



**NEW RESIDENTIAL UNITS  
24B AND 38 JETTY ROAD  
OLD BEACH**

**TRAFFIC  
IMPACT  
ASSESSMENT**

**Hubble Traffic**

May 2024 Updated

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## Table of Contents

<b>1.</b>	<b>Introduction .....</b>	<b>1</b>
<b>2.</b>	<b>Site Description .....</b>	<b>2</b>
<b>3.</b>	<b>Development proposal .....</b>	<b>3</b>
<b>4.</b>	<b>Trip generation by this development .....</b>	<b>4</b>
<b>5.</b>	<b>Existing traffic Conditions.....</b>	<b>5</b>
5.1	Jetty Road characteristics .....	5
5.2	Jetty Road and East Derwent Highway junctions .....	6
5.3	Traffic Activity.....	8
5.4	Summary of traffic flows on surrounding roads .....	8
5.5	Traffic safety near the development site .....	8
<b>6.</b>	<b>Impact from traffic generated by this development.....</b>	<b>9</b>
6.1	Trip assignment.....	9
6.2	Traffic impact at the surrounding road network junctions.....	10
6.3	Residential amenity impact .....	12
<b>7.</b>	<b>Development layout and internal road arrangements .....</b>	<b>13</b>
7.1	Existing vehicular access .....	13
7.2	Sight distance at the existing access with Jetty Road .....	13
7.3	Pedestrian sight distance .....	14
7.4	Number of parking spaces.....	15
7.5	Dimensions of parking spaces .....	15
7.6	Gradient of parking spaces.....	16
7.7	Tandem parking .....	16
7.8	Car parking manoeuvrability.....	16
7.9	Other parking requirements .....	16
7.10	Internal driveway layout.....	17
7.11	Vehicle turnaround facilities .....	18
7.12	Internal gradients.....	21
7.13	Pedestrian access .....	21
7.14	Waste collection .....	22
7.15	Access for emergency vehicles .....	23
<b>8.</b>	<b>Impact to highway traffic flow and future growth .....</b>	<b>24</b>

<b>9.</b>	<b>Planning scheme .....</b>	<b>25</b>
<b>9.1</b>	<b>C2.0 Parking and Sustainable Transport Code.....</b>	<b>25</b>
<b>9.2</b>	<b>C3.0 Road and Railway Assets Code.....</b>	<b>28</b>
<b>10.</b>	<b>Conclusion.....</b>	<b>29</b>
<b>11.</b>	<b>Appendix A – Manual traffic surveys.....</b>	<b>30</b>
<b>12.</b>	<b>Appendix B – Traffic modelling.....</b>	<b>33</b>
<b>13.</b>	<b>Appendix C – Sample of swept paths for on-site parking spaces.....</b>	<b>42</b>
<b>14.</b>	<b>Appendix C – Peak hour traffic surveys .....</b>	<b>45</b>



## 1. Introduction

SJM Property Developments has engaged Hubble Traffic on behalf of the developers, to prepare an independent Traffic Impact Assessment, to consider the traffic impacts from the provision of 53 new residential units at 24B, and 38 Jetty Road, Old Beach (development site).

This assessment has considered the amount of traffic this multi-unit development is likely to generate, and how the additional traffic movements will integrate into the surrounding road network.

The development has been assessed against the Tasmanian Planning Scheme C2 Parking and Sustainable Transport Code, C3 Road and Railway Assets Code, and the Australian Standard 2890.1:2004.

This report has been prepared to satisfy the requirements of Austroads, Guide to Traffic Management Part 12: Traffic Impacts of Developments, 2019, and referred to the following information and resources:

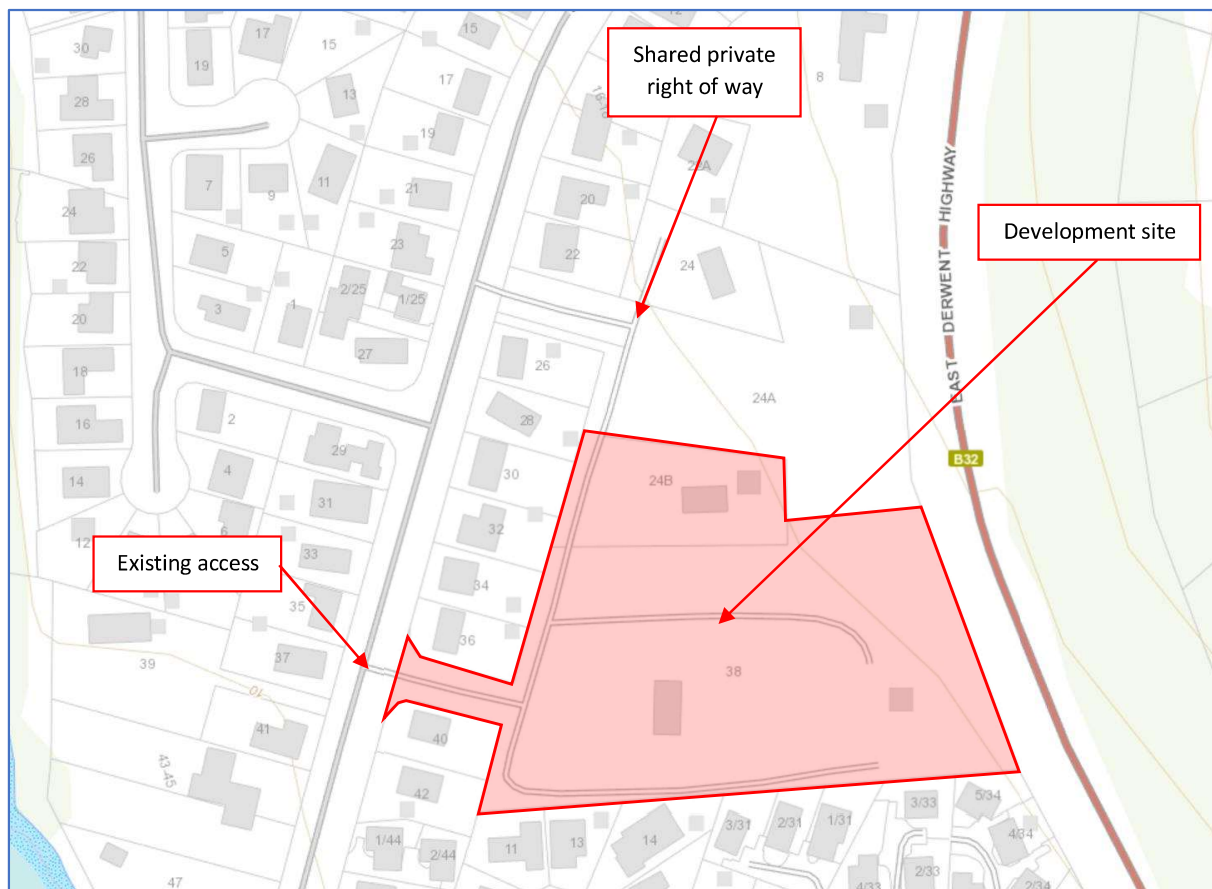
- Tasmanian Planning Scheme (Brighton Council)
- Road Traffic Authority NSW (RTA) Guide to Traffic Generating Developments
- Australian Standards AS2890 parts 1, 2 and 6
- Austroads series of Traffic Management and Road Design
  - Part 4: Intersection and crossings, General
  - Part 4a: Unsignalised and Signalised Intersections
  - Part 12: Traffic Impacts of Development
- Department of State Growth crash database
- Autoturn Online Software
- LIST – Land Information System Tasmania Database

## 2. Site Description

Located at 24B, and 38 Jetty Road, Old Beach, the development site is a combination of two parcels of land, with each parcel occupied by a residential property. The land is situated behind existing properties on Jetty Road, within an established urban residential area, and under the planning scheme considered as an internal lot.

The property at 38 Jetty Road has an existing vehicular access with Jetty Road, while 24B relies on a private right of way shared with 24 and 24A Jetty Road.

Diagram 2.0 – Extract from Land Information System Tasmania (LIST) Database



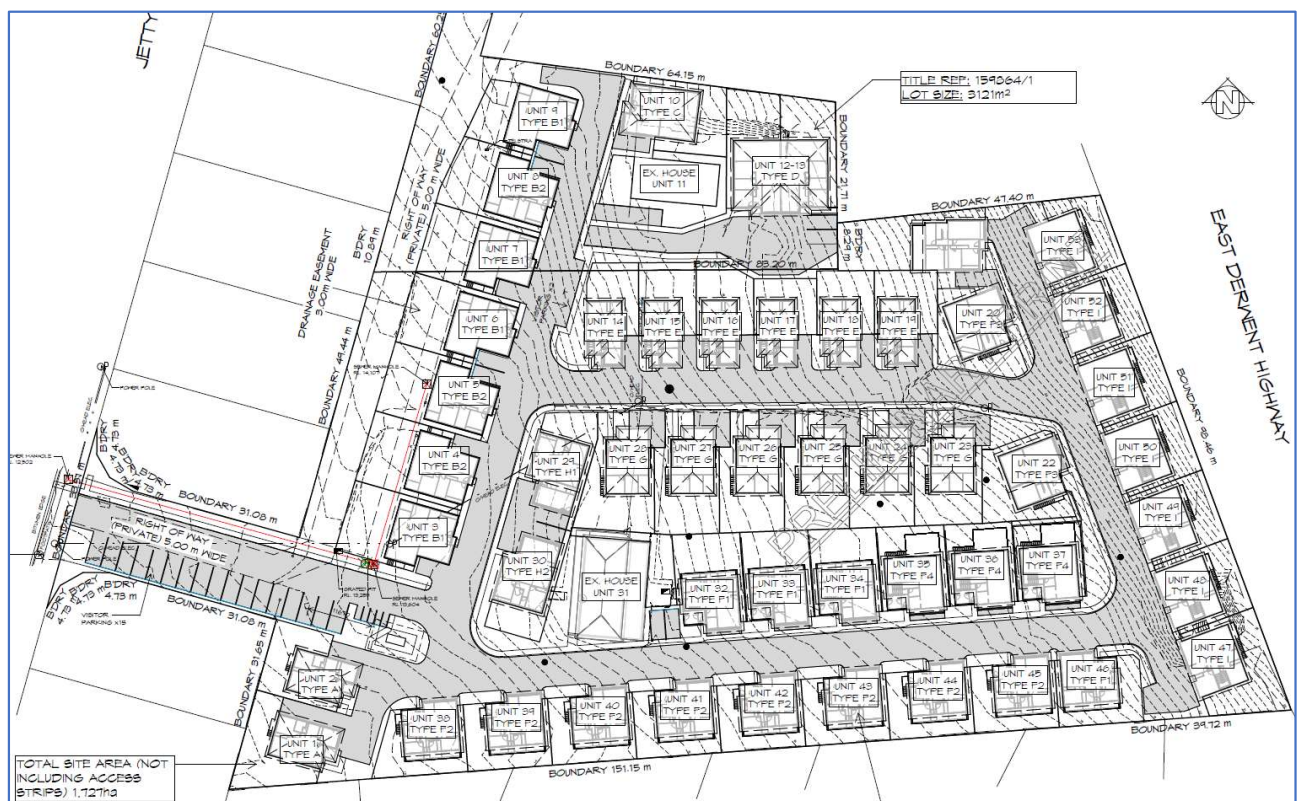
### 3. Development proposal

The development proposal is to construct 53 residential units, while retaining the two existing residential dwellings. The residential units will consist of 14 two-bedroom units, 32 three-bedroom units, and seven four-bedroom units.

Each unit will have two dedicated parking spaces, consisting of either a single enclosed garage and uncovered parking space, double enclosed garage, or two dedicated uncovered parking spaces. As the site is considered an internal lot, the development will provide 19 on-site visitor parking spaces.

The existing driveway and access to 38 Jetty Road will be retained and upgraded to accommodate two-way traffic flow.

Diagram 3.0 – Development proposal



## 4. Trip generation by this development

A trip in this report is defined as a one-way vehicular movement from one point to another, excluding the return journey. Therefore, a return trip to and from a land use is counted as two trips.

To determine the number of trips likely to be generated by this development, reference has been taken from the RTA Guide to Traffic Generating Developments (RTA Guide), section 3.3 residential housing. For the purpose of this assessment the new units and existing dwellings will be referred to as units.

Table 4.0A –Requirements as per RTA section 3.3 update 4a - August 2013

Dwelling Density	Generation Rate
Low density residential dwellings in regional areas:	<ul style="list-style-type: none"> <li>Daily vehicle trips of 7.4 per dwelling, and</li> <li>Weekday peak trips of 0.78 per dwelling.</li> </ul>
Medium density residential units, smaller units (up to two bedrooms):	<ul style="list-style-type: none"> <li>Daily vehicle trips of 5 per unit, and</li> <li>Weekday peak trips of 0.5 per unit.</li> </ul>
Medium density residential units, larger units (three or more bedrooms):	<ul style="list-style-type: none"> <li>Daily vehicle trips of 6.5 per unit, and</li> <li>Weekday peak trips of 0.65 per unit.</li> </ul>

Table 4.0B – Predicted number of trips to be generated from the 55 residential units

Dwelling Type	RTA Generation rate	Number of units/dwellings	Daily trips	Peak trips
Two-bedroom unit	5 per day 0.5 per peak	14	70	7
Three-bedroom unit	6.5 per day 0.65 per peak	32	208	21
Four-bedroom unit		7	46	5
<b>New trips</b>		<b>53</b>	<b>324</b>	<b>33</b>
Existing dwelling	7.4 per day 0.78 per peak	2	14	2
<b>Existing trips</b>		<b>2</b>	<b>14</b>	<b>2</b>
<b>Total additional trips generated</b>			<b>338</b>	<b>35</b>

The existing two units (dwellings) are already generating 14 daily trips, with two trips occurring in the peak hour periods. While the 53 new units are predicted to generate additional 324 daily trips, with 33 of these occurring during the peak periods, and this number of trips will be used within this assessment.

## 5. Existing traffic Conditions

Jetty Road is a local access road maintained by the Brighton Council, which extends between East Derwent Highway (highway), creating two highway junctions (north and south). Fouche Avenue extends off Jetty Road to the south, providing an alternate access route to the highway, via a roundabout.

### 5.1 Jetty Road characteristics

Jetty Road has been constructed to an urban standard, with a sealed bitumen surface, concrete kerb, and guttering, 1.5 metre wide concrete footpaths along both sides, and street lighting.

At the development site, the road is 9.2 metres wide between kerb faces, with sufficient width to accommodate two-way traffic movements and on-street parking. There are no centreline markings, signifying the road does not have a major road function. Jetty Road has a posted speed limit of 50 km/h.

Photograph 5.1 – Jetty Road standard





## 5.2 Jetty Road and East Derwent Highway junctions

The highway is part of the State Road network, with all traffic generated by the development site must travel through one of the two junctions with Jetty Road, or the Fouche Avenue roundabout.

Jetty Road forms a north and south T-junction, both intersecting the highway at approximately 90 degrees, with give way signs reinforcing traffic priority for the highway. The highway is posted with 80km/h speed limit signs. To maximise traffic flow along the highway, turning treatments have been provided at both junctions.

Sight distance was measured on-site based on a driver being five metres back from the middle of the inside traffic lane, 1.05 metres above the road surface, with an approaching vehicle being 1.2 metres high. At the northern junction, available sight distance to the right was found to exceed 200 metres, and 180 metres to the left. The sight distance to the left limited by a slight vertical crest. At the southern junction, the available sight distance exceeds 200 metres in both directions.

Austrroads Guide to Road Design (AGRD) provides guidance of Safe Intersection Sight Distance (SISD), based on the speed environment. For an 80 km/h speed limit the recommended SISD is 170 metres, this is based on a driver reaction time of 1.5 seconds, and three seconds observation time. This reaction time is considered appropriate for the environment, where drivers are expected to be operating in an alert driving state.

With the available sight distance exceeding 170 metres in both directions at each junction, there is sufficient sight distance for vehicles to turn at the junction in a safe and efficient manner, without causing adverse impact to other users.

Photograph 5.2A – Available sight distance to the left at the northern junction



Photograph 5.2B – Available sight distance to the right at the northern junction



Photograph 5.2C – Available sight distance to the left at the southern junction



Photograph 5.2D – Available sight distance to the right at the southern junction





### 5.3 Traffic Activity

In evaluating the traffic impact from the development, it is important to understand the current traffic flow on the surrounding road network. Recent manual traffic surveys were undertaken at the following locations:

- Morrisby Road and Jetty Road junction,
- Jetty Road and Fouche Avenue junction
- Jetty Road and highway northern junction
- Jetty Road and highway southern junction and
- Fouche Avenue roundabout with the highway

From the survey data the peak hour for both the morning and evening periods has been extracted, with diagrams available in Appendix D.

### 5.4 Summary of traffic flows on surrounding roads

The traffic surveys found Fouche Avenue and Jetty Road are lightly trafficked, with less than 150 two-way traffic flows during the peak hour periods. While the two-way traffic flows along the Highway are significantly higher, with 1,265 two-way vehicles in the morning peak and 1,390 two-way vehicles in the evening peak.

### 5.5 Traffic safety near the development site

The Department of State Growth maintains a database of reported road crashes, a check of this database for the last five years, found two crashes reported on Jetty Road, both remote from the development site. Vehicle emerging from a driveway, resulting in property damage, and the other crash resulted in single vehicle not negotiating the curve south of the highway on approach to the southern highway junction. This crash resulted in a minor injury.

At the northern highway junction, four crashes, with three angle collisions, one requiring first aid at the scene, while the others resulted in property damage.

At the southern highway junction, three crashes, one unknown and the other two angle collisions resulting in property damage.

This number of crashes is not an over-representation of crashes for a busy highway, with no serious or fatal injuries, the highway junctions are providing an appropriate level of safety. This crash rate is not expected to change with this development operating.



## 6. Impact from traffic generated by this development

As determined in section 4 of this report, the development site has the potential to generate up to 324 additional daily trips, with 33 of these movements likely to occur during the morning and evening peak periods.

Level of Service (LOS) is a quantifiable assessment of the factors that contribute to the traffic performance, which includes traffic density, gaps in traffic streams, expected delays, and queues. The RTA Guide provides performance criteria for urban traffic lanes (diagram 6.3) and junctions (diagram 6.2), with five levels from A to E.

LOS A provides the highest level of traffic performance, where motorists are not expected to incur traffic delays or queues, with ample gaps in the traffic stream for vehicles to turn freely and safely without disrupting other users. For busy arterial urban roads LOS D within the weekday peak hour periods are acceptable.

### 6.1 Trip assignment

It is common with residential properties, that 90 percent of the generated trips leave the site during the morning peak, with the opposite occurring in the evening peak.

In assigning the new trips to the surrounding road network, the trip distributions at the surrounding road junctions and roundabout have been used. The manual surveys indicate that during the morning peak period the majority of motorists use the northern junction when travelling north, and the Fouche Avenue roundabout when travelling south. During the evening peak, motorists returned to Jetty Road using both the northern, and southern junction.

The new trips generated by the development have been assigned to the surrounding road network based on the manual survey data, as shown in table 6.1.

Table 6.1 – Trip distribution

Peak period	Direction	Number of trips	East Derwent Highway		Fouche Avenue
			North junction	South junction	
Morning peak hour	Leaving	30	38% (11 trips)	10% (3 trips)	52% (16 trips)
	Arriving	3	36% (1 trip)	32% (1 trip)	32% (1 trip)
Evening peak hour	Arriving	30	43% (13 trips)	47% (14 trips)	10% (3 trips)
	Leaving	3	36% (1 trip)	42% (1 trip)	22% (1 trip)

## 6.2 Traffic impact at the surrounding road network junctions

The simplest method to determine the traffic performance at a junction is to use SIDRA Intersection traffic modelling software, which uses gap acceptance theory to determine the average delay, queue lengths, and degree of saturation, which are all measures of traffic congestion and level of service.

Diagram 6.2 – RTA Level of service for intersections, junctions and roundabouts

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	< 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode

Five traffic models have been developed within the SIDRA software to replicate the junctions of Jetty and Morrisby Roads, Jetty Road with Fouche Avenue, Jetty Road, and East Derwent Highway (north and south), and Fouche Avenue with East Derwent Highway roundabout. Recent peak hour traffic flows and the assignment of new trips generated by the development have been used.

Traffic modelling predicts additional traffic generated from the development will not have any adverse traffic impact to the local junctions. These local junctions are lightly trafficked, will continue to perform at the highest level of traffic performance, LOS A, with motorists not incurring any notable delays or traffic queues.

The additional trips have been assigned to the north and south highway junctions and the Fouche roundabout. Traffic modelling has indicated the development will intensify the traffic flow, but will not deteriorate the traffic efficiency motorists are currently receiving.

Table 6.2 below summarises the traffic modelling at each of the local road junctions and State Road junctions and roundabout, demonstrating that the additional traffic generated by the development site will not deteriorate traffic efficiency.

Table 6.2 – Traffic modelling comparison at the five surrounding junctions and roundabout

Junction	Scenario	Period	Total vehicles	DOS	Worst delay	LOS	Max queue
Jetty Rd with Morrisby Rd	Existing	Morning peak	162	0.077	5.6 secs	A	1.9 metres
	With development		174	0.077	5.6 secs	A	1.9 metres
	Existing	Evening peak	159	0.046	5.8 secs	A	1.4 metres
	With development		173	0.046	5.8 secs	A	1.4 metres
Jetty Rd with Fouche Ave	Existing	Morning peak	99	0.036	5.7 secs	A	1.2 metres
	With development		118	0.046	5.8 secs	A	1.5 metres
	Existing	Evening peak	122	0.027	5.7 secs	A	0.5 metres
	With development		140	0.034	5.8 secs	A	0.5 metres
Jetty Rd with the highway north	Existing	Morning peak	1,286	0.466	34.3 secs	C	3.2 metres
	With development		1,298	0.466	34.8 secs	C	3.7 metres
	Existing	Evening peak	1,448	0.419	42.2 secs	C	4.0 metres
	With development		1,462	0.419	43.1 secs	D	4.1 metres
Jetty Rd with the highway south	Existing	Morning peak	1,259	0.471	33.7 secs	C	2.4 metres
	With development		1,263	0.471	33.9 secs	C	2.9 metres
	Existing	Evening peak	1,406	0.437	41.8 secs	C	4.0 metres
	With development		1,419	0.437	42.6 secs	D	4.3 metres
Fouche Ave with the highway roundabout	Existing	Morning peak	1,403	0.633	16.8 secs	B	41.8 metres
	With development		1,419	0.643	17.1 secs	B	42.7 metres
	Existing	Evening peak	1,345	0.545	13.2 secs	A	33.4 metres
	With development		1,348	0.547	13.2 secs	A	33.6 metres

### 6.3 Residential amenity impact

A new development in urban areas can be concerning to local residents, and it can be difficult to argue that a traffic increase is reasonable. The RTA Guide has considered this matter and provided an environmental performance standard, which can be used to evaluate the likely impact on residential amenity. Extract 6.3 is from the RTA Guide and relates to urban environments, providing maximum peak hour goals.

To quantify the impact on Jetty Road and Fouche Avenue, data obtained from the manual surveys has been used and compared with the predicted two way traffic flow in Table 6.3. The new two-way traffic flows will be less than 200 vehicles per hour and is within the acceptable environment goal for a local residential street. This demonstrates that the development will not cause any adverse traffic impact to the amenity of existing residential properties along Jetty Road and Fouche Avenue.

Table 6.3 – Expected vehicle movements generated by this development

Road	Existing two-way traffic flow		Predicted two-way traffic flow	
	Morning peak period	Evening peak period	Morning peak period	Evening peak period
Jetty Road	102	140	135	173
Fouche Avenue	65	47	82	54

Extract 6.3 – RTA Guide performance standards for residential streets

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

**Note:** Maximum speed relates to the appropriate design maximum speeds in new residential developments. In existing areas maximum speed relates to 85th percentile speed.

## 7. Development layout and internal road arrangements

### 7.1 Existing vehicular access

The existing 5.5 metre wide vehicular access for the property at 38 Jetty Road, will be retained and widened to 6.4 metres to provide sufficient width to accommodate two-way traffic movements.

Photograph 7.1 – Existing vehicular access for 38 Jetty Road



### 7.2 Sight distance at the existing access with Jetty Road

SISD is based on the operating speed of approaching vehicles to the access and the gradient of the approach, with the approach speed normally taken as the posted speed limit. AGRD specifies that SISD for a 50 km/h speed environment is 90 metres, based on the driver having a reaction time of 1.5 seconds and observation time of three seconds.

On-site measurements of the available sight distance were taken based on the driver leaving the access being 1.05 metres above the access surface, and an approaching vehicle being 1.2 metres high. The available sight distance in both directions exceeds 100 metres.

With the available sight distance exceeding the SISD, vehicles will be able to enter and leave the development site in a safe and efficient manner, without impacting other road users.



Photograph 7.2A – Available sight distance to the right



Photograph 7.2B – Available sight distance to the left



### 7.3 Pedestrian sight distance

It is important that drivers leaving the development site have adequate sight lines to pedestrians using the footpath.

The existing footpath is located back of the kerb along Jetty Road, located five metres from the property line, and this provides separation between pedestrians using the footpath, and vehicles leaving the development site. The layout of the driveway access will ensure there is sufficient sight lines between drivers and pedestrians, complying with section 3.2.4 and figure 3.3 of the Australian Standard 2890.1:2004 (the Standard).

## 7.4 Number of parking spaces

All units will be provided with two dedicated parking spaces located within close proximity to each unit, plus 19 on-site visitor parking spaces. In total the development site will provide 129 on-site parking spaces to meet the reasonable demand, eliminating overflow parking.

## 7.5 Dimensions of parking spaces

The parking spaces within the development site have been designed to comply with both the dimensions specified in the planning scheme table C2.3 and the Standard, as user class 1A, suitable for residential or domestic use.

The single and double enclosed garages have been designed to comply with section 5.4 and figure 5.4 of the Standard. The Standard allows for the garage door to be made wider, which allows for the manoeuvring area behind the garage to be reduced, as the vehicle can commence to turn within the garage. Each enclosed garage door will be designed with the appropriate width, based on the manoeuvring area behind each garage.

Where a parking space is located adjacent to a vertical obstruction higher than 150 millimetres, an additional 0.3 metres of width will be provided between the space and the obstruction. If there is a vertical obstruction on both sides, 0.3 metres will be provided on both sides of the space.

Uncovered parking spaces associated with each unit, will be designed as User Class 1A under the Standard, suitable for residential and domestic users. The parking spaces will be ninety degrees to the parking aisle, 2.4 metres wide, 5.4 metres long, and supported with a minimum parking aisle width of 5.8 metres.

Due to constraints along the main driveway, visitor parking spaces will be provided with additional width. These parking spaces will be 2.8 metres wide, 5.4 metres long, with a minimum 5.8 metre manoeuvring area, complying with the dimensions in the planning scheme table C2.3.

Two visitor parallel parking spaces are provided opposite unit 7, which will be a minimum of 2.1 metres wide and 6.3 metres long. As both spaces will operate as obstructed end spaces, an additional 0.3 metres of length will be provided to aid vehicle manoeuvrability. Where possible the parking spaces will be delineated with pavement markings and supported with wheel stops where practical.

## 7.6 Gradient of parking spaces

All parking spaces will have grades that comply with Section 2.4.6 of the Standard and shall not exceed five percent.

## 7.7 Tandem parking

To maximise the number of car parking spaces, a tandem parking space will be used for unit 11.

A tandem parking space is where the second parking space is situated between the garage and the internal road. This is an efficient way to increase the parking supply and is suitable when the parking space is allocated to the same unit, and there is sufficient manoeuvring area to accommodate vehicle shuffling, without adversely impacting other users, or traffic efficiency of the internal driveway.

The proposed tandem parking space is considered appropriate, as the spaces are allocated to the same unit, and located where the internal driveway is 5.5 metres wide, to ensure shuffling can be accommodated efficiently.

## 7.8 Car parking manoeuvrability

The design provides sufficient manoeuvring area behind all car parking spaces to allow for vehicles to enter and leave in an efficient manner, complying with either the Standard for user class 1A, suitable for residential and domestic users, or the planning scheme table C2.3.

Vehicle swept path software has been used to demonstrate the swept path of a B85 vehicle entering and leaving a selection of the parking spaces, including the visitor parking spaces, with the swept paths available in Appendix C.

## 7.9 Other parking requirements

As the development is providing 129 on-site car parking spaces, six dedicated motorcycle parking spaces will be provided, complying with planning scheme table C2.4

Bicycle and accessible parking spaces are not a requirement for residential units.



## 7.10 Internal driveway layout

The design incorporates an internal driveway extending from Jetty Road and circulating around the development site, creating a ring road, and allowing vehicles to circulate in a forward driving direction.

Off the internal driveway, four short spur driveways will be used to service units that do not have direct driveway access. The internal driveway will be a minimum of 5.5 metres wide, accommodating two-way traffic flow, with curve widening where necessary. The driveway pavement will have a one-way cross fall directing surface water to the kerb, then to an approved stormwater drainage system.

Each of the four spur driveways will be a minimum of 5.5 metres wide, with a turnaround facility at the end to accommodate a B99 vehicle.

To service units 12 and 13, a small driveway will be provided, which will be a minimum of three metres wide, flaring at the end of the driveway to provide sufficient width to allow a vehicle to turn around and leave in a forward-driving direction.

## 7.11 Vehicle turnaround facilities

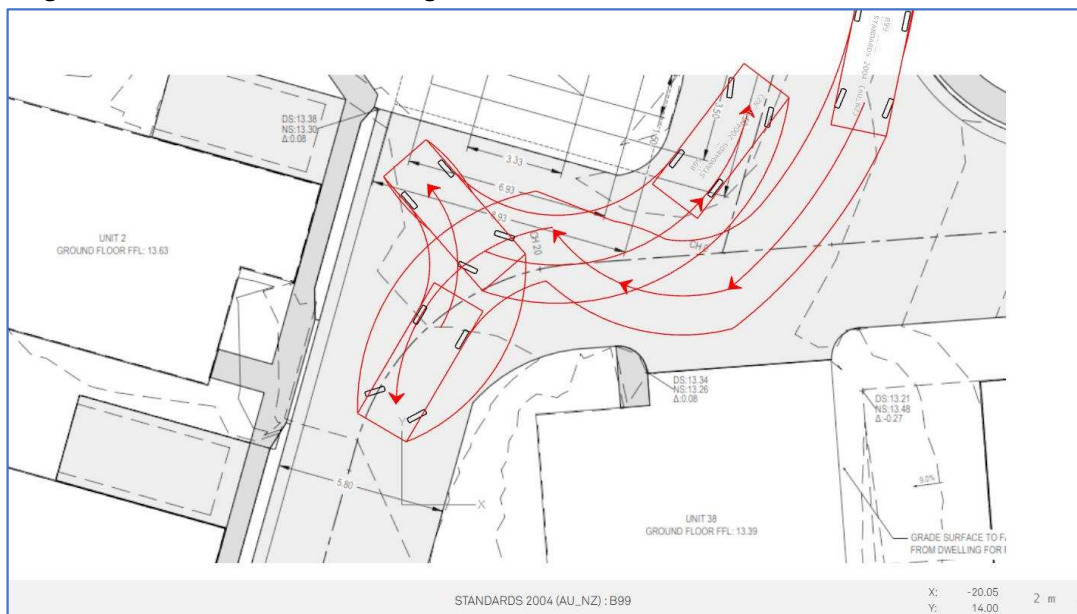
Although the area around the end of the spur driveways is constrained, there will be sufficient width for a B99 vehicle to turnaround.

As the spur driveway leading to unit 1 only serves two units, the need for vehicles to undertake a turnaround is expected to be low, with a B99 vehicle likely required to undertake a five point turn. Alternatively, there is sufficient width outside of unit 2 to accommodate a B99 vehicle to undertake a three-point turn to turnaround.

Diagram 7.11A – B99 vehicle turning around at unit 1



Diagram 7.11B – B99 vehicle turning around outside of unit 2



The spur driveway terminating at units 21 and 53 serves four units, and the need for vehicles to undertake a turnaround is expected to be low. While the turnaround area is limited, vehicle swept path diagrams indicate a B99 vehicle can undertake a three-point turn, and a five-point turn if necessary.

Diagram 7.11C – B99 vehicle turning around at unit 21 and 53

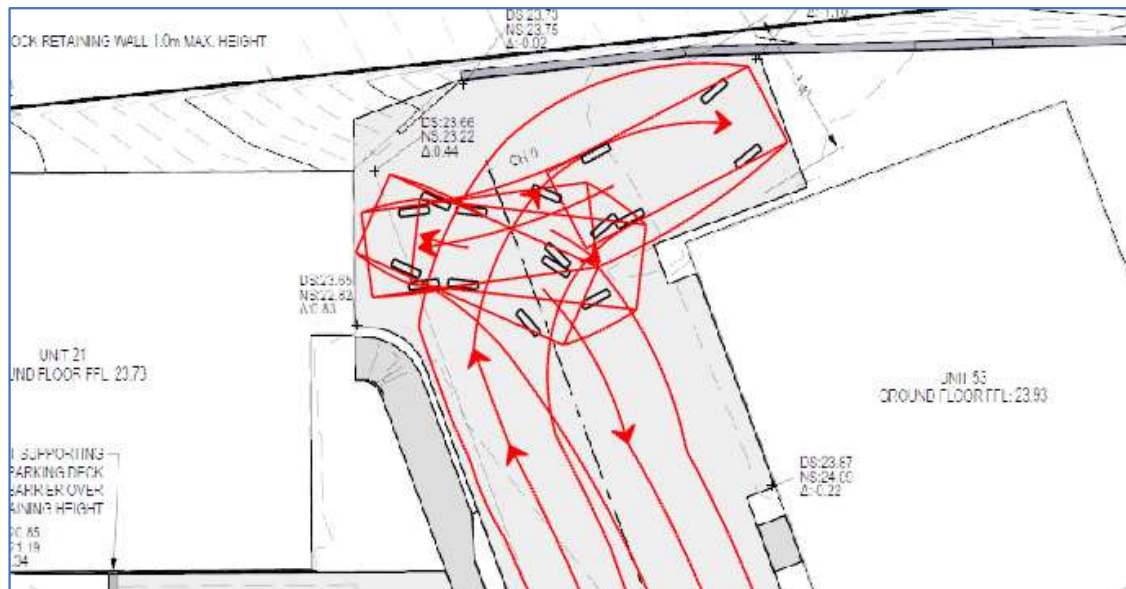


Diagram 7.11D – B99 vehicle turning around at unit 9



Diagram 7.11E – B99 vehicle turning around at unit 47





## 7.12 Internal gradients

The longitudinal section of the proposed internal driveway has been assessed against section 2.5.3 of the Standard, the maximum gradient along any of the driveways is 17.9 percent, which is acceptable for a residential property. Due to the natural topography of the land, the driveways will create sag or crest (summit) curves, throughout the property. To ensure vehicles have adequate ground clearance, the change in grade on the driveway will not exceed 12.5 percent for a summit, or 15 percent for sag curve.

A summary of the larger changes in grade is shown within the table below, indicating that all changes in grade are compliant to the Standard. Short curves will be provided at the location where the change in grade creates a sag curve or summit curve, and these curves are to assist with the vehicle's occupant comfort.

Table 7.12 – Summary of change in grades along the driveways

Road	Chainage	Gradient in	Gradient out	Change in gradient	Compliant
CL2	11.780	-1.091%	5.282%	6.373%	Yes
CL2	59.002	2.177%	7.357%	5.180%	Yes
CL3	2.450	-3.000%	7.053%	10.053%	Yes
CL3	4.558	7.053%	15.000%	7.947%	Yes
CL3	13.972	15.000%	7.000%	8.000%	Yes
CL3	95.000	14.500%	1.925%	12.575%	Yes
CL4	26.598	-1.320%	6.255%	7.575%	Yes
CL4	144.091	6.458%	17.989%	11.531%	Yes
CL4	152.460	13.961%	1.376%	12.585%	Yes
CL6	2.493	-1.794%	6.697%	8.491%	Yes
CL6	35.000	6.697%	1.000%	5.697%	Yes

## 7.13 Pedestrian access

Internal pathways will be provided throughout the site, will be a minimum one metre wide hard-wearing concrete surface, connect the units to the visitor parking spaces and the public footpath. Where possible the pathways will be separated from the driveways by kerbing where possible, and where the pathway crosses the internal road, it will be delineated with road markings, defining the pathway and pedestrian crossing areas. It is desirable for the pedestrian pathway to be located behind the visitor parking spaces, however due to the parking spaces located on an easement, this is not possible.

To enhance pedestrian safety, a 10 km/h shared zone speed limit sign will be posted at the beginning of the development. Under the Australian Road Rules 2019, a shared zone speed limit sign, is covered by road rule 24, which specifies where a shared zone sign is used, drivers must give way to any pedestrian within the zone. The proposed safety measures are expected to ensure pedestrians can move around the development site in a safe and convenient manner, meeting the objective of the planning scheme.

## 7.14 Waste collection

The design allows for a standard waste collection vehicle (8.8 metres long) to enter the site, drive around the ring driveway, collect the waste, and leave in a forward-driving direction. The vehicle will be required to reverse a short distance on the spur driveway that serves units 6 to 13, to a common waste collection point. Reversing is not expected to cause adverse impact, as the drivers are professional, the vehicles are fitted with a reversing camera.

The diagram below demonstrates the swept path of a medium rigid vehicle using the internal driveway, entering, circulating, and leaving in a forward-driving direction.

Diagram 7.14 – Swept path of medium rigid vehicle



## 7.15 Access for emergency vehicles

It is important that all units are accessible to fire emergency vehicles, and according to Tasmania Fire Service, their heavy pump vehicle has similar vehicle dimensions to a medium rigid vehicle, 8.8 metres in length.

The fire service vehicle is expected to enter and drive around the development site to reach all the units, and it is noted that the vehicle will need to reverse out of each spur driveway, which is acceptable given the likelihood of this movement being very low. With the fire service vehicle having similar dimensions to a medium rigid vehicle and the waste collection vehicle, it will be able to enter the site and leave in a forward-driving direction, as demonstrated in diagram 7.14 above.

## 8. Impact to highway traffic flow and future growth

In December 2022 Hubble Traffic undertook an assessment to consider the traffic impact of rezoning land off Old Beach Road, in particular the traffic performance of the highway, between Old Beach and the Bowen Bridge and major side road junctions.

As a direct consequence of this traffic analysis the road owner (Department of State Growth) engage traffic consultants to undertake a road corridor study to develop a future infrastructure plan to ensure the highway continue to provide suitable level of traffic performance. The study recognise rezoning of land within the Old Beach area is expected to occur within the near future, to meet the housing shortage and this will intensify highway traffic flows.

In the context of the road corridor study, this proposed unit development is a low traffic generator, with the additional peak hour traffic movements representing normal yearly traffic growth, which was considered under the traffic analysis. In summary, this development is not expected to cause any adverse impact to future growth in the Old Beach area.



## 9. Planning scheme

### 9.1 C2.0 Parking and Sustainable Transport Code

#### C2.5.1 Car parking numbers

The development site is providing a total of 129 on-site car parking spaces, meeting the planning scheme minimum requirement, minimising the risk of overflow parking. The number of on-site car parking spaces complies with the acceptable solution of the planning scheme.

#### C2.5.2 Bicycle parking numbers

Table C2.1 of the planning scheme prescribes that a residential use does not require bicycle parking spaces.

#### C2.5.3 Motorcycle parking numbers

Table C2.4 of the planning scheme prescribes that this use requires six motorcycle parking spaces, which will be provided by the development, complying with the acceptable solution.

#### C2.5.4 Loading bays

Not applicable for a residential development.

#### C2.6. Development standards

C2.6.1 Construction of parking areas.	The parking areas and internal driveways will be a concrete surface, with the driveways operating with a one-way camber to direct surface water to kerbing, which will be directed to an approved stormwater drainage system. The design complies with the acceptable solution A1.
C2.6.2 Design and layout of parking areas.	The internal layout and parking areas have been designed to comply with the Australian Standard 2890.1:2004 for a residential property and parking space dimensions in the planning scheme, to ensure vehicles can easily manoeuvre within the development and enter and leave in a forward-driving direction. There is sufficient manoeuvring width adjacent to the parking spaces, to enable all vehicles to enter and leave efficiently. All parking spaces will be located on gradient less than five percent. The internal driveways will be wide enough to accommodate two-way traffic flow, except for the small spur driveway servicing units 12 and 13 that services four parking spaces, which will be a minimum of

	three metres wide, complying with the width specified in the planning scheme table C2.2 for the number of parking spaces served. The enclosed garages will comply with section 5.4 of the Australian Standard 2890.1:2004. The open parking spaces will be supported with wheel stops and delineated with road marking where appropriate. Overall, the design complies with the acceptable solution A1.1(a) and (b).
C2.6.3 Number of accesses for vehicles.	The development site will operate with the existing access onto Jetty Road, and this complies with the acceptable solution A1 (a) and (b).
C2.6.4 Lighting of parking areas within the general business zone and central business zone	Sufficient lighting will be provided to light the parking spaces, internal driveways, and pedestrian pathways.
C2.6.5 Pedestrian access.	Assessed against the performance criteria below.
C2.6.6 Loading bays.	Not required for a residential development.
C2.6.7 Bicycle parking and storage facilities	Bicycle parking spaces are not required for a residential development.
C2.6.8 Siting of parking and turning areas.	Not applicable for a residential development.

#### C2.6.5 Pedestrian access

Under the acceptable solution, the planning scheme specifies footpaths should be separated from access ways or parking aisle, by either horizontal distance of 2.5 metres, or protective devices such as bollards, guard rails or planters. As these requirements are difficult to achieve within residential unit developments, this project will use barrier kerb to provide the separation, which is commonly used in urban streets to provide appropriate footpath separation.

As it is impractical to achieve the acceptable solution, this development will need to be assessed under the performance criteria P1.

Performance criteria	Assessment
Safe and convenient pedestrian access must be provided within parking areas, having regard to:	
a) the characteristics of the site;	An internal lot located within an established residential area, with vehicular access provided by a narrow right of way to Jetty Road.
b) The nature of the use;	Residential unit development, where pedestrians are likely to be occupants of the units or visitors, with no through pedestrian movement.
c) The number of parking spaces;	In total the development is providing 129 on-site car parking spaces and six motorcycle parking spaces.
d) The frequency of vehicle movements;	The development is predicted to generate a total of 338 daily vehicle movements, with 35 of these movements likely to occur during the peak periods, representing on average less than one vehicle movement per minute, per hour.

e) The needs of a person with a disability;	Where possible the gradients of the internal pedestrian pathways will be designed to meet the DDA code, however due to the natural topography of the land, this is not always achievable. It is assumed that a person with a disability will use their designated unit parking spaces.
f) The location and number of footpath crossings;	Within the development, five marked pedestrian crossings will be provided where pedestrians are required to cross the driveway. This number of crossings is necessary to ensure all units are connected with the footpath along Jetty Road.
g) Vehicle and pedestrian traffic safety;	The footpaths will be separated from the driveway by barrier kerb where practical, giving drivers a sense of restriction, and providing visible delineation and separation from the roadway. The operating speeds of vehicles will be moderated by implementing a 10 km/h shared zone speed limit, which provides priority to pedestrians, minimising the crash and severity risk. Where the pathway crosses the driveway, painted markings will be used to delineate pedestrian priority. Overall, pedestrians will be provided with safe and convenient access, applicable for a lightly trafficked residential unit development.
h) The location of any access ways or parking aisles; and	The internal layout includes a circulating driveway, with a number of short spur driveways, to provide efficient vehicular access to all units.
i) Any protective devices proposed for pedestrian safety.	Barrier kerbing where practicable, will be used to define and separate the footpaths from the driveways and parking aisles, and be of a similar treatment commonly used in urban residential streets. A 10 km/h shared speed limit will be used to moderate the operating speed of vehicles, and where the footpath crosses the driveway, marked crossings will be used to provide priority to pedestrians.

## 9.2 C3.0 Road and Railway Assets Code

### C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction

The development will increase the use of the existing access by more than 20 percent and will need to be assessed against the performance criteria P1, ensuring that it can operate safely and efficiently.

Performance criteria	Assessment
To ensure that the safety and efficiency of roads is not reduced by the creation of a new access and junctions.	
j) Any increase in the traffic caused by the use;	The 53 residential units are estimated to generate 324 daily vehicular trips, with 33 of these trips likely to occur during the morning and evening peak periods. The two existing residential units are already generating on average 15 daily vehicle trips, with two of these occurring during the morning and evening peak periods.
k) The nature and frequency of the traffic generated by the use;	The residential units are expected to generate light vehicles less than 5.5 metres in length. These types of vehicles are associated with urban residential living, have good manoeuvrability, and are compatible with the existing vehicles using the surrounding road network.
l) The nature of the road;	Jetty Road is a local residential road, built to an urban standard, has sufficient width to accommodate two-way traffic movements, and can support on-street parking. The surrounding road network is of suitable standard to accommodate the minor increase in traffic flow. There is sufficient sight distance at the existing vehicular access to enable vehicles to enter and leave the development site in a safe and efficient manner.
m) The speed limit and traffic flow of the road;	Jetty Road has a posted speed limit of 50 km/h. Recent manual traffic surveys found the road is lightly trafficked, with 102 two-way traffic flow in the morning peak and 140 in the evening peak. Traffic analysis of the surrounding road network, including traffic modelling conducted at the surrounding junctions and roundabout, indicates there is sufficient spare traffic capacity to absorb the increase in traffic, without causing adverse traffic impact, or reduction in traffic flow, or residential amenity.
n) Any alternative access;	None.
o) The need for the access or junction;	Urban infill in established towns is an excellent method to increase the supply of housing, while optimising the current infrastructure and community facilities.
p) Any traffic impact assessment; and	An independent traffic assessment found no reason for this development not to proceed.
q) Any written advice received from the road authority.	Aware of none.

## 10. Conclusion

From a traffic engineering and road safety perspective, additional traffic generated from this development site is not expected to create any adverse safety, amenity, or traffic efficiency problems, as:

- the amount of traffic generated by the development is considered to be low and there is sufficient capacity within the surrounding road network to absorb these movements without impacting other users,
- traffic modelling of the surrounding junctions and roundabout predicts that there will be no deterioration in the level of traffic efficiency,
- the existing vehicular access with Jetty Road has sufficient sight distance, enabling vehicles to enter and leave the development site in a safe and efficient manner,
- there will be a sufficient number of on-site car parking spaces to meet the reasonable demand, eliminating parking overflow,
- the driveway will provide for two-way traffic flow, with dedicated turning bays provided at each spur driveway, ensuring all vehicles can enter and leave in a forward-driving direction,
- appropriate internal pathways will provide pedestrians with a high level of service, and
- the driveway has been designed to accommodate the swept path of medium rigid vehicle, which is suitable for waste collection and emergency service vehicles.

This Traffic Impact Assessment found no reason for this development not to proceed.

## 11. Appendix A – Manual traffic surveys

### East Derwent Highway and Jetty Road northern junction

Morning traffic survey data

Time AM	East Derwent Highway				Jetty Road	
	Straight towards Hobart	Straight towards Bridgewater	Right into Jetty Road	Left into Jetty Road	Left onto the Highway	Right onto the Highway
7:30 – 7:45	256	76	7	1	5	2
7:45 – 8:00	271	92	13	2	11	5
8:00 – 8:15	228	76	8	1	8	4
8:15 – 8:30	147	56	3	3	8	3
8:30 – 8:45	190	71	3	2	10	2
8:45 – 9:00	179	105	7	2	5	3
<b>Total</b>	<b>1,271</b>	<b>476</b>	<b>41</b>	<b>11</b>	<b>47</b>	<b>19</b>

Evening traffic survey data

Time PM	East Derwent Highway				Jetty Road	
	Straight towards Hobart	Straight towards Bridgewater	Right into Jetty Road	Left into Jetty Road	Left onto the Highway	Right onto the Highway
4:00 – 4:15	133	183	13	8	12	4
4:15 – 4:30	112	224	9	11	6	3
4:30 – 4:45	144	217	11	20	8	3
4:45 – 5:00	102	193	10	9	13	0
5:00 – 5:15	107	189	12	8	4	3
5:15 – 5:30	101	217	21	18	9	1
<b>Total</b>	<b>699</b>	<b>1,223</b>	<b>76</b>	<b>74</b>	<b>52</b>	<b>14</b>

### East Derwent Highway and Jetty Road southern junction

Morning traffic survey data

Time AM	East Derwent Highway				Jetty Road	
	Straight towards Hobart	Straight towards Bridgewater	Right into Jetty Road	Left into Jetty Road	Left onto the Highway	Right onto the Highway
7:30 – 7:45	271	79	2	1	3	0
7:45 – 8:00	275	89	2	5	2	4
8:00 – 8:15	240	78	1	6	3	4
8:15 – 8:30	131	53	1	2	0	5
8:30 – 8:45	165	68	1	2	1	8
8:45 – 9:00	167	101	3	4	3	3
<b>Total</b>	<b>1,249</b>	<b>468</b>	<b>12</b>	<b>20</b>	<b>12</b>	<b>24</b>

## Evening traffic survey data

Time PM	East Derwent Highway				Jetty Road	
	Straight towards Hobart	Straight towards Bridgewater	Right into Jetty Road	Left into Jetty Road	Left onto the Highway	Right onto the Highway
4:00 – 4:15	159	218	3	15	2	3
4:15 – 4:30	101	211	3	10	2	5
4:30 – 4:45	119	213	3	8	3	6
4:45 – 5:00	91	211	6	9	2	3
5:00 – 5:15	97	201	3	11	4	5
5:15 – 5:30	81	219	1	9	1	6
<b>Total</b>	<b>648</b>	<b>1,273</b>	<b>19</b>	<b>62</b>	<b>14</b>	<b>28</b>

Jetty Road and Morrisby Road junction

## Morning traffic survey data

Time AM	Jetty Road				Morrisby Road	
	Straight northbound	Straight southbound	Right into Morrisby Road	Left into Morrisby Road	Left onto Jetty Road	Right onto Jetty Road
7:30 – 7:45	3	5	5	0	8	16
7:45 – 8:00	3	10	1	0	12	10
8:00 – 8:15	4	6	5	1	10	23
8:15 – 8:30	3	5	3	1	8	12
<b>Total</b>	<b>13</b>	<b>26</b>	<b>14</b>	<b>2</b>	<b>38</b>	<b>61</b>

## Evening traffic survey data

Time PM	Jetty Road				Morrisby Road	
	Straight northbound	Straight southbound	Right into Morrisby Road	Left into Morrisby Road	Left onto Jetty Road	Right onto Jetty Road
4:00 – 4:15	7	10	14	7	8	2
4:15 – 4:30	5	6	9	3	4	2
4:30 – 4:45	5	10	14	5	7	2
4:45 – 5:00	4	7	9	4	5	2
<b>Total</b>	<b>21</b>	<b>33</b>	<b>46</b>	<b>19</b>	<b>24</b>	<b>8</b>

**Jetty Road and Fouche Avenue junction**

Morning traffic survey data

Time AM	Jetty Road				Fouche Avenue	
	Straight eastbound	Straight westbound	Right into Fouche Avenue	Left into Fouche Avenue	Left onto Jetty Road	Right onto Jetty Road
8:00 – 8:15	4	2	9	1	2	1
8:15 – 8:30	5	3	19	2	5	0
8:30 – 8:45	6	1	8	2	2	2
8:45 – 9:00	3	5	8	1	1	2
<b>Total</b>	<b>18</b>	<b>11</b>	<b>44</b>	<b>6</b>	<b>10</b>	<b>5</b>

Evening traffic survey data

Time PM	Jetty Road				Fouche Avenue	
	Straight eastbound	Straight westbound	Right into Fouche Avenue	Left into Fouche Avenue	Left onto Jetty Road	Right onto Jetty Road
4:30 – 4:45	6	8	3	2	4	1
4:45 – 5:00	6	14	4	2	4	0
5:00 – 5:15	8	9	5	4	4	3
5:15 – 5:30	8	10	2	0	8	1
<b>Total</b>	<b>28</b>	<b>41</b>	<b>14</b>	<b>8</b>	<b>20</b>	<b>5</b>



## 12. Appendix B – Traffic modelling

Jetty Road and Fouche Avenue junction – Morning peak existing traffic flow

### MOVEMENT SUMMARY

▽ Site: 101 [Jetty Road and Fouche Ave - Existing morning peak]

New Site  
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
South: Fouche Avenue								
1	L2	11	0.0	0.011	5.6	LOS A	0.0	0.3
3	R2	5	0.0	0.011	5.7	LOS A	0.0	0.3
Approach		16	0.0	0.011	5.6	LOS A	0.0	0.3
East: Jetty Road (towards highway)								
4	L2	6	0.0	0.009	5.5	LOS A	0.0	0.0
5	T1	12	0.0	0.009	0.0	LOS A	0.0	0.0
Approach		18	0.0	0.009	2.0	NA	0.0	0.0
West: Jetty Road								
11	T1	19	0.0	0.036	0.0	LOS A	0.2	1.2
12	R2	46	0.0	0.036	5.5	LOS A	0.2	1.2
Approach		65	0.0	0.036	3.9	NA	0.2	1.2
All Vehicles		99	0.0	0.036	3.8	NA	0.2	1.2

Jetty Road and Fouche Avenue junction – Evening peak existing traffic flow

### MOVEMENT SUMMARY

▽ Site: 101 [Jetty Road and Fouche Ave - Existing evening peak]

New Site  
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
South: Fouche Avenue								
1	L2	21	0.0	0.018	5.7	LOS A	0.1	0.5
3	R2	5	0.0	0.018	5.7	LOS A	0.1	0.5
Approach		26	0.0	0.018	5.7	LOS A	0.1	0.5
East: Jetty Road (towards highway)								
4	L2	8	0.0	0.027	5.5	LOS A	0.0	0.0
5	T1	43	0.0	0.027	0.0	LOS A	0.0	0.0
Approach		52	0.0	0.027	0.9	NA	0.0	0.0
West: Jetty Road								
11	T1	29	0.0	0.024	0.1	LOS A	0.1	0.5
12	R2	15	0.0	0.024	5.6	LOS A	0.1	0.5
Approach		44	0.0	0.024	1.9	NA	0.1	0.5
All Vehicles		122	0.0	0.027	2.3	NA	0.1	0.5

## Jetty Road and Fouche Avenue junction – Morning peak with development traffic

**MOVEMENT SUMMARY**

▽ **Site: 101 [Jetty Road and Fouche Ave - Existing morning peak - with development]**

New Site  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

**Movement Performance - Vehicles**

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Fouche Avenue								
1	L2	11	0.0	0.011	5.6	LOS A	0.0	0.3
3	R2	5	0.0	0.011	5.8	LOS A	0.0	0.3
Approach		16	0.0	0.011	5.6	LOS A	0.0	0.3
East: Jetty Road (towards highway)								
4	L2	6	0.0	0.010	5.5	LOS A	0.0	0.0
5	T1	14	0.0	0.010	0.0	LOS A	0.0	0.0
Approach		20	0.0	0.010	1.8	NA	0.0	0.0
West: Jetty Road								
11	T1	19	0.0	0.046	0.1	LOS A	0.2	1.5
12	R2	63	0.0	0.046	5.5	LOS A	0.2	1.5
Approach		82	0.0	0.046	4.2	NA	0.2	1.5
All Vehicles		118	0.0	0.046	4.0	NA	0.2	1.5

## Jetty Road and Fouche Avenue junction – Evening peak with development traffic

**MOVEMENT SUMMARY**

▽ **Site: 101 [Jetty Road and Fouche Ave - Existing evening peak - with development]**

New Site  
 Site Category: (None)  
 Giveaway / Yield (Two-Way)

**Movement Performance - Vehicles**

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Fouche Avenue								
1	L2	24	0.0	0.020	5.7	LOS A	0.1	0.5
3	R2	5	0.0	0.020	5.8	LOS A	0.1	0.5
Approach		29	0.0	0.020	5.7	LOS A	0.1	0.5
East: Jetty Road (towards highway)								
4	L2	8	0.0	0.034	5.5	LOS A	0.0	0.0
5	T1	58	0.0	0.034	0.0	LOS A	0.0	0.0
Approach		66	0.0	0.034	0.7	NA	0.0	0.0
West: Jetty Road								
11	T1	29	0.0	0.024	0.1	LOS A	0.1	0.5
12	R2	15	0.0	0.024	5.6	LOS A	0.1	0.5
Approach		44	0.0	0.024	1.9	NA	0.1	0.5
All Vehicles		140	0.0	0.034	2.1	NA	0.1	0.5

## Jetty Road and Morrisby Road junction – Morning peak existing traffic flow

**MOVEMENT SUMMARY**

▽ **Site: 101 [Morrisby and Jetty Rad - Existing morning peak]**

New Site  
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
East: Jetty Road (towards highway)								
5	T1	27	0.0	0.023	0.0	LOS A	0.1	0.5
6	R2	15	0.0	0.023	5.5	LOS A	0.1	0.5
Approach		42	0.0	0.023	1.9	NA	0.1	0.5
North: Morrisby Road								
7	L2	40	0.0	0.077	5.6	LOS A	0.3	1.9
9	R2	64	0.0	0.077	5.6	LOS A	0.3	1.9
Approach		104	0.0	0.077	5.6	LOS A	0.3	1.9
West: Jetty Rd								
10	L2	2	0.0	0.008	5.5	LOS A	0.0	0.0
11	T1	14	0.0	0.008	0.0	LOS A	0.0	0.0
Approach		16	0.0	0.008	0.7	NA	0.0	0.0
All Vehicles		162	0.0	0.077	4.2	NA	0.3	1.9

## Jetty Road and Morrisby Road junction – Evening peak existing traffic flow

**MOVEMENT SUMMARY**

▽ **Site: 101 [Morrisby and Jetty Rad - Existing evening peak]**

New Site  
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
East: Jetty Road (towards highway)								
5	T1	35	0.0	0.046	0.1	LOS A	0.2	1.4
6	R2	48	0.0	0.046	5.6	LOS A	0.2	1.4
Approach		83	0.0	0.046	3.3	NA	0.2	1.4
North: Morrisby Road								
7	L2	25	0.0	0.023	5.6	LOS A	0.1	0.6
9	R2	8	0.0	0.023	5.8	LOS A	0.1	0.6
Approach		34	0.0	0.023	5.7	LOS A	0.1	0.6
West: Jetty Rd								
10	L2	20	0.0	0.022	5.5	LOS A	0.0	0.0
11	T1	22	0.0	0.022	0.0	LOS A	0.0	0.0
Approach		42	0.0	0.022	2.6	NA	0.0	0.0
All Vehicles		159	0.0	0.046	3.6	NA	0.2	1.4

## Jetty Road and East Derwent Highway southern junction – Morning peak existing traffic flow

**MOVEMENT SUMMARY**

▽ **Site: 101 [East Derwent Hwy - Jetty Road south - existing morning peak]**

New Site  
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
South: East Derwent Highway								
1	L2	14	0.0	0.008	5.5	LOS A	0.0	0.0
2	T1	299	0.0	0.153	0.0	LOS A	0.0	0.0
Approach		313	0.0	0.153	0.3	NA	0.0	0.0
North: East Derwent Highway								
8	T1	917	0.0	0.471	0.1	LOS A	0.0	0.0
9	R2	8	0.0	0.008	6.7	LOS A	0.0	0.2
Approach		925	0.0	0.471	0.1	NA	0.0	0.2
West: Jetty Road								
10	L2	8	0.0	0.111	6.8	LOS A	0.3	2.4
12	R2	13	0.0	0.111	33.7	LOS C	0.3	2.4
Approach		21	0.0	0.111	23.4	LOS B	0.3	2.4
All Vehicles		1259	0.0	0.471	0.6	NA	0.3	2.4

## Jetty Road and East Derwent Highway southern junction – Evening peak existing traffic flow

**MOVEMENT SUMMARY**

▽ **Site: 101 [East Derwent Hwy - Jetty Road south - existing evening peak]**

New Site  
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
South: East Derwent Highway								
1	L2	42	0.0	0.023	5.5	LOS A	0.0	0.0
2	T1	853	0.0	0.437	0.1	LOS A	0.0	0.0
Approach		895	0.0	0.437	0.3	NA	0.0	0.0
North: East Derwent Highway								
8	T1	470	0.0	0.243	0.0	LOS A	0.0	0.0
9	R2	15	0.0	0.034	12.2	LOS A	0.1	0.8
Approach		485	0.0	0.243	0.4	NA	0.1	0.8
West: Jetty Road								
10	L2	9	0.0	0.187	13.1	LOS A	0.6	4.0
12	R2	17	0.0	0.187	41.8	LOS C	0.6	4.0
Approach		26	0.0	0.187	31.9	LOS C	0.6	4.0
All Vehicles		1406	0.0	0.437	0.9	NA	0.6	4.0

Jetty Road and East Derwent Highway southern junction – Morning peak with development traffic

## MOVEMENT SUMMARY

▽ Site: 101 [East Derwent Hwy - Jetty Road south - existing morning - with development]

New Site  
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
South: East Derwent Highway								
1	L2	15	0.0	0.008	5.5	LOS A	0.0	0.0
2	T1	299	0.0	0.153	0.0	LOS A	0.0	0.0
Approach		314	0.0	0.153	0.3	NA	0.0	0.0
North: East Derwent Highway								
8	T1	917	0.0	0.471	0.1	LOS A	0.0	0.0
9	R2	8	0.0	0.008	6.7	LOS A	0.0	0.2
Approach		925	0.0	0.471	0.1	NA	0.0	0.2
West: Jetty Road								
10	L2	8	0.0	0.135	6.8	LOS A	0.4	2.9
12	R2	16	0.0	0.135	33.9	LOS C	0.4	2.9
Approach		24	0.0	0.135	24.8	LOS B	0.4	2.9
All Vehicles		1263	0.0	0.471	0.6	NA	0.4	2.9

Jetty Road and East Derwent Highway southern junction – Evening peak with development traffic

## MOVEMENT SUMMARY

▽ Site: 101 [East Derwent Hwy - Jetty Road south - existing evening - with development]

New Site  
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
South: East Derwent Highway								
1	L2	54	0.0	0.029	5.5	LOS A	0.0	0.0
2	T1	853	0.0	0.437	0.1	LOS A	0.0	0.0
Approach		907	0.0	0.437	0.4	NA	0.0	0.0
North: East Derwent Highway								
8	T1	470	0.0	0.243	0.0	LOS A	0.0	0.0
9	R2	15	0.0	0.034	12.3	LOS A	0.1	0.8
Approach		485	0.0	0.243	0.4	NA	0.1	0.8
West: Jetty Road								
10	L2	9	0.0	0.199	13.5	LOS A	0.6	4.3
12	R2	18	0.0	0.199	42.6	LOS D	0.6	4.3
Approach		27	0.0	0.199	32.9	LOS C	0.6	4.3
All Vehicles		1419	0.0	0.437	1.0	NA	0.6	4.3



## Jetty Road and East Derwent Highway northern junction – Morning peak existing traffic flow

<b>MOVEMENT SUMMARY</b>								
▽ <b>Site: 101 [East Derwent Hwy - Jetty Road north existing morning peak]</b>								
New Site Site Category: (None) Giveaway / Yield (Two-Way)								
<b>Movement Performance - Vehicles</b>								
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: East Derwent Highway								
1	L2	7	0.0	0.004	5.5	LOS A	0.0	0.0
2	T1	300	0.0	0.154	0.0	LOS A	0.0	0.0
Approach		307	0.0	0.154	0.1	NA	0.0	0.0
North: East Derwent Highway								
8	T1	902	0.0	0.466	0.1	LOS A	0.0	0.0
9	R2	31	0.0	0.029	6.7	LOS A	0.1	0.8
Approach		933	0.0	0.466	0.3	NA	0.1	0.8
West: Jetty Road								
10	L2	32	0.0	0.141	6.8	LOS A	0.5	3.2
12	R2	14	0.0	0.141	34.3	LOS C	0.5	3.2
Approach		46	0.0	0.141	15.2	LOS B	0.5	3.2
All Vehicles		1286	0.0	0.466	0.8	NA	0.5	3.2

## Jetty Road and East Derwent Highway northern junction – Evening peak existing traffic flow

<b>MOVEMENT SUMMARY</b>								
▽ <b>Site: 101 [East Derwent Hwy - Jetty Road north - existing evening peak ]</b>								
New Site Site Category: (None) Giveaway / Yield (Two-Way)								
<b>Movement Performance - Vehicles</b>								
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: East Derwent Highway								
1	L2	48	0.0	0.026	5.5	LOS A	0.0	0.0
2	T1	817	0.0	0.419	0.1	LOS A	0.0	0.0
Approach		865	0.0	0.419	0.4	NA	0.0	0.0
North: East Derwent Highway								
8	T1	491	0.0	0.254	0.0	LOS A	0.0	0.0
9	R2	43	0.0	0.091	11.9	LOS A	0.3	2.2
Approach		534	0.0	0.254	1.0	NA	0.3	2.2
West: Jetty Road								
10	L2	39	0.0	0.182	12.0	LOS A	0.6	4.0
12	R2	10	0.0	0.182	42.2	LOS C	0.6	4.0
Approach		49	0.0	0.182	18.1	LOS B	0.6	4.0
All Vehicles		1448	0.0	0.419	1.2	NA	0.6	4.0



## Jetty Road and East Derwent Highway northern junction – Morning peak with development traffic

**MOVEMENT SUMMARY**

▽ Site: 101 [East Derwent Hwy - Jetty Road north existing morning peak - with develop

New Site  
Site Category: (None)  
Giveaway / Yield (Two-Way)

**Movement Performance - Vehicles**

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	F
South: East Derwent Highway									
1	L2	7	0.0	0.004	5.5	LOS A	0.0	0.0	
2	T1	300	0.0	0.154	0.0	LOS A	0.0	0.0	
Approach		307	0.0	0.154	0.1	NA	0.0	0.0	
North: East Derwent Highway									
8	T1	902	0.0	0.466	0.1	LOS A	0.0	0.0	
9	R2	32	0.0	0.030	6.7	LOS A	0.1	0.8	
Approach		934	0.0	0.466	0.3	NA	0.1	0.8	
West: Jetty Road									
10	L2	41	0.0	0.166	6.8	LOS A	0.5	3.7	
12	R2	16	0.0	0.166	34.8	LOS C	0.5	3.7	
Approach		57	0.0	0.166	14.7	LOS B	0.5	3.7	
All Vehicles		1298	0.0	0.466	0.9	NA	0.5	3.7	

## Jetty Road and East Derwent Highway northern junction – Evening peak with development traffic

**MOVEMENT SUMMARY**


▽ Site: 101 [East Derwent Hwy - Jetty Road north - existing evening peak - with deve

New Site  
Site Category: (None)  
Giveaway / Yield (Two-Way)


**Movement Performance - Vehicles**

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	F
South: East Derwent Highway									
1	L2	49	0.0	0.026	5.5	LOS A	0.0	0.0	
2	T1	817	0.0	0.419	0.1	LOS A	0.0	0.0	
Approach		866	0.0	0.419	0.4	NA	0.0	0.0	
North: East Derwent Highway									
8	T1	491	0.0	0.253	0.0	LOS A	0.0	0.0	
9	R2	56	0.0	0.118	12.0	LOS A	0.4	2.9	
Approach		547	0.0	0.253	1.3	NA	0.4	2.9	
West: Jetty Road									
10	L2	39	0.0	0.185	12.0	LOS A	0.6	4.1	
12	R2	10	0.0	0.185	43.1	LOS D	0.6	4.1	
Approach		49	0.0	0.185	18.3	LOS B	0.6	4.1	
All Vehicles		1462	0.0	0.419	1.3	NA	0.6	4.1	


## Fouche Avenue and East Derwent Highway roundabout – Morning peak existing traffic flow

MOVEMENT SUMMARY								
 <b>Site: 101 [East Derwent Fouche Roundabout - existing morning peak]</b>								
New Site 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
South: Fouche Avenue								
1	L2	10	0.0	0.164	4.7	LOS A	0.9	6.1
2	T1	2	0.0	0.164	4.9	LOS A	0.9	6.1
3	R2	187	0.0	0.164	10.1	LOS A	0.9	6.1
Approach		199	0.0	0.164	9.8	LOS A	0.9	6.1
East: East Derwent Highway								
4	L2	10	0.0	0.143	3.7	LOS A	1.0	6.7
5	T1	201	0.0	0.143	3.9	LOS A	1.0	6.7
6	R2	12	0.0	0.143	9.1	LOS A	1.0	6.7
Approach		223	0.0	0.143	4.2	LOS A	1.0	6.7
North: Clives Avenue								
7	L2	138	0.0	0.285	11.5	LOS A	2.1	14.7
8	T1	4	0.0	0.285	11.6	LOS A	2.1	14.7
9	R2	19	0.0	0.285	16.8	LOS B	2.1	14.7
Approach		161	0.0	0.285	12.1	LOS A	2.1	14.7
West: East Derwent Hwy								
10	L2	9	0.0	0.633	5.3	LOS A	6.0	41.8
11	T1	809	0.0	0.633	5.4	LOS A	6.0	41.8
12	R2	2	0.0	0.633	10.6	LOS A	6.0	41.8
Approach		820	0.0	0.633	5.4	LOS A	6.0	41.8
All Vehicles		1403	0.0	0.633	6.6	LOS A	6.0	41.8


## Fouche Avenue and East Derwent Highway roundabout – Evening peak existing traffic flow

MOVEMENT SUMMARY								
 <b>Site: 101 [East Derwent Fouche Roundabout - existing evening peak]</b>								
New Site 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
South: Fouche Avenue								
1	L2	15	0.0	0.067	7.8	LOS A	0.4	2.8
2	T1	6	0.0	0.067	8.0	LOS A	0.4	2.8
3	R2	32	0.0	0.067	13.2	LOS A	0.4	2.8
Approach		53	0.0	0.067	11.1	LOS A	0.4	2.8
East: East Derwent Highway								
4	L2	100	0.0	0.545	4.1	LOS A	4.8	33.4
5	T1	652	0.0	0.545	4.3	LOS A	4.8	33.4
6	R2	89	0.0	0.545	9.4	LOS A	4.8	33.4
Approach		841	0.0	0.545	4.8	LOS A	4.8	33.4
North: Clives Avenue								
7	L2	27	0.0	0.050	5.3	LOS A	0.3	1.8
8	T1	4	0.0	0.050	5.5	LOS A	0.3	1.8
9	R2	22	0.0	0.050	10.7	LOS A	0.3	1.8
Approach		53	0.0	0.050	7.6	LOS A	0.3	1.8
West: East Derwent Hwy								
10	L2	34	0.0	0.291	4.3	LOS A	1.8	12.6
11	T1	326	0.0	0.291	4.5	LOS A	1.8	12.6
12	R2	38	0.0	0.291	9.6	LOS A	1.8	12.6
Approach		398	0.0	0.291	4.9	LOS A	1.8	12.6
All Vehicles		1345	0.0	0.545	5.2	LOS A	4.8	33.4

## Fouche Avenue and East Derwent Highway roundabout – Morning peak with development traffic

MOVEMENT SUMMARY								
 <b>Site: 101 [East Derwent Fouche Roundabout - existing morning peak -with development traffic]</b>								
New Site 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
South: Fouche Avenue								
1	L2	10	0.0	0.178	4.7	LOS A	1.0	6.7
2	T1	2	0.0	0.178	4.9	LOS A	1.0	6.7
3	R2	203	0.0	0.178	10.1	LOS A	1.0	6.7
Approach		215	0.0	0.178	9.8	LOS A	1.0	6.7
East: East Derwent Highway								
4	L2	10	0.0	0.143	3.7	LOS A	1.0	6.7
5	T1	201	0.0	0.143	3.9	LOS A	1.0	6.7
6	R2	12	0.0	0.143	9.1	LOS A	1.0	6.7
Approach		223	0.0	0.143	4.2	LOS A	1.0	6.7
North: Clives Avenue								
7	L2	138	0.0	0.293	11.8	LOS A	2.2	15.3
8	T1	4	0.0	0.293	11.9	LOS A	2.2	15.3
9	R2	19	0.0	0.293	17.1	LOS B	2.2	15.3
Approach		161	0.0	0.293	12.4	LOS A	2.2	15.3
West: East Derwent Hwy								
10	L2	9	0.0	0.643	5.4	LOS A	6.1	42.7
11	T1	809	0.0	0.643	5.6	LOS A	6.1	42.7
12	R2	2	0.0	0.643	10.8	LOS A	6.1	42.7
Approach		820	0.0	0.643	5.6	LOS A	6.1	42.7
All Vehicles		1419	0.0	0.643	6.8	LOS A	6.1	42.7

## Fouche Avenue and East Derwent Highway roundabout – Evening peak with development traffic

MOVEMENT SUMMARY								
 <b>Site: 101 [East Derwent Fouche Roundabout - existing evening peak - with development traffic]</b>								
New Site 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
South: Fouche Avenue								
1	L2	15	0.0	0.067	7.8	LOS A	0.4	2.8
2	T1	6	0.0	0.067	8.0	LOS A	0.4	2.8
3	R2	32	0.0	0.067	13.2	LOS A	0.4	2.8
Approach		53	0.0	0.067	11.1	LOS A	0.4	2.8
East: East Derwent Highway								
4	L2	103	0.0	0.547	4.1	LOS A	4.8	33.6
5	T1	652	0.0	0.547	4.3	LOS A	4.8	33.6
6	R2	89	0.0	0.547	9.4	LOS A	4.8	33.6
Approach		844	0.0	0.547	4.8	LOS A	4.8	33.6
North: Clives Avenue								
7	L2	27	0.0	0.050	5.3	LOS A	0.3	1.8
8	T1	4	0.0	0.050	5.5	LOS A	0.3	1.8
9	R2	22	0.0	0.050	10.7	LOS A	0.3	1.8
Approach		53	0.0	0.050	7.6	LOS A	0.3	1.8
West: East Derwent Hwy								
10	L2	34	0.0	0.291	4.3	LOS A	1.8	12.6
11	T1	326	0.0	0.291	4.5	LOS A	1.8	12.6
12	R2	38	0.0	0.291	9.6	LOS A	1.8	12.6
Approach		398	0.0	0.291	4.9	LOS A	1.8	12.6
All Vehicles		1348	0.0	0.547	5.2	LOS A	4.8	33.6

SYSTEM/REFER CIVIL DRAWINGS FOR DETAILS

RIGHT OF WAY (PRIVATE) 30.00 m WIDE

BDRY 31.08 m

BDRY 4.73 m

500

200

100

VS-1

VS-2

VS-3

VS-4

VS-5

VS-6

VS-7

VS-8

VS-9

VS-10

VS-11

VS-12

VS-13

VS-14

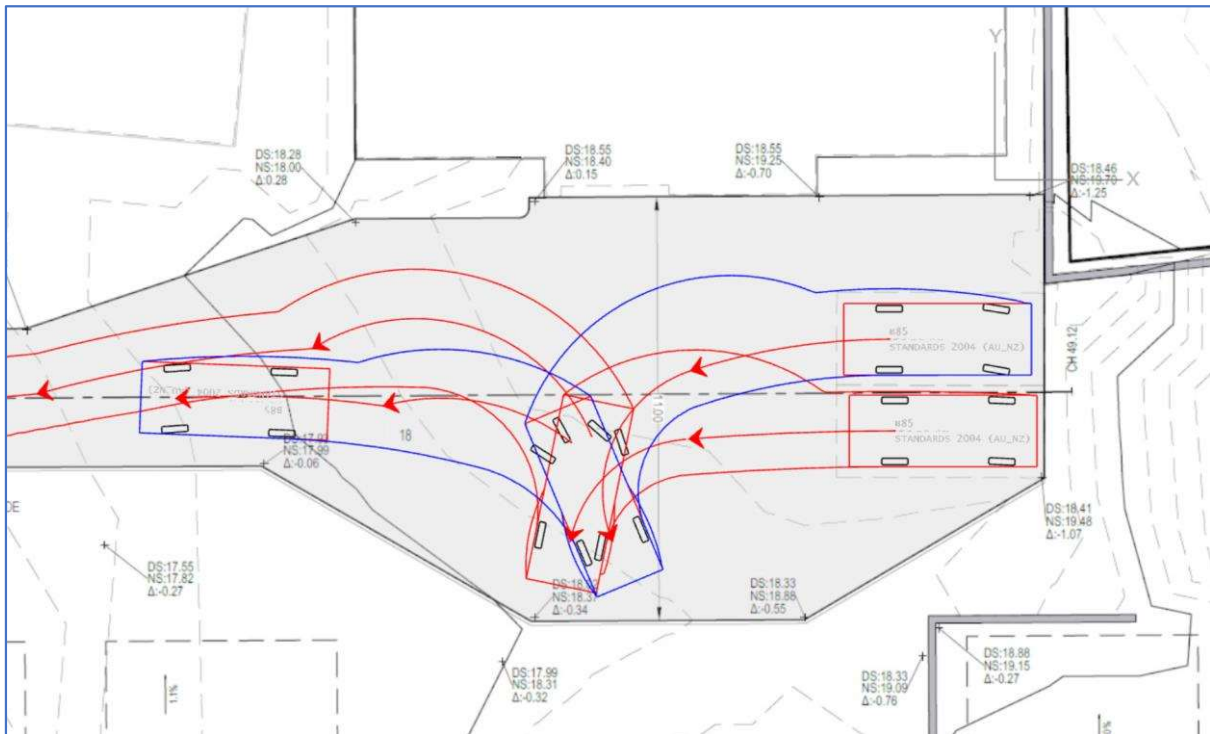
VS-15

VS-16

VS-17



B85 swept paths for unit 12 and 13



B85 swept paths for unit 17 and 25





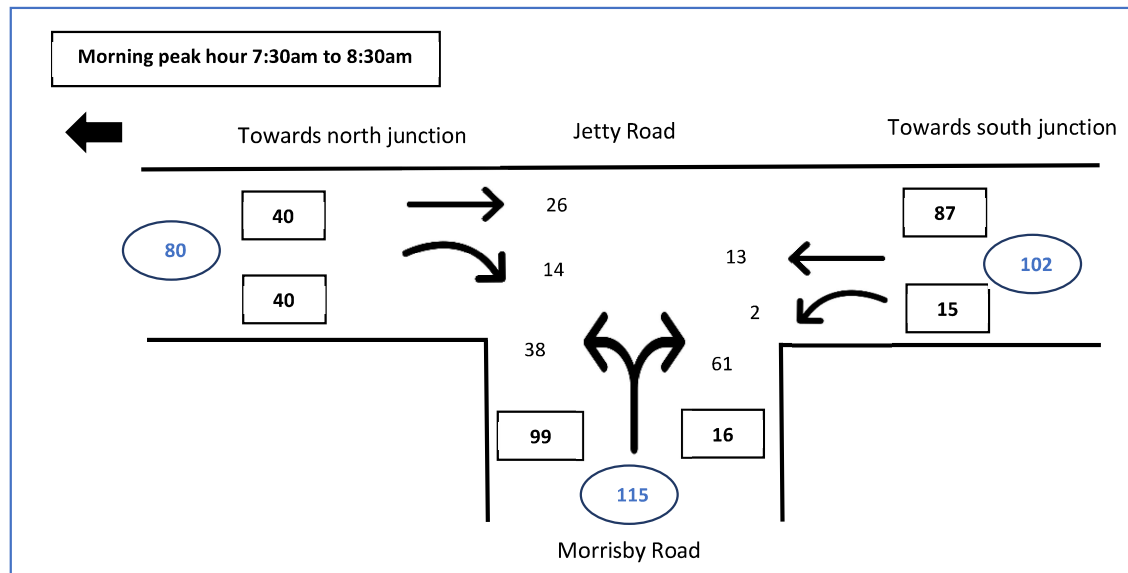
B85 swept path for unit 50



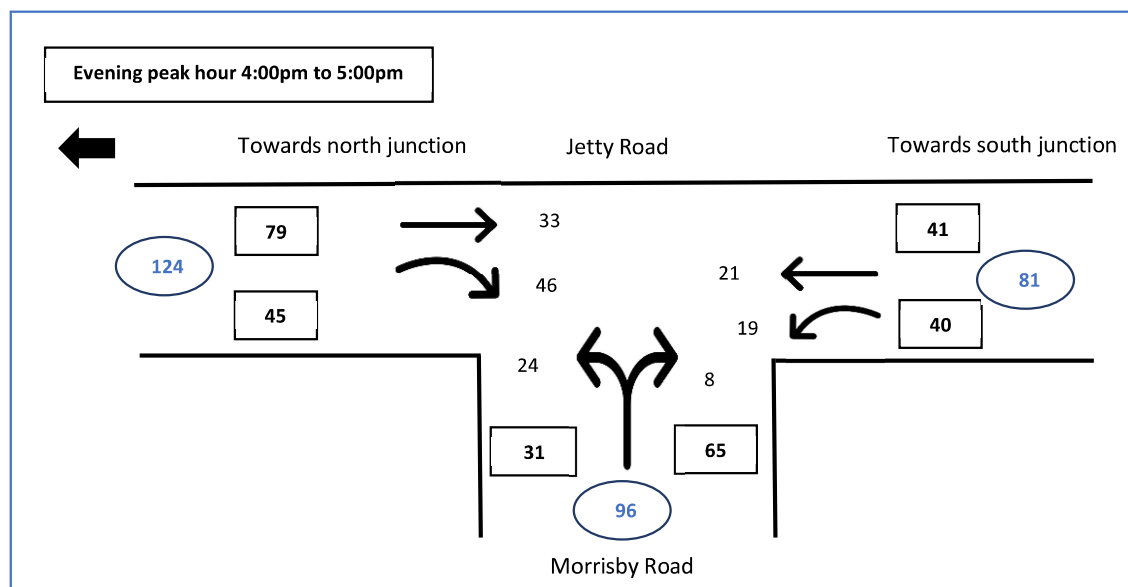
## 14. Appendix C – Peak hour traffic surveys

### Morrisby and Jetty Roads junction

Morning peak hour traffic movements



Evening peak hour traffic movements



### Jetty Road and Fouche Avenue junction

Diagram 5.3.2A – Morning peak hour traffic movements

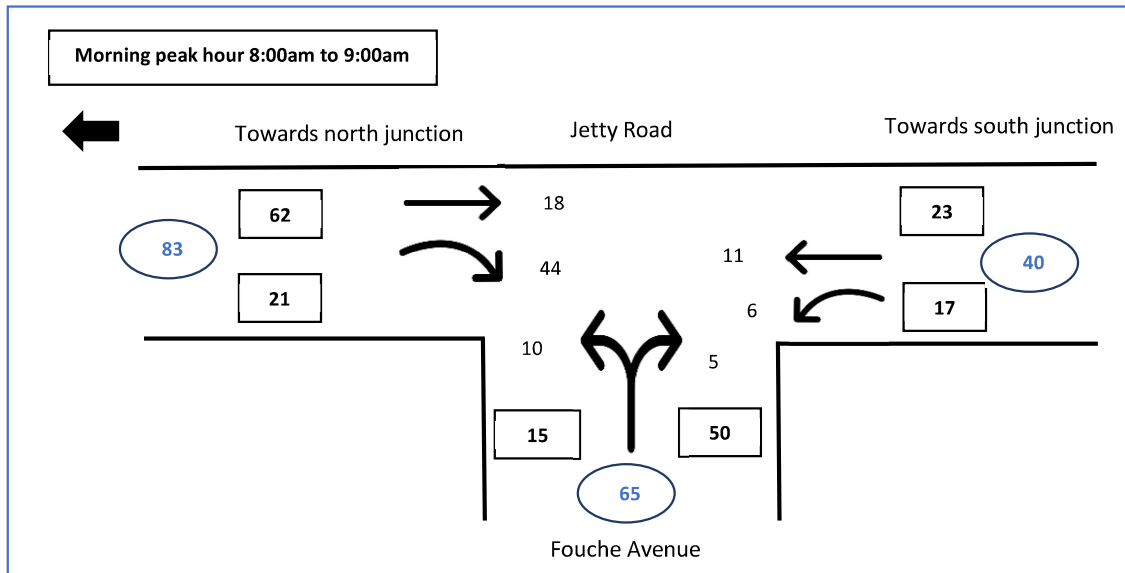
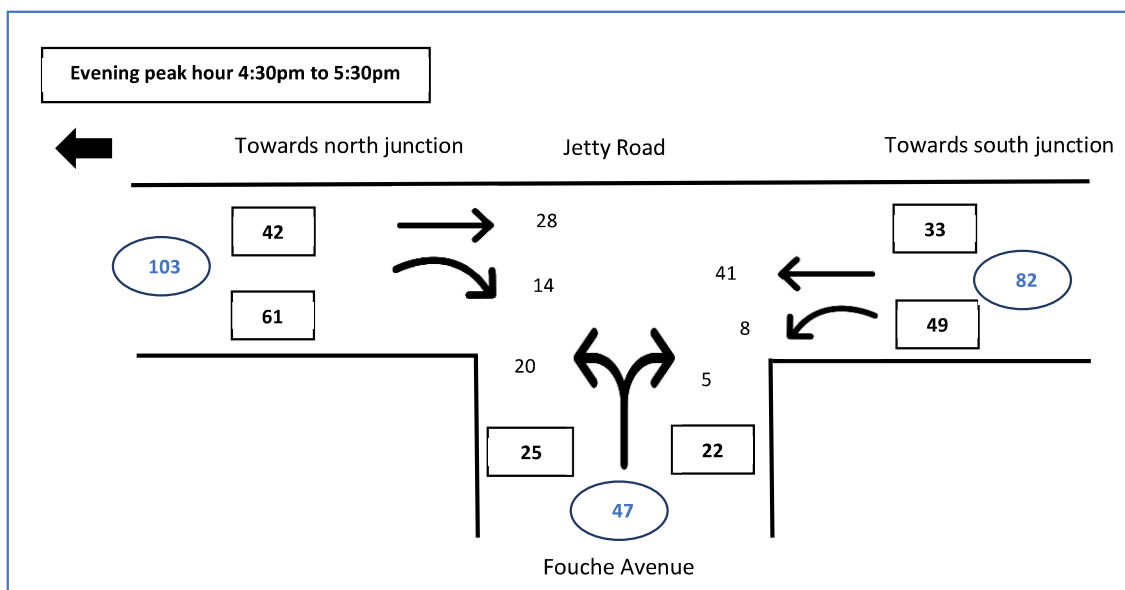


Diagram 5.3.2B – Evening peak hour traffic movements



### Jetty Road and East Derwent Highway north junction

Diagram 5.3.3A – Morning peak hour traffic movements

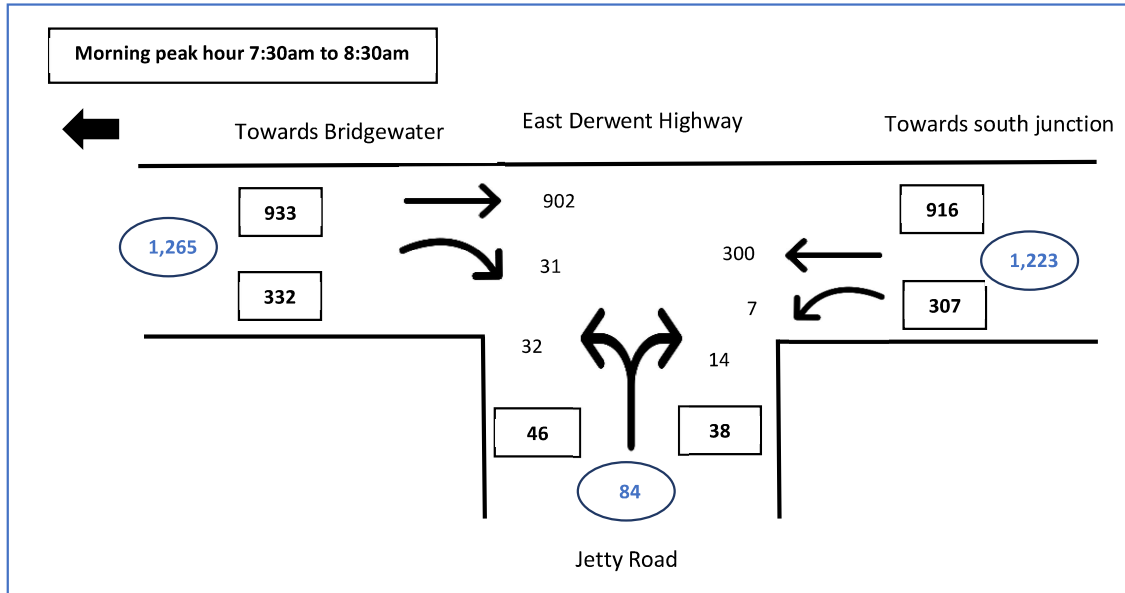
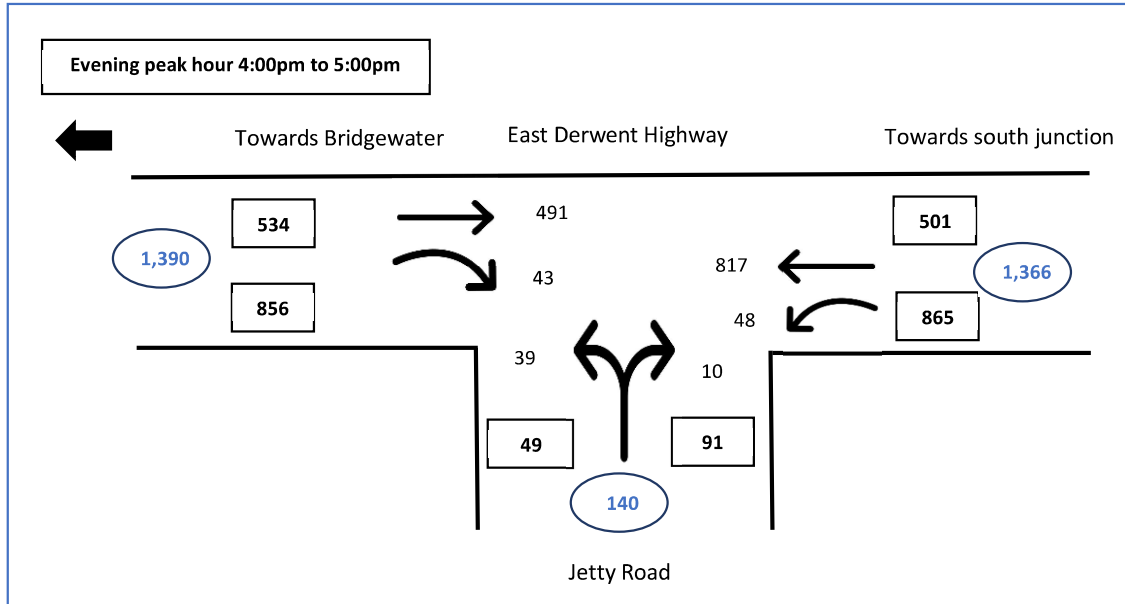


Diagram 5.3.3B – Evening peak hour traffic movements



### Jetty Road and East Derwent Highway south junction

Diagram 5.3.4A – Morning peak hour traffic movements

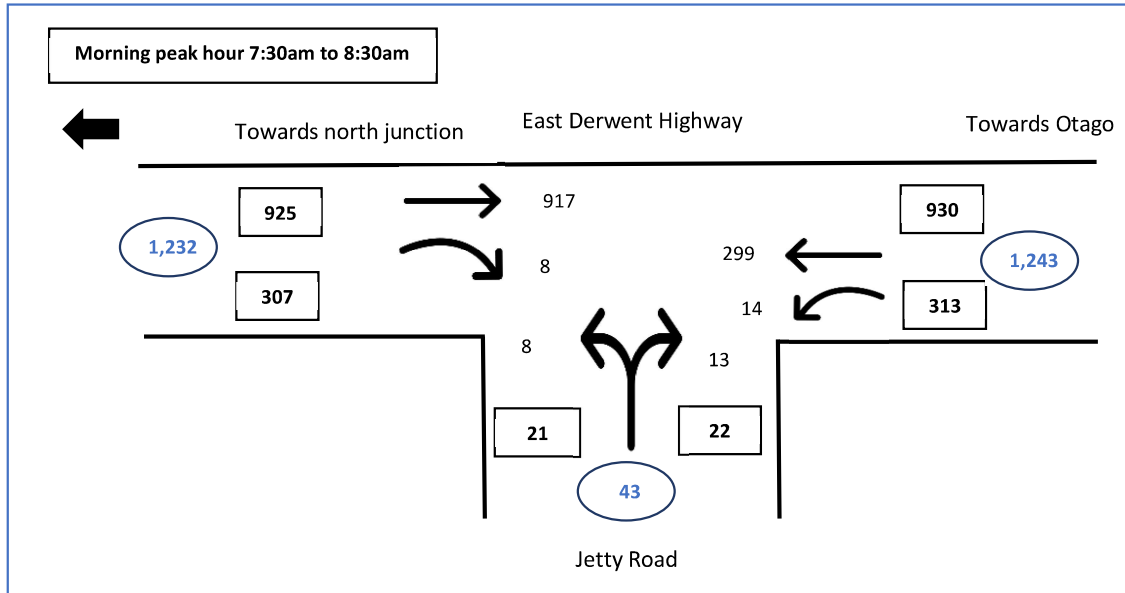
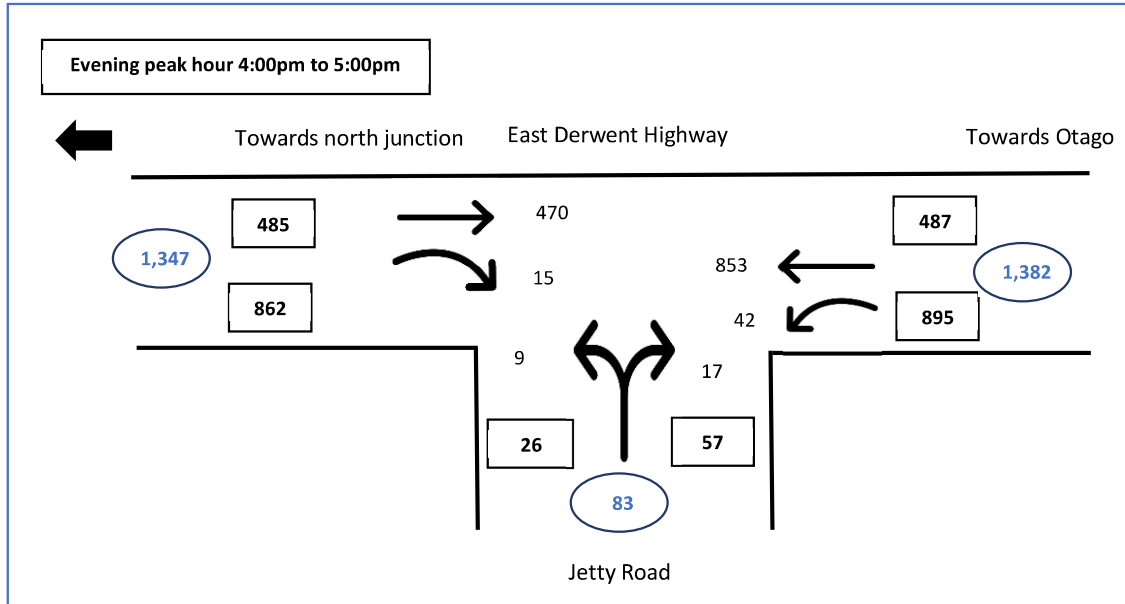


Diagram 5.3.4B – Evening peak hour traffic movements





Attention: Frazer Read

## 38 JETTY ROAD — TRAFFIC NOISE ASSESSMENT

A residential development is proposed at 38 Jetty Road, Old Beach. The site comprises two existing lots (title references 159864/1 and 159864/3) over an area of nominally 1.7 hectares and is located adjacent the East Derwent Highway. The proposal includes the construction of nominally 53 residential dwellings. Part of the proposed development is within 50m of the adjacent East Derwent Highway, and thus a noise assessment against the Tasmanian Planning Scheme's Road and Railway Assets Code has been requested to accompany the DA. This letter presents the results of such a noise assessment, completed by NVC in March / April 2024.

### 1. BACKGROUND

The propose site comprises two existing lots (title references 159864/1 and 159864/3) over an area of nominally 1.7 hectares. The site features a gentle gradient up towards the east, with the area within nominally 30m of the site boundary increasing to a moderate gradient. The existing topography results in the site boundary being approximately 2-3m below the highway's road surface, with the majority of site being significantly below road level. The site is within a General Residential zone (red overlay in Figure 1.1), with the East Derwent Highway located immediately to the site's east (yellow overlay in Figure 1.1).



**FIGURE 1.1: SITE AND SURROUNDINGS**

Figure 1.2, below, shows the site layout of the proposed development.



## 2. CRITERIA

The Tasmanian Planning Scheme contains, under section C3.0, the Road and Railway Assets Code. Specifically relevant is clause C3.6.1:

### C3.6.1 Habitable buildings for sensitive uses within a road or railway attenuation area

Objective:	To minimise the effects of noise, vibration, light and air emissions on sensitive uses within a road or railway attenuation area, from existing and future major roads and the rail network.	
Acceptable Solutions		Performance Criteria
<b>A1</b> Unless within a building area on a sealed plan approved under this planning scheme, habitable buildings for a sensitive use within a road or railway attenuation area, must be: <ul style="list-style-type: none"> <li>(a) within a row of existing habitable buildings for sensitive uses and no closer to the existing or future major road or rail network than the adjoining habitable building;</li> <li>(b) an extension which extends no closer to the existing or future major road or rail network than:               <ul style="list-style-type: none"> <li>(i) the existing habitable building; or</li> <li>(ii) an adjoining habitable building for a sensitive use; or</li> </ul> </li> <li>(c) located or designed so that external noise levels are not more than the level in Table C3.2 measured in accordance with Part D of the <i>Noise Measurement Procedures Manual</i>, 2<sup>nd</sup> edition, July 2008.</li> </ul>		<b>P1</b> Habitable buildings for sensitive uses within a road or railway attenuation area, must be sited, designed or screened to minimise adverse effects of noise, vibration, light and air emissions from the existing or future major road or rail network, having regard to: <ul style="list-style-type: none"> <li>(a) the topography of the site;</li> <li>(b) the proposed setback;</li> <li>(c) any buffers created by natural or other features;</li> <li>(d) the location of existing or proposed buildings on the site;</li> <li>(e) the frequency of use of the rail network;</li> <li>(f) the speed limit and traffic volume of the road;</li> <li>(g) any noise, vibration, light and air emissions from the rail network or road;</li> <li>(h) the nature of the road;</li> <li>(i) the nature of the development;</li> <li>(j) the need for the development;</li> <li>(k) any traffic impact assessment;</li> <li>(l) any mitigating measures proposed;</li> <li>(m) any recommendations from a suitably qualified person for mitigation of noise; and</li> <li>(n) any advice received from the rail or road authority.</li> </ul>

Relevant to this clause, Table C3.2 states acceptable noise levels within a road or railway attenuation zone:

Roads	Railways
The arithmetic average of the A-weighted L10 sound pressure levels for each of the one-hour periods between 6:00am and midnight on any day [L10 (18-hour)] of 63 dB(A).	A 24-hour Leq and Lmax noise level of 65 dB(A) and 87dB(A) Lmax assessed as a single event maximum sound pressure level.

Regarding indoor amenity, AS2107<sup>1</sup> is referred to for indoor noise level criteria. For houses or apartments near major roads, the relevant criteria are presented below:

Type of occupancy/activity	Design sound level ( $L_{Aeq,t}$ ) range	Design reverberation time ( $T$ ) range, s
RESIDENTIAL BUILDINGS (see Note 5 and Clause 5.2)		
Houses and apartments in inner city areas or entertainment districts or near major roads—		
Apartment common areas (e.g. foyer, lift lobby)	45 to 50	—
Living areas	35 to 45	—
Sleeping areas (night time)	35 to 40	—
Work areas	35 to 45	—

Therefore, the following project criteria are applicable:

**63 dBA  $L_{10_{18\text{-hour}}}$  at the boundary to site.**

**35-40 dBA within residential dwellings.**

<sup>1</sup> AS/NZS 2107:2016 *Acoustics - Recommended design sound levels and reverberation times for building interiors*, Standards Australia, 2016.



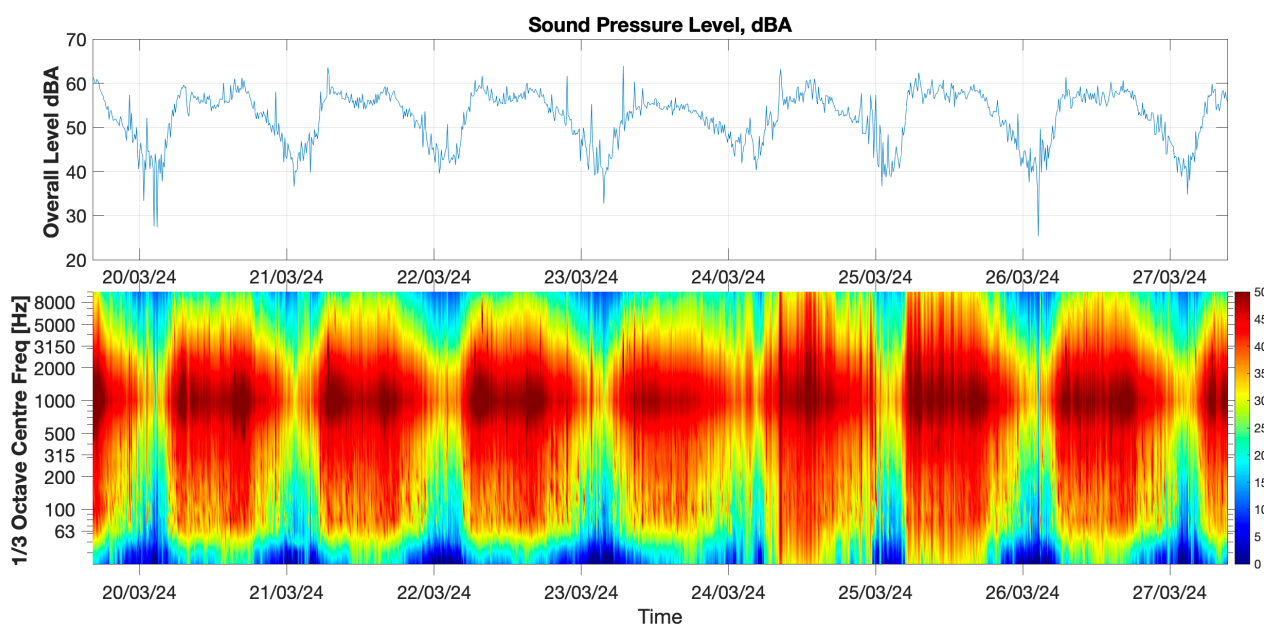
### 3. NOISE MEASUREMENTS

Unattended noise measurements were made on site between the 19<sup>th</sup> and the 27<sup>th</sup> March 2024 to quantify noise emissions from the East Derwent Highway. Measurements used a Svan Type 1 sound level meter, logging in A-weighted decibels with a *Fast* response time. The data set comprised overall levels, one-third octave spectra and full statistical data at 10 minute intervals, with spectra and overall level data also recorded at 1s intervals. The measurements were made at location A (see Figure 1.1), which was chosen as being the worst-affected boundary to site. This location was approximately 18m from the centre line of the highway.

Assessment for intrusive or dominant characteristics were carried out as per the Tas. Noise Measurement Procedures Manual, with no adjustment required.

The measured L10<sub>18-hour</sub> for the duration of the measurement period was 61.2 dBA<sub>adj</sub>.

Figure 3.1, below, presents the measured Leq noise spectrogram at Location A for the duration of the measurement period.



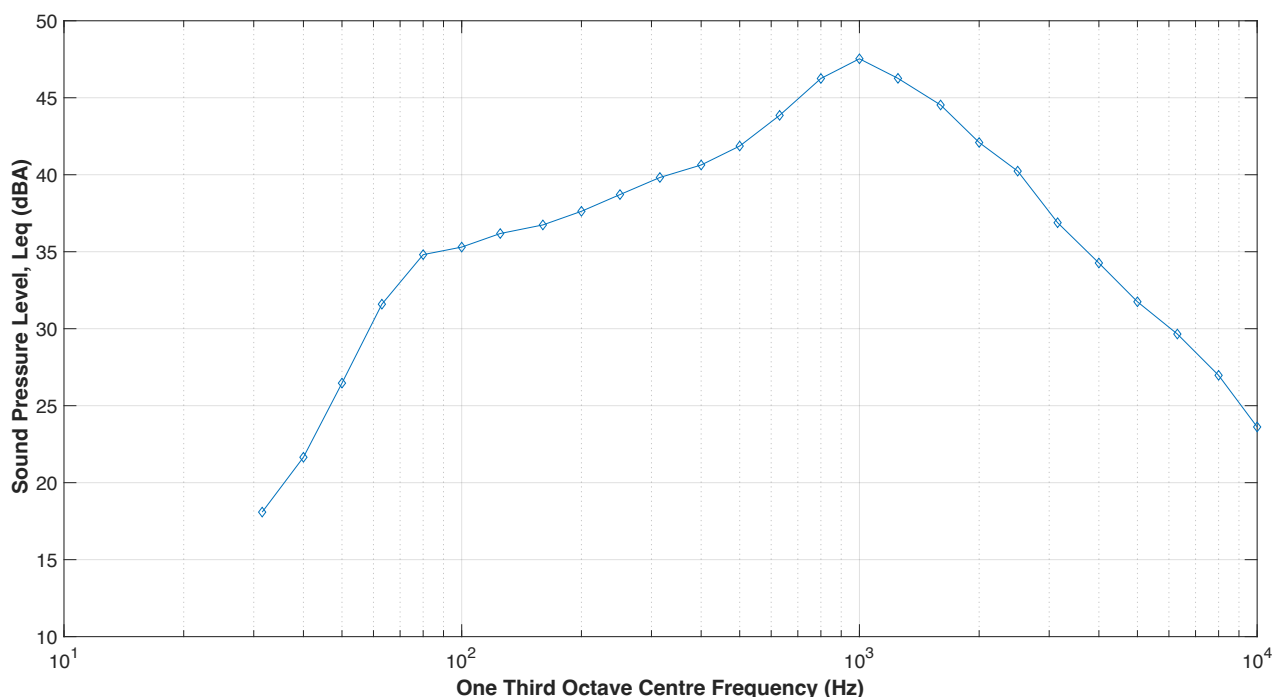
**FIGURE 3.1: MEASURED NOISE SPECTROGRAM - LOCATION A**

The following key points and observations made whilst on site are deemed relevant to the assessment:

- Broad-band noise typical of tyre noise from light vehicles travelling at high speeds was the dominant noise source.
- Low-frequency engine noise was clearly audible when heavy vehicles passed by site.
- It is noted that noise emissions from passing vehicles was only audible for short durations due to the screening of the East Derwent Highway from site by the natural topography of site.
- During the night time, noise levels significantly decreased compared to day time noise levels, however remained at an overall moderate level in general.

Figure 3.2, below, shows the average measured one-third octave spectrum between 6AM and midnight. As shown, noise at Location A is broad-banding nature with moderate low-frequency content due to heavy vehicles.





**FIGURE 3.2: AVERAGE ONE-THIRD OCTAVE LEQ SPECTRUM - LOCATION A (6AM - MIDNIGHT)**

## 4. ASSESSMENT

Measurements conducted at the worst-affected boundary to site resulted in an  $L_{10_{18\text{-hour}}}$  of nominally 62.1  $\text{dBA}_{\text{adj}}$ . This is below the criterion outlined in Table C.2 for roads, and thus:

The Acceptable Solution outlined in Clause C3.6.1 of the Tasmanian Planning Scheme is satisfied.

## 5. RECOMMENDATIONS

To ensure the indoor residential amenity of future residents is protected, the following is recommended:

- A facade construction that will achieve an airborne sound isolation rating of  $R_w$  27 for all dwellings located along the eastern boundary of site.
  - Any modern facade construction including masonry, or weatherboard / profiled metal on an insulated stud wall will comfortably achieve this.

Should you have any queries, please do not hesitate to contact me directly.

Kind regards,

**Jaye Parry**