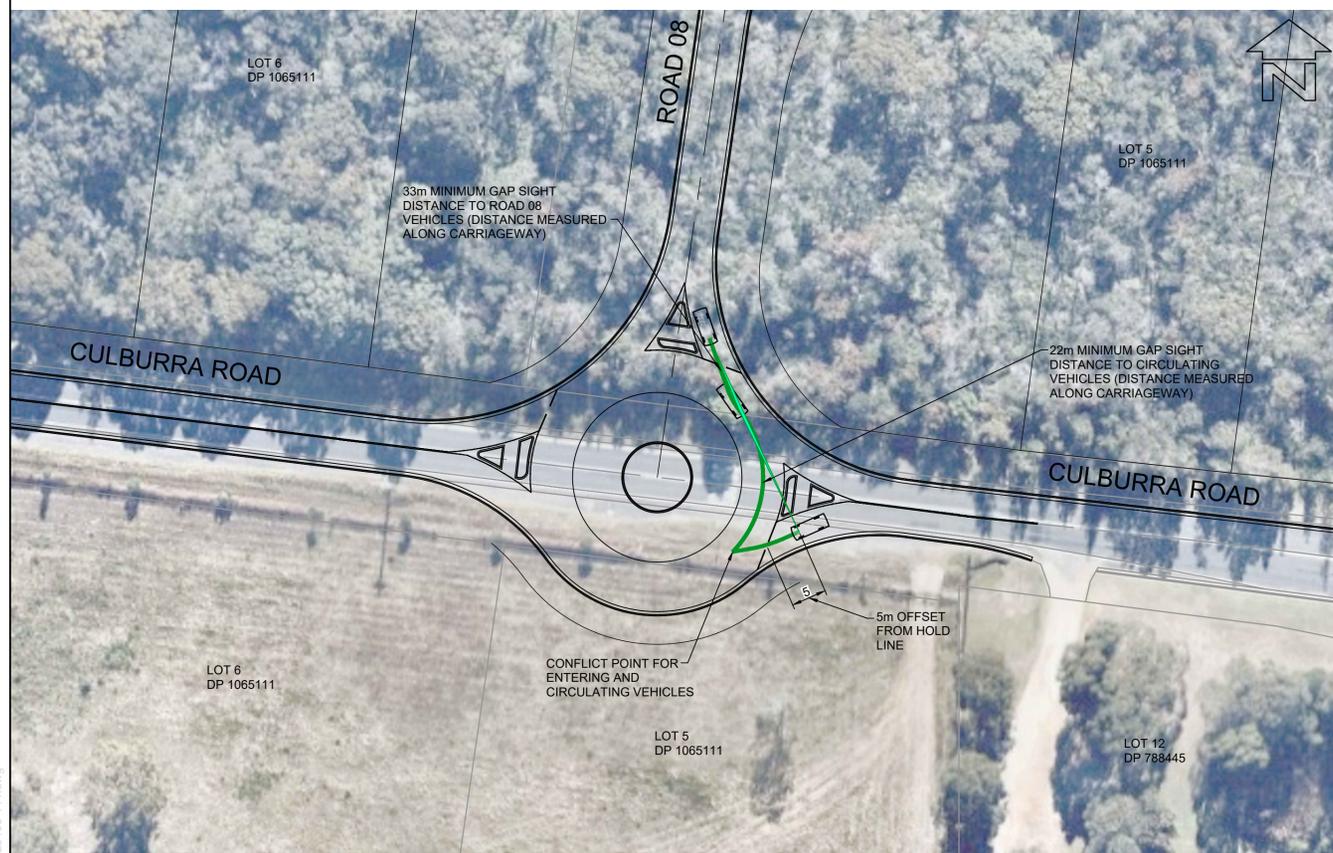
**ROUNDAABOUT 02 VEHICLE MOVEMENT LAYOUT PLAN**  
**OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD**

DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER <b>25405-113</b>	SHEET <b>14</b> OF <b>29</b> REVISION <b>P1</b>

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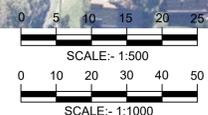
LAYOUT PLAN  
SCALE 1:500



LAYOUT PLAN  
SCALE 1:500



LAYOUT PLAN  
SCALE 1:1000



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RATIO:  
**AS NOTED**  
(AT A1 ORIGINAL)

DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: MARCH 2020

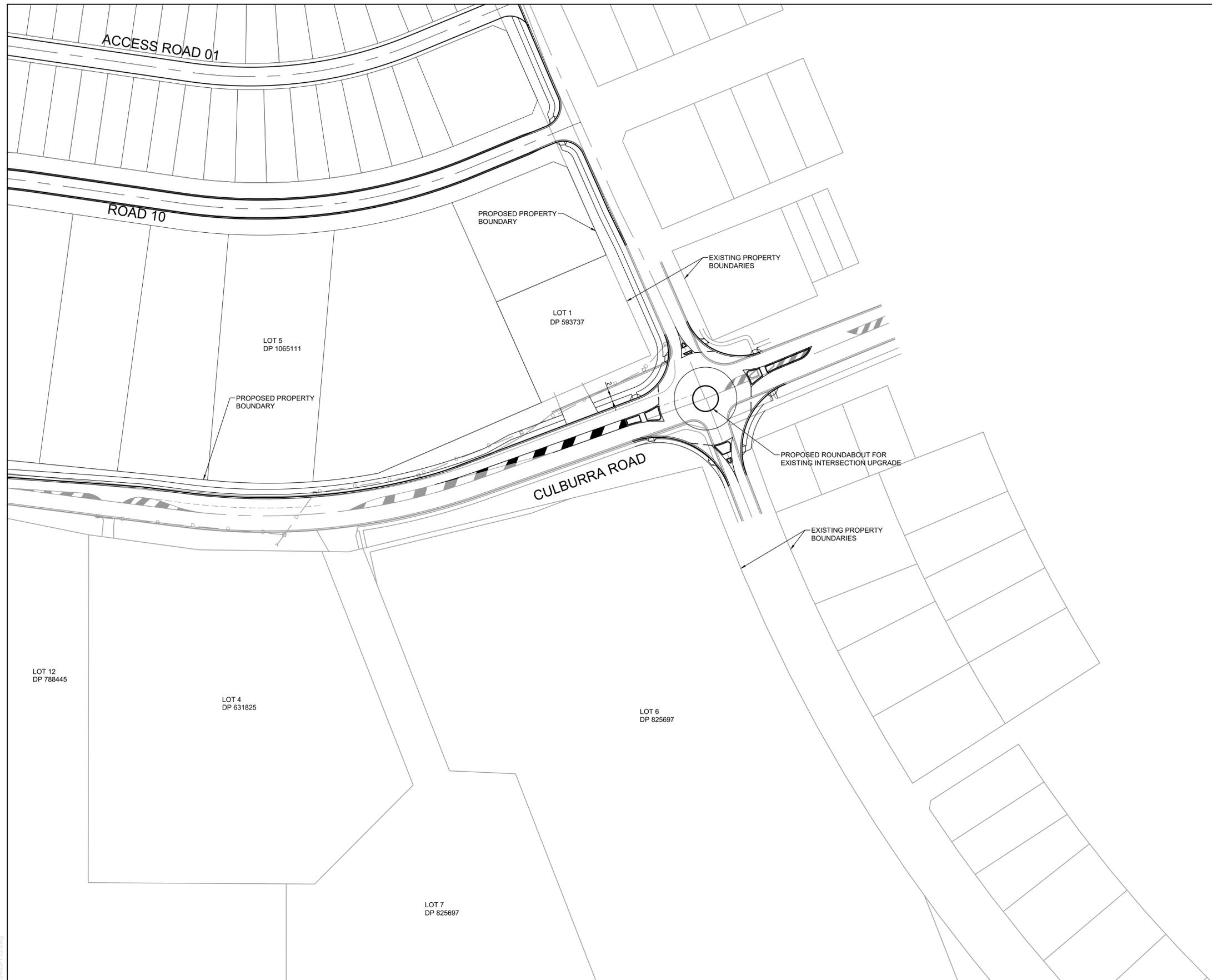
SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	C/JG				
DRAWN	C/JG				
CHECK'D	MJP				

**aps** allen price & scarratts pty ltd  
land and development consultants  
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Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533  
phone: (02) 4421 6544  
consultants@allenprice.com.au www.allenprice.com.au

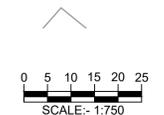
PRELIMINARY ROUNDABOUT 02 SIGHT LINE LAYOUT PLAN  
OVER CULBURRA ROAD  
AT CULBURRA BEACH  
FOR SEALARK PTY LTD

DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER <b>25405-114</b>	SHEET <b>15</b> OF <b>29</b> REVISION <b>P1</b>

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LAYOUT PLAN  
SCALE 1:750



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**BEWARE!**

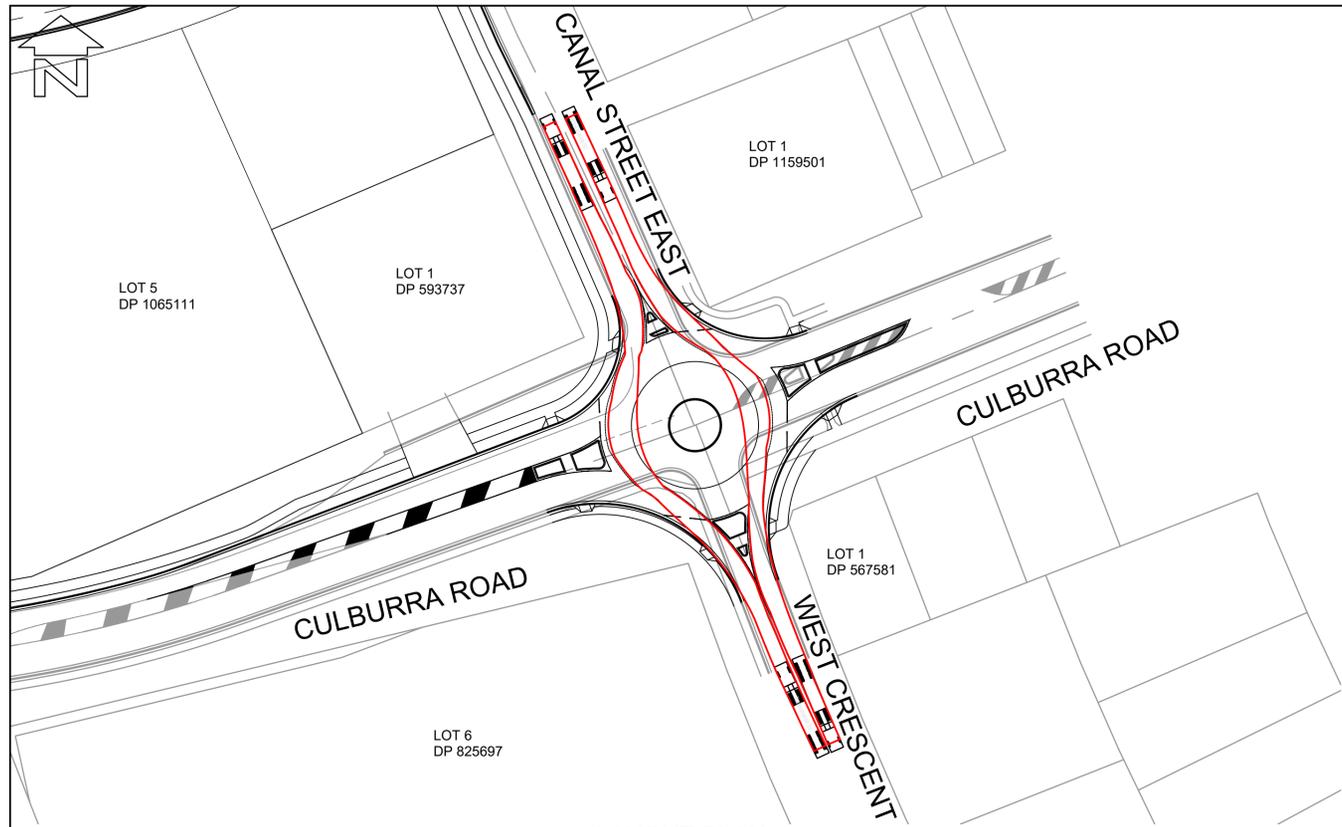
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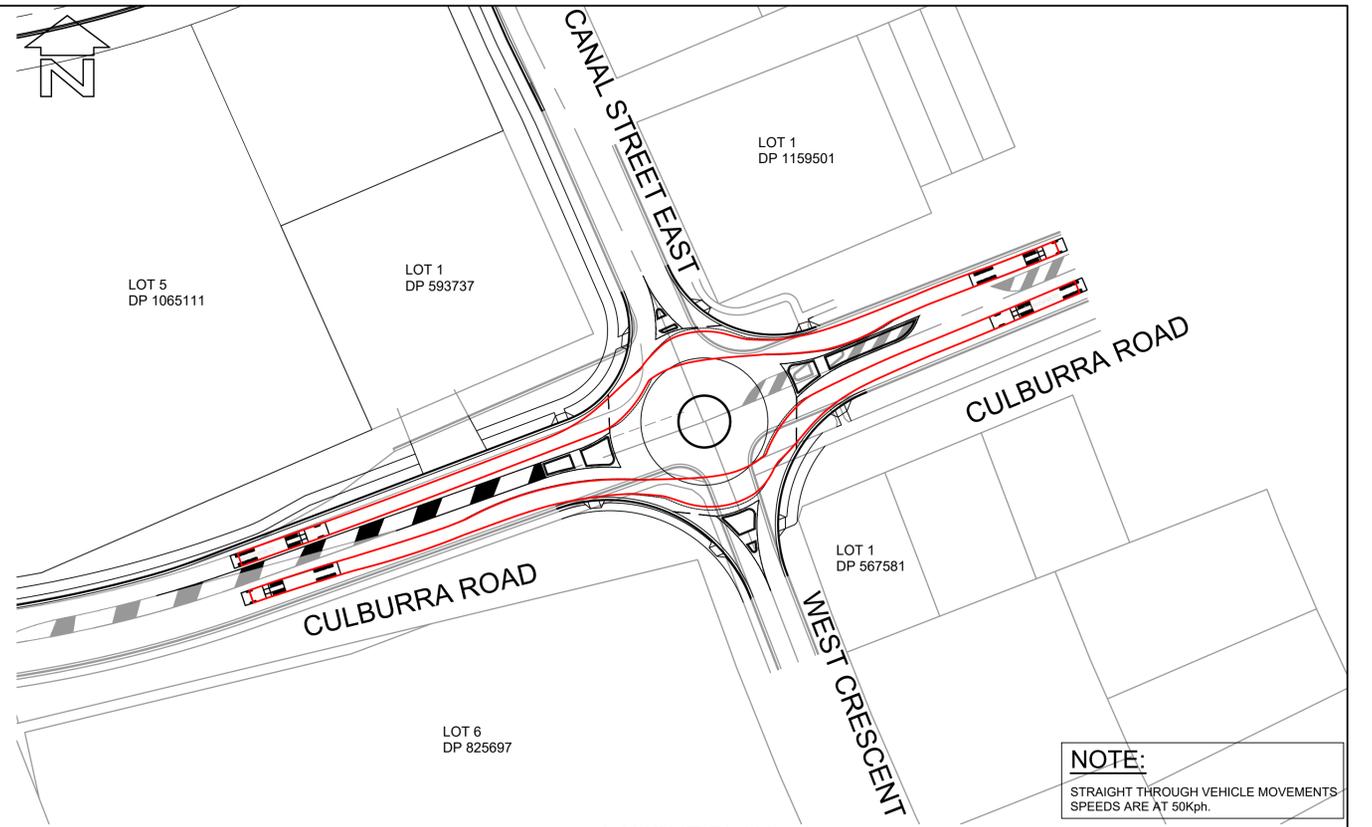
RATIO: <b>1:750</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY	APS	REV	DESCRIPTION	BY	DATE	<p>allen price &amp; scarratts pty ltd land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone:(02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au</p>	<b>PRELIMINARY CONCEPT ROUNDABOUT 03 LAYOUT PLAN</b>  <b>OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DESIGN CJG	CHECK'D MJP							DRAWING NUMBER <b>25405-115</b>
DATE OF PLAN: MARCH 2020										

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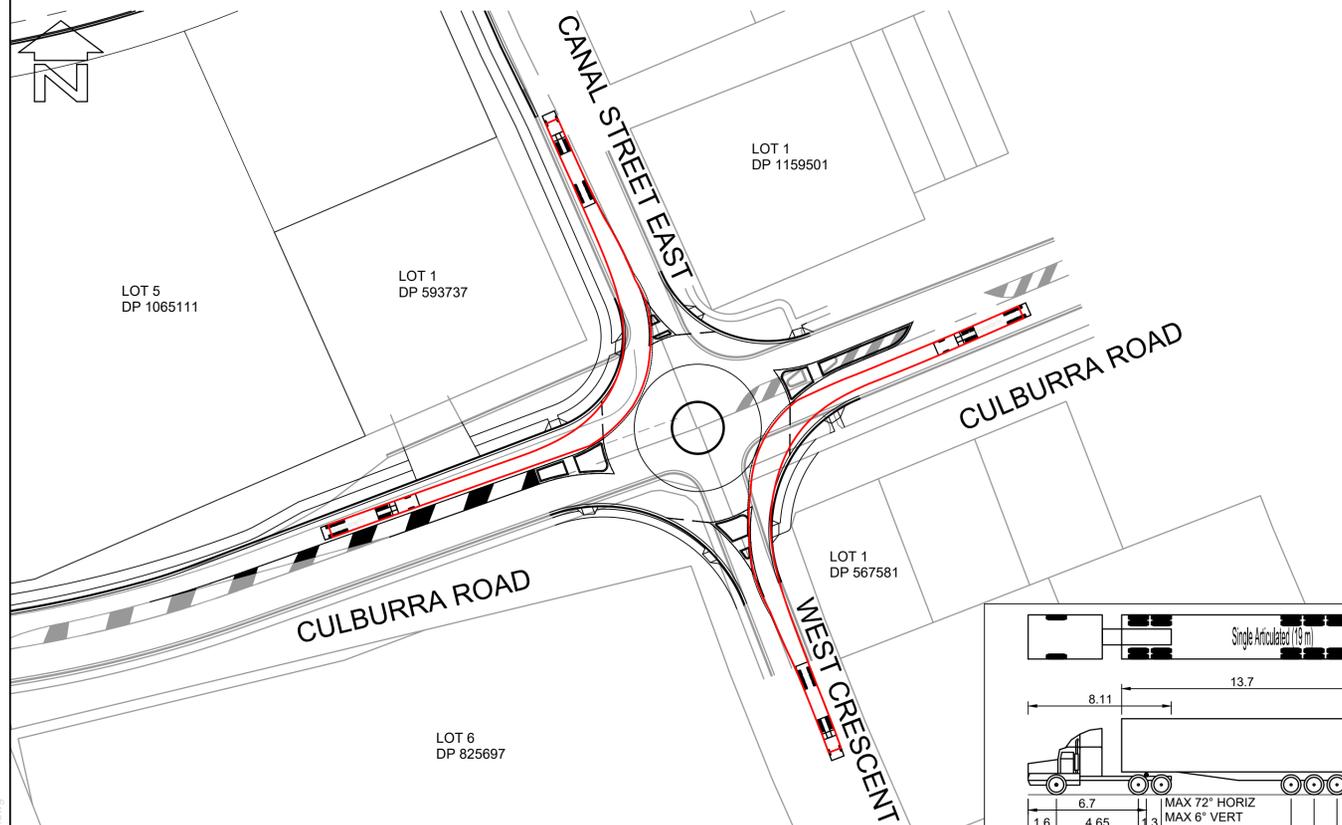


LAYOUT PLAN  
SCALE 1:750

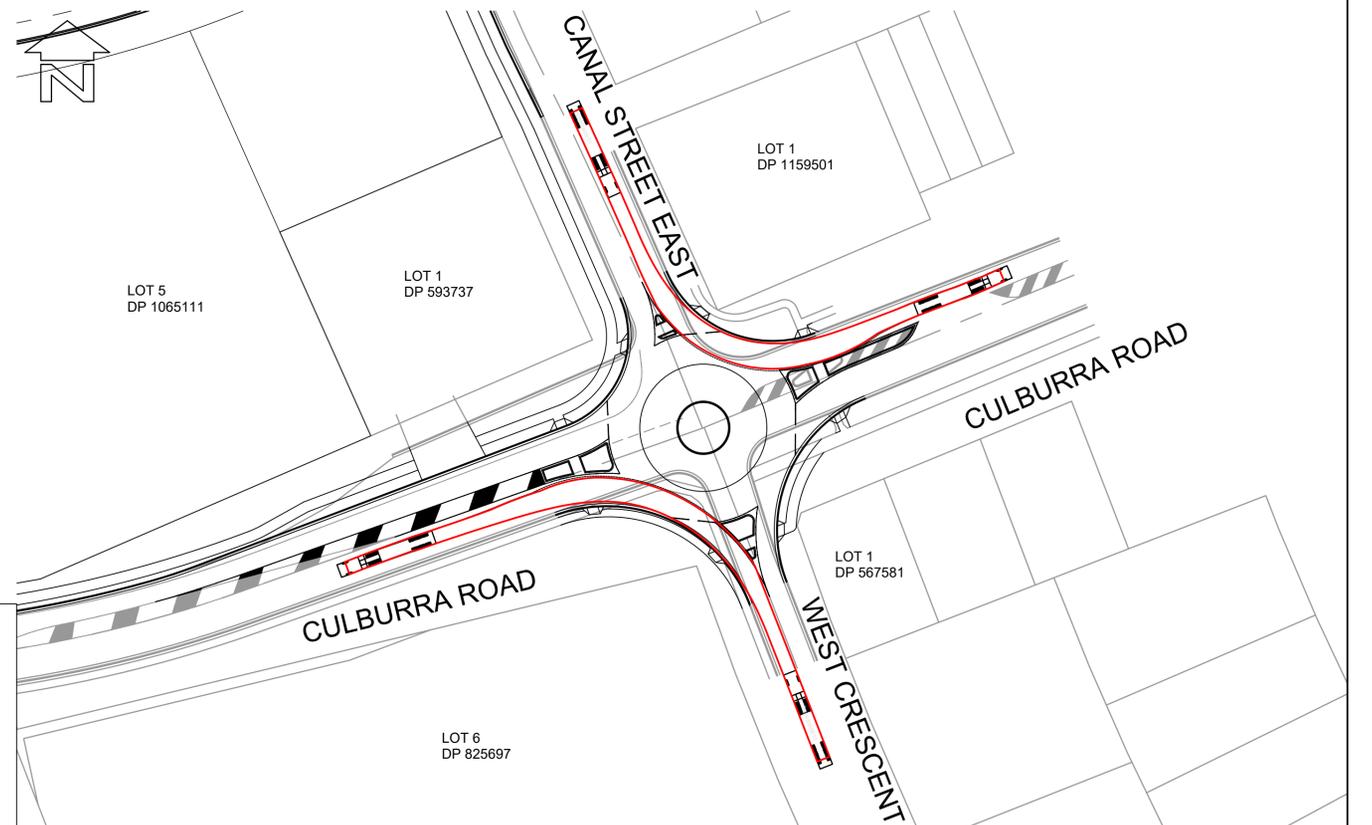


LAYOUT PLAN  
SCALE 1:750

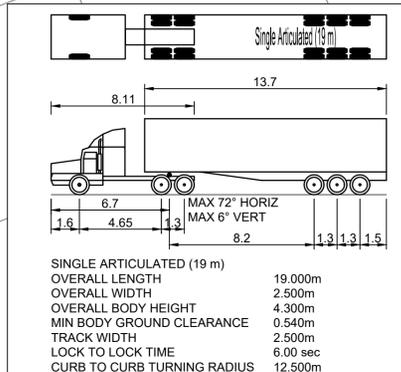
**NOTE:**  
STRAIGHT THROUGH VEHICLE MOVEMENTS  
SPEEDS ARE AT 50kph.



LAYOUT PLAN  
SCALE 1:750

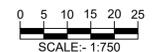


LAYOUT PLAN  
SCALE 1:750



**VEHICLE MANOEUVRE LEGEND:**

— PATH OF OUTER FRONT WHEEL (FORWARD MOVEMENT)  
 - - - SWEEP PATH OF VEHICLE BODY (FORWARD MOVEMENT)  
 THIS DRAWING HAS BEEN PREPARED USING MODELING COMPUTER SOFTWARE AUTODESK VEHICLE TRACKING 2016. THE VEHICLE USED IS BASED UPON DATA PROVIDED BY AUSTRROADS 2013 FOR A SINGLE ARTICULATED (19.0m) TRAVELING AT 20km/hr AND INCORPORATES A REASONABLE DEGREE OF TOLERANCE. HOWEVER IT IS NOT POSSIBLE TO ACCOUNT FOR ALL VEHICLE TYPES/ CHARACTERISTICS AND/OR DRIVER ABILITY.



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RATIO:  
**1:750**  
(AT A1 ORIGINAL)

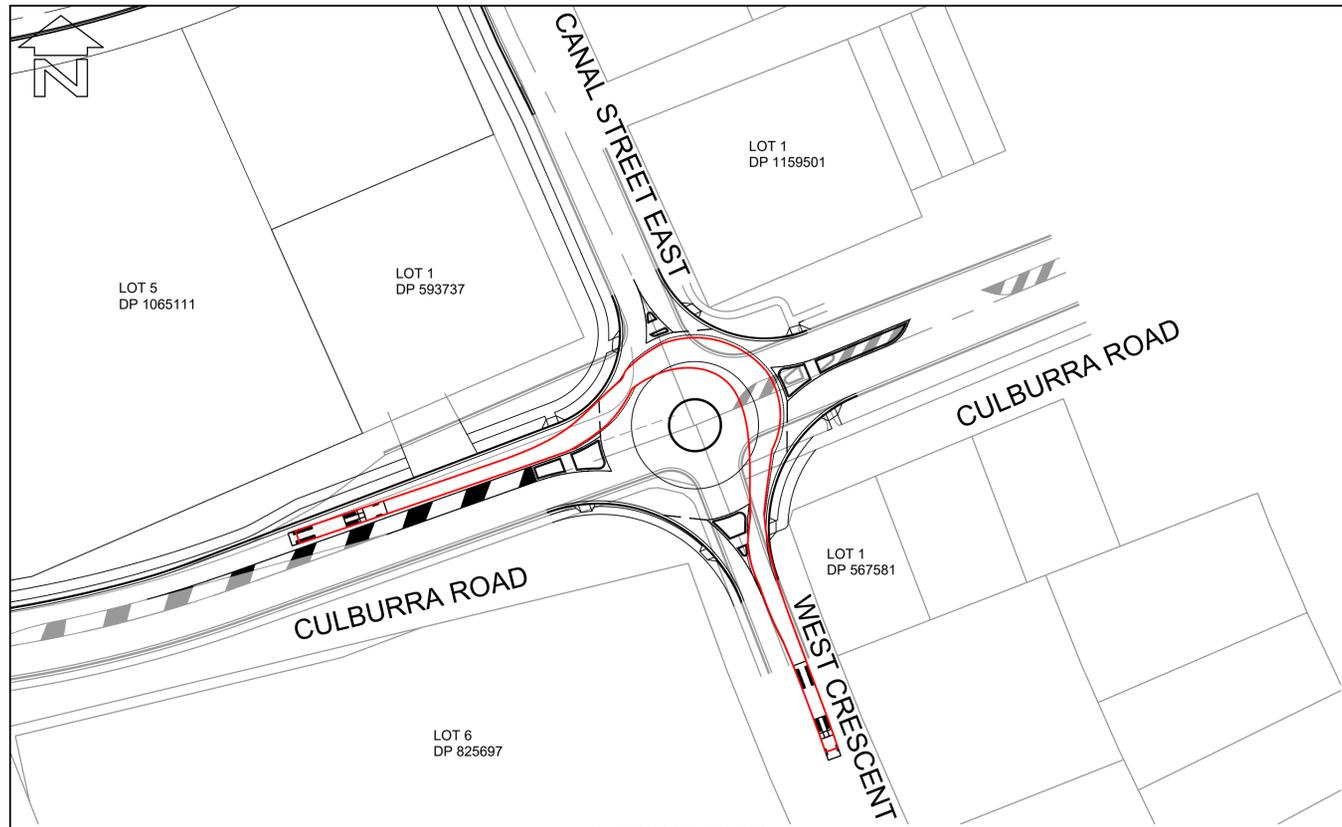
DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: MARCH 2020

SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	CJG				
DRAWN	CJG				
CHECK'D	MJP				

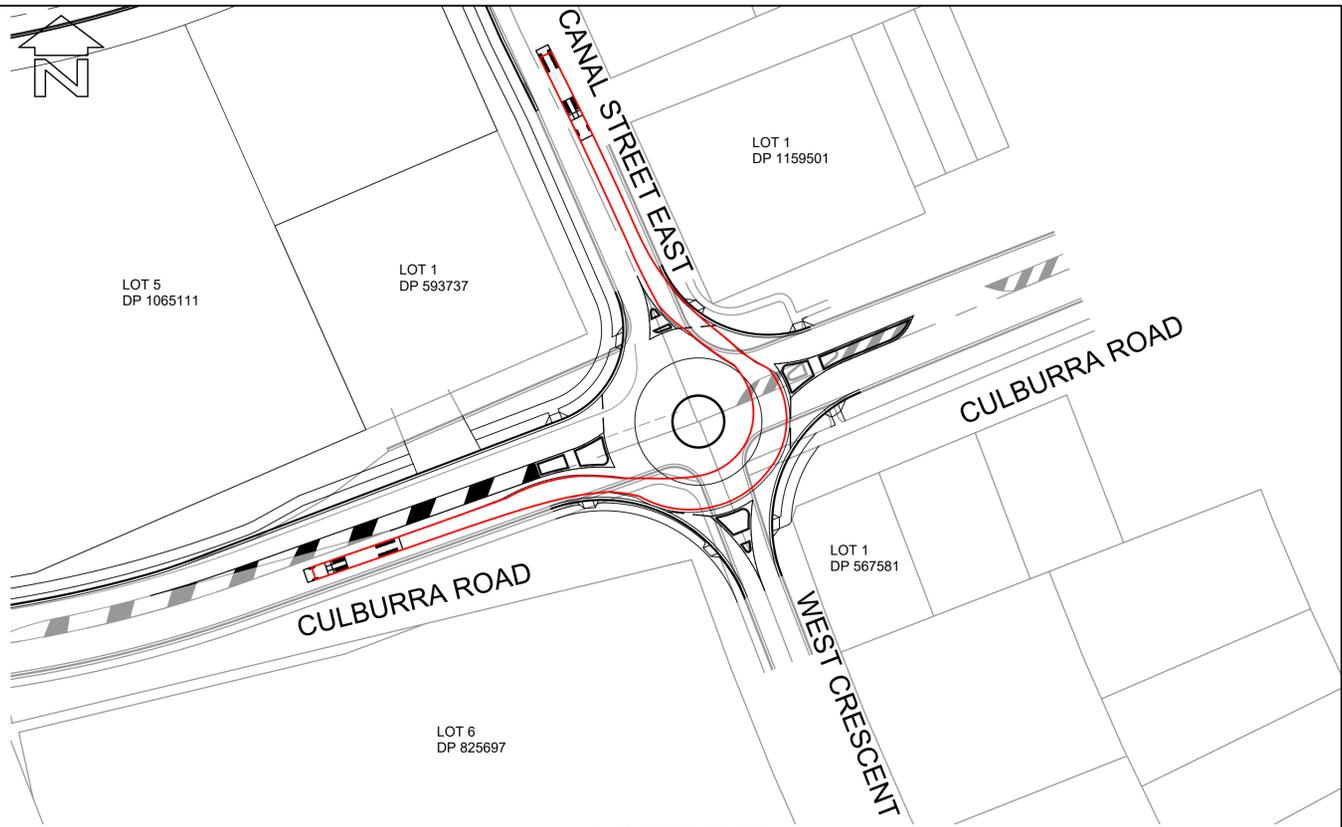
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**ROUNDAABOUT 03 VEHICLE MOVEMENT LAYOUT PLAN**  
**SHEET 01**  
**OVER CULBURRA ROAD**  
**AT CULBURRA BEACH**  
**FOR SEALARK PTY LTD**

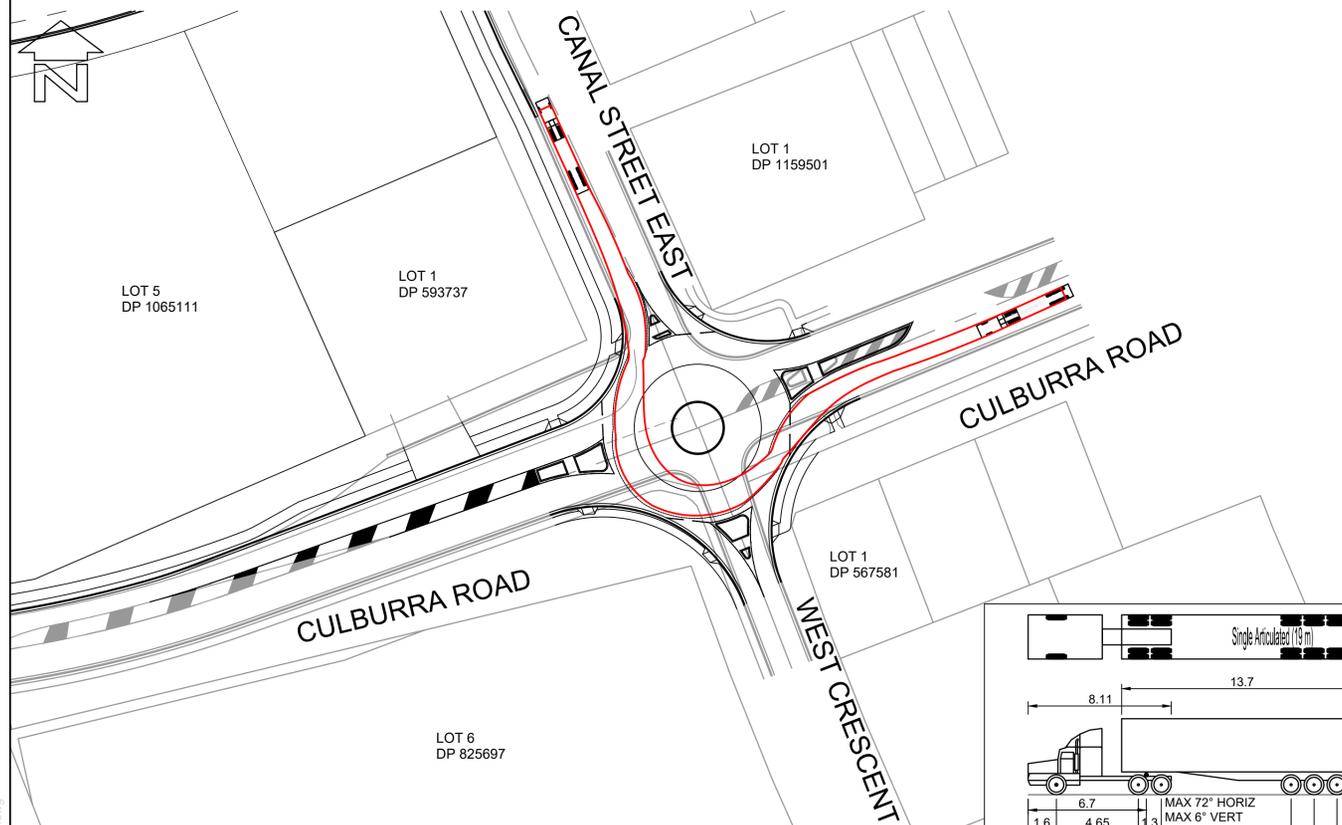
DRAWING STATUS	<b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES		
DRAWING NUMBER	25405-117	SHEET	18
		OF	29
REVISION			P1



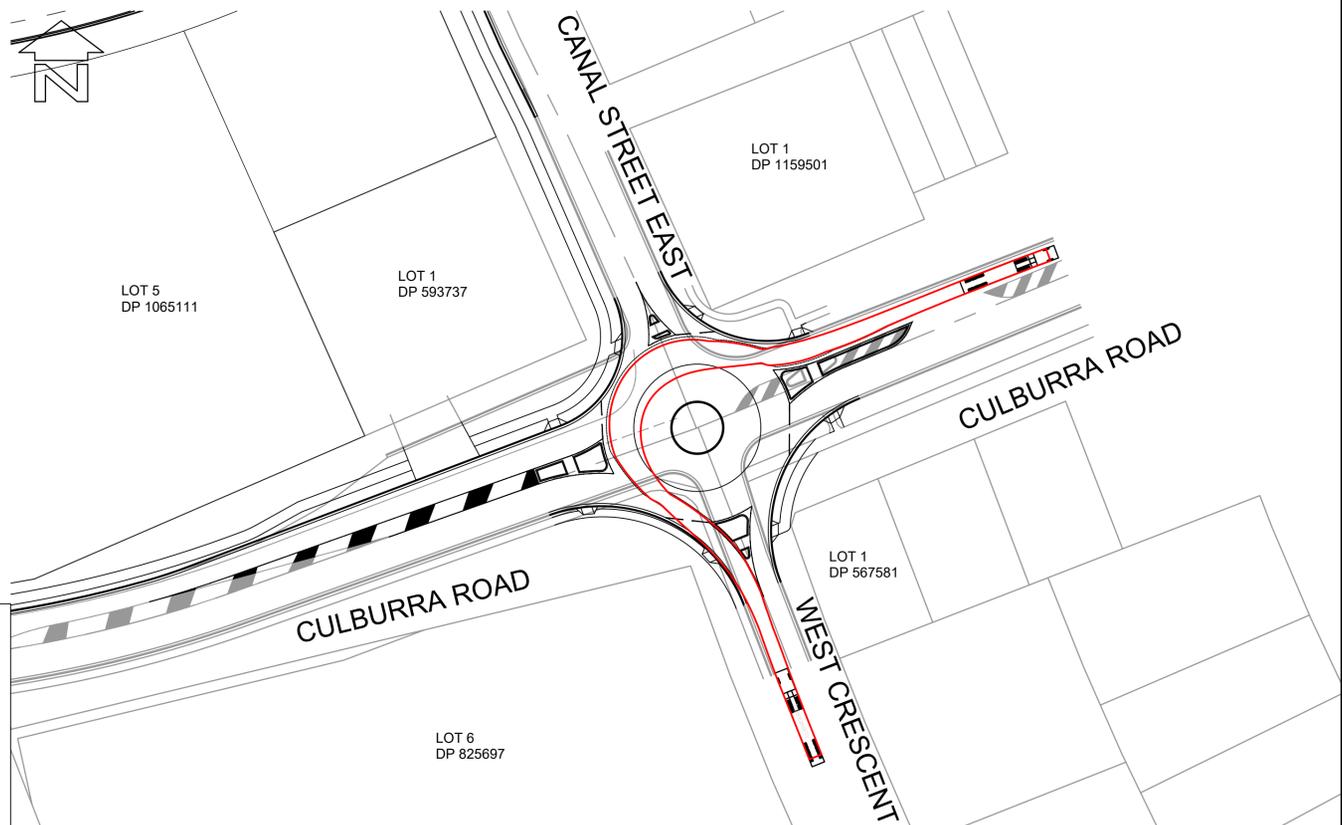
LAYOUT PLAN  
SCALE 1:750



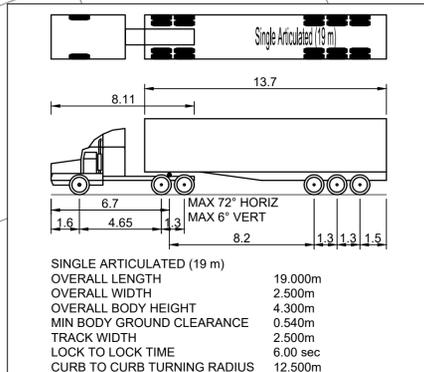
LAYOUT PLAN  
SCALE 1:750



LAYOUT PLAN  
SCALE 1:750

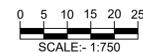


LAYOUT PLAN  
SCALE 1:750



VEHICLE MANOEUVRE LEGEND:

- - - - - PATH OF OUTER FRONT WHEEL (FORWARD MOVEMENT)  
 - - - - - SWEEP PATH OF VEHICLE BODY (FORWARD MOVEMENT)  
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SCALE: 1:750



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RATIO:  
**1:750**  
(AT A1 ORIGINAL)

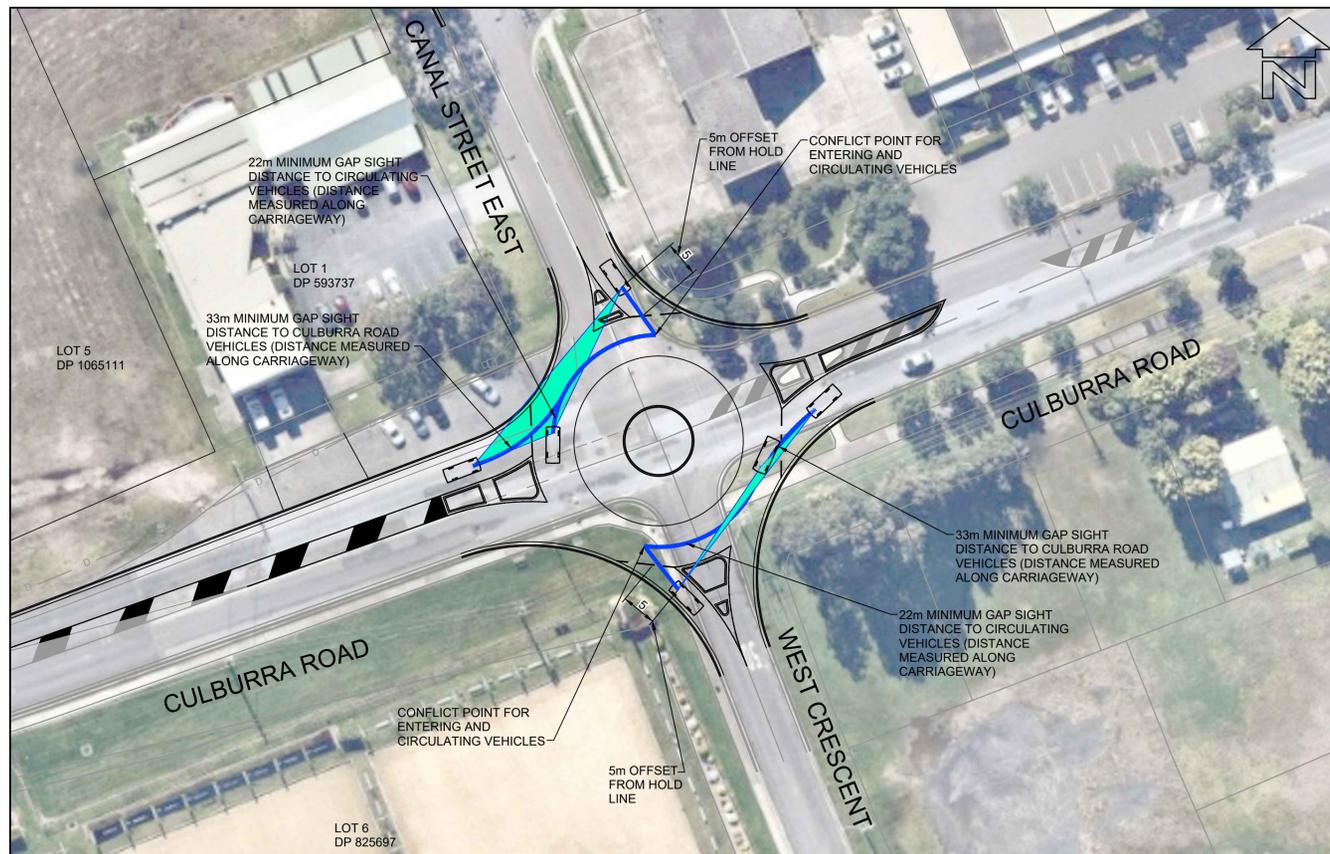
DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: MARCH 2020

SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	CJG				
DRAWN	CJG				
CHECK'D	MJP				

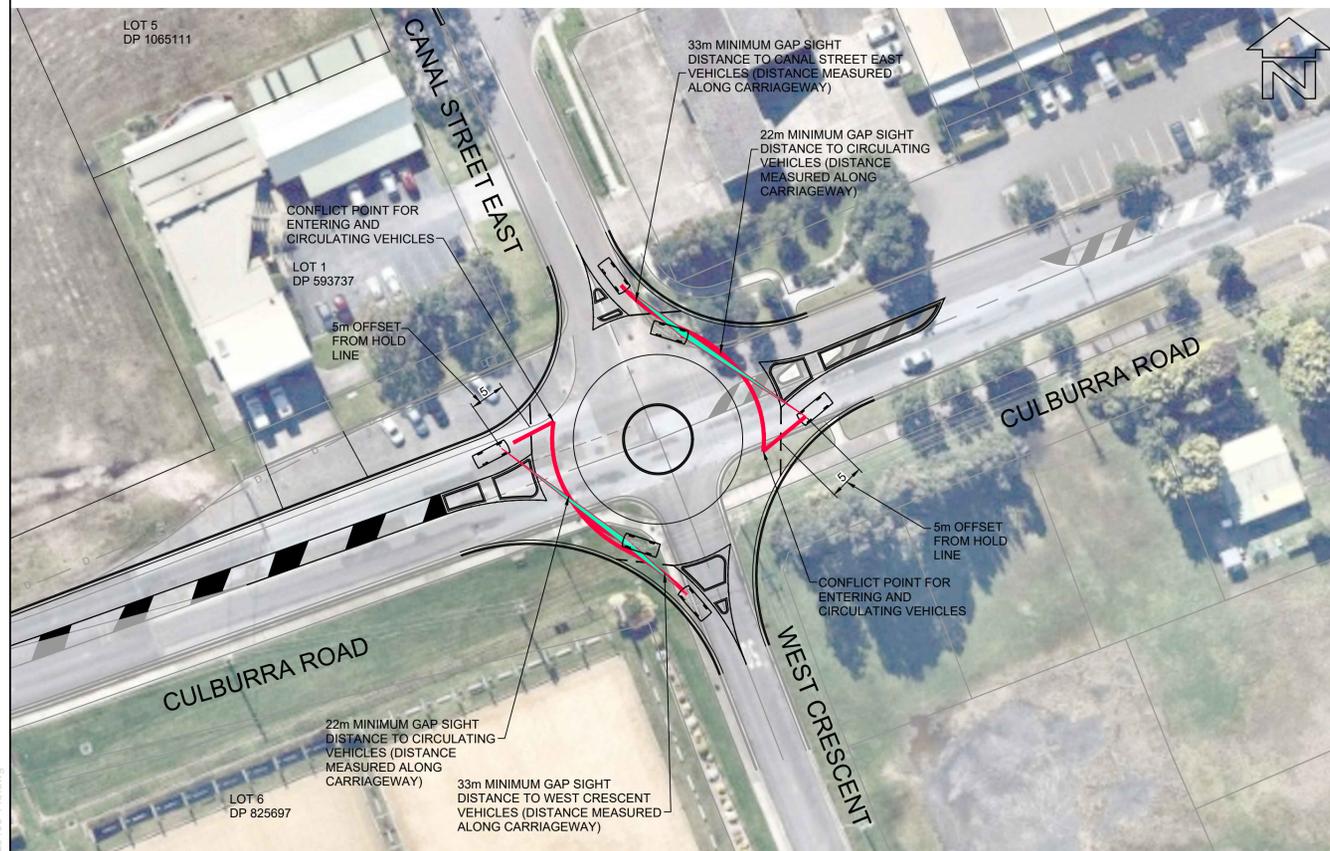
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phone:(02) 4421 6544  
consultants@allenprice.com.au www.allenprice.com.au

**ROUNDAABOUT 03 VEHICLE MOVEMENT LAYOUT PLAN**  
**SHEET 01**  
**OVER CULBURRA ROAD**  
**AT CULBURRA BEACH**  
**FOR SEALARK PTY LTD**

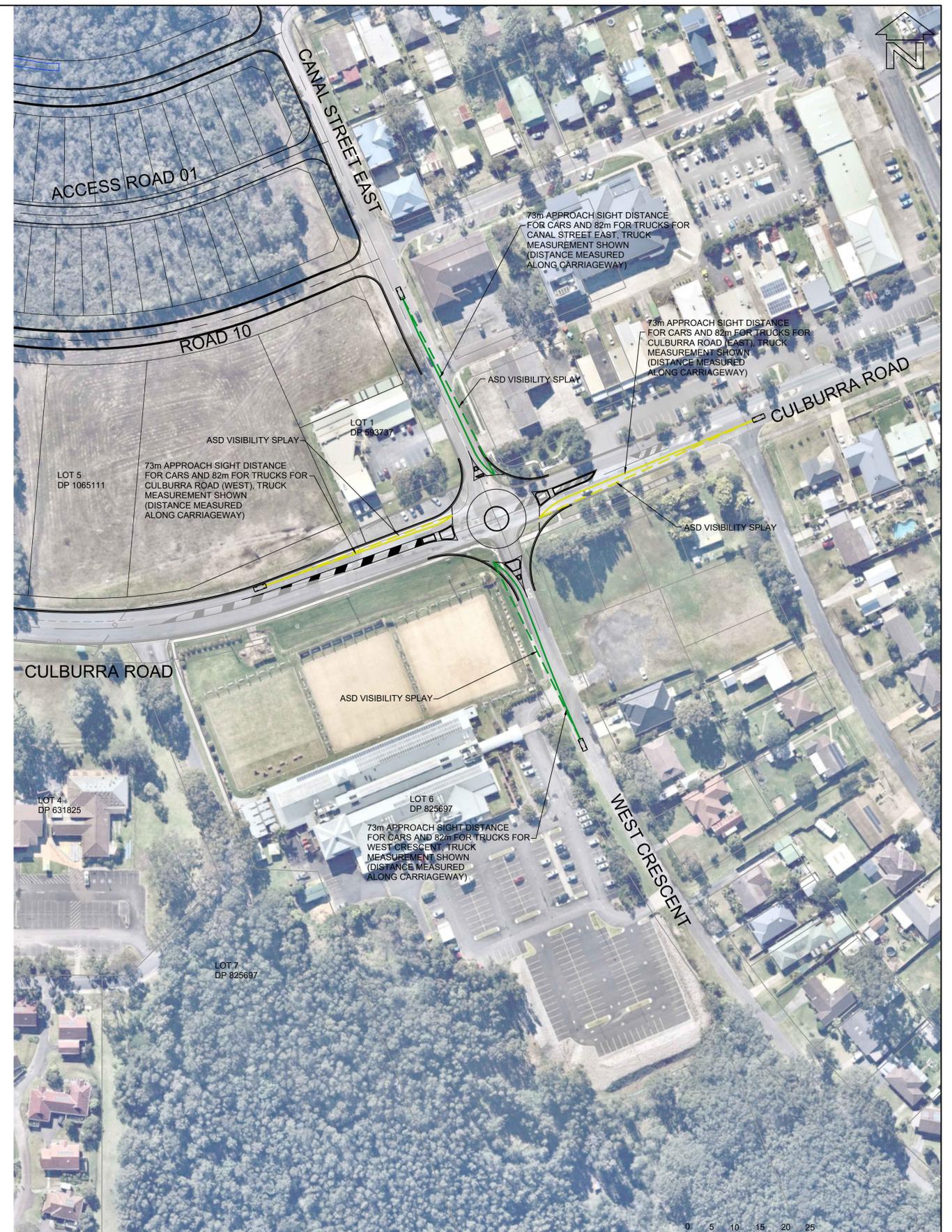
DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER <b>25405-118</b>	SHEET <b>19</b> REVISION <b>29</b> P1



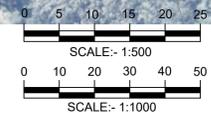
LAYOUT PLAN  
SCALE 1:500



LAYOUT PLAN  
SCALE 1:500



LAYOUT PLAN  
SCALE 1:1000



PROFESSIONAL STANDARDS SCHEME  
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RATIO:  
**AS NOTED**  
(AT A1 ORIGINAL)

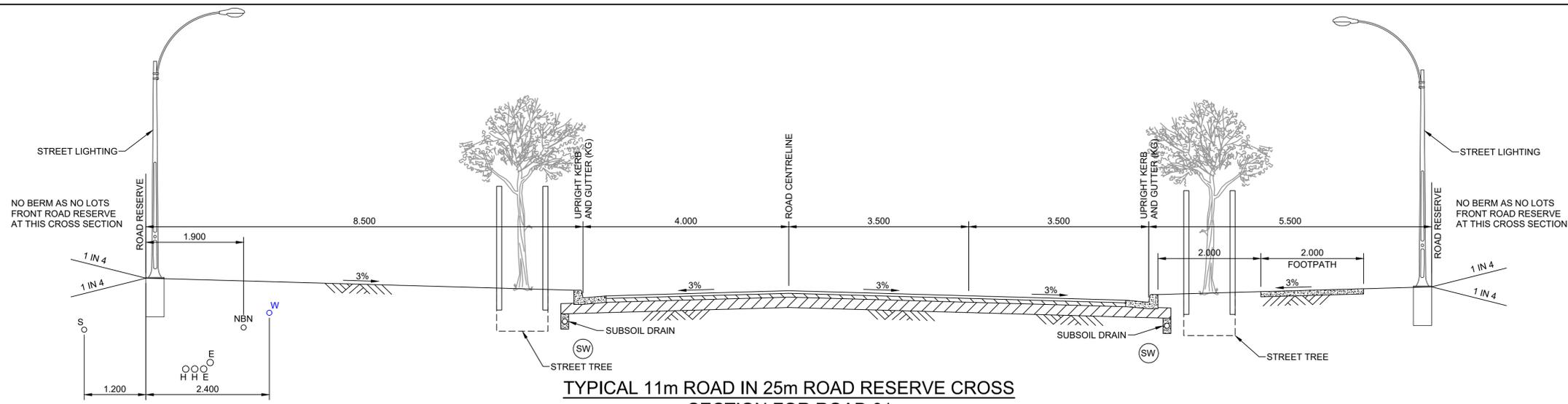
DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: MARCH 2020

SURVEY	APS	REV	DESCRIPTION	BY	DATE
DESIGN	CJG				
DRAWN	CJG				
CHECK'D	MJP				

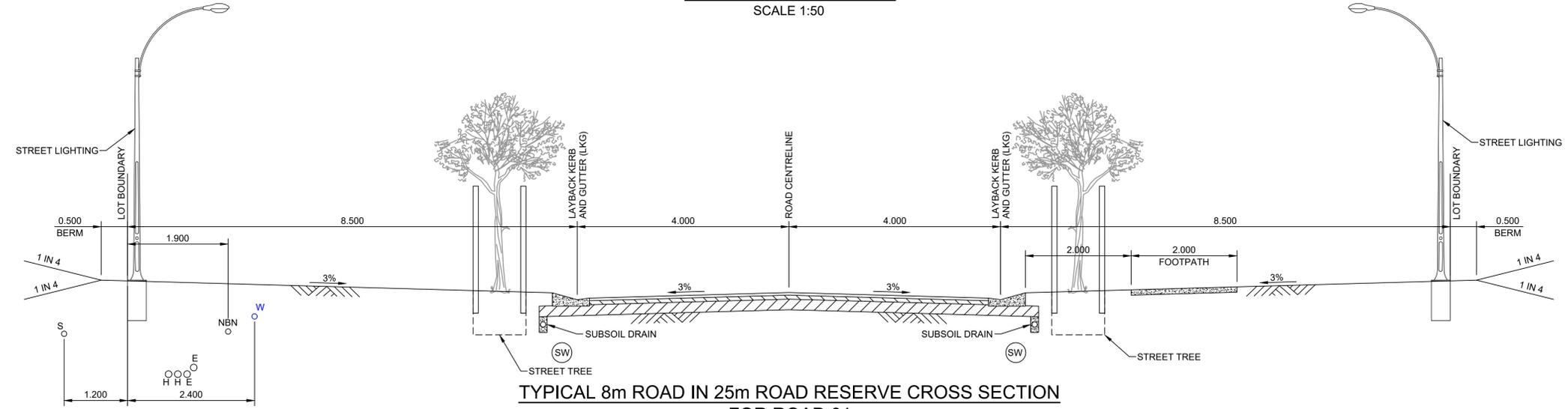
**aps** allen price & scarratts pty ltd  
land and development consultants  
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Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533  
phone: (02) 4421 6544  
consultants@allenprice.com.au www.allenprice.com.au

PRELIMINARY ROUNDABOUT 03 SIGHT LINE LAYOUT PLAN  
OVER CULBURRA ROAD  
AT CULBURRA BEACH  
FOR SEALARK PTY LTD

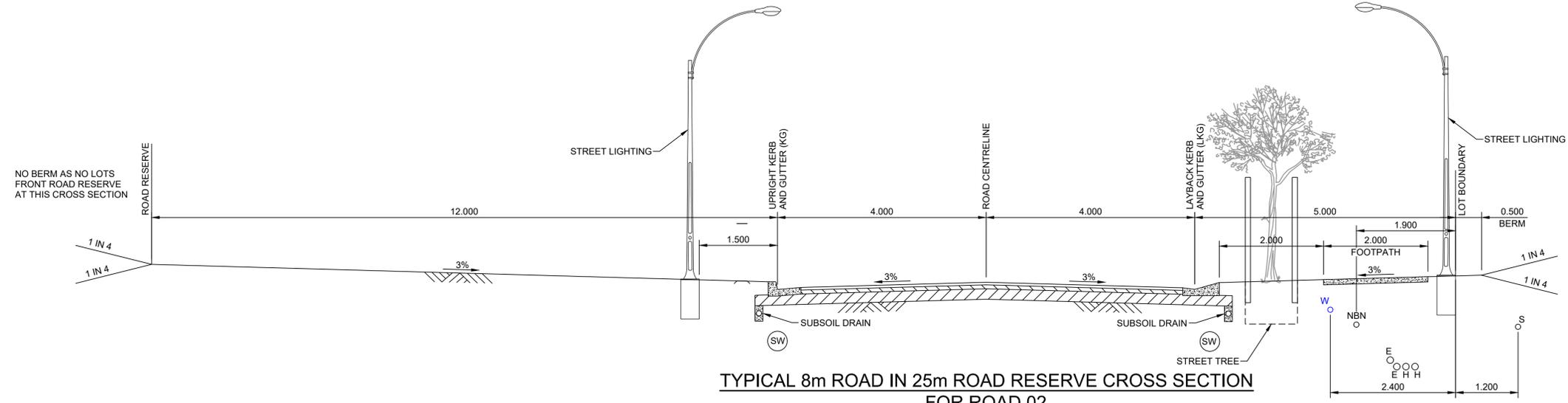
DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES	
DRAWING NUMBER <b>25405-119</b>	SHEET <b>20</b> OF <b>29</b> REVISION <b>P1</b>



**TYPICAL 11m ROAD IN 25m ROAD RESERVE CROSS SECTION FOR ROAD 01**  
SCALE 1:50

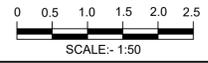


**TYPICAL 8m ROAD IN 25m ROAD RESERVE CROSS SECTION FOR ROAD 01**  
SCALE 1:50



**TYPICAL 8m ROAD IN 25m ROAD RESERVE CROSS SECTION FOR ROAD 02**  
SCALE 1:50

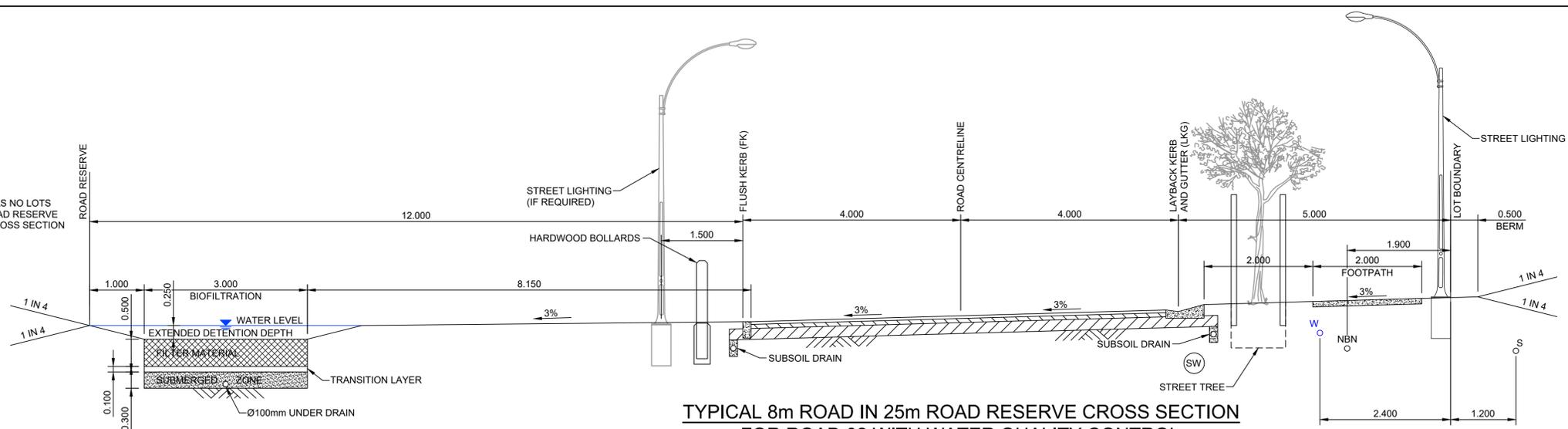
**NOTE:**  
FOOTPATHS SHOWN ON CROSS SECTIONS ARE FOR INFORMATION ONLY. SEE LAYOUT PLANS FOR CLARIFICATION OF FOOTPATH LOCATION THROUGH SUBDIVISION.



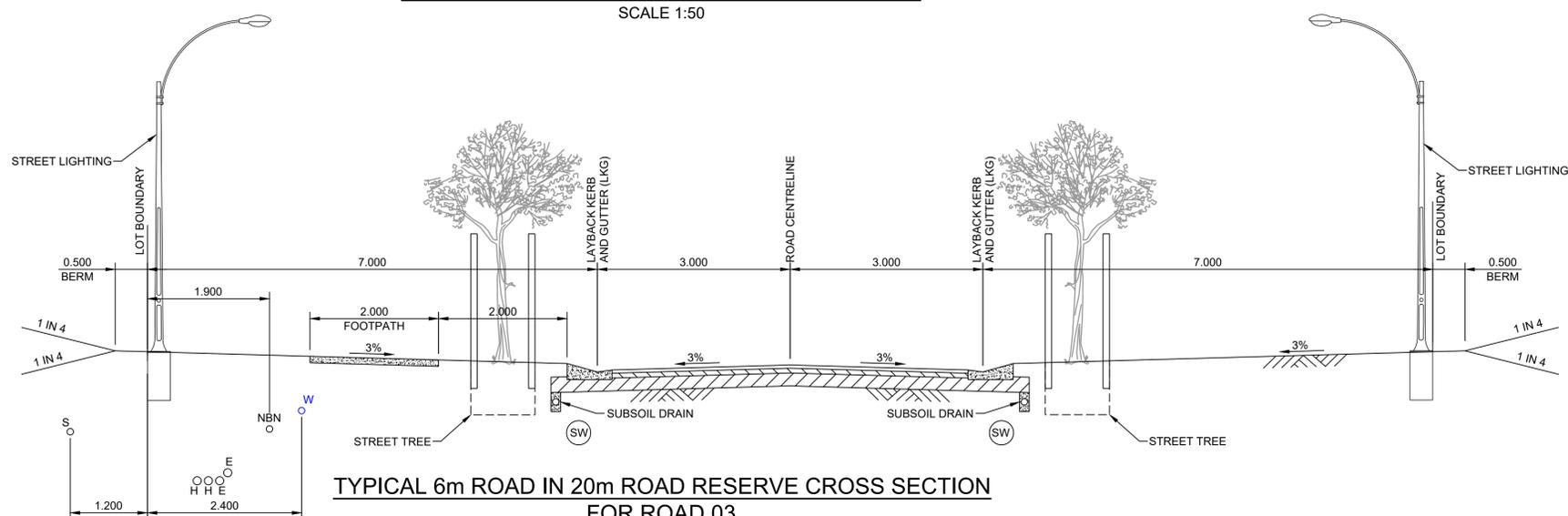
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RATIO: <b>1:50</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY DESIGN	APS CJG	REV =	DESCRIPTION	BY	DATE	 <b>allen price &amp; scarratts pty ltd</b> land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone: (02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	<b>PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN</b> <b>SHEET 01</b> <b>OVER CULBURRA ROAD</b> <b>AT CULBURRA BEACH</b> <b>FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DRAWN CJG	CHECK'D MJP	DATE OF PLAN: MARCH 2020	DRAWING NUMBER <b>25405-120</b>	SHEET <b>21</b> OF <b>29</b>	REVISION <b>P1</b>			

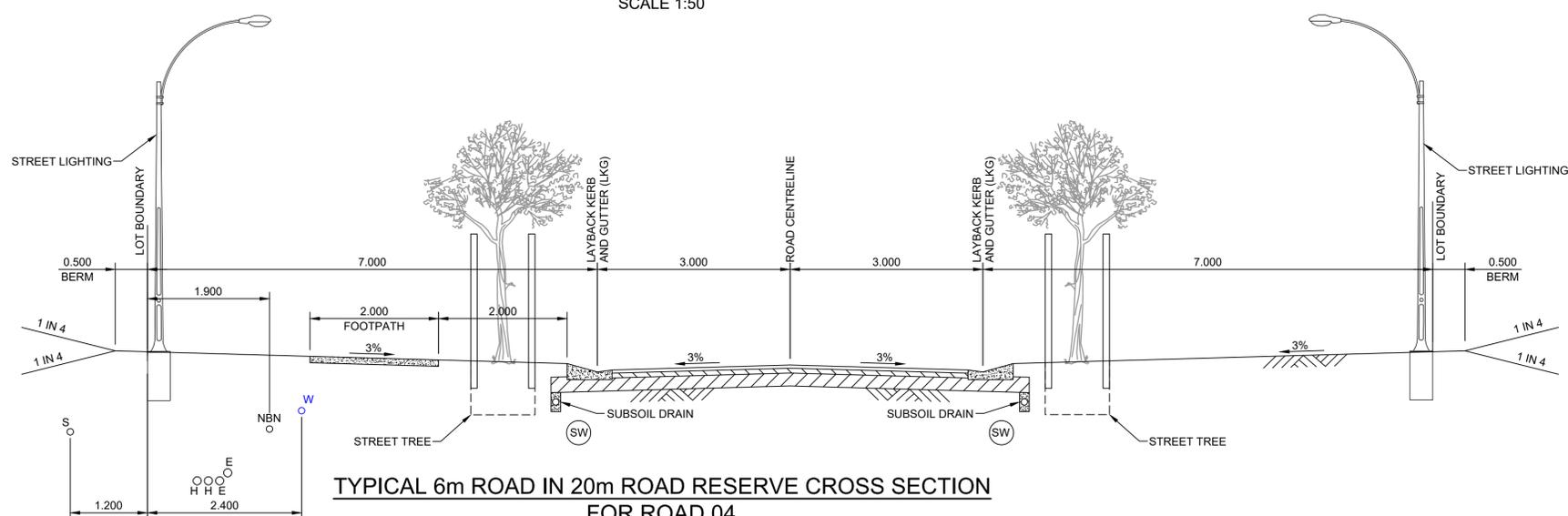
NO BERM AS NO LOTS  
FRONT ROAD RESERVE  
AT THIS CROSS SECTION



**TYPICAL 8m ROAD IN 25m ROAD RESERVE CROSS SECTION  
FOR ROAD 02 WITH WATER QUALITY CONTROL**  
SCALE 1:50

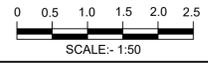


**TYPICAL 6m ROAD IN 20m ROAD RESERVE CROSS SECTION  
FOR ROAD 03**  
SCALE 1:50



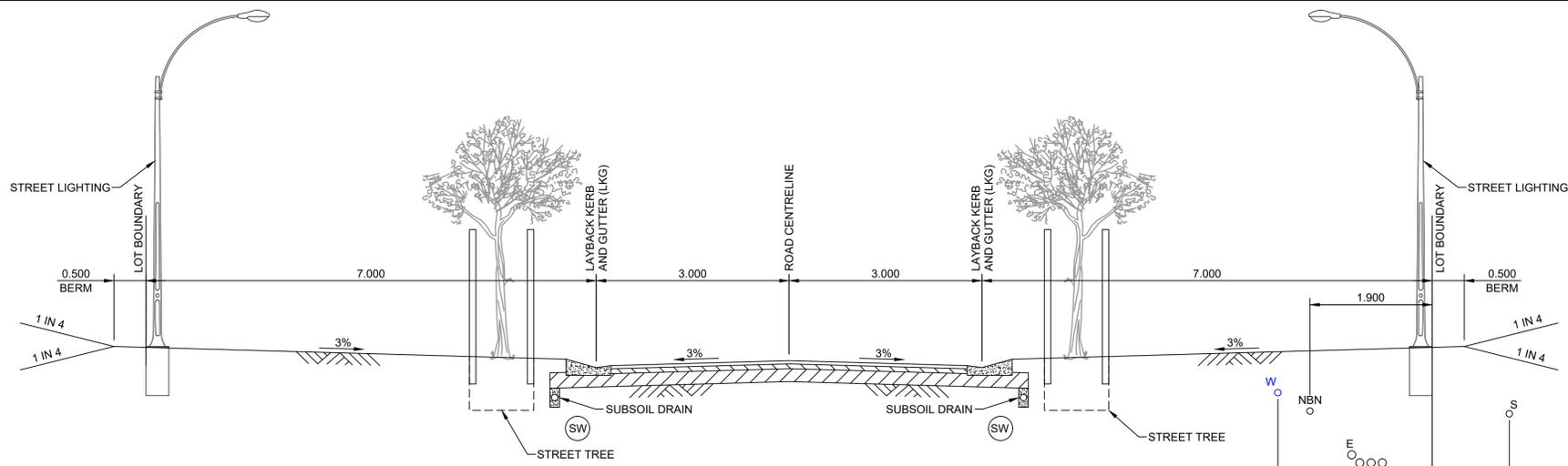
**TYPICAL 6m ROAD IN 20m ROAD RESERVE CROSS SECTION  
FOR ROAD 04**  
SCALE 1:50

**NOTE:**  
FOOTPATHS SHOWN ON CROSS SECTIONS ARE FOR INFORMATION ONLY. SEE LAYOUT PLANS FOR CLARIFICATION OF FOOTPATH LOCATION THROUGH SUBDIVISION.

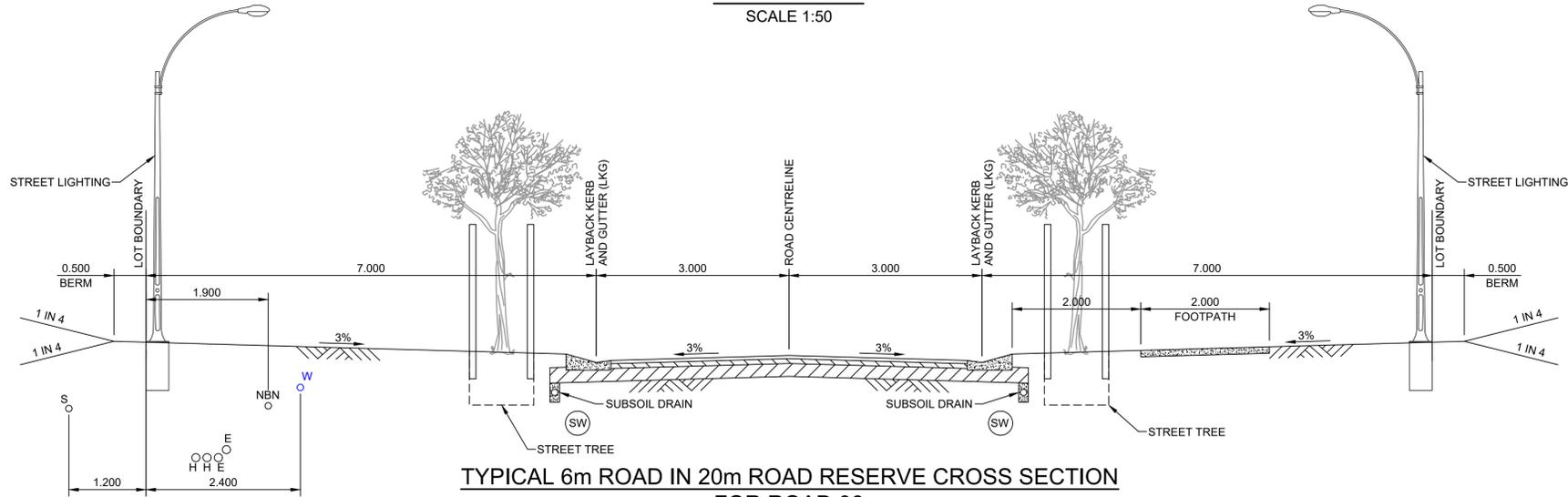


**BEWARE!**  
THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL BE RESPONSIBLE, AT THE CONTRACTOR'S EXPENSE, FOR ANY REPAIRS TO DAMAGE CAUSED DURING CONSTRUCTION.

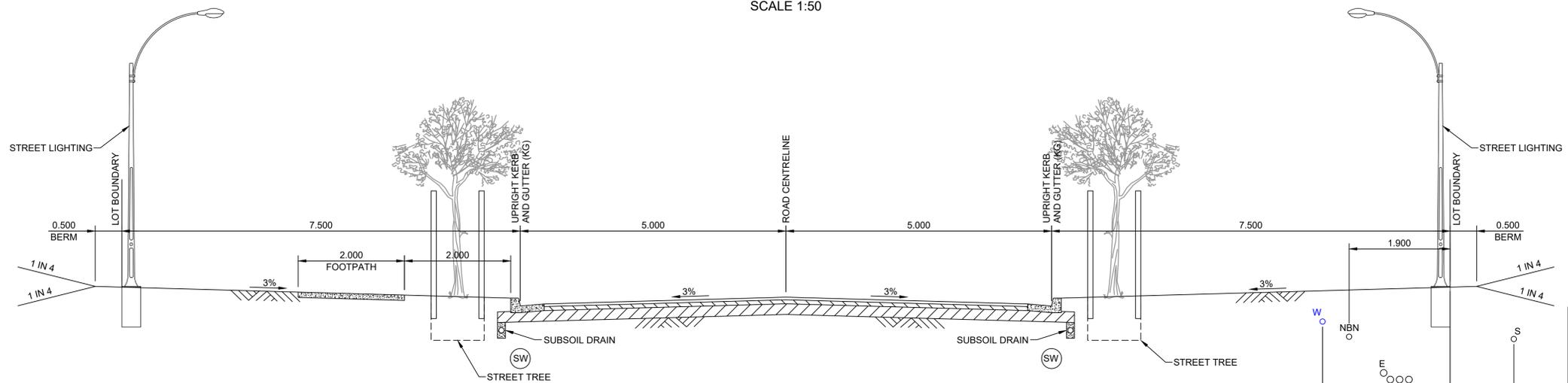
RATIO: <b>1:50</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY DESIGN DRAWN CHECK'D	APS CJG CJG MJP	REV =	DESCRIPTION	BY	DATE	 <b>allen price &amp; scarratts pty ltd</b> land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone: (02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	<b>PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN SHEET 02 OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DATE OF PLAN: MARCH 2020								DRAWING NUMBER <b>25405-121</b>



TYPICAL 6m ROAD IN 20m ROAD RESERVE CROSS SECTION FOR ROAD 05  
SCALE 1:50

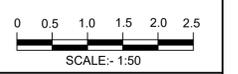


TYPICAL 6m ROAD IN 20m ROAD RESERVE CROSS SECTION FOR ROAD 06  
SCALE 1:50



TYPICAL 10m ROAD IN 25m ROAD RESERVE CROSS SECTION FOR ROAD 07  
SCALE 1:50

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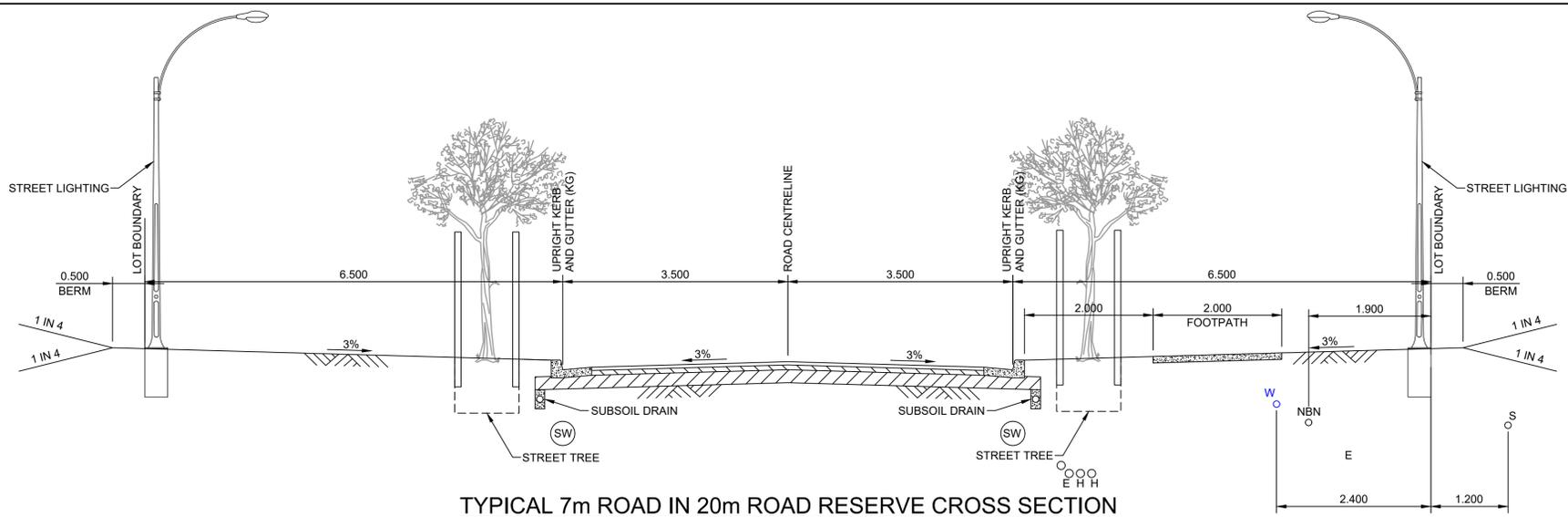


**BEWARE!**

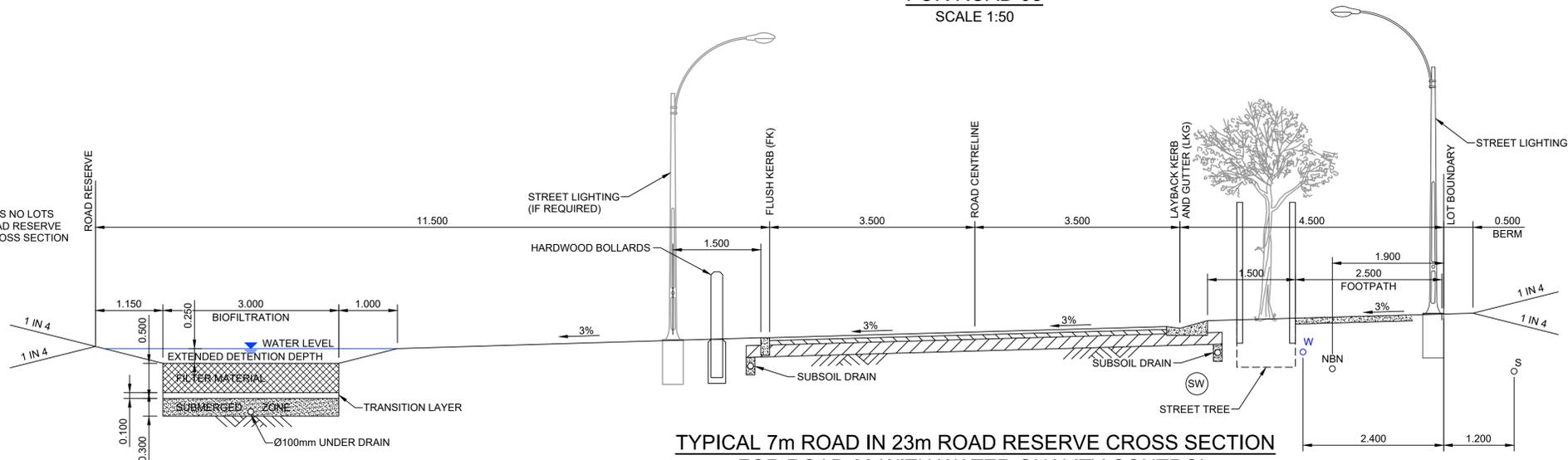
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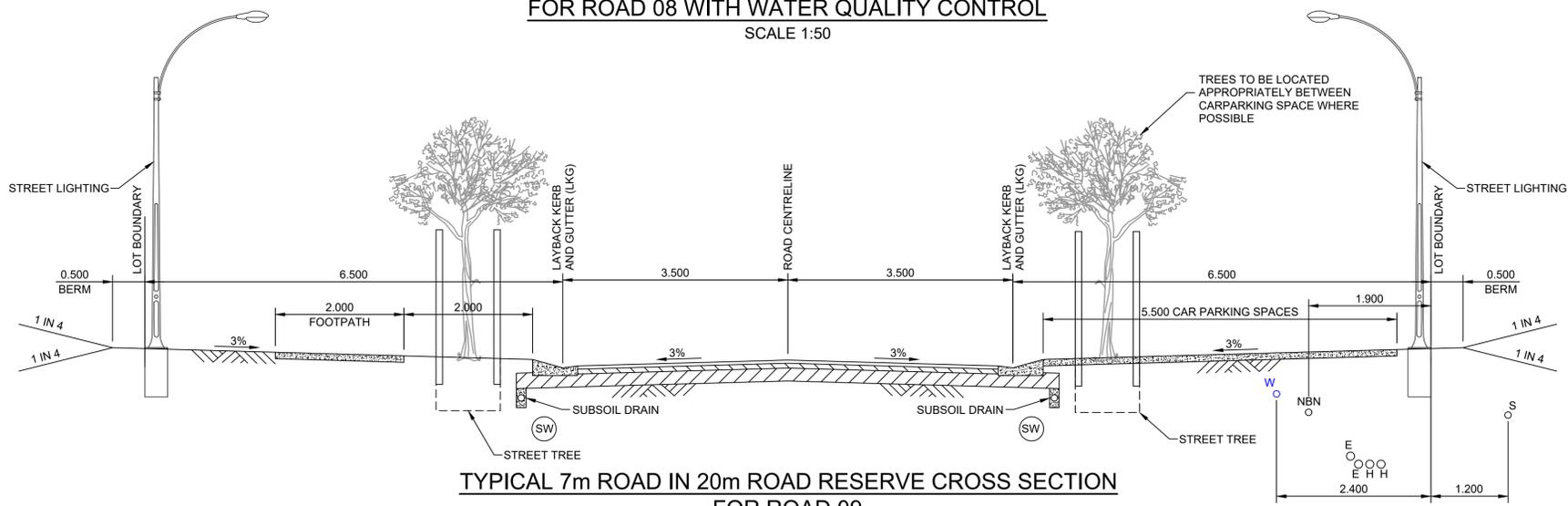
RATIO: <b>1:50</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY DESIGN DRAWN CHECK'D	APS CJG CJG MJP	REV =	DESCRIPTION	BY	DATE	<b>allen price &amp; scarratts pty ltd</b> land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone: (02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	<b>PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN</b> <b>SHEET 03</b> <b>OVER CULBURRA ROAD</b> <b>AT CULBURRA BEACH</b> <b>FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	DATE OF PLAN: MARCH 2020									DRAWING NUMBER <b>25405-122</b>



**TYPICAL 7m ROAD IN 20m ROAD RESERVE CROSS SECTION  
FOR ROAD 08**  
SCALE 1:50

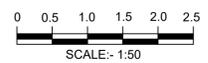


**TYPICAL 7m ROAD IN 23m ROAD RESERVE CROSS SECTION  
FOR ROAD 08 WITH WATER QUALITY CONTROL**  
SCALE 1:50



**TYPICAL 7m ROAD IN 20m ROAD RESERVE CROSS SECTION  
FOR ROAD 09**  
SCALE 1:50

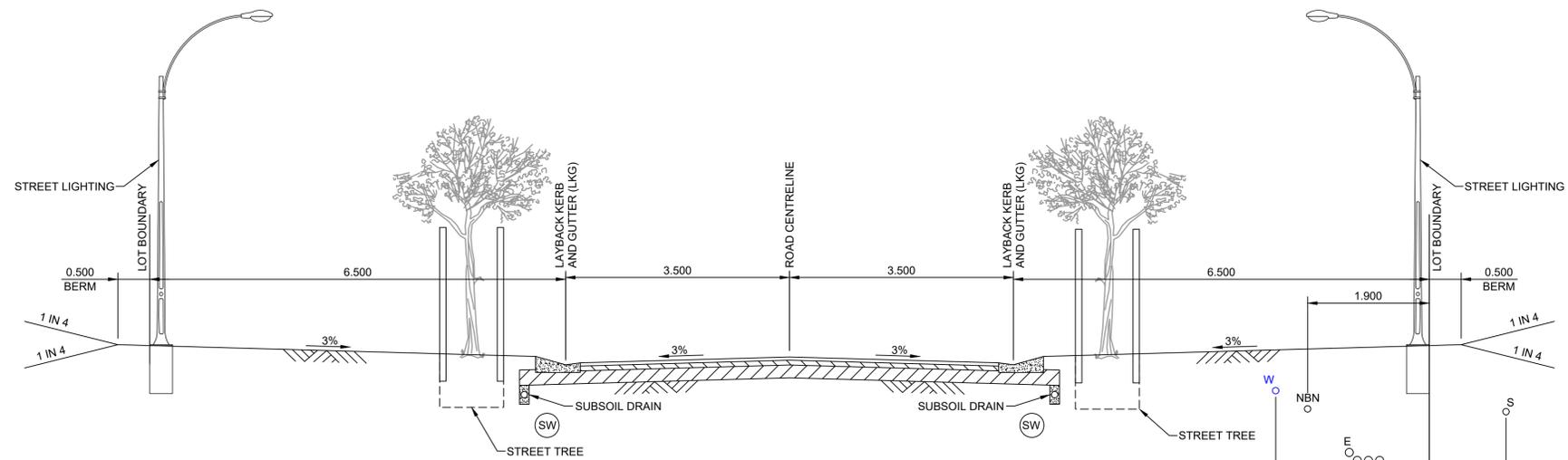
**NOTE:**  
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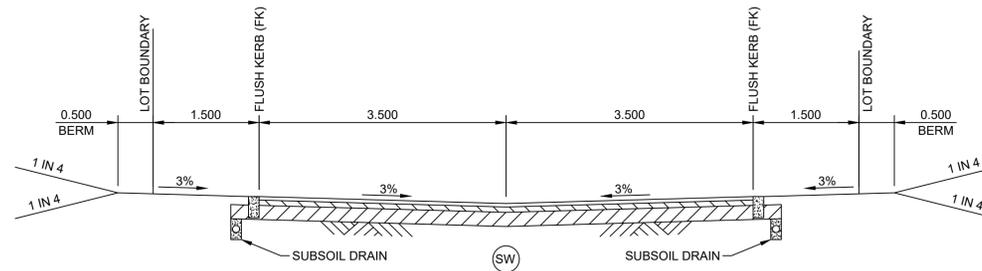
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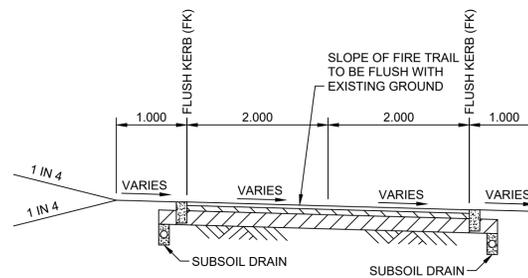
RATIO: <b>1:50</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY DESIGN DRAWN CHECK'D	APS CJG CJG MJP	REV =	DESCRIPTION	BY	DATE	 <b>allen price &amp; scarratts pty ltd</b> land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone: (02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	<b>PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN SHEET 04 OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	DATE OF PLAN: MARCH 2020									DRAWING NUMBER <b>25405-123</b>



**TYPICAL 7m ROAD IN 20m ROAD RESERVE CROSS SECTION  
FOR ROAD 10**  
SCALE 1:50



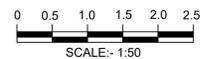
**TYPICAL 7m ROAD IN 10m ROAD RESERVE CROSS SECTION  
FOR ACCESS ROAD 01**  
SCALE 1:50



**TYPICAL 4m FIRE TRAIL PRIVATE PROPERTY/PUBLIC RESERVE CROSS SECTION  
FOR EMERGENCY EGRESS ROUTE 01 AND 02**  
SCALE 1:50

**NOTE:**  
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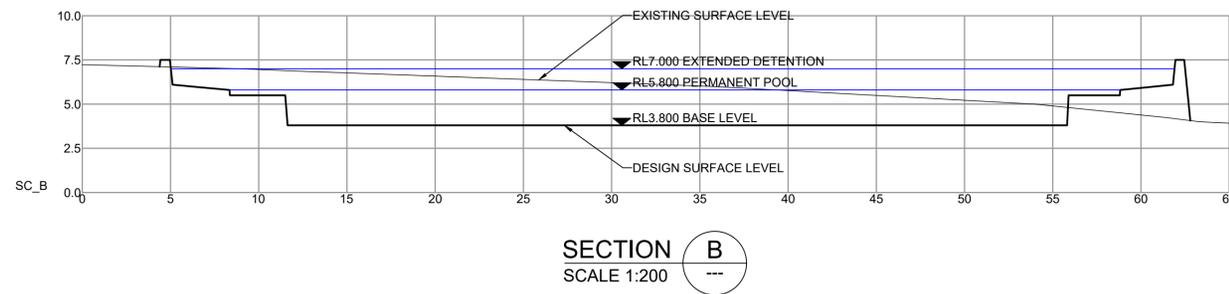
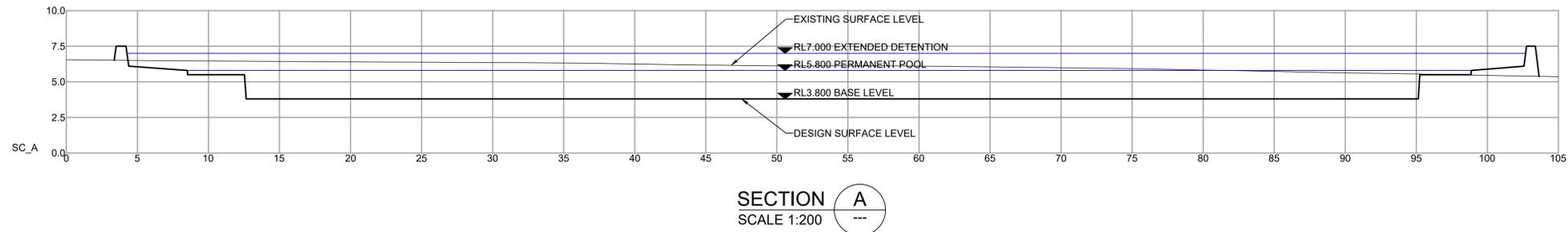
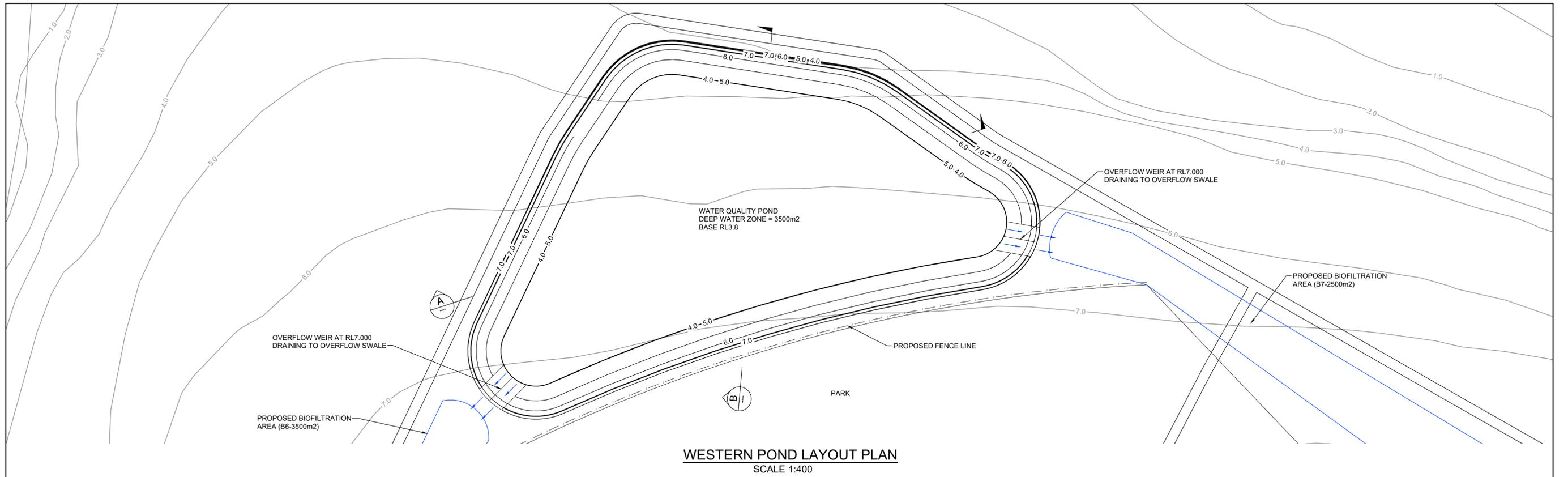
**PROFESSIONAL STANDARDS SCHEME**  
Liability limited by a scheme approved under Professional Standards Legislation



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RATIO: <b>1:50</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY DESIGN	APS CJG	REV =	DESCRIPTION	BY	DATE	<b>allen price &amp; scarratts pty ltd</b> land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone: (02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	<b>PRELIMINARY TYPICAL ROAD CROSS SECTIONS PLAN SHEET 05 OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DRAWN CHECK'D	CJG MJP	DATE OF PLAN: MARCH 2020	DRAWING NUMBER <b>25405-124</b>	SHEET <b>25</b> OF <b>29</b>	REVISION <b>P1</b>			



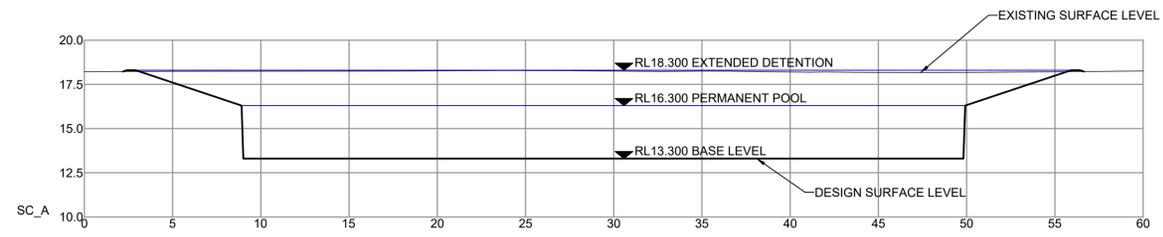
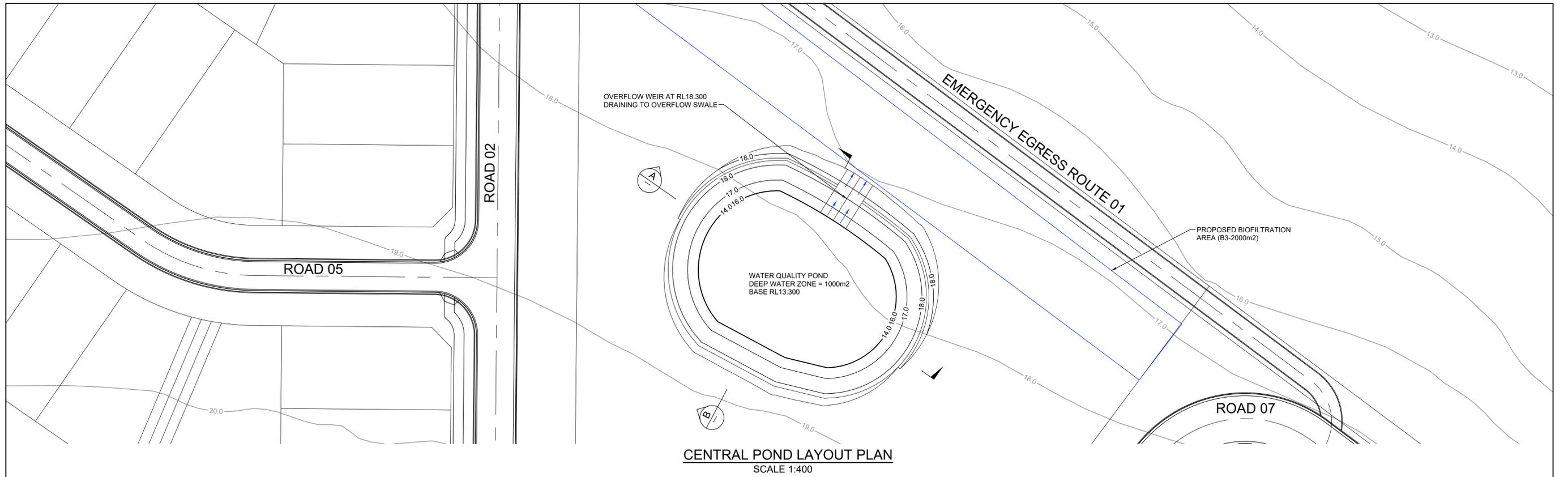
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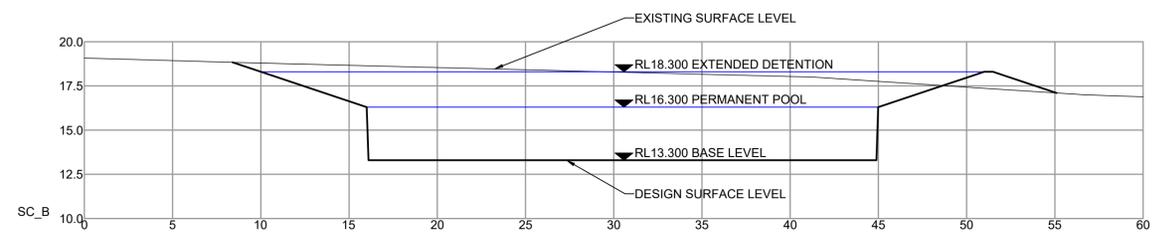
**PROFESSIONAL STANDARDS SCHEME**

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RATIO: <b>AS NOTED</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY DESIGN	APS CJG	REV =	DESCRIPTION	BY	DATE	 allen price & scarratts pty ltd land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone:(02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	WESTERN POND CONCEPT LAYOUT PLAN	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DRAWN CJG	CHECK'D MJP						DRAWING NUMBER <b>25405-125</b>	SHEET 26 OF 29
	DATE OF PLAN: MARCH 2020								OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD	



SECTION A  
SCALE 1:200



SECTION B  
SCALE 1:200

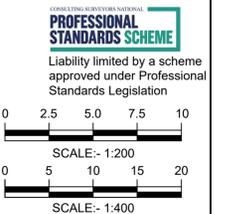
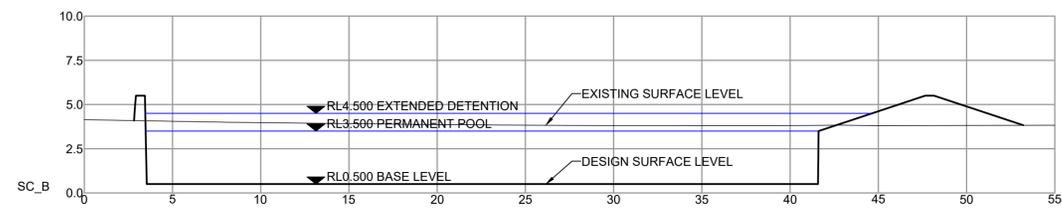
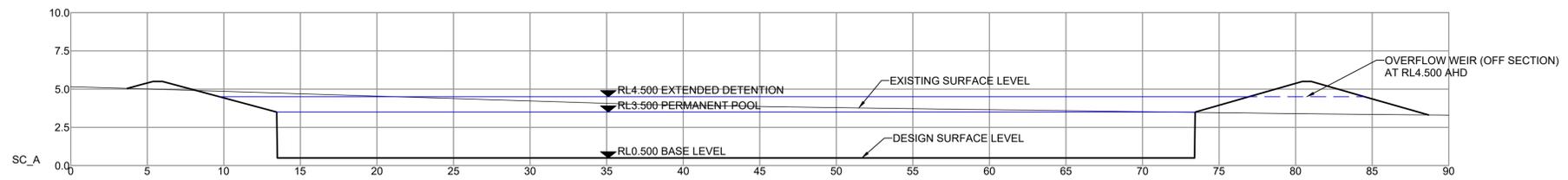
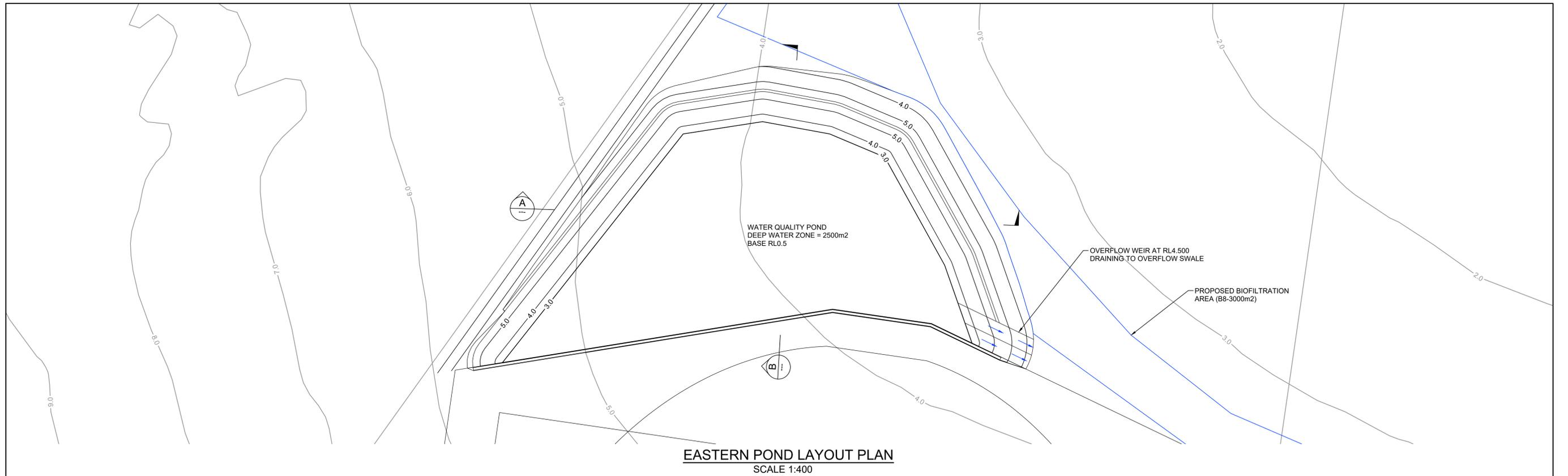
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RATIO: <b>AS NOTED</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY DESIGN	APS CJG	REV =	DESCRIPTION	BY	DATE	<p>allen price &amp; scarratts pty ltd land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone:(02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au</p>	CENTRAL POND CONCEPT LAYOUT PLAN  OVER CULBURRA ROAD AT CULBURRA BEACH FOR SEALARK PTY LTD	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DRAWN CJG	CHECK'D MJP	DATE OF PLAN: MARCH 2020	DRAWING NUMBER <b>25405-126</b>	SHEET 27 OF 29	REVISION P1			



**BEWARE!**

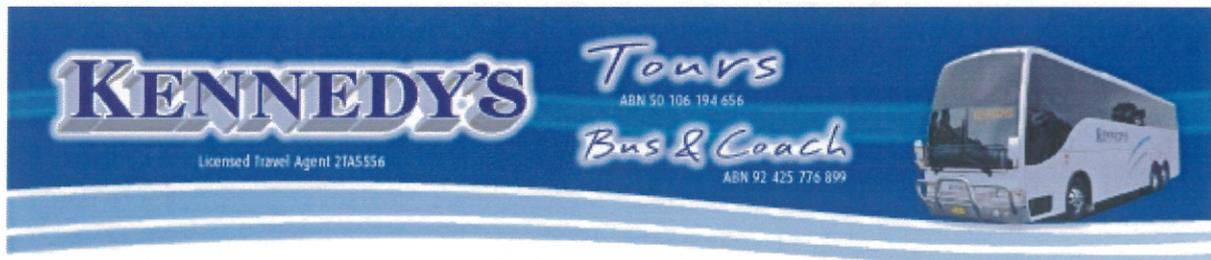
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RATIO: <b>AS NOTED</b> (AT A1 ORIGINAL)	DATUM: AUSTRALIAN HEIGHT DATUM	SURVEY DESIGN	APS CJG	REV =	DESCRIPTION	BY	DATE	<b>allen price &amp; scarratts pty ltd</b> land and development consultants Nowra Office: 75 Plunkett Street, Nowra NSW 2541 Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533 phone:(02) 4421 6544 consultants@allenprice.com.au www.allenprice.com.au	<b>EASTERN POND CONCEPT LAYOUT PLAN</b>  <b>OVER CULBURRA ROAD</b> <b>AT CULBURRA BEACH</b> <b>FOR SEALARK PTY LTD</b>	DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES
	ORIGIN: SSM RL	DRAWN CJG	CHECK'D MJP	DATE OF PLAN: MARCH 2020	DRAWING NUMBER <b>25405-127</b>	SHEET <b>28</b> OF <b>29</b>	REVISION <b>P1</b>			



# F. BUS OPERATOR CORRESPONDENCE

F



**Ken Hollyoak**  
**Associate Director**  
**GTA Consultants**  
**PO Box 5254**  
**West Chatswood NSW 1515**

**Re: Proposed Residential Development - Culburra**

As a follow up from our initial discussion relating to your proposed development of 900 home sites in Culburra, the following information is provided.

Kennedys Bus & Coach is the contracted provider for Transport for NSW in supplying school & route services to Culburra / Orient Point. Additional patronage from your development would be welcomed and approval to include this development within our normal operations can be easily arranged. If the Development Proposal is approved we would be happy to extend our current service arrangements. There would be no additional cost to the government undercurrent contract arrangements.

It is important that you be aware in the design of this residential housing estate, that development enables bus stops to be located within 400 metre from access points / dwellings. The geometry of the road must be designed in order to allow for a minimum 12.5 metre to 13.5 metre bus to circulate through the proposed development.

Consideration also needs to be had relating to provision of Disability Access for low floor wheelchair buses which will be compulsory on all route services by 2020.

We look forward to providing services to this proposed new development. If I can be of any further assistance please contact me on the number below.

**Yours sincerely**

A handwritten signature in black ink, appearing to read 'David Tagg', is written over a horizontal line. The signature is stylized and loops around the line.

**David Tagg**  
**12th September 2012**

Kennedys Bus & Coach  
PO Box 477 Nowra NSW  
Ph: 02 44217596 Fax: 02 44235990

