

JMG Ref: 203143PH

Council Ref: PLAM-22/08

1st May 2023

The General Manager
Glenorchy City Council
Via planning@gcc.tas.gov.au

Attention: Lyndal Byrne

Dear Lyndal,

AMENDMENT REQUEST APPLICATION: PLAM-22/08 - TECHNOPARK, DOWSING POINT

Please refer to the following with regards to the 'request for additional information letter' received from Glenorchy City Council, dated 23rd November 2023.

The required additional information is addressed in the sequence below.

1. Contamination

We have **no** historical or site investigation evidence that the site is contaminated. The list of uses on the site (page 10 of the planning report) also suggest contamination by current uses is unlikely. Refer to attached table of historic uses.

2. Increased Height Justification

The reason for the increased height is to provide greater flexibility for future development on what is largely isolated site from sensitive uses. Given the height of the Goodwood Residential zones is 8.5m the height limit of 8m under the PPZ was considered overly restrictive. The height limit was modelled the height provision on that of the Commercial zone limit which is 12m. This justification is added to the Planning report also.

3. New Overlays

The new overlays have been updated into the planning report.

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4. Deletion of GLE-P2.5.1 Noise and GLE-P2.5.2 Dust, smell, fumes and other emissions

This clause is inconsistent with the operation of both the Light Industrial and General Industry zoning in the Tasmanian Planning Scheme, but we would be content with a clause in alignment with 18.3.2 (under GLE-P2.5.1) which puts a discretion around off-site impacts if Council thought this necessary.

5. Traffic Impact Assessment

Innovation Drive is the only access road to the Technopark area. It is constructed with a kerb and gutter along both sides of the road for the initial 115m from Howard Road where the width between kerb faces is around 8.5m. Beyond this there is a kerb along the northern side of the road to just before the Longreach Avenue junction and the road width is 8.0m. The road then widens to around 8.5m between kerb faces. The type of vehicles using the site will not change from those currently. A traffic impact assessment was undertaken by Milan Prodanovic for the site masterplan process which has some relevance to this application and is attached for Council's reference.

6. Word version of the draft PPZ

A word version of the PPZ is attached.

Other matters

The child care use is not critical use to the Department but the preference it be retained. The location of polluting uses would be captured by the 18.3.2 provision referenced above. Acoustic protection could also be conditioned in a planning permit if required.

The location of roller doors is not a matter regulated by the TPS in terms of land use conflict (it is assumed acoustic impacts).

We are open to wording changes that align with the scheme definitions.

We trust this satisfies Council's request however if further information or clarification is required with respect to this request, please contact me on 6231 2555 or at planning@jmg.net.au.

Yours faithfully

JOHNSTONE MCGEE & GANDY PTY LTD



**MINGMING MA
TOWN PLANNER**

ATTACHMENT 1

Historic Site Uses

TENANT	BUSINESS TYPE
FIOMARINE INDUSTRIES	Light manufacturing
THOMPSON HUMAN RESOURCES	Human Resource management services
PRINT APPLIED TECHNOLOGY	Printer (former occupant Tech 6)
MOUTH WATERS	Cafe
BETFAIR	Data centre
BYTECRAFT	Software developers
AUSTRALIAN SEAFOOD INDUSTRIES	Research – Pacific Oysters
TASMANET	Data centre
PERACTO	Agricultural research
TASMANIAN INSTITUTE OF SPORT	Athlete development and coaching
TOTAL FITNESS AND MASSAGE PTY LTD	Gym and massage
CRAWFORD AND CO	Insurance loss assessors
MACQUARIE FRANKLIN P/L	Agricultural, environmental consultants
MITCHELL PLASTIC WELD	Plastic welding startup (moved on)
PRINT MAIL LOGISTICS	Printing, mail handling
DATA CENTRE 3 (DC3)	Data centre
MEDECS	Registered Training Organisation
TASMANIAN COMMUNITY FUND	Charity
SURESAFE HEALTHCARE PTY LTD	Medical supplies and materials
NEXUS INCORPORATED	Registered Training Organisation
BERRYWORLD AUSTRALIA	Agricultural consultancy
SEAAQUA PTY LTD	Acquaculture startup
ABLE AUSTRALIA SERVICES	Registered Training Organisation
COVID-19 Call Centre	Call centre
RIZON GROUP PTY LTD	Building company local office
NICHOLBROOK PTY LTD	Brewing local office
UNIVERSITY OF TASMANIA	Computer room only
DXN LTD/TAS01	Data Centre

ATTACHMENT 2

Traffic Impact Assessment



MILAN PRODANOVIC B.E. PEng
TRAFFIC ENGINEERING & ROAD SAFETY

TRAFFIC ASSESSMENT

FOR

PROPOSED

TASMANIAN TECHNOPARK
MASTERPLAN

INNOVATION DRIVE
DOWSING POINT

JUNE 2020

TRAFFIC ASSESSMENT

FOR

PROPOSED

TASMANIAN TECHNOPARK
MASTERPLAN

INNOVATION DRIVE

DOWSING POINT

JUNE 2020

CONTENTS

	Page Number
1. INTRODUCTION	4
2. BACKGROUND	5
3. EXISTING ROAD AND TRAFFIC ENVIRONMENT	6
3.1 Road Characteristics	6
3.2 Traffic Activity	15
3.3 Crash Record	25
4. CAPACITY OF ROAD NETWORK TO ACCOMMODATE TRAFFIC GROWTH	27
5. LOCAL TRAFFIC IMPROVEMENTS	31
6. SUMMARY AND RECOMMENDATIONS	33

REFERENCES:

- Australian Standard AS 1742.2-2009 – Manual of uniform traffic control devices Part 2: Traffic control devices for general use
- AUSTROADS – Guide to Road Safety Part 6: Road Safety Audit
- AUSTROADS – Guide to Road Design Part 4: Intersections and Crossings General (2017)
- AUSTROADS – Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (2017)
- AUSTROADS – Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings
- AUSTROADS – Guide to Traffic Management Part 12: Traffic Impacts of Developments (2019)
- Department of State Growth publication: *A Framework for Undertaking Traffic Impact Assessments* (2007)
- GLENORCHY Interim Planning Scheme 2015

1. INTRODUCTION

JMG Engineers and Planners have been engaged by the Department of State Growth to provide a masterplan for possible future development at the Tasmanian Technopark site at Dowsing Point.

As part of the consultancy, this subconsultant has been commissioned to provide an assessment of the traffic activity in the surrounding area which will allow the determination of what increase in traffic could be accommodated on the affected road network from any additional development within the Technopark area.

This traffic assessment discusses the current road and traffic environment along the main access roads to the Technopark area. This includes a discussion of the geometric characteristics of the roads, current vehicle volumes, travel by other travel modes and the safety record along the roads.

The assessment then addresses the possible increase in vehicle traffic by considering the operational capacity of key intersections and the additional traffic which the intersections could accommodate.

Attention is also given to facilities for other modes of travel and scope to improve these to encourage use of these travel modes.

2. BACKGROUND

The Technopark site was originally set up to provide a business incubator service for Tasmania to provide support services and assistance to Technopark businesses and place the Tasmanian Technopark at the forefront in development of industries in the future.

There are several sources that suggest that the site is no longer focussed on developing future industries.

As part of an overall review of the function and future of the Technopark area consideration is being given to the site remaining as an incubator specifically for high technology and innovation businesses, becoming a business park with a more general focus but with some continued government support provided for start-up businesses.

Some consideration may be given to the site and adjoining properties being rezoned from Particular Purpose use to Light Industrial and/or Commercial use

This traffic assessment of the current capacity of both the internal and local road network servicing the site, and the consideration of the traffic impact of potential future development scenarios for the site has been undertaken to assist with this review.

3. EXISTING ROAD AND TRAFFIC ENVIRONMENT

3.1 Road Characteristics

The roads of relevance to this assessment are Innovation Drive and Longreach Avenue at Dowsing Point as well as Howard Road and Goodwood Main Road in the Goodwood area.

Goodwood Main Road

Goodwood Main Road is the arterial road for this area. It is a state government road connecting the Brooker Highway to the East Derwent Highway via the Bowen Bridge across the Derwent River.

It is a four lane divided road and is classified as a category 3 – regional access road.

The intersection of Howard Road with Goodwood Main Road is controlled by traffic signals which provide safe access between the two roads.

The road on the northern side of Goodwood Main Road opposite Howard Road is Dowsing Point Road. Dowsing Point Road continues into a gated entrance to the Australian Army land and local side roads provide access to Elwick Racecourse, residential dwellings, and the Derwent Entertainment Centre (through a gated access).

While there would be few pedestrians that cross at the Goodwood Main Road/Howard Road/Dowsing Point Road intersection, the traffic islands at the intersection do not have pedestrian (and bicycle) ramps on the traffic island which can be appreciated from the views in Photographs 3.1 and 3.2.

The footway and bicycle path along the north side of Goodwood Main Road and across the Bowen Bridge commences at the northeast corner of this intersection. This location is seen in Photograph 3.3.



Photograph 3.1: View to south across Goodwood Main Road towards Howard Road (eastern side)



Photograph 3.2: View to south across Goodwood Main Road towards Howard Road (western side)



Photograph 3.3: View towards start of footway and cycle path off northeast corner of Goodwood Main Road/Dowsing Point Road intersection which leads to the Bowen Bridge

Howard Road

Howard Road is a local circulation road for Goodwood, providing predominantly residential development access northward to Goodwood Main Road, southward to Gepp Parade and Derwent Park Road beyond, or westward to the Brooker Highway via roads such as Renfrew Circle – Barron Avenue, Acton Crescent and Lampton Avenue.

The road is generally constructed to a width of 9.7m between kerb faces and follows an alignment with several horizontal bends.

Traffic management along Howard Road consists of a centreline marking on the bend at Baron Avenue, a give way sign and holding line at some junctions, a pedestrian refuge to the south of Hornby Road junction and a roundabout control at the Howard Road/Gepp Parade/Acton Crescent intersection.

Views along Howard Road between Innovation Drive and Goodwood Main Road are seen in Photographs 3.4 to 3.6.

There are more than sufficient sight lines along Howard Road from Innovation Drive as can be appreciated from the views in Photographs 3.7 and 3.8.



**Photograph 3.4: View to north along Howard Road with
Innovation Drive on right**



**Photograph 3.5: View to south along Howard Road from
Barron Avenue towards Innovation Drive**



**Photograph 3.6: View to north along Howard Road from
Barron Avenue towards Goodwood Main Road**



**Photograph 3.7 View to south along Howard Road from
Innovation Drive**



Photograph 3.8: View to north along Howard Road from Innovation Drive

Innovation Drive

Innovation Drive is the only access road to the Technopark area. It has a straight horizontal alignment apart from a bend between around 70m to 120m from Howard Road and it follows an upgrade from the bend past the Longreach Avenue junction and into the Technopark site.

It is constructed with a kerb and gutter along both sides of the road for the initial 115m from Howard Road where the width between kerb faces is around 8.5m. Beyond this there is a kerb along the northern side of the road to just before the Longreach Avenue junction and the road width is 8.0m. The road then widens to around 8.5m between kerb faces.

There is a centreline marking around the bend on Innovation Drive and a give way sign plus holding line control on Longreach Avenue at the junction.

Views along Innovation Drive are seen in Photographs 3.9 to 3.11.



Photograph 3.9: View to east along Innovation Drive from Howard Road



Photograph 3.10: View to east along Innovation Drive from eastern end of bend



Photograph 3.11: View to east along Innovation Drive towards Longreach Avenue junction

A footway extends along the length of the southern side of Innovation Drive from Howard Road to the western side of Longreach Avenue. There is no footway facility east of this point along Innovation Drive or Longreach Avenue, as can be appreciated from the view in Photograph 3.12.

There are Metro bus stops on both sides of Innovation Drive just before the gated entrance to the Technopark site, as seen in photograph 3.13. There are two further bus stops along Innovation Drive within the Technopark site. One of these is seen in Photograph 3.14



Photograph 3.12: View of eastern end of footway along Innovation Drive at the Longreach Avenue junction



Photograph 3.13: View of bus stop signs on both sides of Innovation Drive just to the east of Longreach Avenue junction



Photograph 3.14: View of bus stop on Innovation Drive within the Technopark site

3.2 Traffic Activity

In order to have detail about current traffic activity in the area of the Technopark, traffic volume data was obtained from the Department of State Growth, Glenorchy City Council as well as peak hour turning movement surveys undertaken by this consultant.

Goodwood Main Road

The Department of State Growth traffic database has detail about traffic volumes on Goodwood Main Road. Traffic volume data from a survey site at the eastern end of the Bowen Bridge has been analysed.

The most recent Department of State Growth survey was undertaken in March 2020 and the following traffic volumes were recorded:

- Average weekday traffic (March 2020) - 20,507 vehicles/day;
- Morning weekday peak hour traffic (8-9am) - 628 vehicles/hour to east;
- 1,489 vehicles/hour to west;
- Afternoon weekday peak hour traffic (4-5pm) - 1,240 vehicles/hour to east;
- 782 vehicles/hour to west.

The hourly distribution of the traffic volumes over the average weekday in March 2020 in each direction and two-way has been presented graphically in Figure 3.1.

The traffic variation is consistent with Seasonal Group P24. The compound traffic growth at the survey site has been a 3.1% p.a. over the last 37 years and 7.8% of the current traffic is commercial vehicles.

The seasonal monthly traffic variation is detailed in Figure 3.2.

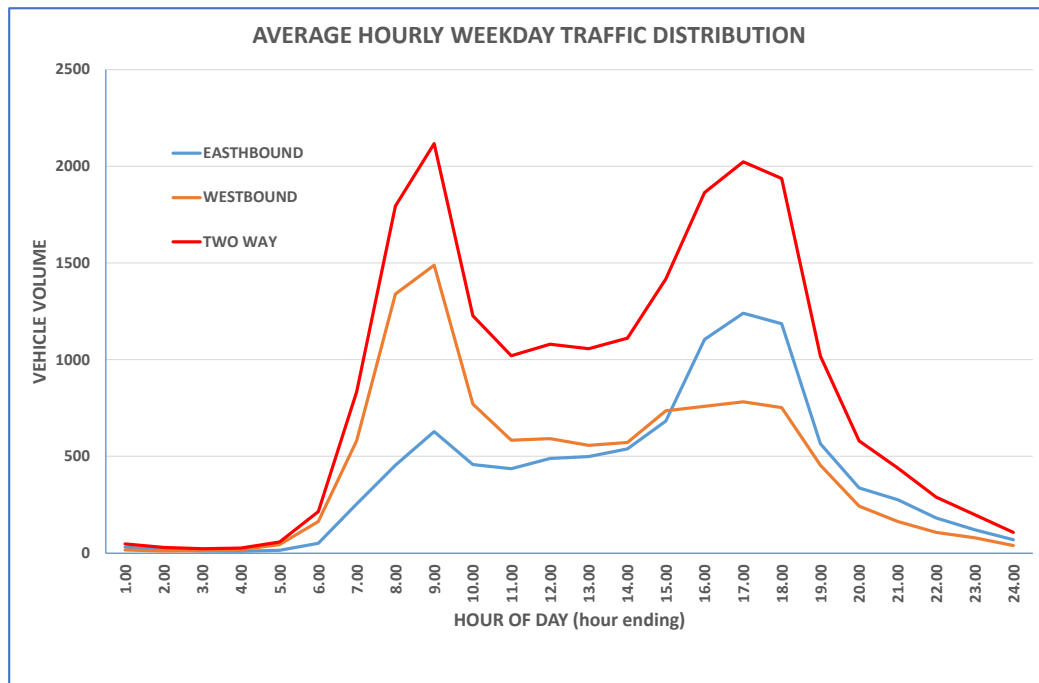


Figure 3.1: Average hourly weekday traffic distribution on Goodwood Main Road east of Howard Road

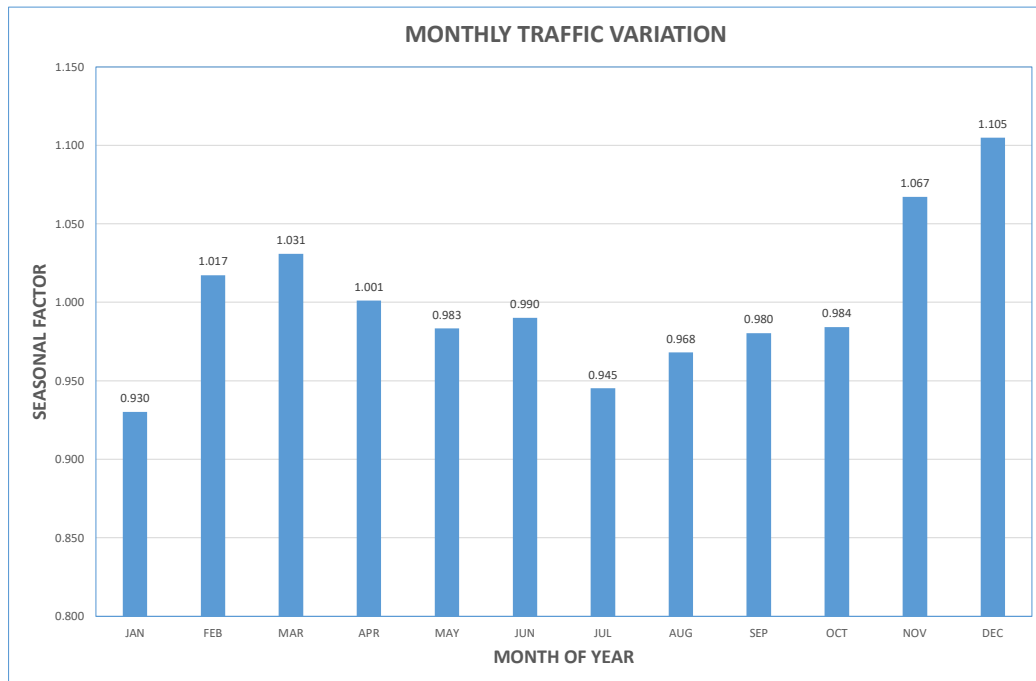


Figure 3.2: Monthly traffic variation along Goodwood Main Road

Turning traffic volume data has also been obtained from the Department of State Growth for the Goodwood Main Road/Howard Road/Dowsing Point Road intersection from same week in March 2020 as the above data for the eastern end of the Bowen Bridge.

The data are the lane traffic volumes recorded by the traffic signal lane sensors on the approaches to this traffic signal controlled intersection.

The recorded turning traffic volumes for the morning 8:00am – 9:00am and afternoon 4:00pm – 5:00pm peak hours are summarised in Figures 3.3 and 3.4.

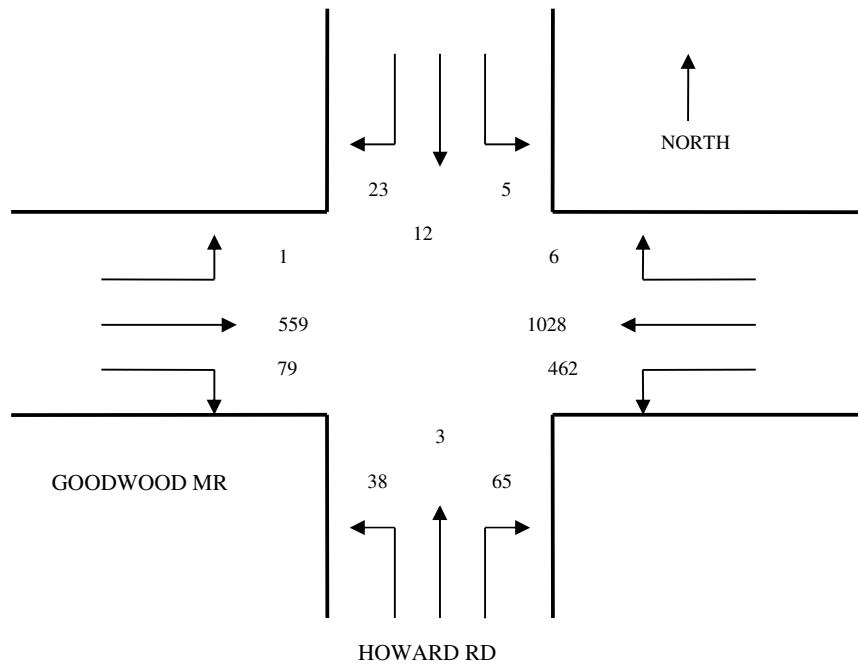


Figure 3.3: Turning traffic volumes at Goodwood Main Road/ Howard Road during 8:00am to 9:00am period

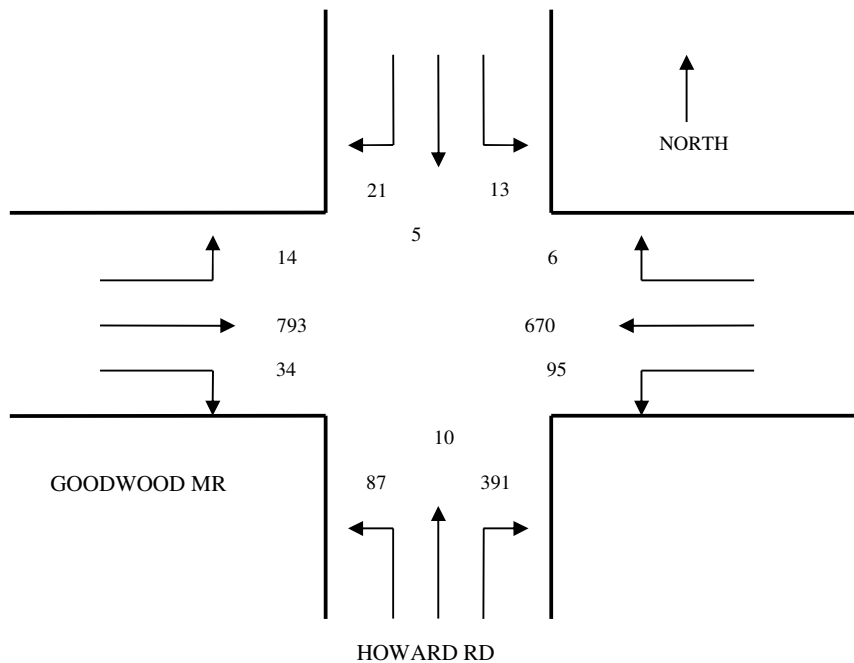


Figure 3.4: Turning traffic volumes at Goodwood Main Road/ Howard Road during 4:00pm to 5:00pm period

Council Roads

Enquiries were made with the Glenorchy City Council resulting in traffic data being obtained for Innovation Drive, Barron Avenue and Howard Road.

The data was recorded during surveys that were undertaken in 2015 on Innovation Drive, June 2017 on Barron Avenue and November 2016 on Howard Road. The Howard Road survey was undertaken between the two Negara Crescent junctions.

Innovation Drive

The survey recorded the following traffic volumes:

- Average weekday traffic (2015) - 1,413 vehicles/day;
- Morning weekday peak hour traffic (8-9am) - 177 vehicles/hour to east;
- 21 vehicles/hour to west;
- Afternoon weekday peak hour traffic (4-5pm) - 24 vehicles/hour to east;
- 113 vehicles/hour to west.

The hourly distribution of the traffic volumes over the average weekday in 2015 in each direction and two-way has been presented graphically in Figure 3.5.

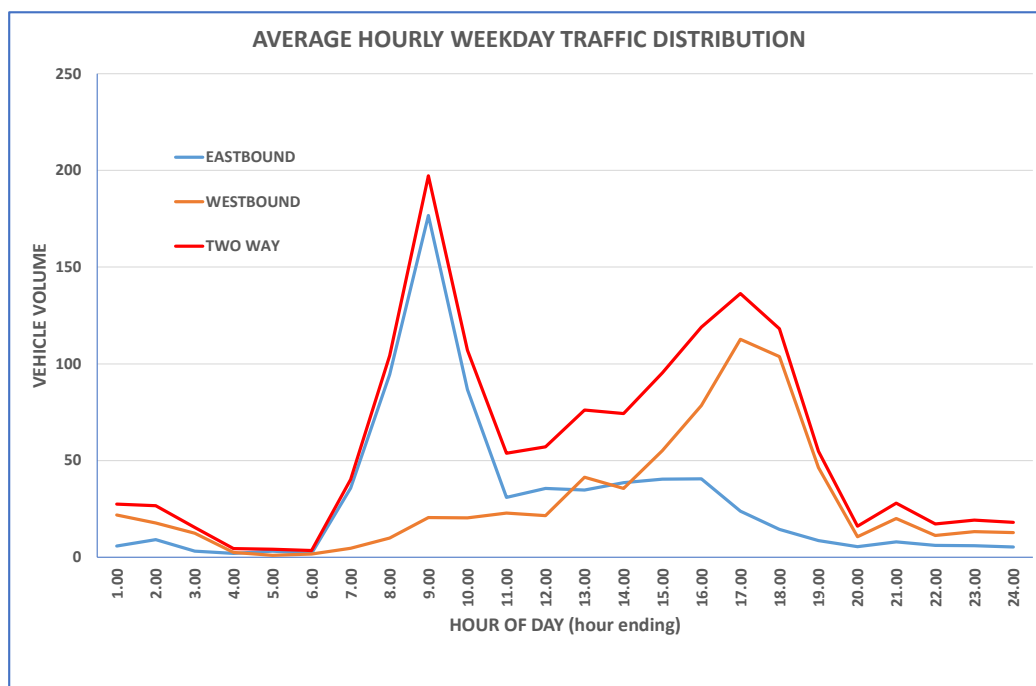


Figure 3.5: Average hourly weekday traffic distribution along Innovation Drive –2015

Barron Avenue

The survey recorded the following traffic volumes:

- Average weekday traffic (June 2017) - 1,923 vehicles/day;
- Morning weekday peak hour traffic (8-9am) - 69 vehicles/hour to north;
- 109 vehicles/hour to south;
- Afternoon weekday peak hour traffic (4-5pm) - 149 vehicles/hour to north;
- 61 vehicles/hour to south.

The hourly distribution of the traffic volumes over the average weekday in June 2017 in each direction and two-way has been presented graphically in Figure 3.6.

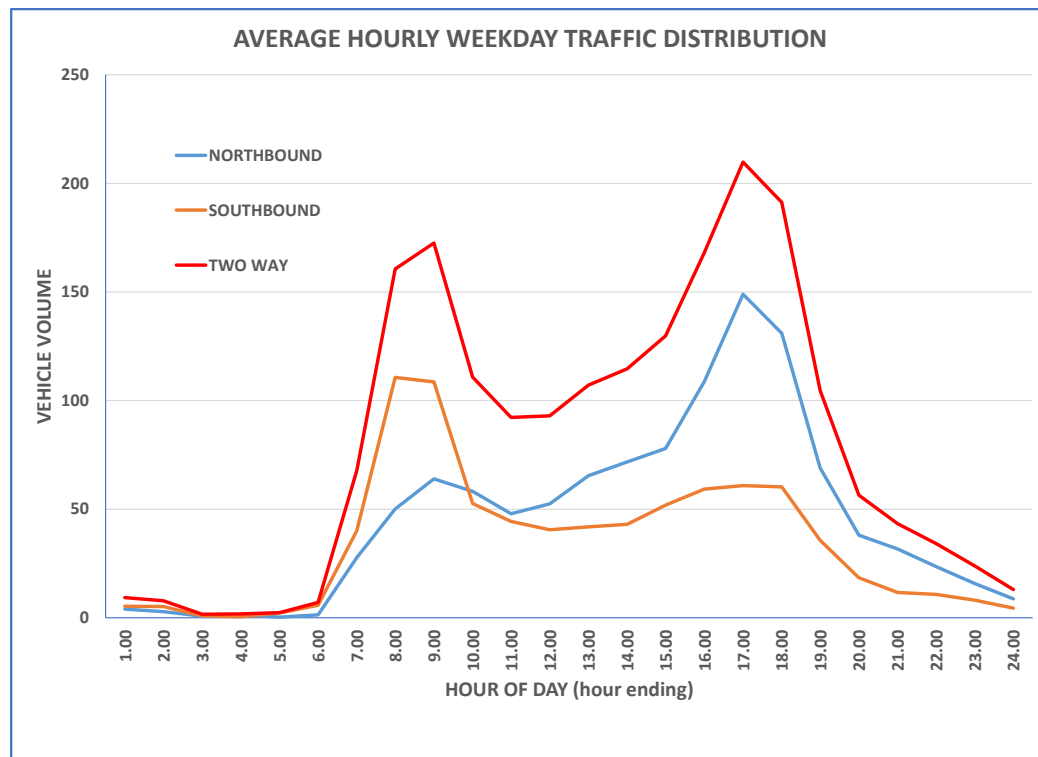


Figure 3.6: Average hourly weekday traffic distribution along Barron Avenue – June 2017

Howard Road

The survey recorded the following traffic volumes:

- Average weekday traffic (November 2016) - 4,245 vehicles/day;
- Morning weekday peak hour traffic (8-9am) - 106 vehicles/hour to north;
- 485 vehicles/hour to south;

Afternoon weekday peak hour traffic (4-5pm) - 419 vehicles/hour to north;
 - 162 vehicles/hour to south.

The hourly distribution of the traffic volumes over the average weekday in November 2016 in each direction and two-way has been presented graphically in Figure 3.7.

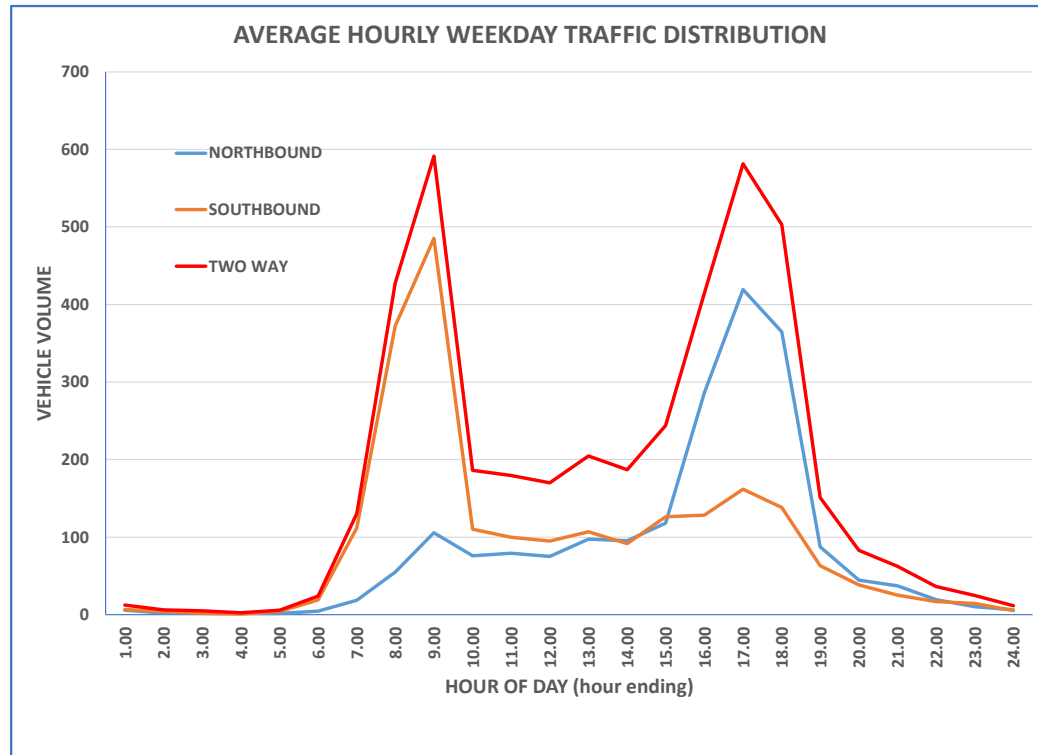


Figure 3.7: Average hourly weekday traffic distribution along Howard Road south of Negara Crescent – November 2016

As some of the above data was recorded a few years ago and in order to have detail about turning traffic volumes at the Innovation Drive/Howard Road junction, a turning movement survey was undertaken at the junction on 27 May 2020 between 4:00pm and 5:00pm and on 28 May 2002 between 8:00am and 9:00am.

The results from this turning movement survey has been summarised in Figures 3.8 and 3.9.

The survey was undertaken at a time of some Covid-19 travel restrictions.

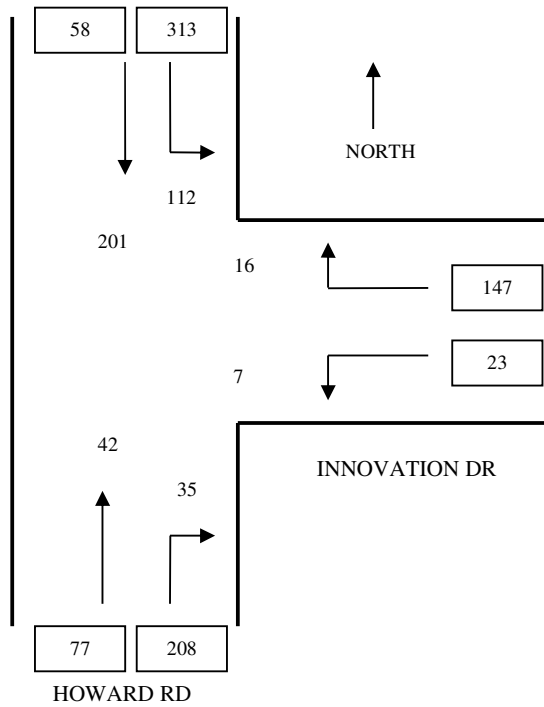


Figure 3.8: Turning traffic at Innovation Drive/Howard Road junction - 8:00am to 9:00am

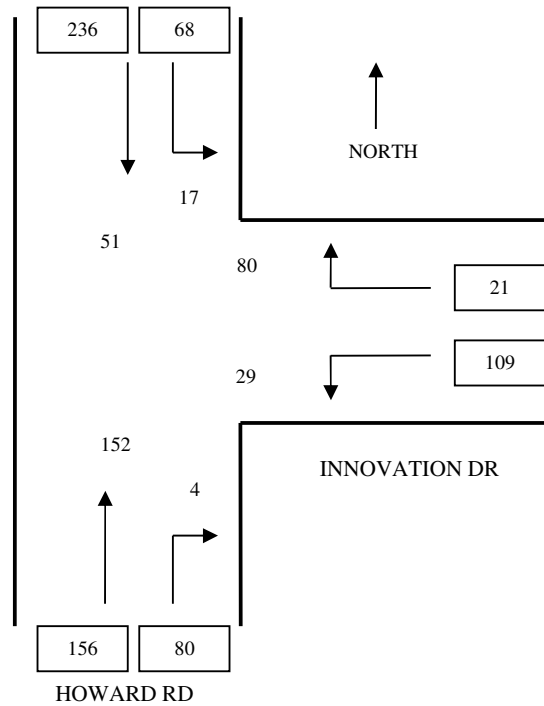


Figure 3.9: Turning traffic at Innovation Drive/Howard Road junction - 4:00pm to 5:00pm

When comparing the recent turning movement traffic volumes (for Goodwood Main Road/Howard Road and Innovation Drive/Howard Road intersections) with the historic Council data, it is evident there are some discrepancies. It would appear the Council data for Howard Road from 2016 is not a true volume or there were unnatural conditions applying at the time and the Innovation Drive/Howard Road peak hour traffic recorded in May 2020 is a little low.

For the purpose of future traffic capacity analysis, it is accepted the volumes in Figures 3.3 and 3.4 are current traffic volumes for one of the peak months of the year and it has been determined the current normal traffic volumes at the Innovation Drive/Howard Road junction area detailed in Figures 3.10 and 3.11.

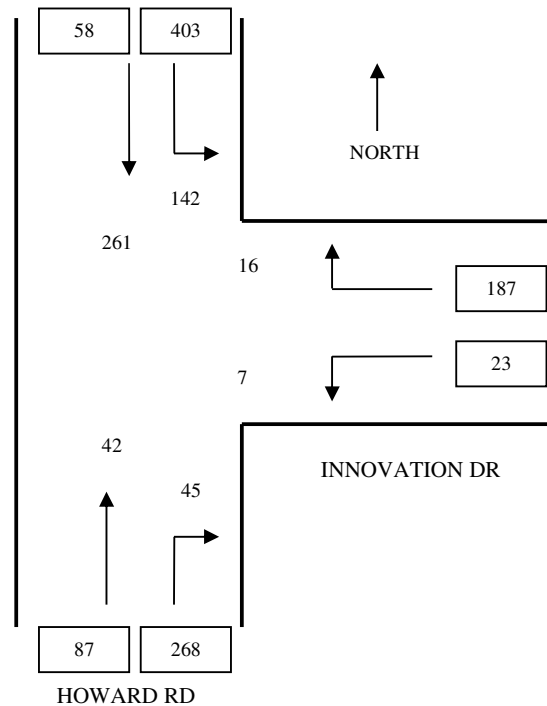


Figure 3.10: Normal turning traffic at Innovation Drive/Howard Road junction - 8:00am to 9:00am 2020

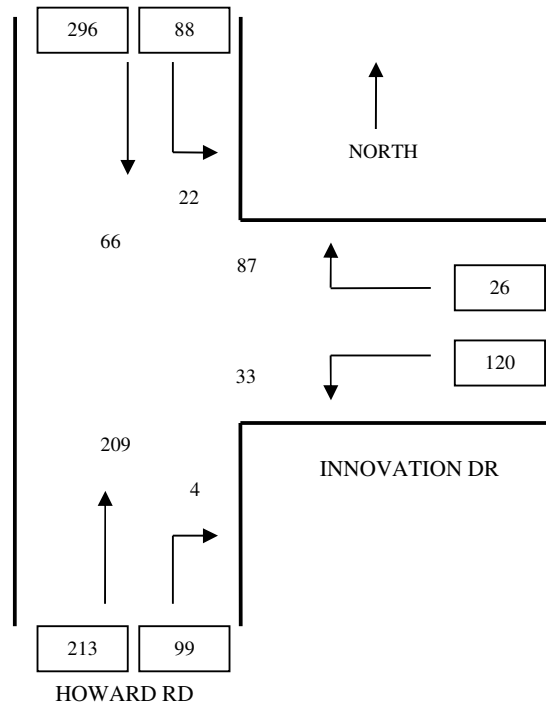


Figure 3.11: Normal turning traffic at Innovation Drive/Howard Road junction - 4:00pm to 5:00pm

OTHER TRAVEL MODES

During the morning and afternoon peak hour surveys at the Howard Road/Innovation Drive junction as well as during middle of the day inspections in the area, attention was given to other travel modes by workers at the Technopark.

Metro Bus Service

Metro Tasmania provide morning and afternoon peak hour bus services to the Technopark. These were observed during the peak hour surveys.

There are four to five route services in each period; one in the morning and three in the afternoon between Hobart and Glenorchy, and two in morning and three in the afternoon between Glenorchy and Hobart.

Bicycle Use

There was only one cyclist observed to cycle through the Howard Road/Innovation Drive junction in the morning peak hour; there were none in the afternoon peak hour. The cyclist turned right from Howard Road to Innovation Drive.

Pedestrian Traffic

There were also only two pedestrians that walked through the Howard Road/Innovation Drive junction in the morning peak hour towards the Technopark and none in the afternoon peak hour. The pedestrians walked from different directions along Howard Road.

Observations during the middle of the day found there was a significant number of pedestrians that walked along the footway on the southern side of Innovation Drive.

Some pedestrians seemed to walk the length of the footway for exercise, but many walked to the local shop on the corner at the Howard Road/Hornby Road junction.

It was estimated there are around 20-30 pedestrians that walk along the footway in both directions between 12:00noon and 2:00pm.

3.3 Crash Record

It was considered relevant to review the crash record in the area to determine if there is any cause for concern about the number or type of crashes.

All crashes that result in personal injury are required to be reported to Tasmania Police. Tasmania Police record all crashes that they attend. Any crashes that result in property damage only, which are reported to Tasmania Police, are also recorded even though they may not visit the site.

Details of reported crashes are collated and recorded on a computerised database that is maintained by the Department of State Growth.

Information was requested from the Department of State Growth about any reported crashes over the five and a half years since January 2015 along Innovation Drive, Longreach Avenue and Howard Road between Goodwood Main Road and Hornby Road.

Advice has been received that the database has record of two reported crashes along Innovation Drive and seven crashes along Howard Road.

One of the Innovation Drive crashes occurred at the Longreach Avenue junction in 2016. This was an angle collision that resulted in minor injury.

The other crash occurred on Innovation Drive within the Technopark development in 2015, seemingly as a result of a parking incident which resulted in property damage only.

Two of the Howard road crashes occurred at the Goodwood Road intersection as a result of angle collisions in 2016 and 2017. One crash resulted in minor injury.

The other five crashes occurred at four different locations along Howard Road.

One was a rear end collision in 2018 which resulted in property damage only due to queueing back from the traffic signals at Goodwood Main Road. There were two injury crashes (in 2015 and 2018) at the driveway access to Goodwood Park. The other two crashes were parking and U-turn manoeuvre incidents in 2017 and 2020 which occurred near the northern Negara Crescent junction and just north of Hornby Road and resulted in property damage only.

Overall, the crash record in this area is not of significant concern.

4. CAPACITY OF ROAD NETWORK TO ACCOMMODATE TRAFFIC GROWTH

The extent to which any additional development could occur within the Technopark area (along Innovation Drive and Longreach Avenue) will be determined by the capacity of the surrounding road network and its limitations in accepting additional traffic within operational efficiency requirements.

The ability of a road network to accommodate additional traffic is limited by the capacity of key intersections.

For the road network around the Technopark area, the two key intersections are Innovation Drive/Howard Road junction and the Goodwood Main Road/Howard Road/Dowsing Point road intersection.

In order to assess the current and future operational efficiency of the above intersections allowing for increased traffic activity, a SIDRA analysis of the performance of the intersections has been undertaken.

SIDRA is a nationally recognised intersection computer modelling tool that is known as Traffic Signalised and Unsignalised Intersection Design and Research Aid.

In using the SIDRA program and interpreting the output results, there is a need to understand the program in terms of the analysis process and the basis of reporting the outputs which can vary depending on the chosen parameters. Of particular relevance is the presentation of the Level of Service outputs that range from Level of Service A to F and the basis on which the Level of Service is determined.

For the purpose of this assessment the Level of Service based on the **Delay** and **Degree of Saturation** performance measures has been applied in the SIDRA analysis. A Level of Service (LoS) up to Level D is generally regarded as quite acceptable, as detailed in Table 4.1

Level of Service for $v/c \leq 1.0$	Average delay per vehicle in seconds (d)			Level of Service for $v/c > 1.0$
	Signals	"SIDRA Roundabout LOS" method (1)	Sign Control (Default for roundabouts) (1)	All Intersection Types
A	$d \leq 10$	$d \leq 10$	$d \leq 10$	F
B	$10 < d \leq 20$	$10 < d \leq 20$	$10 < d \leq 15$	F
C	$20 < d \leq 35$	$20 < d \leq 35$	$15 < d \leq 25$	F
D	$35 < d \leq 55$	$35 < d \leq 50$	$25 < d \leq 35$	F
E	$55 < d \leq 80$	$50 < d \leq 70$	$35 < d \leq 50$	F
F	$80 < d$	$70 < d$	$50 < d$	F

v/c (demand volume / capacity) ratio, or degree of saturation: $v/c > 1.0$ represents oversaturated conditions. Level of Service Target = LOS D is indicated by the table.

Table 4.1: Extract from SIDRA User Guide

Current traffic operation

A check of the current traffic operation at the Innovation Drive/Howard Road junction and the Goodwood Main Road/Howard Road/Dowsing Point Road intersection using SIDRA has been undertaken.

The traffic volumes in Figures 3.3 and 3.4 and Figures 3.10 and 3.11 have been used in this analysis, which found:

- the Goodwood Main Road/Howard Road/Dowsing Point Road intersection is operating at Level of Service B during the morning peak hour and Level of Service C during the afternoon peak hour;
- The Innovation Drive/Howard Road junction is operating at Level of Service A during both the morning and afternoon peak hour period.

Future traffic operation

In order to determine the additional traffic which these two intersections can accommodate into the future, the traffic volumes in Figures 3.3 and 3.4 as well as Figures 3.10 and 3.11 have been taken as the current (March 2020) volumes passing through these intersections.

In assessing the impact of additional traffic through these intersections into the future:

- the historic traffic growth of 3.1% p.a. was applied to the through traffic volumes on Goodwood Main Road;
- a factor of 1.078 was applied to the Goodwood Main Road through traffic volume to represent the peak month of December;
- a 1% p.a. growth was applied to the traffic volumes on Howard Road and Dowsing Point Road;
- a maximum Level of Service D was taken as acceptable;
- an assessment period of 10 years has been adopted (to year 2030). This period of time allows for reasonable confidence in the future traffic activity. For periods longer than this the variations in traffic become more difficult to predict.

Various percentage increases to the traffic volume along Innovation Drive were tested to arrive at a volume that would ensure the Innovation Drive/Howard Road junction and the Goodwood Main Road/Howard Road/Dowsing Point Road intersection would operate efficiently with the traffic increase.

The additional traffic volumes along Innovation Drive during the morning and afternoon peak hour were assigned to the Innovation Drive/Howard Road junction and Goodwood Main Road/Howard Road/Dowsing Point Road

intersection at the same proportional directional movements as determined for the current traffic movements.

From the SIDRA analysis it has been determined the Goodwood Main Road/Howard Road/Dowsing Point Road intersection is the controlling intersection with respect to increased traffic activity to and from the Technopark area.

When applying a 150% increase in the current Innovation Drive peak hour traffic, it was found the Goodwood Main Road/Howard Road/Dowsing Point Road intersection will be operating at a Level of Service D during the afternoon peak hour in year 2030. This is somewhat largely due also to the nearly 50% growth in traffic on Goodwood Main Road between May 2020 and December 2030.

The main output from the SIDRA analysis are summarised in Table 4.2. At these performance levels, the intersection as a whole will be operating at Level of Service C during the morning peak hour and Level of Service D during the afternoon peak hour.

With much lower future conflicting traffic volumes at the Innovation Drive/Howard Road junction, this junction will continue to operate at Level of Service A during the morning and afternoon peak hour.

Again, the main output from the SIDRA analysis are summarised in Table 4.2.

Future traffic volume along Innovation Drive

As outlined earlier in this report, the current traffic volume along Innovation Drive is around 1,500 vehicles/day with a two way volume of around 210 vehicles/hour in the morning peak hour and 150 vehicles/hour in the afternoon peak hour at the Howard Road junction.

The above analysis has determined this traffic volume could increase to around 3,750 vehicles/day along Innovation Drive while ensuring the more critical Goodwood Main Road/Howard Road/Dowsing Point Road intersection will be operating at a Level of Service D in year 2030.

For this intersection to operate at this level or better beyond 2030, changes to the intersection will be required. These will need to include a southward extension of the two lanes through the traffic signals as well as the left slip lane on Howard Road to a length of at least 110m as well as a change of traffic signal phasing to a split diamond phase for Howard Road and Dowsing Point Road.

The need for any changes should be monitored and will be subject to any increased traffic activity along Innovation Drive through additional development, and the traffic growth rate into the future along Goodwood Main Road.

At the current growth rate, the traffic volume along Goodwood Main Road in 2030 will be around 30,000 vehicles/day. At this traffic volume, traffic capacity issues can be expected along the East Derwent Highway towards the Grass Tree Hill Road/East Derwent Highway roundabout and possibly at the Brooker Highway/Goodwood Main Road intersection.

The increase traffic volume along Howard road to the south of the Innovation Drive junction will not affect traffic operations at any intersection of along the road. The traffic volume will remain at a minor collector road level.

TIME OF DAY/ SITUATION	APPROACH	WORST LEVEL OF SERVICE	DEGREE OF SAT	LONGEST 95% QUEUE LENGTH (m)	HIGHEST APPROACH DELAY (sec)
GOODWOOD MR & HOWARD RD 8:00-9:00AM PEAK HOUR 2030	Goodwood MR east	C	0.92	261	22.6
	Goodwood MR west	C	0.49	90	20.2
	Howard Rd	C	0.39	24	32.7
	Dowsing Point Rd	C	0.04	6	25.9
GOODWOOD MR & HOWARD RD 4:00-5:00PM PEAK HOUR 2030	Goodwood MR north	C	0.73	27	33.7
	Goodwood MR south	D	0.88	36	42.4
	Howard Rd	D	0.93	35	44.6
	Dowsing Point Rd	C	0.042	6	25.9
INNOVATION DRIVE & HOWARD RD 8:00-9:00AM PEAK HOUR 2030	Innovation Dr east	A	0.10	2	8.7
	Howard Rd north	A	0.35	0	2.5
	Howard Rd south	A	0.16	6	6.1
INNOVATION DRIVE & HOWARD RD 4:00-5:00PM PEAK HOUR 2030	Innovation Dr east	A	0.35	11	6.9
	Howard Rd north	A	0.17	0	2.0
	Howard Rd south	A	0.13	1	0.2

Table 4.2: Outputs from SIDRA analysis for 2030 traffic volumes

5. LOCAL TRAFFIC IMPROVEMENTS

During investigations and surveys in the Dowsing Point area there were a number of incidents observed as well as locations found where improved management would be desirable, particularly to facilitate alternative travel modes.

Howard Road/Innovation Drive Junction

At the time of traffic surveys at the Howard Road/Innovation Drive junction, it was noted some southbound vehicles on Howard Road were cutting the right hand corner at the junction, potentially into the path of oncoming vehicles.

While there has been no crash record at this location in recent years, it is recommended council install a centreline marking on Howard Road, similar to what exists at the Barron Avenue junction.

Goodwood Main Road/Howard Road/Dowsing Point Road intersection

The traffic management at this intersection was installed many years ago, at the time when it was not common to provide ramped pedestrian access through the traffic islands and to/from the footpaths across slip lanes. There has been no upgrading of this location since.

Although there are few pedestrians or cyclists crossing at the intersection, the Department of State Growth should commit to the ramp installation at the footpaths and traffic islands as well as the access to the bicycle path leading to the Bowen Bridge.

Innovation Drive/Longreach Avenue junction

As detailed earlier in this report, the footway along Innovation Drive ends at Longreach Avenue.

Pedestrians in this area need to walk on the unformed nature strip along Longreach Avenue or along the road to and from the businesses off both Innovation Drive and Longreach Avenue.

Observations have found there is a significant pedestrian movement in this area particularly during the lunch period.

It is recommended that formal footways be constructed along both roads. This will be necessary if there will be an intensification of development in the area.

Innovation Drive Bus Stops

While the Technopark area is provided with morning and afternoon bus services, the pedestrian facilities at the bus stops are quite poor.

Pedestrians using the Metro bus stops on both sides of Innovation Drive, just before the gated entrance to the Technopark site, need to walk on grassed road verges between the bus stops and their work place.

At the two bus stops along Innovation Drive within the Technopark site, the standing area at the bus stop is absolute minimal.

It is recommended these bus stop standing areas are increased, formalised, and sealed with a sealed path extended to the footways discussed above.

Bicycle Facilities

For the investigation works in the area, it appears there currently is only the occasional cyclist travelling to and from the Technopark area.

This is not expected to change unless the number of people in Technopark area significantly increases.

If there is to be an intensification of businesses or other use activities in this area, leading to large increase in traffic activity, there would be merit in considering the construction of a cycle path or segregated bicycle lane along the northern side of Innovation Drive. This could be extended towards Goodwood Main Road and eventually linked to the Brooker Highway along the pathway on the northern side of Goodwood Main Road or via the Wilkinson Point area.

6. SUMMARY AND RECOMMENDATIONS

This traffic assessment of the traffic activity in the area of the Technopark at Dowsing Point has been undertaken to allow the determination of what increase in traffic could be accommodated on the affected road network from any additional development within the Technopark area.

The roads of relevance to this assessment are Innovation Drive and Longreach Avenue at Dowsing Point as well as Howard Road and Goodwood Main Road in the Goodwood area.

Traffic volume data was obtained from the Department of State Growth, Glenorchy City Council as well as peak hour from turning movement surveys undertaken by this consultant.

The traffic capacity road of a network is limited by the capacity of key intersections. the two key intersections for the Technopark area are Innovation Drive/Howard Road junction and the Goodwood Main Road/Howard Road/Dowsing Point road intersection.

The current traffic volume along Innovation Drive is around 1,500 vehicles/day with a two way volume of around 210 vehicles/hour in the morning peak hour and 150 vehicles/hour in the afternoon peak hour at the Howard Road junction.

The Goodwood Main Road/Howard Road/Dowsing Point Road intersection is currently operating at Level of Service B during the morning peak hour and Level of Service C during the afternoon peak hour; the Innovation Drive/Howard Road junction is operating at Level of Service A during both the morning and afternoon peak hour period.

In order to assess the current and future efficiency and operational performance of these intersections, the SIDRA analysis program has been used to determine the impact of increased traffic activity.

As well as assigning additional traffic along Innovation Drive to the two intersections with directional splits in proportion to current movements, the following additional factors were applied:

- the historic traffic growth of 3.1% p.a. to the through traffic volumes on Goodwood Main Road;
- a factor of 1.078 to the Goodwood Main Road through traffic volume to represent the peak month of December;
- a 1% p.a. growth to the traffic volumes on Howard Road and Dowsing Point Road;
- a maximum Level of Service D as acceptable;
- an assessment period of 10 years (to year 2030).

When applying various increased traffic volumes, it was determined a 150% increase in the current Innovation Drive peak hour traffic would result in the Goodwood Main Road/Howard Road/Dowsing Point Road intersection to be operating at Level of Service C during the morning peak hour and at a Level of Service D during the afternoon peak hour in year 2030.

The future conflicting traffic volumes will be much lower at the Innovation Drive/Howard Road junction and this junction will continue to operate at Level of Service A during the morning and afternoon peak hour.

Therefore, this analysis has determined the traffic volume along Innovation Drive could increase to around 3,750 vehicles/day without adversely affecting the traffic operation at the Goodwood Main Road/Howard Road/Dowsing Point Road intersection and Innovation Drive/Howard Road junction.

The additional traffic along Howard Road to the south of Innovation Drive will remain at acceptable levels for a minor collector road.

The crash record in the immediate Goodwood – Dowsing Point area is not of significant concern.

Some consideration has been given to possible safety and access improvements in the area. It is recommended:

- Glenorchy City Council install a centreline marking on Howard Road, similar to what exists at the Barron Avenue junction;
- the Department of State Growth commit to the installation of ramp at the footpaths and traffic islands as well as the access to the bicycle path leading to the Bowen Bridge;
- formal footways be constructed along both Innovation Drive and Longreach Avenue between the current eastern end of the footway along Innovation Drive and the Technopark development;
- bus stop standing areas are increased, formalised, and sealed as well as a sealed pathways constructed between the bus stops and the footways discussed in the last point;
- if there is an intensification of development, consideration be given to the construction of a cycle path or segregated bicycle lane along the northern side of Innovation Drive with possible extension towards Goodwood Main Road and eventually linked to the Brooker Highway along the pathway on the northern side of Goodwood Main Road or via the Wilkinson Point area.