Redland
CITY COUNCIL

MINUTES

GENERAL MEETING

Wednesday, 20 June 2018

The Council Chambers
91 - 93 Bloomfield Street
CLEVELAND QLD

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GENERAL MEETING
HELD AT THE COUNCIL CHAMBERS, 91 - 93 BLOOMFIELD STREET, CLEVELAND QLD
ON WEDNESDAY, 20 JUNE 2018 AT 9.30AM

1 DECLARATION OF OPENING

The Deputy Mayor declared the meeting open at 9.32am and acknowledged the Quandamooka people, who are the traditional custodians of the land on which Council meets.

The Mayor also paid Council's respect to their elders, past and present, and extended that respect to other indigenous Australians who are present.

2 RECORD OF ATTENDANCE AND LEAVE OF ABSENCE

MEMBERS PRESENT:	Cr Peter Mitchell (Division 2), Cr Lance Hewlett (Deputy Mayor and Division 4), Cr Mark Edwards (Division 5), Cr Julie Talty (Division 6), Cr Murray Elliott (Division 7), Cr Tracey Huges (Division 8), Cr Paul Gleeson (Division 9), Cr Paul Bishop (Division 10)
EXECUTIVE LEADERSHIP TEAM:	Andrew Chesterman (Chief Executive Officer), John Oberhardt (General Manager Organisational Services), Louise Rusan (General Manager Community & Customer Services), Peter Best (General Manager Infrastructure & Operations), Deborah Corbett-Hall (Chief Financial Officer), Andrew Ross (General Counsel)
MINUTES:	Lizzi Striplin Corporate Meetings & Registers Supervisor

2.1 LEAVE OF ABSENCE – MAYOR WILLIAMS

COUNCIL RESOLUTION 2018/37

Moved by: **Cr Mark Edwards**
Seconded by: **Cr Paul Bishop**

That a leave of absence is granted for Cr Mayor Williams.

CARRIED 7/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

Cr Murray Elliott was not present when the motion was put.

2.2 LEAVE OF ABSENCE – CR BOGLARY

COUNCIL RESOLUTION 2018/38

Moved by: **Cr Paul Bishop**
Seconded by: **Cr Julie Talty**

That a leave of absence is granted for Cr Boglary.

CARRIED 7/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

Cr Murray Elliott was not present when the motion was put.

2.3 LEAVE OF ABSENCE – CR GOLLÈ

COUNCIL RESOLUTION 2018/39

Moved by: **Cr Paul Bishop**
Seconded by: **Cr Julie Talty**

That a leave of absence is granted for Cr Gollè

CARRIED 7/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

Cr Murray Elliott was not present when the motion was put

COUNCILLOR ABSENCES DURING THE MEETING

Cr Murray Elliott entered the meeting at 9.40am

Cr Julie Talty left the meeting at 9.34am and returned at 9.35am (during Item 3)

Cr Peter Mitchell left the meeting at 10.37am and returned at 10.40am (during Item 14.4)

Cr Paul Bishop left the meeting at 11.06am and returned at 11.08am (during confidential session)

Cr Peter Mitchell left the meeting at 11.06am and returned at 11.08am (during confidential session)

Cr Julie Talty left the meeting at 11.06am and returned at 11.11am (during confidential session)

3 DEVOTIONAL SEGMENT

Pastor Steve Kennedy, Champions Church Thornlands and a member of the Minister's Fellowship led Council in a brief Devotional segment.

4 RECOGNITION OF ACHIEVEMENT

Nil

5 RECEIPT AND CONFIRMATION OF MINUTES

COUNCIL RESOLUTION 2018/40

Moved by: **Cr Paul Gleeson**
Seconded by: **Cr Tracey Huges**

That the minutes of the General Meeting held on 6 June 2018 be confirmed.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

6 MATTERS OUTSTANDING FROM PREVIOUS COUNCIL MEETING MINUTES

6.1 REQUEST FOR REPORT – PETITION REQUESTING A COMMUNITY REFERENCE GROUP BE FORMED TO ASSIST COUNCIL PLAN FOR FUTURE USE OF COMMONWEALTH LAND AT BIRKDALE

At the General Meeting of 6 June 2018 (Item 8.2 refers) Council resolved as follows:

That petition be received and referred to the Chief Executive Officer for consideration and a report to the local government.

A report will be presented to a future General Meeting of Council.

7 PUBLIC PARTICIPATION

MOTION TO ADJOURN MEETING AT 9.42AM

COUNCIL RESOLUTION 2018/41

Moved by: **Cr Paul Bishop**
Seconded by: **Cr Tracey Huges**

That Council adjourn the meeting for a 15 minute public participation segment.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

1. Mr Peter Story, resident of Redland Bay, addressed Council regarding MCU/0123 100-102 Collins Road, Redland Bay (Item 13.5 refers).

MOTION TO RESUME MEETING AT 9.47AM

COUNCIL RESOLUTION 2018/42

Moved by: Cr Murray Elliott
Seconded by: Cr Paul Bishop

That the meeting proceedings resume.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

8 PETITIONS AND PRESENTATIONS

Nil

9 ORDER OF BUSINESS

9.1 MOTION TO ACCEPT A LATE ITEM

COUNCIL RESOLUTION 2018/43

Moved by: Cr Murray Elliott
Seconded by: Cr Mark Edwards

That a confidential late item Appeal 1506 of 2018 - Barro Quarry Appeal Update (MCU17/0149) be received and discussed as Item 19.2.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

10 DECLARATION OF MATERIAL PERSONAL INTEREST OR CONFLICT OF INTEREST ON ANY ITEMS OF BUSINESS

Cr Hewlett declared a perceived conflict of interest in Item 13.5 *mcu/0123 100-102 Collins Road, Redland Bay – Child Care Centre* (refer item for details).

11 REPORTS FROM THE OFFICE OF THE CEO

Nil

12 REPORTS FROM ORGANISATIONAL SERVICES

12.1 MAY 2018 MONTHLY FINANCIAL REPORT

Objective Reference: **A3133577**

Authorising Officer: **Deborah Corbett-Hall, Chief Financial Officer**

Responsible Officer: **Deborah Corbett-Hall, Chief Financial Officer**

Report Author: **Udaya Panambala Arachchilage, Corporate Financial Reporting Manager**

Attachments: **1. May 2018 Monthly Financial Report**

PURPOSE

The purpose of this report is to note the year to date financial results as at 31 May 2018.

BACKGROUND

Council adopts an annual budget and then reports on performance against the budget on a monthly basis. This is not only a legal requirement but enables the organisation to periodically review its financial performance and position and respond to changes in community requirements, market forces or other outside influences.

ISSUES

Revaluation of Road and Stormwater assets

Council is currently in the process of comprehensively valuing Road and Stormwater assets and desktop valuations are undertaken on other material asset classes, in accordance with Australian Accounting Standard 116 Property, Plant and Equipment.

STRATEGIC IMPLICATIONS

Council has either achieved or favourably exceeded the following key financial stability and sustainability ratios as at the end of May 2018:

- Net financial liabilities
- Level of dependence on general rate revenue
- Ability to pay our bills – current ratio
- Ability to repay our debt – debt servicing ratio
- Cash balance
- Cash balances – cash capacity in months
- Longer term financial stability – debt to asset ratio
- Operating performance
- Interest coverage ratio

The following ratios did not meet the target at the end of May 2018:

- Operating surplus ratio
- Asset sustainability ratio

Council reported a year to date operating deficit of $1.73M resulting in a -0.70% operating surplus ratio, which is slightly below the target range of 0% - 10%. The deficit is mainly on account of above budget depreciation expense due to higher opening asset balances for 2017/2018.

These asset balances include the results from the 2016/2017 asset revaluations, as well as the recognition of developer contributed assets. These end of year adjustments as well as sewerage network assets capitalised this year from work in progress, influenced the increase in depreciation expense.

The asset sustainability ratio did not meet the target at the end of May 2018 and continues to be a stretch target for Council with renewal spend of $27.88M and depreciation expense of $52.06M year to date on infrastructure assets. This ratio is an indication of how Council currently maintains, replaces and renews its existing infrastructure assets as they reach the end of their useful life. Capital spend on non-renewal projects increase the asset base and therefore increases depreciation expense, resulting in a lower asset sustainability ratio. The upward revaluation of infrastructure assets increases the asset base correspondingly increasing the depreciation expense that results in a lower ratio.

Council's Capital Works Prioritisation Policy (POL-3131) demonstrates its commitment to maintaining existing infrastructure and the adoption of a renewal strategy for its existing assets ahead of 'upgrade' and/or 'new' works.

Legislative Requirements

The May 2018 financial reports are presented in accordance with the legislative requirement of section 204(2) of the *Local Government Regulation 2012,* requiring the Chief Executive Officer to present the financial report to a monthly Council meeting.

Risk Management

The May 2018 financial reports have been noted by the Executive Leadership Team and relevant officers who can provide further clarification and advice around actual to budget variances.

Financial

There is no direct financial impact to Council as a result of this report; however it provides an indication of financial outcomes at the end of May 2018.

People

Nil impact expected as the purpose of the attached report is to provide financial information to Council based upon actual versus budgeted financial activity.

Environmental

Nil impact expected as the purpose of the attached report is to provide financial information to Council based upon actual versus budgeted financial activity.

Social

Nil impact expected as the purpose of the attached report is to provide financial information to Council based upon actual versus budgeted financial activity.

Alignment with Council's Policy and Plans

This report has a relationship with the following items of the Corporate Plan:

8. Inclusive and ethical governance

Deep engagement, quality leadership at all levels, transparent and accountable democratic processes and a spirit of partnership between the community and Council will enrich residents' participation in local decision-making to achieve the community's Redlands 2030 vision and goals.

8.2 Council produces and delivers against sustainable financial forecasts as a result of best practice Capital and Asset Management Plans that guide project planning and service delivery across the city.

CONSULTATION

Council departmental officers, Financial Services Group officers and the Executive Leadership Team are consulted on financial results and outcomes throughout the period.

OPTIONS

Option One

That Council resolves to note the financial position, results and ratios for May 2018 as presented in the attached Monthly Financial Report.

Option Two

That Council requests additional information.

COUNCIL RESOLUTION 2018/44

Moved by: **Cr Tracey Huges**
Seconded by: **Cr Mark Edwards**

That Council resolves to note the financial position, results and ratios for May 2018 as presented in the attached Monthly Financial Report.

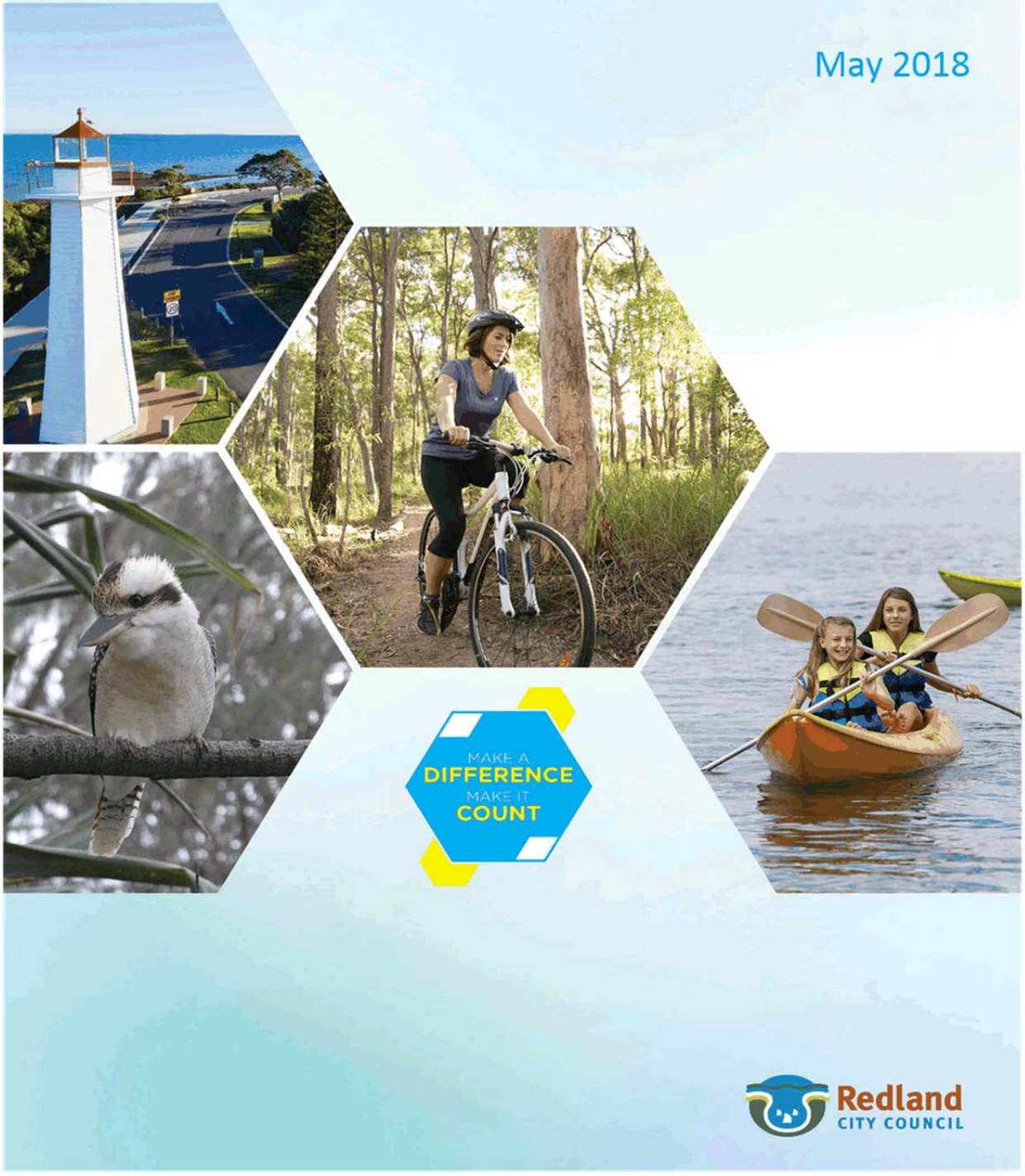
CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

Monthly Financial Report

May 2018



Redland CITY COUNCIL

Redland CITY COUNCIL

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Redland CITY COUNCIL

1. EXECUTIVE SUMMARY

This monthly report illustrates the financial performance and position of Redland City Council compared to its adopted budget at an organisational level for the period ended 31 May 2018. The year to date and annual revised budget referred to in this report incorporates the changes from the budget capital carryovers adopted by Council on 23 August 2017.

Key Financial Highlights and Overview

Key Financial Results ($000)	Annual Revised Budget	YTD Revised Budget	YTD Actual	YTD Variance	YTD Variance %	Status Favourable ✓ Unfavourable ✗
Operating Surplus / (Deficit)	(11,136)	932	**(1,728)**	(2,660)	-285%	✗
Recurrent Revenue	261,639	245,474	**245,589**	115	0%	✓
Recurrent Expenditure	272,775	244,542	**247,317**	2,775	1%	✗
Capital Works Expenditure	94,860	71,773	**60,187**	(11,586)	-16%	✓
Closing Cash & Cash Equivalents	140,234	163,395	**148,203**	(15,192)	-9%	✗

Council reported a year to date operating deficit of $1.73M. Recurrent revenue is slightly above budget. The favourable variance in materials and services expenditure is primarily due to underspend in consultant and contractor costs. The unfavourable variance in depreciation expense is due to higher opening asset balances for 2017/2018 which include the results from the 2016/2017 asset revaluations, as well as the recognition of developer contributed assets. These end of year adjustments as well as sewerage network assets capitalised this year from WIP, influenced the increase in depreciation expense.

Capital revenue is below budget mainly due to lower than expected developer cash and non-cash contributions. Loss on disposal of non-current assets is mainly due to sale of fleet assets; and infrastructure and parks asset replacement.

Council's capital works expenditure is below budget by $11.59M due to timing of works for a number of infrastructure projects, asset management project and timing of capital acquisitions and fleet replacement.

Council's cash balance is below budget due to higher than anticipated payments to suppliers which includes $7.87M for canal and lake special charges refund and below budget receipt of capital grants, subsidies and contributions. This is partially offset by below budget expenditure for property, plant and equipment and above budget operating grants. Constrained cash reserves represent 62% of the cash balance.

2. KEY PERFORMANCE INDICATORS

Key Performance Indicators

Financial Stability Ratios and Measures of Sustainability	Status Achieved ✓ Not achieved ✗	Annual Revised Budget	YTD May 2018	Target
Operating Surplus Ratio (%)	✗	-4.26%	**-0.70%**	Between 0% and 10% (on average over the long-term)
Asset Sustainability Ratio (%)^	✗	70.92%	**53.57%**	Greater than 90% (on average over the long-term)
Net Financial Liabilities (%)*	✓	-23.95%	**-40.79%**	Less than 60% (on average over the long-term)
Level of Dependence on General Rate Revenue (%)	✓	33.93%	**36.01%**	Less than 37.5%
Ability to Pay Our Bills - Current Ratio	✓	2.74	**3.88**	Between 1.1 & 4.1
Ability to Repay Our Debt - Debt Servicing Ratio (%)	✓	2.99%	**3.19%**	Less than or equal to 10%
Cash Balance $M	✓	$140.234M	**$148.203M**	Greater than or equal to $50M
Cash Balances - Cash Capacity in Months	✓	7.87	**7.81**	Greater than 3 months
Longer Term Financial Stability - Debt to Asset Ratio (%)	✓	1.47%	**1.44%**	Less than or equal to 10%
Operating Performance (%)	✓	17.65%	**17.75%**	Greater than or equal to 15%
Interest Coverage Ratio (%)**	✓	-0.59%	**-0.63%**	Less than 5%

* The net financial liabilities ratio exceeds the target range when current assets are greater than total liabilities (and the ratio is negative)
** The interest coverage ratio exceeds the target range when interest revenue is greater than interest expense (and the ratio is negative)

The annual revised budgeted balances for 2017/2018 include the changes from the budget carryovers adopted by Council on 23 August 2017. The differences between the carryover budget figures and those published are due to the actual opening balances on 1 July 2017, which are now finalised following end of year accounts finalisation.

Redland CITY COUNCIL

3. STATEMENT OF COMPREHENSIVE INCOME

STATEMENT OF COMPREHENSIVE INCOME
For the period ending 31 May 2018

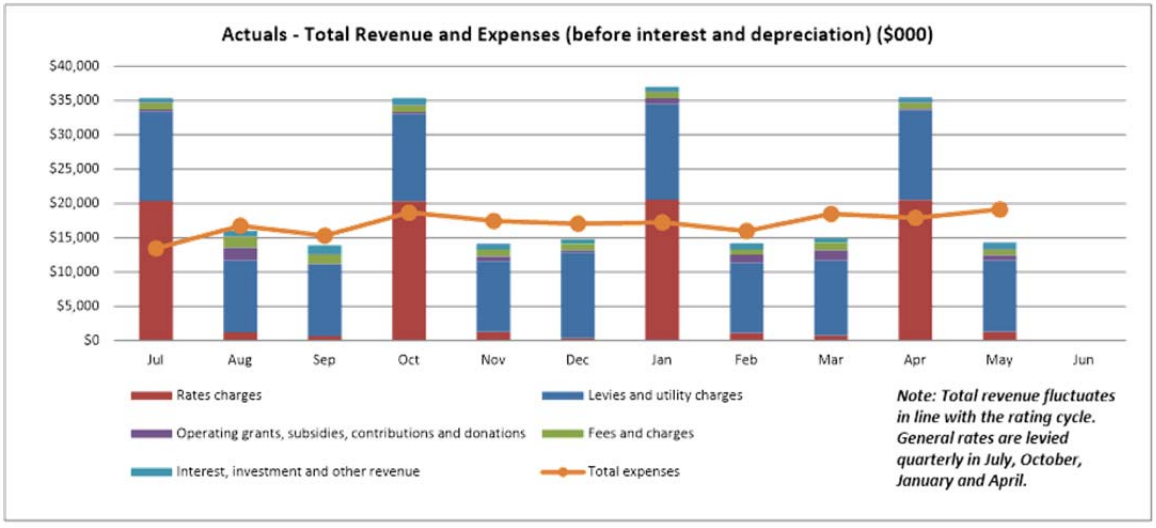
	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD **Actual $000**	YTD Variance $000
Recurrent revenue					
Rates, levies and charges	227,186	227,186	216,991	**216,632**	(359)
Fees	13,048	13,048	11,632	**11,600**	(32)
Rental income	839	839	792	**859**	67
Interest received	4,361	4,361	4,013	**4,128**	115
Investment returns	2,200	2,200	500	**500**	-
Sales revenue	3,823	3,823	3,325	**3,025**	(300)
Other income	684	684	601	**891**	290
Grants, subsidies and contributions	9,497	9,497	7,620	**7,954**	334
Total recurrent revenue	261,639	261,639	245,474	**245,589**	115
Capital revenue					
Grants, subsidies and contributions	33,013	33,035	23,059	**17,035**	(6,024)
Non-cash contributions	3,213	3,213	2,950	**2,602**	(348)
Total capital revenue	36,226	36,248	26,009	**19,637**	(6,372)
TOTAL INCOME	**297,865**	**297,887**	**271,483**	**265,226**	**(6,257)**
Recurrent expenses					
Employee benefits	85,677	85,677	77,971	**78,013**	42
Materials and services	125,787	125,787	110,350	**108,938**	(1,412)
Finance costs	3,112	3,112	2,871	**3,024**	153
Depreciation and amortisation	58,200	58,200	53,350	**57,342**	3,992
Total recurrent expenses	272,775	272,775	244,542	**247,317**	2,775
Capital expenses					
(Gain) / loss on disposal of non-current assets	289	36	(91)	**1,602**	1,693
Total capital expenses	289	36	(91)	**1,602**	1,693
TOTAL EXPENSES	**273,064**	**272,811**	**244,451**	**248,919**	**4,468**
NET RESULT	**24,801**	**25,076**	**27,032**	**16,307**	**(10,725)**
Other comprehensive income / (loss) **Items that will not be reclassified to a net result**					
Revaluation of property, plant and equipment	-	-	-	**(67)**	(67)
TOTAL COMPREHENSIVE INCOME	**24,801**	**25,076**	**27,032**	**16,240**	**(10,792)**

Redland CITY COUNCIL

4. OPERATING STATEMENT

OPERATING STATEMENT
For the period ending 31 May 2018

	Annual	Annual	YTD	YTD	YTD
	Original Budget $000	Revised Budget $000	Revised Budget $000	**Actual $000**	Variance $000
Revenue					
Rates charges	91,688	91,688	91,688	**91,280**	(408)
Levies and utility charges	138,824	138,824	128,608	**128,609**	1
Less: Pensioner remissions and rebates	(3,325)	(3,325)	(3,305)	**(3,257)**	48
Fees	13,048	13,048	11,632	**11,600**	(32)
Operating grants and subsidies	8,795	8,795	7,037	**7,635**	598
Operating contributions and donations	702	702	583	**319**	(264)
Interest external	4,361	4,361	4,013	**4,128**	115
Investment returns	2,200	2,200	500	**500**	-
Other revenue	5,347	5,347	4,718	**4,775**	57
Total revenue	**261,639**	**261,639**	**245,474**	**245,589**	**115**
Expenses					
Employee benefits	85,677	85,677	77,971	**78,013**	42
Materials and services	126,040	126,040	110,603	**108,057**	(2,546)
Finance costs other	303	303	293	**431**	138
Other expenditure	489	489	426	**1,592**	1,166
Net internal costs	(741)	(741)	(679)	**(711)**	(32)
Total expenses	**211,767**	**211,767**	**188,614**	**187,382**	**(1,232)**
Earnings before interest, tax and depreciation (EBITD)	**49,872**	**49,872**	**56,860**	**58,207**	**1,347**
Interest expense	2,809	2,809	2,578	**2,593**	15
Depreciation and amortisation	58,200	58,200	53,350	**57,342**	3,992
OPERATING SURPLUS / (DEFICIT)	**(11,136)**	**(11,136)**	**932**	**(1,728)**	**(2,660)**



Redland CITY COUNCIL

4. OPERATING STATEMENT - CONTINUED

LEVIES AND UTILITY CHARGES ANALYSIS
For the period ending 31 May 2018

	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD **Actual $000**	YTD Variance $000
Levies and utility charges					
Refuse collection rate charge	21,663	21,663	19,848	**19,943**	95
Special charges	4,083	4,083	4,083	**4,073**	(10)
SES separate charge	339	339	339	**341**	2
Environment separate charge	7,568	7,568	7,568	**7,631**	63
Separate charge landfill remediation	2,911	2,911	2,668	**2,690**	22
Wastewater charges	43,647	43,647	40,010	**39,978**	(32)
Water access charges	18,296	18,296	16,771	**16,874**	103
Water consumption charges	40,317	40,317	37,321	**37,079**	(242)
Total levies and utility charges	**138,824**	**138,824**	**128,608**	**128,609**	**1**

MATERIALS AND SERVICES ANALYSIS
For the period ending 31 May 2018

	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD **Actual $000**	YTD Variance $000
Materials and services					
Contractors	34,121	34,558	29,449	**27,738**	(1,711)
Consultants	4,465	4,197	2,952	**1,567**	(1,385)
Other Council outsourcing costs*	17,355	17,516	15,529	**16,447**	918
Purchase of materials	44,300	44,052	39,902	**39,796**	(106)
Office administration costs	7,949	8,045	7,173	**7,269**	96
Electricity charges	5,751	5,729	5,228	**4,935**	(293)
Plant operations	4,466	4,480	3,879	**4,075**	196
Information technology resources	2,811	2,652	2,223	**2,180**	(43)
General insurance	1,363	1,363	1,251	**1,218**	(33)
Community assistance**	1,619	1,623	1,539	**1,376**	(163)
Other material and service expenses	1,840	1,823	1,478	**1,456**	(22)
Total materials and services	**126,040**	**126,040**	**110,603**	**108,057**	**(2,546)**

** Other Council outsourcing costs are various outsourced costs including refuse collection and disposal, waste disposal, legal services, traffic control, external training, valuation fees, etc.*

*** Community assistance costs represent community related costs including community grants, exhibitions & awards, donations and sponsorships.*

EMPLOYEE BENEFITS AND FULL TIME EQUIVALENTS (FTE)
For the period ending 31 May 2018

	FTE (Council employees and Councillors)*	Total staff wages and salaries (including Councillors) $000	Annual leave and long service leave entitlements $000	Superannuation (including Councillors) $000	Other employee related expenses (including agency costs) $000	Less: capitalised employee expenses $000	**Total operating employee benefits $000**
Month							
July	900	5,324	626	647	333	481	**6,449**
August	899	5,992	702	698	627	520	**7,499**
September	902	5,213	617	653	597	471	**6,609**
October	906	6,080	724	722	525	531	**7,520**
November	914	5,961	698	703	598	383	**7,577**
December	919	5,508	650	674	452	389	**6,895**
January	921	5,496	646	713	560	414	**7,001**
February	922	5,416	646	637	469	638	**6,530**
March	925	5,967	710	699	479	383	**7,472**
April	923	5,581	642	685	471	486	**6,893**
May	931	6,084	733	735	554	538	**7,568**
Total employee benefits YTD		**62,622**	**7,394**	**7,566**	**5,665**	**5,234**	**78,013**

** Refer to page 14 for further information on FTE and headcount.*

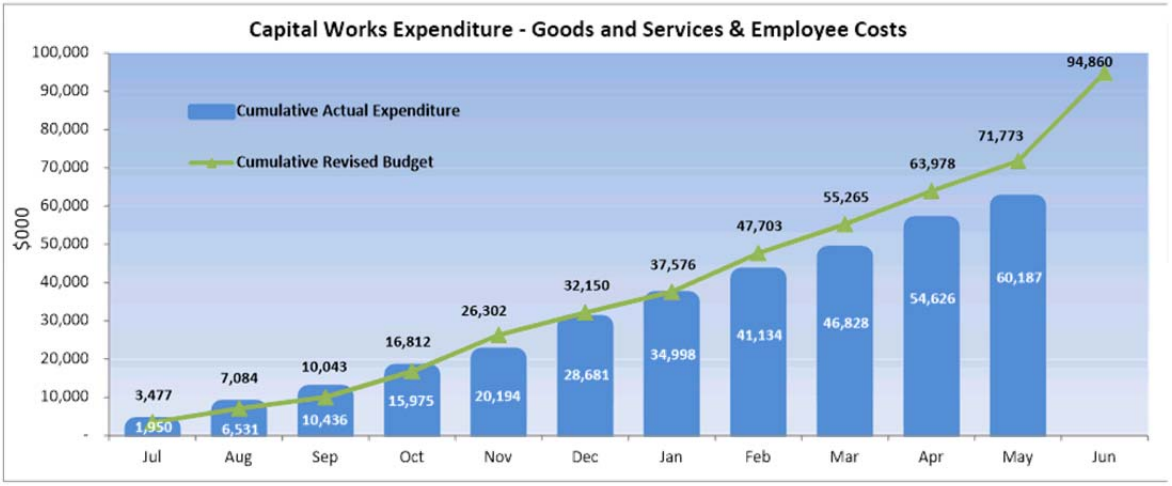
Redland CITY COUNCIL

5. CAPITAL FUNDING STATEMENT

CAPITAL FUNDING STATEMENT
For the period ending 31 May 2018

	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD **Actual $000**	YTD Variance $000
Sources of capital funding					
Capital contributions and donations	29,250	29,250	21,304	**14,331**	(6,973)
Capital grants and subsidies	3,763	3,785	1,755	**2,704**	949
Proceeds on disposal of non-current assets	1,180	1,433	1,315	**761**	(554)
Capital transfers (to) / from reserves	(14,106)	(13,493)	(14,851)	**(6,069)**	8,782
Non-cash contributions	3,213	3,213	2,950	**2,602**	(348)
New loans	867	867	-	**-**	-
Funding from general revenue	66,106	78,028	67,491	**53,711**	(13,780)
Total sources of capital funding	**90,272**	**103,082**	**79,964**	**68,040**	**(11,924)**
Application of capital funds					
Contributed assets	3,213	3,213	2,950	**2,602**	(348)
Capitalised goods and services*	74,965	87,599	65,833	**54,952**	(10,881)
Capitalised employee costs*	7,085	7,261	5,940	**5,235**	(705)
Loan redemption	5,010	5,010	5,241	**5,251**	10
Total application of capital funds	**90,272**	**103,082**	**79,964**	**68,040**	**(11,924)**
Other budgeted items					
Transfers to constrained operating reserves	(13,268)	(13,268)	(11,040)	**(13,773)**	(2,733)
Transfers from constrained operating reserves	11,565	11,565	9,713	**16,934**	7,221
Written down value (WDV) of assets disposed	1,468	1,468	1,224	**2,363**	1,139

** Total capital works expenditure depicted in the graph below is the total of capitalised goods and services and capitalised employee costs.*



Redland CITY COUNCIL

6. STATEMENT OF FINANCIAL POSITION

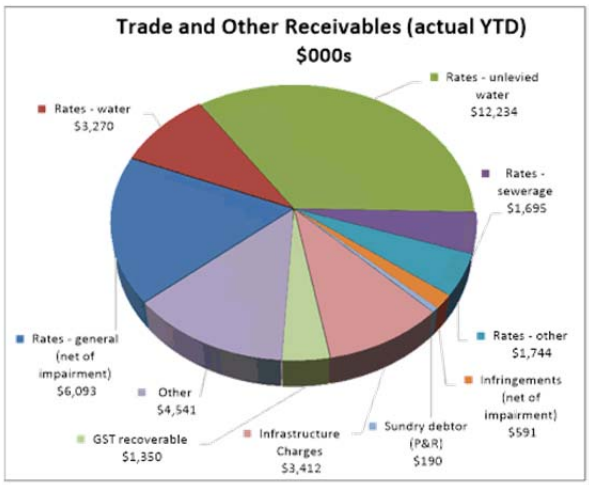
STATEMENT OF FINANCIAL POSITION
As at 31 May 2018

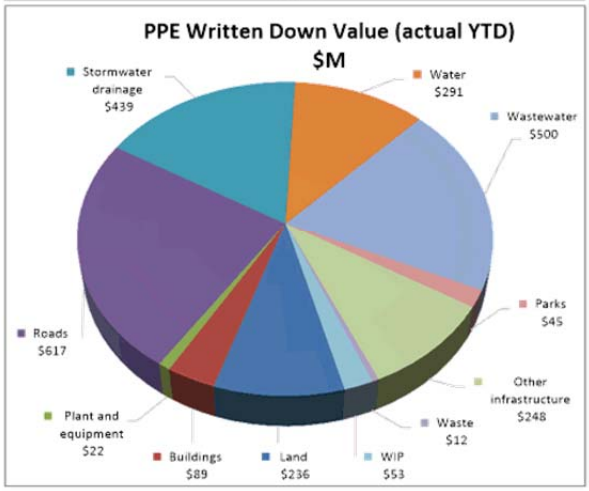
	Annual	Annual	YTD	YTD
	Original Budget $000	Revised Budget $000	Revised Budget $000	**Actual Balance $000**
CURRENT ASSETS				
Cash and cash equivalents	133,650	140,234	163,395	**148,203**
Trade and other receivables	25,805	27,273	24,582	**35,120**
Inventories	678	556	556	**1,061**
Non-current assets held for sale	4,278	262	262	**11,203**
Other current assets	2,122	2,073	2,073	**1,447**
Total current assets	**166,533**	**170,398**	**190,868**	**197,034**
NON-CURRENT ASSETS				
Investment property	1,054	1,091	1,091	**1,091**
Property, plant and equipment	2,483,228	2,598,914	2,580,564	**2,552,372**
Intangible assets	1,215	1,845	1,939	**2,042**
Other financial assets	73	73	73	**73**
Investment in other entities	5,961	14,712	14,712	**14,712**
Total non-current assets	**2,491,531**	**2,616,635**	**2,598,379**	**2,570,290**
TOTAL ASSETS	**2,658,064**	**2,787,033**	**2,789,247**	**2,767,324**
CURRENT LIABILITIES				
Trade and other payables	21,411	39,792	39,738	**22,161**
Borrowings	7,701	7,713	7,713	**7,713**
Provisions	13,126	13,014	12,955	**9,449**
Other current liabilities	1,755	1,747	3,223	**11,509**
Total current liabilities	**43,993**	**62,266**	**63,629**	**50,832**
NON-CURRENT LIABILITIES				
Borrowings	33,461	33,343	32,245	**32,235**
Provisions	12,356	12,115	12,108	**13,783**
Total non-current liabilities	**45,817**	**45,458**	**44,353**	**46,018**
TOTAL LIABILITIES	**89,811**	**107,724**	**107,982**	**96,850**
NET COMMUNITY ASSETS	**2,568,254**	**2,679,309**	**2,681,265**	**2,670,474**
COMMUNITY EQUITY				
Asset revaluation surplus	963,349	1,070,838	1,070,838	**1,070,771**
Retained surplus	1,498,727	1,503,632	1,504,605	**1,507,151**
Constrained cash reserves	106,178	104,839	105,822	**92,552**
TOTAL COMMUNITY EQUITY	**2,568,254**	**2,679,309**	**2,681,265**	**2,670,474**

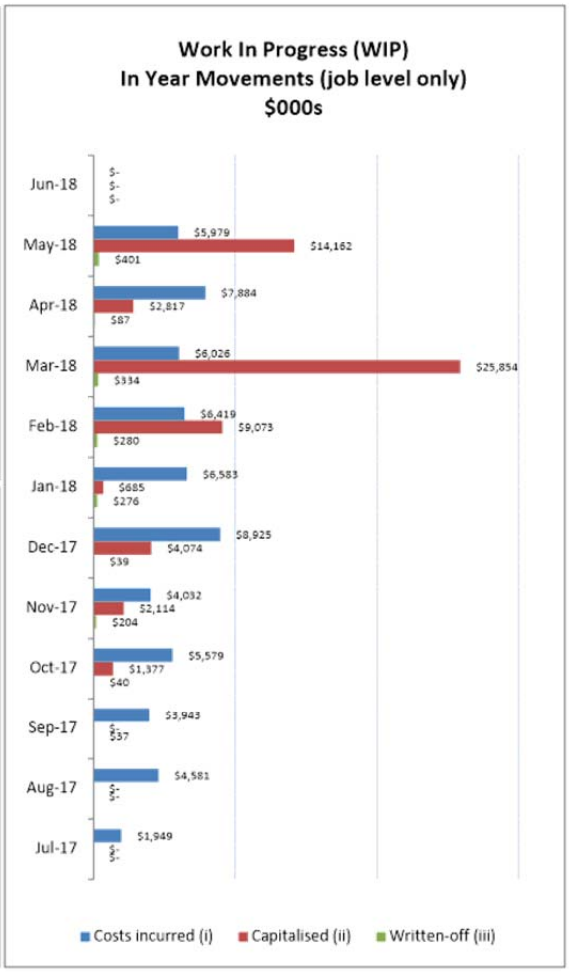
The annual revised budgeted balances for 2017/2018 include the changes from the budget carryovers adopted by Council on 23 August 2017. The differences between the carryover budget figures and those published are due to the actual opening balances on 1 July 2017, which are now finalised following end of year accounts finalisation.

Redland CITY COUNCIL

6. STATEMENT OF FINANCIAL POSITION - CONTINUED







(i) Costs incurred: costs transferred into WIP for the construction or acquisition of fixed assets and at this point are non-depreciating.
(ii) Assets registered: additions to the asset register which includes unwinding of 2016/2017 accruals and new capitalisations.
(iii) Written-off: costs transferred from WIP to operational expenditure. These costs are operational in nature and therefore will not be capitalised.

PROPERTY, PLANT AND EQUIPMENT (PPE) MOVEMENT*
For the period ending 31 May 2018

	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD **Actual Balance $000**
PPE movement				
Opening balance (includes WIP from previous years)	2,456,540	2,559,417	2,559,417	**2,559,417**
Acquisitions and WIP in year movement	85,217	98,026	74,677	**62,768**
Depreciation in year	(57,061)	(57,061)	(52,307)	**(56,480)**
Disposals	(1,468)	(1,468)	(1,223)	**(2,199)**
Other adjustments**	-	-	-	**(11,134)**
Closing balance	**2,483,228**	**2,598,914**	**2,580,564**	**2,552,372**

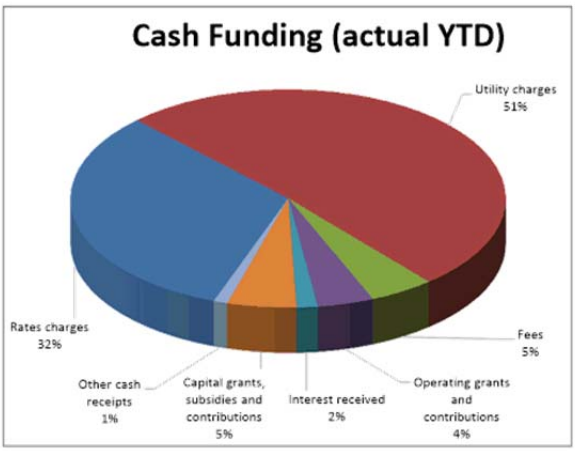
** This table includes movement relating to property, plant and equipment only and is exclusive of intangible assets.*
*** Other adjustments include transfers between asset classes, revaluation adjustments, prior period adjustments and depreciation thereon. Includes reclassification of $11.05M from property, plant and equipment to non-current assets held for sale.*

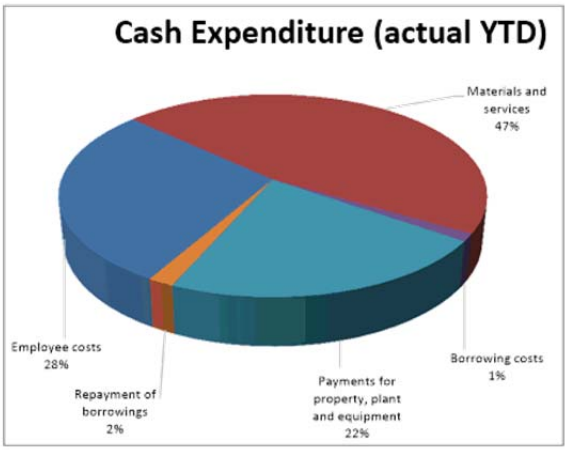
Redland CITY COUNCIL

7. STATEMENT OF CASH FLOWS

STATEMENT OF CASH FLOWS
For the period ending 31 May 2018

	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD Actual $000
CASH FLOWS FROM OPERATING ACTIVITIES				
Receipts from customers	244,741	244,741	238,516	**237,699**
Payments to suppliers and employees	(210,402)	(210,527)	(187,493)	**(205,568)**
	34,340	**34,215**	**51,023**	**32,131**
Interest received	4,361	4,361	4,013	**4,128**
Rental income	839	839	792	**859**
Non-capital grants and contributions	9,547	9,547	7,620	**11,105**
Borrowing costs	(3,175)	(3,175)	(3,175)	**(3,187)**
Net cash inflow / (outflow) from operating activities	**45,912**	**45,787**	**60,273**	**45,036**
CASH FLOWS FROM INVESTING ACTIVITIES				
Payments for property, plant and equipment	(82,005)	(94,815)	(71,728)	**(60,165)**
Payments for intangible assets	(45)	(45)	(45)	**(20)**
Proceeds from sale of property, plant and equipment	1,180	1,433	1,315	**761**
Capital grants, subsidies and contributions	33,013	33,035	23,059	**13,623**
Other cash flows from investing activities	2,200	2,200	(1,250)	**(2,790)**
Net cash inflow / (outflow) from investing activities	**(45,656)**	**(58,192)**	**(48,649)**	**(48,591)**
CASH FLOWS FROM FINANCING ACTIVITIES				
Proceeds of borrowings	867	867	-	**-**
Repayment of borrowings	(4,644)	(4,644)	(4,644)	**(4,657)**
Net cash inflow / (outflow) from financing activities	**(3,777)**	**(3,777)**	**(4,644)**	**(4,657)**
Net increase / (decrease) in cash held	**(3,521)**	**(16,181)**	**6,980**	**(8,212)**
Cash and cash equivalents at the beginning of the year	137,171	156,415	156,415	**156,415**
Cash and cash equivalents at the end of the financial year / period	**133,650**	**140,234**	**163,395**	**148,203**





Total Cash Funding (Actual YTD)	**265,385**
Total Cash Funding (Annual Revised Budget)	297,023
% of Budget Achieved YTD	89%

Total Cash Expenditure (Actual YTD)	**273,597**
Total Cash Expenditure (Annual Revised Budget)	313,204
% of Budget Achieved YTD	87%

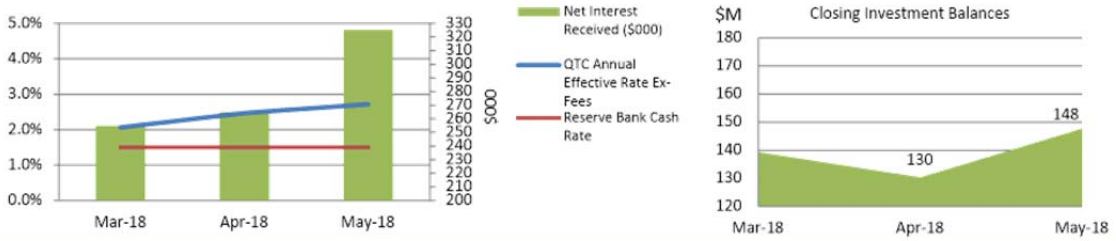
The annual revised budgeted balances for 2017/2018 include the changes from the budget carryovers adopted by Council on 23 August 2017. The differences between the carryover budget figures and those published are due to the actual opening balances on 1 July 2017, which are now finalised following end of year accounts finalisation.

Redland CITY COUNCIL

8. INVESTMENT & BORROWINGS REPORT

For the period ending 31 May 2018

INVESTMENT RETURNS - QUEENSLAND TREASURY CORPORATION (QTC)



Total Investment at End of Month was $147.77M

All Council investments are currently held in the Capital Guaranteed Cash Fund, which is a fund operated by the Queensland Treasury Corporation (QTC).

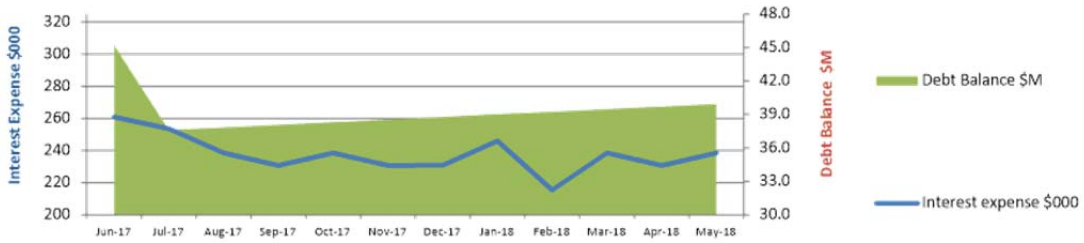
The movement in interest earned is indicative of both the interest rate and the surplus cash balances held, the latter of which is affected by business cash flow requirements on a monthly basis as well as the rating cycle.

Note: the Reserve Bank reduced the cash rate down to 1.5% in the August 2016 sitting - this has not changed in subsequent months.

On a daily basis, cash surplus to requirements is deposited with QTC to earn higher interest as QTC is offering a higher rate than what is achieved from Council's transactional bank accounts. The current annual effective interest rate paid by QTC of 2.72% exceeds the Bloomberg AusBond Bank Bill Index (previously the UBS Bank Bill Index) of 1.78% as at the end of May 2018 in accordance with Corporate POL-3013. Term deposit rates are being monitored to identify investment opportunities to ensure Council maximises its interest earnings.

Council adopted its revised Investment Policy (POL-3013) in May 2017 for the 2017/2018 financial year

BORROWINGS AND BORROWING COSTS



The existing loan accounts were converted to fixed rate loans on 1 April 2016 following a QTC restructure of loans and policies. In line with Council's debt policy, the principal debt repayment has been made *annually* in advance for 2017/2018 which will result in the loans being repaid approximately one year earlier.

The debt balance shows a decrease as the Annual Debt Service Payment (ADSP) was made during July 2017. Interest will accrue monthly on a daily balance until next ADSP in July 18 which is reflected in the increasing debt balance. Interest expense for February 2018 shows a decrease due to days in calendar month.

Total Borrowings at End of Month were $39.95M

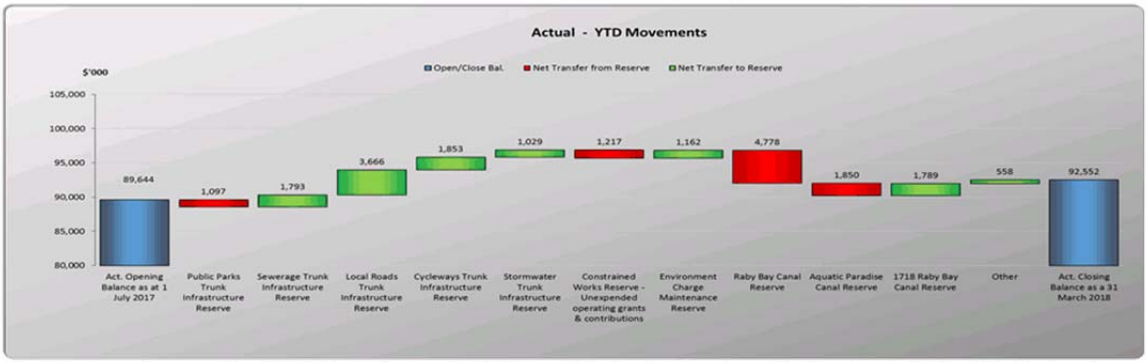
General pool allocated to capital works is 99.26% and 0.74% is attributable to RedWaste.

Council adopted its revised Debt Policy (POL-1838) in June 2017 for the 2017/2018 financial year

Redland CITY COUNCIL

9. CONSTRAINED CASH RESERVES

Reserves as at 31 May 2018	Opening Balance	To Reserve	From Reserve	Closing Balance
	$000	$000	$000	$000
Special Projects Reserve:				
Weinam Creek Reserve	3,075	434	(29)	3,480
Red Art Gallery Commissions & Donations Reserve	4	-	-	4
	3,079	**434**	**(29)**	**3,484**
Constrained Works Reserve:				
Public Parks Trunk Infrastructure Reserve	8,693	2,536	(3,633)	7,596
Land for Community Facilities Trunk Infrastructure Reserve	1,675	400	-	2,075
Water Supply Trunk Infrastructure Reserve	9,478	519	-	9,997
Sewerage Trunk Infrastructure Reserve	6,573	2,482	(689)	8,366
Constrained Works Reserve-Capital Grants & Contributions	1,154	-	(401)	753
Local Roads Trunk Infrastructure Reserve	30,570	4,967	(1,301)	34,236
Cycleways Trunk Infrastructure Reserve	8,343	1,998	(145)	10,196
Stormwater Trunk Infrastructure Reserve	7,553	1,029	-	8,582
Constrained Works Reserve-Operating Grants & Contributions	2,667	140	(1,357)	1,450
Tree Planting Reserve	86	36	(48)	74
	76,792	**14,107**	**(7,574)**	**83,325**
Separate Charge Reserve - Environment:				
Environment Charge Acquisition Reserve	618	600	(984)	234
Environment Charge Maintenance Reserve	1,387	7,631	(6,469)	2,549
	2,005	**8,231**	**(7,453)**	**2,783**
Special Charge Reserve - Other:				
Bay Island Rural Fire Levy Reserve	-	225	(168)	57
SMBI Translink Reserve	(6)	948	(713)	229
	(6)	**1,173**	**(881)**	**286**
Special Charge Reserve - Canals:				
Raby Bay Canal Reserve	4,778	15	(4,793)	-
Aquatic Paradise Canal Reserve	2,592	15	(1,865)	742
Sovereign Waters Lake Reserve	404	5	12	421
1718 Raby Bay Canal Reserve	-	2,798	(1,009)	1,789
1718 Aquatic Paradise Canal Reserve	-	872	(1,100)	(228)
1718 Sovereign Waters Lake Reserve	-	52	(102)	(50)
	7,774	**3,757**	**(8,857)**	**2,674**
TOTALS	**89,644**	**27,702**	**(24,794)**	**92,552**
	Closing cash and cash equivalents			**148,203**
	Reserves as percentage of cash balance			**62%**



Total Reserves decreased by $958K during the month. YTD growth in developer cash contributions totalled $13.97M with drawdowns of $5.82M. Increases are predominantly from developments in Cleveland, Victoria Point, Thornlands, Ormiston, Capalaba and Birkdale. YTD growth in other reserves totalled $13.73M, with drawdowns totalling $18.97M. $3.76M of the increase in reserves is attributed to canals and lakes. The process for issuing refunds for the reserve balances quarantined for maintenance and repairs since 2011-12, has been worked through and as at end of May, Council has processed 95% of the refunds. New 2017/2018 canal and lake reserves reflect the current year program for revenue and expenditure. $1.16M movement in the Environment Charge Maintenance Reserve is associated with the Environment Separate Charge (which is recognised in line with the rating cycle), offset by YTD spending on designated projects.

Redland CITY COUNCIL

10. REDLAND WATER STATEMENTS

REDLAND WATER SUMMARY OPERATING STATEMENT
For the period ending 31 May 2018

	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD **Actual $000**	YTD Variance $000
Total revenue	105,147	105,147	96,550	**96,221**	(329)
Total expenses	59,688	59,688	54,220	**52,267**	(1,953)
Earnings before interest, tax and depreciation (EBITD)	45,459	45,459	42,330	**43,954**	1,624
Interest expense	18,265	18,265	16,743	**16,743**	-
Depreciation	18,457	18,457	16,919	**21,228**	4,309
Operating surplus / (deficit)	**8,737**	**8,737**	**8,668**	**5,983**	**(2,685)**

REDLAND WATER CAPITAL FUNDING STATEMENT
For the period ending 31 May 2018

	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD **Actual $000**	YTD Variance $000
Capital contributions, donations, grants and subsidies	6,631	6,631	1,864	**3,401**	1,537
Net transfer (to) / from constrained capital reserves	(3,120)	(3,117)	(3,452)	**(2,312)**	1,140
Non-cash contributions	3,131	3,131	2,870	**64**	(2,806)
Funding from utility revenue	4,675	6,186	9,107	**4,428**	(4,679)
Total sources of capital funding	**11,316**	**12,830**	**10,389**	**5,581**	**(4,808)**
Contributed assets	3,131	3,131	2,870	**64**	(2,806)
Capitalised expenditure	8,185	9,699	7,519	**5,517**	(2,002)
Total application of capital funds	**11,316**	**12,830**	**10,389**	**5,581**	**(4,808)**

11. REDWASTE STATEMENTS

REDWASTE OPERATING STATEMENT
For the period ending 31 May 2018

	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD **Actual $000**	YTD Variance $000
Total revenue	24,532	24,532	22,477	**23,440**	963
Total expenses	17,480	17,480	16,058	**18,072**	2,014
Earnings before interest, tax and depreciation (EBITD)	7,052	7,052	6,419	**5,368**	(1,051)
Interest expense	33	33	30	**30**	-
Depreciation	307	307	281	**162**	(119)
Operating surplus / (deficit)	**6,712**	**6,712**	**6,108**	**5,176**	**(932)**

REDWASTE CAPITAL FUNDING STATEMENT
For the period ending 31 May 2018

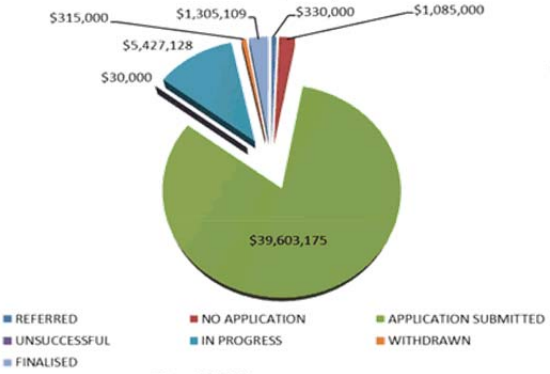
	Annual Original Budget $000	Annual Revised Budget $000	YTD Revised Budget $000	YTD **Actual $000**	YTD Variance $000
Non-cash contributions	-	-	-	**-**	-
Funding from utility revenue	317	333	329	**367**	38
Total sources of capital funding	**317**	**333**	**329**	**367**	**38**
Capitalised expenditure	240	249	243	**281**	38
Loan redemption	77	83	86	**86**	-
Total application of capital funds	**317**	**333**	**329**	**367**	**38**

Redland CITY COUNCIL

12. APPENDIX: ADDITIONAL AND NON-FINANCIAL INFORMATION

External Funding Summary

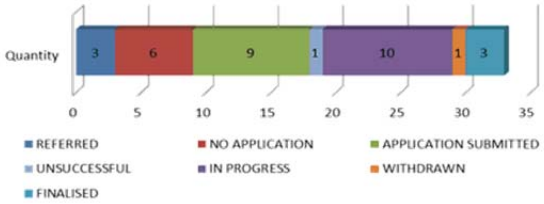
Value of External Grant Applications by Status (YTD)



May 2018 Progress

GRANTS REFERRED:
- Smart Cities and Suburbs Program Round 2, applications close 2 July 2018
- Innovation and Improvement Fund Round 2, applications close 27 July 2018
- Advancing Queensland: an age-friendly community grants program, applications close 25 June 2018

Number of External Grant Applications by Status (YTD)



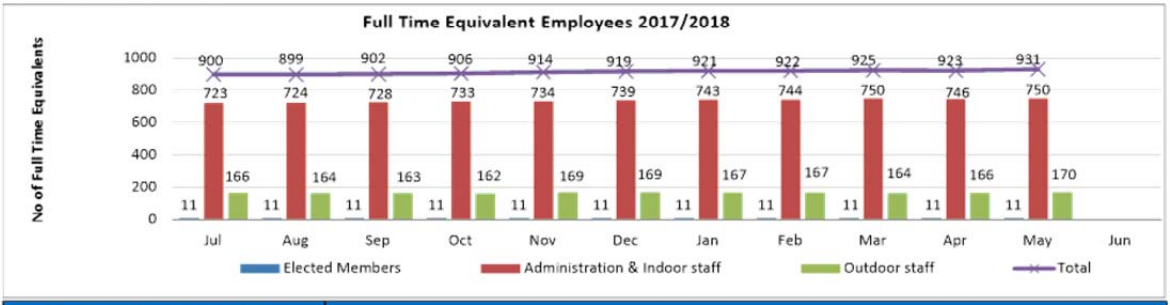
Successful Funding Submissions YTD 2017/2018

Environment:
- $6,977 for revegetation of the Coolnwynpin Creek Corridor Koala Refuge under the Nature Refuge Landholder Grant to be completed in late 2017/2018

Roads and Active Transport:
- $875,000 for two Road Alliance projects to be completed in 2017/2018
- $456,000 for City wide Bus Shelter Renewals to be completed in 2017/2018

Economic Development:
- $500,000 between 2017-2019 as part of the Advancing Regional Innovation Program (multiple partners including Logan City Council and Griffith University)
- $916,137 between 2017-2019 for Indigiscapes Expansion Stage 2 under the Local Government Grants and Subsidies Program

Workforce Reporting



Workforce reporting - May 2018: Headcount	Employee Type							
Department Level	Casual	Contract of Service	Perm Full	Perm Part	Temp Full	Temp Part	Councillors	Total
Office of CEO	3	2	30	4	6	2		47
Organisational Services	5	6	156	16	24	6		213
Community and Customer Service	28	5	232	69	39	13		386
Infrastructure and Operations	7	6	309	13	21	2		358
Elected members							11	11
Total	43	19	727	102	90	23	11	1015

Note: Full Time Equivalent Employees includes all full time employees at a value of 1 and all other employees, at a value less than 1. The table above demonstrates the headcount by department (excluding agency staff) and does not include a workload weighting. Commencing February 2018 elected members were included in the head count to be consistent with the FTE reporting. It includes casual staff in their non-substantive roles as at the end of the period where relevant. Due to a change in the reporting structure in August 2017, Finance and Legal Services (including Procurement) moved from the Office of CEO to join Organisational Services.

Redland CITY COUNCIL

13. GLOSSARY

Key Terms

Written Down Value:
This is the value of an asset after accounting for depreciation or amortisation, and it is also called book value or net book value.

Work In Progress:
This represents an unfinished project that costs are still being added to. When a project is completed, the costs will be either capitalised (allocated to relevant asset class) or written off.

Definition of Ratios

Operating Surplus Ratio*: *This is an indicator of the extent to which revenues raised cover operational expenses only or are available for capital funding purposes*	Net Operating Surplus / Total Operating Revenue
Asset Sustainability Ratio*: *This ratio indicates whether Council is renewing or replacing existing non-financial assets at the same rate that its overall stock of assets is wearing out*	Capital Expenditure on Replacement of Infrastructure Assets (Renewals) / Depreciation Expenditure on Infrastructure Assets
Net Financial Liabilities*: *This is an indicator of the extent to which the net financial liabilities of Council can be serviced by operating revenues*	Total Liabilities - Current Assets / Total Operating Revenue
Level of Dependence on General Rate Revenue: *This ratio measures Council's reliance on operating revenue from general rates (excludes utility revenues)*	General Rates - Pensioner Remissions / Total Operating Revenue - Gain on Sale of Developed Land
Current Ratio: *This measures the extent to which Council has liquid assets available to meet short term financial obligations*	Current Assets / Current Liabilities
Debt Servicing Ratio: *This indicates Council's ability to meet current debt instalments with recurrent revenue*	Interest Expense + Loan Redemption / Total Operating Revenue - Gain on Sale of Developed Land
Cash Balance - $M: *Cash balance include cash on hand, cash at bank and other short term investments.*	Cash Held at Period End
Cash Capacity in Months: *This provides an indication as to the number of months cash held at period end would cover operating cash outflows*	Cash Held at Period End / [[Cash Operating Costs + Interest Expense] / Period in Year]
Longer Term Financial Stability - Debt to Asset Ratio: *This is total debt as a percentage of total assets, i.e. to what extent will our long term debt be covered by total assets*	Current and Non-current loans / Total Assets
Operating Performance: *This ratio provides an indication of Redland City Council's cash flow capabilities*	Net Cash from Operations + Interest Revenue and Expense / Cash Operating Revenue + Interest Revenue
Interest Coverage Ratio: *This ratio demonstrates the extent which operating revenues are being used to meet the financing charges*	Net Interest Expense on Debt Service / Total Operating Revenue

* These targets are set to be achieved on average over the longer term and therefore are not necessarily expected to be met on a monthly basis.

13 REPORTS FROM COMMUNITY & CUSTOMER SERVICES

13.1 DECISIONS MADE UNDER DELEGATED AUTHORITY FOR CATEGORY 1, 2 & 3 DEVELOPMENTS

Objective Reference: **A3133581**

Authorising Officer: **Louise Rusan, General Manager Community & Customer Services**

Responsible Officer: **David Jeanes, Group Manager City Planning & Assessment**

Report Author: **Debra Weeks, Senior Business Support Officer**

Attachments: **1. Decisions Made Under Delegated Authority for 13.05.2018 to 26.05.2018**

PURPOSE

The purpose of this report is for Council to note that the decisions listed below were made under delegated authority for Category 1, 2 and 3 development applications only.

This information is provided for public interest.

BACKGROUND

At the General Meeting of 21 June 2017, Council resolved that development assessments be classified into the following four categories:

Category 1 – minor code and referral agency assessments;
Category 2 – moderately complex code and impact assessments;
Category 3 – complex code and impact assessments; and
Category 4 – major assessments (not included in this report)

The applications detailed in this report have been assessed under:-

Category 1 - Minor code assessable applications, concurrence agency referral, minor operational works and minor compliance works; minor change requests and extension to currency period where the original application was Category 1 procedural delegations for limited and standard planning certificates.

Delegation Level: Chief Executive Officer, General Manager, Group Managers, Service Managers, Team Leaders and Principal Planners as identified in the officer's instrument of delegation.

Category 2 - In addition to Category 1, moderately complex code assessable applications, including operational works and compliance works and impact assessable applications without objecting submissions; other change requests and variation requests where the original application was Category 1, 2, 3 or 4*. Procedural delegations including approval of works on and off maintenance, release of bonds and full planning certificates.

* *Provided the requests do not affect the reason(s) for the call in by the Councillor (or that there is agreement from the Councillor that it can be dealt with under delegation).*

Delegation Level: Chief Executive Officer, General Manager, Group Managers and Service Managers as identified in the officer's instrument of delegation.

Category 3 - In addition to Category 1 and 2, applications for code or impact assessment with a higher level of complexity. They may have minor level aspects outside a stated policy position that are subject to discretionary provisions of the planning scheme. Impact applications may involve submissions objecting to the proposal readily addressable by reasonable and relevant conditions. Assessing superseded planning scheme requests and approving a plan of subdivision.

Delegation Level**:** Chief Executive Officer, General Manager and Group Managers as identified in the officer's instrument of delegation.

COUNCIL RESOLUTION 2018/45

Moved by: **Cr Peter Mitchell**
Seconded by: **Cr Mark Edwards**

That Council resolves to note this report.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

Decisions made under delegated authority 13.05.2018 to 19.05.2018

CATEGORY1

Application Id	Application Full Details	Applicant	Associated Property Address	Primary Category	Decision Date	Negotiated Decision Date	Decision Description	Division
CAR18/0176	Design & Siting - Fence	Gary Wayne EINAM Maria Josephine EINAM	3A Seabreeze Court Ormiston QLD 4160	Referral Agency Response - Planning	16/05/2018	NA	Approved	1
CAR18/0168	Design & Siting - Dwelling House - (Future Lot 9 SP302307)	Building Code Approval Group Pty Ltd	556-562 Main Road Wellington Point QLD 4160	Referral Agency Response - Planning	16/05/2018	NA	Approved	1
CAR18/0182	Design and Siting	The Certifier Pty Ltd	21 Hope Street Ormiston QLD 4160	Referral Agency Response - Planning	16/05/2018	NA	Approved	1
CAR18/0190	Design and Siting	The Certifier Pty Ltd	16 Archer Place Wellington Point QLD 4160	Referral Agency Response - Planning	02/05/2018	NA	Approved	1
MCU18/0047	Dwelling House	TDH Builders Pty Ltd	92 Main Road Wellington Point QLD 4160	Code Assessment	16/05/2018	NA	Development Permit	1
RAL18/0023	Standard Format - 1 into 2 lots	East Coast Surveys Pty Ltd	9 Kefford Street Wellington Point QLD 4160	Code Assessment	15/05/2018	NA	Development Permit	1
RAL18/0031	Reconfiguring a Lot - Standard Format - 1 into 2 lots	Gateway Survey & Planning	33 Hope Street Ormiston QLD 4160	Code Assessment	16/05/2018	NA	Development Permit	1
RAL18/0029	Reconfiguring a Lot - Standard Format - 1 into 2 lots	Ms Suzanne K Hembrow	154 Shore Street North Cleveland QLD 4163	Code Assessment	18/05/2018	NA	Development Permit	2
CAR18/0143	Design and Siting - Dwelling	East Coast Surveys Pty Ltd	6 Midjimberry Road Point Lookout QLD 4183	Minor Change to Approval	14/05/2018	NA	Approved	2

Decisions made under delegated authority 13.05.2018 to 19.05.2018

CATEGORY1

Application Id	Application Full Details	Applicant	Associated Property Address	Primary Category	Decision Date	Negotiated Decision Date	Decision Description	Division
CAR18/0201	Design and Siting	The Certifier Pty Ltd	3 Snapper Street Point Lookout QLD 4183	Referral Agency Response - Planning	18/05/2018	NA	Approved	2
DBW18/0019	Retaining Wall	Mr Geoffrey A Bennell	12 Kinsail Court Cleveland QLD 4163	Code Assessment	18/05/2018	NA	Development Permit	2
MCU18/0086	Home Business	Sweet Treats By Jules	38 Caravel Court Cleveland QLD 4163	Code Assessment	16/05/2018	NA	Development Permit	2
CAR18/0175	Design and Siting - Shed	Lee Daniel GRACE	5 Natalin Street Cleveland QLD 4163	Referral Agency Response - Planning	15/05/2018	NA	Approved	3
OPW002248	Operational Works - Civil Only - Apartment Building 23 Units, Tourist Accommodation 1 Unit, Commercial / Shop / Refreshment	Carbone Developments Pty Ltd	161-165 Esplanade Redland Bay QLD 4165	SPA - 15 Day Compliance Assessment	15/05/2018	NA	Approved	5
MCU18/0044	Dwelling House	Cornerstone Building Certification	14 Broadwater Terrace Redland Bay QLD 4165	Code Assessment	18/05/2018	NA	Development Permit	5
CAR18/0181	Design and Siting - Fence	Kp Building Approvals Pty Ltd	51 Sarsenet Circuit Mount Cotton QLD 4165	Referral Agency Response - Planning	01/05/2018	NA	Approved	6
CAR18/0171	Design and Siting	The Certifier Pty Ltd	23 Leonard Street Wellington Point QLD 4160	Referral Agency Response - Planning	17/05/2018	NA	Approved	8

Decisions made under delegated authority 13.05.2018 to 19.05.2018

CATEGORY1

Application Id	Application Full Details	Applicant	Associated Property Address	Primary Category	Decision Date	Negotiated Decision Date	Decision Description	Division
CAR18/0198	Design and Siting - Carport	All Approvals Pty Ltd	1 Rosa Street Birkdale QLD 4159	Referral Agency Response - Planning	16/05/2018	NA	Approved	8
CAR18/0199	Design and Siting - Addition	The Certifier Pty Ltd	4 Eagle Street Birkdale QLD 4159	Referral Agency Response - Planning	16/05/2018	NA	Approved	8
CAR18/0189	Design and Siting - Carport	Titan Enterprises (Qld) Pty Ltd	2 Philippa Court Capalaba QLD 4157	Referral Agency Response - Planning	02/05/2018	NA	Approved	9
MCU18/0055	Dwelling	Emma Lee-Ann MAZZEI Marco Terrence MAZZEI	10 Agnes Street Birkdale QLD 4159	Code Assessment	15/05/2018	NA	Development Permit	10

Decisions made under delegated authority for 20.05.2018 to 26.05.2018

CATEGORY1

Application Id	Application Full Details	Applicant	Associated Property Address	Primary Category	Decision Date	Negotiated Decision Date	Decision Description	Division
ROL006213	Reconfiguration of a Lot (2 Lots into 3 Lots)	Suzanne Kate HEMBROW	52-54 Beachcrest Road Wellington Point QLD 4160	Code Assessment	23/05/2018	NA	Development Permit	1
CAR18/0206	Design and Siting - Domestic Additions	Austags Development	36-38 Rose Street Ormiston QLD 4160	Referral Agency Response - Planning	25/05/2018	NA	Approved	1
CAR18/0090.01	Change to Development Approval	Building Code Approval Group Pty Ltd	556-562 Main Road Wellington Point QLD 4160	Minor Change to Approval	21/05/2018	NA	Approved	1
CAR18/0201	Design and Siting	The Certifier Pty Ltd	3 Snapper Street Point Lookout QLD 4183	Referral Agency Response - Planning	24/05/2018	NA	Approved	2
CAR18/0192	Design & Siting - Dwelling House	Building Code Approval Group Pty Ltd	48-50 Passage Street Cleveland QLD 4163	Referral Agency Response - Planning	21/05/2018	NA	Approved	2
CAR18/0193	DESIGN AND SITING - Additions to existing house.	Redplan	136 Passage Street Cleveland QLD 4163	Referral Agency Response - Planning	21/05/2018	NA	Approved	2
DBW17/0015.01	Change to Development Approval DBW17/0015 - Domestic Additions	The Certifier Pty Ltd	19 Marram Court Cleveland QLD 4163	Minor Change to Approval	22/05/2018	NA	Approved	2
DBW18/0013	Secondary Dwelling and ancillary structures	Nest Bespoke Homes	110-118 Springacre Road Thornlands QLD 4164	Code Assessment	25/05/2018	NA	Approved	3

Decisions made under delegated authority for 20.05.2018 to 26.05.2018

CATEGORY1

Application Id	Application Full Details	Applicant	Associated Property Address	Primary Category	Decision Date	Negotiated Decision Date	Decision Description	Division
CAR18/0133	Design and Siting - Carport	The Certifier Pty Ltd	10 Cupania Street Victoria Point QLD 4165	Referral Agency Response - Planning	18/05/2018	NA	Approved	4
CAR18/0162	Design And Siting	Murrant Building Certification	31 Aspect Drive Victoria Point QLD 4165	Referral Agency Response - Planning	25/05/2018	NA	Approved	4
CAR18/0183	Combined design & Siting and Amenity and Aesthetics - Shipping Container	Applied Building Approvals	27-31 Lea-weena Avenue Russell Island QLD 4184	Referral Agency Response - Planning	22/05/2018	NA	Approved	5
MCU18/0056	New Dwelling	Curlew Homes Pty Ltd	51 Noyes Parade Karragarra Island QLD 4184	Code Assessment	22/05/2018	NA	Development Permit	5
MCU18/0058	New Dwelling	Curlew Homes Pty Ltd	26 Deenya Parade Russell Island QLD 4184	Code Assessment	22/05/2018	NA	Development Permit	5
MCU18/0078	Dwelling House (incl Secondary Dwelling)	Kcw Developments	74 Harvey Street Russell Island QLD 4184	Code Assessment	21/05/2018	NA	Development Permit	5
MCU18/0085	Change to Development Approval -New Dwelling and Shed - ADA	Bay Island Designs	14 Rio Street Macleay Island QLD 4184	Minor Change to Approval	21/05/2018	NA	Approved	5
MCU18/0049	Dwelling House (incl Secondary Dwelling)	Christopher Edward GILBERT	40 Timothy Street Macleay Island QLD 4184	Code Assessment	24/05/2018	NA	Development Permit	5
CAR18/0180	Design and Siting	Australian Sheds And Carports Pty Ltd	40 Hoop Pine Street Mount Cotton QLD 4165	Referral Agency Response - Planning	22/05/2018	NA	Approved	6

Decisions made under delegated authority for 20.05.2018 to 26.05.2018

CATEGORY1

Application Id	Application Full Details	Applicant	Associated Property Address	Primary Category	Decision Date	Negotiated Decision Date	Decision Description	Division
CAR18/0197	Design & Siting - Outbuilding	Building Code Approval Group Pty Ltd	7 Malcomia Street Redland Bay QLD 4165	Referral Agency Response - Planning	22/05/2018	NA	Approved	6
CAR18/0191	Design and Siting - Dwelling	Clarendon Homes Qld C/ - Professional Certification Group	2 Leven Street Thornlands QLD 4164	Referral Agency Response - Planning	25/05/2018	NA	Approved	7
MCU18/0048	Dwelling House	Sandra Lesleigh KEATING Vincent James KEATING	57-59 Mooroondu Road Thorneside QLD 4158	Code Assessment	23/05/2018	NA	Development Permit	10

CATEGORY2

Application Id	Application Full Details	Applicant	Associated Property Address	Primary Category	Decision Date	Negotiated Decision Date	Decision Description	Division
CAR18/0166	Build Over or Near Relevant Infrastructure - Dwelling House	Anthony CREGAN	12A Warner Street Wellington Point QLD 4160	Referral Agency Response - Engineering	08/05/2018	NA	Approved	1
EXC18/0004	Exemption Certificate	East Coast Surveys	73 Main Street Redland Bay QLD 4165	Exemption Certificate	22/05/2018	NA	Exemption Certificate Issued	5
OPW002269	Operational Works - CIVIL ONLY - Multiple Dwellings x 18 Units	Belle Projects Pty Ltd	232-234 Birkdale Road Birkdale QLD 4159	SPA - 15 Day Compliance Assessment	23/05/2018	NA	Compliance Certificate Approved	10

13.2 LIST OF DEVELOPMENT AND PLANNING RELATED COURT MATTERS AS AT 28 MAY 2018

Objective Reference: **A3133595**

Authorising Officer: **Louise Rusan, General Manager Community & Customer Services**

Responsible Officer: **David Jeanes, Group Manager City Planning & Assessment**

Report Author: **Emma Martin, Senior Appeals Planner**

Attachments: **Nil**

PURPOSE

The purpose of this report is for Council to note the current development and planning related Court matters/proceedings.

BACKGROUND

Information on appeals may be found as follows:

1. **Planning and Environment Court**

   a) Information on current appeals and declarations with the Planning and Environment Court involving Redland City Council can be found at the District Court web site using the "Search civil files (eCourts) Party search" service: http://www.courts.qld.gov.au/services/search-for-a-court-file/search-civil-files-ecourts

   b) Judgments of the Planning and Environment Court can be viewed via the Supreme Court of Queensland Library web site under the Planning and Environment Court link: http://www.sclqld.org.au/qjudgment/

2. **Court of Appeal**

   Information on the process and how to search for a copy of Court of Appeal documents can be found at the Supreme Court (Court of Appeal) website: http://www.courts.qld.gov.au/courts/court-of-appeal/the-appeal-process

3. **Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP)**

   The DSDMIP provides a Database of Appeals that may be searched for past appeals and declarations heard by the Planning and Environment Court. (https://planning.dsdmip.qld.gov.au/planning/spa-system/dispute-resolution-under-spa/planning-and-environment-court/planning-and-environment-court-appeals-database)

   The database contains:

   a) A consolidated list of all appeals and declarations lodged in the Planning and Environment Courts across Queensland of which the Chief Executive has been notified.

   b) Information about the appeal or declaration, including the appeal number, name and year, the site address and local government.

4. **Department of Housing and Public Works (DHPW)**

   Information on the process and remit of development tribunals can be found at the DHPW web site: Http://www.hpw.qld.gov.au/construction/BuildingPlumbing/DisputeResolution/Pages/default.aspx

PLANNING & ENVIRONMENT COURT APPEALS

1.	**File Number:**	Appeal 3641 of 2015 (MCU012812)
Appellant:		**King of Gifts Pty Ltd and HTC Consulting Pty Ltd**
Proposed Development:		Material Change of Use for Service Station (including car wash) and Drive Through Restaurant 604-612 Redland Bay Road, Alexandra Hills
Appeal Details:		Appeal against Council refusal
Current Status:		Appeal filed on 16 September 2015. Trial held 1-3 August 2017. Judgment handed down on 6 November 2017. Appeal allowed subject to finalising conditions. Council conditions finalised. Department for Environment and Science conditions still to resolve. The matter has been set down for final orders on 12 June 2018.

2.	**File Number:**	Appeal 4515 of 2017 (ROL006084)
Appellant:		**Australian Innovation Centre Pty Ltd**
Proposed Development:		Reconfiguring a Lot (1 into 22 lots and park) 289-301 Redland Bay Road, Thornlands (Lot 5 on RP14839)
Appeal Details:		Deemed refusal appeal
Current Status:		Appeal filed on 23 November 2017. On 31 January 2018 Council solicitors notified the parties that it opposed the proposed development. A mediation was held on 6 March 2018. The next Court review is 8 June 2018.

3.	**File Number:**	Appeal 339 of 2018 (MCU013949)
Appellant:		**Hosgood Company 3 Pty Ltd & DPK Injection Pty Ltd**
Proposed Development:		Material Change of Use for a Dual Occupancy 2 Starkey Street, Wellington Point (Lot 11 on SP284567)
Appeal Details:		Appeal against Council refusal
Current Status:		Appeal filed on 30 January 2018. Mediation held on 10 April 2018. The next Court review is 8 June 2018.

4.	**File Number:**	Appeal 461 of 2018 (MCU013977)
Appellant:		**Robyn Edwards & Ronald Edwards**
Proposed Development:		Material Change of Use for an Undefined Use (Rooming Accommodation) 41 Ziegenfusz Road, Thornlands (Lot 291 on RP801793)
Appeal Details:		Appeal against Council refusal
Current Status:		Appeal filed on 8 February 2018. A Directions Order was set down on 27 April 2018 detailing a timetable for the proceedings. Mediation held 31 May 2018. The next Court review is 3 August 2018.

5.	**File Number:**	Appeal 894 of 2018 (MCU013921)
Appellant:		**Palacio Property Group Pty Ltd**
Proposed Development:		Infrastructure Conversion Application (relating to the Development Permit for a Material Change of Use for Multiple Dwellings (22 units)) 4-8 Rachow Street, Thornlands (Lot 5 on SP149013)
Appeal Details:		Appeal against Council refusal
Current Status:		Appeal filed on 9 March 2018. A without prejudice meeting was held on 17 May 2018.

6.	**File Number:**	Appeal 1506 of 2018 (MCU17/0149)
Appellant:		**Barro Group Pty Ltd**
Proposed Development:		Request to Extend the Currency Period (relating to the Development Permit for a Material Change of Use for Extractive Industry and Environmentally Relevant Activities 8 (Chemical Storage), 16 (Extractive and Screening Activities) and 21 (Motor Vehicle Workshop Operation)) 1513 and 1515-1521 Mount Cotton Road, Mount Cotton 163-177 and 195 Gramzow Road, Mount Cotton (Lot 162 on S31962, Lot 238 on SP218968, Lot 370 on S311071, Lot 1 on RP108970, Lot 17 on RP108970, Lot 1 on SP272090, Lot 2 on SP272091, Lot 3 on SP272092 and the land comprising part of Greenhide (California) Creek located between Lot 162 on S31962 and Lot 238 on SP218968, which is the property of the State)
Appeal Details:		Appeal against Council refusal
Current Status:		Appeal filed on 24 April 2018. A directions hearing is scheduled for 1 June 2018.

7.	**File Number:**	Appeal 1774 of 2018 (OPW002206)
Appellant:		**Jexville Pty Ltd**
Proposed Development:		Operational Works for an Advertising Device 39 Old Cleveland Road, Capalaba (Lot 1 on RP137310)
Appeal Details:		Appeal against a condition of the Development Permit
Current Status:		Appeal filed on 15 May 2018.

8.	**File Number:**	Appeal 1834 of 2018 (RCC reference CAR17/058 and Development Tribunal reference 58 of 2017)
Appellant:		**Redland City Council**
Respondents:		**Michael Van Dyck** **Sean Carroll** **Jane Carroll**
Proposed Development:		Building Works for a Domestic Outbuilding (Carport) 22 Sommersea Court, Cleveland (Lot 666 on CP853643)
Appeal Details:		Appeal against the decision of the Development Tribunal (58-17)
Current Status:		Appeal filed on 18 May 2018.

APPEALS TO THE QUEENSLAND COURT OF APPEAL

9.	**File Number:**	CA11075 of 2017 (4940 of 2015, 2 of 2016 and 44 of 2016) (MCU013926)
Appplicant:		**Nerinda Pty Ltd**
Proposed Development:		Preliminary Approval for Material Change of Use for Mixed Use Development and Development Permit for Reconfiguring a Lot (1 into 2 lots) 128-144 Boundary Road, Thornlands (Lot 3 on SP117065)
Appeal Details:		Co-respondent appeal against the decision of the P&E Court
Current Status:		Application for leave to appeal filed on 23 October 2017. All parties have filed an outline of their arguments. The application and outline of arguments were heard on 30 April 2018. Awaiting Judgment.

DEVELOPMENT TRIBUNAL AND OTHER MATTERS

10.	**File Number:**	58 of 2017 (CAR17/058)
Appellant:		**Sean and Jane Carroll**
Proposed Development:		Building Works for a Domestic Outbuilding (Carport) 22 Sommersea Court, Cleveland (Lot 666 on CP853643)
Appeal Details:		Appeal against refusal
Current Status:		Notice of appeal received on 27 November 2017. Tribunal hearing was held on 13 February 2018. Decision handed down on 17 April 2018. The Tribunal approved the siting of the proposed carport subject to conditions. Council officers filed an appeal to the Planning & Environment Court on 18 May 2018.

11.	**File Number:**	1568 of 2018
Applicant:		**Redland City Council**
Respondents:		**Paul Michael McManus** **Approved Realty Pty Ltd** **IApproved Pty Ltd**
Development:		Undefined Use (Rooming Accommodation) 1/139 Mount Cotton Road, Capalaba (Lot 1 on SP258938)
Application Details:		Unlawful Use
Current Status:		Application filed on 30 April 2018. Review scheduled for 20 July 2018.

COUNCIL RESOLUTION 2018/46

Moved by: **Cr Tracey Huges**
Seconded by: **Cr Paul Bishop**

That Council resolves to note this report.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

13.3 PUBLIC ART FRAMEWORK

Objective Reference:

Authorising Officer: **Louise Rusan, General Manager Community & Customer Services**

Responsible Officer: **Gary Photinos, Group Manager Community & Cultural Services**

Report Author: **Gary Photinos, Group Manager Community & Cultural Services**

Attachments:
1. **Public Art Policy**
2. **Public Art Framework**

PURPOSE

That Council:

1. Notes the Public Art Policy (POL-3046) has been reviewed, and
2. Adopts the Public Art Framework (FR-3046-001) which outlines how public art will be delivered in the City subject to annual budgetary approvals.

BACKGROUND

- Since 1993, Council has had approximately 90 public art commissions installed around the City with an estimated value of $600,000. Most public art has been commissioned through streetscape and open space projects. More recently public art acquired has been the Quandamooka Recognition Statement at Council Chambers and mural commissions at Wellington Point and Cleveland.
- In 1993, Council's first public arts program was developed with the Bloomfield Streetscape Project. As a result community art projects were commissioned and installed in the Cleveland CBD.
- In 1995, the Capalaba Town Centre Community Arts Project was developed resulting in public art commissions.
- In 2003, public art was formalised into policy (POL 3046). As well, a public art guideline (GL-3046-001) was developed, and is still current, providing a detailed process for facilitating the acquisition and management of high quality public art to be located in centres, parklands and other public areas of significance.
- The Public Arts Policy (POL-3046) and Public Arts Guideline (GL-3046-001) have been subject to regular reviews with minor administrative changes approved under delegated authority.
- In 2016, the responsibilities for commissioning art in public places became the responsibility of Council's Creative Arts Unit. This responsibility was previously embedded in the Urban Design Team in Strategic Planning and Open Space Planning units. The Creative Arts Unit subsequently undertook a review of the public arts program and external public art curators and consultants prepared a report for further consideration.
- In 2018, a draft Public Art Framework (FR-3046-001) was developed with consideration given to Council's strategic priorities regarding the arts and identity.

ISSUES

Public Art Policy (POL-3046) review

The Public Art Policy (POL-3046) and supporting Public Art Guideline (GL-3046-001) were adopted 30th July 2003. When Council approved these documents, it acknowledged the need for them came about from the success of previous public art projects with particular mention of the Bloomfield Street and Capalaba Town Centre Improvement Projects in the 1990's and the number and diversity of public art proposals Council was receiving.

The Public Art Guideline GL-3046-001 provides a detailed process for facilitating the acquisition and management of high quality public art to be located in centres, parklands and other public areas of significance. This guideline outlines specific objectives to be achieved by public art and describes the approval process through an inter-Council advisory panel.

A review of the Public Art Policy objectives and statements has shown that they remain relevant today and it is proposed that no changes are made other than to update corporate plan references in the head of power statement.

Public Art Framework (FR-3046-001)

The Public Art framework outlines a platform for the delivery of public art projects in public places which will be subject to an annual budget approval process.

In 2016, a review of the public art program was undertaken by external public art professionals, Creative Move Consultancy Services. Their review report provided the foundations for a new public art framework.

The framework's purpose is to help guide the City's public art collection with high-quality public artworks developed through national best practice.

Council will commission public artworks (subject to the annual budget approval process) that recognise the area's distinctive local identity and character, its rich environmental attributes across the mainland and the islands, and the Council's partnership with the Quandamooka People. The framework will provide opportunities to attract external funding and will seek to enhance our newly adopted Redlands Coast brand.

The attached public art framework details:

- cultural themes,
- delivery platforms,
- art work types,
- commissioning, and
- implementation actions.

The Creative Arts Unit will finalise the public art commissioning program each year for adoption by Council through the budget process. All public art commissions will be approved through the Public Art Panel which is established through Public Art Guideline GL-3406-001 and outlines an assessment process.

STRATEGIC IMPLICATIONS

Legislative Requirements

The legislative requirements for asset management and workplace health and safety of any commissioned public art will apply.

Risk Management

The opportunities for a proactive public arts program are that it will help develop tourism initiatives and promote Redland City as a cultural destination.

Financial

There are no direct financial implications associated with the review of the public art policy and the adoption of the new public art framework. Any projects guided by and developed out of the framework will be subject to Council project prioritisation and the annual budget approval process. The framework also provides an opportunity to attract funding from external sources including sponsorship, gifts and grants.

People

There are no identified staff implications associated with the policy review and adoption of a new public art framework.

Environmental

The Public Art Policy and Framework aim to enhance Redland City's urban development, open spaces and the broader natural environment through the development of public art that reflects the distinctive character of the Redlands, acknowledging the Quandamooka people, and creating a strong cultural identity.

Social

The Public Art Framework provides for social inclusion, a bicultural thematic and tandem understanding that sees the traditional Quandamooka owners and the non-Indigenous population in Redland City 'walking forward' together.

Alignment with Council's Policy and Plans

The Public Art Policy and supporting documentation is aligned with Council's Corporate Plan objectives namely:

- Quandamooka Country,
- Supportive and vibrant economy,
- Strong and connected communities and
- Wise planning and design.

CONSULTATION

Creative Moves consultancy undertook extensive consultation with QYAC as well as numerous internal stakeholders and benchmarking with other local governments in Queensland including Logan, Cairns and the Gold Coast.

The Public Art Framework has also been presented to the inter-departmental Public Arts Panel (as per the Public Art Guidelines GL-3046-001) consisting of Council representatives from the following:

- Creative Arts Unit
- Public Places Projects Unit
- Workplace Health and Safety Unit

- Strengthening Communities Unit
- Indigenous Partnership Team
- City Planning and Assessment Group
- Risk and Liability Unit.

OPTIONS

Option One

That Council resolves to:

1. note the review and minor administrative amendments of the Public Art Policy (POL-3046), and
2. approve the public art framework (FR-3046-001) for the delivery of public art projects in the City subject to budget approval.

Option Two

That Council resolves to not approve the Public Art Framework and requests further information.

COUNCIL RESOLUTION 2018/47

Moved by: Cr Paul Bishop
Seconded by: Cr Peter Mitchell

That Council resolves to:

1. **note the review and minor administrative amendments of the Public Art Policy (POL-3046), and**
2. **approve the public art framework (FR-3046-001) for the delivery of public art projects in the City subject to budget approval.**

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

policy document

Redland CITY COUNCIL

Corporate POL-3046

Public Art Policy

Head of Power

This policy supports Redland City Council's Corporate Plan 2018-2023 for:

a) Quandamooka Country where Council's and the community's respect and understanding of the Quandamooka Peoples' relationship with their traditional land and waters continue to improve.

b) Supportive and vibrant economy where Council supports infrastructure that encourages business and tourism growth.

c) Strong and connected communities where Council maximizes community benefit from the use of its parklands and facilities by improving access and the quality of the shared use of, public spaces and facilities by groups for sporting, recreational and community activities; and

d) Wise planning and design where the City's character and livability are enhanced through a program of master planning, place-marking and centre improvement strategies.

Policy Objective

To enhance the quality of urban and open space environments through support for public art that reflects the distinctive culture and character of the Redlands and its communities.

To facilitate the acquisition and management of quality, site-specific public artworks that enhance local identity and sense of place.

Policy Statement

Council is committed to:

1. Supporting the development of public artworks (both permanent and temporary) of significance and meaning to the local environment and community.
2. Encouraging collaborative arrangements between artists and design professionals in the creation and commissioning of public artworks.
3. Ensuring that all proposals for public artworks are subject to a uniform evaluation process.
4. Securing adequate resources to build and maintain a collection of public artworks through:
   - Council's capital works program and operational budgets
   - Private sector contributions
   - Public funding for projects and "in kind" support from the community
5. Implementing a regular public art maintenance program that:
   - safeguards the asset
   - ensures workplace health and safety standards are met
   - identifies the expected life of the asset

Version Information

Version number	Date	Key Changes
3	Dec 2013	The word "temporary" has been inserted into both documents so that the policy and guideline can respond to CBD Revitalisation initiatives that might include temporary art installations and also respond to community arts initiatives.
4	June 2018	References to corporate planning documentation updated

CMR Team use only

Department: Community & Customer Services
Group: Community & Cultural Services
Approved: General Meeting

Effective date:
Version: 4
Review date:



REDLAND CITY COUNCIL
PUBLIC ART FRAMEWORK
FR-3046-001



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1. INTRODUCTION

The Redland City Council (Council) Public Art Framework (framework) draws on the Council Corporate Plan with outcomes in the areas of:

- Quandamooka Country
- Supportive and vibrant economy
- Strong and connected communities and
- Wise planning and design.

The framework uses these outcome areas to extend and deliver a vision for public art, develop tourism initiatives, contribute to our place branding and aspire to a world class public art collection in the region. It will utilise new media platforms to share information and to extend the art experience. The public art to be developed will attract audiences, engage and narrate significant histories for residents, and establish Redland City as a cultural destination for local and national audiences.

The framework acknowledges that amongst the most spectacular areas of Redland City are its coastlines and the islands, where the interconnections stretch over the sea, facilitated by access to boating transport and, increasingly, commuter and other remote working connections. Our place branding describes the Redlands Coast as 387 kilometres of diverse coastline, home to villages, urban areas, islands and the world's oldest living culture.

The framework defines a strong cultural identity for the City that utilises art as a vehicle for its many significant stories drawing on its history and heritage (Indigenous and non-Indigenous), and its extraordinary natural assets. The framework recognises the unique geography of the Redlands (a community of villages) as part of this new identity. The public art collection defines the Redlands as a distinct and discrete identity both part of, yet separate from Brisbane.



2. VISION

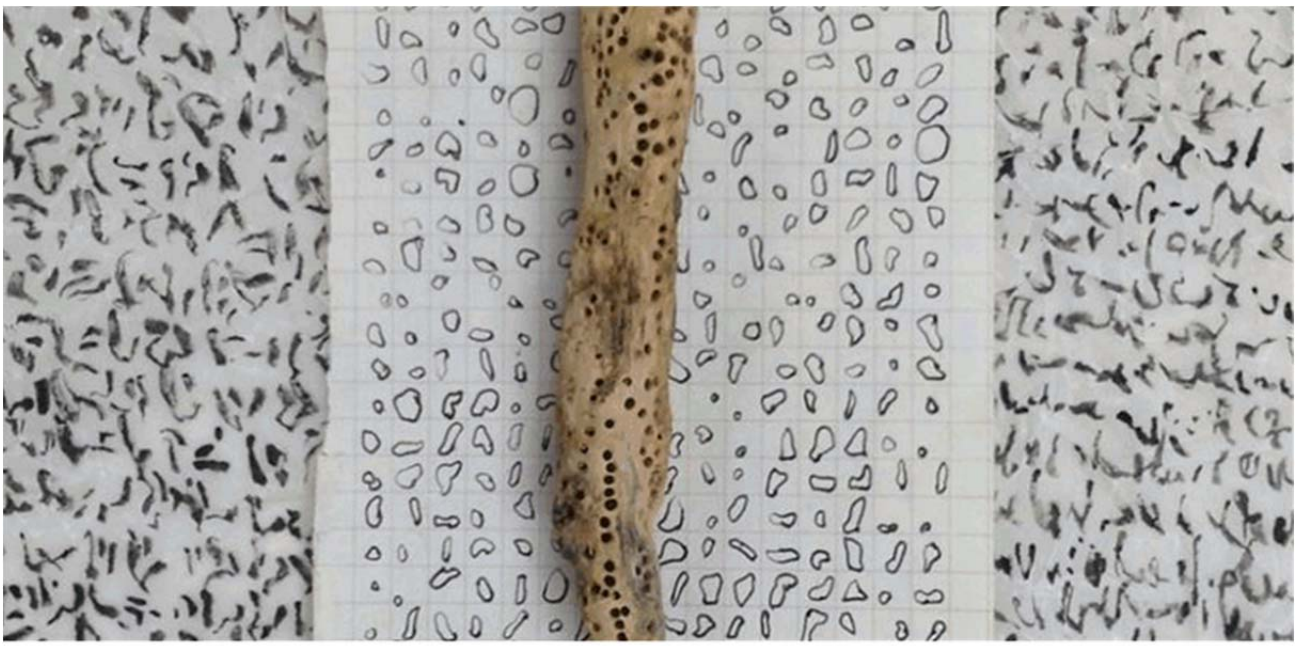
'To have the Redlands Public Art Collection recognised for its compelling works of art that honour the Quandamooka Country on which they stand and in tandem acknowledges the overlay of agrarian, industrial, colonial and settler heritage that has imprinted Redland City from first contact in the late 18th Century.'

3. PURPOSE

The framework will be used by Council and its various collaborators to grow the City's Public Art Collection with high-quality public artworks developed through national best practice. The collection aspires to high quality and standards as detailed in the National Association for the Visual Arts' Code of Practice for Commissioning Art in the public space, and to attracting cultural visitation by tourists from all over. Redland City will commission outstanding public artworks that recognise the area's distinctive local identity and character, its rich environmental attributes across the mainland and archipelago, and the Council's partnership with the Quandamooka People.

4. POLICY OBJECTIVE

- To enhance the quality of urban and open space environments through support for public art that reflects the distinctive culture and character of the Redlands and its communities, and
- to facilitate the acquisition and management of quality, site-specific public artworks that enhance local identity and sense of place.



5. POLICY STATEMENTS

Council is committed to:

1. Supporting the development of public artworks (both permanent and temporary) of significance and meaning to the local environment and community,

2. encouraging collaborative arrangements between artists and design professionals in the creation and commissioning of public artworks,

3. ensuring that all proposals for public artworks are subject to a uniform evaluation process,

4. securing adequate resources to build and maintain a collection of public artworks through:

   a. Council's capital works program and operational budgets
   b. private sector contributions
   c. public funding for projects and "in kind" support from the community

5. implementing a regular public art maintenance program that:

   a. safeguards the asset
   b. ensures workplace health and safety standards are met
   c. identifies the expected life of the asset



6. CULTURAL THEMES

At the navigational heart for this framework is the Quandamooka Country narrative: the sharing by Quandamooka people of their places of significance and connection to Country over generations. This emphasis is an important act of acknowledgement and recognition of Redland's traditional owners. In tandem with this narrative, the framework acknowledges the overlay of agrarian, industrial, colonial and settler heritage that has imprinted Redland City from first contact in the late 18th Century, and varying levels of coexistence over the last 150 years.

It makes apparent to both residents and tourists alike what makes this place unique, and the significance of the past in tracing new and positive narratives into a prosperous future.

The framework's themes below will guide our public art designers. The framework is also congruent with the Redland Art Gallery Collection Policy, which prioritises art of quality "that reflects the diversity and uniqueness of Redland City's heritage, culture, identity and sense of place" and aims "to invest in a distinctive art collection that returns long term cultural and economic benefits to Council and the Redlands community".

1. Caring For Country – a strong engagement with the natural environment.
2. Restoration – interpreting the richness and depth of Quandamooka heritage alongside the social, industrial, colonial, settler heritage of the region.
3. Portals and Pathways – journeys in time, across landscapes, villages, cultures and languages, through memories and new ideas of place.
4. Shore To Shore – customs, traditions, imageries, marine life, maritime heritage and cultural landscapes that are an expression of living near the sea.
5. Creative Communities – strong, healthy, and resilient places; integrating creativity into broader community revitalization.
6. Place of Leisure & Labour – authentic experiences, the marking of gateways, important places and times when tourism compels and attracts particular groups.



7. DELIVERY PLATFORMS

This framework will create a distinctive public art collection over time that offers an integral vision understood by residents and visitors alike. It will grow an ecology that builds sustainable capacity in public art practice, understanding and appreciation. It will inform and engage audiences (both local and tourist visitation), and articulate Redland's stories—past, present and future. It will acknowledge the important geographical features that makes the Redlands distinct such as the diverse coastline, home to villages, urban areas, islands and the world's oldest living culture. The framework will ensure that the creative attention is shared with the City's suburbs, enriching local identity and generating a sense of belonging through place making.

The Redland Public Art Framework is structured around the following seven (7) major delivery platforms:

- Arterial Corridors
- Cycleways and Walkways
- Centres Developments
- Streetscapes
- Private Developments
- Festivals and Events
- Suburban Identity



8. ARTWORK TYPES

Public Art is "artworks" and "designed landscape elements" located in outdoor urban and semi-urban public places e.g. in footpaths, streets, parks, urban centres, foreshore areas, recreational areas. Public art can also include architectural features of buildings and temporary art installations. (Redland City Council Public Art Guidelines GL-3046-001).

A temporary artwork opportunity is one of short- to medium-term duration. This may be as simple as a graffiti mural on a building under construction, a stand-alone sculptural form, a digital projection, a light box, or an installation that changes the character of a particular space for a limited period. The form of a temporary artwork opportunity may be ephemeral, event-based, easily removed, and extend across the gamut of physicality to also include long term hardware items installed for a set period. Its scale, size and media are varied to suit the opportunity and/or site.

Public art provides a focus point in a particular place or urban realm, but it may also reflect cultural and/or community values, and a city's aspirations and achievements. It adds a focus and value to an urban place that assists in the determination of the meaning of such a place. Artwork opportunities may be articulated according to the response that is most appropriate and rewarding for particular locations and may be expressed through the following categories:

- Gateway/Iconic
- Landmark/Wayfinding
- Interpretive
- Integrated
- Interactive
- Commemorative
- Temporary



9. COMMISSIONING

There are a number of ways to commission artworks and to source artists for public art commissions. The most common methods are limited tender, direct commission, public art curators and open competition; or hiring/leasing/renting artworks, each having benefits and limitations that need to be considered and determined for each opportunity as required.

10. IMPLEMENTATION

Council makes commitments through the budget approval process to fund the public art program. This framework will maximise investments by utilising the resources of Council and the community as well as attracting grants and private funding. The Creative Arts Unit will facilitate collaborations through an awareness campaign.

An annual public arts commissioning program, as a budget bid, will be developed by the Creative Arts Unit. Council's decisions for commissioning public art will be focused on achieving the policy objectives outlined in this framework, while fostering a public art program that provides a balance of cultural themes, delivery platforms and artwork types. Examples of programs to be prioritised:

a. Delivering a major public art project each year associated with a significant project of Council

b. Delivering public art in the suburbs of curated pieces across the City of differing artwork types.

c. Contributing to a recurrent festival activity.

d. Delivering temporary art.

The Creative Art Units will finalise the public art commissioning program each year for Council approval through the budget process. All funded public art designs will be approved through the Public Art Panel established through the Public Art Guideline GL-3406-001 which also outlines an assessment process.



11. COUNCIL'S ROLE IN PUBLIC ART

Council understands that public art can create many benefits, including economic, social and cultural benefits and is therefore committed to encouraging public art in our City. There are many roles that Council plays in relation to public art including manager, facilitator and advocate.

Council as a Public Art Manager

Where public art is owned by Council, the management rights and responsibilities are retained by Council. This includes any maintenance, insurance, risk mitigation strategies and de-accessioning of any artworks.

Where Council is not the owner of the public art, the responsibility will be retained by the artist/owner unless a management agreement has been put in place between Council and the public art owner.

Council as a Public Art Facilitator

Council facilitates public art through working collaboratively with the community, businesses and other agencies. Public art as place making tool activates community participation, creates an identity and visually connects civic spaces.

Council's policy decision will support our commitment to the development of public artworks.

Council as a Public Art Advocator

Council plays a role in the advocacy of public art in the City. This advocacy will include identifying opportunities and strategies to market and promote public art to locals and visitors, including developing partnership opportunities to support this promotion.

Council's advocacy will include funding opportunities from both the private and public sector. Council will advocate for privately funded public artworks to be well maintained and aligned to the Public Art Framework.

APPENDIX 1

Who will use this framework?

Public art is an important place making tool which can enhance our built and urban design, our villagescapes, natural environments, and promote cultural understanding.

It is not confined to an arts agenda. Public art is making an important contribution to urban design, tourism, heritage and economic development.

This framework espouses to a developing public art collection of high quality, suitable for the public domain.

Council is looking at developing collaborations with governments, communities, and organisations of all kinds to deliver public art.

- Developers can use this framework to add value to urban development design, architecture, place making and way finding.
- Designers and engineers can use this framework to add value to capital works programs, major projects or create functional elements.
- Landscape architects, open space planners and place makers can integrate public art into streetscapes, parks, foreshore zones, civic spaces, playgrounds and conservation areas.
- Philanthropists, sponsors, grant writers, collaborators, crowd funders and any gifts givers can make contributions to the city, its culture, its heritage and its future through their funding of our public art program.
- Community groups can use this framework to enhance community participation through their projects with young people, schools, disadvantaged groups and senior groups to tell their stories with localised public art.
- Festival and tourism organisers, Chambers of Commerce and local entrepreneurs can use the framework as a reference for extending visitation and cultural tourism.
- Digital Innovators will be inspired by this framework to incorporate public art into new technological platforms.

Please contact the Creative Arts Service Manager at Redland City Council (07) 38298999 or rcc@redland.qld.gov.au for more information.

APPENDIX 2

Image Attributions

PAGE	DETAILS
Cover page	Craig Tapp, Lines in the Sand (sand art workshop), 2014. Photo: Jamie Mercer
3	Sandra Delaney, Quandamooka Statement
4	Megan Cope, Twice Removed-Quandamooka
5	Sharon Jewell, Writing to myself at home
6	Elisa Jane Carmichael,
7	Bike week Redlands
8	Megan Cope, Twice Removed-Quandamooka
9	Capalaba Regional Park
10	North Stradbroke Island

Acknowledgements

We would like to acknowledge Creative Move Art Consultancy Services for their significant contribution to this framework document.

The Public Art Framework FR-3046-001 is prepared with reference to the Public Art Policy POL-3046 and the Public Art Guidelines GL-3046-001.

The framework will be subject to the normal process of regular review.

13.4 REDLANDS ECONOMIC DEVELOPMENT ADVISORY BOARD UPDATE

Objective Reference: **A3133609**

Authorising Officer: **Louise Rusan, General Manager Community & Customer Services**

Responsible Officer: **Glynn Henderson, Acting Manager Economic Sustainability and Major Projects**

Report Author: **Kristen Banks, Program Manager Economic Sustainability and Major Projects**

Attachments: **Nil**

PURPOSE

The purpose of this report is to update Redland City Council on the ninth formal meeting of the Redlands Economic Development Advisory Board (Advisory Board) as specified in its Terms of Reference.

BACKGROUND

Council established and appointed an Advisory Board as part of its commitment to increasing the City's economic capacity through business growth and retention; and employment generation.

The Advisory Board oversees implementation of the *Redland City Economic Development Framework 2014-2041* and assists in the development of industry sector strategies and action plans.

ISSUES

The ninth formal Advisory Board meeting was held on Tuesday 13 March 2018.

The following items formed the agenda for the meeting:

i. Declaration of conflicts of interest
ii. Mayor's update
iii. Validation of *Redland City Economic Development Framework 2014-2041*
iv. City-wide branding update
v. Industry action plans
vi. Digital connectivity
vii. Potential Cleveland Innovation Precinct
viii. Redland Investment Corporation update

A summary of the meeting follows:

i. Declaration of conflicts of interest
No Board members declared any conflicts of interest.

ii. Mayor's update
Redland City Mayor Karen Williams spoke about several topics:

- An autonomous vehicle demonstration by EasyMile occurred at the Cleveland Markets on Sunday 4 March 2018. About 500 people participated in the demonstration. There is potential for a longer term trial to take place in the Redlands.

- Council continues to work with Surf Life Saving Queensland on the Surf Life Saving Queensland Centre of Excellence, to be located at the site of the existing Cleveland Aquatic Centre. It is anticipated that the Centre would include a new pool that can be used for deep water rescue and helicopter escape training. There is also potential for co-location of emergency services including a fire station.
- Meetings occurred with:
    - Hon Mark Bailey MP, Minister for Transport and Main Roads about transport challenges and opportunities for autonomous vehicles.
    - Hon Di Farmer MP, Minister for Child Safety, Youth and Women and Minister for the Prevention of Domestic and Family Violence about the Diner en Rouge fundraising event and Council's Pledge not to Sledge social media campaign.
    - Senator Bridget McKenzie about regional communication and mobile black spot communication funding for North Stradbroke Island and Russell Island.
    - Senator the Hon Mitch Fifield, Minister for the Department of Communications and the Arts about broader communication issues in the Redlands and Wi-Fi.
    - Hon Kate Jones MP, Minister for Innovation and Tourism Industry Development and Minister for the Commonwealth Games about tourism industry development on North Stradbroke Island.

iii. Validation of *Redland City Economic Development Framework 2014-2041*

Following discussions at the eighth formal Advisory Board meeting, held on Thursday 14 December 2017, Council officers considered applying the latest Australian Bureau of Statistics Census data to the *Redland City Economic Development Framework 2014–2041* to determine if its data was still relevant and if any priorities needed to shift.

Council commissioned REMPLAN to undertake the data validation and assessment exercise. A REMPLAN representative gave a presentation on work completed in regards to the data validation and consideration of emerging industry sectors for the Redlands.

The work included determining the relevance of the eight key industry sectors identified in the *Redland City Economic Development Framework 2014-2041*:

- Tourism (Accommodation and Food Services)
- Construction
- Education and Training
- High Value-Add Services
- Health Care and Social Assistance
- Manufacturing
- Retail Trade
- Rural Enterprises.

The eight industry sectors continue to perform well in terms of output, value-add, employment and account for three-quarters of total regional exports. These industries are considered future employment growth sectors.

Board members advised for Council to consider the following:

- prioritise completion of the education and training action plan and health care and social assistance action plan

- build on the data validation and assessment exercise by undertaking a gap analysis study to identify opportunities for key sectors with the potential to re-capture some of the workforce currently leaving the region, and identify import replacement opportunities for the South East Queensland economy.

iv. City-wide branding update

Council officers from the Communication, Engagement and Tourism Group presented an update on the City-wide branding project.

Brand architecture was discussed for potential place brand 'Redlands Coast'. The master brand will be an overarching place brand supporting tourism and place marketing.

Inspiration for the branding from Traditional Owners was achieved through extensive engagement with Quandamooka Elders and artists including Delvene Cockatoo-Collins to collaborate on the final proposed logo design.

Board members endorsed the brand for workshops with Councillors, and to progress to General Council for adoption.

The place brand 'Redlands Coast – Naturally Wonderful' was endorsed by Council on Wednesday 6 June 2018.

v. Industry action plans

Council officers presented a proposed delivery and implementation schedule for the revised draft health care and social assistance action plan, which includes timeframes, stakeholders and accountable parties as well as corresponding budget and resource considerations.

Development of the schedule was a Council resolution from the General Meeting, held on Wednesday 6 September 2017, when Council also received the draft education and training strategy and action plan that was prepared by Carramar Consulting.

To inform the revised draft health care and social assistance action plan, a ground truthing process has been undertaken to ensure that input from key industry stakeholders has been incorporated into the research report that was originally prepared by the consultants.

The Board advised that the sector presents both challenges and opportunities for the City, and there is a compelling reason to invest in this industry.

The Board advised Council to consider the following elements in relation to the draft action plan:

- home-based sector
- aged care sector
- Redlands Health and Wellness Precinct Masterplan
- synergy with draft education and training action plan
- resourcing.

vi. Digital connectivity

An Advisory Board recommendation to Council from its seventh formal meeting, held on Friday 29 September 2017, was that Council invests in the improvements of high speed internet connectivity in the Capalaba and Cleveland industrial estates, subject to budget review and considerations.

Council's Information Management Group has further investigated options for connectivity in industrial estates at Capalaba and Cleveland, focusing on two technology solutions –

wireless point to multipoint and fibre to premise. Telstra, Optus and Nexium were approached for quotes. It was concluded that no options were viable.

SEQ Council of Mayor's have been advocating to government to try to get more trunk infrastructure to cities and increase connection from city to city.

North Stradbroke Island and Russell Island have been included in round 3 of the Australian Government's Black Spot Program. Telstra and Optus continue to engage with Council to try to solve Black Spot issues in the Redlands.

There is potential for Redlands to be involved in a submarine cable connection from Singapore, however it is anticipated that Council would need to contribute toward a tower build cost.

Council could also potentially be involved in a sensor network i.e. a Council site, power and Internet of Things (IoT) network.

The Information Management Group will continue to investigate opportunities and provide a report to Council at the appropriate time.

vii. Potential Cleveland Innovation Precinct

A Council officer from the Economic Sustainability and Major Project's Group presented information from consultant Aurecon about work being conducted for an early stage assessment of a potential Cleveland Innovation Precinct – a feasibility project funded under the State Government Maturing the Infrastructure Pipeline Program.

As part of the feasibility project, consultation was planned with stakeholders including schools and innovative businesses.

Identified issues for the potential Cleveland Innovation Precinct through the feasibility project included limited ICT infrastructure, regulatory barriers and funding. It could be an innovation generator and provide missing infrastructure.

viii. Redland Investment Corporation Update

A representative from the Redland Investment Corporation presented an update on the Corporation's projects.

STRATEGIC IMPLICATIONS

Legislative Requirements

There are no legislative requirements that affect the outcome of this report.

Risk Management

Identified risks to successful economic development in the City include:

- Failure to work in partnership with the business community, and other levels of government that will inhibit the delivery of the framework; and
- Failure to develop and implement industry action plans due to inadequate resourcing.

Financial

Budget has been allocated for:

- City-wide branding project;
- Industry sector action plans; and
- Innovation.

People

Advisory Board recommendations may impact upon staff resources within the Economic Sustainability and Major Projects Group; Communication, Engagement and Tourism Group; and Information Management Group.

Environmental

There are no identified environmental implications.

Social

A strong and vibrant economy allows a community to reinvest its wealth back into the society that helped contribute to that growth. The wellbeing of people, the environment and the economy are intricately linked. A strong and sustainable economy will be integrated and deliver benefits from across a range of sectors, through all parts of the City and across all demographic boundaries.

Alignment with Council's Policy and Plans

Relationship to Corporate Plan

The Advisory Board, through its role of overseeing the implementation of the *Redland City Economic Development Framework 2014-2041*, supports Council's strategic priority of delivering a supportive and vibrant economy. In addition, the Framework will also:

- Provide opportunity for business investment and local employment
- Develop a supportive vibrant economy that delivers business opportunities
- Promote local jobs
- Strengthen the tourism industry

CONSULTATION

The ninth formal meeting of the Advisory Board was overseen by the Economic Sustainability and Major Projects Group with input from the following:

Internal

- Communication, Engagement and Tourism Group
- Information Management Group

External

- REMPLAN
- Aurecon
- Redland Investment Corporation

OPTIONS

Option One

That Council resolves to note the report to Council from the Advisory Board meeting held on Tuesday 13 March 2018.

Option Two

That Council resolves to request additional information on the Advisory Board meeting held on Tuesday 13 March 2018.

COUNCIL RESOLUTION 2018/48

Moved by: **Cr Peter Mitchell**
Seconded by: **Cr Mark Edwards**

That Council resolves to note the report to Council from the Advisory Board meeting held on Tuesday 13 March 2018.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

Cr Hewlett declared a perceived conflict of interest in the following item, stating:

"In regards to this item, I declare that my brother-in-law, Peter James Dowling is a local residend and has also made a submission against this proposal. But I have considered my position and am firmly of the opinion that I can participate in the debate and vote on this matter in the public interest"

Cr Hewlett voted in the affirmative.

13.5 MCU17/0123 - 100-102 COLLINS ROAD, REDLAND BAY - CHILD CARE CENTRE

Objective Reference: **A3133617**

Authorising Officer: **Louise Rusan, General Manager Community & Customer Services**

Responsible Officer: **David Jeanes, Group Manager City Planning & Assessment**

Report Author: **Tony Thompson, Planning Officer**

Attachments:
1. **Site Aerial and Locality Map**
2. **Zoning Map**
3. **Catchment Plans**
4. **Architectural Plans**

PURPOSE

Council has received an application seeking a Development Permit for a Material Change of Use that was lodged by Wellington Property Management Pty Ltd c/-Urbicus on land at 100-102 Collins Street, Redland Bay, owned by Mark Jamin Tchirpig for the purpose of a Child Care Centre. The site is zoned Urban Residential. The applicable zone code identifies the proposed development as impact assessable. This application is referred to the General Meeting of Council for determination at the request of the Divisional Councillor.

The application has been assessed against the relevant provisions of the Redlands Planning Scheme and the proposed development is considered to comply with the scheme. The key issues identified in the assessment are:

- Non-Residential Use in Urban Residential Zone
- Scale of Use
- Noise Impacts
- Privacy and Amenity
- Design and Streetscape
- Traffic and Access

It is recommended that the application be granted a Development Permit.

BACKGROUND

Planning History

There is no relevant planning history pertaining to the subject site. It is noted that an application was lodged over 89, 91–101 Collins Street, Redland Bay to the west on 23 March 2018 for a Material Change of Use for a Service Station, Indoor Sport and Recreation, Food and Drink Outlet and a Child Care Centre and Reconfiguring a Lot 2 into 4 lots.

ISSUES

Development Proposal

The application is for a Material Change of Use for a Child Care Centre and is summarised as follows:

- construction of a 2 storey building with a maximum height of 8.4m above natural ground level;
- front setback – 4m from Collins St (setback varies from 4m to 6.1m along this frontage);
- secondary frontage setback – 19m from Torquay Street;
- northern side setback – minimum 3.9m;
- eastern side setback – minimum 1.3m, with the majority of the building setback 3.2m;
- the proposed building will have a gross floor area of 578m2 and site cover of 31%. This will consist of 5 learning rooms, 4 prep rooms, 2 sleep areas, 6 storerooms, kitchen, staff area, plant room, 3 primary bathrooms, laundry, reception, powder room, and lift;
- the proposed centre will accommodate 75 children from 0 - 5 years of age and 12 staff members;
- proposed operating hours are 6:00am to 7:00pm – Monday to Friday;
- outdoor play areas are located to the west, north and east of the building and enclosed on the first floor. A total of 543m2 of outdoor play space is proposed on the site;
- a total of 23 car parking spaces are provided – 12 for the centre staff, 11 for pickup and drop-off and service bay. All access is via a single driveway on Torquay Road;
- landscaping on all boundaries/frontages; and
- 2m high acoustic fence to all common residential boundaries.

Site & Locality

The site has an area of 1,531m² and accommodates an existing dwelling, carport, outbuilding and ancillary improvements. The topography of the site slopes north away from Torquay Road (18.25m Australian Height Datum (AHD) at Torquay Road frontage to approximately 17m AHD at the northern boundary). The site contains a mix of native and exotic species. Most trees are clustered around the corner of the front boundary and some exotic palms along the northern side boundary.

The site has frontage to Collins Street and Torquay Road. Both frontages contain an existing pedestrian footpath.

The area is an established residential area, characterised by low density detached dwellings on a mixture of urban residential zoned lots generally ranging from 500m2 – 800m2.

The site to the east accommodates a single level detached dwelling and the northern adjoining lot is currently vacant. However, on 12 December 2017 a building approval (BX315172) was issued for a two storey dwelling on this northern adjoining lot.

Directly across the road to the west is large lot containing a dwelling house. This lot is partly zoned Local Centre and partly Urban Residential. Further to the west, fronting Bankswood Drive and Donald Road is a neighbourhood centre accommodating small format shops and health care services (Ave Maria Medical Centre).

Application Assessment

Planning Act 2016

The application has been made in accordance with the *Planning Act 2016* Development Assessment Rules and constitutes an application for Material Change of Use under the Redlands Planning Scheme.

SEQ Regional Plan 2017

The site is located within the Urban Footprint in the SEQ Regional Plan 2017.

State Planning Policies & Regulatory Provisions

State Planning Policy / Regulatory Provision	Applicability to Application
Koala Habitat Area	The site falls within the Priority Koala Assessable Development Area and is mapped "medium value other". The vegetation identified on the site consists of natives and exotic landscaping species, and six Non-Juvenile Koala Habitat (NJKHT) trees to be removed. The site is not mapped in Bushland Habitat, nor Medium or High Value Rehabilitation Habitat Areas. As such, there are no replanting or offset requirements under Schedule 11, Part 6. Schedule 11, Part 6, Section 2(2)(a) to (e) requires maintenance of koala movement ability as much as possible given the proposed layout. Section 3 (habitat connectivity) acknowledges that surrounding development reduces koala movement and connectivity. That is the case here as the surrounding area is urbanised with very sparse koala habitat trees and development density that blocks koala movement. The proposal is considered to comply given the Section 3 provisions. Section 2 (c) requires koala protection measures during vegetation clearing. A condition for a fauna spotter has been included.
State Planning Policy 2017 (SPP)	In accordance with Part E: Development Assessment Requirements of the SPP, no assessment against the SPP is required for this development.

Redlands Planning Scheme

The application has been assessed under the Redlands Planning Scheme version 7.1. The application is subject to impact assessment. In this regard, the application is subject to assessment against the entire planning scheme. However it is recognised that the following codes are most relevant to the application:

- Urban Residential Zone Code
- Child Care Centre Code
- Acid Sulphate Soils Overlay Code
- Road and Rail Noise Corridor Overlay Code
- Infrastructure Works Code
- Development Near Underground Infrastructure Code
- Access and Parking Code
- Excavation and Fill Code
- Stormwater Management Code

The proposed development has been assessed against the applicable codes and is considered to comply with the scheme. The most pertinent parts of this assessment are discussed below.

Non-Residential use in Urban Residential Zone

Within the Urban Residential Zone Code, a Child Care Centre is subject to impact assessment, but is not identified as an inconsistent use.

Probable Solution P1.3 (1) of the zone code provides the deemed to comply solutions in relation to non-residential uses within the Urban Residential Zone, namely:

(a) located on the corner of collector or higher order roads
(b) where of –

(ii) community facilities, health care centres, child care centres, or uses of a similar community nature –

a. are 400m² or less of gross floor area per use;
b. are co-located with other similar uses or retail or commercial uses.

The two elements within this probable solution relate to the location of the proposal and the scale of the use.

The use meets the location test as the proposal is located on the corner of a trunk collector and co-located with other similar uses to the west. However, the use does not meet the scale element of this provision as the proposal has a gross floor area (GFA) greater than 400m² (591m² of GFA is proposed).

As the proposal does not meet the probable solution, assessment must be undertaken against the relevant specific outcome.

Specific Outcome S1.3(1) states the following:

S1.3 (1) "non-residential uses, such as…child care centres…may be contemplated in appropriate locations and subject to detailed development requirements including:

(a) being located on the major road network;
(b) co-locating with other similar uses;
(c) providing only for the identified convenience needs of the local community;
(d) not impacting on the role and function of the City's network of centres; and
(e) resulting in positive economic and social benefits for the local community

The proposal has demonstrated that it meets the Specific Outcome S1.3(1) as outlined below:

(a) being located on the major road network

The subject site is located on the major road network, with Collins Street identified as a trunk collector road.

(b) co-locating with other similar uses

The subject site for the proposed Child Care centre is on a prominent corner lot amongst detached residential housing; however it will still facilitate the co-location of existing and future commercial and community uses, in association with the adjacent Local Centre. The Local Centre zoning directly across Collins Street to the west currently provides for a range of centre uses such as small format retail, cafés and a Medical Centre (Ave Maria), which are community focal points. The Local Centre zoning extends along Donald Road to Collins Street and is intended to provide other commercial or community uses in this location. The two sites are closely located together along a major road, allowing multiple services to be accessed in one trip, as well as being located close to public transport options.

(c) Providing only for the identified convenience needs of the local community

The Probable Solution's scale test identifies '400m² or less of gross floor area per use', which amounts to a centre of approximately 45 students. This deemed to comply GFA has been scaled to fit a local context.

In addressing this Specific Outcome, the proposal must demonstrate that it provides only for convenience needs of the local community.

With this in mind, a Childcare Needs Assessment prepared by Business Geographics Pty Ltd first assessed the current market environment.

> *"At present (2017) there are five long day care centres in Redland Bay supplying a total of 340 places to an estimated market of 988 children under 5. This represents a ratio of 2.91 children per childcare place.*
>
> *The average occupancy rate is estimated at 87.16% which indicates a supply restriction in which there is limited choice."*

The existing Child Care Centres are located to the north and were established when earlier waves of residential development occurred in Redland Bay. The five centres operate within less than 1km radius from each other, where traditional residential growth is concentrated. Since the establishment of these centres, residential development has extended further south, with this southern catchment not currently locally serviced by a Child Care Centre.

The needs analysis surveyed the five Childcare Centres making the following commentary:

> *"for children over 2, two (2) centres reported vacancies, one (1) centre reported very limited vacancies and (two) centres reported no vacancies. It is worth noting that the only centre in nearby Mt Cotton also reports no vacancies …. likely contributing to demand pressures in Redland Bay".*

Additionally, the study also notes that there are 205 children under the age of 5 on the Southern Moreton Bay Islands without access to local Child Care services (except 50 places on Macleay Island) which may provide further demands for Redland Bay.

The Specific Outcome seeks the proposal to provide only for the convenience needs of the local community. The economic analysis adopts a 2km radius for the catchment that would allow "convenient" access to Child Care services. A 2km catchment is typical for Child Care Centres in metropolitan markets and is considered adequate in this context based on the local demographic makeup and actual daily travel time to the site.
The needs assessment made the following findings and conclusions:

> *"In 2018 there are an estimated 520 children under the age of 5 within 2km of the subject site with no local long day care centres. This equates to demand for 156 places per day which is currently serviced elsewhere or not eventuated. Moreover, the catchment is the focus of most new residential development activity and population growth in Redland Bay. The population of children aged under 5 is forecast to increase by 100 children to 620 children by 2023. This equates to demand for an additional 30 places per day"*

The above shows pertinent socio-economic evidence of the nature of the potential local demand. It is considered that an additional Child Care service at this subject site would be expected to benefit the local community by being easily accessed by walking/car, reducing waiting times for nearby residents by meeting a supply restriction and allowing parents to ultimately return to the workforce faster. Council's research economists confirm that these findings are sound.

It is therefore considered that the proposal meets the Specific Outcome as it adequately demonstrates the convenience needs for a Child Care Centre to service the local community. The scale of the operation (75 students) meets approximately half the anticipated demand in the local defined catchment.

(d) Not impacting on the role and function of the City's network of centres

Firstly, with regard to the City's network of centres, the Strategic Framework and Desired Environmental Outcome No. 6 in the Redlands Planning Scheme encourages the development of centres in accordance with a functional network, with individual centres of varying levels differentiated from one another on the basis of a centre matrix that distinguishes centre role and function, scale and use composition. Major centres serve a large catchment and provide higher order commercial, retail, administrative, community and entertainment facilities. District and neighbourhood centres service smaller catchments and offer a more modest range of goods and services.

Local centres effectively fill the gaps between the larger centres and provide a more limited range of goods and services. Local centres have a catchment of less than 7500 persons, except for Colburn Avenue, Victoria Point where the catchment size is reduced to reflect locational circumstances. With this in mind, the Redlands Planning Scheme 2006 (RPS) is a regulatory tool which guides development to preferred locations. Commercial uses are encouraged in well-defined centres in order to make efficient use of services such as public transport, allowing users to access a number of commercial services within the one trip, allowing commercial tenants to build supply chains and leverage off of other tenants and to reduce the impacts of non-residential uses on residential areas. The current and draft planning schemes support development within the Centres, and in particular for this proposal the local centre to the west.

The adjacent local centre is predominantly developed on the western side with commercial and retail uses, with approximately 1810m2 of developable vacant land fronting Donald Rd and Collins Street. As mentioned, the current tenancies that are filled (retail, medical centre and pharmacy) share co-locational qualities with the proposed Child Care and it is considered that this does not have a detrimental impact to the existing centre viability.

Furthermore, Council has received applications seeking Development Permits for Reconfiguring a Lot and Material Change of Use for Service Station, Refreshment Establishment, and Indoor Recreation (swim-school) on part of the vacant centre and urban residential zoned land.

However, the centre zoned proposal also seeks a Development Permit for a Child Care Centre. As such, the argument of this potential development failing, and thus affecting natural centre expansion has merit, due to it hinging on the feasibility of also proposing Child Care services.

Because of this, Council required further catchment and market studies to demonstrate that the 'out of centre' development would not compromise the viability of a future Child Care Centre within the Local Centre zone.

The needs assessment demonstrated that there is a local demand for 150+ places and this is forecast to increase. The current application involves 75 places, representing approximately half of this current demand. Using the applicant's claim that a viable Child Care Centre needs to cater for at least 75 places, this would leave sufficient local demand to contain a second Child Care Centre within the Local Centre Zone. This is also not including the greater catchment which is also experiencing a supply restriction due to emerging residential developments. Thus, the proposal does not preclude the development of another Child Care Centre on the adjacent site.

With respect to the above then, when viewed in context and relative to the city's network of centres, the proposal is minor in scale and will service a demonstrated need for Child Care services.

(e) Resulting in positive economic and social benefits for the local community

The needs assessment prepared by Business Geographics Pty Ltd presented the following conclusion, among others, on how the proposed development provides 'economic and social benefits for the local community':

> *"Long Day Care is an important community service as it is seen as both a mechanism to support labour force participation and as an important form of early learning and education. Access to affordable and quality childcare increases opportunities for new parents to engage in the workplace and contribute economic benefits to the community."*

The addition of local and convenient childcare options increases the likelihood of parents re-entering the workforce or increasing their hours at work. It is considered that this will also increase long day care participation and drive demand that otherwise would go unserviced. The economic analysis also makes the following statement:

> *"This increased income and economic activity also has economic benefits for the local community with an increase in disposable income available to families and increases local expenditure on goods and services."*

The proposed use has demonstrated that it will provide a positive economic benefit for the community in terms of reinvesting in the City by creating business linkages with adjacent/local businesses and providing employment opportunities for locals. It highlights the social contributions it provides for the Young Parent labour force and educational benefits for young children. It also promotes other positive social benefits, particularly for their interaction with other young parents/families in the community.

Council's Research Economist confirms that the methodology of the needs assessment study is sound. The proposal is considered to satisfy the specific outcome in regard to having positive economic and social benefits.

With due respect to the above, the proposal has sufficiently demonstrated compliance with Specific Outcome S1.3(1) of the Urban Residential Code.

<u>Scale of use</u>

Probable Solution P1.2 of the Child Care Centre Code identifies the following:

> *P1(1) The use is located on land having less than 10 percent slope (1 in 10) and a minimum area of –*
>
> *(a) 1500m² for up to 40 children; or*
> *(b) 2200m² for between 40 – 75 children; or*
> *(c) for more than 75 children, no probable solution identified.*

The proposal has an area of 1,531m2 and accommodates 75 children and therefore does not meet the probable solution for minimum site area. The proposal must therefore be assessed against Specific Outcome S1.2(1) of the Child Care Centre Code, which states:

> *S1(1) The use is located on a site having a size and configuration that enables it to accommodate a well-designed facility incorporating –*
>
> *(a) all required buildings and structures;*
>
> *(b) vehicle access, parking and manoeuvring areas;*
>
> *(c) adequate provision for both external play areas and internal activity areas, including sleep areas;*
>
> *(d) waste management and other service functions;*

(e) emergency vehicle access;

(f) landscaping, planting and buffering.

The proposal has demonstrated through design and layout that the site is sufficient in size to accommodate the use, including landscaping, parking, access, and waste management components of the specific outcome. This is further explained below. Outdoor play areas have been provided at the prescribed rate of 7m² per child as per the Education and Care Services National 2013 Act/ Regulation and the building and car parking areas are appropriately setback from property boundaries.

Accordingly, it has been demonstrated that the facility complies with Specific Outcome S1.2(1) of the Child Care Centre Code.

Noise Impacts

Specific Outcome S3.8 (1) of the Urban Residential Code prescribes:

S3.8(1) 'noise generated by the use or other development is compatible with that experienced in a residential environment'

S2 (2) of the Child Care Centre Use Code prescribes:

S2(2) 'location of play areas minimises noise impacts' to adjoining properties'

The applicant has provided an Acoustic Report prepared by Assured Monitoring Group (AMG) which outlines that significant setbacks in combination with acoustic walls on common boundaries and attenuated first floor play areas will minimise operational noise. Furthermore, it assessed road noise generated by Collins Street as part of Road and Rail Overlay buffer, concluding that internal noise levels will also be acceptable. With these measures the report has confirmed that this 'use will generate noise compatible with that experience in a residential environment' and achieves the acoustic quality objectives of Schedule 1 of the Environmental Protection (noise) Policy 2008.

It is also noted that the proposed hours of operation are – Monday to Friday, from 6:00am to 7:00pm, yet the acoustic analysis performed was for a typical work day Monday – Friday, 6:00am – 6:00pm. The hours proposed are outside the acoustic studies parameters. The applicant has submitted a letter signed by an AMG acoustic engineer confirming the extended hours do not change the predicted noise conclusions and any noise generated at this time remains compatible with that experienced in a residential zone.

Council's Environmental Health unit has reviewed the acoustic study in its entirety and considers its methodology and drawn conclusions appropriate.

Privacy and amenity

Privacy

Specific Outcome s3.3 (1) of the Urban Residential Code seeks the following:

s3.3 (1) *Building layout and design maximise privacy (visual and acoustic) through –*

(a) locating habitable rooms so they do not directly overlook habitable rooms of adjacent uses, either within or adjoining the use;

(b) separating noise generating areas from sleeping areas.

The proposal sits on higher topography than adjoining residential lots with first floor play areas located at a level where overlooking might occur. As such, the proposed development has provided acoustically glazed and obscured glass on the first-floor windows of the northern and

eastern elevations to a height of 1.8m. This will restrict any overlooking from the first floor and is considered to achieve Specific Outcome s3.3(1).

Amenity

The proposal includes retaining walls along the western (Collins Street), northern and eastern boundaries. On the northern and eastern boundaries, which adjoin residential lots, a 2 metre high acoustic fence is located on top of the retaining wall. At its highest point, the retaining wall is 1 metre above ground level.

Specific Outcome S1(1) of the Excavation and Fill code seeks the following:

S1(1)(1) excavation and fill –

(a) does not reduce the amenity of adjoining properties through the –

(i) loss of solar access or privacy;

(ii) intrusion of negative visual or overbearing impacts;

(iii) ensuring retaining walls or structures –

a. are constructed of materials that are of a high quality appearance;

b. incorporate landscaping or other features to assist reducing their visual bulk and length;

c. do not dominate over, and are of an appropriate scale to buildings / structures and land uses in the locality;

It is noted that the combined heights of the retaining wall and acoustic fence is 3 metres at its maximum at the north-east corner of the site, and tapers down to the west and south. The height is mostly located in this north east corner and not along the whole northern or eastern boundary. The combined height is progressively reduced from east to west from 3m (North East corner) to 2m (at Collins Street).

Plans were revised to incorporate a combination of transparent polycarbonate acoustic glazing and timber panels where the combined height exceeds 2m in the north/east corner of the site. Where the combined height is 3m, the acoustic fence consists of timber to a height of 1m and polycarbonate glazing for 1m. It is considered that the glazing reduces any overbearing impacts of the wall/fence on the adjoining residential land. Additionally, as the fence is on the southern side of the residential land, solar access is not compromised. Due to its transparency more of the internal landscaping of the proposal can be seen creating varied levels of visual interest on the property boundaries. Where glazing is provided less than 1.5m from finished ground level the glazing is opaque to address privacy issues. The applicant has also submitted further advice prepared by AMG noise consultancy that the acoustic performance of the fence will not be compromised.

In this regard it is considered that the proposal meets Specific Outcome S1 of the Excavation and Fill Code.

<u>Design and Streetscape</u>

Specific Outcome S2.3 of the Urban Residential Zone Code seeks the following:

S2.3 Setbacks -

(a) complement existing front setbacks in the street;

(b) maximise the usability of side and rear setbacks for outdoor open space areas, privacy and solar access for the occupants and adjoining uses.

The frontage to Collins Street has a minimum setback of 4m (to the stairwell). The front setback staggers with a 6m setback provided to Collins Street at ground level reducing to 4m. This provides a transitioning of setbacks toward the intersection. The extent of building setback 4m to Collins Street is limited to 6m in length along a frontage of 34m. It is also noted that the established setback is varied further north along the eastern side of Collins Street. There are large dwelling structures which are setback to approximately 2m, with landscaped retaining and block work fencing interfacing Collins Street. Where the proposal is setback 4m from the front boundary on the upper floor this includes landscaped trellises to provide visual relief from bulk and articulation from a street perspective.

The proposal has a northern side setback of 5.5m on ground floor, 3.9m for the first floor and an eastern site setback of 1.2m to the wall. The proposal has maximised the useability of side setbacks, with increased ground floor setbacks to increase open space at the rear. The western side setback of 1.2m only occurs at the laundry room; a small portion of the building line, where the habitable areas area setback 3.2m from the boundary. The height at the eaves at the side boundaries are approximately 5.8m, and combined with larger setbacks will have negligible impact on solar access and ventilation to occupants and adjoining lots. As mentioned, privacy issues have been ameliorated.

It is considered that the proposal compliments the existing street scape and ameliorates impacts through design, landscaping and appropriate articulation. The proposal is setback appropriately from side boundaries to not impact on solar, ventilation or privacy and maximise useable ground floor space. As such, the proposal satisfies Specific Outcome S3.8 (1) of the Urban Residential

Landscaping

Specific Outcome S3(1) of the Child Care Centre Code seeks the following:

S3 (1) planting is used to present an attractive appearance to the streetscape;

The proposal includes deep planting to the Torquay Road and part of the Collins Street frontages, which assists in softening the hardstand surfaces (carpark). For the balance of the Collins Street frontage, landscaping is provided behind a semi-transparent fence (50% openings), which will allow the internal landscaping to be seen from the road. This, in combination with upper floor landscaping trellises, is considered to present an attractive streetscape and satisfy the Specific Outcome.

<u>Traffic and Access</u>

A Traffic Engineering Report prepared by BMC Traffic presented the following findings to demonstrate how the proposed development addresses impacts on the surrounding road network:

"Reference to Department of Transport and Main Roads' Road Planning and Design Manual suggests that long day care generates some 0.8 vehicle trips per child in the road network during peak hours. Application of the rate to the proposed 75 child facility anticipates a peak hour traffic generation of 60 trips.

On the basis that parent trips consist of both in and out during the road network peak hours (short duration drop-off/pick-up), plus allowing for staff arrivals in the AM peak hour and departures in PM peak hour provides the following rates:

- *AM peak hour: 60% in / 40% out; and*

- *PM peak hour: 40% in / 60% out*

With respect to the above assumptions, the following traffic volumes are anticipated:

- *AM peak hour: 36 in / 24 out; and*
- *PM peak hour: 24 in / 36 out.*

The above rates correspond to one trip every one-to-two minute in the road network peak hour in the peak directions on Collins and Torquay Road."

Collins Street has a Trunk Collector classification with a maximum capacity of 10,000 vehicles per day (v.p.d) and Torquay Road is a Local Street with a capacity of 1000 v.p.d as per Schedule 6 of the Redlands Planning Scheme.

In addition to the above, a more recent traffic survey submitted to Council indicates 4355 v.p.d on Collins Street (north and south bound) and 490 v.p.d (eastbound) on Torquay Road, which is still well below the maximum road capacities. It's therefore considered that the current capacity of both roads is able to absorb the current and future anticipated traffic generation, and it is not expected that traffic will result in unacceptable impacts to the surrounding road networks. The driveway access is located on the lower order road and it is considered to be located at an acceptable distance from the roundabout to not cause impacts to public safety or decrease the efficiency of the roundabout. The peak times of use are at a rate that will facilitate servicing, drop off and pick up queuing efficiently and if there is overflow queuing for car parking involved offsite car parking/stacking can be facilitated safely on Torquay Rd or close local streets. The study also demonstrated that, pedestrian connectivity is achieved and internal vehicle turning is effective.

Car Parking

Probable Solution P4 of the Child Care Centre Code seeks that car parking achieves the following:

- *1 space per employee; and*
- *1 space per 7 children.*

To meet the deemed to comply solution, the development would need to provide 23 spaces, with 12 parking spaces for staff and 11 spaces for pick-up/drop off. The proposal has provided 23 car parks, with the appropriate provision of 12 staff parking bays and 11 pick-up/drop off spaces. However, 1 drop-off/pickup parking bay is also a service vehicle bay. It is considered that there are sufficient spaces on the site, as any servicing activities using the service bay will be outside of peak pick-up/drop off times.

Council's Engineering Assessment Unit have reviewed the traffic and parking study and considers the conclusions drawn above are acceptable and satisfies the Specific Outcome S1. (1) of the Access and Parking Code.

Stormwater management

The applicant provided a revised concept services plan detailing the site based stormwater management to be implemented. The plan identifies stormwater discharge to existing infrastructure within Torquay Road. The management plan also indicates that stormwater is to be treated with first flush diverters and litter baskets.

Council's Engineering and Environment Assessment Unit has reviewed the revised stormwater plan and considers it appropriate for the use in regard to lawful point of discharge and stormwater quality. Accordingly, the proposal has satisfied Specific Outcome S1 of the Stormwater Management Code.

Infrastructure Charges

The proposed development is subject to infrastructure charges in accordance with the State Planning Regulatory Provisions (adopted charges). The total charge applicable to this development is:

Total charge: $65,405.30

This charge has been calculated as follows in accordance with Council's Adopted Infrastructure Charges Resolution (No. 2.3) August 2016.

Notice #001783

Non-Residential Component	
578m2 GFA Child Care Centre X $141.65m2	$81,873.70
Stormwater Infrastructure	
1,175m2 Impervious Area X $10.10m2	$11,867.50
Demand Credit	
1 X 3 bedroom residential dwelling X $28,335.90	$28,335.90
Total Council Charge:	**$65,405.30**

OFFSETS

There are no offsets that apply under Chapter 4 Part 2 of the *Planning Act 2016*.

REFUNDS

There are no refunds that apply under Chapter 4 Part 2 of the *Planning Act 2016*

State Referrals

N/A

Public Consultation

The proposed development is impact assessable and requires public notification. The application was publicly notified for 15 business days from 18 January 2018 to 9 February 2018. A notice of compliance for public notification was received on 10 February 2018.

There were 40 submissions received by Council, 36 of which were properly made submissions. A petition with 78 signatures was received outside the notification period.

The matters raised within these submissions are discussed below.

1.	**Issue:** Traffic Concerns of traffic congestion, safety at the roundabout of Collins Street and Torquay Road, access and parking, access point safety impacts to vehicles, children, pedestrians and cyclists, on street parking issues.
	Applicant Response Refer Traffic Engineering Assessment Report Prepared by BMC Traffic.
	Officer's Comment A Traffic study prepared by BMC traffic, signed by a register traffic engineer concluded that the use minimised road safety issues/nuisances, had appropriate parking and will not cause the unacceptable operation of or traffic delays on surrounding road networks. Council's Engineering Assessment officer concurs with these conclusions.
2.	**Issue:** Amenity General residential amenity, noise, visual, odour and privacy/overlooking concerns with children, traffic, mechanical plant, and events held at the premise.

	Applicant Response Refer to Acoustic Assessment prepared by AMG Consultants.
	Officer's Comment A noise study prepared by AMG, signed by a registered acoustic engineer concluded that all noise generated by the use during operating hours is considered to be compatible with that experienced in a residential environment, achieving the acoustic quality objectives stated in Schedule 1 of the Environmental Protection (noise) Policy 2008. Waste collection has been revised to not adjoin common boundaries. There is no indication that events are going to be held, and if it can be determined as an 'event', there is no indication that this will be outside the acceptable acoustic parameters. If there is an occasion that creates noise outside what is experienced in a residential area, then compliance action can be taken. The Redlands Planning Scheme defines the Child Care Centre as a premise for minding or care of children under school age (kinder garden, crèche, preschool and after school care). Any new use, or temporary use associated with this would be subject to another assessment. Specific Outcome S3.3 (1) or the Child Care Centre Code outlines that building layout and design maximises privacy. The proposal includes obscure glazing up to 1.8m high on all acoustically treated windows on the first floor to restrict overlooking of adjoining premises.
3.	**Issue:** Land Use Non-residential commercial use in residential zoning, inappropriate use for residential area, particularly with vacant adjacent land.
	Applicant Response Proposal is a 'community' use not 'commercial' and co-locates with adjacent local centre uses.
	Officer's Comment The urban residential zone anticipates some non-residential uses, including child care centres, provided they are appropriately located, designed and of a scale that caters for local community needs. The proposal has demonstrated that it meets both the location and scale elements of the zone code.
4.	**Issue:** Economic Need There is no need for a child care centre at this location. Child care centres and family home child care already available in Redland Bay. The cumulative economic impacts of the proposed development will undermine the viability of the established local business and conflict with the intended outcomes of the centre.
	Applicant Response Refer to Childcare Needs Assessment Prepared by Business Geographic's Pty Ltd. Proposed Childcare centre demonstrates that the local 2km catchment demand is expected to increase by 2023. Currently the 2km catchment is undersupplied and there is sufficient locally generated demand to support two (2) childcare centres in the local areas of minimum 75 places.
	Officer's Comment The applicant's needs assessment identifies low vacancy rates for existing child care centres and has demonstrated a need for at least two 75 place childcares for this local catchment in the southern part of Redland Bay. It demonstrated that the proposal co-locates with similar adjacent uses and does not compromise the role of this local centre.
5.	**Issue:** Built Form Built form is not consistent with residential zoning. The building is too large, being over 50% when including car parking and is not in keeping with the community expectations for a residential lot.
	Applicant Response Built form is limited to 2 storeys and does not exceed the maximum allowable building height for dwelling houses within UR zone. It's noted that existing residential streetscape is characterised by mix of 1 and 2 storey buildings. Site Cover is less than the 50% allowed for the UR zone Building setbacks to all common boundaries exceed the minimum setback required for detached dwellings.
	Officer's Comment The built form is maintained at 2 storeys and less than 8.5m, with a site cover that is limited to 34% and appropriate setbacks to property boundaries. The proposal uses a variety of materials, colour schemes, protrusions, vertical and horizontal elements to create visual interest and provided sufficient ground level landscaping to break up hardstand surfaces. As such, it is considered to be appropriate with respect to the outcomes of the zoning and residential typology of the area.
6.	**Issue:** Loss of Property Values Approval of this development application would potentially devalue neighbouring properties and the area as a whole.

	Applicant Response Not Provided
	Officer's Comment The devaluation of properties is not a valid planning ground and is not considered in the assessment of this application. The application assessment does, however, consider the impact on amenity to surrounding properties, and this is discussed above.

Deemed Approval

N/A

STRATEGIC IMPLICATIONS

Legislative Requirements

In accordance with the *Planning Act 2016* this development application has been assessed against the Redlands Planning Scheme V7.1 and other relevant planning instruments.

Risk Management

Standard development application risks apply. In accordance with the Planning Act 2016 the Applicant may appeal to the Planning and Environment Court against a condition of approval or against a decision to refuse. A submitter also has appeal rights.

Financial

If approved, Council will collect infrastructure contributions in accordance with Council's Adopted Infrastructure Charges Resolution.

If the development is refused, there is potential that an appeal will be lodged and subsequent legal costs may apply.

People

Not applicable. There are no implications for staff.

Environmental

There are no environmental issues related to this application.

Social

Social implications are detailed within the assessment in the 'Issues' section of this report.

Alignment with Council's Policy and Plans

The assessment and officer's recommendation align with Council's policies and plans as noted within this report.

CONSULTATION

The assessment manager has consulted with other internal assessment teams where appropriate. Advice has been received from relevant officers and forms part of the assessment of the application.

OPTIONS

Option One

That Council resolves to adopt the officer's recommendation to issue a development permit subject to conditions.

Option Two

That Council resolves to approve without conditions or subject to amended conditions.

Option Three

That Council resolves to issue a preliminary approval subject to additional requirements.

Option Four

That Council resolves to refuse the application (grounds for refusal will need to be established by Council).

OFFICER'S RECOMMENDATION

That Council resolves to issue a Development Permit for a Material Change of Use for a Child Care Centre on land described as Lot 1 on RP190688 and situated at 100-102, Collins Street, Redland Bay, subject to the following conditions:

ASSESSMENT MANAGER CONDITIONS	TIMING
1. Comply with all conditions of this approval, at no cost to Council, at the timing periods specified in the right-hand column. Where the column indicates that the condition is an ongoing condition, that condition must be complied with for the life of the development.	
Approved Plans and Documents	
2. Undertake the development in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval and any notations by Council on the plans.	Prior to the use commencing and ongoing.

Plan/Document Title	**Reference Number**	**Prepared By**	**Plan/Doc. Date**
Proposed Ground Floor Plan	1674/DA10/F	Husband Architects	4/05/2018
Proposed First Floor Plan	1674/DA11/E	Husband Architects	4/05/2018
Section A-A/Section B-B/Section C-C	1674/DA20/G	Husband Architects	4/05/2018
North/South/East Elevations	1674/DA30/F	Husband Architects	4/05/2018
Collins Street West Elevation	1674/DA31/E	Husband Architects	4/05/2018
Entry View	1674/D40/E	Husband Architects	4/05/2018
Collins Street View 1	1674/D41/E	Husband Architects	4/05/2018
Collins Street View 2	1674/D42/E	Husband Architects	4/05/2018
Concept Services Plan	17141/SK20 Rev A1	Morgan consulting engineers	15/12/2017
Traffic Engineering Assessment Report	BMC18033	BMC Traffic	1 November 2017
Landscape Concept Plan	1709-L-SD01/Ground Floor/Rev2	ASdesign	Received 9/5/2018
Landscape Concept Plan	1709-L-SD01/First FloorFloor/Rev2	ASdesign	Received 9/5/2018
Noise Impact Assessment	Project ID.11084 R_O	AMG - Assured Monitoring Group	1/11/2017
Noise Impact Assessment – Addendum A dated 14/12/2017	Reference: 11084 R_O	AMG - Assured Monitoring Group	14/12/2017
Noise Impact Assessment – Addendum B dated 17/04/2018	Reference: 11084 R_O	AMG - Assured Monitoring Group	14/12/2017
Noise Impact Assessment – Addendum C dated 8/05/2018	Reference: 11084 R_O	AMG - Assured Monitoring Group	8/05/2018

Table 1: Approved Plans and Documents

Land Dedication and Design	
3. Locate, design and install outdoor lighting, where required, to minimise the potential for light spillage to cause nuisance to neighbours.	Prior to the use commencing and ongoing.
Hours of Operation	
4. Operate the approved use between the hours of 6:00am to 7:00pm Monday to Friday.	Ongoing
Conditioned Works Assessment	
5. Submit to Council, and receive approval for, Conditioned Works Assessment for the documents and works referred to in Table 2:	Prior to site works commencing.

Document or Works Item	**Assessment Criteria**
Stormwater management	• Redlands Planning Scheme Part 8 Division 9 – Stormwater Management Code • Redlands Planning Scheme Part 11 Policy 3 Chapter 4 – Security Bonding • Redlands Planning Scheme Part 11 Policy 9 Chapter 2 – Documentation and General Conditions and Chapter 6 – Stormwater Management • Queensland Urban Drainage Manual
Water Supply and Sewerage	• SEQ Water Supply and Sewerage Design and Construction Code • Redlands Planning Scheme Part 8 Division 7 – Infrastructure Works Code • Redlands Planning Scheme Part 11 Policy 3 Chapter 4 – Security Bonding • Redlands Planning Scheme Part 11 Policy 9 Chapter 2 – Documentation and General Conditions, Chapter 7 – Water Reticulation and Chapter 8 – Sewerage Reticulation.
Waste Management Plan	• Redlands Planning Scheme Part 11 Policy 9 Chapter 16 – Waste Management.
Access and Parking	• Redlands Planning Scheme Part 8 Division 1 – Access and Parking Code • Redlands Planning Scheme Part 11 Policy 3 Chapter 4 – Security Bonding • Redlands Planning Scheme Part 11 Policy 9 Chapter 2 – Documentation and General Conditions and Chapter 15 – Access and Parking • Australian Standard 2890:2009 – Parking Facilities Set
Sediment and Erosion Control Plan/Program	• Redlands Planning Scheme Part 8 Division 6 – Erosion Prevention and Sediment Control Code • Redlands Planning Scheme Part 11 Policy 3 Chapter 4 – Security Bonding • Redlands Planning Scheme Part 11 Policy 9 Chapter 2 – Documentation and General Conditions and Chapter 4 – Erosion Prevention and Sediment Control • International Erosion Control Association Best Practice Erosion and Sediment Control document
Earthworks	• Redlands Planning Scheme Part 7 Division 6 – Excavation and Fill Code • Redlands Planning Scheme Part 11 Policy 3 Chapter 4 – Security Bonding • Redlands Planning Scheme Part 11 Policy 9 Chapter 2 – Documentation and General Conditions and Chapter 12 – Excavation and Fill. • Australian Standard 4678:2002 – Earth-retaining Structures • Australian Standard 3798:2007 – Guidelines on Earthworks for Commercial and Residential Development.
Construction Management Plan	• Redlands Planning Scheme Part 11 Policy 9 Chapter 2 – Documentation and General Conditions • Redlands Planning Scheme Part 11 Policy 3 Chapter 4 – Security

Bonding.	
Table 2: Conditioned Works Assessment	
6. Comply with all conditions and approved plans in the Conditioned Works Approval.	Prior to the use commencing.
Access, Roadworks and Parking	
7. Provide 23 car parks in accordance with approved site plan, and the total number must include at least 1 disability parking space. Access to car parking spaces, bicycle spaces, bin bays, vehicle loading and manoeuvring areas and driveways must remain unobstructed and available during the approved hours of operation. Loading and unloading operations must be conducted wholly within the site.	Prior to the use commencing and ongoing.
8. Submit to Council for approval, engineering plans and details showing the following frontage works are in accordance with the assessment criteria listed in Table 2: Conditioned Works Assessment of this approval: a) Road construction including concrete kerb and channel and road pavement; b) Footpath earthworks, top soiling and turfing of all disturbed footpath areas; c) Reinstatement of concrete kerb and channel where required; d) Removal of all redundant vehicle crossovers; e) Entry treatment/access to the site; f) Adjustment and relocations necessary to public utility services resulting from these works; g) A minimum 5.5m wide type R-RSC-3 permanent vehicular crossover to the Torquay Road frontage of the site.	As part of the request for conditioned works assessment.
Stormwater Management	
9. Convey roof water and surface water in accordance with the Redlands Planning Scheme Policy 9 Chapter 6 – Stormwater Management to: • A lawful point of discharge, Manhole Council asset No 148629, on Torquay Road.	Prior to the use commencing and ongoing.
10. Manage stormwater discharge from the site in accordance with the Redlands Planning Scheme Policy 9 Chapter 6 – Stormwater Management, so as to not cause an actionable nuisance to adjoining properties.	Prior to the use commencing and ongoing.
11. Submit to Council, and receive Conditioned Works approval for, a stormwater assessment that is generally in accordance with the approved concept services plan and addresses both quality and quantity in accordance with the Redlands Planning Scheme Policy 9 Chapter 6 – Stormwater Management, and the following: • Detailed drawings of the proposed stormwater quantity detention systems and any associated works. The drawings must include longitudinal and cross sections.	As part of request for conditioned works assessment.
12. Maintain all internal stormwater management devices for the life of the development in accordance with approved documentation and to manufacturer's specifications.	Ongoing condition.
Utilities	
13. Pay the cost of any alterations to existing public utility mains, services or installations due to building and works in relation to the proposed development, or any works required by conditions of this approval. Any cost incurred by Council must be paid at the time the works occur in accordance with the terms of any cost estimate provided to perform the works, or prior to plumbing final or the use commencing, whichever is the sooner.	At the time of works occurring.
14. Connect the development to external reticulated sewer, external reticulated water and underground electricity supply.	Prior to the use commencing.
Services	
15. Remove any redundant sewerage connections within the site or servicing the development and provide documentary evidence to Council or its delegate that this has occurred.	Prior to site works commencing.
16. Provide water connections and water meters in accordance with Council's Standard Drawings. Provide details to Council of the water meters and their locations.	Prior to on maintenance.

Excavation and Filling	
17. Undertake any required excavation and fill works in accordance with the following: a) Design retaining walls/structures to have a minimum design life of 60 years and to be in accordance with Australian Standard 4678:2002 – Earth Retaining Structures (as amended). b) Undertake compaction in accordance with Australian Standard 3798:2007 – Guidelines on earthworks for commercial and residential developments (as amended) and Australian Standard 2870:2011 – Residential Slabs and Footings (as amended). c) Comply with the relevant requirements of the *Building Regulations 200*6 (as amended) where involving gradients or embankments.	During construction.
Waste Management	
18. Install a screened refuse storage area, located as indicated on the approved plans for the development, for the storage of a minimum of 10 wheelie bins. The storage area must be impervious, well drained, provided with a hose cock, enclosed and illuminated for night time use.	Prior to the use commencing and ongoing.

ADDITIONAL APPROVALS

The following further Development Permits are necessary to allow the development to be carried out.

- Building Works approval.
- Building works – demolition:
- Provide evidence to Council that a Demolition Permit has been issued for structures that are required to be removed and/or demolished from the site in association with this development.

Further approvals, other than a Development Permit or Compliance Permit, are also required for your development. This includes, but is not limited to, the following:

- Conditioned works assessment as detailed in Table 2 of the conditions.
- Plumbing and drainage works.
- Capping of Sewer – for demolition of existing buildings on site.
- Road Opening Permit – for any works proposed within an existing road reserve.
- Food business licence in accordance with the *Food Act 2006*.

ASSESSMENT MANAGER ADVICE

- Infrastructure Charges

Infrastructure charges apply to the development in accordance with the State Planning Regulatory Provisions (adopted charges) levied by way of an Infrastructure Charges Notice. The infrastructure charges are contained in the attached Redland City Council Infrastructure Charges Notice.

- Live Connections

Redland Water is responsible for all live water and wastewater connections. Contact *must* be made with Redland Water to arrange live works associated with the development.
Further information can be obtained from Redland Water on 07 3829 8999.

- Coastal Processes and Sea Level Rise

Please be aware that development approvals issued by Redland City Council are based upon current lawful planning provisions which do not necessarily respond immediately to new and developing information on coastal processes and sea level rise. Independent advice about this issue should be sought.

- Hours of Construction

Please be aware that you are required to comply with the *Environmental Protection Act* in regards to noise standards and hours of construction.

- Survey and As-constructed Information

Upon request, the following information can be supplied by Council to assist survey and engineering consultants to meet the survey requirements:

a) A map detailing coordinated and/or levelled PSMs adjacent to the site.
b) A listing of Council (RCC) coordinates for some adjacent coordinated PSMs.
c) An extract from Department of Natural Resources and Mines SCDM database for each PSM.
d) Permanent Survey Mark sketch plan copies.

This information can be supplied without charge once Council received a signed declaration from the consultant agreeing to Council's terms and conditions in relation to the use of the supplied information.
Where specific areas within a lot are being set aside for a special purpose, such as building sites or environmental areas, these areas should be defined by covenants. Covenants are registered against the title as per Division 4A of the *Land Title Act 1994*.

- Services Installation

It is recommended that where the installation of services and infrastructure will impact on the location of existing vegetation identified for retention, an experienced and qualified arborist that is a member of the Australian Arborist Association or equivalent association, be commissioned to provide impact reports and on site supervision for these works.

- Fire Ants

Areas within Redland City have been identified as having an infestation of the Red Imported Fire Ant (RIFA). Biosecurity Queensland should be notified on 13 25 23 of proposed development(s) occurring in the Fire Ant Restricted Area before earthworks commence. It should be noted that works involving movements of soil associated with earthworks may be subject to movement controls and failure to obtain necessary approvals from Biosecurity Queensland is an offence. It is a legal obligation to report any sighting or suspicion of fire ants within 24 hours to Biosecurity Queensland on 13 25 23. The Fire Ant Restricted Area as well as general information can be viewed on the Department of Agriculture and Fisheries (DAF) website www.daf.qld.gov.au/fireants

- Cultural Heritage

The *Aboriginal Cultural Heritage Act 2003* requires anyone who carries out a land use activity to exercise a duty of care. Further information on cultural heritage duty of care is available on the Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP) website: https://www.datsip.qld.gov.au/resources/datsima/people-communities/cultural-heritage/cultural-heritage-duty-care.pdf

The DATSIP has established a register and database of recorded cultural heritage matters, which is also available on the Department's website: https://www.datsip.qld.gov.au/people-communities/aboriginal-torres-strait-islander-cultural-heritage/cultural-heritage-search-request

Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC) is the registered cultural heritage body in the Redland City local government area. It is recommended you consult with QYAC in relation to aboriginal and cultural heritage matters prior to the commencement of works on site. QYAC can be contacted on 07 3415 2816 or admin@QYAC.net.au

Should any aboriginal, archaeological or historic sites, items or places be identified, located or exposed during construction or operation of the development, the *Aboriginal and Cultural Heritage Act 2003* requires all activities to cease. Please contact DATSIP for further information.

- Fauna Protection

It is recommended an accurate inspection of all potential wildlife habitats be undertaken prior to removal of any vegetation on site. Wildlife habitat includes trees (canopies and lower trunk) whether living or dead, other living vegetation, piles of discarded vegetation, boulders, disturbed ground surfaces, etc. It is recommended that you seek advice from the Queensland Parks and Wildlife Service if evidence of wildlife is found.

- Environment Protection and Biodiversity Conservation Act

Under the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act* (the EPBC Act), a person must not take an action that is likely to have a significant impact on a matter of national environmental significance without Commonwealth approval. Please be aware that the listing of the Koala as vulnerable under this Act may affect your proposal. Penalties for taking such an action without approval are significant. If you think your proposal may have a significant impact on a matter of national environmental significance, or if you are unsure, please contact Environment Australia on 1800 803 772. Further information is available from Environment Australia's website at www.ea.gov.au/epbc

Please note that Commonwealth approval under the EPBC Act is independent of, and will not affect, your application to Council.

- Road and Rail Noise

Council's Road and Rail Noise Impact Overlay Map identifies that the proposed development will be impacted by road/rail noise and triggers the Redlands Planning Scheme Part 5 – Overlays, Division 10 – Road and Rail Noise Impacts Overlay Code. It is recommended that your development be designed and constructed to minimise impacts from the nearby roadway or rail corridor.

NOTICE ABOUT DECISION – STATEMENT OF REASONS

Assessment Benchmarks:	The proposed development was assessed against the following assessment benchmarks: Redlands Planning Scheme V7.1 • Urban Residential Zone Code • Child Care Centre Code • Acid Sulphate Soils Overlay Code • Road and Rail Noise Corridor Overlay Code

	• Infrastructure Works Code • Development Near Underground Infrastructure Code • Access and Parking Code • Excavation and Fill Code • Stormwater Management Code

The key issues identified in the assessment were:

- Non-Residential use in Urban Residential Zone
- Scale of use
- Noise Impacts
- Privacy and Amenity
- Design and Streetscape
- Traffic and Access

For these issues, the development did not meet the deemed to comply probable solutions in the relevant code, but did meet the specific or overall outcomes, which therefore complies with the code as outlined below.

Issue	**Performance assessment**
Non-Residential use in Urban Residential Zone	Specific Outcome S1.3(1) (a),(b),(c),(d) and (e) of the Urban Residential Zone While being in a residential zone, the site is located in close proximity to existing and planned local centre and on the corner of a major road. The size of the facility will satisfy a need that is currently unmet within the local catchment, without impacting on the amenity of adjoining residents. Appropriate conditions have been imposed to restrict overlooking and mitigate noise impacts.
Scale of Use	Specific Outcome S1.2(1) of the Child Care Centre It is considered that the proposal has demonstrated through design and layout that the site is sufficient in size to accommodate the use, including all required landscaping, parking, access, and waste management.
Noise Impacts	Specific Outcome s3.8 (1) of the Urban Residential Code and Specific Outcome S2 (2) of the Child Care Centre Code An acoustic assessment confirms that design, setbacks, noise attenuation, and acoustic walls mitigate operational noise level to that compatible with that experienced in a residential environment.
Privacy and Amenity	Specific Outcome s3.3 (1) Urban Residential Code The proposal development has provided obscure glass on first-floor windows on the northern and eastern elevations to a height of 1.8m. This is considered an appropriate solution to mitigate overlooking into adjoining properties. Specific Outcome S1(1) of the Excavation and Fill Code. The proposed retaining wall and acoustic wall on the northern and western boundary incorporates a combination of polycarbonate acoustic glazing and timber panels anywhere the combined heights exceed more than 2m. This is considered acceptable in reducing overbearing aspects such as bulk, overshadowing and solar access. The structures are opaque anywhere less than 1.5m high from ground level to address privacy and has been signed by an acoustic engineer to certify that its acoustic performance is not compromised.
Design and Streetscape	Specific Outcome S2.3 of the Urban Residential Zone Code Revised design increases the Collins Street setback and includes appropriate landscaping interfacing the street. It is considered that the proposal compliments the existing front setbacks in the street and ameliorates impacts through design, landscaping and articulation. Specific Outcome S3(1) Child Care Centre It is considered that the proposed landscaping sufficiently screens the hardstand surfaces on frontages and car parks. The first floor has included a landscaped façade interfacing Collins Street and boundary fencing is semi-transparent to allow internal landscaping to show and be maintained.

Traffic and Access	Specific Outcome S1. (1) Access and Parking Code It is considered both Collins Street and Torquay Road can facilitate the anticipated traffic generation of the proposal and it is not expected that traffic will result in unacceptable impacts to the surrounding road networks. The access is on the lower order road and a sufficient distance from the roundabout to not decrease its functionality or impact public safety.

The development application is approved as it complies with all of the relevant assessment benchmarks, or can be made to comply through the imposition of conditions on the approval.

PROPOSED MOTION

Moved by: Cr Mark Edwards
Seconded by: Cr Murray Elliott

That Council resolves to refuse the application due to;

1. Scale of Use does not meet the criteria of 2200m2 for 40 to 75 children.
2. Driveway access is an unacceptable distance from the roundabout and may cause impacts to public safety and decrease vehicle flow efficiency.
3. The proposed Child Care Centre is not situated within the local Centre zoning. Council consensus is for commercial activity to be confined to the western side of Collins Road.
4. Does not meet Probable Solution P1.3 (1) (b) (ii) a. are 400m2 or less of gross floor area per uses.

PROCEDURAL MOTIONS

PROCEDURAL RESOLUTION 2018/49

Moved by: Cr Murray Elliott

That the item lie on the table.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

PROCEDURAL RESOLUTION 2018/50

Moved by: Cr Murray Elliott

That the item be removed from the table.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

AMENDMENT MOTION

PROCEDURAL RESOLUTION 2018/51

Moved by: Cr Tracey Huges
Seconded by: Cr Paul Gleeson

That Council amends the motion to read as follows:

That Council resolves to adopt Option 4 and refuse the application under the following grounds:

1. The proposed development does not provide for the identified convenience needs of the local community and will impact on the role and function of the City's network of centres in accordance with Specific Outcome S1.3(1) and Overall Outcome 4.24.7(2)(a)(ii) of the Urban Residential Zone Code and Specific Outcome S1.2 and Overall Outcomes 6.7.3(2)(a) of the Child Care Centre Code.
2. The proposed development does not provide for safe, efficient and convenient movement of vehicles and does not minimise the impact on surrounding traffic networks in accordance with Overall Outcome 6.7.3 of the Child Care Centre Code and Overall Outcomes 8.1.3 (2) of the Access and Parking Code.
3. There are no other relevant matters that justify the approval of the development despite the conflict with the relevant assessment benchmarks.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

The motion with the amendment became the motion and was put as follows:

COUNCIL RESOLUTION 2018/52

Moved by: Cr Tracey Huges
Seconded by: Cr Mark Edwards

That Council resolves to adopt Option 4 and refuse the application under the following grounds:

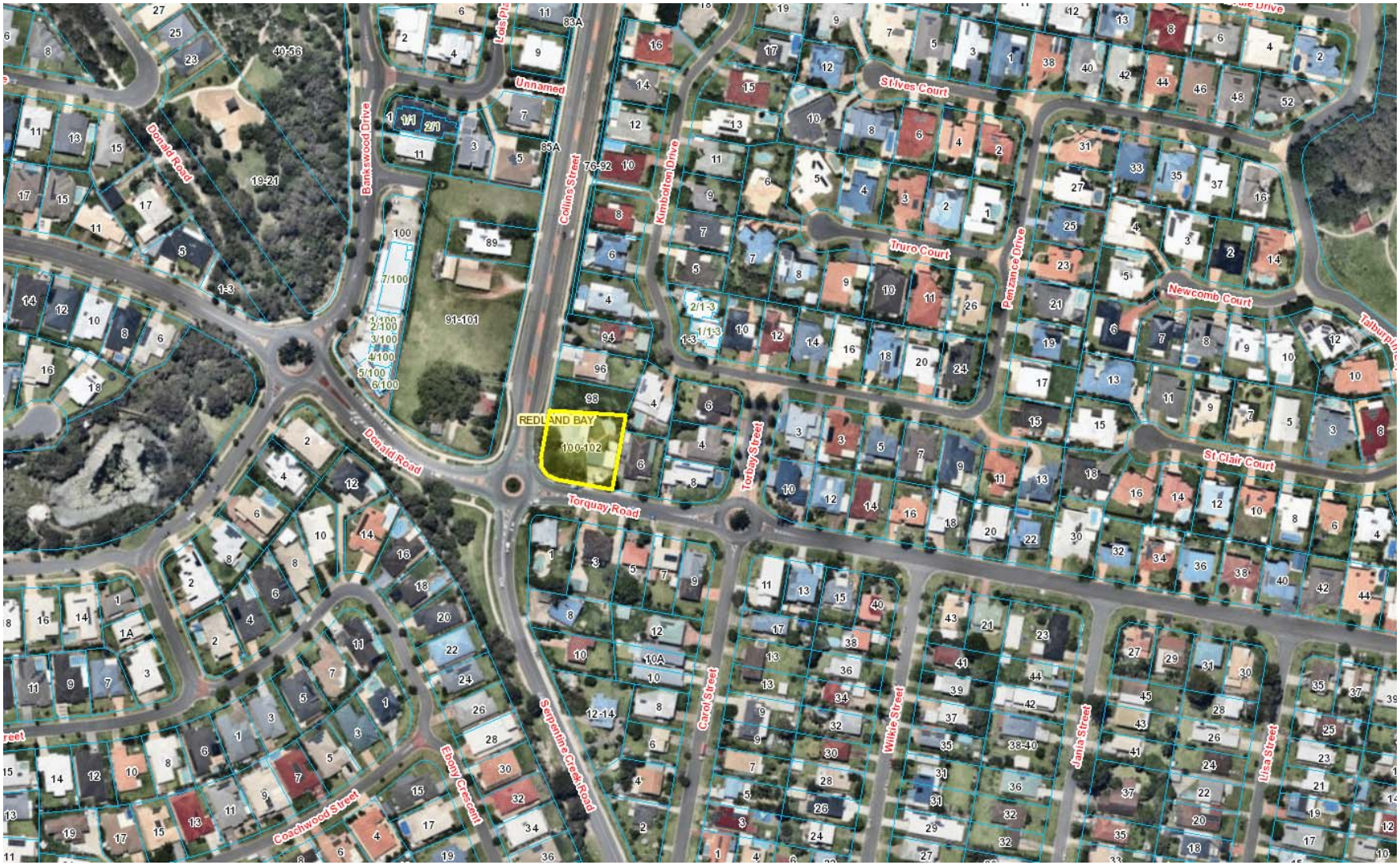
1. **The proposed development does not provide for the identified convenience needs of the local community and will impact on the role and function of the City's network of centres in accordance with Specific Outcome S1.3(1) and Overall Outcome 4.24.7(2)(a)(ii) of the Urban Residential Zone Code and Specific Outcome S1.2 and Overall Outcomes 6.7.3(2)(a) of the Child Care Centre Code.**
2. **The proposed development does not provide for safe, efficient and convenient movement of vehicles and does not minimise the impact on surrounding traffic networks in accordance with Overall Outcome 6.7.3 of the Child Care Centre Code and Overall Outcomes 8.1.3 (2) of the Access and Parking Code.**
3. **There are no other relevant matters that justify the approval of the development despite the conflict with the relevant assessment benchmarks.**

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.


96
98
4
6
Penzance Drive
Collins Street
REDLAND BAY
100-102
4
6
8
Serpentine Creek Road
Torquay Road
1
3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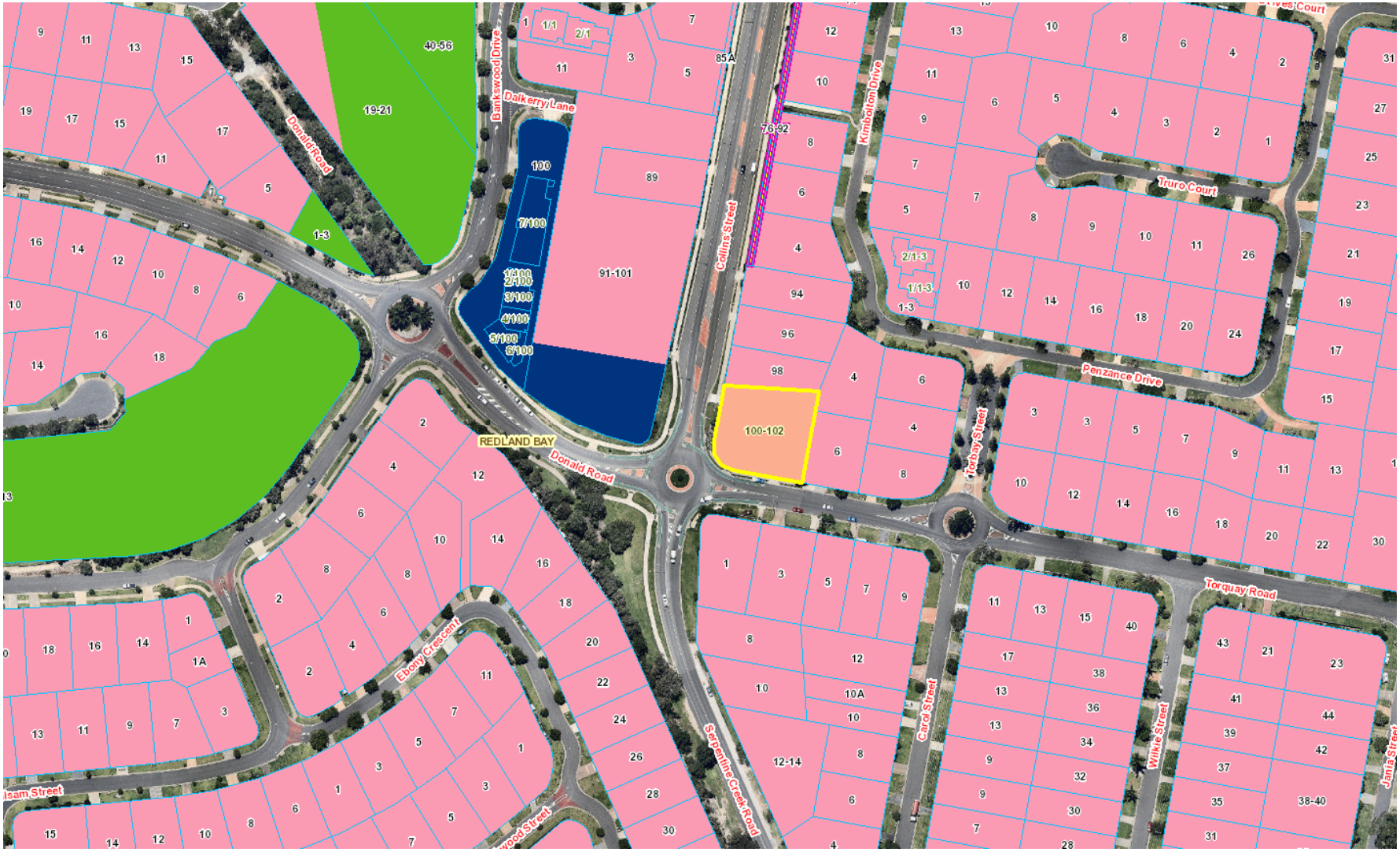
100-102
Donald Road
Torquay Road
Collins Street
Kimbolton Drive
Bankswood Drive
Unnamed
St Ives Court
Truro Court
Penzance Drive
Newcomb Court
St Clair Court
Torbay Street
Carol Street
Wilkie Street
Jania Street
Lisa Street
Serpentine Creek Road
Ebony Crescent
Coachwood Street
91-101
76-92
85A
83A
40-56
19-21
1-3
12-14
10A
38-40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Truro Court
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Torbay Street
REDLAND BAY
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Ebony Crescent
Serpentine Creek Road
Carol Street
Wilkie Street
Jania Street
100-102
91-101
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7/100
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4/100
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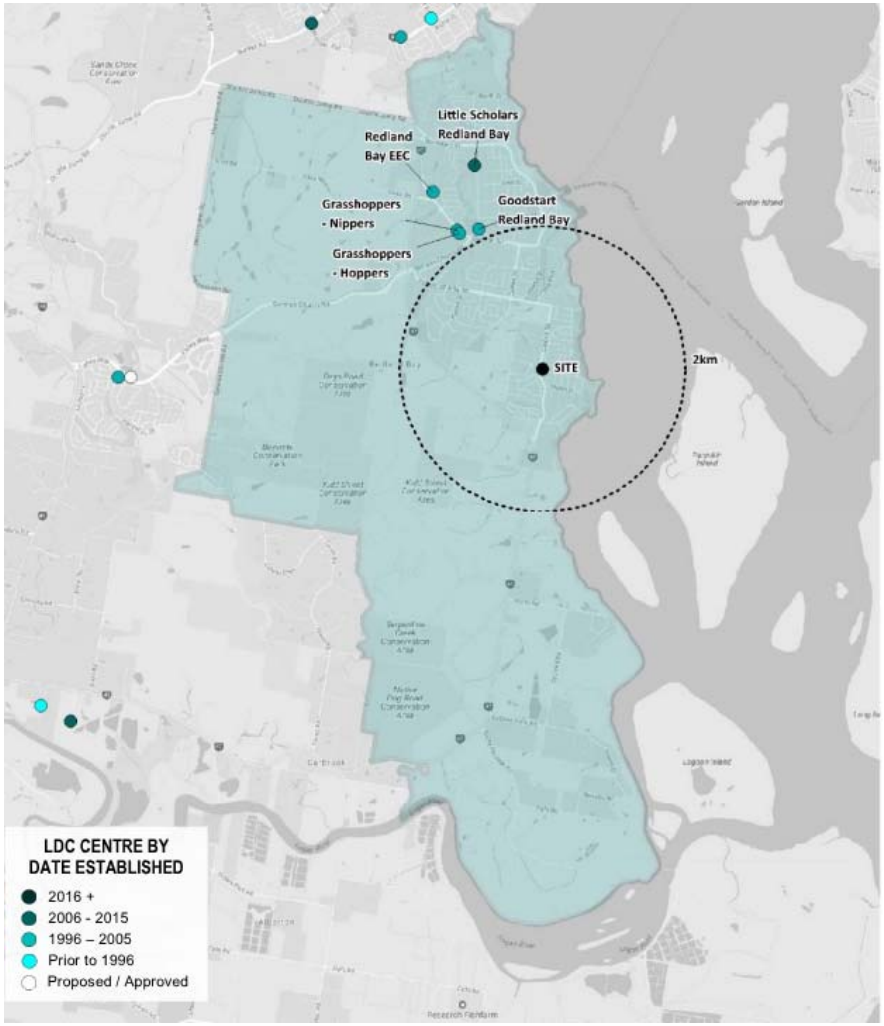
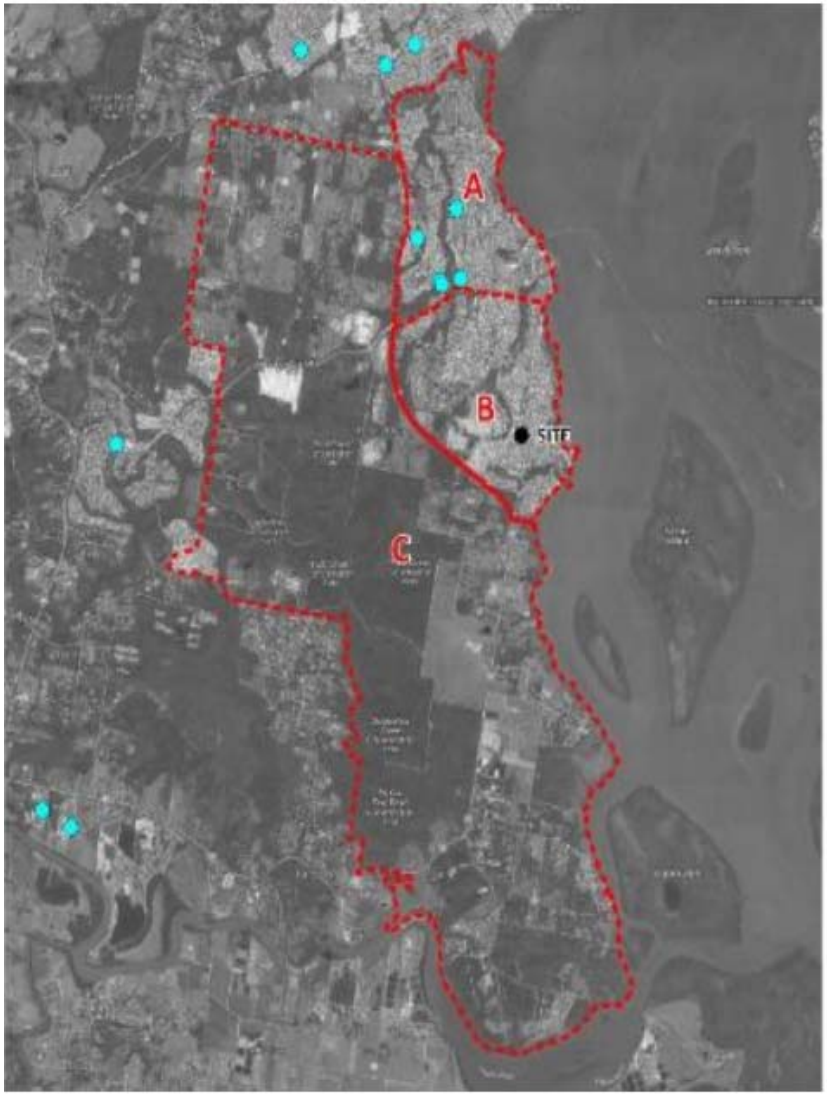
1-3
12-14
10A
38-40


Little Scholars
Redland Bay
Redland
Bay EEC
Grasshoppers
- Nippers
Goodstart
Redland Bay
Grasshoppers
- Hoppers
SITE
2km
LDC CENTRE BY
DATE ESTABLISHED
2016 +
2006 - 2015
1996 – 2005
Prior to 1996
Proposed / Approved


A
B
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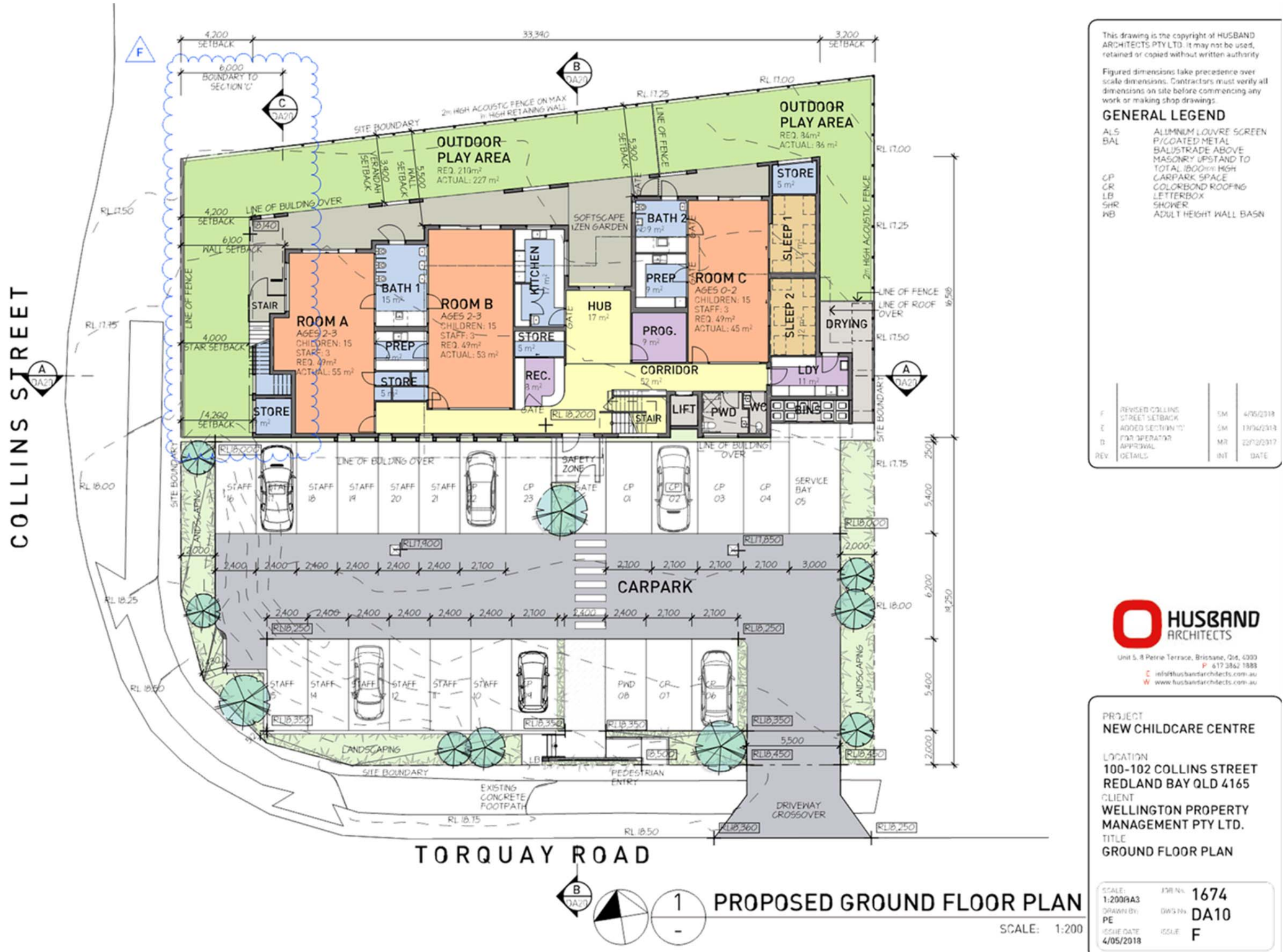

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GENERAL LEGEND

ALS	ALUMINUM LOUVRE SCREEN
BAL	P/COATED METAL BALUSTRADE ABOVE MASONRY UPSTAND TO TOTAL 1800mm HIGH
CP	CARPARK SPACE
CR	COLORBOND ROOFING
LB	LETTERBOX
SHR	SHOWER
WB	ADULT HEIGHT WALL BASIN

REV.	DETAILS	INT	DATE
F	REVISED COLLINS STREET SETBACK	SM	4/05/2018
E	ADDED SECTION 'C'	SM	13/04/2018
D	DA APPROVAL	MR	22/12/2017

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PROJECT
NEW CHILDCARE CENTRE

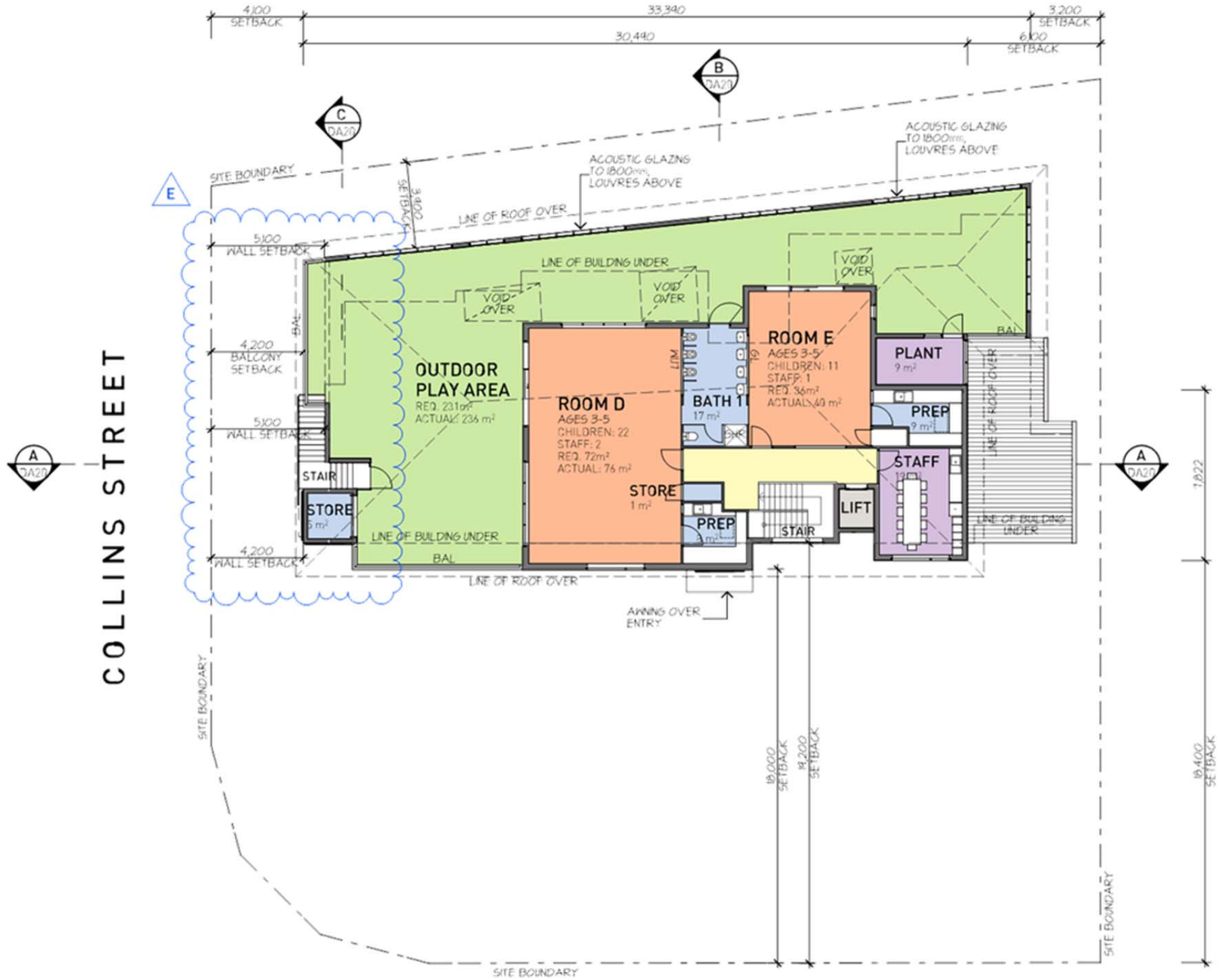
LOCATION
100-102 COLLINS STREET
REDLAND BAY QLD 4165

CLIENT
WELLINGTON PROPERTY MANAGEMENT PTY LTD.

TITLE
GROUND FLOOR PLAN

SCALE:	1:200@A3	JOB No.	1674
DRAWN BY:	PE	DWG No.	DA10
ISSUE DATE:	4/05/2018	ISSUE	F

1 / - PROPOSED GROUND FLOOR PLAN
SCALE: 1:200



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GENERAL LEGEND

ALS	ALUMINUM LOUVRE SCREEN
BAL	P/COATED METAL BALUSTRADE ABOVE MASONRY UPSTAND TO TOTAL 1800mm HIGH
CP	CARPARK SPACE
CR	COLORBOND ROOFING
LB	LETTERBOX
SHR	SHOWER
WB	ADULT HEIGHT WALL BASIN

REV.	DETAILS	INT	DATE
E	REVISED COLLINS STREET SETBACK FOR OPERATOR APPROVAL	SM	4/05/2018
D	AMENDMENTS AS NOTED. COUNCIL RFI ISSUE.	MR	22/12/2017
C		MR	13/12/2017

1 / - PROPOSED FIRST FLOOR PLAN
SCALE: 1:200

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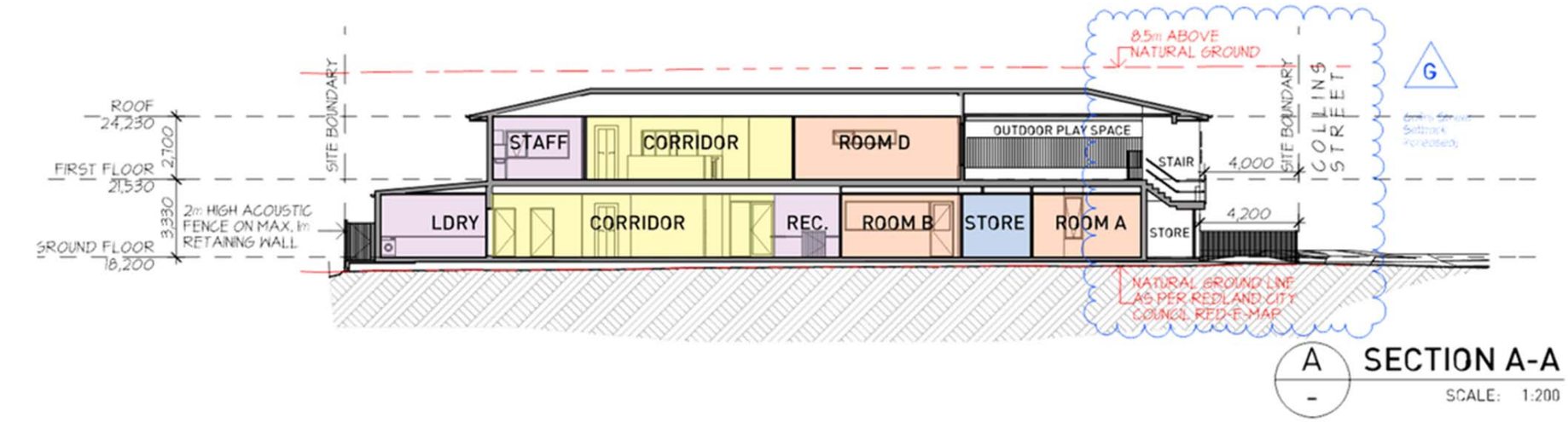
PROJECT
NEW CHILDCARE CENTRE

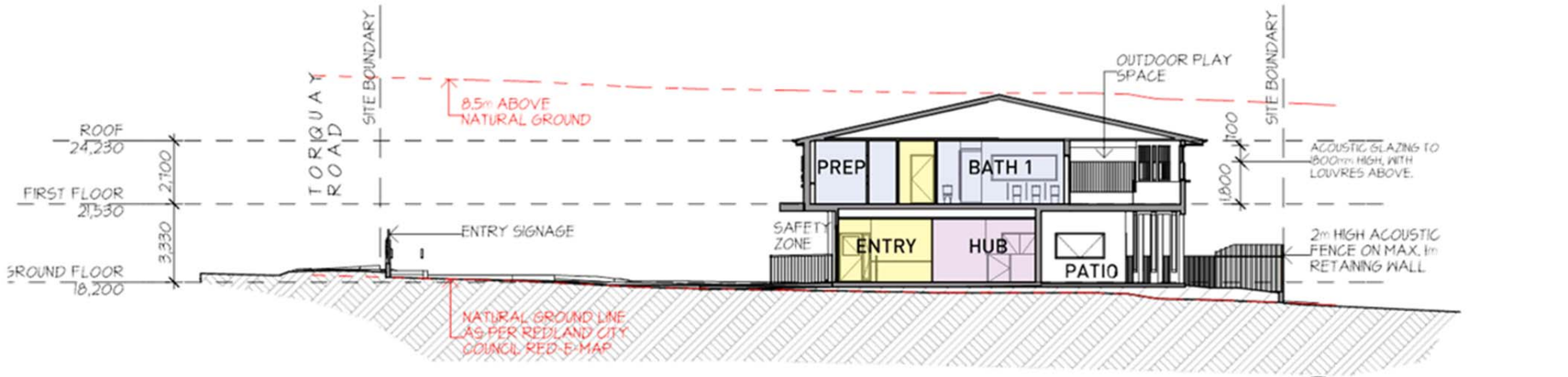
LOCATION
100-102 COLLINS STREET
REDLAND BAY QLD 4165

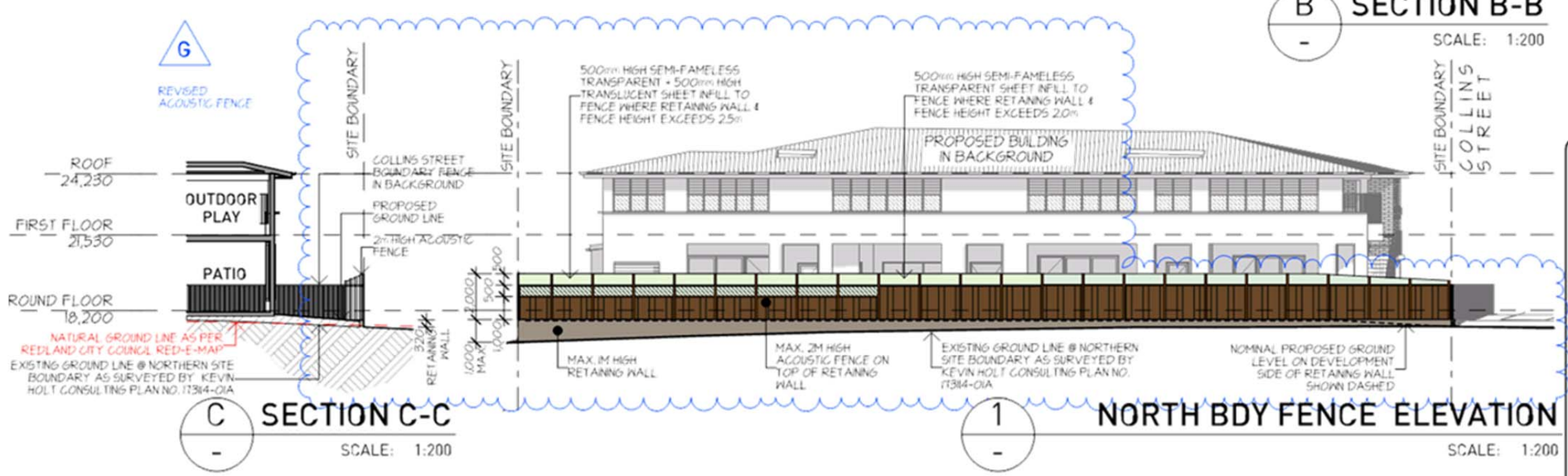
CLIENT
WELLINGTON PROPERTY MANAGEMENT PTY LTD.

TITLE
FIRST FLOOR PLAN

SCALE: 1:200@A3	JOB No. 1674
DRAWN BY: PE	DWG No. DA11
ISSUE DATE: 4/05/2018	ISSUE E







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GENERAL LEGEND

ALS	ALUMINIUM LOUVRE SCREEN
BAL	P/COATED METAL BALUSTRADE ABOVE MASONRY UPSTAND TO TOTAL 1800mm HIGH
CR	COLORBOND ROOFING
E.G.L.	EXISTING GROUND LINE
FBLK	FACE BLOCKWORK
GL	CLEAR GLAZING
RPB1	RENDERED PAINTED BLOCKWORK 1
RPB2	RENDERED PAINTED BLOCKWORK 2
RPB3	RENDERED PAINTED BLOCKWORK 3
RPB4	RENDERED PAINTED BLOCKWORK 4
WB	WEATHERBOARD CLADDING

REV.	DETAILS	INT	DATE
G	REVISED COLLINS STREET SETBACK, REVISED ACOUSTIC FENCE DETAIL	SM	4/05/2018
F	ADDED SECTION 'C'	SM	13/04/2018
E	ADDED NORTH BOUNDRY FENCE ELEVATION	SM	12/04/2018

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CLIENT
WELLINGTON PROPERTY MANAGEMENT PTY LTD.

TITLE
SECTIONS

SCALE:	1:200@A3	JOB No.	1674
DRAWN BY:	PE	DWG No.	DA20
ISSUE DATE:	4/05/2018	ISSUE	G



1 NORTH ELEVATION
SCALE: 1:200



2 TORQUAY ROAD SOUTH ELEVATION
SCALE: 1:200



3 EAST ELEVATION
SCALE: 1:200

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GENERAL LEGEND

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BAL	P/COATED METAL BALUSTRADE ABOVE MASONRY UPSTAND TO TOTAL 1800mm HIGH
CR	COLORBOND ROOFING
E&L	EXISTING GROUND LINE
FBLK	FACE BLOCKWORK
GL	CLEAR GLAZING
RPB1	RENDERED PAINTED BLOCKWORK 1
RPB2	RENDERED PAINTED BLOCKWORK 2
RPB3	RENDERED PAINTED BLOCKWORK 3
RPB4	RENDERED PAINTED BLOCKWORK 4
WB	WEATHERBOARD CLADDING

REV	DETAILS	INT	DATE
F	REVISED COLLINS STREET SETBACK, PRIVACY FILM TO UPPER GLAZING	SM	4/05/2018
E	ACOUSTIC FENCE HEIGHT CLARIFIED	SM	16/04/2018
D	FOR OPERATOR APPROVAL	MR	22/12/2017

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W www.husbandarchitects.com.au

PROJECT
NEW CHILDCARE CENTRE

LOCATION
100-102 COLLINS STREET
REDLAND BAY QLD 4165

CLIENT
WELLINGTON PROPERTY MANAGEMENT PTY LTD.

TITLE
ELEVATIONS 1

SCALE:	1:200@A3	JOB No.	1674
DRAWN BY:	PE	DWG No.	DA30
ISSUE DATE:	4/05/2018	ISSUE	F



1 / - COLLINS STREET WEST ELEVATION

SCALE: 1:200

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Figured dimensions take precedence over scale dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

GENERAL LEGEND

ALS	ALUMINIUM LOUVRE SCREEN
BAL	P/COATED METAL BALUSTRADE ABOVE MASONRY UPST AND TO TOTAL 1800mm HIGH
CR	COLORBOND ROOFING
E&L	EXISTING GROUND LINE
FBLK	FACE BLOCKWORK
GL	CLEAR GLAZING
RPB1	RENDERED PAINTED BLOCKWORK 1
RPB2	RENDERED PAINTED BLOCKWORK 2
RPB3	RENDERED PAINTED BLOCKWORK 3
RPB4	RENDERED PAINTED BLOCKWORK 4
WB	WEATHERBOARD CLADDING

REV.	DETAILS	INT	DATE
E	REVISED COLLINS STREET SETBACK	SM	4/05/2018
D	FOR OPERATOR APPROVAL	MR	22/12/2017
C	AMENDMENTS AS NOTED, COUNCIL RFI ISSUE	MR	13/12/2017

RPB:
RENDERED PAINTED BLOCK
- WHITE

RPB:
RENDERED PAINTED BLOCK
- BROWN



RPB:
RENDERED PAINTED BLOCK
- GREEN



RPB:
RENDERED PAINTED BLOCK
- BLUE



FBK:
FACE BLOCK



WB:
PAINTED SELECTED HORIZONTAL CLADDING



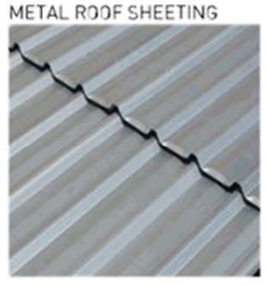
BAL-1:
ALUMINIUM BALUSTRADE TYPE 1



FCP:
SELECTED TIMBER CEILING CLADDING



MR:
METAL ROOF SHEETING



GL:
METAL FRAMED GLAZING



SC:
P/COATED METAL SCREENING



2 / - FINISHES SCHEDULE

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PROJECT
NEW CHILDCARE CENTRE

LOCATION
100-102 COLLINS STREET
REDLAND BAY QLD 4165

CLIENT
WELLINGTON PROPERTY MANAGEMENT PTY LTD.

TITLE
ELEVATIONS 2 & MATERIALS SCHEDULE

SCALE: 1:200@A3	JOB No. 1674
DRAWN BY: PE	DWG No. DA31
ISSUE DATE: 4/05/2018	ISSUE E



1 ENTRY VIEW
-

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REV.	DETAILS	INT	DATE
E	UPDATED TO MATCH PLAN CHANGES	SM	4/05/2018
D	FOR OPERATOR APPROVAL	MR	22/12/2017
C	UPDATED TO REFLECT PLAN CHANGES. COUNCIL RFI ISSUE	MR	13/12/2017

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PROJECT
NEW CHILDCARE CENTRE

LOCATION
100-102 COLLINS STREET
REDLAND BAY QLD 4165

CLIENT
WELLINGTON PROPERTY MANAGEMENT PTY LTD.

TITLE
PERSPECTIVES SHEET 1

SCALE: NTS @ A3	JOB No. 1674
DRAWN BY: PE	DWG No. DA40
ISSUE DATE: 4/05/2018	ISSUE E



1 / - COLLINS STREET VIEW 1

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REV	DETAILS	INT	DATE
E	UPDATED TO MATCH PLAN CHANGES	SM	4/05/2018
D	FOR OPERATOR APPROVAL	MR	22/12/2017
C	UPDATED TO REFLECT PLAN CHANGES. COUNCIL RFI ISSUE	MR	13/12/2017

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PROJECT
NEW CHILDCARE CENTRE

LOCATION
100-102 COLLINS STREET
REDLAND BAY QLD 4165

CLIENT
WELLINGTON PROPERTY MANAGEMENT PTY LTD.

TITLE
PERSPECTIVES SHEET 2

SCALE: NTS @ A3	JOB No. 1674
DRAWN BY: PE	DWG No. DA41
ISSUE DATE: 4/05/2018	ISSUE E



1 COLLINS STREET VIEW 2
-

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Figured dimensions take precedence over scale dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

REV.	DETAILS	INT	DATE
E	UPDATED TO MATCH PLAN CHANGES	SM	4/05/2018
D	FOR OPERATOR APPROVAL	MR	22/12/2017
C	UPDATED TO REFLECT PLAN CHANGES. COUNCIL RFI ISSUE	MR	13/12/2017

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PROJECT
NEW CHILDCARE CENTRE

LOCATION
100-102 COLLINS STREET
REDLAND BAY QLD 4165

CLIENT
WELLINGTON PROPERTY MANAGEMENT PTY LTD.

TITLE
PERSPECTIVES SHEET 3

SCALE:	NTS @ A3	JOB No.	1674
DRAWN BY:	PE	DWG No.	DA42
ISSUE DATE:	4/05/2018	ISSUE	E

13.6 RENEWAL OF TELECOMMUNICATION LEASES - COUNCIL OWNED PROPERTIES

Objective Reference: **A3133622**

Authorising Officer: **Louise Rusan, General Manager Community & Customer Services**

Responsible Officer: **Graham Simpson, Group Manager Environment & Regulation**

Report Author: **Damien Jolley, Senior Property Officer**

Attachments:
1. **Locality map - Kate Street Macleay Island**
2. **Locality map - Middle Street Cleveland**

PURPOSE

The purpose of this report is to recommend that Council grant two (2) leases to Optus for mobile phone facilities at:

1. 20-24 Kate Street Macleay Island, described as Lot 16 on RP126474; and
2. 43 Middle Street Cleveland, described as Lot 4 on RP72222.

BACKGROUND

Council has existing leases with Optus for a mobile phone facility at 20-24 Kate St Macleay Island and a roof top monopole at 43 Middle Street Cleveland, that are due to expire in 2019 and 2020 respectively.

Optus has contacted Council requesting renewal and renegotiation of the terms of the leases, which may also require an access licence for the facility on Macleay Island. Optus has requested 20 year term leases (2 x 10 year consecutive leases) for both facilities.

ISSUES

20-24 Kate Street Macleay Island

Changes to the conditions of the planning approval for the Macleay Island site may also need to be obtained before a new lease is granted to reflect the as-constructed facility.

Appropriate access via Council land to the Macleay Island facility may also need to be negotiated and will be dependent on any required changes to the conditions of the amended planning approval.

The details concerning these matters will be negotiated and determined subsequent to Council first resolving to grant the request by Optus for a 20 year lease term.

43 Middle Street Cleveland

In order to provide consistency between the leases held by Optus for telecommunications facilities, it is considered appropriate to negotiate and determine a new lease for the Middle Street Cleveland facility at the same time as the facility at Kate Street Macleay Island.

There is no requirement to update the existing planning approval or access requirements for this facility.

STRATEGIC IMPLICATIONS

Legislative Requirements

The *Local Government Regulation 2012* describes land as a "Valuable Non-Current Asset" and prescribes a number of options available to enter into a contract to dispose of the land including

granting of a lease. Sale by tender or auction is the prescribed method of disposing of land, however the Regulation provides for exceptions to this rule in certain circumstances.

In particular reference is made to sub paragraph 236(1)(c)(vi) of the *Local Government Regulation 2012* which states the following exception can apply:-

The disposal is for the purpose of a lease for a telecommunication tower.

It is considered that the renegotiated leases are able to be made in accordance with this exception and no tender or auction is necessary.

Risk Management

Issues such as electromagnetic radiation will be addressed in the new lease documentation which requires Optus to provide electromagnetic radiation testing as required under the *Telecommunications Act 1997*. In addition, Optus will be required to maintain public liability insurance in relation to the mobile phone facility.

Financial

Council will not incur any costs with the proposed facility as Optus shall be required to construct and/or maintain the facility and pay for lease preparation and registration in the Titles Office.

Council will receive equal to or above market value rent for the duration of the leases. The commercial rent received for the leases contributes to Council revenue.

The Australian Accounting Standard on Leases (AASB 16 Leases) comes into effect for Council on 1 July 2019. Council will be a lessor for the aforementioned lease and no material changes are expected to occur from an accounting perspective. Of note, the lease will be reviewed in full detail by Financial Services to ensure appropriate treatment and disclosures in Council's Annual Reports from 2019-20 onwards.

People

There are no staff implications.

Environmental

Periodic electromagnetic radiation testing and compliance is the responsibility of Optus and will be incorporated in new lease documentation. Use of the various premises is regulated by any planning or environmental approvals that may apply to the land and activity.

Social

There are no social implications identified. Continuation of an up to date telecommunications network provides significant advantages to the community.

Alignment with Council's Policy and Plans

The Telecommunication leases support Council's financial sustainability and digital connectivity objectives.

CONSULTATION

Consultation in regards the leases has occurred with:

- Divisional Councillor for the location of the premises
- Service Manager Roads Drainage and Marine Unit
- Service Manager Facilities Services Unit

OPTIONS

Option One

That Council resolves to:

1. apply the exception to dispose of land or an interest in land, other than by tender or auction, under sub paragraph 236(1)(c)(vi) of the *Local Government Regulation 2012 Act,* for granting of new telecommunication leases to Optus for the properties listed as follows:
   a) 20-24 Kate Street Macleay Island, described as Lot 16 on RP126474
   b) 43 Middle Street Cleveland, described as Lot 4 on RP72222; and
2. delegate the Chief Executive Officer under s.257(1)(b) of the *Local Government Act 2009* to make, vary, negotiate and discharge the telecommunication leases at fair market value.

Option Two

That Council resolves as follows:

1. That the exception under sub paragraph 236(1)(c)(vi) of the *Local Government Regulation 2012* does not apply; and
3. no new lease is negotiated and the facilities are removed from Council land.

COUNCIL RESOLUTION 2018/53

Moved by: **Cr Peter Mitchell**
Seconded by: **Cr Murray Elliott**

That Council resolves to:

1. **apply the exception to dispose of land or an interest in land, other than by tender or auction, under sub paragraph 236(1)(c)(vi) of the *Local Government Regulation 2012*, for granting of new telecommunication leases to Optus for the properties listed as follows:**
   a) 20-24 Kate Street Macleay Island, described as Lot 16 on RP126474
   b) 43 Middle Street Cleveland, described as Lot 4 on RP72222; and
2. **delegate the Chief Executive Officer under s.257(1)(b) of the *Local Government Act 2009* to make, vary, negotiate and discharge the telecommunication leases at fair market value.**

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

5/10/2018 **Attachment 1 Locality map - Kate St Maclaey Island** Red-e-map Print



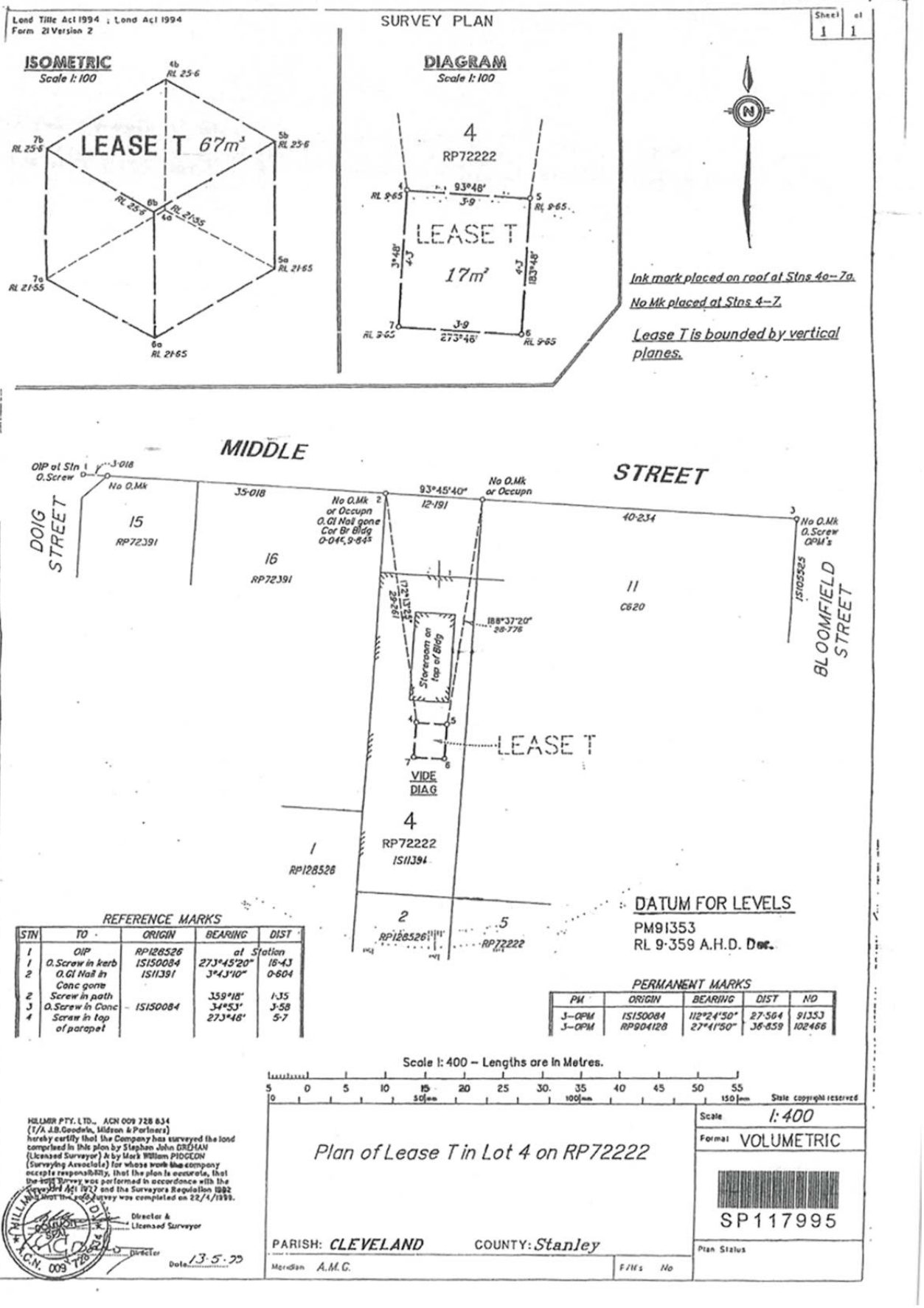
http://pspaaps01/redemap/printGeneric.aspx?Title=Red-e-map%20Plot&Scale=2655&PaperSize=A3&Orientation=Landscape 1/1

5/10/2018 Attachment 2 Locality Map - Middle Street Cleveland Red-e-map Print



http://pspaaps01/redemap/printGeneric.aspx?Title=Red-e-map%20Plot&Scale=1200&PaperSize=A3&Orientation=Landscape 1/1

PAGE 16 of 28



STN	TO	ORIGIN	BEARING	DIST
1	OIP	RP128526	at Station	
1	O.Screw in kerb	IS150084	273°45'20"	18·43
2	O.GI Nail in Conc gone	IS11391	3°43'10"	0·604
2	Screw in path		359°18"	1·35
3	O.Screw in Conc	IS150084	34°53'	3·58
4	Screw in top of parapet		273°48'	5·7

PM	ORIGIN	BEARING	DIST	ND
3–CPM	IS150084	112°24'50"	27·564	91353
3–CPM	RP904128	27°41'50"	36·859	102466

13.7 RENEWAL OF LEASES - COUNCIL OWNED PROPERTIES

Objective Reference: **A3133627**

Authorising Officer: **Louise Rusan, General Manager Community & Customer Services**

Responsible Officer: **Graham Simpson, Group Manager Environment & Regulation**

Report Author: **Damien Jolley, Senior Property Officer**

Attachments:
1. **Locality map - 1-21 Degen Road**
2. **Locality map - 29 Gordon Road**
3. **Locality map - 248 Middle Street and 21a Emmett Drive**

PURPOSE

The purpose of this report is to recommend that Council approve the disposal of land or an interest in land under the *Local Government Regulation 2012*, for the purposes of renewing three (3) leases and granting of a new lease on Council land.

BACKGROUND

The Property Services Unit is responsible for managing a number of properties that are leased on a commercial basis.

A recent review of leased properties has been undertaken and it was identified that four properties required updated lease requirements as follows:

Lease renewals

a) 248 Middle Street Cleveland, described as Lot 58 on SP115554 (Sealink workshop) – the previous lease has expired and is on a month by month lease. It is proposed to enter into a new four year term lease (2 x two year consecutive leases) with the current tenant.

b) 1-21 Degen Road Capalaba, described as Lot 1 on SP193524 (CPL Capalaba) – the current lease expires in January 2019. CPL Capalaba, as the current tenant, has requested a new four year term lease (2 x two year consecutive leases).

c) 29 Gordon Road Redland Bay, described as Lot 2 on SP204523 (Residential house) – the current lease has been identified as being invalid and requires renewal by Council resolution. The lease, for the current tenant, will be backdated to run from 18 January 2018 to 21 January 2021.

New Lease

d) 21a Emmett Drive Cleveland, described as Lot 115 on SL9166 - a new lease is recommended following a request from Sealink to use the jetty and water access on this property. Sealink (at that time Big Red Cat) was the successful tenderer in 2011 when the property was originally offered for lease, which also included 248 Middle Street Cleveland. Sealink opted not to take up a lease for the property at that time. It is proposed to enter into a four year term lease (2 x two year consecutive leases).

It is also noted the properties at Middle Street and Emmett Drive are located in the Toondah Harbour Priority Development Area and will be subject to early termination clauses.

ISSUES

To ensure consistency and compliance with legislative requirements and good governance, new or renewed leases are required for the above properties.

STRATEGIC IMPLICATIONS

Legislative Requirements

The *Local Government Regulation 2012* (LGR 2012) describes land as a "Valuable Non-Current Asset" and prescribes a number of options available to enter into a contract to dispose of the land including granting of a lease. Sale by tender or auction is the prescribed method of disposing of land, however the LGR 2012 provides for exceptions to this rule in certain circumstances.

In particular reference is made to sub paragraph 236(1)(c)(iii) and paragraph 236(1)(e) of the LGR 2012 which state exceptions apply as follows:-

> 236(1)(c)(iii) - *The disposal is for the purpose of renewing the lease of land to the existing tenant of the land*
>
> 236(1)(e) - *For the disposal of a valuable non-current asset by the grant of a lease—the grant of the lease has been previously offered by tender or auction, but a lease has not been entered into.*

It is considered that the proposed new or renewed leases are able to be made in accordance with the exceptions contained within the LGR 2012 provisions.

Risk Management

New leases will provide some measure of security for both Council and tenants ensuring the properties are maintained and managed within the terms of the leases.

Financial

The commercial rent received for the leases contributes to Council revenue. There are no forecast additional costs during the term of the leases, above current business as usual maintenance and management costs associated with the properties.

The Australian Accounting Standard on Leases (AASB 16 Leases) comes into effect for Council on 1 July 2019. Council will be a lessor for the aforementioned lease and no material changes are expected to occur from an accounting perspective. Of note, the lease will be reviewed in full detail by Financial Services to ensure appropriate treatment and disclosures in Council's Annual Reports from 2019-20 onwards.

People

There are no staff implications.

Environmental

There are no environmental implications identified. Use of the various premises is regulated by any planning or environmental approvals that may apply to the land and activity.

Social

There are no social implications identified. However, a decision not to renew the CPL Capalaba lease would disrupt the disability and support services provided by CPL Capalaba at these premises.

Alignment with Council's Policy and Plans

The commercial leases support Council's financial sustainability objectives.

CONSULTATION

Consultation in regards the leases has occurred with relevant Divisional Councillors and officers associated with the location or with responsibility for the premises, as follows:

- Divisional Councillor for the locations of the various premises
- Senior Engineer Marine and Water Assets
- Service Manager Facilities Services
- Acting Group Manager City Operations
- Service Manager City Sport and Venues
- Senior Advisor Cemetery and Internment Services
- Senior Solicitor

OPTIONS

Option One

That Council resolves to:

1. apply the exception to dispose of land or an interest in land, other than by tender or auction, under sub paragraph 236(1)(c)(iii) and paragraph 236(1)(e) of the *Local Government Regulation 2012 Act,* for renewing or granting of a new lease for the properties listed as follows:
   a) 248 Middle Street Cleveland, described as Lot 58 on SP115554
   b) 1-21 Degen Road Capalaba, described as Lot 1 on SP193524
   c) 29 Gordon Road Redland Bay, described as Lot 2 on SP204523
   d) 21a Emmett Drive Cleveland, described as Lot 115 on SL9166;
2. delegate the Chief Executive Officer under s.257(1)(b) of the *Local Government Act 2009* to make, vary, negotiate and discharge the lease of the properties at fair market value; and
3. maintain this report as confidential until the leases are finalised.

Option Two

That Council resolves as follows:

1. That the exceptions under the *Local Government Regulation 2012* do not apply;
2. to invite written tenders for the lease of the properties;
3. to delegate the Chief Executive Officer under s.257(1)(b) of the *Local Government Act 2009* to make, vary, negotiate and discharge the lease of the properties at fair market value; and
4. to maintain this report as confidential until the leases are finalised.

COUNCIL RESOLUTION 2018/54

Moved by: **Cr Paul Gleeson**
Seconded by: **Cr Murray Elliott**

That Council resolves to:

1. **apply the exception to dispose of land or an interest in land, other than by tender or auction, under subparagraph 236(1)(c)(iii) and paragraph 236(1)(e) of t*he Local Government Regulation 2012*, for renewing or granting of a new lease for the properties listed as follows:**
   a) **248 Middle Street Cleveland, described as Lot 58 on SP115554**
   b) **1-21 Degen Road Capalaba, described as Lot 1 on SP193524**
   c) **29 Gordon Road Redland Bay, described as Lot 2 on SP204523**
   d) **21a Emmett Drive Cleveland, described as Lot 115 on SL9166;**
2. **delegate the Chief Executive Officer under s.257(1)(b) of the *Local Government Act 2009* to make, vary, negotiate and discharge the lease of the properties at fair market value; and**
3. **maintain this report as confidential until the leases are finalised.**

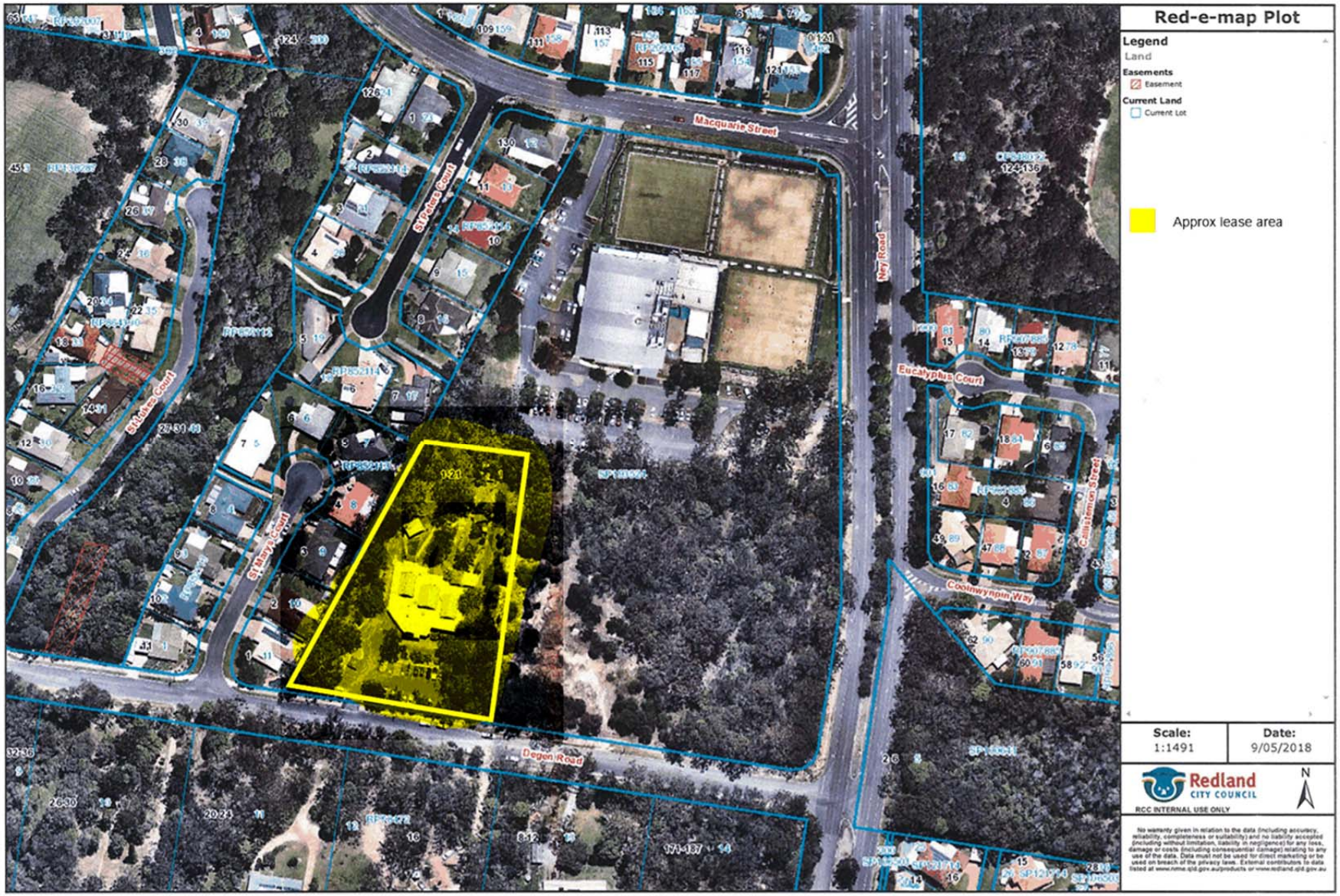
CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

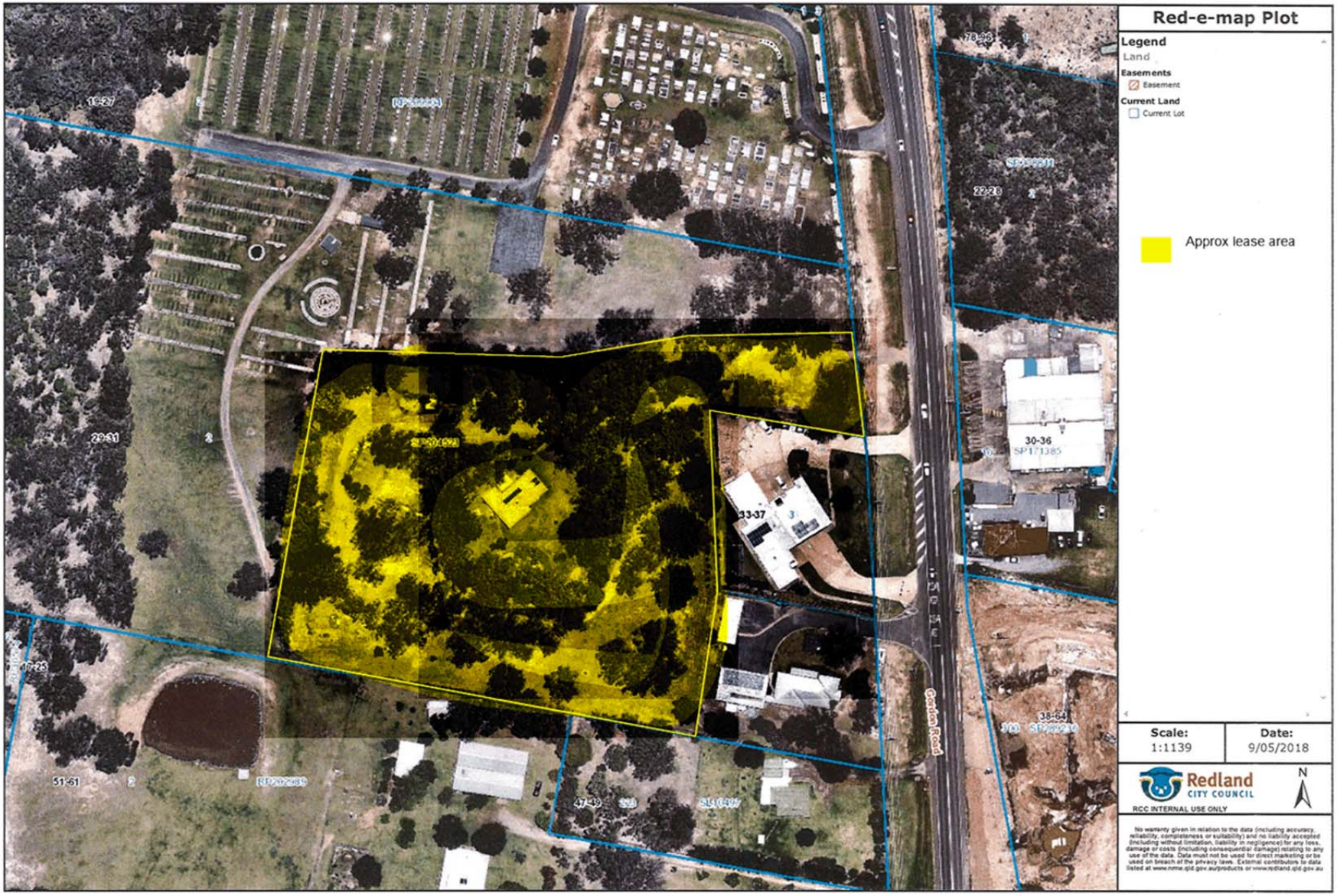
5/9/2018 **Attachment 1 - Locality map - 1-21 Degen Road**

Red-e-map Print



http://pspaaps01/redemap/printGeneric.aspx?Title=Red-e-map%20Plot&Scale=1491&PaperSize=A3&Orientation=Landscape 1/1

5/9/2018 Attachment 2 Locality map - 29 Gordon Road Red-e-map Print



http://pspaaps01/redemap/printGeneric.aspx?Title=Red-e-map%20Plot&Scale=1139&PaperSize=A3&Orientation=Landscape 1/1

5/9/2018 Attachment 3 locality map - 246 Middle St and 21a Emmett Dr Red-e-map Print



http://pspaaps01/redemap/printGeneric.aspx?Title=Red-e-map%20Plot&Scale=1243&PaperSize=A3&Orientation=Landscape 1/1

14 REPORTS FROM INFRASTRUCTURE & OPERATIONS

14.1 ROAD DEDICATION - PATERSONIA PLACE, BIRKDALE

Objective Reference: **A3133630**

Authorising Officer: **Peter Best, General Manager Infrastructure & Operations**

Responsible Officer: **Anthony Burrows, Group Manager Project Delivery**

Report Author: **Jason Masters, Survey Services Manager**
Sharon Wynne, Survey Project Officer

Attachments:
1. **Site location map - Patersonia Place, Birkdale**
2. **Survey Plan DP305444 Sheet 1**

PURPOSE

The purpose of this report is to seek Redland City Council (Council) approval to dedicate part of Lot 500 on RP884584 (88-108 Burbank Rd) as road. The road dedication will assign the appropriate tenure to the recently constructed upgrade of Patersonia Place, Birkdale.

BACKGROUND

In April 2018 Council completed the construction of a service vehicle turnaround facility at the eastern end of Patersonia Place. This turnaround is currently within Council freehold land designated as park.

The dedication of 489m^2 of Lot 500 on RP884584 as road will provide the appropriate tenure to the newly constructed service vehicle turnaround facility.

ISSUES

Prior to the construction of the turnaround facility, service vehicles were previously required to reverse into Patersonia Place, causing a hazard to pedestrians and vehicles. The new turning facility has provided a safe area for all vehicles to turn.

The turning facility is currently located within Council freehold land designated as Park. The identified section of land (as shown on Attachment 2 - DP305444) will need to be changed to an appropriate tenure reflecting the purpose. This appropriate tenure is road.

STRATEGIC IMPLICATIONS

Legislative Requirements

- Land actions will occur under Section 5(1)(b) of the *Acquisitions of Land Act 1967.*
- The land will be dedicated as road pursuant to Section 51 of the *Land Title Act 1994.*
- Liability will be reduced under Section 37 of the *Civil Liability Act 2003.*

Risk Management

Dedication as road will improve safety for all road users. The recognition of the area as road will introduce limited protection for Council under the *Civil Liability Act 2003*.

Financial

Funding is available in the Council FY17/18 budget ($88,000).

People

There will be no impact on Council staff as this is a business as usual activity.

Environmental

No environmental implications have been identified.

Social

There are no social implications identified.

Alignment with Council's Policy and Plans

This activity aligns with Council's policies and plans.

CONSULTATION

- Councillor Divisional 10
- Design and Technical Services Manager
- Principal Engineer Roads and Drainage
- Senior Property Officer
- Group Manager - Project Delivery Group
- Group Manager - City Operations
- Principal Engineer – Water
- Service Manager – Network Operations
- Service Manager – Compliance
- Group Manager City Planning and Assessment
- Business Partnering Unit, Financial Services

OPTIONS

Option One

That Council resolves to:

1. Dedicate the land as per the Attachment 2 (Survey Plan DP305444), as road under s.51 of the *Land Title Act 1994*; and
2. Delegate authority to the Chief Executive Officer Redland City Council, under s.257(1)(b) of the *Local Government Act 2009*, to sign Survey Plan DP305444.

Option Two

That Council resolves not to dedicate the land as road and to maintain the newly constructed road formation on Council freehold land without the protection given under the *Civil Liability Act 2003*.

COUNCIL RESOLUTION 2018/55

Moved by: **Cr Paul Bishop**
Seconded by: **Cr Tracey Huges**

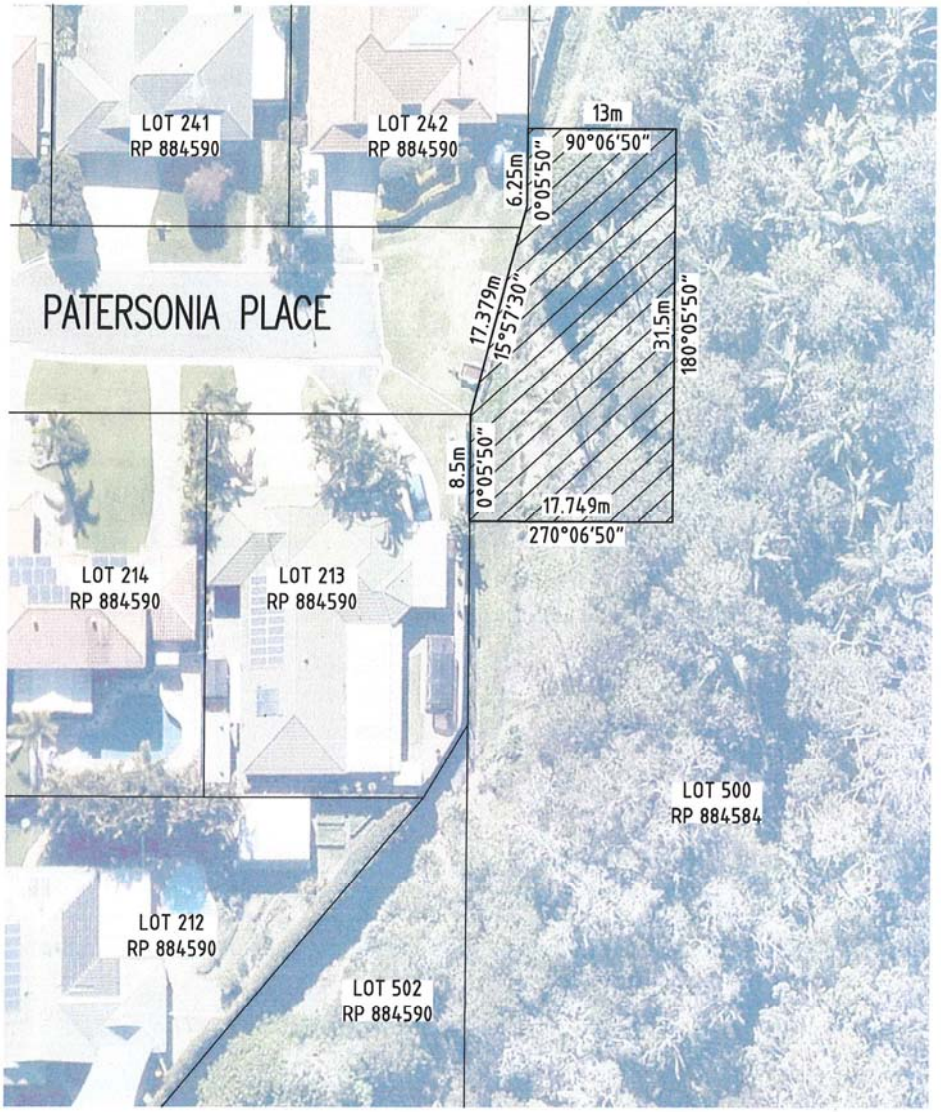
That Council resolves to:

1. **Dedicate the land as per the Attachment 2 (Survey Plan DP305444) as road under s.51 of the Land Title Act 1994; and**
2. **Delegate authority to the Chief Executive Officer Redland City Council, under s.257(1)(b) of the Local Government Act 2009, to sign Survey Plan DP305444.**

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.



DETAIL

Scale 1:500

LOT 500
RP884584
PARISH OF CAPALABA
TOTAL AREA = 43610m²
ACQUIRED AREA = 489.7m² (APPROX.)
OWNER: REDLAND CITY COUNCIL CITY SPACES
PO BOX 21
CLEVELAND QLD 4163

PRELIMINARY
NOT FOR CONSTRUCTION OR TENDER

NOTE: ALL DIMENSIONS AND AREAS ARE APPROXIMATE ONLY AND ARE SUBJECT TO SURVEY CONFIRMATION.

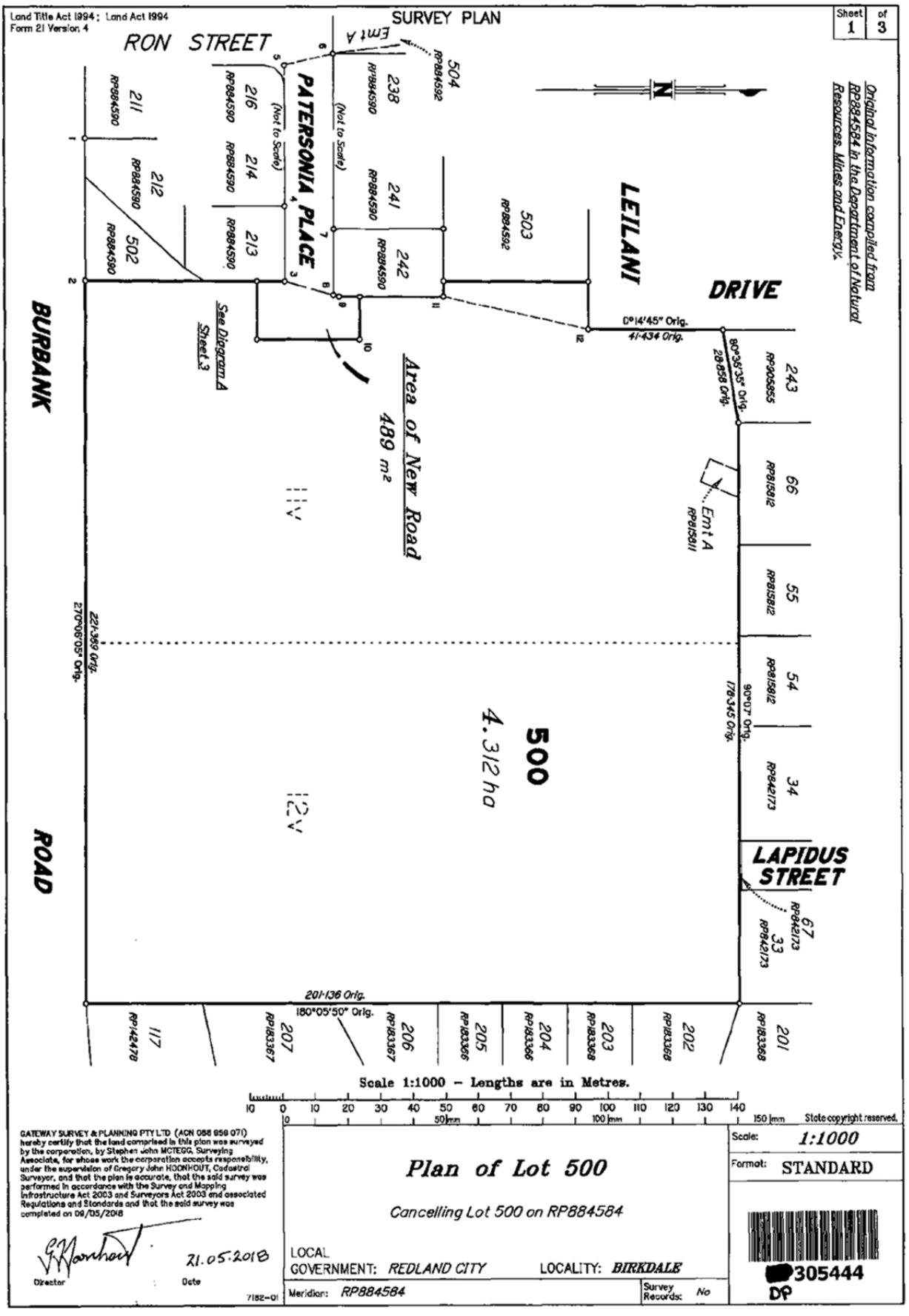
DATE:	21/11/2017
DRAWN:	AK
CHECKED:	MH

Redland CITY COUNCIL

PROPOSED LAND ACQUISITION
LOT 50 RP884584 PARISH OF CAPALABA
88–108 BURBANK ROAD, BIRKDALE

DRAWING NO. A4
ARB6–5–1
A

W:\Design Services Unit\Current Drawings\Patersonia Place, Birkdale Turning Facility_43232_MH\Design\ARB6-5-1.dwg, 21/11/2017 4:10:55 PM, \\PAUPRDU1\RCC-Printers


Land Title Act 1994; Land Act 1994
Form 21 Version 4
SURVEY PLAN
Sheet 1 of 3
RON STREET
PATERSONIA PLACE
LEILANI DRIVE
BURBANK ROAD
LAPIDUS STREET
Original information compiled from RP884584 in the Department of Natural Resources, Mines and Energy.
See Diagram A Sheet 3
Area of New Road 489 m²
500
4.312 ha
Emt A
0°14'45" Orig.
41·434 Orig.
80°35'35" Orig.
28·858 Orig.
90°07' Orig.
178·345 Orig.
270°06'05" Orig.
221·369 Orig.
201·136 Orig.
180°05'50" Orig.
Scale 1:1000 – Lengths are in Metres.
State copyright reserved.
GATEWAY SURVEY & PLANNING PTY LTD (ACN 086 959 071) hereby certify that the land comprised in this plan was surveyed by the corporation, by Stephen John MCTEGG, Surveying Associate, for whose work the corporation accepts responsibility, under the supervision of Gregory John HOONHOUT, Cadastral Surveyor, and that the plan is accurate, that the said survey was performed in accordance with the Survey and Mapping Infrastructure Act 2003 and Surveyors Act 2003 and associated Regulations and Standards and that the said survey was completed on 09/05/2018
21.05.2018
Director
Date
7182-01
Plan of Lot 500
Cancelling Lot 500 on RP884584
LOCAL GOVERNMENT: REDLAND CITY
LOCALITY: BIRKDALE
Meridian: RP884584
Survey Records: No
Scale: 1:1000
Format: STANDARD
305444
DP

14.2 RABY BAY CANAL ESTATE PROPOSED AMENDMENT TO 2017-18 OVERALL PLAN

Objective Reference: **A3133634**

Authorising Officer: **Peter Best, General Manager Infrastructure & Operations**

Responsible Officer: **Bradley Salton, Group Manager City Infrastructure**

Report Author: **Rodney Powell, Senior Engineer Marine & Water Assets**

Attachments: **Nil**

PURPOSE

This report:

a) presents an amendment to the Raby Bay Canal Estate Special Charge Overall Plan **(Overall Plan),** adopted by Council as part of the Special Budget Meeting of 26 June 2017; and

b) submits associated annual implementation plans for adoption.

BACKGROUND

The 2017-2018 Raby Bay Canal Estate Special Charge maintained Council's position that the maintenance of the canals should predominantly be funded by those who own rateable land that abuts a canal or revetment wall, such land being specially benefited by Council carrying out the activities relating to the general maintenance of the canals.

The Overall Plan requires amendment by resolution as per s 94(9)(a) of *the Local Government Regulation 2012*. As the effect of the amendment will be to extend the estimated time for carrying out the Overall Plan to more than 1 year (namely, to 30 November 2018), Council must also adopt an annual implementation plan for the period from the date of adoption of the amendment to the Overall Plan to 30 June 2018 and an annual implementation plan for the period from 1 July 2018 to 30 November 2018.

ISSUES

The operational activities of the Overall Plan, namely:

- monitoring, planning and maintaining the revetment walls, canals and associated infrastructure will be completed by 30 June 2018.

The capital activities of the Overall Plan, namely:

- replacement, renewal, stabilising works and/or upgrade of revetment walls and associated infrastructure will only be partially completed by 30 June 2018. To enable the completion of capital activities that have been identified as being required to be carried out (and as set out below), an amendment to the Overall Plan is required.

Relevantly:

- Effective tender negotiations and re-scoping of projects (undertaken in direct consultation with the Raby Bay Ratepayers Association (RBRA) Technical Working group), have resulted in significant cost savings.
- Four particular instances of capital activities under the Overall Plan, having been identified in the 2017-2018 financial year as being required to be carried out, will need to be carried out

in the 2018-2019 financial year (namely, no later than 30 November 2018). These activities are:

- Stabilising works for a revetment wall being at Anchorage Drive;
- Upgrade works for a revetment wall being at Seacrest Court;
- Upgrade works for a revetment wall being at Piermont Place; and
- Stabilising works for a revetment wall being at Mainroyal Court.

Current estimated cost of carrying out Overall Plan
The estimated cost of carrying out the Overall Plan was stated as $4,330,104. The Raby Bay Canal Estate Special Charge was levied to raise revenue of $2,242,921. Council resolved to contribute 20% of the total revenue, equating to $560,730. Bringing the total revenue raised to $2,803,651. In addition, Council funded the short fall in revenue of $1,526,453 in the current overall plan.

Current estimated time for carrying out Overall Plan
The estimated time for carrying out the Overall Plan was stated as one year commencing 1 July 2017 and ending 30 June 2018.

OVERALL PLAN (AMENDED)
Council amends the Overall Plan in accordance with s 94(9)(a) of the *Local Government Regulation 2012* as follows.

Estimated cost of carrying out Overall Plan
The estimated cost of carrying out the Overall Plan (as amended) is $3,400,000.

Estimated time for carrying out Overall Plan
The estimated time for carrying out the Overall Plan (as amended) is from 1 July 2017 to 30 November 2018.

In all other respects the Overall Plan remains the same.

ANNUAL IMPLEMENTATION PLAN (20 JUNE 2018 TO 30 JUNE 2018)

This annual implementation plan is made in accordance with s 94(6) of the *Local Government Regulation 2012*.

The actions to be carried out under this plan are as follows:

- monitoring state of, and renewing beacon piles;
- monitoring state of, and carrying out maintenance works for revetment walls;
- monitoring of, and replacing rock armouring; and
- otherwise maintaining (including monitoring state of canals) and keeping clean the canals in accordance with section 121 of the *Coastal Protection and Management Act 1995.*

ANNUAL IMPLEMENTATION PLAN (1 JULY 2018 TO 30 NOVEMBER 2018)

This annual implementation plan is made in accordance with s 94(6) of the *Local Government Regulation 2012*.

The actions to be carried out under this plan are as follows:

- stabilising works at Anchorage Drive;
- upgrading works at Seacrest Court;
- upgrading works at Piermont Place; and
- stabilising works at Mainroyal Court.

STRATEGIC IMPLICATIONS

Legislative Requirements

Section 94 of the *Local Government Act 2009* (Act) provides that local governments may levy a special rate or charge.

Section 92(3) of the Act describes a special rate or charge as being for services, facilities and activities that have a special association with particular land because:

a) the land or its occupier—
   i) specially benefits from the service, facility or activity; or
   ii) has or will have special access to the service, facility or activity; or

b) the land is or will be used in a way that specially contributes to the need for the service, facility or activity; or

c) the occupier of the land specially contributes to the need for the service, facility or activity.

Section 94(2) of the *Local Government Regulation 2012* (Regulation) requires that a local government's resolution to levy special rates or charges must identify the rateable land to which the special rates or charges apply and the Overall Plan for the service, facility or activity to which the special rates or charges apply.

Section 94(3) of the Regulation sets out the information that must be included in an Overall Plan.

Section 94(4) of the Regulation requires the local government to adopt the Overall Plan before, or at the same time as, the local government first resolves to levy the special rates or charges.

Section 94(6) of the Regulation requires that, if an Overall Plan is for more than one year, the local government is to also adopt an annual implementation plan for each year.

Section 94(7) of the Regulation sets out the information that must be included in an annual Implementation Plan adopted each financial year.

Section 94(9) of the Regulation enables a local government to at any time, by resolution; amend an Overall Plan or annual Implementation Plan.

Financial

The amended estimated cost of carrying out the Overall Plan is expected to be $3,400,000.

People

Nil impact expected.

Environmental

Nil impact expected.

Social

Nil impact expected.

Alignment with Council's Policy and Plans

This report aligns with Council's Corporate Plan.

CONSULTATION

- Representatives from the City Infrastructure Group
- Financial Services officers
- Legal counsel

OPTIONS

Option One

That Council resolves to:

1. amend the Overall Plan as follows:
   a) The estimated cost of carrying out the Overall Plan (as amended) is $3,400,000.
   b) The estimated time for carrying out the Overall Plan (as amended) from 1 July 2017 to 30 November 2018; and
2. adopt the annual implementation plan (20 June 2018 to 30 June 2018) and the annual implementation plan (1 July 2018 to 30 November 2018).

Option Two

That Council resolves to not amend the Overall Plan or adopt either annual implementation plan.

COUNCIL RESOLUTION 2018/56

Moved by: **Cr Peter Mitchell**
Seconded by: **Cr Murray Elliott**

That Council resolves to:

1. amend the Overall Plan as follows:
   a) the estimated cost of carrying out the Overall Plan be amended to state that it is $3,400,000;
   b) the estimated time for carrying out the Overall Plan be amended to state that is from 1 July 2017 to 30 November 2018, and
2. adopt the annual implementation plan (20 June 2018 to 30 June 2018) and the annual implementation plan (1 July 2018 to 30 November 2018).

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

14.3 COUNCIL RESPONSE TO THE QUEENSLAND GOVERNMENT DIRECTIONS PAPER (TRANSFORMING QUEENSLAND'S RECYCLING AND WASTE INDUSTRY)

Objective Reference: **A3133639**

Authorising Officer: **Peter Best, General Manager Infrastructure & Operations**

Responsible Officer: **Kevin McGuire, Group Manager Water & Waste Operations**

Report Author: **Paula Kemplay, Principal Waste Planner**

Attachments: **1. RCC Draft Letter Response to State Waste Directions Paper**

PURPOSE

This report provides background information and a draft Redland City Council (Council) letter response to the Queensland State Government (the State) Directions Paper (Transforming Queensland's Recycling and Waste industry) which was issued for public consultation on 1 June 2018. Public consultation closes on 29 June 2018.

Given the dynamic nature of information surrounding the Directions Paper, approval for the Chief Executive Officer to finalise a letter for the Mayor to submit to the State, on behalf of Council is requested. A draft copy of this letter is detailed in attachment one.

BACKGROUND

On 20 March 2018 the Queensland Government announced the development of a comprehensive waste management strategy underpinned by a waste disposal levy to increase recycling and resource recovery and create new jobs. The introduction of a levy was a recommendation of an independent investigation into the interstate transport of waste into Queensland. At the same time there was a commitment made that the levy would not have a direct cost impact on households. On the same day, the Local Government Association of Queensland (LGAQ) confirmed their policy position of not having a levy on domestic kerbside waste, nor having a system that leaves householders worse off.

On 27 April 2018 the LGAQ Policy Executive members issued the following support statements on behalf of Queensland Councils in positioning Queensland as a leader in waste management:

- making Queensland a global leader in creating a circular economy for waste management that will be good for our children, our children's children, and generations to come;
- a 'zero waste to landfill' target by 2028 for Queensland, underpinned by nation-leading Waste to Energy solutions;
- opposing a waste levy on domestic / municipal solid waste;
- no expansion of the Local Government areas subject to the levy applied in 2011/12;
- all waste levy proceeds going to either councils for zero waste, waste to energy, or circular economy initiatives; or to the recycling industry to directly target problem waste streams.

ISSUES

Council has some key concerns with the Directions Paper and other information available, such as the State budget papers for financial year 2018/19. These are summarised below and form part of the draft submission to the State:

- The $70 per tonne waste levy will be placed on the three main waste streams, namely commercial and industrial, construction and demolition and domestic/municipal waste. The levy will increase by $5 per tonne every year for four years. Whilst this is not the preferred LGAQ policy position, the State has committed to an annual advance payment to Councils to offset the additional levy costs on the domestic/municipal waste. Domestic/municipal waste forms the majority of waste managed by Council (~95%).
- With the advance payment for Councils, the Directions Paper has some information on how households would be compensated for the red-lidded general waste wheelie bins, however other details are lacking. These include self-haul waste at the transfer stations which is 25% of the waste managed by Council, the public litter bins in streets and parks and bulk bins for domestic multiple dwelling units. The Directions Paper also notes that the proposed 105% starting advance payment formula would be reviewed in future years. An allocation of $32 million for advance payments to Councils has been made in the State budget for financial year 2018/19, but no budget allocation after that. A footnote states that future year payments will be based on actual levy costs. As such, Council does not have assurance at this stage, that the extent of municipal waste exemptions would be sufficiently covered both at the start of the levy and beyond, to completely avoid a direct cost impact to households.
- The levy is proposed to commence in the first quarter of 2019. Assuming an early commencement in the quarter of January 2019, this would provide less than six months for Council to prepare. Council will need to dedicate staff resources to becoming “levy ready” with a variety of tasks involved in the rollout such as site software configuration, interface with financial systems, staff and contractor training, additional reporting and communication plans. Council is planning to set its rates for next financial year at the Special Budget meeting on 25 June 2018 and under the current legislation will not be able to adjust its utility charges for commercial services without an amendment to the legislation. Council will therefore require more details from the State to manage the levy implementation phase. Given how tight these timeframes potentially could be, Council officers would prefer a start date of 1 July 2019.
- Of the total levy revenue collected, around 30% will be redistributed into other non-waste related programs. This is against the current LGAQ policy position of 100% use for achieving the strategic waste targets, infrastructure and other outcomes. Council officers advocate for 100% use within the waste industry until such time as the zero avoidable waste to landfill target is achieved. Further, Council officers recommend that the expenditure allocations be widened to include remediating closed landfills and associated environmental legacy issues from historic waste management practices. Council welcomes the availability of local government funding for waste disposal infrastructure upgrades, education and awareness raising and reducing greenhouse gas emissions from waste. Council advocates for greater transparency in the split of funding for different waste types. Other suggestions include increasing the upper amount of grants available for Council infrastructure from $5 million up to $25 million to be able to significantly contribute to new advanced waste treatment and

processing facilities, required to divert waste away from landfill and specific funding for Councils to assist with any cost impacts on kerbside recycling.

- There are exemptions to the levy to be identified such as natural disaster wastes, wastes where disposal is required by law such as asbestos, fire ant material and quarantine waste, litter and illegally dumped waste, community clean-ups such as Clean Up Australia Day and waste from charity donations. Council officers advocate for all of these items to be automatic exemptions without any further case by case applications having to occur. In addition, Council notes that other wastes may need consideration for exemption, such as domestic treated timber or biosolids, depending on the level of per- and poly-fluoroalkyl substances (PFAS). This is not an exhaustive list of waste products and requires further analysis and consultation with the State.
- There are levy concessions to be considered for residual waste arising from recycling activities. At the outset, Council advocates for a 100% levy exemption from residual waste arising from material recovery facilities. Given the impacts of the China National Sword Policy on kerbside recycling commodity markets, it is not reasonable for Council to bear any additional costs at this stage.
- The framework that has been identified for the development of the new Queensland waste strategy involving the circular economy, landfill bans where feasible, product stewardship programs where necessary, a waste to energy policy and new zero avoidable waste to landfill targets is supported by Council officers. In addition Council officers support increased focus on waste avoidance and reduction and education programmes. In particular there should be targeted consistent messages regarding kerbside recycling and reducing contamination across the State. It is understood there will be further public consultation once the draft State strategy is developed.

STRATEGIC IMPLICATIONS

Legislative Requirements

Council will need to comply with the *Waste Reduction and Recycling Act 2011* and subordinate Regulation and any associated amendments in implementing the waste levy and strategy requirements.

Risk Management

The zero waste to landfill target creates an opportunity for Council to be more sustainable in its use of waste and resources. Any new infrastructure to avoid landfill is expected to take several years to implement. Council will need to manage the expiry and renewal of relevant contracts and carefully assess all relevant risks and resultant solution funding requirements.

Financial

The financial impacts of the levy and strategy introduction cannot be quantified at this stage. Any required budget amendments in 2018/19 will be calculated based on the final legislated position and associated implementation requirements. Additional costs for managing commercial and industrial and construction and demolition waste will be passed onto those customers by increases in the fees and charges at the waste transfer stations. Council as a business itself will also incur higher costs of waste disposal.

People

Council will need to dedicate staff resources to becoming "levy ready" with detailed project plans yet to be documented to ensure critical tasks occur as required to meet the State's implementation plan.

Environmental

The levy introduction and associated new funding will act to drive innovation and industry investment towards better technology to reduce the dependence on landfill.

Social

In advocating for a clearer definition of municipal waste and no levy to be applied on this waste type, Council is acting to potentially avoid any additional cost impost on households within its community.

Alignment with Council's Policy and Plans

The Council Green Living Policy review has been updated to include some of the broad new waste management objectives included such as circular economy and zero waste to landfill. The adopted Council Waste Reduction and Recycling Plan 2015-2020 will be reviewed in line with both State and Federal directives.

CONSULTATION

Service Manager RedWaste

OPTIONS

Option One

That Council resolves to:

1. note the information contained within this report; and
2. request that the Chief Executive Officer finalises a letter for the Mayor's signature to the State Department of Environment and Science before 5pm 29 June 2018, which outlines Council's response to the Queensland Government Directions Paper (Transforming Queensland's Recycling and Waste Industry).

Option Two

That Council resolves not to make a submission.

COUNCIL RESOLUTION 2018/57

Moved by: **Cr Mark Edwards**
Seconded by: **Cr Paul Bishop**

That Council resolves to:

1. **note the information contained within this report;**
2. **request that the Chief Executive Officer finalises a letter for the Mayor's signature to the State Department of Environment and Science before 5pm 29 June 2018, which outlines Council's response to the Queensland Government Directions Paper (Transforming Queensland's Recycling and Waste Industry).**

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

XX June 2018

Your Ref: Waste Directions Paper
Our Ref: fA175635
File No: **A3104436**
Contact: Paula Kemplay

Strategic Environment and Waste Policy
Department of Environment and Science
GPO Box 2454
Brisbane QLD 4001

By email: wastepolicy@des.qld.gov.au

Dear Sir/Madam

RE: Waste Directions Paper (Paper)

I refer to the public consultation opportunity on the above Paper which identifies the development of a new waste strategy underpinned by a waste disposal levy. Please find documented below the response on behalf of Redland City Council (RCC). Redland City is an area of 537 square kilometres located in south-east Queensland, about 26 kilometres south-east of the Brisbane City with a population of around 155,000.

General

RCC supports the key principles that the new strategy seeks to achieve in terms of job creation, innovation and industry investment, transitioning Queensland into a circular economy and crucially having no direct impact on households. RCC is very mindful about cost of living pressures on its community, and carefully considers each budget to achieve a lean and efficient position, without loss of service or community satisfaction. RCC is concerned about potential additional future cost impacts of the proposed waste levy on its budget, due to a lack of clarity within the Paper.

Whilst the Paper outlines the direction, there are still a lot of details to be worked through and this response is submitted to assist the State and the peak industry body, the Local Government Association of Queensland (LGAQ), to input feedback via the Stakeholder Advisory Group, to refine both the design and operation of the levy and strategy.

Part A – Waste Disposal levy

1. Background and application to all waste streams

RCC notes that the investigation into interstate waste transport recommended a general levy on all waste types. RCC supports the LGAQ and Council of Mayors (SEQ) policy positions opposing a levy on municipal solid waste (MSW) and appreciates the commitment by the State for no direct cost on households. In that regard, RCC would prefer a $0 levy on MSW from the outset (as per the levy design in 2011) not the $70 with a proposed rebate. This provides more clarity on the intent of the State and would achieve the LGAQ policy position. Whilst the Paper notes the previous levy design was criticised due to excluding household waste, RCC strongly believes that Local Government has been instrumental in growing recycling services (and associated jobs and capacity) within the industry without the use of a levy. This has occurred both at the kerbside, with the introduction of kerbside recycling over two decades ago and more recently with the greenwaste collections, and also by segregation of multiple products at the waste transfer stations. RCC currently has a credible overall MSW resource recovery rate of 46%.

[2]

The Paper has not provided adequate details on the definition of MSW and how the advance payment will work for all components. RCC is concerned that self-haul, public litter bins, bulk bins from domestic multiple dwellings, street sweepings and waste from sewage treatment plants are not dealt with in the example. Rather, there appears to be consideration of only red-lidded wheelie bins. RCC understands that the inclusion of domestic self-haul waste as part of the household rebate is under review. RCC rejects this position on the basis that it manages the bulky household waste that cannot be placed in the wheelie bins. This amounts to about 25% of the total weight of MSW handled by RCC. The operation of the eight waste transfer stations are funded from a utility charge and no user fees and charges apply for the public. These additional costs are estimated to be over $1 million per annum and would have to be passed onto households if self-haul was not part of the rebate, thereby contradicting a key State commitment. RCC has strong controls in place at its transfer stations to manage the predominantly MSW waste type (>95% of total waste managed) and ensure the other waste types will be appropriately classified and have the levy applied.

RCC is also concerned both about the statement that the 105% payment rebate formula will be reviewed in future years, and the lack of transparency in the State budget papers for any advance payment amount beyond 2018/19. RCC requests that the State provides longevity and ongoing security plans for the payment rebate beyond the establishment year. RCC appreciates the State has flagged a price path for the levy of $5 per year so it can improve its strategic financial modelling.

In summary, the Paper overall lacks assurance to Local Government, that costs to households can be fully avoided both at the outset, and maintained into the future.

2. Timeframes

RCC is concerned about the proposal to start the levy in the first quarter of 2019. RCC has already set its budget parameters for financial year 2018/19. It is currently not possible to reset the utility charges, for example for commercial kerbside collections, and therefore RCC expenses would increase without any opportunity for revenue adjustment. RCC would need to be financially compensated for these services or have the assurance of suitable legislative changes to allow it to recover the additional revenue required mid budget cycle.

In addition, considering the matters potentially to be worked though in item (1) and other factors that RCC has to manage to become levy ready, a possible six month mobilisation period is not considered adequate. RCC like other Local Government authorities, will need to review its staffing levels to address infrastructure requirements, IT and finance systems, procedure reviews, communications plans, model new fees and charges and train staff and contractors. Further, it is expected that there would need to be more detailed information and specifications provided by the State to assist Councils, for example on recording and reporting systems for audit and other compliance purposes.

RCC therefore strongly advocates for levy commencement on 1 July 2019.

[3]

3. Use of levy

RCC notes from the State financial year 2018/19 budget papers that around 30% will be redistributed into other non-waste related programs. This is against the LGAQ policy position of 100% use for achieving the strategic waste targets, infrastructure and other outcomes. RCC advocates for 100% use within the waste industry until such time as the zero avoidable waste to landfill target is achieved. Further, RCC suggests that the expenditure allocations be widened to include remediating closed landfills and associated environmental legacy issues from historic waste management practices.

RCC welcomes the availability of Local Government funding for waste disposal infrastructure upgrades, education and awareness raising and reducing greenhouse gas emissions from waste. RCC advocates for greater transparency in the split of funding for different waste types. Other suggestions include increasing the upper amount of grants available for Council infrastructure from $5 million up to $25 million to be able to significantly contribute to the new advanced waste treatment and processing facilities required to divert waste away from landfill and specific funding for Councils to assist with any cost impacts on headline current challenges such kerbside recycling.

In summary RCC advocates for a more detailed business plan showing the use of the levy towards priority waste actions that are required now particularly around new market development for kerbside recyclables and greater investment towards new infrastructure such as waste to energy plants.

4. Exemptions and concessions

RCC supports the exemptions nominated in the Paper as automatic exemptions including natural disaster waste, waste requiring landfill by regulation e.g. asbestos, quarantine waste and fire ant infested material, litter and illegally dumped waste, community clean-ups such as Clean Up Australia Day and waste from charity donations. In addition there needs to be more consideration of how domestic treated timber and wastewater biosolids are to be managed and funded. The finalisation of the Regulated Waste review may assist provide clarity

At the outset, RCC advocates for a 100% levy exemption from residual waste arising from the material recovery facilities. Given the impacts of the China National Sword Policy on kerbside recycling commodity markets, it is not considered reasonable for RCC to bear any additional costs at this stage.

Part B - Strategy

The framework that has been identified for the development of the new waste strategy involving the circular economy, landfill bans where feasible, product stewardship programs where necessary, a waste to energy policy and new zero avoidable waste to landfill targets, is supported by RCC. In addition, RCC supports increased focus on waste avoidance and reduction, and education programmes. In particular, there should be targeted consistent messages regarding kerbside recycling and reducing contamination across the State. It is understood there will be further public consultation once the draft State strategy is developed.

In closing, RCC requests the State provide a detailed implementation plan showing all of the key milestones and information to be provided to stakeholders to assist with the levy preparedness. RCC is also requesting more information on how the anticipated increase in illegal tipping as a result of the levy introduction will be managed by the State.

[4]

If you have any questions please contact Paula Kemplay on (07) 3829 8999.

Yours sincerely

Mayor Karen Williams
Redland City Council

DRAFT

14.4 COUNCIL RESOLUTION UPDATE - RESPONSE TO CORONER'S FINDINGS INTO DEATH OF ETHAN STEPHENSON ON RUSSELL ISLAND

Objective Reference: **A3133646**

Authorising Officer: **Peter Best, General Manager Infrastructure & Operations**

Responsible Officer: **Bradley Salton, Group Manager City Infrastructure**

Report Author: **Abdish Athwal, Senior Engineer, Traffic & Transport**

Attachments:

1. **SLR Public Road Network**
2. **SLR High St**
3. **SLR Canaipa Rd & Canaipa Pt**
4. **SLR Minjerriba Rd**
5. **SLR Centre Rd**
6. **Russell Island Lighting Assessment**
7. **Lighting Assessment Plans**
8. **Russell Island Pathway Assessment & Site Locations**
9. **Letter to Qld Premier**
10. **Response from Premier's office**

PURPOSE

The purpose of this report is to present the final reports and outcomes of the speed limit reviews, street lighting assessment and shared pathway assessment undertaken for Russell Island in response to the Coroner's recommendations included in the Coroner's report, *Findings of Inquest into the Death Of Ethan Stephenson,* and Redland City Council's (Council's) Resolution Advice Item 11.1.3 from the General Meeting dated 4 October 2017.

BACKGROUND

The Coroner's findings of the Inquest into the death of Ethan Stephenson on Russell Island were presented at Council's General Meeting of 4 October 2017. At this meeting Council resolved to accept the Coroner's recommendations and endorsed the following action plan:

1. Speed Limit Review: Council through City Infrastructure Group will undertake an overall review of speed limits for Russell Island roads to be finalised by the end of June 2018;
2. Street Lighting and Shared Pathways: Council through City Infrastructure Group will undertake an assessment of street lighting and shared pathways along the major traffic routes to be completed by the end of June 2018;
3. Advocacy: Council to write to the relevant State Departments referred to in the Coroner's report and seek their response and proposed action plan to the recommendations and also note Council's concern that vehicles can be registered on the Southern Moreton Bay Islands without Safety Certificates.

This report covers Items 1 and 2 of Council's resolution and action plan.

Item 3 of the Resolution was completed by the Office of the Mayor in August 2017. A copy of the Mayor's letter to the Premier of Queensland (attachment 9) and the Office of the Premier's response (attachment 10) are included for information.

ISSUES

The speed limit review and street lighting assessment were undertaken by qualified external consultants and the shared pathway assessment by City Infrastructure Group.

Speed Limit Review

The findings of the review (see attachments 1 to 5) revealed that of the 86 sealed roads and 310 unsealed or partially sealed roads included in the review, 394 roads have an existing local street speed limit of 50km/h and two roads have an existing speed limit of 60km/h.

The speed limit review determined that the existing speed limits on most roads remained appropriate, apart from an existing 60km/h speed limit on Crescent Drive between Glendale Road and 50m north of The Boulevard. The review recommended that the existing 60km/h speed limit on this section of Crescent Drive be reduced to 50km/h.

Some minor speed sign repositioning was recommended on High Street and on Canaipa Road, as well as installation of repeater speed signs in the 60km/h zones.

It is noted that the speed limit review did not recommend any change to the existing 60km/h speed limit on Centre Road, where the fatality occurred.

Street Lighting Assessment

This assessment (see attachments 6 & 7) covered street lighting on five major Russell Island roads, namely High Street, Canaipa Road, Canaipa Point Drive, Minjerriba Road and Centre Road.

The assessment found that the existing lighting on all these roads does not comply with current standards for either the entire or majority of the road lengths. The main non-compliance with standards was primarily due to the spacing between lights being greater than the maximum (120m) distance allowed.

Pathway Assessment

The assessment (see attachment 8) of the major traffic routes on Russell Island revealed that concrete pathways are provided along the full length of High Street, Minjerriba Road and Canaipa Road. Concrete pathways are also provided along sections of Centre Road and Canaipa Point Drive.

Sections of missing pathway links were identified on:

- Centre Road (Stradbroke Drive to Glendale Road)
- Glendale Road (Centre Road to Crescent Drive)
- Canaipa Point Drive (Oasis Drive to Keats Street)

The missing pathway sections have been included on Council's Future Pathway Program. Timing of future pathway works is subject to CAPEX program budget availability and prioritisation.

STRATEGIC IMPLICATIONS

Legislative Requirements

There is no specific legislative requirement for Council to action the recommendations contained in the assessment reports. Council may consider implementation of any recommendations following consultation, competing works prioritisation and future available budget.

Risk Management

Nil

Financial

There will be financial implications to Council should the assessment recommendations be implemented in the future. As most street lighting infrastructure is a contributed asset to Energex, Council funding would fall under the operational stream.

A high level construction cost estimate of $1,260,000 to upgrade the lighting to the required standard was provided in the street lighting assessment report. It is anticipated to program these works into future Council operational budgets over a three year period commencing FY19/20. These funds are not approved.

The recommended works for the three footpaths would fall under the capital works program.

These works could be a staged construction over a four year period commencing FY19/20. The high level construction estimates are:

- Centre Road – estimated cost $377,000
- Glendale Road – estimated cost $271,000
- Canaipa Point Drive – estimated cost $521,000

The traffic signage upgrades required will be completed from the Traffic Minor Works program under the operational works stream by City Infrastructure's Traffic & Transport Unit.

People

There are no implications for Council staff.

Environmental

Nil

Social

Consultation with Russell Island residents that may be affected by additional street light and shared pathway installations would be required prior to progressing actions recommended in associated assessment reports.

Alignment with Council's Policy and Plans

Aligns with the Redlands Planning Scheme 7.1, Policy 9 – Infrastructure Works and Corporate Policy 2350 Street Lighting Policy.

CONSULTATION

The contents of this report have been discussed with the Senior Solicitor, General Counsel Group and the Councillor for Division 5.

OPTIONS

Option One

That Council resolves to:

1. acknowledge completion of the speed limit review, street lighting assessment and shared pathway assessment for Russell Island and to note the recommendations contained in the final reports;
2. implement the speed zone and signing changes recommended in the speed limit review reports for Russell Island during the 18/19 financial year; and
3. further progress the conclusions and recommendations contained in the street lighting and shared pathway assessment reports, taking into consideration competing Council works priorities and available future budgets.

Option Two

That Council notes the assessment reports and does not implement any recommendations contained in those reports.

COUNCIL RESOLUTION 2018/58

Moved by: **Cr Mark Edwards**
Seconded by: **Cr Murray Elliott**

That Council resolves to:

1. **acknowledge completion of the speed limit review, street lighting assessment and shared pathway assessment for Russell Island and to note the recommendations contained in the final reports;**
2. **implement the speed zone and signing changes recommended in the speed limit review reports for Russell Island during the 18/19 financial year; and**
3. **further progress the conclusions and recommendations contained in the street lighting and shared pathway assessment reports, taking into consideration competing Council works priorities and available future budgets.**

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

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Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
2	Allison Crescent	Local street	Sealed	1.30	50	No	No	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No	50	None
2	Ferrbrook Avenue	Local street	Sealed	0.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Hawthornden Drive	Access street	Unsealed	3.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Wilma Crescent	Access street	Sealed	4.77	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Fern Terrace	Local street	Sealed	2.28	50	No	No	Yes	No	Yes	Yes	Yes	No	No	No	No	Yes	50	None
2	Borrows Street	Local street	Sealed	2.26	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Borrows Street (short leg)	Access street	Sealed	1.67	50	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	50	None
2	Guthrie Street	Local street	Sealed	4.94	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Parish Street	Local street	Sealed	3.08	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Lowther Street	Local street	Sealed	3.75	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Blurring Street	Local street	Sealed	2.44	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Reading Street	Local street	Sealed	4.78	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Ritson Street	Local street	Sealed	1.82	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Akebia Street	Local street	Sealed	3.21	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Alstonia Street	Local street	Unsealed	2.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Aralia Street	Local street	Unsealed	1.14	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Ellis Street	Access street	Unsealed	2.86	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Richardson Street	Local street	Unsealed	3.75	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Kilt Street	Access street	Unsealed	7.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Carissa Street	Local street	Partial Seal	2.89	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Anzac Drive	Local street	Sealed	1.14	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Cycas Street	Access street	Unsealed	1.18	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
2	Castrum Street	Local street	Partial Seal	2.76	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 2
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-02-2**
DATE : JANUARY 2018



RoadPro CONSULTING

Speed Limit Review

Public road network, Russell Island

Prepared for Redland City Council

13 February 2018

Traffic Engineering and Road Safety Specialists www.roadpro.net.au

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Client sign-off

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Redland City Council

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Speed Limit Review: Public Road Network, Russell Island

Document sign-off:
The following officer acknowledges receipt of this document on behalf of Redland City Council:

Name Russell Smith

Position Adviser Traffic Safety

Signature _____ Date 13/02/2018

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1 Introduction

This report presents the findings of a desktop speed limit review conducted on the public road network of Russell Island. The speed limit review has been undertaken by RoadPro Consulting at the request of Redland City Council.

The review has been conducted in accordance with the speed limit review process outlined in the *Manual of Uniform Traffic Control Devices* (MUTCD), Part 4: Speed Controls (Ninth Issue, 31 May 2017) and the Supplement to the MUTCD, Part 4: Speed Controls (May 2016).

Figure 1 illustrates the location of the Russell Island.



Figure 1: Location of speed limit review – Russell Island (Source: UBD Gregory's Australian City Streets v7.0)

2 Site details

Russell Island is situated in Redland City, between the mainland and North Stradbroke Island. It is approximately 8km long and 3km wide, making it the largest of the Southern Moreton Bay Islands.

The public road network on Russell Island consists entirely of local government-controlled roads that are managed by Redland City Council (Council).

At the time of review, Russell Island contained 401 roads that were being used by the travelling public and 119 unconstructed roads that were either dedicated, notified, or declared to be a road for future public use.

This speed limit review covers 396 public roads that extend for a combined length of approximately 116km.

Excluded from this review were:

- roads that were unconstructed at the time of review, that is, land dedicated as a road under the *Land Act 1994* and had been set aside for future use, but were yet to be open to vehicles or pedestrians
- the following roads where a formal speed limit review had been undertaken by RoadPro Consulting:
    - High Street
    - Centre Road
    - Minjerriba Road
    - Canaipa Road and Canaipa Point Drive.

3 Methodology

This speed limit review has been undertaken as a 'desktop review' as opposed to a full speed limit review or formal review. A desktop speed limit review is a process of assessing road function, traffic conditions, and speed environment factors including land use and crash history to determine if the existing speed limit is still suitable.

Where significant changes to traffic characteristics or the speed environment has occurred, or the existing speed limit is determined to be inappropriate, a revised speed limit has been proposed.

3.1 Desktop review process

The following steps outline the process that has been followed when undertaking the desktop speed limit review on each road.

1. Site inspections were undertaken on every road that was open to the public between Monday 4 December 2018 and Wednesday 6 December 2018. The primary purpose of these inspections was to identify and record the following information:
    - roads that were unconstructed and not open for public use
    - surface type (sealed or gravel)
    - roadside environment characteristics, including the presence of off-road paths, street or intersection lighting, and kerb/channel
    - formal or informal pedestrian crossing facilities and areas likely to have significant pedestrian use
    - roads that had a constrained speed environment, contained traffic calming devices, or where a local area traffic management scheme was in place
    - traffic lane configuration, including the presence of linemarking, turning facilities, and designated on-street parking
    - confirm the existing speed limit on each road
    - record any other details that were identified and considered relevant to the speed limit setting process.

2. In a desktop setting, a data gathering process was undertaken that involved recording the following details for each road:
    - road length
    - road width (minimum and maximum where widths varied)
    - number of land parcels (lots) which had at least one boundary with frontage along the road
    - number of undeveloped lots, where dwellings or buildings were not visible
    - typical maximum lot size
    - number of side street intersections
    - access frequency

- abutting land use (for example, residential, commercial, industrial)
- road function as described in Council's Strategic Road Network Hierarchy
- road environment description (for example, urban, urban fringe, rural).

This data was obtained using all available information sources, which included:

- Redlands' Planning Scheme
- Council's Red-e-Map online service
- Google Earth Pro
- Google Street View
- Queensland Government's Queensland Globe service
- Nearmap high resolution aerial maps and imagery service.

3. Three speed limit categories were devised and warrants for each category were established using the relevant criteria contained in Part 4 of the MUTCD. The categories that have been used are:
   - 60km/h or higher
   - 50km/h
   - 40km/h or lower.

4. Information recorded during the site inspections and desktop data interrogation were tabulated in a spreadsheet. A speed limit recommendation was then made by comparing the available information for each road against the warrants for each speed limit category. Where the proposed speed limit was different to the existing speed limit, a recommendation was also made about the works required to implement the revised limit.

For ease of locating information about each road, the network has been divided into 19 separate sections. Refer to **Appendix A** for a locality map and speed limit review summary table for each section.

4 Determination of appropriate speed limits

Part 4/4.2.1 of the MUTCD suggests the following criteria should be considered for a particular length of road when reviewing existing speed limits:

a) road function
b) prevailing speeds
c) speed environment.

As this speed limit review is a desktop assessment, prevailing speed data was not obtained on any of the subject roads. The determination of appropriate speed limits has therefore involved a two-stage process based on an assessment of road function and speed environment.

The MUTCD also suggests other issues, such as crash history and potential risk factors, be considered prior to the recommendation of an appropriate speed limit. The following analysis applies the standard desktop assessment procedure for the determination of appropriate speed limits as described in Part 4/4.3.3 of the MUTCD.

4.1 Road function

The initial assessment of the appropriate speed limits has been made by identifying the typical speed limit that is associated with each road's function. This is a limit that in the first instance is likely to match road users' expectations of the appropriate limit.

The process of identifying a typical speed limit for each road segment requires a determination to be made about the following criteria:

- functional classification
- roadside environment
- design standard.

4.1.1 Functional classification

The function a road serves within the network is one of the most important considerations when setting speed limits. In broad terms two main functions are:

- 'access', which is primarily concerned with safe and comfortable ingress/egress to land abutting the road
- 'mobility', which prioritises the movement of through traffic.

It is common for most roads to serve both an 'access' and 'mobility' function; however, the process of undertaking a speed limit review requires a determination to be made about the primary function of each road.

The *Redlands Transport Plan 2016* (the Transport Plan) details the strategic road network hierarchy that Council has adopted for Redland City.

The functional classifications given in Table 8-1 and Map 8-1 of the Transport Plan show that the road network on Russell Island contains three road types:

- trunk collectors
- local streets
- access streets.

Urban trunk collectors are roads that primarily cater for district movement. Traffic using these roads typically has trip origins and destinations outside of the local area. They are commonly referred to as 'traffic carrying roads' and clearly serve a 'mobility' function.

The following roads on Russell Island have been identified where all or part of the road is a trunk collector:

- High Street
- Centre Road
- Minjerriba Road
- Canaipa Road
- Canaipa Point Drive.

As discussed in Section 1, RoadPro Consulting has undertaken a formal speed limit review on each of these roads, hence they have been excluded from this desktop review.

The Transport Plan shows that all remaining roads provide either a local street or access street function. These road types are used mainly for access to abutting properties or to gain access to other lower-order streets within a local neighbourhood. The roads in this category clearly have access as their primary function.

Exception

The section of Glendale Road between Centre Road and Crescent Drive had been designated as a local street; however, it is considered more likely to have a primary function of 'mobility' rather than 'access'. This section of road is essentially a continuation of Centre Road, which is a major trunk collector road and traffic distributer. At the intersection of these two roads, there is no other intersecting leg or traffic node that would enable traffic to disperse into the local road network and cause the road function to abruptly change. This road section has virtually no direct access and most road users that travel on this section are likely to have trip origins and destinations outside of the local area. It is not until traffic reaches the intersection with Crescent Drive that they cross the boundary of the local residential area.

For the purpose of this review, it is considered that the subject section of Glendale Road has a function that more closely aligns with a 'trunk collector' than a 'local street'.

4.1.2 Roadside environment

In accordance with the descriptions given in Appendix L, Part 4 of the MUTCD, roadside environments are typically classified using the following descriptions:

- urban area (built-up area)
- urban fringe
- rural settlement
- rural township
- rural hamlet
- rural residential area
- rural area.

Development along most roads was typically sporadic, apart from several small built-up areas that featured consolidated residential and commercial development. However, the roadsides throughout Russell Island consisted almost entirely of existing or future low-density residential land uses with average lot sizes that were less than 2000m². These attributes are most closely associated with a developing urban area, hence the roadside environment on all roads has been determined as 'urban'.

4.1.3 Design standard

A lower speed limit than that suggested by functional classification and roadside environment, may be appropriate if the design standard of the road is not compatible with the higher speed.

The design standard relates to the level of service, mobility and safety provided by design elements such as:

- horizontal and vertical curvature
- sight distance
- superelevation
- pavement, shoulder and lane width
- gradients
- degree of access restriction.

The design standard along many of the roads was not compatible with high vehicle speeds. There were numerous deficiencies identified including:

- poor sight distance at intersections and crests
- tight horizontal alignments suitable for very low speeds
- an absence of flag lighting to highlight potential conflict points, including intersections
- narrow road widths that required opposing vehicles to pass on an unformed road shoulder
- rough surface conditions and areas where a significant amount of loose gravel had built up on the road surface
- potential hazards situated close to the running lanes
- an absence of widened shoulders to provide for manoeuvring around turning vehicles
- basic drainage provisions that were unlikely to satisfactorily manage periods of sustained rainfall.

The roads where significant design deficiencies were identified were all unsealed. As speed limits other than the general speed limits are not applied to unsealed roads, consideration has not been given to the use of lower speed limits to compensate for reduced design standards (refer MUTCD, Part 4, Clause 2.1.2).

4.1.4 Typical speed limit

The typical speed limits for roads that are included in this review are summarised in Table 1. These limits have been determined by matching the relevant road type attributes with the speed limit hierarchy given in Part 4, Appendix B, Table B1 of the MUTCD and in accordance with Clause 2.1.2(d), Part 4 of the MUTCD.

STAGE 1				
Road	**Functional classification**	**Roadside environment**	**Design standard**	**Typical speed limit (km/h)**
Glendale Road (between Centre Road and Crescent Drive)	Trunk collector road	Urban	Satisfactory	**60**
85 sealed roads	Local street or access street	Urban	Satisfactory	**50**
310 unsealed or partially sealed roads	Local street or access street	Urban	Predominantly low standard	**50**

Table 1: Typical speed limits

4.2 Speed environment

The speed environment can be described as the elements of the road and traffic environment, that collectively influence a road user's perception of an appropriate maximum travel speed. These elements include:

- roadside development
- road characteristics
- traffic characteristics.

The QLIMITS speed environment analysis software has been used to evaluate the different speed environments that were encountered throughout the network and suggest appropriate speed limits. Due to the substantial number of roads included in this desktop review, a separate analysis has not been undertaken for each road. Instead, a sensitivity analysis was performed whereby different scenarios were evaluated using a range of inputs that covered the full scope of speed environment attributes that were identified.

Elements of the speed environment that have been considered as part of the analysis include:

- roadside access frequency
- lane configuration
- presence of traffic management treatments
- road function
- restrictions to property access
- crash rate
- special roadside activities

The speed limits that QLIMITS suggested for each road segment are shown in Table 2.

STAGE 2	
Road	**Speed limit suggested by speed environment (km/h)**
Glendale Road (between Centre Road and Crescent Drive) which was identified as having a 'traffic carrying' function	70
85 sealed roads with a local street or access street function	50
310 unsealed or partially sealed roads with a local street or access street function	50

Table 2: Limits suggested by speed environment

4.2.1 Crash history

High crash rates or the occurrence of crash clusters at specific locations can often signal that a road safety problem exists. Speed limits should not necessarily be lowered as a direct response to a high crash rate; however, a crash data review forms an important part of the speed limit review process as it may identify if an incorrectly set speed limit is likely to be exacerbating a road safety problem.

A search of the Department of Transport and Main Roads' WebCrash2 database indicated there have been five casualty crashes on the subject road sections in the five-year period between 1 June 2012 and 31 December 2017 (see note*). A copy of the crash data output from WebCrash2 is provided in **Appendix B**.

Table 3 provides a summary of important crash details.

Location	DCA Code	Crash nature	Severity	Contributing circumstances
Glendale Road and Centre Road	704	Right off carriageway: Hit object	Medical Treatment	No street lighting Driver underage
Bayview Road and Cambridge Road	201	Head on	Medical Treatment	Miscellaneous
Anzac Drive	400	Hit fixed obstruction or temporary object	Medical Treatment	No street lighting Dangerous driving Under influence of liquor / drug
Anzac Drive and Carissa Street	804	Off carriageway left bend: Hit object	Hospitalisation	No street lighting Under influence of liquor drug Medical condition
Deenya Parade	804	Off carriageway left bend: Hit object	Hospitalisation	Dangerous driving Under influence of liquor / drug

Table 3: Crash history summary

Of the five incidents, four of those were single-vehicle crashes that involved motorists losing control prior to leaving the road and impacting with a tree or power pole. In three of these crashes it was identified that one of the primary contributing factors was the driver being under the influence of liquor or drugs. The remaining off-road crash involved an underage and inexperienced driver losing control when attempting to negotiate an intersection turn.

The only multi-vehicle crash occurred at the intersection of Bayview Road and Cambridge Road. This incident involved a collision between a bicycle and vehicle and was attributed to the cyclist cutting the corner of the intersection and travelling onto the incorrect side of the road.

Factors identified by police as common to two or more crashes are:

- driving under the influence of liquor or drugs
- absence of street lighting
- dangerous driving.

However, the primary cause of all five crashes appeared to be most likely the result of driver related factors. Apart from the absence of street lighting, there were no road factors identified in any of the reported incidents.

The crash history does not indicate that there are any roads that have a specific road safety problem or that speed-related issues have had a significant role in contributing to crashes. In this regard, there appears to be no basis to artificially reduce the speed limit on any roads due to a high crash potential or particular road safety concern.

Note: At the time of extracting crash data, the WebCrash2 database was reporting all casualty crash data to 31 May 2017. The selected crash analysis period therefore represents the most recent five-year period in which a complete data set was available.*

5 Speed limit review correlation

Table 4 shows the overall correlation between the two stages of this speed limit review on the subject road sections.

Stage	Description	Suggested speed (km/h)		
		85 sealed roads with a local street or access function	281 unsealed roads with a local street or access function	Glendale Road between Centre Road and Crescent Drive (mobility function)
1	Road function	50	50	60
2	Speed environment (QLIMITS)	50	50	70
-	Existing speed limit	50	50	60
Correlation		**50**	**50**	**-**

Table 4: Suggested speed limit correlation

Table 4 shows there is a correlation between both stages of the review process for all roads that have a local street or access function, resulting in a suggested speed limit of 50km/h.

A correlation was not obtained on Glendale Road, with the road function suggestive of a 60km/h speed limit and the speed environment suggestive of a 70km/h speed limit. However, the 70km/h limit is solely due to the very low level of roadside access that equates to 0.45 accesses per 100m of road length. The addition of just one more access would increase access frequency above the 0.5 accesses per 100m threshold, resulting in the suggested speed limit from the speed environment stage to drop to 60km/h.

Given the high sensitivity for calculating the suggested speed limit from the speed environment assessment and the presence of an existing 60km/h speed limit, it is considered appropriate that the existing limit be retained.

6 Criteria-based speed limit

At the time of review, a 50km/h speed limit was in place on 394 of the 396 roads that have been included in this review. This speed limit is the default limit for local streets and falls within a category of speed limits known as 'criteria based speed limits'.

A formal speed limit review is not required for the assessment of criteria-based speed limits, as they are determined in accordance with specific criteria for each type of limit. With regard to the '50k/h local street speed limit', the main determinant is the function of the street. If the primary function is to provide access to properties, or cater for limited neighbourhood movements, then the use of the 50km/h local street speed limit is generally appropriate. Higher speed limits are only considered on urban roads that have a primary function of carrying traffic.

As discussed in Section 3.1.1, the primary function of all but one road is to provide for direct access to abutting properties and access to other lower-order streets within defined local areas

As safe access to properties has a higher priority than traffic efficiency and mobility, the 50km/h local street speed limit is the most appropriate limit for most roads.

7 Findings

Of the 86 sealed roads and 310 unsealed or partially sealed roads included in this review, 394 roads had an existing local street speed limit of 50km/h and two roads had an existing speed limit of 60km/h.

It was determined that the existing speed limits on most roads remained appropriate, apart from the existing 60km/h speed limit on Crescent Drive between Glendale Road and 50m north of The Boulevard.

Crescent Drive is a local street that provides the primary access route within the local area situated at the south-east corner of Russell Island. The primary function of all roads within this local area, including Crescent Drive, is to provide safe access to abutting properties and other access streets. The boundary where road function changes from 'access' to 'mobility' occurs at the intersection of Glendale Road and Crescent Drive. There is also a distinct change in speed environment that occurs at this intersection, primarily due to the increase in access frequency and residential dwellings beside the road. South of this intersection, on Crescent Drive, most trip origins or destinations are likely to occur within the local area, hence safe and easy access to properties and side streets should take precedence over traffic movement and efficiency.

The 50km/h local street speed limit would be the most appropriate limit on Crescent Drive and is supported by the roads function and speed environment characteristics.

The following points provide a summary of the other key findings from the desktop speed limit review process.

1. The roadside environment throughout the road network on Russell Island was determined to be 'urban'. Although in many areas the extent of existing development was unconsolidated, almost all of the abutting land use was designated for residential development and lot sizes were consistent with those expected in an urban area.
2. The 396 roads that were assessed in the desktop review were designated as 'local streets' or 'access streets' in the road network hierarchy. The primary function of these road types was to provide for safe and easy access to properties, the default maximum speed limit typically adopted for these roads is the local street speed limit of 50km/h.
3. Speed limits lower than 50km/h are normally reserved for urban roads that have either: a constrained environment, high levels of pedestrian activity, been physically altered using traffic calming measures, or form part of a local traffic area or management scheme. Of the 396 roads that were assessed, none were identified as having any of these properties.
4. Speed limits greater than 50km/h are only applied to urban roads that have a primary 'traffic carrying' function. Only one of the 396 roads that were assessed (Glendale Road), was identified as having a road section that served as a 'traffic carrying' road. Although the section of Glendale Road between Centre Road and Crescent Drive, was designated in the Transport Plan as a 'local street', there are several factors that support retention of the existing 60km/h speed limit, normally reserved for 'traffic carrying' roads. These were:
    - The road forms a continuation of Centre Road, which is a major trunk collector road and traffic distributer. At the intersection of these two roads, there is no

other intersecting leg or traffic node that would enable traffic to disperse or immediately alter the road function.

- A majority of road users are likely to have trip origins and destinations outside of the local area.
- An absence of roadside development apart from two lots at the eastern end.
- The entire northern roadside bordering one large undeveloped land parcel.

5. At the time of undertaking the review, there were 281 roads that had a gravel or earth surface and 29 roads that were only partially sealed. The remaining 86 roads had been sealed with a bitumen or concrete surfacing. Speed limits, other than the general 50km/h local street speed limit, are not applied to unsealed urban roads (refer MUTCD, Part 4, Clause 2.1.2).

8 Recommendations

Table 5 shows the recommended changes to existing speed limits. These limits are based on outcomes using the speed limit review process outlined in Part 4 of the MUTCD. The recommended limits are in no way binding and the responsibility for the selection and implementation of an appropriate speed limit for the subject road segments rests with Council.

Road Name	Existing speed limit (km/h)	Recommended speed limit (km/h)
Crescent Drive (Glendale Road to 50m north of The Boulevard)	**60**	**50**

Table 5: Recommended speed limit changes

8.1 Actions required

The following actions are required to implement the speed limits shown in Table 5:

1. Remove the two existing 60km/h speed limit signs installed in Crescent Drive; 60m south of the intersection with Glendale Road and 40m north of the intersection with The Boulevard.

Refer to the proposed sign layouts shown in **Appendix C** for further details of the required signage works



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Appendix A
Locality maps and speed limit review summary tables



Traffic Engineering and Road Safety Specialists www.roadpro.net.au

RoadPro CONSULTING



SECTION - 1
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 1 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-01-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
1	Bay Drive	Local street	Sealed	5.44	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Tenanne Street	Local street	Sealed	3.77	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Remart Street	Local street	Sealed	2.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Samar Street	Access street	Sealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Kamar Street	Local street	Sealed	2.29	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Hill Street	Local street	Sealed	2.22	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Michel Street	Local street	Sealed	2.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Aquarius Road	Local street	Sealed	3.85	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Zephyr Street	Access street	Partial Seal	1.52	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Oasis Drive	Access street	Sealed	4.55	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Phoenix Street	Access street	Sealed	3.45	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Byron Street	Access street	Sealed	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Player Court	Access street	Unsealed	7.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Hogan Court	Access street	Sealed	5.71	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Thompson Esplanade	Access street	Partial Seal	2.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Tennyson Court	Access street	Sealed	6.09	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Wright Street	Access street	Unsealed	0.87	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Emerson Street	Access street	Sealed	4.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Patterson Street	Access street	Sealed	4.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Stevenson Court	Access street	Sealed	5.71	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Keats Street	Access street	Sealed	5.49	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Browning Street	Access street	Sealed	5.60	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
1	Milton Street	Access street	Sealed	8.57	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 1
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : R-01-2
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 2
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : **RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS**	DESCRIPTION : **SECTION - 2 LOCALITY**	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-02-1 DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 3
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 3 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-03-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
3	Goolagong Street	Access street	Unsealed	2.55	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Illagona Street	Access street	Unsealed	2.80	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Jiwali Street	Access street	Unsealed	0.87	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Titala Street	Local street	Sealed	2.68	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Trimaran Street	Local street	Partial Seal	2.27	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Grevillea Street	Access street	Sealed	1.92	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Hakea Street	Access street	Partial Seal	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Banksia Street	Local street	Partial Seal	3.82	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Cassia Street	Access street	Unsealed	1.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Callistemon Street	Access street	Unsealed	2.79	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Dryandra Street	Access street	Partial Seal	5.16	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Bernborough Street	Local street	Sealed	2.72	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Sabot Street	Local street	Sealed	4.44	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Seaview Street	Access street	Sealed	2.80	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Yacht Street	Local street	Sealed	2.36	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Inlet Avenue	Local street	Partial Seal	1.56	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Cutter Street	Local street	Sealed	4.05	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	James Street	Local street	Sealed	2.11	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Orme Drive	Access street	Sealed	2.35	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
3	Virginia Parade	Access street	Sealed	3.64	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 3
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-03-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 4
AREA MAP



KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 4 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-04-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
4	Baguette Street	Access street	Unsealed	0.98	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Tails Street	Access street	Sealed	3.41	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Gunsynd Street	Access street	Unsealed	4.10	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Todman Street	Access street	Partial Seal	2.05	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Tulloch Street	Access street	Unsealed	1.54	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Catamaran Street	Access street	Unsealed	1.12	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Yawl Street	Access street	Unsealed	1.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Phar lap Street	Local street	Unsealed	3.84	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Norfolk Street	Access street	Unsealed	1.13	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Elm Street	Access street	Unsealed	3.64	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Oak Street	Access street	Unsealed	3.03	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Maroondah Street	Access street	Unsealed	1.82	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Ferry Court	Access street	Unsealed	6.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Skiff Street	Local street	Partial Seal	1.62	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Sloop Street	Access street	Unsealed	0.69	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Ketch Street	Local street	Unsealed	2.38	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
4	Schooner Street	Access street	Partial Seal	4.52	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 4
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-04-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 5
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 5 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-05-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
5	Jasper Street	Local street	Partial Seal	3.06	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Aquamarine Avenue	Local street	Unsealed	2.27	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Venus Court	Access street	Unsealed	9.09	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Neptune	Access street	Unsealed	5.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Opal Court	Access street	Unsealed	2.78	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Gem Street	Access street	Unsealed	2.11	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Emerald Street	Local street	Unsealed	0.75	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Topaz Street	Local street	Unsealed	2.69	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Sapphire Street	Local street	Unsealed	2.31	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Diamond Street	Local street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Ruby Street	Local street	Sealed	1.36	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Jewel Street	Local street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Mercury Road	Access street	Unsealed	0.78	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Mars Street	Local street	Unsealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Pearl Street	Local street	Unsealed	1.74	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Saturn Street	Local street	Unsealed	3.24	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
5	Crystal Street	Local street	Unsealed	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 5
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-05-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 6
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 6 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-06-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
6	Davidson Road	Access street	Unsealed	1.00	50	No	Yes	Yes	Yes	Yes	No	Yes	No	No	No	No	No	50	None
6	Coco Palms Drive	Local street	Unsealed	0.65	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Anthony Avenue	Local street	Unsealed	0.53	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Neenes Place	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Diana Place	Local street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Bilambil Drive	Local street	Unsealed	0.88	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Magnolia Street	Local street	Unsealed	1.04	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Flamingo Street	Access street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Zinnia Street	Local street	Unsealed	2.11	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Frangipani Street	Local street	Unsealed	1.30	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Coleus Street	Access street	Unsealed	1.30	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Allamanda Street	Local street	Unsealed	2.18	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Eucalypt Street	Access street	Unsealed	2.19	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Waratah Street	Local street	Sealed	3.02	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Carnation Court	Access street	Unsealed	7.06	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Dahlia Street	Access street	Unsealed	2.31	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Acalypha Street	Local street	Unsealed	2.96	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Petunia Street	Local street	Unsealed	0.74	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Azalea Street	Access street	Unsealed	1.92	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Tulip Street	Local street	Unsealed	1.88	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Aster Street	Local street	Unsealed	1.54	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Camellia Street	Local street	Unsealed	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
6	Stock Street	Access street	Unsealed	1.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 6
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-06-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 7
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : **RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS**	DESCRIPTION : **SECTION - 7 LOCALITY**	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : **R-07-1** DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
7	Weedmore Road	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Titania Terrace	Local street	Unsealed	1.56	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Doverton Drive	Local street	Partial Seal	3.46	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Hunters Road	Access street	Unsealed	3.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Field Street	Access street	Unsealed	1.05	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Belgrave Road	Local street	Unsealed	1.32	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Manson Parade	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Villawood Road	Local street	Partial Seal	2.12	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Turell Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Grafton Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Woodland Circuit	Local street	Unsealed	1.38	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Bean Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Romford Crescent	Local street	Unsealed	1.63	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	St Jons Walk	Access street	Unsealed	1.54	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Mulbray Crescent	Local street	Unsealed	1.11	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
7	Forest Hill Road	Local street	Unsealed	1.23	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

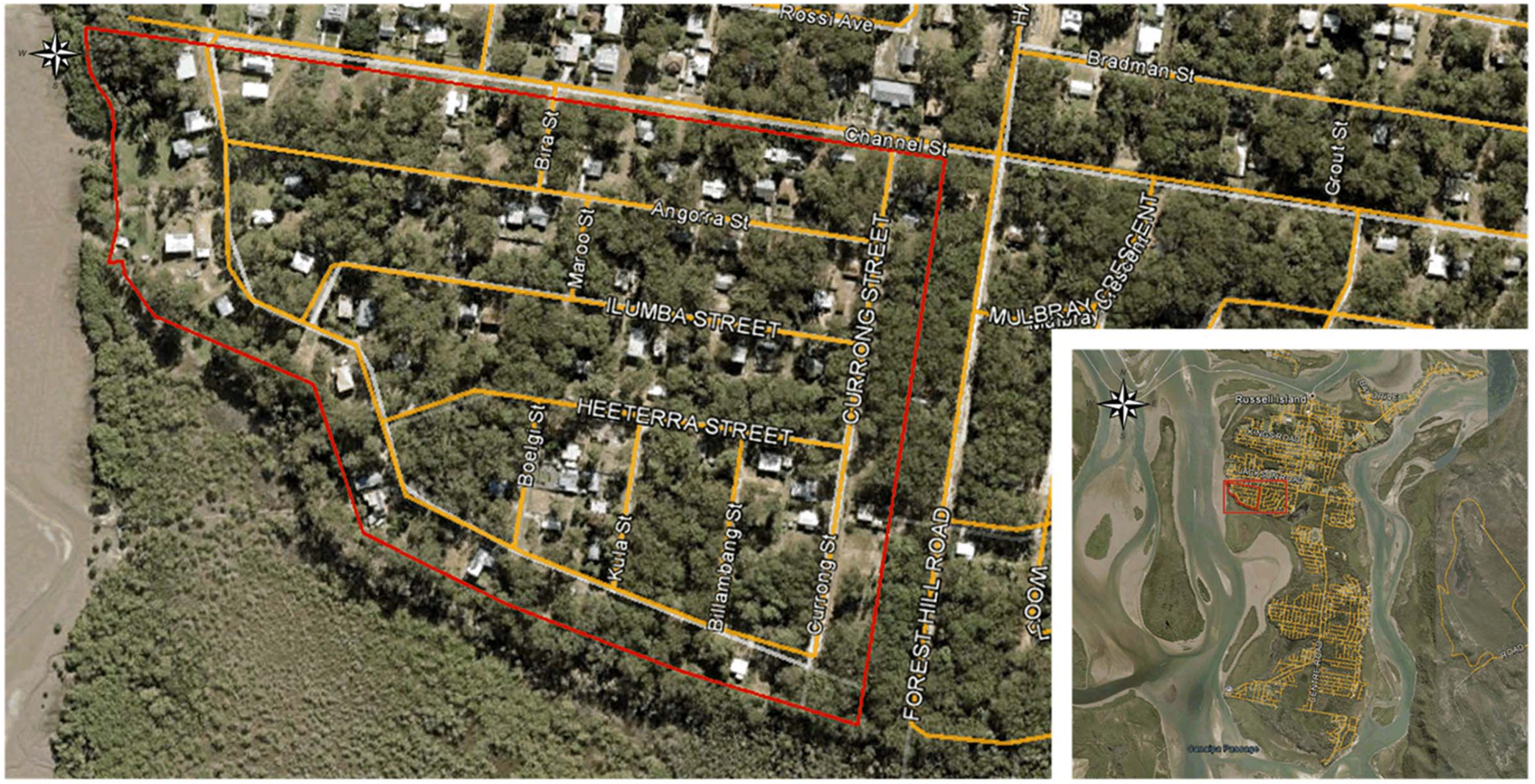
Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 7
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-07-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 8
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 8 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-08-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
8	Currong Street	Local street	Partial Seal	2.47	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
8	Deenya Parade	Local street	Partial Seal	2.86	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
8	Heeterra Street	Local street	Unsealed	2.06	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
8	Billambang Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
8	Kula Street	Access street	Sealed	3.64	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
8	Boeigi Street	Access street	Sealed	4.21	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
8	Ilumba Street	Local street	Sealed	4.05	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
8	Maroo Street	Local street	Sealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
8	Angorra Street	Local street	Sealed	2.98	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
8	Bira Street	Local street	Sealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 8
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-08-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 9
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 9 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-09-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
9	Channel Street	Local street	Sealed	3.17	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Bradman Street	Local street	Sealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Benaud Street	Access street	Sealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Harvey Street	Local street	Partial Seal	3.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Miller Street	Access street	Unsealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Burge Street	Access street	Unsealed	2.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Lindwall Street	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Rossi Avenue	Local street	Sealed	3.11	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Pia Street	Access street	Unsealed	4.14	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Panorama Avenue	Local street	Sealed	6.12	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Binalong Street	Access street	Unsealed	7.14	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Mark Road	Local street	Partial Seal	3.42	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Jackson Road	Local street	Sealed	3.21	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Beth Street	Access street	Sealed	3.08	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	West Street	Access street	Unsealed	1.60	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
9	Lau Street	Local street	Partial Seal	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 9
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-09-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 10
AREA MAP



KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 10 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-10-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
10	Breeze Street	Local street	Unsealed	1.54	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Mountain View Crescent	Local street	Unsealed	2.22	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Spring Street	Local street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Bamboo Road	Local street	Unsealed	2.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Autum Court	Access street	Unsealed	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Tonga Street	Local street	Unsealed	1.05	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Pao Pao Road	Local street	Unsealed	2.92	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Fiji Street	Local street	Unsealed	3.37	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Kava Street	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Aimeo Esplanade	Local street	Unsealed	1.84	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Avera Road	Access street	Unsealed	0.87	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Orchid Street	Access street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Monsoon Street	Local street	Unsealed	0.81	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Tropic Drive	Local street	Unsealed	2.35	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Plantation Street	Access street	Unsealed	1.71	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Sundown Road	Local street	Unsealed	4.32	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Koro Street	Local street	Sealed	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Suva Road	Access street	Partial Seal	2.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Kalia Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Ursula Street	Access street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Amanda Street	Access street	Unsealed	3.64	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Leilani Avenue	Local street	Unsealed	2.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Kao Road	Access street	Unsealed	2.31	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
10	Alofi Street	Access street	Unsealed	2.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 10
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-10-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 11
AREA MAP

KEY MAP

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 11
LOCALITY

SCALE : NOT TO SCALE
SHEET : 1 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-11-1**
DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
11	Roebuck Road	Access street	Unsealed	2.40	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Highland Street	Local street	Sealed	3.93	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Short Street	Access street	Sealed	2.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Vista Street	Local street	Sealed	3.52	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Iris Street	Access street	Unsealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Laurel Street	Local street	Partial Seal	3.38	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Leslie Street	Access street	Sealed	1.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Ross Street	Access street	Sealed	4.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Regal Street	Local street	Partial Seal	2.46	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Kings Road	Local street	Partial Seal	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Canopy Crescent	Access street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Capewell Court	Access street	Unsealed	2.86	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Cynthia Crescent	Access street	Unsealed	0.74	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Cosmos Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Dempsey Street	Local street	Unsealed	1.82	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Clivia Street	Access street	Unsealed	3.08	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Folwell Street	Access street	Unsealed	2.96	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Taylor Street	Local street	Unsealed	2.94	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Crocus Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Celosia Street	Access street	Unsealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
11	Coyne Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 11
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-11-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 12
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 12 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-12-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
12	John Street	Access street	Unsealed	0.38	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Sandra Street	Access street	Unsealed	1.54	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Robert Street	Local street	Sealed	2.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Nicholas Street	Access street	Unsealed	1.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Union Street	Local street	Sealed	2.55	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Annet Street	Access street	Unsealed	0.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Miriam Street	Access street	Sealed	4.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Judith Street	Local street	Sealed	3.21	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Sutton Street	Local street	Unsealed	3.75	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Canna Street	Local street	Unsealed	2.35	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Meadstone Street	Access street	Unsealed	2.31	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Oaklea Street	Local street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Waterlea Street	Access street	Unsealed	1.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Cavendish Street	Local street	Sealed	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Wilies Street	Access street	Unsealed	4.83	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Alice Street	Local street	Sealed	4.78	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Douglas Street	Local street	Sealed	3.71	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Oxford Road	Access street	Unsealed	2.92	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Cambridge Road	Access street	Sealed	4.17	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
12	Bayview Road	Local street	Sealed	5.77	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	50	None
12	Outlook Crescent	Access street	Unsealed	6.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 12
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-12-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 13
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 13 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-13-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants													Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower						Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity			
13	Cougal Drive	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Hacking Ridge Road	Local street	Unsealed	2.41	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Rose Bay Drive	Local street	Unsealed	1.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Avondale Road	Access street	Unsealed	1.54	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Letitia Avenue	Access street	Unsealed	1.31	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Bambeery Street	Access street	Unsealed	1.30	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Toolona Avenue	Access street	Unsealed	2.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Coombah Drive	Access street	Unsealed	1.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Dickenson Drive	Access street	Unsealed	1.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Fernando Road	Local street	Unsealed	2.89	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Darwallah Avenue	Local street	Partial Seal	2.22	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Palm Beach Road	Local street	Partial Seal	2.86	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Kurrajong Road	Local street	Sealed	2.80	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Castle Wood Crescent	Access street	Unsealed	0.45	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Calwood Crescent	Access street	Unsealed	1.36	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Martin Place	Access street	Unsealed	0.91	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Lotus Crescent	Access street	Unsealed	1.82	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Glenfield Avenue	Access street	Unsealed	2.27	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Bowen Avenue	Access street	Unsealed	1.36	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Swan Parade	Access street	Unsealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Monaco Avenue	Access street	Unsealed	1.82	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Trevanna Avenue	Local street	Unsealed	1.82	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Gilcrest Road	Local street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Ranora Avenue	Access street	Unsealed	0.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Maher Avenue	Access street	Unsealed	1.18	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Hemp Hill Road	Local street	Unsealed	1.51	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Tahlin Drive	Local street	Unsealed	2.45	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Fenton Road	Local street	Unsealed	3.20	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Phillips Road	Access street	Unsealed	2.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Lamsell Avenue	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Gaffin Road	Access street	Unsealed	2.86	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
13	Abalone Avenue	Access street	Unsealed	2.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 13
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-13-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 14
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 14 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-14-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
14	Nautilus Parade	Local street	Unsealed	2.31	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Medika Drive	Local street	Unsealed	3.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Tierney Terrace	Access street	Unsealed	1.95	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Wakehill Road	Access street	Unsealed	1.90	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Bimbad Crescent	Local street	Unsealed	1.63	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Tomewin Road	Access street	Unsealed	0.48	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Possum Parade	Access street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Summerland Drive	Local street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Grove Road	Local street	Unsealed	1.10	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Boronia Avenue	Access street	Unsealed	1.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Amalfi Avenue	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Naken Place	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Stradbroke Drive	Local street	Sealed	0.77	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Pennies Road	Local street	Unsealed	1.28	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Kimbin Street	Local street	Unsealed	2.09	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Rodds Road	Access street	Unsealed	1.54	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
14	Lagoon Road	Local street	Unsealed	2.81	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 14
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-14-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 15
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : **RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS**	DESCRIPTION : **SECTION - 15 LOCALITY**	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : **R-15-1** DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants													Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower						Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity			
15	Lakeland Avenue	Access street	Unsealed	0.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Simpson Drive	Local street	Unsealed	1.50	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Ian Lane	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Glendale Road (west of Centre Rd)	Local street	Unsealed	0.46	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Peyton Avenue	Access street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Shandoss Avenue	Access street	Unsealed	0.74	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Lucy Street	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Susan Street	Access street	Unsealed	1.76	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Sonia Street	Access street	Unsealed	2.78	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Ruth Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Sherlock Drive West	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Kay Street	Local street	Unsealed	1.54	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Arnold Street	Local street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Sadie Street	Local street	Unsealed	1.54	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	South End Road	Local street	Unsealed	1.84	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Pookanah Street	Access street	Unsealed	2.29	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Bilbungra Street	Access street	Unsealed	1.71	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Coolabah Street	Access street	Unsealed	1.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Jarrah Street	Access street	Unsealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Binburra Street	Access street	Unsealed	2.42	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Kam Street	Access street	Unsealed	0.51	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Bunya Street	Local street	Unsealed	1.95	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Wattle Street	Access street	Unsealed	2.86	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Bangalow Street	Local street	Sealed	2.61	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
15	Yarra Street	Local street	Sealed	2.37	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 15 SPEED LIMIT REVIEW SUMMARY AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : R-15-2
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 16
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : **RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS**	DESCRIPTION : **SECTION - 16 LOCALITY**	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : **R-16-1** DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
16	Gay Terrace	Access street	Sealed	1.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Penn Street	Local street	Sealed	1.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Cowderoy Drive	Local street	Partial Seal	2.05	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Park Avenue	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Basket Beach Road	Local street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Cypress Avenue	Access street	Unsealed	0.32	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Poinsettia Court	Access street	Unsealed	0.30	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Seaward Drive	Local street	Partial Seal	3.29	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Rampart Drive	Local street	Unsealed	2.08	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Delmar Parade	Access street	Unsealed	0.71	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Beaumont Drive	Access street	Unsealed	0.88	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Little Cove Road	Local street	Unsealed	2.38	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	The Avenue	Local street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Canalpa Ridge Road	Local street	Unsealed	2.13	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Beacon Drive	Local street	Unsealed	0.76	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Main View Drive	Access street	Unsealed	2.41	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Scenic Drive	Access street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Highland Ridge Road	Local street	Unsealed	2.15	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Eldon Drive	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Double Island Outlook	Access street	Unsealed	1.51	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Vernon Way	Access street	Unsealed	0.45	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Island View Road	Access street	Unsealed	2.96	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Wahine Drive	Local street	Sealed	4.45	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Cutler Drive	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Maybrook Avenue	Access street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Barcelona Terrace	Local street	Sealed	3.31	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Magoa Road	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Woomera Street	Local street	Unsealed	1.95	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Boeing Ridge Road	Local street	Unsealed	1.87	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Coveden Crescent	Local street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Condor Avenue	Access street	Unsealed	0.77	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Bayswater Road	Access street	Unsealed	1.91	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Rundal Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
16	Baynton Street	Access street	Unsealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

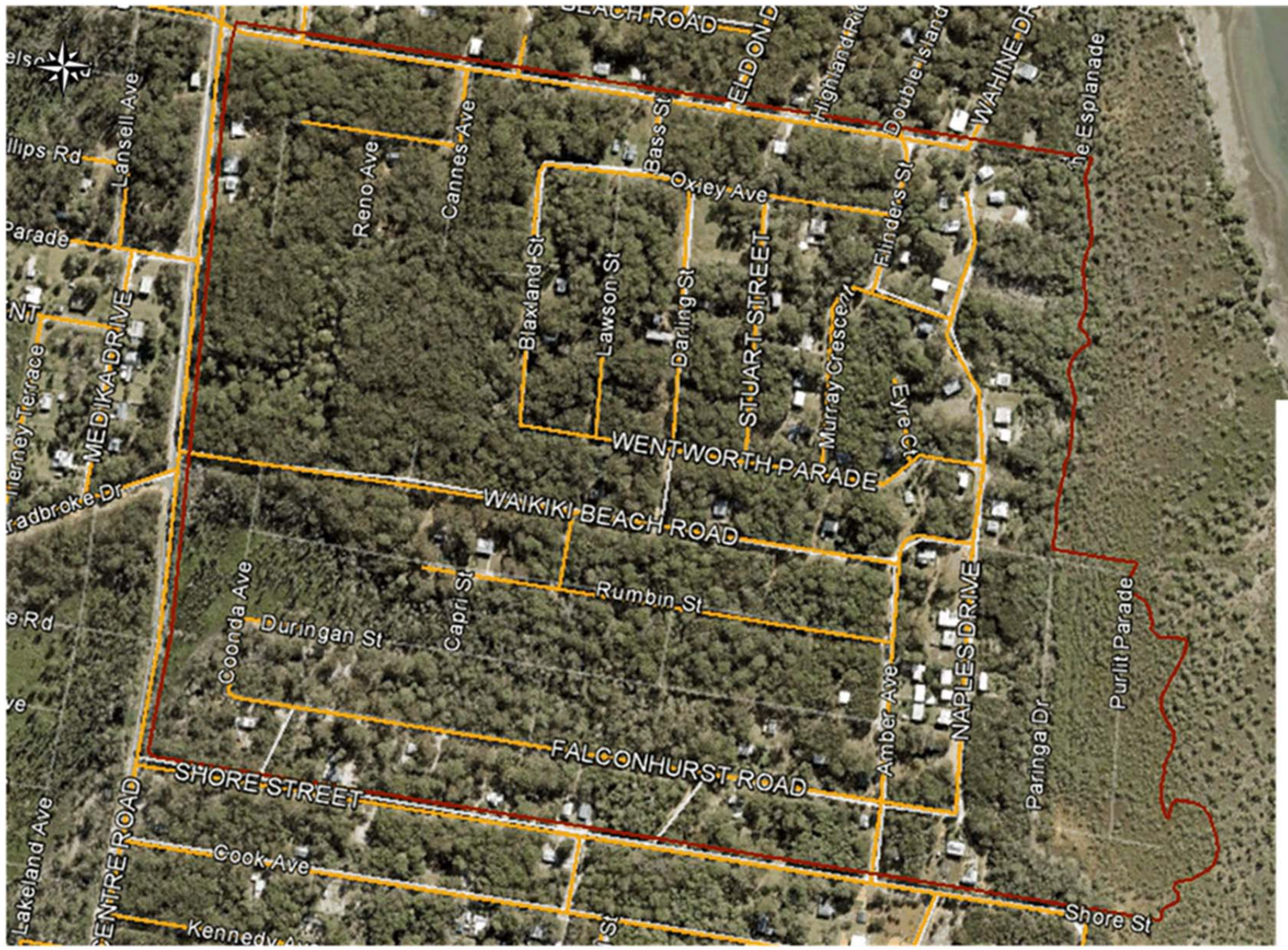
Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 16
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-16-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 17
AREA MAP



KEY MAP

Redland CITY COUNCIL	PROJECT : **RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS**	DESCRIPTION : **SECTION - 17 LOCALITY**	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : **R-17-1** DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants													Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower						Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity			
17	Hume Street	Local street	Sealed	1.73	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Sunhaven Road	Access street	Unsealed	1.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Reno Avenue	Access street	Unsealed	0.95	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Cannes Avenue	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Bass Street	Local street	Unsealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Oxley Avenue	Local street	Unsealed	1.71	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Wentworth Parade	Local street	Unsealed	2.15	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Leichhardt Terrace	Access street	Unsealed	0.42	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Eyre Court	Access street	Unsealed	1.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Murray Crescent	Access street	Unsealed	1.72	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Flinders Street	Local street	Unsealed	1.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Stuart Street	Access street	Unsealed	0.39	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Darling Street	Access street	Unsealed	1.18	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Lawson Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Blaxland Street	Access street	Unsealed	0.77	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Barata Street	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Waikiki Beach Road	Local street	Unsealed	0.99	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Purlit Parade	Local street	Unsealed	1.11	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Naples Drive	Access street	Unsealed	2.65	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Amber Avenue	Local street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Falconhurst Road	Local street	Unsealed	1.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Cooinda Avenue	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Duringan Street	Access street	Unsealed	1.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Rumbin Street	Access street	Unsealed	0.64	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None
17	Austral Street	Local street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No		50	None

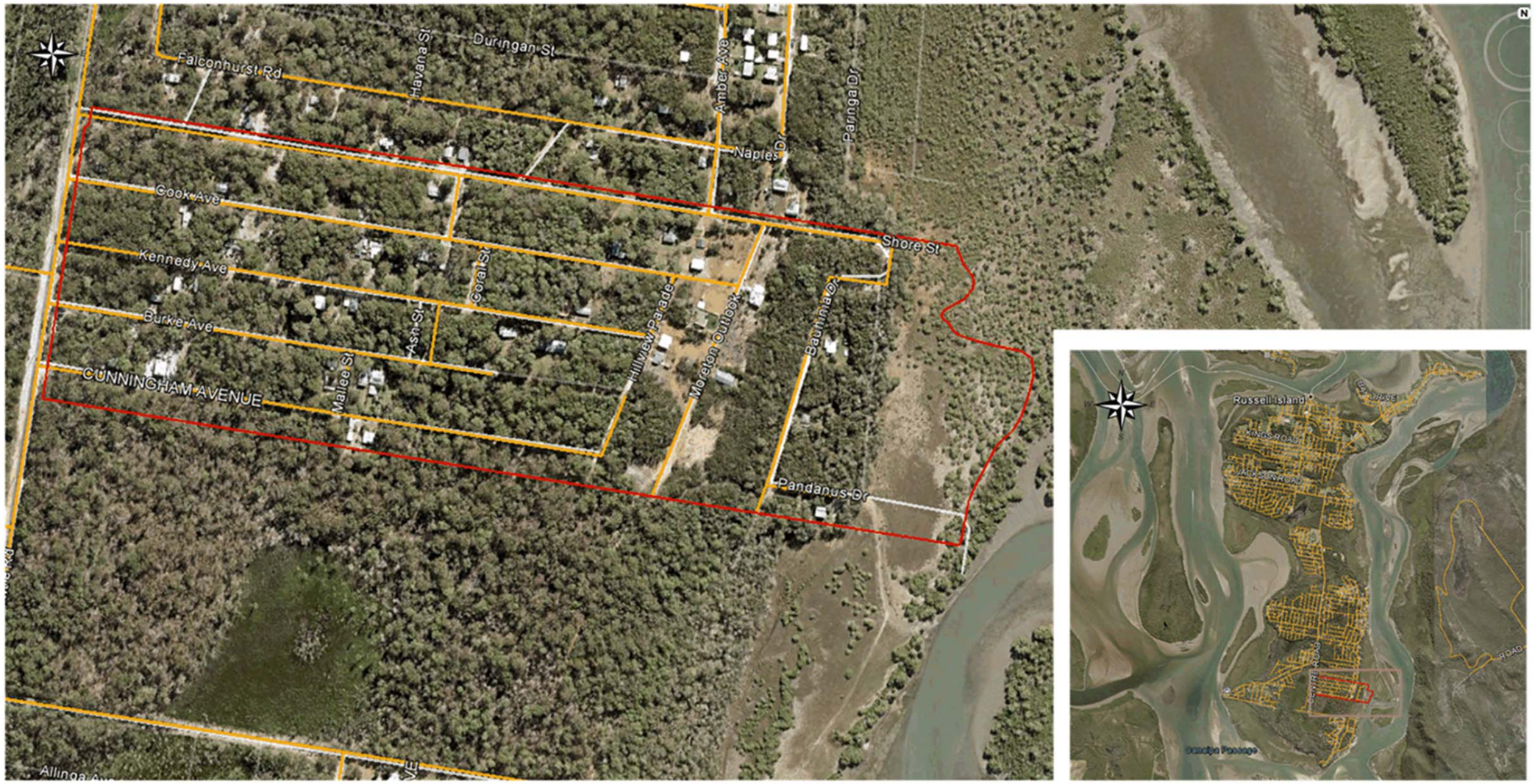
Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 17 SPEED LIMIT REVIEW SUMMARY AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : R-17-2
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 18
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS	DESCRIPTION : SECTION - 18 LOCALITY	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : R-18-1 DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
18	Shore Street	Local street	Sealed	1.40	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Bauhina Drive	Access street	Unsealed	0.67	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Pandanus Drive	Access street	Unsealed	0.77	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Moreton Outlook	Access street	Unsealed	1.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Hillview Parade	Access street	Unsealed	2.04	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Wilga Street	Access street	Unsealed	1.43	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Coral Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Ash Street	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Mallee Street	Access street	Unsealed	4.29	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Cook Avenue	Access street	Unsealed	1.82	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Kennedy Avenue	Access street	Unsealed	1.62	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Burke Avenue	Access street	Unsealed	1.06	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
18	Cunningham Avenue	Access street	Unsealed	0.62	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 18
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-18-2**
DATE : JANUARY 2018

RoadPro CONSULTING



SECTION - 19
AREA MAP

KEY MAP

Redland CITY COUNCIL	PROJECT : **RUSSELL ISLAND DESKTOP REVIEW OF PUBLIC ROAD SPEED LIMITS**	DESCRIPTION : **SECTION - 19 LOCALITY**	SCALE : NOT TO SCALE SHEET : 1 of 2 DRAWN BY : DARREN SHIRLEY DRG. No : **R-19-1** DATE : JANUARY 2018

RoadPro CONSULTING

Street Details						Speed Limit Warrants												Reccommendation	
Section	Street Name	Road Function	Surface Type	Access Frequency (per 100m)	Existing Speed Limit (km/h)	Warrants for 60km/h or Higher		Warrants for 50km/h					Warrants for 40km/h or lower					Recommended Speed Limit (km/h)	Works Required to Achieve Recommended Limit
						Traffic Carrying Road	Urban Fringe Area	Local Street Access Street or Minor Collector	Maximum Road Width of 10m	Absence of Dividing Linemarking	Typical Maximum Block Size 2000m2	Maximum of 300 Dwellings	Constrained Environment	Traffic Calming	Strip Shopping or Commercial area (Traffic carrying road)	Central Business District (CBD) (Traffic carrying road)	Significant Pedestrian Activity		
19	Glendale Road (between Centre Road and Crescent Drive)	Trunk Collector	Sealed	0.59	60	Yes	No	No	Yes	Yes	Yes	Yes	No	No	No	No	No	60	None
19	Glenday Road (between Headland Circuit and The Boulevard)	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Jingell Avenue	Access street	Unsealed	0.88	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Castle Drive	Access street	Unsealed	4.55	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Peronne Avenue	Access street	Unsealed	1.71	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Lee-Weena Avenue	Access street	Unsealed	2.40	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Prior Way	Access street	Unsealed	2.47	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	The Tor Walk	Access street	Unsealed	2.73	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Kilpa Avenue	Local street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Casandara Avenue	Access street	Unsealed	2.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Victoria Avenue	Access street	Unsealed	1.25	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Crescent Drive south of Paradise Avenue	Access street	Unsealed	4.33	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Crescent Drive north of Paradise Avenue	Local street	Sealed	3.66	60	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	Remove existing 60km/h speed signs
19	Paradise Avenue	Local street	Partial Seal	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Headland Circuit	Access street	Unsealed	3.04	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	The Chase	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	Deepwater Avenue	Access street	Unsealed	0.00	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None
19	The Boulevarde	Local street	Unsealed	0.95	50	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	50	None

Redland CITY COUNCIL

PROJECT :
RUSSELL ISLAND
DESKTOP REVIEW OF
PUBLIC ROAD SPEED LIMITS

DESCRIPTION :
SECTION - 19
SPEED LIMIT REVIEW SUMMARY
AND RECOMMENDATIONS

SCALE : NOT TO SCALE
SHEET : 2 of 2
DRAWN BY : DARREN SHIRLEY
DRG. No : **R-19-2**
DATE : JANUARY 2018



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Appendix B
Crash history reports



Traffic Engineering and Road Safety Specialists www.roadpro.net.au

Data Analysis
Customer Services, Safety and Regulation Division

WebCrash v2.3 Reports

The page numbers shown here are those of the overall PDF file (they range 1-5).
The PDF page numbers appear at the top left-hand corner of each page.
Pages within individual reports are numbered from 1 and appear at the top right-hand corner of each page.
When printing specific reports with Acrobat Reader, the PDF page numbers must be specified.

Table of Contents

1. Crash Details by Crash Number 3

Data Restrictions

Please note:-

IMPORTANT MESSAGE

Around 10% to 15% of non-fatal crash records for 1 July 2012 to 31 December 2014 are incomplete and unavailable. Data Analysis are addressing the issues to resolve this problem as soon as possible.

The crash data for 1 July 2012 to 31 December 2014 is being made available and users must exercise caution when analysing this data.

The data CAN be used to identify locations where crash frequency has increased, however, the degree of increase may be under-reported and some locations may not be identified. The data CAN be used to examine individual crash details.

The data is NOT suitable for:

* Time series trend analysis

* Comparison of characteristics

* Evaluation of crash reductions

* Evaluation of crash risk

* Crash rates (per VKT, per Vehicle type, per licence holder, per population)

With 10% to 15% of crash records unavailable the data is under-reported, biased and fairly limited for analytical purposes, however, it is considered a reasonable level of completeness for Black Spot submissions and examining individual crash details.

The Department of Transport and Main Roads (TMR) WebCrash system reports on the following crash data - fatal to 31 August 2017, hospitalisation to 31 May 2017, medical treatment to 31 May 2017, minor injury to 31 May 2017 and property damage only to 31 December 2010.

Road Crash Data Inclusion Requirements

Please also note that the information held in the RoadCrash database relating to crashes occurring within the last 12 months are considered preliminary as investigations into crashes can take up to 12 months to finalise. Please further note that to qualify as valid, crashes must meet the following criteria:

1. The crash occurred on a public road, and
2. A person was killed or injured, or
3. At least one vehicle was towed away, or
4. The value of property damage was:
   (a) $2500 damage to property other than vehicles (after 1 December 1999)
   (b) $2500 damage to vehicle and property (after 1 December 1991 and prior to 1 December 1999)
   (c) $1000 damage to property (prior to 1 December 1991)

Note: crashes resulting from medical conditions or deliberate acts are excluded.

Contact Details:

Postal Address: Manager (Data Analysis)
Customer Services, Safety and Regulation Division
Department of Transport and Main Roads
PO Box 673
Fortitude Valley
Qld 4006

Phone: 07 3066 2236
Fax: 07 3066 2410
Email: DataAnalysis@tmr.qld.gov.au

Report 1

Crash Details by Crash Number

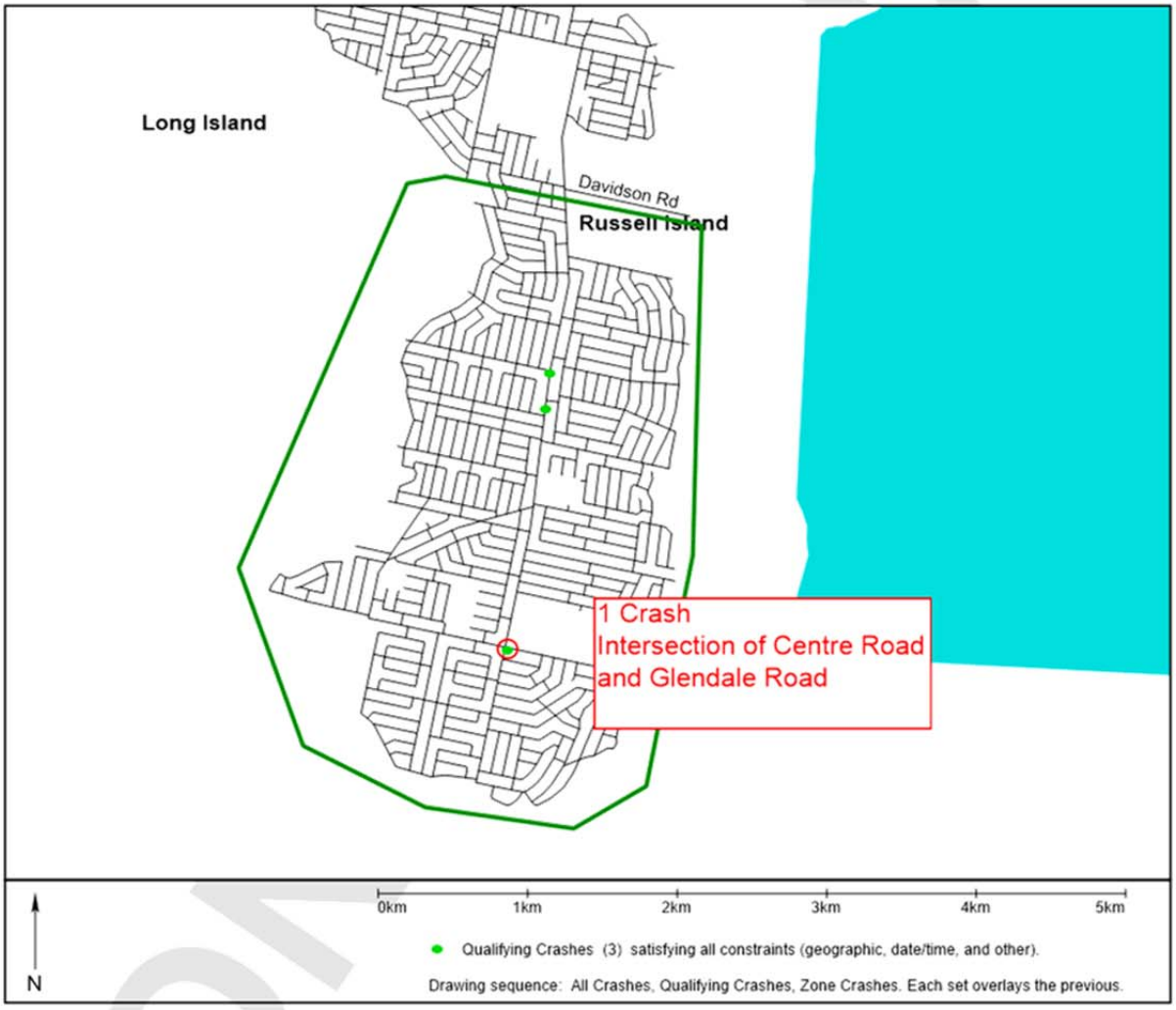
NOTE: This report has been limited to the maximum of 500 records.

Report Constraints

Geographic Constraints
Map

and

Date and Time Constraints
Continuous time: Jun-2012 to Dec-2017



COPY

Report 1

Crash Details by Crash Number

Crash Number	20131491674 (1 of 3)	**Longitude GDA94**	153.382099
Date and Time	Sat 30-Nov-2013 2am	**DCA Coding**	Off Path-Straight:Right Off Cway Hit Obj(704)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	60
LGA	Redland Shire Council(34)	**Crash Severity**	Medical Treatment
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	T Junction
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Glendale Rd	**Lighting Condition**	Darkness - unlighted
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.698873		

Crash Description

Unit 1 travelling south on Centre Road, turning left onto Glendale Road, no stop sign or give way sign as it is a continuation of main road, unit 1 lost control, ran off the road and collided with a power pole on the south eastern side of the road. Unit 1 extensively damaged on front end, unrepairable write off. Vehicle stolen at time of incident, related occurrence QP1301491337 refers. Search of area later located xxxxxxxxx, outside time frame for breath test, conveyed to hospital for treatment, not admitted, charged with UUMV and unlicenced driving. Enquiries later established xxxxxxx as passenger, also conveyed to hospital for treatment, not admitted, not in public interest to charge asxxxxxxxxxxis a minor and only admitted involvement to Police when urged to seek medical treatment as a result of injuries sustained. Owner notified and arranged removal of vehicle. SOC attended and photographed scene. No further action required.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	15	**Damage**	Extensive; unrepairable
Controller AgeGroup	12-16	**Unit Headed Direction**	East
Licence Type			

Contributing Circumstances

Unit 1 LIGHTING - NO STREET LIGHTING
Unit 1 DRIVER - UNDERAGE (INEXPERIENCE)

Injury Details

Injured Person	1 of 2	**Age Group**	12-16
Unit Number	1	**Road User**	Driver
Injury Severity	Medically treated	**Restraint**	Fitted - Not Worn
Gender	M	**Helmet**	Not Applicable
Injured Person	2 of 2	**Age Group**	12-16
Unit Number	1	**Road User**	Passenger
Injury Severity	Medically treated	**Restraint**	Unknown
Gender	F	**Helmet**	Not Applicable

Crash Number	20140576804 (2 of 3)	**Longitude GDA94**	153.383784
Date and Time	Wed 30-Apr-2014 1pm	**DCA Coding**	Off Path-Straight:Right Off Cway Hit Obj(704)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	60
LGA	Redland Shire Council(34)	**Crash Severity**	Medical Treatment
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Centre Rd	**Lighting Condition**	Daylight
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.684364		

Crash Description

Unit 1 travelling south on Centre Road, Russell Island, travelled slightly off road into gravel on left side of road, over corrected, travelled accross road, up kerbing and into tree on opposite side of the road. Extensive damage to vehicle. Driver issued TIN for Fail to maintain proper control of vehicle.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	F	**Intended Action**	Go straight ahead
Controller Age	47	**Damage**	Extensive; unrepairable
Controller AgeGroup	40-49	**Unit Headed Direction**	South
Licence Type	Open		

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Report 1

PDF Page 3 of 10

Crash Details by Crash Number

Page 1 of 8

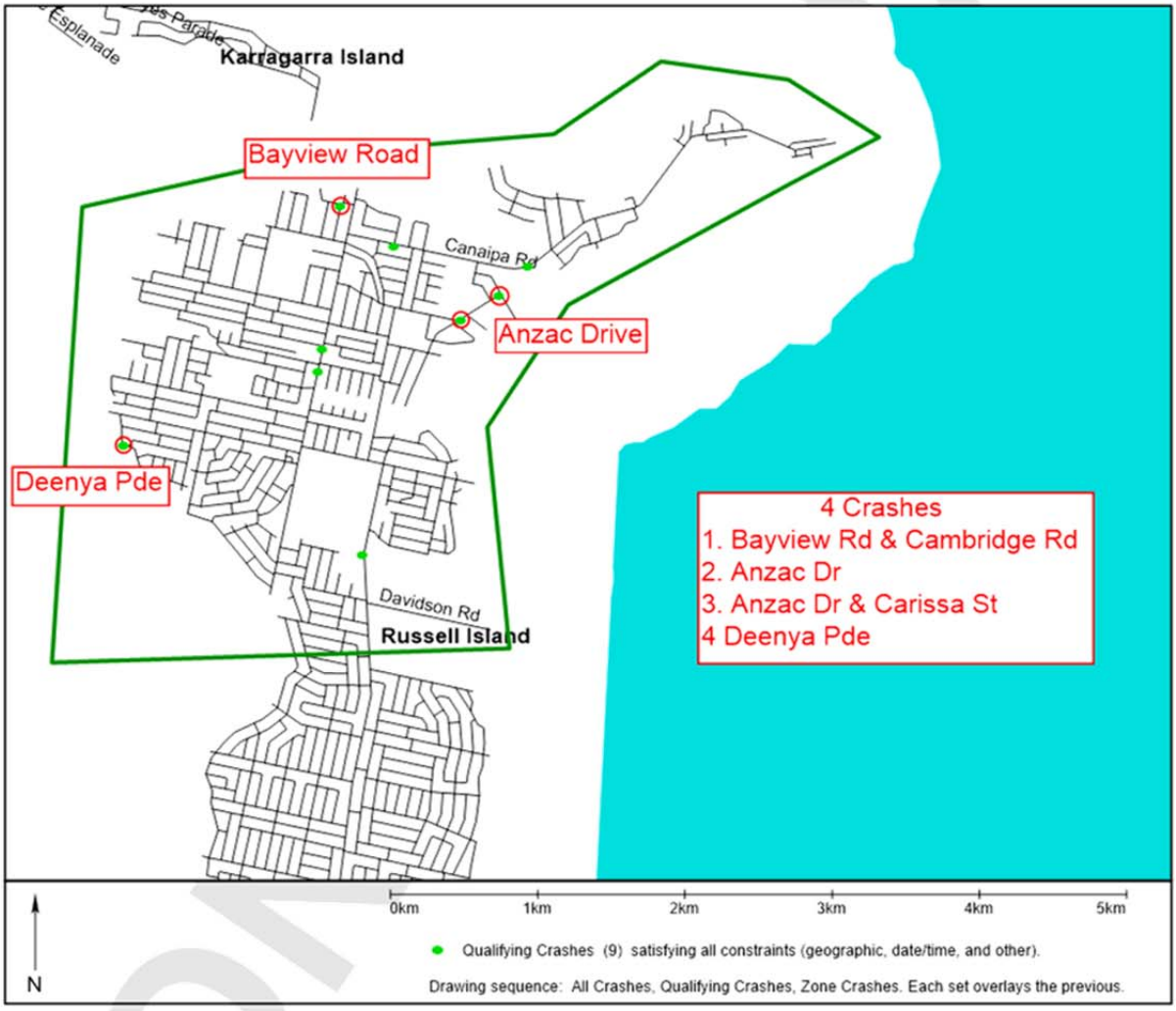
NOTE: This report has been limited to the maximum of 500 records.

Report Constraints

Geographic Constraints
Map

and

Date and Time Constraints
Continuous time: Jun-2012 to Dec-2017



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Report 1

Crash Details by Crash Number

Crash Number	20130125243 (1 of 9)	**Longitude GDA94**	153.383982
Date and Time	Wed 30-Jan-2013 12pm	**DCA Coding**	Off Path-Curve: Off Cway Rt Bend Hit Obj(803)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	60
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Wet
Police District	South Brisbane(502)	**Horiz. Alignment**	Curved-View obscured
Police Division	Russell Island(00074)	**Vert. Alignment**	Grade
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Centre Rd	**Lighting Condition**	Daylight
Intersecting St		**Atmospheric Cond.**	Raining
Latitude GDA94	-27.668073		

Crash Description

Single vehicle traffic accident. Unit 1 was travelling northbound along Centre Road Russell Island. Vehicle has come over a hill 200 metres prior to Zircon Street. Vehicle has crossed over to the right hand side of the road and spun in the wet road. Vehicle has collided with a tree on the right hand side of the road. Tree has collided with drivers side door of the vehicle. Driver has remained entrapped for 3 hours whilst rescue work has been undertaken. Vehicle was towed from scene. Vehicle is written off.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	UNK
Controller Gender	F	**Intended Action**	Go straight ahead
Controller Age	37	**Damage**	Extensive; unrepairable
Controller AgeGroup	30-39	**Unit Headed Direction**	North
Licence Type	Provisional		

Contributing Circumstances

Unit 1 ROAD - WET/SLIPPERY

Injury Details

Injured Person	1 of 3	**Age Group**	17-20
Unit Number	1	**Road User**	Passenger
Injury Severity	Hospitalised	**Restraint**	Fitted - Not Worn
Gender	M	**Helmet**	Not Applicable
Injured Person	2 of 3	**Age Group**	40-49
Unit Number	1	**Road User**	Passenger
Injury Severity	Hospitalised	**Restraint**	Fitted - Unknown if Worn
Gender	M	**Helmet**	Not Applicable
Injured Person	3 of 3	**Age Group**	30-39
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Unknown
Gender	F	**Helmet**	Not Applicable

Crash Number	20130231338 (2 of 9)	**Longitude GDA94**	153.381134
Date and Time	Sun 24-Feb-2013 3pm	**DCA Coding**	Veh'S Opposite Approach: Head On(201)
QT Region	South East Region (Mr)	**Crash Nature**	Head-On
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Medical Treatment
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	T Junction
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Curved-View open
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Bayview Rd	**Lighting Condition**	Daylight
Intersecting St	Cambridge Rd	**Atmospheric Cond.**	Clear
Latitude GDA94	-27.646981		

Crash Description

Unit 1 is a bicycle rider, unit 2 is a motor vehicle, the incident location is Bayview Road, Russell Island, approximately 5 metres east of Cambridge Road, both roads terminate at the intersection requiring all traffic to turn into the other road, unit 2 was approaching the intersection, travelling west on Bayview Road, unit 1 was travelling north on Cambridge Road, unit 1 has cut the corner of the intersection whilst travelling at speed, travelled onto the wrong side of the road and run into the front of unit 2 as it stopped just prior to the intersection. Collision has occurred on the southern side of Bayview Road, indicating unit 1 was on the incorrect side of the road.

CONFIDENTIAL

Report 1

Crash Details by Crash Number

Unit Number	1 of 2	**Licence State**	N/A
Unit Type	Bicycle	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	15	**Damage**	Not applicable
Controller AgeGroup	12-16	**Unit Headed Direction**	MISSING FROM wc_report_column_values
Licence Type	Not applicable		

Unit Number	2 of 2	**Licence State**	N/A
Unit Type	Car; Station Wagon	**Origin State**	QLD
Controller Gender	F	**Intended Action**	Go straight ahead
Controller Age	40	**Damage**	Minor
Controller AgeGroup	40-49	**Unit Headed Direction**	South
Licence Type			

Contributing Circumstances

Unit 1 DRIVER CONDITIONS - MISCELLANEOUS

Unit 2 NOT APPLICABLE

Injury Details

Injured Person	1 of 1	**Age Group**	12-16
Unit Number	1	**Road User**	Bicycle Rider
Injury Severity	Medically treated	**Restraint**	Not Applicable
Gender	M	**Helmet**	Unknown

Crash Number	20131541886 (3 of 9)	**Longitude GDA94**	153.384952
Date and Time	Tue 10-Dec-2013 4pm	**DCA Coding**	Veh'S Manoeuvring. Entering From Footway(408)
QT Region	South East Region (Mr)	**Crash Nature**	Angle
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Fatal
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	T Junction
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Canaipa Rd	**Lighting Condition**	Daylight
Intersecting St	Hawthornden Dr	**Atmospheric Cond.**	Clear
Latitude GDA94	-27.649214		

Crash Description

At about 4.50pm on Tuesday the 10th December 2013, xxxxxxxxxxxxxxxxxxxxxxxxxxx was travelling along Canaipa Rd Russell Island in a grey Mitsubishi Magna sedan with Qld rego xxxxxx. This vehicle was travelling in a westerly direction. At the intersection with Hawthornden Dr a 8 year old child was riding a green bicycle and had come from a vacant block of land on the left hand side opposite Hawthornden Dr. The front left of the vehicle collided with the rider and bicycle and the riders head hit the front left side of the windscreen. The driver swerved to the right braked and stopped. He then drove to the left hand side of the road and stopped the vehicle. Ran back to the boy and commenced CPR. QAS arrived shortly after followed by Police.
A medivac was organised with QAS. Rider was transported to the Jackson Road helipad. Staff from EMQ worked on the child at the landing zone. The child was pronounced deceased by doctor from EMQ helicopter. Forensic crash unit attended scene.
Canaipa Rd is a sealed bitumen Road, no dividing line. Hawthornden Dr is an unsealed dirt road. Weather was overcast and daylight at the time. Cement footpath on southern side of Canaipa Rd. Canaipa Rd is wide enough for vehicles to travel in opposite directions.
(GCL has no record of blood sample for U2 at time of processing, 30/1/14)
3/2/14 - UNIT 1 CC 890 VS IUA 14 VALIDATED (SO)

Unit Number	1 of 2	**Licence State**	N/A
Unit Type	Bicycle	**Origin State**	UNK
Controller Gender	M	**Intended Action**	Enter Roadway
Controller Age	8	**Damage**	Not applicable
Controller AgeGroup	5-11	**Unit Headed Direction**	North
Licence Type	Not applicable		

CONFIDENTIAL

Report 1

Crash Details by Crash Number

Crash Number	20150644650 (5 of 9)	**Longitude GDA94**	153.389801
Date and Time	Sat 9-May-2015 6pm	**DCA Coding**	Veh'S Manoeuvring: Other(400)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Medical Treatment
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Driveway
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Cuphea St	**Lighting Condition**	Darkness - unlighted
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.653513		

Crash Description

The defendant in this matter is X. On Saturday the 9th of May, 2015, at about 6.30 pm, Police from Russell Island attended a single vehicle traffic crash on Cuphea Street, Russell Island. Cuphea Street is also known as Anzac Avenue. It is a two lane carriageway running north-east to south-west, with a wide nature strip to the northern side of the road. The Russell Island X Club is located at X Cuphea Street on the northern side of the road. Vehicle traffic regularly uses this road to travel to the X Club or to access residential dwelling houses in the area. Pedestrian traffic regualarly use the nature strip on the northern side of the road to attend the X Club, walk their pets or travel from the main area of the island to their dwelling houses. Upon arriving at the traffic crash, Police observed a 1998 Ford Falcon sedan, gold in colour, Queensland registration X, to be extensively damaged, wedged under a tree branch on the north side of the roadway, facing west. The defendant was the only occupant of the vehicle and was trapped, sitting in the driver's seat, with the roof of the vehicle pinning the defendant's head down against the centre console. QAS were in attendance and a short time later QFRS volunteers attended. QFRS cut the roof of the vehicle, peeling it back from the body of the vehicle to enable the defendant to exit the vehicle. The defendant had a minor abrasion to his head, was unsteady on his feet and smelt strongly of intoxicating liquor. The defendant initially refused treatment by QAS but then accepted treatment and was transported to the Redlands Hospital. Police accompanied the defendant to hospital. Once at the Redlands Hospital, Police attempted to have medical personnel obtain blood for analysis, however, medical personnel were unable to access a vein and blood could not be taken. Police then obtained statements, CCTV footage and photographs in relation to this matter. In chronological order of relevance... A statement was obtained from X, a bar supervisor at the X Club, who stated he started work at about 3.00 pm and the defendant was already at the club, and that he served the defendant on two occasions, the first being a nip of Tequila and the second being a schooner of XXXX heavy beer. X stated the defendant then came to the bar at about 5.50 or 5.55 pm and X refused him service because the defendant was slurring his words, was getting loud and obnoxious and that he had formed the opinion the defendant was heavily intoxicated. Wickstead stated he organised for the defendant to be on the 6.30 pm courtesy bus, then went about his work within the club. Then at about 6.10 pm, he heard a car do a burnout in the car park, saw dust and gravel everywhere, saw the car get airbourne over the speed bump in the driveway, turn right out of the driveway then heard a bang. On Thursday the 13th of August, 2015, at about 2.30 pm, the defendant attended the Russell Island Police Station where he participated in an electronically recorded interview. The defendant was suitably advised of his rights. At the conclusion of the interview, the defendant was provided with an audio CD being his copy of the interview to retain. During the interview, the defendant admitted being the driver of the vehicle at the time of the accident, that he did drive into the tree, that he had consumed only two beers at the X Club not three as suggested, that he had three beers and two shots of Tequila at the X Club, that the beers were all XXXX heavy, that he consumed all drinks purchased and that he also had 6ml of Suboxone in the morning and two 5mg Valium tablets between 10.30 and 11.00 am. After the interview, the defendant was arrested and conveyed to the Cleveland Watchhouse where he was charged in relation to this matter.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	55	**Damage**	Extensive; unrepairable
Controller AgeGroup	50-59	**Unit Headed Direction**	South
Licence Type	Open		

Contributing Circumstances

Unit 1 LIGHTING - NO STREET LIGHTING
Unit 1 VIOLATION - DANGEROUS DRIVING
Unit 1 CONDITION - UNDER INFLUENCE OF LIQOUR/DRUG

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Crash Details by Crash Number

Injury Details

Injured Person	1 of 1	**Age Group**	50-59
Unit Number	1	**Road User**	Driver
Injury Severity	Medically treated	**Restraint**	Fitted - Not Worn
Gender	M	**Helmet**	Not Applicable

Crash Number	20151482690 (6 of 9)	**Longitude GDA94**	153.380433
Date and Time	Wed 14-Oct-2015 10pm	**DCA Coding**	Off Path-Straight:Right Off Cway Hit Obj(704)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	High St	**Lighting Condition**	Darkness - lighted
Intersecting St	Highland St	**Atmospheric Cond.**	Clear
Latitude GDA94	-27.655676		

Crash Description

Police had attended a disturbance involving the driver at another address. The driver had driven off from that scene prior to police attendance. At the disturbance, his mother advised that he had been drinking rum most of the afternoon and that he had driven off in an unregistered vehicle her sister had given him. After leaving the disturbance police drove towards the station and observed a rural fire officer outside the fire station. He advised that there was a vehicle accident on High Street. Police attended this location and observed the drivers vehicle with extensive damage to the front end. Witnesses have observed the driver weaving along the road. The driver was breath tested which returned a reading of 0.195% and required to provide blood at the hospital. Driver transported to Redlands Hospital, appeared to suffer minor injuries only. Driver only has a learners permit.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	19	**Damage**	Extensive; unrepairable
Controller AgeGroup	17-20	**Unit Headed Direction**	North
Licence Type	Learner		

Contributing Circumstances

Unit 1 VIOLATION - OVER PRESCRIBED CONCENTRATION OF ALCOHOL

Injury Details

Injured Person	1 of 1	**Age Group**	17-20
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Fitted - Unknown if Worn
Gender	M	**Helmet**	Not Applicable

Crash Number	20161449269 (7 of 9)	**Longitude GDA94**	153.394181
Date and Time	Wed 3-Aug-2016 3pm	**DCA Coding**	Off Path-Curve: Off Cway Lt Bend Hit Obj(804)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	60
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Curved-View open
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Canaipa Rd	**Lighting Condition**	Daylight
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.650098		

Crash Description

The driver of unit 1 was travelling home to Sarmar Street Russell Island after collecting her child from the Russell Island State School. The driver stated that there was a car in front of her which caused her to lose control. No description of the vehicle. Unit 1 has then travelled across the road travelling over a concrete footpath with the front left end hitting a tree.

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Report 1

Crash Details by Crash Number

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	F	**Intended Action**	Go straight ahead
Controller Age	47	**Damage**	Moderate - towed away
Controller AgeGroup	40-49	**Unit Headed Direction**	East
Licence Type	Open		

Contributing Circumstances

Unit 1 VIOLATION - OVER PRESCRIBED CONCENTRATION OF ALCOHOL

Injury Details

Injured Person	1 of 1	**Age Group**	40-49
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Fitted - Worn
Gender	F	**Helmet**	Not Applicable

Crash Number	20161801640 (8 of 9)	**Longitude GDA94**	153.392388
Date and Time	Sat 24-Sep-2016 6pm	**DCA Coding**	Off Path-Curve: Off Cway Lt Bend Hit Obj(804)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	T Junction
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Carissa St	**Lighting Condition**	Darkness - unlighted
Intersecting St	Anzac Dr	**Atmospheric Cond.**	Clear
Latitude GDA94	-27.651937		

Crash Description

On the 24/09/2016, Police detailed to attend Carissa street, Russell Island re single VEH crash. Police, QAS and rural Fire Brigade in attendance. Police observed VEH X had hit, and still in contact with, a large tree, off road on Carissa Street, Russell Island. On attendance, driver receiving treatment outside the drivers side door of the VEH. Witness X on scene. X witness/will say report available. Driver details, X. Heavy impact with the tree, off road. Air bags deployed Driver showed indicia of alcohol/drug influence. Driver X stated to Police that he remembers playing with the car radio, and then hitting a large bump, and being airborne, before impact of the tree. X denied being under the influence of alcohol or drugs. Driver was transported to the Redlands hospital by QAS from Russell Island. Rural fire brigade attending advised Police, no requirement to tow vehicle, no hazzard to street traffic, VEH to be towed at later date by owner. Police requested a job for local crews to attend the Redlands hospital to require a blood sample for dangerous drugs. Job no. X (24/09/2016) Police attended X listed home address ofX and TUW GODDARD's parents. X mother X , stated that X suffers from mental illness, and is currently taking a number of medications. X is being treated for ADHD, anxiety and depression. X is currently taking Ritalin and other forms of anti-depressants. X stated to Police that Mark had attended their house atX earlier in the evening, and she was concerned about his behaviour, which is due to the medication he is taking. X stated to Police that X seemed to have a short attention span, and at times seemed confused. Police advised by attending crew for blood requirement (W450) that driver had been diverted to the Princess Alexandra Hospital. Crew informed by X to disregard blood requirement job. Police unable to obtain blood sample within 3 hrs of accident.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	39	**Damage**	Extensive; unrepairable
Controller AgeGroup	30-39	**Unit Headed Direction**	North
Licence Type	Open		

Contributing Circumstances

Unit 1 LIGHTING - NO STREET LIGHTING
Unit 1 CONDITION - UNDER INFLUENCE OF LIQOUR/DRUG
Unit 1 DRIVER - MEDICAL CONDITION (HEART ATTACK; EPILEPSY ETC.)

Injury Details

Injured Person	1 of 1	**Age Group**	30-39
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Fitted - Worn
Gender	M	**Helmet**	Not Applicable

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Report 1

Crash Details by Crash Number

Crash Number	20170509597 (9 of 9)	**Longitude GDA94**	153.367137
Date and Time	Mon 20-Mar-2017 6pm	**DCA Coding**	Off Path-Curve: Off Cway Lt Bend Hit Obj(804)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Wet
Police District	South Brisbane(502)	**Horiz. Alignment**	Curved-View open
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Deenya Pde	**Lighting Condition**	Darkness - unlighted
Intersecting St		**Atmospheric Cond.**	Raining
Latitude GDA94	-27.662273		

Crash Description

Incident occurred outside XX Deenya Parade, Russell Island. Incident location is a narrow bitumen road with a slight bend, east bound to the left. Unit 1 has failed to negotiate the bend, running off the road into a tree. Unit 1 has sustained major damage to the front end. Airbag has deployed. Driver has been thrown forwarrd indicating no seatbelt was worn. Driver has impacted windscreen with his head, suffering a gash to the left forehead region. Driver has also impacted the steering wheel, breaking the steering wheel and suffering internal injuries. Driver smells of liquor. Driver transported to PA Hospital. Arrangements made for blood to be obtained.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	58	**Damage**	Extensive; unrepairable
Controller AgeGroup	50-59	**Unit Headed Direction**	East
Licence Type	Cancelled; disqualified		

Contributing Circumstances

Unit 1 VIOLATION - DANGEROUS DRIVING
Unit 1 CONDITION - UNDER INFLUENCE OF LIQOUR/DRUG

Injury Details

Injured Person	1 of 1	**Age Group**	50-59
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Fitted - Not Worn
Gender	M	**Helmet**	Not Applicable

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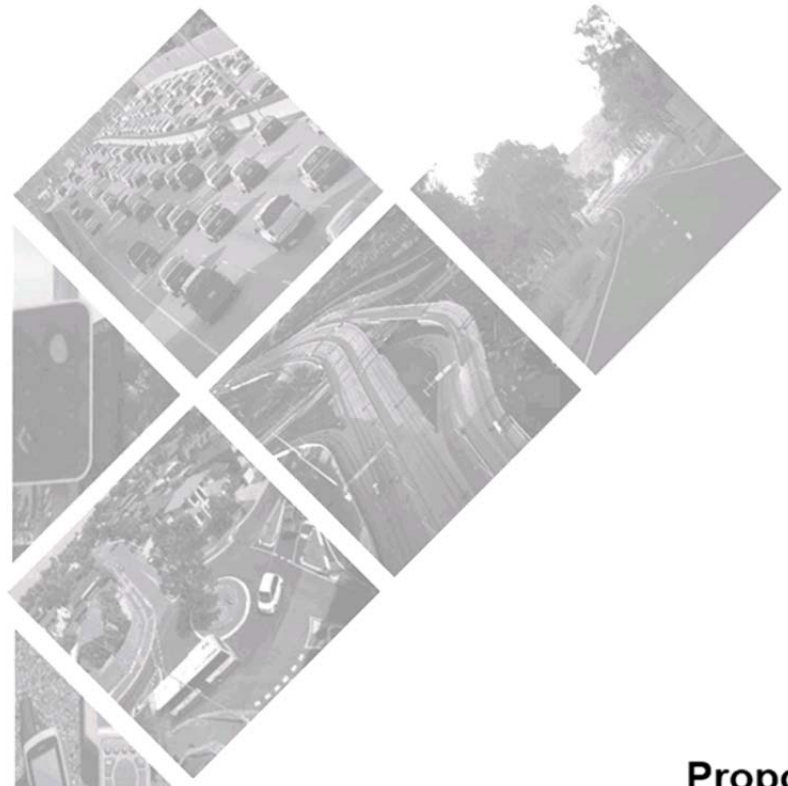

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Appendix C
Proposed sign layouts



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LOCATION :
CRESCENT DRIVE
RUSSELL ISLAND

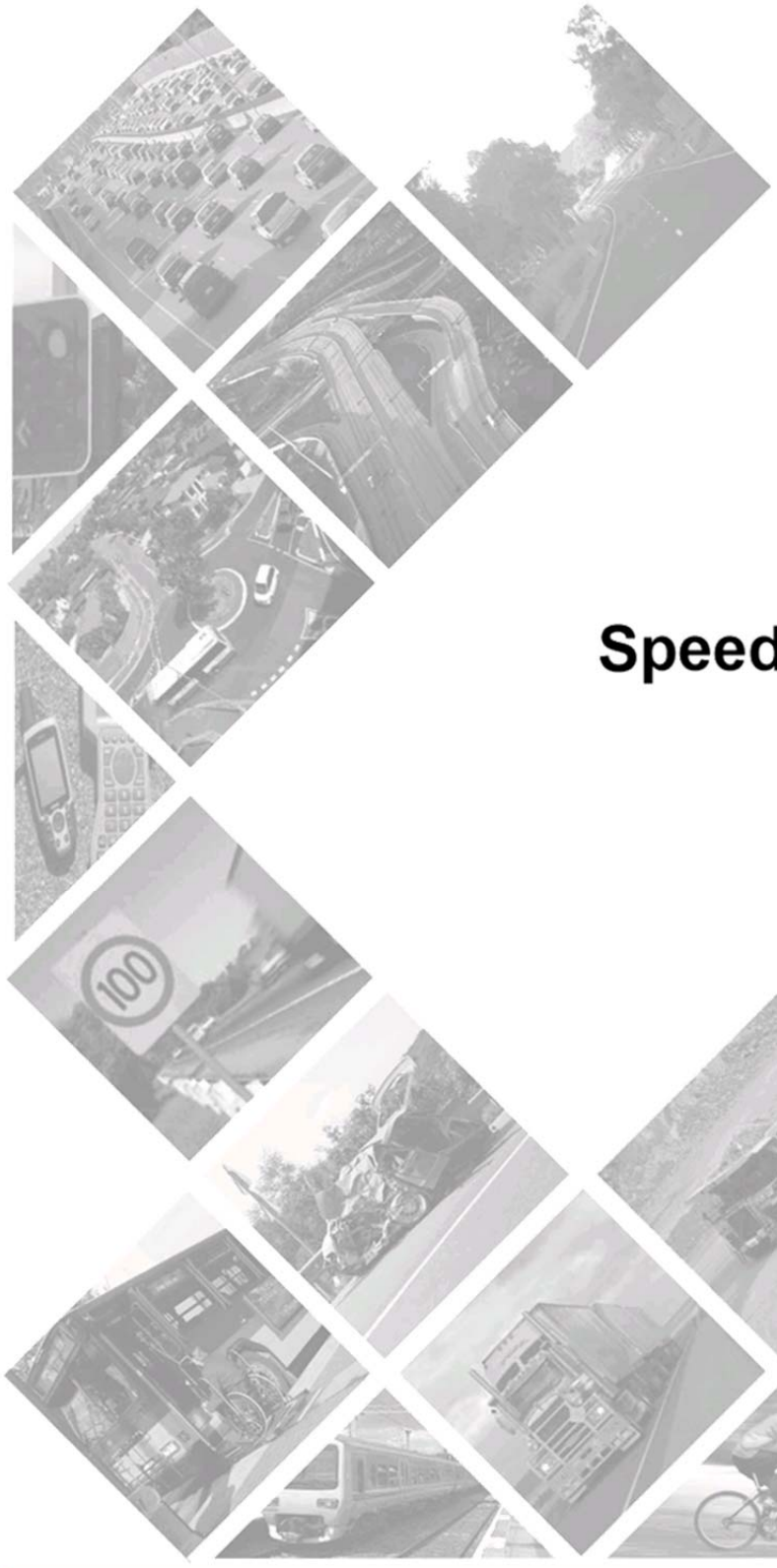
DESCRIPTION :
DESKTOP SPEED LIMIT REVIEW
PROPOSED SIGN CHANGES
SHEET 1 OF 2

SCALE : NOT TO SCALE
SHEET : 1 of 2
DRAWN BY : LJK
DRG. No : **SK-01**
DATE : 25 JANUARY 2018



RoadPro CONSULTING www.roadpro.net.au	LOCATION : **CRESCENT DRIVE RUSSELL ISLAND**	DESCRIPTION : **DESKTOP SPEED LIMIT REVIEW PROPOSED SIGN CHANGES SHEET 2 OF 2**	SCALE : NOT TO SCALE SHEET : 2 of 2 DRAWN BY : LJK DRG. No : SK-01 DATE : 25 JANUARY 2018

DRAFT



RoadPro CONSULTING

Speed Limit Review

High Street, Russell Island

Prepared for Redland City Council

13 February 2018

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Draft V2	28.01.2018	Darren Shirley	Review
Draft V3	02.02.2018	Lisa Shirley	Editorial amendments
Final	13.02.2018	Darren Shirley	Final report

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Client sign-off

Prepared for:
Redland City Council

Project description:
Speed limit review: High Street, Russell Island

Document sign-off:
The following officer acknowledges receipt of this document on behalf of Redland City Council:

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1 Introduction

This report presents the findings of a formal speed limit review conducted on High Street, Russell Island. The speed limit review has been undertaken by Roadpro Consulting at the request of Redland City Council.

The review has been conducted in accordance with the speed limit review process outlined in the *Manual of Uniform Traffic Control Devices* (MUTCD), Part 4: Speed Controls (Ninth Issue, 31 May 2017) and the Supplement to the MUTCD, Part 4: Speed Controls (May 2016).

Figure 1 illustrates the location of the speed limit review.

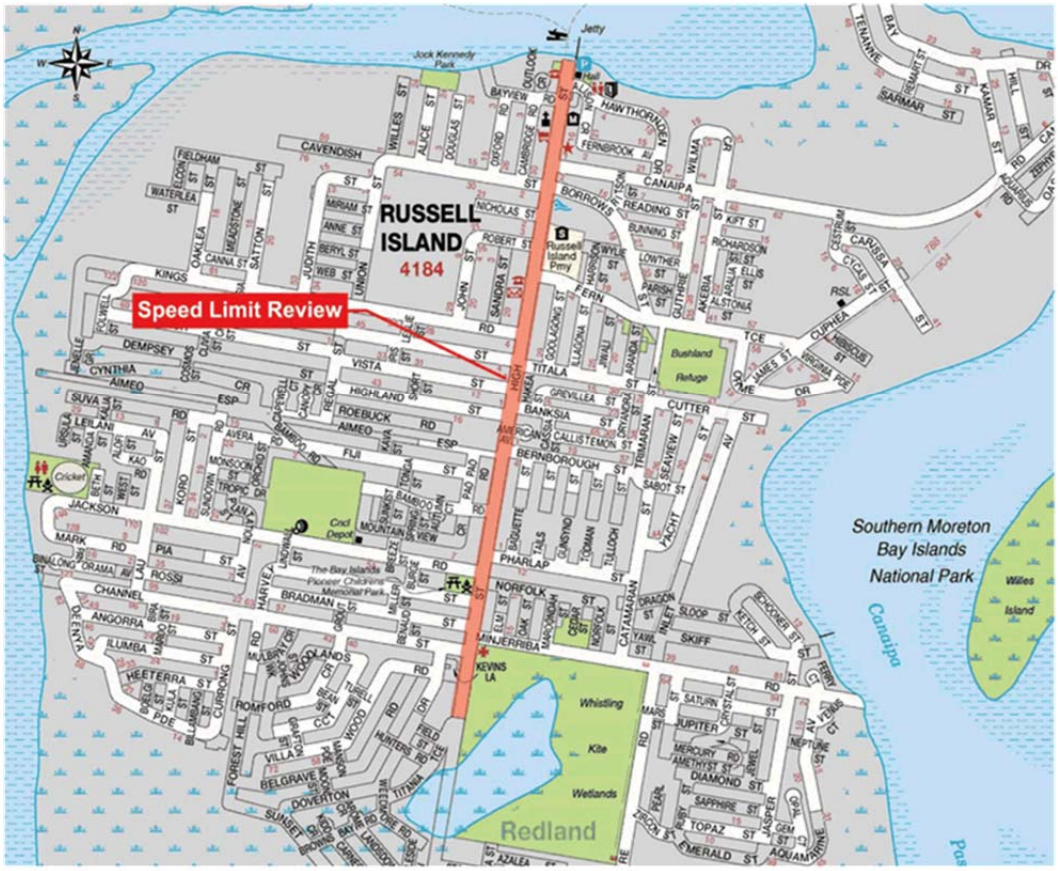

Figure 1: Location of speed limit review – High Street (Source: UBD Gregory's Australian City Streets v7.0)

1.1 Abbreviations and acronyms

ADT	Annual Daily Traffic
ERU	Equivalent Risk Unit
MUTCD	*Manual of Uniform Traffic Control Devices*
VKT	vehicle kilometres travelled
vpd	vehicles per day

2 Site details

High Street is a local government controlled road that is managed by Redland City Council (Council). It is situated at the northern end of Russell Island, which is the largest of the southern Moreton Bay islands.

The road extends south from the Island's Ferry Terminal for 2.06km, terminating at the access to the Russell Island Concrete Plant, near the intersection with Titania Terrace. This speed limit review covers the entire 2.06km of High Street.

High Street travels through a mixture of consolidated and developing urban areas and is surrounded by both residential development and commercial businesses. It also borders a large conservation area known as the Whistling Kite Wetlands at its southern end. The commercial activity is confined to the road section north of Kings Road intersection and includes a retail shopping centre, strip shopping outlets, government services, and a primary school.

The road has a single carriageway that operates with two-lane, two-way traffic flows. It has a sealed surface in most areas that varies in width between 4.0m at the southern end and 12.5m at the northern end. There is also a short section of gravel road at the southern end near the intersection with Titania Terrace.

At the time of review a 60km/h speed limit was signed along the section north of Minjerriba Road and a 50km/h limit along the section south of Minjerriba Road.

3 Previous speed reviews

A search of the historical records in the QLIMITS (SLR QLD) program returned no records of previous reviews on the subject road section.

4 Traffic data

The average daily traffic volume (ADT) was obtained from count data collected by Council in November 2017. The eight count sites yielded ADTs that ranged between 1515 and 3548 vehicles per day, with commercial vehicle content between 3.9% and 10.6%.

Refer to **Appendix E** for further traffic volume details.

5 Homogeneity of road section

Part 4/4.3.2 of the MUTCD suggests the speed limit review process should be applied only to segments of road which are homogenous in terms of characteristics and speed environment.

A subjective assessment of the continuity of the road was undertaken with regard to: functional classification, density of roadside development, frequency of accesses and intersections, visibility and setback of buildings, general speed environment, alignment, existing speed limits, and traffic volume. It was determined that for this review, the subject road section formed three separate homogenous segments:

- Segment 1 - 875m between the High Street Ferry Terminal and 30m south of the Kings Road intersection.
- Segment 2 - 910m between 30m south of the Kings Road intersection and the Minjerriba Road intersection.
- Segment 3 - 275m between the Mingerriba Road intersection and the road's terminus at the Russell Island Concrete Plant.



Figure 2: Homogenous road segments

The relevant factors that resulted in the determination of three segments were:

- There was a noticeable change in cross section between each of the three segments. Segment 1 has typical sealed width of between 11.5 and 12.5 metres, providing for traffic lanes and parking lanes on each side of the road.

  The sealed width varied in Segment 2 between 6.0m and 8.5m, with a centre line marked for approximately 400m at the southern end.

  Segment 3 contained both sealed and gravel road sections, with a typical width of 4.0m, which widened to 6m near the intersections with Channel Street and Minjerriba Road.
- The segments north of Minjerriba Road served an important traffic-carrying function, as opposed to Segment 3 that performed a minor collector and access street function.
- Abutting land use in segments 2 and 3 consisted primarily of residential development, whereas Segment 1 contained a significant amount of commercial development, comprising a passenger and vehicular ferry terminal, retail shopping centre, strip shopping outlets, and government services, including a primary school.
- The existing speed limit in segments 1 and 2 was 60km/h, while the speed limit in Segment 3 was 50km/h.

6 Determination of appropriate speed limit

Part 4/4.2.1 of the MUTCD suggests the following criteria should be considered for a length of road in the determination of speed zones:

a) Stage 1 - road function
b) Stage 2 - prevailing speeds
c) Stage 3 - speed environment.

The MUTCD also suggests other issues, such as crash history and potential risk factors, be considered prior to the recommendation of an appropriate speed limit. The following analysis applies the standard procedure for the determination of an appropriate speed limit as described in Part 4/4.3.3 of the MUTCD.

6.1 Stage 1 - Road function

The initial assessment of the appropriate speed limit is made by identifying the typical speed limit associated with the road's function. This is a limit that in the first instance is likely to match the road users' expectations of the appropriate limit.

The process of identifying a typical speed limit for the homogenous road segment requires a determination to be made about the following criteria:

- functional classification
- roadside environment
- design standard.

6.1.1 Functional classification

High Street served a mixture of functions in the road network hierarchy. The section north of Minjerriba Road (segments 1 and 2) formed part of the primary north-south transport link. Its principal function was to transport passengers and goods between neighbourhoods and local areas across Russell Island.

The section south of Minjerriba Road (Segment 3) served as a lower order access road and collector street. Its primary function was to provide access to abutting properties and other access streets that service a local area of approximately 880 residential blocks. At the time of review, approximately 110 dwellings had been constructed on these blocks.

Using the classifications shown in Tables A1 to A3, Appendix A, Part 4 of the MUTCD, and with reference to Council's road hierarchy system, the functional classification of each road segment have been identified as:

- Segment 1 – Trunk collector
- Segment 2 – Trunk collector
- Segment 3 – Minor collector street.

6.1.2 Roadside environment

In accordance with the descriptions given in Appendix L, Part 4 of the MUTCD, roadside environments are typically classified using the following descriptions:

- urban area (built-up area)
- urban fringe
- rural settlement
- rural township
- rural hamlet
- rural residential area
- rural area.

High Street was situated in an area with a mixture of consolidated and developing land uses. This included both residential and commercial development. Apart from several large lots designated as parklands or nature belts, the average lot sizes were consistent with those found in a typical urban area and much less than the typical maximum residential lot size of 2000m^2.

The roadside environment along the full length of High Street has therefore been identified as 'urban'.

Although all three segments were situated in an urban area, the roadside environment in Segment 1 was noticeably different when compared to the other two segments. Segment 1 passed through the main business centre of Russell Island, with a broad mix of commercial operations within this segment including a passenger and vehicular ferry terminal, a retail shopping centre, strip shopping outlets, a service station, light industrial businesses, local and state government services, and a primary school. Because of these operations, a significant volume of pedestrians of all ages was observed crossing High Street throughout the day, particularly north of the Cavendish Street intersection.

The wider cross section within Segment 1 was also considerably different when compared to the other two segments. The presence of sealed shoulders throughout most of this section provided for on-street parking that was regulated by a mixture of marked parking bays and signage. Parking bay usage varied throughout the segment, with a high turnover observed near the shopping centre and around the school during morning and afternoon peaks.

The roadside environment in Segment 1 has been identified as 'urban – with a constrained speed environment' due to the combination of:

- commercial roadside development
- parked vehicles beside the traffic lanes
- regular parking manoeuvres interrupting through traffic flow
- high pedestrian activity.

6.1.3 Design standard

A lower speed limit than that suggested by functional classification and roadside environment, may be appropriate if the design standard of the road is not compatible with the higher speed.

The design standard relates to the level of service, mobility, and safety provided by design elements such as:

- horizontal and vertical curvature
- sight distance
- superelevation
- pavement, shoulder, and lane width
- gradients
- degree of access restriction.

The design standard along High Street was typical of that found in many developing urban areas and did not present an unsafe operating environment for the existing 50km/h or 60km/h speed limits.

6.1.4 Typical speed limit

The typical speed limits for each road segment are given in Table 1. These limits have been determined by matching the relevant road type attributes with the speed limit hierarchy given in Table B1, Appendix B, Part 4 of the MUTCD.

STAGE 1				
Homogeneous segment	**Functional classification**	**Roadside environment**	**Design standard**	**Typical speed limit (km/h)**
1	Trunk collector road	Urban – with a constrained speed environment	Satisfactory	**50**
2	Trunk collector road	Urban	Satisfactory	**60**
3	Minor collector street	Urban	Satisfactory	**50**

Table 1: Typical speed limits

6.2 Stage 2 - Prevailing traffic speeds

Part 4/4.2.3 of the MUTCD states that prevailing traffic speeds are a major factor in the determination of a speed limit.

Speed survey data was collected at five locations on High Street between Thursday 2 November and Friday 10 November 2017. Table 2 provides a statistical summary of the available data. Refer to **Appendix F** for further detail.

Segment	Location	No. of vehicles	Mean speed (km/h)	85th % speed (km/h)	Upper limit of 15km/h pace (km/h)	No. in pace (%)
1	No. 10 High Street	12 398	34.3	43.9	42	58.71
	No. 24 High Street	16 315	41.5	49.3	49	67.96
	Opposite Nicholas Street	23 517	51.2	59.8	59	62.60
2	No. 100 High Street	23 407	50.9	59.0	60	67.95
	No. 124 High Street	20 924	60.3	67.3	68	72.06

Table 2: Summary of speed survey data

In Segment 1, the speed distributions at two of the three sites did not conform to an acceptable distribution for the existing 60km/h speed limit. In cases where the speed data did not correlate with the existing speed limit, the upper limit of the 15km/h pace band was used to suggest an appropriate speed limit (refer Table 3).

In Segment 2, the measured speed distributions at both survey sites conformed to an acceptable distribution for the existing 60km/h speed limit (refer Table 3).

STAGE 2	
Homogenous segment	**Speed limit suggested by prevailing vehicle speeds (km/h)**
1	**50 (2 sites) 60 (1 site)**
2	**60**

Table 3: Prevailing traffic speed

Data was not available to analyse prevailing vehicle speeds within Segment 3. However, as Segment 3 has been identified as an urban collector street, prevailing speed data was not required to make a speed limit determination. Instead, an appropriate limit has been established in accordance with the criteria-based speed limit process detailed in Section 3, Part 4 of the MUTCD. Reference should be made to Section 7 for further detail.

6.3 Stage 3 - Speed environment

The speed environment can be described as the elements of the road and traffic environment that collectively influence a road user's perception of an appropriate maximum travel speed. In accordance with Part 4/4.2.4 of the MUTCD, the QLIMITS program has been used to assess the speed environment.

The speed limits that QLIMITS has suggested for each road segment are shown in Table 4.

STAGE 3	
Homogenous segment	**Speed limit suggested by speed environment (km/h)**
1	50
2	60
3	50

Table 4: Limits suggested by speed environment

QLIMITS initially suggested a speed limit of 60km/h for Segment 1; however, after reviewing several factors that were flagged for further consideration, the suggested limit was lowered to 50km/h. Relevant issues that were flagged included:

- the presence of a school and a school crossing
- a large number of pedestrians and cyclists
- frequent parking manoeuvres.

It was also identified as part of the review that the school crossing situated north of the Fern Terrace intersection operated as a full time pedestrian crossing (zebra). The requirements given in AS 1742.10, clause 6.3(a)(iii) in relation to the presence of a zebra crossing state that: "The speed limit on approach to the crossing shall be 50km/h or lower and the 85th percentile speed shall not exceed 60km/h". Compliance with the Australian Standard therefore requires that the speed limit within Segment 1 must not exceed 50km/h.

Important criteria that forms part of the speed environment assessment is documented in the following subsections. Refer to **Appendix C** for the detailed QLIMITS assessment report (Form F2).

6.3.1 Access frequency

Table 5 provides a summary of the frequency of roadside accesses by type for each segment.

Access type	Number of accesses		
	Segment 1	Segment 2	Segment 3
Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (Weighting 1).	10	19	5
Average commercial establishments, local schools, caravan parks, light industries, public buildings and other units generating activity that is: (i) Continuous light (ii) Moderate at certain regular times, such as commuting hours (iii) Substantial at infrequent intervals (Weighting 2).	10	0	0
Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side road traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (Weighting 1).	3	12	2
Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (Weighting 2).	6	2	1
Average number of accesses per 100 m	**5.14**	**3.85**	**3.27**

Table 5: Frequency of road access by type

6.3.2 Crash history

A search of the Department of Transport and Main Roads' WebCrash2 database indicated there have been two casualty crashes on High Street, in the five-year period between 1 June 2012 and 31 December 2017 (see note*). Both crashes occurred within Segment 2 between Bamboo Road and Banksia Street.

One crash involved a vehicle making minor contact with a pedestrian on a vacant block of land beside the road following a verbal exchange between the two parties. The other crash involved a young driver on their learner's permit losing control and colliding with an object beside the road while heavily affected by alcohol.

The detailed crash reports indicated that both crashes resulted solely from driver-related factors. Crashes of this nature are unlikely to be attributed to road environment factors and are therefore unlikely to be mitigated by road improvements or speed limit changes. A copy of the crash data output from WebCrash 2 is provided in **Appendix G**.

Note: At the time of extracting crash data, the WebCrash2 database was reporting all casualty crash data to 31 May 2017. The selected crash analysis period therefore represents the most recent five-year period in which a complete data set was available.*

6.3.3 Casualty crash rate comparison

The accepted manner of measuring road crashes is in terms of exposure to risk. For road segments, exposure is measured as the distance travelled. For the purpose of this review, the casualty crash rates have been computed in terms of equivalent risk unit (ERU) per 10^8 vehicle kilometres travelled (10^8 VKT).

The calculated or 'actual' casualty crash rates have been compared to typical average and typical critical rates from similar roads, to determine if the subject section has a safety problem. The average and critical rates for Queensland roads in urban and rural environments were obtained from Part 4, Tables E2 to E5 of the MUTCD.

The actual, average and critical crash rates for each segment are given in Table 6.

Crash rate ($10^4 ERU per $10^8 Vehicle Kilometres Travelled (VKT))			
Segment	**Actual**	**Average**	**Critical**
1	0	524.20	542.50
2	1358	524.20	542.50
3	0	995.9	1086.5

Table 6: High Street crash rates

Part 4, Section E2, Appendix E of the MUTCD states that for comparison purposes, the following convention should be used to describe the crash rate in relation to typical crash rates:

- Low crash rate: Less than the average casualty crash rate
- Medium crash rate: Between average and critical casualty crash rates
- High crash rate: Greater than or equal to the critical casualty crash rate.

With reference to Table 6, segments 1 and 3 have a low crash rate that is below the average rate for the road type. Segment 2 has a high crash rate that is above the critical rate. Road sections that have an actual crash rate higher than the critical rate are commonly defined as 'high crash zones' and require additional safety considerations when under taking a speed limit review.

However, in this instance the high crash rate in Segment 2 is a consequence of splitting the longer road section into smaller segments and assessing the crash rate on each individual segment. In this regard, the presence of even a single crash has the potential to artificially inflate the crash rate. The minor pedestrian crash that was discussed in Section 5.3.2, also occurred on private property beside the road and should not be included in the crash rate analysis.

Segments 1 and 2 on High Street are each relatively short, yet they form one continuous traffic route. Therefore, the crash rate has been recalculated for the combined length of these two segments, while also excluding the pedestrian incident. The combined crash rate for the full continuous route is 304 (ERU) per (10^8 VKT). This rate is below the average and critical rate for the road type and indicates the road as a whole, does not have a road safety problem.

7 Criteria-based speed limit

At the time of review, a 50km/h speed limit was in place on High Street south of Minjerriba Road, along the full length of Segment 3. This speed limit is the default limit for local streets and falls within a category of speed limits known as 'criteria-based speed limits'.

A formal speed limit review is not required for the assessment of criteria-based speed limits, as they are determined in accordance with specific criteria for each type of limit. With regard to the '50k/h local street speed limit', the main determinant is the function of the street. If the primary function is to provide access to properties, or cater for limited neighbourhood movements, then the use of the 50km/h local street speed limit is generally appropriate. Higher speed limits are only considered on urban roads that have a primary function of carrying traffic.

As discussed in Section 5.1.1, the primary function of Segment 3 is to provide for direct access to abutting properties and access to other streets within the local area, which also serve an access function. As safe access to properties has a higher priority than traffic efficiency and mobility, the existing 50km/h local street speed limit is the most appropriate limit for Segment 3.

8 Speed limit review correlation

Table 7 shows the overall correlation between the various stages of this speed limit review on each segment of High Street.

Stage	Description	Suggested speed (km/h)		
		Segment 1	Segment 2	Segment 3
1	Road function	50	60	50
2	Prevailing traffic speed	50 & 60	60	n/a
3	Speed environment (QLIMITS)	50	60	50
Correlation		**50**	**60**	**50**

Table 7: QLIMITS speed correlation

Table 7 shows there is a correlation between all three stages of the review process for Segment 2, resulting in a suggested speed limit of 60km/h.

Table 7 also shows there is a correlation between two stages of the review process for segments 1 and 3, resulting in a suggested speed limit of 50km/h.

The speed limit suggested by prevailing vehicle speeds within Segment 1 did vary along the road length, with speeds at the northern end suggestive of a 50km/h speed limit and speeds at the southern end suggestive of a 60km/h speed limit. However, as discussed in Section 5.3, the presence of a zebra crossing at the southern end of this segment means a 50km/h speed limit is most appropriate.

Although prevailing speed data was not available in Segment 3, retention of the existing 50km/h local street speed limit is also considered appropriate due to the 'access' function this section of road serves (refer Section 7).

9 Recommendations

Table 8 shows the recommended speed limits for High Street. These limits are based on outcomes using the speed limit review process outlined in Part 4 of the MUTCD. The recommended limits are in no way binding and the responsibility for the selection and implementation of an appropriate speed limit for the subject road segments rests with Council.

Segment	Recommended speed limit (km/h)
1	50
2	60
3	50

Table 8: Recommended speed limits

9.1 Actions required

The following actions are required to implement the speed limits shown in Table 8:

Segment 1

1. Replace one existing 60km/h speed limit sign with a 50km/h speed limit sign, 35m north of the Alison Crescent intersection.
2. Replace two existing 60km/h speed limit signs with 50km/h speed limit signs, at either end of the school zone.
3. Install one new 60km/h speed limit sign (R4-1) facing southbound traffic 30m south of the Kings Road intersection.
4. Install one new 50km/h speed limit sign facing northbound traffic 30m south of the Kings Road intersection.

Refer to the proposed sign layouts shown in **Appendix H** for further details of signage works required to implement a 50km/h speed limit within Segment 1.

Segment 2

1. No action required.

Segment 3

1. No action required.



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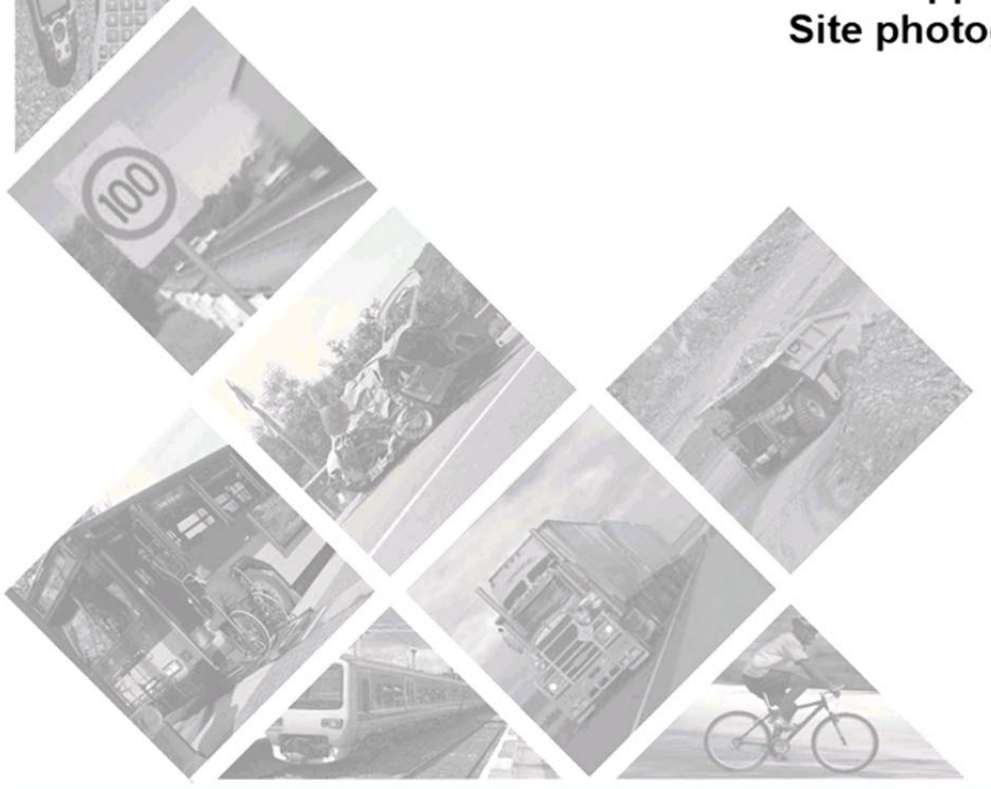
Appendix A
Site photographs



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Photograph 1: Southbound view on High Street near the Ferry Terminal (Segment 1).



Photograph 2: Southbound view on High Street on approach to the shopping centre (Segment 1).



Photograph 3: Southbound view on High Street on approach to the pedestrian zebra crossing (Segment 1).



Photograph 4: Southbound view on High Street at the Kings Road intersection (transition from Segment 1 to 2).



Photograph 5: Southbound view on High Street on approach to Banksia Street intersection (Segment 2).



Photograph 6: Southbound view on High Street at the Bernborough Street intersection (Segment 2).



Photograph 7: Southbound view on High Street at the Norfolk Street intersection (Segment 2).



Photograph 8: Southbound view on High Street at the Minjerriba Road intersection (transition from Segment 2 to 3).



Photograph 9: Northbound view on High Street at the Titania Terrace intersection (Segment 3).



Photograph 10: Northbound view on High Street at the Minjerriba Road intersection (transition from Segment 3 to 2).



Photograph 11: Northbound view on High Street north of the Pharlap Street intersection (Segment 2).



Photograph 12: Northbound view on High Street on approach to the Kings Road intersection (transition from Segment 2 to 1).



Photograph 13: Northbound view on High Street adjacent to the shopping centre (Segment 1).



Photograph 14: Northbound view on High Street adjacent to the Ambulance Station (Segment 1).



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Appendix B
QLimits field data (Form F1)



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FORM F1 QLIMITS FIELD DATA FORM

If saving this form for use at a later date, please ensure that it is the most current version. See http://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx

LOCAL GOVERNMENT/DISTRICT Redland City Council **ROAD:** High Street

LOCATION: Russell Island

RECORDER: Luke Kidd **DATE:** 25 January 2018

Tick (✓) the appropriate box to respond

1. LOCATION OF ROAD

The area in which this road section is located is generally:

(i)	Urban:	Fully built-up area with consolidated residential, commercial and industrial land uses.	☑
(ii)	Urban Fringe:	Less developed area typically containing low-density residential, small scale farming, future urban and other 'developing' land uses.	☐
(iii)	Rural Settlement:	Small settlements or townships located in rural areas which are typically located on through roads, and where all or most land development is concentrated on, or has direct access to, those through roads.	☐
(iv)	Rural:	Areas that are rural in nature, with large property or farm holdings. The only residential properties in these areas will be scattered homesteads and farmhouses.	☐

2. LENGTH OF ROAD

The length of road section is 2.06 km

3. UPPER LIMIT OF THE 15 km/h PACE

The upper limit of the 15km/h pace of free vehicles on this road section is varies km/h

4. DEVELOPMENT (for divided roads only)

The development on both sides of the road is:	balanced	☑
	unbalanced	☐

5. FREQUENCY OF ROADSIDE ACCESSES (for both sides of the road combined)

Note: (i) Abutting development on service roads is not considered and therefore only the points of access to the through traffic lanes are counted.
(ii) Crossroads are counted once each side of the road.

Abutting properties

(a) Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity.

Number of this type: Side 1 = 15 Side 2 = 19

(b) Average commercial establishments, local schools, caravan parks, light industries, public buildings and other units generating activity that is:

(i) continuous light

(ii) moderate at certain regular times, such as commuting hours

(iii) substantial at infrequent intervals

Number of this type: Side 1 = 6 Side 2 = 4

1

(c) Heavy industry, schools, shopping centres and other units generating
   (i) continuous moderate activity or
   (ii) substantial activity at certain regular times.

Number of this type: Side 1 = 0 Side 2 = 0

(d) Large shopping centres and other units generating substantial and continuous activity. Some large industries that are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity.

Number of this type: Side 1 = 0 Side 2 = 0

Intersections

(a) Intersecting roads of substantially lesser importance than the road being studied, or intersecting roads where side road traffic and turning movements have little effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 7 Side 2 = 10

(b) Intersecting roads of lesser importance than the road being studied but where side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 3 Side 2 = 6

(c) Signalised intersections, roundabouts and intersections with roads comparable to or of greater significance than the road being studied. Intersections which have a pronounced effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 0 Side 2 = 0

Note: (i) Abutting development on service roads is not considered and therefore only the points of access to the through traffic lanes are counted.
(ii) Crossroads are counted once each side of the road.

6. DIVIDED OR UNDIVIDED

The section of road being studied is:

- undivided ☑
- divided ☐

Note: (i) Double barrier lines do not constitute a median.
(ii) A painted median is sufficient to constitute a divided road if it extends for the full length of the section under consideration (excepting median breaks for turns, etc).

7. RESTRICTION OF ACCESS

The major part of this road has restriction of direct vehicular access on:

- neither side ☑
- one side ☐
- both sides ☐

Note: (i) This restriction may include service roads, river or railway line alongside the road or a large fenced-off area e.g. golf course, airport.

8. SETBACK

The setback of the through traffic lanes to the property boundary line is:

- less than 4 metres ☐
- 4-10 metres ☑
- more than 10 metres ☐

Note: (i) If development is balanced, the lower setback value should be used.
(ii) If development is unbalanced, the setback value for the more developed side should be used.

9. MEDIAN

The central median has a width of n/a metres

FORM F1: QLIMITS Field Data Form 2

10. PROTECTION OF TURNING/CROSSING VEHICLES

The median protects turning vehicles:

- ☐ fully
- ☑ only partially or not at all

11. NUMBER OF LANES

The total number of traffic lanes is 2 lanes

Note: (i) include through lanes in both directions.
(ii) do not include service roads or exclusive parking lanes.
(iii) if lanes are not clearly marked, count the number of lanes normally used by drivers during busy traffic periods.

12. FUNCTION OF ROAD

The main reason that vehicles use this section of road is:

- ☑ traffic movement
- ☑ access to abutting properties

13. ADJACENT ROAD SECTIONS

The speed limits on the adjoining road sections are: 0 km/h 60 km/h

14. FREEWAY

Is this road a motorway, freeway or expressway? NO ☑ YES ☐

15. LOW SPEED AREA

Is this road a low speed area?

- ☑ NO
- ☐ YES (LATM area)
- ☐ YES (shared-use zone)

16. OTHER FACTORS

Is the road predominantly winding or hilly? NO ☑ YES ☐

Is the road unusually congested? NO ☑ YES ☐

17. SPECIAL ROADSIDE ACTIVITIES

Are there any schools along this road section? NO ☐ YES ☑

18. CASUALTY CRASH RATES

Compared to other similar road sections the casualty crash rate is:

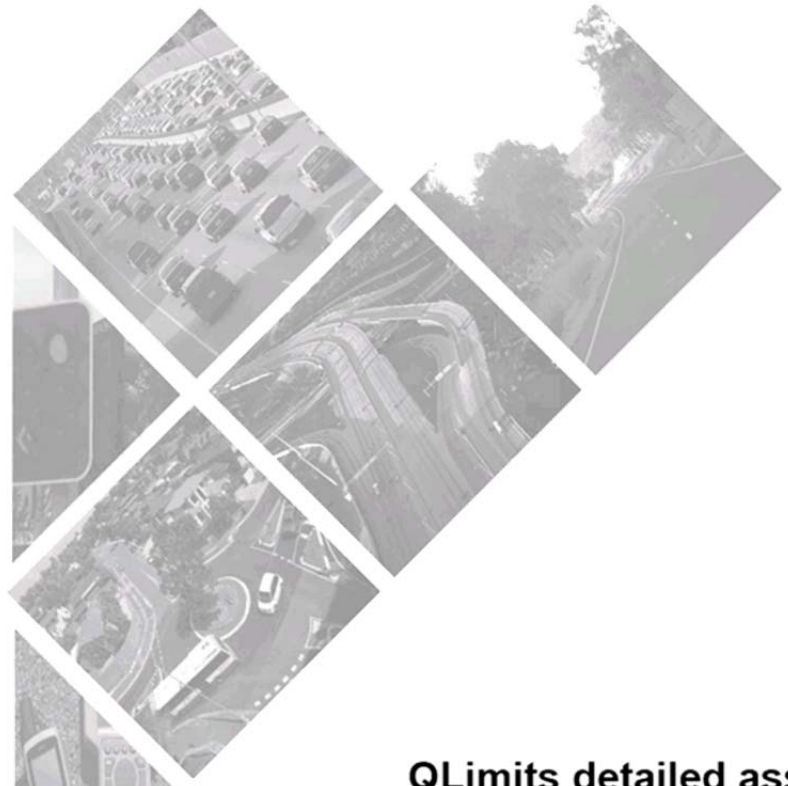
- ☐ average or lower than average
- ☐ a little higher than average
- ☑ significantly higher than average

Note: Care should be exercised when using historical crash rate data. Only use relevant data pertaining to crashes that have occurred whilst the road is in its current state, e.g. if an intersection has been signalised or a road recently reconstructed, only use crash data from the period following these changes.

19. TRAFFIC SIGNALS/ROUNDABOUTS

Are there any traffic signals or roundabouts along this road section? NO ☑ YES ☐

FORM F1: QLIMITS Field Data Form 3



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Appendix C
QLimits detailed assessment reports (Form F2)



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Speed Limit Review – Queensland (SLR-QLD)
Detailed Assessment Report

Background Information

Analysed By: Luke Kidd.
User Reference: High Street_Seg1, Rev. 1
Road Name: High Street.
Road Location: Ferry Terminal to 30m south of Kings Road.
Suburb: Russell Island.
GPS Start Point : .
GPS Finish Point: .
TMR Road Number: .
Local Government: 256, Redland City Council
Main Roads District: 13, Metropolitan
The need to review the speed limit on this road has occurred due to community request.
The length of the road section being assessed is 0.87 km
AADT on this road section is 3536 vpd
The existing speed limit is 60 km/h.

Adjacent Speed Zones

Approach 2: 60 km/h - Northbound

Recommended Speed Limit:

50

Stage 1: Road function

This section of High Street being assessed is located in a urban area.
The road type is: Trunk Collector Roads and Collector Roads.
The Typical Speed Limit is: 50 km/h.
The Existing Speed Limit **does not** equal the Typical Speed Limit

Stage 2: Prevailing Traffic speed

Sample data on 16315 vehicles was analysed using ' '
The upper limit of 15 km/h pace is 49
The mean speed is 42 km/h
The 85th percentile speed is 49 km/h
Hence, the prevailing traffic speed data **does not** correlate with the existing Speed Limit

Stage 3: QLIMITS

The suggested speed limit based on the speed environment analysis was **50 km/h** after allowing for site specific issues.

Comments
Constrained road environment and presence of zebra crossing - not suited to speed limit greater than 50km/h

Additional issues considered:

- A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:
  - Schools or school crossings
  - A large number of pedestrians and/or cyclists
  - Frequent parking manoeuvres
  - Substantial crossing and turning traffic

- Recreational or tourist traffic
- Presence of aged and/or disabled persons
- Presence of roadside hazards

Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

- Speed environment was assessed (Stage 3 was completed). Answers to the Speed Environment questions were as follows:
  - N/A (no questions were answered).

Frequency of Roadside Accesses

	Type of access	Number
A	Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (The weighting for this type of access is 1).	10
B	Average commercial establishment, local schools, caravan parks, light industries, public buildings and units generating activity which is either: 1. Continuous light. 2. Moderate at certain times, such as commuting hours. 3. Substantial at infrequent intervals. (The weighting for this type of access is 2).	10
C	Heavy industry, schools, shopping centres and other units generating continuous moderate activity or substantial activity at certain regular times. (The weighting for this type of access is 3).	0
D	Large shopping centres and other units generating substantial and continuous activity. Some large industries which are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity. (The weighting for this type of access is 4).	0
E	Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 1).	3
F	Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 2).	6
G	Unsignalised intersecting roads of comparable or greater significance than the road being assessed. Intersections which have pronounced effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 3).	0
H	Roundabouts and signalised intersecting roads. (The weighting for this type of access is 3).	0
	Average number of accesses per 100 m	5.14

Road Cross Section
The road is **Undivided**

Number of Lanes
The total number of traffic lanes on this section of road is **2**

Function of Road
The road is primarily used for **Traffic movement (freeway/arterial/sub arterial/trunk collector)**

Restrictions of Access
There are **no restrictions.**

Special Roadside Activities
A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:

- Schools or school crossings
- A large number of pedestrians and/or cyclists
- Frequent parking manoeuvres
- Substantial crossing and turning traffic
- Recreational or tourist traffic
- Presence of aged and/or disabled persons
- Presence of roadside hazards

Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

Number of crashes in the past 5 years:

Description	No. of crashes
Head-on	0
Rear-end	0
Lane change	0
Parallel lanes, turning	0
U-turn	0
Entering roadway	0
Overtaking, same direction	0
Hit parked vehicle	0
Hit railway train	0
Pedestrian	0
Permanent obstruction on carriageway	0
Hit animal	0
Off carriageway, on straight	0
Off carriageway, on straight, hit object	0
Out of control, on straight	0
Off carriageway on curve	0
Off carriageway, on curve, hit object	0
Out of control, on curve	0

The average annual equivalent crash risk is 0.00 (10^4)

Stage 4: Speed correlation check & recommendations

The speed limit based on road function is **50 km/h.**

The speed limit suggested by current speed data is **50 km/h.**
The speed limit suggested by the speed environment (QLIMITS) is **50 km/h.**

Recommendations and authorisation

THE RECOMMENDED SPEED LIMIT IS 50 km/h

Speed Limit Review – Queensland (SLR-QLD)
Detailed Assessment Report

Background Information

Analysed By: Luke Kidd.
User Reference: High Street_Seg2, Rev. 1
Road Name: High Street.
Road Location: 30m south of Kings Road to Minjerriba Road.
Suburb: Russell Island.
GPS Start Point : .
GPS Finish Point: .
TMR Road Number: .
Local Government: 256, Redland City Council
Main Roads District: 13, Metropolitan
The need to review the speed limit on this road has occurred due to community request.
The length of the road section being assessed is 0.91 km
AADT on this road section is 3548 vpd
The existing speed limit is 60 km/h.

Adjacent Speed Zones
Approach 1: 60 km/h - Southbound
Approach 2: 60 km/h - Northbound

Recommended Speed Limit:

60

Stage 1: Road function

This section of High Street being assessed is located in a urban area.
The road type is: Trunk Collector Roads and Collector Roads.
The Typical Speed Limit is: 60 km/h.
The Existing Speed Limit **does** equal the Typical Speed Limit

Stage 2: Prevailing Traffic speed

Sample data on 20924 vehicles was analysed using ' '
The upper limit of 15 km/h pace is 68
The mean speed is 60 km/h
The 85th percentile speed is 67 km/h
Hence, the prevailing traffic speed data **does** correlate with the existing Speed Limit

Stage 3: QLIMITS

The suggested speed limit based on the speed environment analysis was **60 km/h** after allowing for site specific issues.

Comments
Crash rate not considered to be high when assessing the entire road length. Also the pedestrian crash occurred in a private property beside the road and is not road related.

Additional issues considered:

- A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:
  - Substantial crossing and turning traffic
  - Recreational or tourist traffic
  - Presence of aged and/or disabled persons

- Presence of roadside hazards
- Narrow traffic lane width

Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

- The accident rate for this section of road is **significantly higher** than the average for this type of road. Further investigation of the possible causes for this increased accident rate is recommended. A review of the recommended speed limit may or may not be appropriate depending on local circumstances.

- Speed environment was assessed (Stage 3 was completed). Answers to the Speed Environment questions were as follows:
  - Has a comprehensive road safety audit been completed? NO
  - Did the road safety audit highlight deficiencies that have not been corrected? NO
  - Was the road safety audit conducted more than 3 years ago? NO
  - Is there a concern for pedestrian or cyclist safety along the road segment? NO
  - Are there high risk intersections in the road segment? NO

Frequency of Roadside Accesses

	Type of access	Number
A	Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (The weighting for this type of access is 1).	19
B	Average commercial establishment, local schools, caravan parks, light industries, public buildings and units generating activity which is either: 1. Continuous light. 2. Moderate at certain times, such as commuting hours. 3. Substantial at infrequent intervals. (The weighting for this type of access is 2).	0
C	Heavy industry, schools, shopping centres and other units generating continuous moderate activity or substantial activity at certain regular times. (The weighting for this type of access is 3).	0
D	Large shopping centres and other units generating substantial and continuous activity. Some large industries which are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity. (The weighting for this type of access is 4).	0
E	Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 1).	12
F	Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 2).	2
G	Unsignalised intersecting roads of comparable or greater significance than the road being assessed. Intersections which have pronounced effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 3).	0
H	Roundabouts and signalised intersecting roads. (The weighting for this type of access is 3).	0

	Average number of accesses per 100 m	3.84

Road Cross Section
The road is **Undivided**

Number of Lanes
The total number of traffic lanes on this section of road is **2**

Function of Road
The road is primarily used for **Traffic movement (freeway/arterial/sub arterial/trunk collector)**

Restrictions of Access
There are **no restrictions.**

Special Roadside Activities
A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:

- Substantial crossing and turning traffic
- Recreational or tourist traffic
- Presence of aged and/or disabled persons
- Presence of roadside hazards
- Narrow traffic lane width

Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

Number of crashes in the past 5 years:

Description	No. of crashes
Head-on	0
Rear-end	0
Lane change	0
Parallel lanes, turning	0
U-turn	0
Entering roadway	0
Overtaking, same direction	0
Hit parked vehicle	0
Hit railway train	0
Pedestrian	1
Permanent obstruction on carriageway	0
Hit animal	0
Off carriageway, on straight	0
Off carriageway, on straight, hit object	1
Out of control, on straight	0
Off carriageway on curve	0
Off carriageway, on curve, hit object	0
Out of control, on curve	0

The average annual equivalent crash risk is 16.00 (10^4)

Crash Rate
The crash rate is 1358 (10^4 ERUs per 10^8 VKT)

Stage 4: Speed correlation check & recommendations

The speed limit based on road function is **60 km/h.**

The speed limit suggested by current speed data is **60 km/h.**
The speed limit suggested by the speed environment (QLIMITS) is **60 km/h.**

Recommendations and authorisation

THE RECOMMENDED SPEED LIMIT IS 60 km/h

Speed Limit Review – Queensland (SLR-QLD)
Detailed Assessment Report

Background Information

Analysed By: Luke Kidd.
User Reference: High Street_Seg3, Rev. 1
Road Name: High Street.
Road Location: Minjerriba Road to Concrete Plant.
Suburb: Russell Island.
GPS Start Point : .
GPS Finish Point: .
TMR Road Number: .
Local Government: 256, Redland City Council
Main Roads District: 13, Metropolitan
The need to review the speed limit on this road has occurred due to community request.
The length of the road section being assessed is 0.27 km
AADT on this road section is 1000 vpd
The existing speed limit is 60 km/h.

Recommended Speed Limit:

50

Stage 1: Road function

This section of High Street being assessed is located in a urban area.
The road type is: Trunk Collector Roads and Collector Roads.
The Typical Speed Limit is: 50 km/h.
The Existing Speed Limit **does not** equal the Typical Speed Limit

Stage 2: Prevailing Traffic speed

Sample data on 500 vehicles was analysed using ' '
The upper limit of 15 km/h pace is 55
The mean speed is 50 km/h
The 85th percentile speed is 55 km/h
Hence, the prevailing traffic speed data **does not** correlate with the existing Speed Limit

Stage 3: QLIMITS

The suggested speed limit based on the speed environment analysis was **50 km/h** after allowing for site specific issues.

Additional issues considered:

- Speed survey guidelines have not been adhered to, as follows:
  - Speed survey data was NOT collected according to to the guidelines in Appendix G of MUTCD
  - Speed survey site geometry and alignment is NOT representative of overall road segment
  - Speed survey site is NOT located at a midblock at least 200m away from intersections
  - Speed survey does NOT only consider vehicles operating in free flowing traffic conditions (minimum headway of 4 seconds)

- Speed environment was assessed (Stage 3 was completed). Answers to the Speed Environment questions were as follows:
  - N/A (no questions were answered).

Frequency of Roadside Accesses

	Type of access	Number
A	Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (The weighting for this type of access is 1).	5
B	Average commercial establishment, local schools, caravan parks, light industries, public buildings and units generating activity which is either: 1. Continuous light. 2. Moderate at certain times, such as commuting hours. 3. Substantial at infrequent intervals. (The weighting for this type of access is 2).	0
C	Heavy industry, schools, shopping centres and other units generating continuous moderate activity or substantial activity at certain regular times. (The weighting for this type of access is 3).	0
D	Large shopping centres and other units generating substantial and continuous activity. Some large industries which are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity. (The weighting for this type of access is 4).	0
E	Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 1).	2
F	Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 2).	1
G	Unsignalised intersecting roads of comparable or greater significance than the road being assessed. Intersections which have pronounced effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 3).	0
H	Roundabouts and signalised intersecting roads. (The weighting for this type of access is 3).	0
	Average number of accesses per 100 m	3.27

Road Cross Section
The road is **Undivided**

Number of Lanes
The total number of traffic lanes on this section of road is **2**

Function of Road
The road is primarily used for **Access to abutting properties (Traffic carrying)**

Low Speed Area
There is no reason why this should be a low speed area.

Stage 4: Speed correlation check & recommendations

The speed limit based on road function is **50 km/h.**

The speed limit suggested by current speed data is **50 km/h.**
The speed limit suggested by the speed environment (QLIMITS) is **50 km/h.**

Recommendations and authorisation

THE RECOMMENDED SPEED LIMIT IS 50 km/h



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Appendix D
QLimits checklist (Form F3)



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FORM F3 CHECKLIST FOR REVIEW OF EXISTING SPEED LIMIT

Not required for setting speed limits on roads in rural residential areas. See MUTCD Part 4 Section 3.4.

LOCATION IDENTIFICATION

Road Owner: ☐ MRD ☒ LGA

District Number: 13

LGA Number: 256

LGA Name: Redland City Council

Town/City: Russell Island

Suburb: Russell Island

Road Name: High Street

Road Section: Minjerriba Road to Glendale Road

Road Number: n/a

Road Segment:

	Location or Reference Point	Chainage or Distance	GPS Coordinates (decimal degrees)	
			Latitude	Longitude
Start	Ferry Terminal			
End	Concrete Plant			

Existing Speed Limit: 50 & 60 km/h

AADT: 1515 to 3548

REVIEWING OFFICER

Name: Luke Kidd

Employer: RoadPro Consulting

Address: 8 MacLeay Lane, Maroochydore, QLD

Phone No: 0459666608

Date of Review: 25 January 2018

Have you undertaken appropriate training in the application of Part 4? Yes ☒ No ☐

Notes:

1. The numbering convention used for the Checklist coincides with that used in MUTCD Part 4 Figure F1.
2. References to Figures and Tables are to those in Part 4 of the Manual of Uniform Traffic Control Devices.
3. Mark following selections with a tick.

1

SPEED LIMIT REVIEW

1. The need to review the speed limit on this road has occurred due to:
   - ☐ General Limit no longer applicable
   - ☐ Altered speed environment
   - ☐ Evidence of speed limit/vehicle speed discrepancies
   - ☐ Need to adjust speed zone lengths
   - ☑ Community request
   - ☐ Other (specify) .....

Stage 1 – Road Function Analysis

2. Road Function

   If the road is in a rural environment, go to Step 3.

   For a road in an urban environment, the function of the road has been identified as:
   - ☐ Access / Local street
   - ☑ Collector street
   - ☑ Trunk collector road
   - ☐ Sub-arterial road
   - ☐ Arterial road
   - ☐ Controlled access arterial road, Freeway

   If rural, go to Step 3

3. From Table B1 (Urban) or B2 (Rural), the typical speed limit is: 50, 60, 50 ..... km/h
4. The existing speed limit equals the typical speed limit?
   - ☑ Yes - go to Step 6
   - ☑ No - go to Step 5
5. Is it proposed to alter the road function to align the typical speed limit with the existing speed limit speed?
   - ☐ Yes - go to Step 18
   - ☑ No - go to Step 6

Stage 2 – Prevailing Vehicle Speed Analysis

6. Prevailing Vehicle Speed Data

(a) Collected using:
- ☐ Manual methods
- ☑ Automatic device (specify type) ..... Metro Count .....
- ☐ Other (specify) ..... Metro Count Software .....

(b) Collected according to guidelines:
- ☑ Specified in Appendix G
- ☐ Other (specify) ..... Metro Count Software .....

(c) Analysed using:
- ☐ EsdeeMan version 3.0
- ☐ Manual methods
- ☑ Other (specify) ..... Metro Count Software .....

(d) Results from analysis:

No. of vehicles in sample: varies - refer report ....

Upper limit of 15 km/h pace: varies ..... km/h

% vehicles in the 15 km/h pace: varies .....%

85th %ile speed: varies ..... km/h

Mean speed: varies .....

7. Speed data correlates with existing speed limit? (see Table C1)
   - ☑ Yes - go to Step 11
   - ☑ No - go to Step 7a

7a. From Table C2,

Suggested speed limit is: 50 & 60 ..... km/h

Go to Step 8.

Stage 3 – Speed Environment Analysis

8. QLIMITS

(a) Field Data Form F1 (Appendix D):
- ☑ Completed
- ☐ Copy attached

(b) Analysis Report Form F2 (Appendix D):

- [x] Completed
- [ ] Copy attached

(c) QLIMITS recommended speed limit

50, 60, 50 km/h

(d) QLIMITS flagged considerations?

- [ ] No
- [x] Yes (see Report Form F2 (Appendix D))

Stage 4 – Correlation Check

9. Correlation check

(a) Outputs from each stage are:

Stage 1

Typical speed limit 50, 60, 50 km/h

Stage 2

From Table C2

Suggested speed limit 50 & 60 km/h

Stage 3

QLIMITS recommendation 50, 60, 50 km/h

(b) Is there a correlation between two of the three outputs from Stages 1, 2 and 3 above?

- [x] Yes 50 & 60 km/h - go to Step 11
- [ ] No - go to Step 10

10. Have all data, QLIMITS input/output and road function been checked?

- [ ] No - go to Step 2
- [ ] Yes - go to Step 24

Other Criteria

11. (From Steps 7 and 9)

(a) The calculated casualty crash rate is:

304 * 10^4 ERUs per 10^8 VKT

(b) The typical casualty crash rates are:

Average: 524.20 * 10^4 ERUs per 10^8 VKT

Critical: 542.50 * 10^4 ERUs per 10^8 VKT

(c) The casualty crash rate / potential risk factor is comparatively:

- [x] Low (=< Average)
- [ ] Medium (Between average and critical)
- [ ] High (>= Critical)

(d) Is casualty crash rate / potential risk factor high?

- [ ] Yes - go to Step 12
- [x] No - Figure F1 leads to:
- [ ] Step 19
- [ ] Step 13

12. Crash investigation / road safety review or audit conducted by:

Name: -

Date: -

File/Report No: -

Go to Step 15

13. Has the review process suggested an increase in the speed limit?

- [ ] Yes - go to Step 14
- [ ] No - go to Step 23

14. Has a safety review (or road safety audit) identified any risk factors?

- [ ] Yes - go to Step 16
- [ ] No - go to Step 23

15. Has a crash investigation or safety review identified causal or risk factors?

- [ ] Yes - go to Step 16
- [ ] No - go to Step 22

16. Is treatment feasible?

- [ ] Yes - go to Step 17
- [ ] No - go to Step 21

17. (From Step 16)

Proposed treatments / works have been listed for the financial year:

Go to Step 20

18. (From Step 5)

See Figure F1, Note 18

Go to Step 17

19. (From Step 11 via Step 7)

Retain existing limit - go to Step 25

20. Consider whether an interim alteration to the speed limit is necessary.

Go to Step 25

FORM F3: Checklist for review of existing speed limit 3

21. (From Step 16)

Subject to Figure F1 (Note 21), it is considered appropriate to:

☐ Increase

☐ Decrease

the existing speed limit by ..... km/h

Go to Step 25

22. (From Step 15)

Retain existing speed limit with enhanced enforcement.

Go to Step 25

23. (From Step 13 or 14)

Adopt speed limit noted at 9(b).

Go to Step 25

24. (From Step 10)

The review of speed limits according to the process described in Figure F1 has failed to determine an appropriate speed limit. Action taken is as follows:

(a) ☐ The Checklist, together with all relevant data and information, has been referred to the responsible officer for consideration.

Referred to: .....

By: .....

RPEQ No: .....

Date: .....

The responsible officer now has responsibility for providing recommendations at Step 25.

(b) ☐ Input to the review requested from the Traffic Advisory Committee (TAC)

Committee meeting of …../…../….. offered the following information:

.....

.....

.....

.....

.....

and/or advised a preferred speed limit of:

..... km/h

(c) Has information provided by the committee assisted in determining an appropriate limit?

☐ Yes - it is..... km/h

Go to Step 25

☐ No - (a) I concur the following speed limit for the section of road under consideration: ..... km/h

Concurred by (TAC Chair): .....

.....

Date: .....

25. Recommendation by Engineer

Following the completion of this checklist, which documents the process for the review of speed limits according to Figure F1 of Part 4 of the MUTCD, I submit the following:

Recommended Speed Limit: 50, 60, 50 km/h

Recommended by:

Name: .....

Position: .....

RPEQ No: .....

Date: .....

Authorisation for Deliberation

☐ The recommended speed limit is approved for deliberation in the SMC.

☐ The recommended speed limit is not approved for deliberation by the SMC for the following reasons:

.....

.....

.....

.....

.....

☐ The alternative speed limit to be discussed or retained is: ..... km/h

Reasons for the alternative speed limit are:

.....

.....

.....

.....

Authorised by: .....

Position:.....

(Responsible officer/Regional Director)

Date: .....

Endorsement by Speed Management Committee (SMC)

☐ The recommended speed limit has been endorsed by the SMC.

☐ The recommended speed limit has not been endorsed by the SMC and will now be sent back to the responsible officer for referral to the Speed Limit Review Panel (SLRP).

Recommendation by Speed Limit Review Panel (SLRP)

Following the deliberation by the SLRP, the chairperson will forward its recommendation to the responsible officer for consideration:

Recommended speed limit: ..... km/h

Recommended by:

Name:.....

(Chairperson SLRP)

Position:.....

RPEQ No:.....

Date:.....

Authorisation for Installation

☐ The recommended speed limit is authorised for installation according to the provisions of MUTCD Part 1, Appendix C.

☐ The recommended speed limit is not authorised for the following reasons:

.....

.....

.....

.....

.....

☐ The alternative speed limit to be installed or retained is: ..... km/h

Reasons for the alternative speed limit are:

.....

.....

.....

.....

.....

Authorised by: .....

Position:.....

(Responsible officer/Regional Director)

Date:.....

☐ Form M994 or equivalent local government Form completed by authorising officer and copy filed with this Checklist.

(Failure to complete this task could compromise the legality of the Speed Limit.)

26. Review / Evaluation

Will the existing speed limit be altered?

☐ Yes - program assessment to occur 1-4 weeks after installation.

☐ No - program for review in 5 years or sooner if required.

Where Steps 21, 22 or 23 have indicated that enhanced enforcement is required, complete the following:

Enhanced enforcement of this site by QPS has been requested by reporting the outcome for this speed limit review to:

☐ Local TAC (Traffic Advisory Committee)

☐ Regional Speed Management Advisory Committee

☐ Regional QPS Traffic Co-ordinator

Reported by: .....

Position:.....

Date:.....

☐ Written advice

☐ Other (specify).....

.....

.....

FORM F3: Checklist for review of existing speed limit 5



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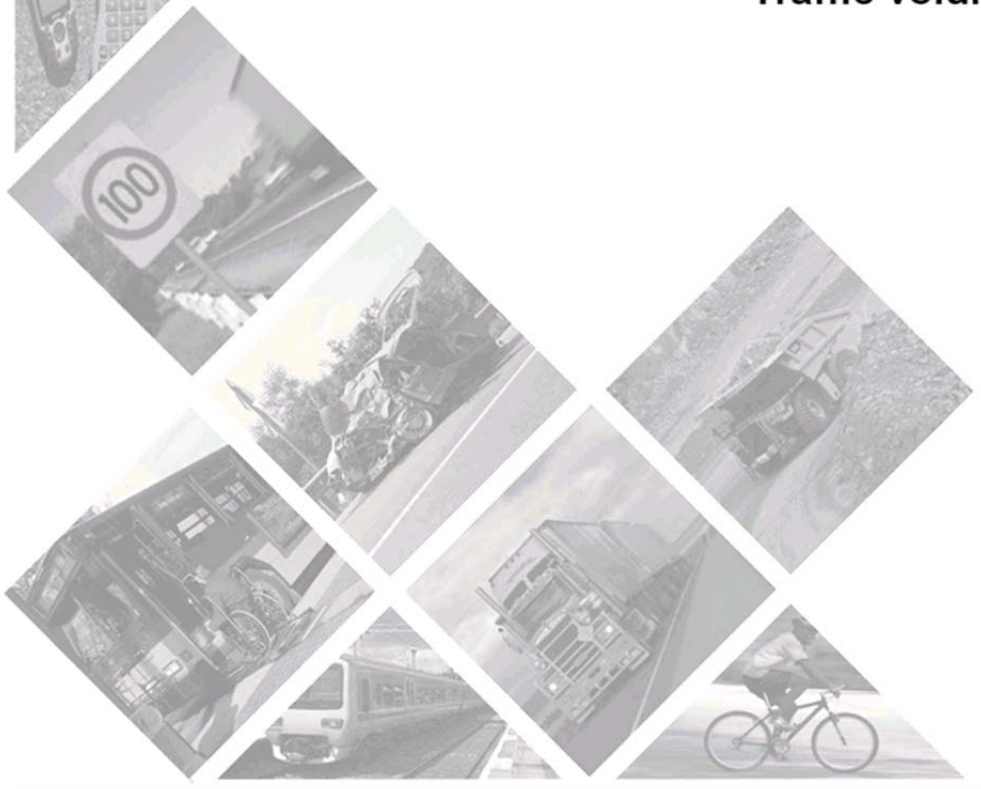
Appendix E
Traffic volume data



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MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-455 -- English (ENA)

Datasets:

Site:	**[# 3 High Street] # 3 High Street on Pole # P65966 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	18:00 Thursday, 2 November 2017 => 11:38 Friday, 10 November 2017,
Zone:	
File:	# 3 High Street.EC0 (Plus)
Identifier:	U4633VB2 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 10602 / 11662 (90.91%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-455
Site: # 3 High Street.0.1NS
Description: **# 3 High Street on Pole # P65966 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	2.0	2.0	1.0	2.0	6.0	6.0	1.4	2.7
0100-0200	0.0	2.0	3.0	0.0	1.0	2.0	1.0	1.2	1.3
0200-0300	0.0	0.0	1.0	2.0	0.0	2.0	2.0	0.6	1.0
0300-0400	8.0	6.0	4.0	9.0	9.0	4.0	0.0	7.2	5.7
0400-0500	54.0	62.0	60.0	55.0	65.0	10.0	2.0	59.2	44.0
0500-0600	87.0	86.0	81.0	79.0	67.0	12.0	27.0	80.0	62.7
0600-0700	108.0	105.0	115.0	98.0	99.0	73.0	33.0	105.0	90.1
0700-0800	**168.0**	**173.0**	**180.0**	**140.0**	**167.0**	87.0	74.0	**165.6**	**141.3**
0800-0900	73.0	69.0	92.0	116.0	83.0	86.0	86.0	86.6	86.4
0900-1000	75.0	98.0	126.0	92.0	114.0	**111.0**	82.0	101.0	99.7
1000-1100	69.0	93.0	101.0	90.0	95.0	103.0	87.0	89.6	91.1
1100-1200	76.0	92.0	93.0	104.0	113.0	77.0	**95.0**	95.6	92.9
1200-1300	82.0	86.0	98.0	91.0	95.0	**98.0**	77.0	90.4	89.6
1300-1400	66.0	60.0	81.0	59.0	63.0	68.0	89.0	65.8	69.4
1400-1500	102.0	99.0	118.0	116.0	119.0	87.0	76.0	110.8	102.4
1500-1600	**148.0**	**161.0**	**156.0**	**123.0**	109.0	91.0	**101.0**	**139.4**	**127.0**
1600-1700	132.0	134.0	117.0	112.0	**181.0**	77.0	96.0	135.2	121.3
1700-1800	97.0	104.0	113.0	110.0	119.0	62.0	83.0	108.6	98.3
1800-1900	78.0	75.0	77.0	93.0	77.0	61.0	61.0	80.0	74.6
1900-2000	47.0	39.0	54.0	35.0	51.0	40.0	33.0	45.2	42.7
2000-2100	20.0	27.0	25.0	36.0	26.0	30.0	45.0	26.8	29.9
2100-2200	25.0	13.0	17.0	22.0	33.0	16.0	20.0	22.0	20.9
2200-2300	14.0	14.0	14.0	11.0	15.0	12.0	12.0	13.6	13.1
2300-2400	5.0	2.0	13.0	5.0	13.0	7.0	0.0	7.6	6.4
Totals									
0700-1900	1166.0	1244.0	1352.0	1246.0	1335.0	1008.0	1007.0	1268.6	1194.0
0600-2200	1366.0	1428.0	1563.0	1437.0	1544.0	1167.0	1138.0	1467.6	1377.6
0600-0000	1385.0	1444.0	1590.0	1453.0	1572.0	1186.0	1150.0	1488.8	1397.1

0000-0000	1534.0	1602.0	1741.0	1599.0	1716.0	1222.0	1188.0	1638.4	1514.6
AM Peak	0700	0700	0700	0700	0700	0900	1100		
	168.0	173.0	180.0	140.0	167.0	111.0	95.0		
PM Peak	1500	1500	1500	1500	1600	1200	1500		
	148.0	161.0	156.0	123.0	181.0	98.0	101.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-456 -- English (ENA)

Datasets:

Site:	**[# 3 High Street] # 3 High Street on Pole # P65966 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	18:00 Thursday, 2 November 2017 => 11:38 Friday, 10 November 2017,
Zone:	
File:	# 3 High Street.EC0 (Plus)
Identifier:	U4633VB2 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 10602 / 11662 (90.91%)

Class Speed Matrix

ClassMatrix-456
Site: # 3 High Street.0.1NS
Description: **# 3 High Street on Pole # P65966 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	549	7	58	36	7	1	1	.	2	1	.	.	662	6.2%
20 - 30	4495	30	205	41	19	2	3	.	2	1	.	.	4798	45.3%
30 - 40	4045	21	132	7	2	.	.	1	1	3	.	.	4212	39.7%
40 - 50	835	3	38	.	.	.	.	.	.	.	.	.	876	8.3%
50 - 60	44	.	2	.	.	.	.	.	.	.	.	.	46	0.4%
60 - 70	7	.	.	.	.	.	.	.	.	.	.	.	7	0.1%
70 - 80	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
80 - 90	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
90 - 100	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
100 - 110	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
110 - 120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120 - 130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	9976	61	435	84	28	3	4	1	5	5	0	0	10602	
	94.1%	0.6%	4.1%	0.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-458 -- English (ENA)

Datasets:

Site:	**[# 10 High Street] # 10 High Street on Pole # P50102-A Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	19:00 Thursday, 2 November 2017 => 11:32 Friday, 10 November 2017,
Zone:	
File:	# 10 High Street.EC0 (Plus)
Identifier:	DR92FJB6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 12710 / 14124 (89.99%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-458
Site: # 10 High Street.0.1NS
Description: **# 10 High Street on Pole # P50102-A Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	2.0	1.0	1.0	2.0	6.0	6.0	1.2	2.6
0100-0200	0.0	0.0	2.0	0.0	1.0	2.0	1.0	0.6	0.9
0200-0300	0.0	0.0	1.0	0.0	0.0	2.0	1.0	0.2	0.6
0300-0400	8.0	7.0	5.0	9.0	9.0	4.0	0.0	7.6	6.0
0400-0500	56.0	62.0	61.0	56.0	66.0	11.0	2.0	60.2	44.9
0500-0600	93.0	90.0	87.0	91.0	72.0	14.0	32.0	86.6	68.4
0600-0700	118.0	109.0	129.0	106.0	118.0	76.0	32.0	116.0	98.3
0700-0800	**196.0**	**200.0**	**205.0**	**165.0**	**206.0**	109.0	86.0	**194.4**	**166.7**
0800-0900	118.0	86.0	118.0	148.0	118.0	113.0	98.0	117.6	114.1
0900-1000	112.0	119.0	140.0	127.0	164.0	**163.0**	115.0	132.4	134.3
1000-1100	105.0	120.0	134.0	131.0	124.0	154.0	**115.0**	122.8	126.1
1100-1200	105.0	125.0	135.0	145.0	137.0	113.0	106.0	129.4	123.7
1200-1300	115.0	109.0	126.0	126.0	135.0	**110.0**	107.0	122.2	118.3
1300-1400	85.0	76.0	97.0	88.0	90.0	98.0	108.0	87.2	91.7
1400-1500	129.0	114.0	134.0	**153.0**	149.0	97.0	84.0	135.8	122.9
1500-1600	**182.0**	**182.0**	**176.0**	147.0	130.0	93.0	**115.0**	**163.4**	**146.4**
1600-1700	160.0	150.0	131.0	125.0	**188.0**	86.0	112.0	150.8	136.0
1700-1800	129.0	118.0	127.0	127.0	132.0	66.0	93.0	126.6	113.1
1800-1900	88.0	87.0	95.0	98.0	85.0	62.0	65.0	90.6	82.9
1900-2000	55.0	43.0	54.0	41.0	57.0	39.0	34.0	50.0	46.1
2000-2100	22.0	24.0	25.0	36.0	29.0	30.0	43.0	27.2	29.9
2100-2200	26.0	14.0	20.0	22.0	30.0	18.0	21.0	22.4	21.6
2200-2300	14.0	14.0	14.0	12.0	16.0	12.0	11.0	14.0	13.3
2300-2400	6.0	3.0	14.0	6.0	13.0	7.0	0.0	8.4	7.0
Totals									
0700-1900	1524.0	1486.0	1618.0	1580.0	1658.0	1264.0	1204.0	1573.2	1476.3
0600-2200	1745.0	1676.0	1846.0	1785.0	1892.0	1427.0	1334.0	1788.8	1672.1
0600-0000	1765.0	1693.0	1874.0	1803.0	1921.0	1446.0	1345.0	1811.2	1692.4

0000-0000	1922.0	1854.0	2031.0	1960.0	2071.0	1485.0	1387.0	1967.6	1815.7
AM Peak	0700	0700	0700	0700	0700	0900	1000		
	196.0	200.0	205.0	165.0	206.0	163.0	115.0		
PM Peak	1500	1500	1500	1400	1600	1200	1500		
	182.0	182.0	176.0	153.0	188.0	110.0	115.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-459 -- English (ENA)

Datasets:

Site:	**[# 10 High Street] # 10 High Street on Pole # P50102-A Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	19:00 Thursday, 2 November 2017 => 11:32 Friday, 10 November 2017,
Zone:	
File:	# 10 High Street.EC0 (Plus)
Identifier:	DR92FJB6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 12710 / 14124 (89.99%)

Class Speed Matrix

ClassMatrix-459
Site: # 10 High Street.0.1NS
Description: **# 10 High Street on Pole # P50102-A Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	833	3	50	46	8	1	1	1	3	.	1	.	947	7.5%
20 - 30	2913	23	141	61	34	.	4	1	6	6	.	.	3189	25.1%
30 - 40	5131	38	161	13	6	2	1	.	4	2	.	.	5358	42.2%
40 - 50	2649	11	36	.	.	.	1	.	1	2	.	.	2700	21.2%
50 - 60	460	1	8	.	.	.	.	.	.	.	.	.	469	3.7%
60 - 70	42	.	.	.	.	.	.	.	.	.	.	.	42	0.3%
70 - 80	4	.	.	.	.	.	.	.	.	.	.	.	4	0.0%
80 - 90	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
90 - 100	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
100 - 110	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
110 - 120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120 - 130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	12033	76	396	120	48	3	7	2	14	10	1	0	12710	
	94.7%	0.6%	3.1%	0.9%	0.4%	0.0%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-461 -- English (ENA)

Datasets:

Site:	**[# 24 High Street] # 24 High Street on Pole # X50100-A Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 3
Survey Duration:	16:00 Thursday, 2 November 2017 => 11:26 Friday, 10 November 2017,
Zone:	
File:	# 24 High Street.EC0 (Plus)
Identifier:	Q5219Q6K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 16362 / 18256 (89.63%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-461
Site: # 24 High Street.3.4NS
Description: **# 24 High Street on Pole # X50100-A Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	2.0	1.0	1.0	2.0	7.0	6.0	1.2	2.7
0100-0200	0.0	0.0	2.0	0.0	1.0	2.0	1.0	0.6	0.9
0200-0300	1.0	0.0	0.0	0.0	0.0	2.0	1.0	0.2	0.6
0300-0400	8.0	4.0	3.0	10.0	9.0	4.0	0.0	6.8	5.4
0400-0500	59.0	62.0	62.0	58.0	69.0	12.0	2.0	62.0	46.3
0500-0600	97.0	97.0	95.0	94.0	80.0	14.0	31.0	92.6	72.6
0600-0700	138.0	140.0	153.0	136.0	135.0	85.0	37.0	140.4	117.7
0700-0800	**216.0**	**217.0**	**223.0**	199.0	**236.0**	119.0	92.0	**218.2**	186.0
0800-0900	160.0	125.0	154.0	185.0	166.0	130.0	108.0	158.0	146.9
0900-1000	155.0	169.0	169.0	169.0	191.0	206.0	137.0	170.6	170.9
1000-1100	178.0	188.0	203.0	202.0	185.0	**216.0**	**160.0**	191.2	**190.3**
1100-1200	162.0	194.0	193.0	**224.0**	197.0	205.0	155.0	194.0	190.0
1200-1300	160.0	153.0	172.0	168.0	198.0	**158.0**	**151.0**	170.2	165.7
1300-1400	134.0	110.0	150.0	141.0	152.0	135.0	125.0	137.4	135.3
1400-1500	169.0	138.0	187.0	**219.0**	**238.0**	131.0	107.0	190.2	169.9
1500-1600	**229.0**	**213.0**	**221.0**	194.0	166.0	134.0	136.0	**204.6**	**184.7**
1600-1700	190.0	179.0	170.0	184.0	232.0	123.0	131.0	191.0	172.7
1700-1800	163.0	130.0	150.0	165.0	176.0	89.0	113.0	156.8	140.9
1800-1900	118.0	105.0	112.0	111.0	124.0	82.0	80.0	114.0	104.6
1900-2000	63.0	53.0	66.0	45.0	72.0	45.0	37.0	59.8	54.4
2000-2100	27.0	31.0	30.0	36.0	31.0	33.0	41.0	31.0	32.7
2100-2200	26.0	17.0	20.0	26.0	28.0	21.0	22.0	23.4	22.9
2200-2300	15.0	14.0	19.0	14.0	21.0	12.0	12.0	16.6	15.3
2300-2400	7.0	3.0	16.0	10.0	15.0	7.0	0.0	10.2	8.3
Totals									
0700-1900	2034.0	1921.0	2104.0	2161.0	2261.0	1728.0	1495.0	2096.2	1957.7
0600-2200	2288.0	2162.0	2373.0	2404.0	2527.0	1912.0	1632.0	2350.8	2185.4
0600-0000	2310.0	2179.0	2408.0	2428.0	2563.0	1931.0	1644.0	2377.6	2209.0

0000-0000	2475.0	2344.0	2571.0	2591.0	2724.0	1972.0	1685.0	2541.0	2337.4
AM Peak	0700	0700	0700	1100	0700	1000	1000		
	216.0	217.0	223.0	224.0	236.0	216.0	160.0		
PM Peak	1500	1500	1500	1400	1400	1200	1200		
	229.0	213.0	221.0	219.0	238.0	158.0	151.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-462 -- English (ENA)

Datasets:

Site:	**[# 24 High Street] # 24 High Street on Pole # X50100-A Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 3
Survey Duration:	16:00 Thursday, 2 November 2017 => 11:26 Friday, 10 November 2017,
Zone:	
File:	# 24 High Street.EC0 (Plus)
Identifier:	Q5219Q6K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 16362 / 18256 (89.63%)

Class Speed Matrix

ClassMatrix-462
Site: # 24 High Street.3.4NS
Description: **# 24 High Street on Pole # X50100-A Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	171	1	13	8	5	.	.	.	.	.	.	.	198	1.2%
20 - 30	925	7	105	24	6	.	12	.	.	.	.	.	1079	6.6%
30 - 40	5234	40	383	37	16	4	6	.	10	4	.	.	5734	35.0%
40 - 50	6712	45	497	30	9	2	1	.	2	4	.	.	7302	44.6%
50 - 60	1636	5	178	2	2	.	.	.	.	.	.	.	1823	11.1%
60 - 70	153	.	44	1	.	.	.	.	.	.	.	.	198	1.2%
70 - 80	16	.	5	.	.	.	.	.	.	.	.	.	21	0.1%
80 - 90	6	.	.	.	.	.	.	.	.	.	.	.	6	0.0%
90 - 100	.	.	1	.	.	.	.	.	.	.	.	.	1	0.0%
100 - 110	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
110 - 120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120 - 130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	14853	98	1226	102	38	6	19	0	12	8	0	0	16362	
	90.8%	0.6%	7.5%	0.6%	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-476 -- English (ENA)

Datasets:

Site:	**[High St Nicholas] High Street opp. Nicholas street on Pole # X116501 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	18:00 Thursday, 2 November 2017 => 11:14 Friday, 10 November 2017,
Zone:	
File:	High St Nicholas.EC0 (Plus)
Identifier:	U559JKPZ MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 24692 / 26697 (92.49%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-476
Site: High St Nicholas.0.1NS
Description: **High Street opp. Nicholas street on Pole # X116501 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	2.0	0.0	2.0	0.0	8.0	7.0	0.8	2.7
0100-0200	1.0	0.0	2.0	0.0	1.0	4.0	2.0	0.8	1.4
0200-0300	5.0	1.0	3.0	3.0	1.0	3.0	1.0	2.6	2.4
0300-0400	8.0	4.0	4.0	6.0	10.0	5.0	0.0	6.4	5.3
0400-0500	53.0	55.0	55.0	49.0	66.0	17.0	3.0	55.6	42.6
0500-0600	86.0	86.0	88.0	84.0	76.0	21.0	36.0	84.0	68.1
0600-0700	164.0	189.0	185.0	190.0	182.0	132.0	64.0	182.0	158.0
0700-0800	264.0	270.0	277.0	250.0	293.0	216.0	172.0	270.8	248.9
0800-0900	237.0	267.0	263.0	272.0	294.0	255.0	181.0	266.6	252.7
0900-1000	289.0	278.0	**323.0**	309.0	**339.0**	377.0	249.0	307.6	309.1
1000-1100	291.0	306.0	315.0	**344.0**	305.0	**403.0**	**266.0**	312.2	**318.6**
1100-1200	**302.0**	**315.0**	301.0	313.0	333.0	346.0	241.0	**312.8**	307.3
1200-1300	266.0	245.0	272.0	280.0	298.0	**277.0**	**237.0**	272.2	267.9
1300-1400	225.0	175.0	246.0	254.0	270.0	225.0	178.0	234.0	224.7
1400-1500	302.0	260.0	**309.0**	**297.0**	309.0	212.0	173.0	**295.4**	266.0
1500-1600	**309.0**	**283.0**	288.0	281.0	274.0	218.0	228.0	287.0	**268.7**
1600-1700	275.0	254.0	288.0	263.0	**342.0**	174.0	205.0	284.4	257.3
1700-1800	234.0	168.0	210.0	213.0	217.0	154.0	165.0	208.4	194.4
1800-1900	191.0	166.0	151.0	169.0	146.0	148.0	118.0	164.6	155.6
1900-2000	103.0	88.0	95.0	75.0	111.0	74.0	65.0	94.4	87.3
2000-2100	37.0	32.0	32.0	33.0	46.0	36.0	47.0	36.0	37.6
2100-2200	30.0	19.0	21.0	32.0	40.0	23.0	20.0	28.4	26.4
2200-2300	14.0	14.0	19.0	14.0	21.0	13.0	14.0	16.4	15.6
2300-2400	4.0	7.0	15.0	10.0	16.0	10.0	0.0	10.4	8.9
Totals									
0700-1900	3185.0	2987.0	3243.0	3245.0	3420.0	3005.0	2413.0	3216.0	3071.1
0600-2200	3519.0	3315.0	3576.0	3575.0	3799.0	3270.0	2609.0	3556.8	3380.4
0600-0000	3537.0	3336.0	3610.0	3599.0	3836.0	3293.0	2623.0	3583.6	3404.9

0000-0000	3690.0	3484.0	3762.0	3743.0	3990.0	3351.0	2672.0	3733.8	3527.4
AM Peak	1100	1100	0900	1000	0900	1000	1000		
	302.0	315.0	323.0	344.0	339.0	403.0	266.0		
PM Peak	1500	1500	1400	1400	1600	1200	1200		
	309.0	283.0	309.0	297.0	342.0	277.0	237.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-477 -- English (ENA)

Datasets:

Site:	**[High St Nicholas] High Street opp. Nicholas street on Pole # X116501 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	18:00 Thursday, 2 November 2017 => 11:14 Friday, 10 November 2017,
Zone:	
File:	High St Nicholas.EC0 (Plus)
Identifier:	U559JKPZ MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 24692 / 26697 (92.49%)

Class Speed Matrix

ClassMatrix-477
Site: High St Nicholas.0.1NS
Description: **High Street opp. Nicholas street on Pole # X116501 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	89	.	5	3	.	.	.	.	.	.	.	.	97	0.4%
20 - 30	296	2	14	5	9	.	1	.	.	.	.	.	327	1.3%
30 - 40	1670	35	122	12	4	1	9	.	3	.	.	.	1856	7.5%
40 - 50	7901	134	347	16	7	8	15	1	5	2	.	.	8436	34.2%
50 - 60	9821	101	386	18	20	5	7	.	6	4	.	.	10368	42.0%
60 - 70	2985	29	141	8	7	2	.	.	.	2	1	.	3175	12.9%
70 - 80	354	1	13	2	.	.	.	.	.	.	.	.	370	1.5%
80 - 90	51	.	1	.	.	.	.	.	.	.	.	.	52	0.2%
90 - 100	8	.	.	.	.	.	.	.	.	.	.	.	8	0.0%
100 - 110	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
110 - 120	1	.	1	.	.	.	.	.	.	.	.	.	2	0.0%
120 - 130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	23177	302	1030	64	47	16	32	1	14	8	1	0	24692	
	93.9%	1.2%	4.2%	0.3%	0.2%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-473 -- English (ENA)

Datasets:

Site:	**[High St near School] High Street near School on Pole # 101744 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 2
Survey Duration:	15:00 Thursday, 2 November 2017 => 11:08 Friday, 10 November 2017,
Zone:	
File:	High St near School.EC0 (Plus)
Identifier:	FM40K381 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 24754 / 27515 (89.97%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-473
Site: High St near School.2.3NS
Description: **High Street near School on Pole # 101744 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	2.0	0.0	2.0	0.0	8.0	7.0	0.8	2.7
0100-0200	1.0	0.0	2.0	0.0	1.0	4.0	2.0	0.8	1.4
0200-0300	5.0	1.0	3.0	3.0	1.0	3.0	1.0	2.6	2.4
0300-0400	8.0	4.0	4.0	7.0	10.0	7.0	0.0	6.6	5.7
0400-0500	53.0	56.0	55.0	48.0	66.0	15.0	3.0	55.6	42.3
0500-0600	87.0	86.0	88.0	87.0	77.0	21.0	36.0	85.0	68.9
0600-0700	163.0	185.0	185.0	189.0	184.0	131.0	61.0	181.2	156.9
0700-0800	264.0	275.0	280.0	245.0	293.0	217.0	173.0	271.4	249.6
0800-0900	235.0	260.0	267.0	277.0	290.0	255.0	182.0	265.8	252.3
0900-1000	285.0	281.0	**323.0**	310.0	337.0	378.0	253.0	307.2	309.6
1000-1100	295.0	310.0	320.0	**342.0**	303.0	**407.0**	**263.0**	**314.0**	**320.0**
1100-1200	**297.0**	**316.0**	302.0	312.0	**339.0**	346.0	243.0	313.2	307.9
1200-1300	267.0	247.0	277.0	282.0	297.0	**278.0**	**239.0**	274.0	269.6
1300-1400	225.0	177.0	250.0	257.0	268.0	226.0	175.0	235.4	225.4
1400-1500	307.0	259.0	**308.0**	303.0	302.0	216.0	168.0	**295.8**	266.1
1500-1600	**313.0**	**283.0**	291.0	**310.0**	278.0	214.0	231.0	295.0	**274.3**
1600-1700	268.0	250.0	293.0	262.0	**340.0**	176.0	205.0	282.6	256.3
1700-1800	230.0	164.0	213.0	214.0	214.0	155.0	165.0	207.0	193.6
1800-1900	196.0	161.0	151.0	169.0	149.0	146.0	118.0	165.2	155.7
1900-2000	105.0	89.0	92.0	77.0	111.0	74.0	66.0	94.8	87.7
2000-2100	36.0	32.0	32.0	33.0	47.0	35.0	47.0	36.0	37.4
2100-2200	30.0	19.0	21.0	32.0	40.0	23.0	20.0	28.4	26.4
2200-2300	14.0	14.0	19.0	13.0	21.0	13.0	14.0	16.2	15.4
2300-2400	4.0	7.0	15.0	11.0	16.0	8.0	0.0	10.6	8.7
Totals									
0700-1900	3182.0	2983.0	3275.0	3283.0	3410.0	3014.0	2415.0	3226.6	3080.3
0600-2200	3516.0	3308.0	3605.0	3614.0	3792.0	3277.0	2609.0	3567.0	3388.7
0600-0000	3534.0	3329.0	3639.0	3638.0	3829.0	3298.0	2623.0	3593.8	3412.9

0000-0000	3688.0	3478.0	3791.0	3785.0	3984.0	3356.0	2672.0	3745.2	3536.3
AM Peak	1100	1100	0900	1000	1100	1000	1000		
	297.0	316.0	323.0	342.0	339.0	407.0	263.0		
PM Peak	1500	1500	1400	1500	1600	1200	1200		
	313.0	283.0	308.0	310.0	340.0	278.0	239.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-474 -- English (ENA)

Datasets:

Site:	**[High St near School] High Street near School on Pole # 101744 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 2
Survey Duration:	15:00 Thursday, 2 November 2017 => 11:08 Friday, 10 November 2017,
Zone:	
File:	High St near School.EC0 (Plus)
Identifier:	FM40K381 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 24754 / 27515 (89.97%)

Class Speed Matrix

ClassMatrix-474
Site: High St near School.2.3NS
Description: **High Street near School on Pole # 101744 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	46	.	2	2	2	.	.	.	.	.	.	.	52	0.2%
20 - 30	401	3	43	7	9	1	4	.	2	.	.	.	470	1.9%
30 - 40	2534	43	177	35	8	2	6	1	5	.	.	.	2811	11.4%
40 - 50	8169	125	349	41	15	6	10	1	9	3	.	.	8728	35.3%
50 - 60	9116	100	453	19	13	8	1	.	3	4	.	.	9717	39.3%
60 - 70	2429	12	165	5	.	.	1	.	1	.	.	.	2613	10.6%
70 - 80	283	1	22	1	1	.	.	.	.	.	.	.	308	1.2%
80 - 90	30	.	4	.	.	.	.	.	.	.	.	.	34	0.1%
90 - 100	11	.	2	.	.	.	.	.	.	.	.	.	13	0.1%
100 - 110	2	.	.	.	.	.	.	.	.	.	.	.	2	0.0%
110 - 120	3	.	1	.	.	.	.	.	.	.	.	.	4	0.0%
120 - 130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130 - 140	2	.	.	.	.	.	.	.	.	.	.	.	2	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	23026	284	1218	110	48	17	22	2	20	7	0	0	24754	
	93.0%	1.1%	4.9%	0.4%	0.2%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-464 -- English (ENA)

Datasets:

Site:	**[# 100 High Street] # 100 High Street on Pole # X236740 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	17:00 Thursday, 2 November 2017 => 11:01 Friday, 10 November 2017,
Zone:	
File:	# 100 High Street.EC0 (Plus)
Identifier:	U553BGXW MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 24835 / 26961 (92.11%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-464
Site: # 100 High Street.0.1NS
Description: **# 100 High Street on Pole # X236740 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	1.0	2.0	0.0	3.0	0.0	7.0	8.0	1.2	3.0
0100-0200	1.0	0.0	3.0	0.0	1.0	4.0	3.0	1.0	1.7
0200-0300	7.0	1.0	4.0	3.0	1.0	3.0	0.0	3.2	2.7
0300-0400	9.0	4.0	4.0	8.0	12.0	7.0	1.0	7.4	6.4
0400-0500	48.0	51.0	52.0	44.0	60.0	14.0	5.0	51.0	39.1
0500-0600	79.0	87.0	84.0	82.0	73.0	19.0	32.0	81.0	65.1
0600-0700	160.0	176.0	170.0	175.0	181.0	121.0	62.0	172.4	149.3
0700-0800	247.0	265.0	265.0	228.0	288.0	212.0	194.0	258.6	242.7
0800-0900	265.0	280.0	255.0	273.0	312.0	245.0	220.0	277.0	264.3
0900-1000	273.0	302.0	316.0	308.0	328.0	371.0	**280.0**	305.4	311.1
1000-1100	**304.0**	**321.0**	**332.0**	308.0	318.0	**407.0**	274.0	**316.6**	**323.4**
1100-1200	302.0	311.0	290.0	**320.0**	**331.0**	348.0	252.0	310.8	307.7
1200-1300	244.0	**268.0**	274.0	288.0	281.0	**270.0**	**261.0**	271.0	269.4
1300-1400	238.0	204.0	233.0	257.0	259.0	227.0	179.0	238.2	228.1
1400-1500	**328.0**	260.0	**333.0**	**289.0**	310.0	216.0	171.0	**304.0**	**272.4**
1500-1600	315.0	261.0	288.0	287.0	259.0	207.0	230.0	282.0	263.9
1600-1700	280.0	243.0	294.0	257.0	**339.0**	177.0	207.0	282.6	256.7
1700-1800	239.0	176.0	210.0	223.0	216.0	160.0	166.0	212.8	198.6
1800-1900	195.0	160.0	155.0	170.0	142.0	147.0	114.0	164.4	154.7
1900-2000	103.0	99.0	99.0	81.0	114.0	80.0	68.0	99.2	92.0
2000-2100	39.0	32.0	29.0	43.0	53.0	42.0	44.0	39.2	40.3
2100-2200	33.0	19.0	25.0	33.0	48.0	28.0	21.0	31.6	29.6
2200-2300	17.0	15.0	18.0	14.0	23.0	15.0	15.0	17.4	16.7
2300-2400	4.0	7.0	16.0	10.0	12.0	12.0	0.0	9.8	8.7
Totals									
0700-1900	3230.0	3051.0	3245.0	3208.0	3383.0	2987.0	2548.0	3223.4	3093.1
0600-2200	3565.0	3377.0	3568.0	3540.0	3779.0	3258.0	2743.0	3565.8	3404.3
0600-0000	3586.0	3399.0	3602.0	3564.0	3814.0	3285.0	2758.0	3593.0	3429.7

0000-0000	3731.0	3544.0	3749.0	3704.0	3961.0	3339.0	2807.0	3737.8	3547.9
AM Peak	1000	1000	1000	1100	1100	1000	0900		
	304.0	321.0	332.0	320.0	331.0	407.0	280.0		
PM Peak	1400	1200	1400	1400	1600	1200	1200		
	328.0	268.0	333.0	289.0	339.0	270.0	261.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-465 -- English (ENA)

Datasets:

Site:	**[# 100 High Street] # 100 High Street on Pole # X236740 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	17:00 Thursday, 2 November 2017 => 11:01 Friday, 10 November 2017,
Zone:	
File:	# 100 High Street.EC0 (Plus)
Identifier:	U553BGXW MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 24835 / 26961 (92.11%)

Class Speed Matrix

ClassMatrix-465
Site: # 100 High Street.0.1NS
Description: **# 100 High Street on Pole # X236740 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	193	1	14	.	5	.	.	.	.	.	.	.	213	0.9%
20 - 30	895	10	70	34	10	2	2	.	.	.	.	.	1023	4.1%
30 - 40	1443	35	85	28	9	3	4	.	1	2	.	.	1610	6.5%
40 - 50	6485	167	242	14	15	7	10	.	4	4	1	.	6949	28.0%
50 - 60	11572	161	283	19	11	4	3	.	7	1	.	.	12061	48.6%
60 - 70	2599	23	51	4	.	.	.	.	1	1	.	.	2679	10.8%
70 - 80	238	.	4	2	.	.	.	.	.	.	.	.	244	1.0%
80 - 90	44	.	.	.	.	.	.	.	.	.	.	.	44	0.2%
90 - 100	7	.	1	.	.	.	.	.	.	.	.	.	8	0.0%
100 - 110	3	.	.	.	.	.	.	.	.	.	.	.	3	0.0%
110 - 120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120 - 130	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	23480	397	750	101	50	16	19	0	13	8	1	0	24835	
	94.5%	1.6%	3.0%	0.4%	0.2%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-467 -- English (ENA)

Datasets:

Site:	**[# 124 High Street] # 124 High Street on Pole # X20390 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 1
Survey Duration:	17:00 Thursday, 2 November 2017 => 10:55 Friday, 10 November 2017,
Zone:	
File:	# 124 High Street.EC0 (Plus)
Identifier:	U232ZWQ6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 22138 / 23965 (92.38%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-467
Site: # 124 High Street.1.2NS
Description: **# 124 High Street on Pole # X20390 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	1.0	3.0	2.0	4.0	0.0	10.0	6.0	2.0	3.7
0100-0200	1.0	0.0	3.0	0.0	1.0	4.0	3.0	1.0	1.7
0200-0300	7.0	0.0	4.0	5.0	1.0	3.0	0.0	3.4	2.9
0300-0400	10.0	4.0	6.0	8.0	11.0	5.0	1.0	7.8	6.4
0400-0500	41.0	42.0	41.0	34.0	49.0	10.0	7.0	41.4	32.0
0500-0600	68.0	74.0	67.0	69.0	58.0	12.0	24.0	67.2	53.1
0600-0700	123.0	147.0	151.0	157.0	156.0	97.0	51.0	146.8	126.0
0700-0800	207.0	228.0	220.0	179.0	234.0	182.0	157.0	213.6	201.0
0800-0900	226.0	265.0	248.0	233.0	292.0	220.0	210.0	252.8	242.0
0900-1000	237.0	264.0	283.0	273.0	294.0	315.0	242.0	270.2	272.6
1000-1100	245.0	**289.0**	**293.0**	**286.0**	285.0	**371.0**	**250.0**	**279.6**	**288.4**
1100-1200	**270.0**	283.0	276.0	269.0	**295.0**	309.0	239.0	278.6	277.3
1200-1300	219.0	**255.0**	244.0	246.0	251.0	**247.0**	**228.0**	243.0	241.4
1300-1400	214.0	195.0	211.0	237.0	219.0	200.0	184.0	215.2	208.6
1400-1500	**276.0**	240.0	**287.0**	**267.0**	267.0	193.0	166.0	**267.4**	**242.3**
1500-1600	273.0	238.0	242.0	263.0	240.0	192.0	212.0	251.2	237.1
1600-1700	255.0	224.0	275.0	244.0	**312.0**	160.0	188.0	262.0	236.9
1700-1800	200.0	164.0	195.0	201.0	213.0	153.0	160.0	194.6	183.7
1800-1900	170.0	144.0	135.0	161.0	114.0	120.0	110.0	144.8	136.3
1900-2000	80.0	95.0	95.0	72.0	107.0	68.0	63.0	89.8	82.9
2000-2100	34.0	35.0	18.0	39.0	49.0	42.0	32.0	35.0	35.6
2100-2200	28.0	14.0	16.0	36.0	36.0	25.0	19.0	26.0	24.9
2200-2300	13.0	14.0	16.0	19.0	27.0	17.0	13.0	17.8	17.0
2300-2400	1.0	7.0	13.0	8.0	17.0	14.0	2.0	9.2	8.9
Totals									
0700-1900	2792.0	2789.0	2909.0	2859.0	3016.0	2662.0	2346.0	2873.0	2767.6
0600-2200	3057.0	3080.0	3189.0	3163.0	3364.0	2894.0	2511.0	3170.6	3036.9
0600-0000	3071.0	3101.0	3218.0	3190.0	3408.0	2925.0	2526.0	3197.6	3062.7

0000-0000	3199.0	3224.0	3341.0	3310.0	3528.0	2969.0	2567.0	3320.4	3162.6
AM Peak	1100	1000	1000	1000	1100	1000	1000		
	270.0	289.0	293.0	286.0	295.0	371.0	250.0		
PM Peak	1400	1200	1400	1400	1600	1200	1200		
	276.0	255.0	287.0	267.0	312.0	247.0	228.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-468 -- English (ENA)

Datasets:

Site:	**[# 124 High Street] # 124 High Street on Pole # X20390 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 1
Survey Duration:	17:00 Thursday, 2 November 2017 => 10:55 Friday, 10 November 2017,
Zone:	
File:	# 124 High Street.EC0 (Plus)
Identifier:	U232ZWQ6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 22138 / 23965 (92.38%)

Class Speed Matrix

ClassMatrix-468
Site: # 124 High Street.1.2NS
Description: **# 124 High Street on Pole # X20390 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	43	.	.	1	.	.	.	.	.	.	.	.	44	0.2%
20 - 30	82	1	7	5	1	.	.	1	.	.	.	.	97	0.4%
30 - 40	252	4	27	7	.	.	1	1	.	.	.	.	292	1.3%
40 - 50	1119	43	156	8	6	4	7	.	.	.	.	.	1343	6.1%
50 - 60	7956	179	819	45	9	10	11	.	9	1	.	.	9039	40.8%
60 - 70	8231	144	849	33	20	21	6	.	4	7	.	.	9315	42.1%
70 - 80	1481	17	198	7	7	3	1	.	.	3	.	.	1717	7.8%
80 - 90	181	.	51	1	1	.	.	.	.	.	.	.	234	1.1%
90 - 100	39	.	4	.	.	.	.	.	.	.	.	.	43	0.2%
100 - 110	4	.	1	.	.	.	.	.	.	.	.	.	5	0.0%
110 - 120	3	.	1	.	.	.	.	.	.	.	.	.	4	0.0%
120 - 130	2	.	2	.	.	.	.	.	.	.	.	.	4	0.0%
130 - 140	.	.	1	.	.	.	.	.	.	.	.	.	1	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	19393	388	2116	107	44	38	26	2	13	11	0	0	22138	
	87.6%	1.8%	9.6%	0.5%	0.2%	0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-470 -- English (ENA)

Datasets:

Site:	**[# 156 High Street] # 156 High Street on Pole # X-5492-C Russell Island <60>**
Attribute:	Russell Street
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	15:00 Thursday, 2 November 2017 => 10:50 Friday, 10 November 2017,
Zone:	
File:	# 156 High Street.EC0 (Plus)
Identifier:	DT208B0T MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 17811 / 19608 (90.84%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-470
Site: # 156 High Street.0.1NS
Description: **# 156 High Street on Pole # X-5492-C Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	1.0	3.0	2.0	2.0	0.0	11.0	5.0	1.6	3.4
0100-0200	0.0	0.0	0.0	0.0	3.0	5.0	3.0	0.6	1.6
0200-0300	6.0	0.0	0.0	3.0	0.0	2.0	0.0	1.8	1.6
0300-0400	10.0	4.0	6.0	8.0	11.0	5.0	1.0	7.8	6.4
0400-0500	35.0	37.0	36.0	29.0	38.0	8.0	4.0	35.0	26.7
0500-0600	57.0	60.0	55.0	50.0	44.0	14.0	22.0	53.2	43.1
0600-0700	95.0	124.0	124.0	116.0	121.0	80.0	43.0	116.0	100.4
0700-0800	163.0	198.0	172.0	147.0	193.0	154.0	131.0	174.6	165.4
0800-0900	184.0	206.0	204.0	189.0	225.0	186.0	161.0	201.6	193.6
0900-1000	**207.0**	195.0	207.0	226.0	**245.0**	254.0	**202.0**	216.0	219.4
1000-1100	188.0	**236.0**	232.0	**243.0**	234.0	**306.0**	193.0	**226.6**	**233.1**
1100-1200	201.0	225.0	**233.0**	215.0	227.0	248.0	193.0	220.2	220.3
1200-1300	184.0	189.0	189.0	197.0	209.0	**184.0**	**195.0**	193.6	192.4
1300-1400	174.0	142.0	170.0	190.0	168.0	177.0	159.0	168.8	168.6
1400-1500	211.0	190.0	**238.0**	**212.0**	220.0	162.0	138.0	**214.2**	**195.9**
1500-1600	**211.0**	**192.0**	186.0	199.0	197.0	164.0	170.0	197.0	188.4
1600-1700	194.0	170.0	201.0	187.0	**241.0**	137.0	168.0	198.6	185.4
1700-1800	148.0	131.0	148.0	150.0	175.0	126.0	131.0	150.4	144.1
1800-1900	138.0	121.0	102.0	120.0	112.0	100.0	78.0	118.6	110.1
1900-2000	69.0	75.0	84.0	61.0	83.0	54.0	49.0	74.4	67.9
2000-2100	26.0	30.0	20.0	32.0	47.0	32.0	30.0	31.0	31.0
2100-2200	28.0	12.0	15.0	33.0	31.0	21.0	18.0	23.8	22.6
2200-2300	11.0	14.0	13.0	17.0	26.0	16.0	13.0	16.2	15.7
2300-2400	1.0	5.0	10.0	6.0	16.0	12.0	0.0	7.6	7.1
Totals									
0700-1900	2203.0	2195.0	2282.0	2275.0	2446.0	2198.0	1919.0	2280.2	2216.9
0600-2200	2421.0	2436.0	2525.0	2517.0	2728.0	2385.0	2059.0	2525.4	2438.7
0600-0000	2433.0	2455.0	2548.0	2540.0	2770.0	2413.0	2072.0	2549.2	2461.6

0000-0000	2542.0	2559.0	2647.0	2632.0	2866.0	2458.0	2107.0	2649.2	2544.4
AM Peak	0900	1000	1100	1000	0900	1000	0900		
	207.0	236.0	233.0	243.0	245.0	306.0	202.0		
PM Peak	1500	1500	1400	1400	1600	1200	1200		
	211.0	192.0	238.0	212.0	241.0	184.0	195.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-471 -- English (ENA)

Datasets:

Site:	**[# 156 High Street] # 156 High Street on Pole # X-5492-C Russell Island <60>**
Attribute:	Russell Street
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	15:00 Thursday, 2 November 2017 => 10:50 Friday, 10 November 2017,
Zone:	
File:	# 156 High Street.EC0 (Plus)
Identifier:	DT208B0T MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 17811 / 19608 (90.84%)

Class Speed Matrix

ClassMatrix-471
Site: # 156 High Street.0.1NS
Description: **# 156 High Street on Pole # X-5492-C Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	50	.	5	1	.	.	.	.	.	.	.	.	56	0.3%
20 - 30	125	5	21	6	2	.	.	.	3	.	.	.	162	0.9%
30 - 40	869	48	100	17	10	3	4	.	3	1	.	.	1055	5.9%
40 - 50	5431	155	263	13	15	3	7	.	6	6	1	.	5900	33.1%
50 - 60	8061	122	288	13	14	4	3	.	2	2	.	.	8509	47.8%
60 - 70	1830	18	82	3	2	1	1	.	.	.	.	.	1937	10.9%
70 - 80	155	1	10	.	.	.	.	.	.	.	.	.	166	0.9%
80 - 90	21	.	1	.	.	.	.	.	.	.	.	.	22	0.1%
90 - 100	2	.	1	.	.	.	.	.	.	.	.	.	3	0.0%
100 - 110	.	.	1	.	.	.	.	.	.	.	.	.	1	0.0%
110 - 120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120 - 130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	16544	349	772	53	43	11	15	0	14	9	1	0	17811	
	92.9%	2.0%	4.3%	0.3%	0.2%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%		



RoadPro
CONSULTING

Appendix F
Speed survey data

Traffic Engineering and Road Safety Specialists www.roadpro.net.au

MetroCount Traffic Executive
Speed Statistics

SpeedStat-16 -- English (ENA)

Datasets:

Site:	**[# 10 High Street] # 10 High Street on Pole # P50102-A Russell Island <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	19:00 Thursday, 2 November 2017 => 11:32 Friday, 10 November 2017
Zone:	
File:	# 10 High Street.EC0 (Plus)
Identifier:	DR92FJB6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**19:00 Thursday, 2 November 2017 => 11:32 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 12398 / 14126 (87.77%)

Speed Statistics

SpeedStat-16
Site: # 10 High Street.0.0NS
Description: **# 10 High Street on Pole # P50102-A Russell Island <60>**
Filter time: **19:00 Thursday, 2 November 2017 => 11:32 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 12398
Posted speed limit = 60 km/h, Exceeding = 50 (0.40%), Mean Exceeding = 65.10 km/h
Maximum = 96.4 km/h, **Minimum** = 10.0 km/h, **Mean** = 34.3 km/h
85% Speed = 43.9 km/h, **95% Speed** = 49.3 km/h, **Median** = 34.2 km/h
15 km/h Pace = 27 - 42, **Number in Pace** = 7279 (58.71%)
Variance = 87.21, **Standard Deviation** = 9.34 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	12398	100.0%	0.00	0.00	0.00
10 - 20	866	7.0%	866	7.0%	11532	93.0%	0.00	0.00	0.00
20 - 30	3019	24.4%	3885	31.3%	8513	68.7%	0.00	0.00	0.00
30 - 40	5156	41.6%	9041	72.9%	3357	27.1%	0.00	0.00	0.00
40 - 50	2811	22.7%	11852	95.6%	546	4.4%	0.00	0.00	0.00
50 - 60	496	4.0%	12348	99.6%	50	0.4%	0.00	0.00	0.00
60 - 70	44	0.4%	12392	100.0%	6	0.0%	0.00	0.00	0.00
70 - 80	4	0.0%	12396	100.0%	2	0.0%	0.00	0.00	0.00
80 - 90	1	0.0%	12397	100.0%	1	0.0%	0.00	0.00	0.00
90 - 100	1	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
100 - 110	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
110 - 120	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
120 - 130	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	12398	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	12348	99.6%	50	0.4%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-17 -- English (ENA)

Datasets:

Site:	**[# 24 High Street] # 24 High Street on Pole # X50100-A Russell Island <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 3
Survey Duration:	16:00 Thursday, 2 November 2017 => 11:26 Friday, 10 November 2017
Zone:	
File:	# 24 High Street.EC0 (Plus)
Identifier:	Q5219Q6K MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**16:00 Thursday, 2 November 2017 => 11:26 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 16315 / 18254 (89.38%)

Speed Statistics

SpeedStat-17
Site: # 24 High Street.3.0NS
Description: **# 24 High Street on Pole # X50100-A Russell Island <60>**
Filter time: **16:00 Thursday, 2 November 2017 => 11:26 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 16315
Posted speed limit = 60 km/h, Exceeding = 242 (1.48%), Mean Exceeding = 64.58 km/h
Maximum = 90.4 km/h, **Minimum** = 10.2 km/h, **Mean** = 41.5 km/h
85% Speed = 49.3 km/h, **95% Speed** = 54.4 km/h, **Median** = 41.4 km/h
15 km/h Pace = 34 - 49, **Number in Pace** = 11087 (67.96%)
Variance = 68.42, **Standard Deviation** = 8.27 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	16315	100.0%	0.00	0.00	0.00
10 - 20	189	1.2%	189	1.2%	16126	98.8%	0.00	0.00	0.00
20 - 30	1037	6.4%	1226	7.5%	15089	92.5%	0.00	0.00	0.00
30 - 40	5536	33.9%	6762	41.4%	9553	58.6%	0.00	0.00	0.00
40 - 50	7346	45.0%	14108	86.5%	2207	13.5%	0.00	0.00	0.00
50 - 60	1965	12.0%	16073	98.5%	242	1.5%	0.00	0.00	0.00
60 - 70	213	1.3%	16286	99.8%	29	0.2%	0.00	0.00	0.00
70 - 80	23	0.1%	16309	100.0%	6	0.0%	0.00	0.00	0.00
80 - 90	5	0.0%	16314	100.0%	1	0.0%	0.00	0.00	0.00
90 - 100	1	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
100 - 110	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
110 - 120	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
120 - 130	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	16315	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	16073	98.5%	242	1.5%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-20 -- English (ENA)

Datasets:

Site:	**[High St Nicholas] High Street opp. Nicholas street on Pole # X116501 Russell Island <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	18:00 Thursday, 2 November 2017 => 11:14 Friday, 10 November 2017
Zone:	
File:	High St Nicholas.EC0 (Plus)
Identifier:	U559JKPZ MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**18:00 Thursday, 2 November 2017 => 11:14 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 23517 / 26709 (88.05%)

Speed Statistics

SpeedStat-20
Site: High St Nicholas.0.0NS
Description: **High Street opp. Nicholas street on Pole # X116501 Russell Island <60>**
Filter time: **18:00 Thursday, 2 November 2017 => 11:14 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 23517
Posted speed limit = 60 km/h, Exceeding = 3577 (15.21%), Mean Exceeding = 65.05 km/h
Maximum = 117.1 km/h, **Minimum** = 10.5 km/h, **Mean** = 51.2 km/h
85% Speed = 59.8 km/h, **95% Speed** = 65.5 km/h, **Median** = 51.1 km/h
15 km/h Pace = 44 - 59, **Number in Pace** = 14722 (62.60%)
Variance = 84.27, **Standard Deviation** = 9.18 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	23517	100.0%	0.00	0.00	0.00
10 - 20	87	0.4%	87	0.4%	23430	99.6%	0.00	0.00	0.00
20 - 30	313	1.3%	400	1.7%	23117	98.3%	0.00	0.00	0.00
30 - 40	1861	7.9%	2261	9.6%	21256	90.4%	0.00	0.00	0.00
40 - 50	7988	34.0%	10249	43.6%	13268	56.4%	0.00	0.00	0.00
50 - 60	9691	41.2%	19940	84.8%	3577	15.2%	0.00	0.00	0.00
60 - 70	3121	13.3%	23061	98.1%	456	1.9%	0.00	0.00	0.00
70 - 80	385	1.6%	23446	99.7%	71	0.3%	0.00	0.00	0.00
80 - 90	59	0.3%	23505	99.9%	12	0.1%	0.00	0.00	0.00
90 - 100	8	0.0%	23513	100.0%	4	0.0%	0.00	0.00	0.00
100 - 110	2	0.0%	23515	100.0%	2	0.0%	0.00	0.00	0.00
110 - 120	2	0.0%	23517	100.0%	0	0.0%	0.00	0.00	0.00
120 - 130	0	0.0%	23517	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	23517	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	23517	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	23517	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	23517	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	23517	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	23517	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	23517	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	19940	84.8%	3577	15.2%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-18 -- English (ENA)

Datasets:

Site:	**[# 100 High Street] # 100 High Street on Pole # X236740 Russell Island <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	17:00 Thursday, 2 November 2017 => 11:01 Friday, 10 November 2017
Zone:	
File:	# 100 High Street.EC0 (Plus)
Identifier:	U553BGXW MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**17:00 Thursday, 2 November 2017 => 11:01 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 23407 / 26964 (86.81%)

Speed Statistics

SpeedStat-18
Site: # 100 High Street.0.0NS
Description: **# 100 High Street on Pole # X236740 Russell Island <60>**
Filter time: **17:00 Thursday, 2 November 2017 => 11:01 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 23407
Posted speed limit = 60 km/h, Exceeding = 3035 (12.97%), Mean Exceeding = 64.50 km/h
Maximum = 128.7 km/h, **Minimum** = 10.0 km/h, **Mean** = 50.9 km/h
85% Speed = 59.0 km/h, **95% Speed** = 64.1 km/h, **Median** = 52.2 km/h
15 km/h Pace = 45 - 60, **Number in Pace** = 15904 (67.95%)
Variance = 98.58, **Standard Deviation** = 9.93 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	23407	100.0%	0.00	0.00	0.00
10 - 20	198	0.8%	198	0.8%	23209	99.2%	0.00	0.00	0.00
20 - 30	1000	4.3%	1198	5.1%	22209	94.9%	0.00	0.00	0.00
30 - 40	1472	6.3%	2670	11.4%	20737	88.6%	0.00	0.00	0.00
40 - 50	6308	26.9%	8978	38.4%	14429	61.6%	0.00	0.00	0.00
50 - 60	11394	48.7%	20372	87.0%	3035	13.0%	0.00	0.00	0.00
60 - 70	2722	11.6%	23094	98.7%	313	1.3%	0.00	0.00	0.00
70 - 80	256	1.1%	23350	99.8%	57	0.2%	0.00	0.00	0.00
80 - 90	44	0.2%	23394	99.9%	13	0.1%	0.00	0.00	0.00
90 - 100	8	0.0%	23402	100.0%	5	0.0%	0.00	0.00	0.00
100 - 110	3	0.0%	23405	100.0%	2	0.0%	0.00	0.00	0.00
110 - 120	1	0.0%	23406	100.0%	1	0.0%	0.00	0.00	0.00
120 - 130	1	0.0%	23407	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	23407	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	23407	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	23407	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	23407	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	23407	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	23407	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	23407	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	20372	87.0%	3035	13.0%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-19 -- English (ENA)

Datasets:

Site:	**[# 124 High Street] # 124 High Street on Pole # X20390 Russell Island <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 1
Survey Duration:	17:00 Thursday, 2 November 2017 => 10:55 Friday, 10 November 2017
Zone:	
File:	# 124 High Street.EC0 (Plus)
Identifier:	U232ZWQ6 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**17:00 Thursday, 2 November 2017 => 10:55 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 20924 / 23968 (87.30%)

Speed Statistics

SpeedStat-19
Site: # 124 High Street.1.0NS
Description: **# 124 High Street on Pole # X20390 Russell Island <60>**
Filter time: **17:00 Thursday, 2 November 2017 => 10:55 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 20924
Posted speed limit = 60 km/h, Exceeding = 10782 (51.53%), Mean Exceeding = 66.18 km/h
Maximum = 133.5 km/h, **Minimum** = 10.1 km/h, **Mean** = 60.3 km/h
85% Speed = 67.3 km/h, **95% Speed** = 73.1 km/h, **Median** = 60.1 km/h
15 km/h Pace = 53 - 68, **Number in Pace** = 15078 (72.06%)
Variance = 72.26, **Standard Deviation** = 8.50 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	20924	100.0%	0.00	0.00	0.00
10 - 20	42	0.2%	42	0.2%	20882	99.8%	0.00	0.00	0.00
20 - 30	82	0.4%	124	0.6%	20800	99.4%	0.00	0.00	0.00
30 - 40	244	1.2%	368	1.8%	20556	98.2%	0.00	0.00	0.00
40 - 50	1269	6.1%	1637	7.8%	19287	92.2%	0.00	0.00	0.00
50 - 60	8505	40.6%	10142	48.5%	10782	51.5%	0.00	0.00	0.00
60 - 70	8783	42.0%	18925	90.4%	1999	9.6%	0.00	0.00	0.00
70 - 80	1698	8.1%	20623	98.6%	301	1.4%	0.00	0.00	0.00
80 - 90	239	1.1%	20862	99.7%	62	0.3%	0.00	0.00	0.00
90 - 100	45	0.2%	20907	99.9%	17	0.1%	0.00	0.00	0.00
100 - 110	7	0.0%	20914	100.0%	10	0.0%	0.00	0.00	0.00
110 - 120	5	0.0%	20919	100.0%	5	0.0%	0.00	0.00	0.00
120 - 130	3	0.0%	20922	100.0%	2	0.0%	0.00	0.00	0.00
130 - 140	2	0.0%	20924	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	20924	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	20924	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	20924	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	20924	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	20924	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	20924	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	10142	48.5%	10782	51.5%



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Appendix G
Crash history data



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Data Analysis
Customer Services, Safety and Regulation Division

WebCrash v2.3 Reports

The page numbers shown here are those of the overall PDF file (they range 1-10).
The PDF page numbers appear at the top left-hand corner of each page.
Pages within individual reports are numbered from 1 and appear at the top right-hand corner of each page.
When printing specific reports with Acrobat Reader, the PDF page numbers must be specified.

Table of Contents

1. Crash Details by Crash Number 3

Data Restrictions

Please note:-

IMPORTANT MESSAGE

Around 10% to 15% of non-fatal crash records for 1 July 2012 to 31 December 2014 are incomplete and unavailable. Data Analysis are addressing the issues to resolve this problem as soon as possible.

The crash data for 1 July 2012 to 31 December 2014 is being made available and users must exercise caution when analysing this data.

The data CAN be used to identify locations where crash frequency has increased, however, the degree of increase may be under-reported and some locations may not be identified. The data CAN be used to examine individual crash details.

The data is NOT suitable for:

* Time series trend analysis

* Comparison of characteristics

* Evaluation of crash reductions

* Evaluation of crash risk

* Crash rates (per VKT, per Vehicle type, per licence holder, per population)

With 10% to 15% of crash records unavailable the data is under-reported, biased and fairly limited for analytical purposes, however, it is considered a reasonable level of completeness for Black Spot submissions and examining individual crash details.

The Department of Transport and Main Roads (TMR) WebCrash system reports on the following crash data - fatal to 31 August 2017, hospitalisation to 31 May 2017, medical treatment to 31 May 2017, minor injury to 31 May 2017 and property damage only to 31 December 2010.

Road Crash Data Inclusion Requirements

Please also note that the information held in the RoadCrash database relating to crashes occurring within the last 12 months are considered preliminary as investigations into crashes can take up to 12 months to finalise. Please further note that to qualify as valid, crashes must meet the following criteria:

1. The crash occurred on a public road, and
2. A person was killed or injured, or
3. At least one vehicle was towed away, or
4. The value of property damage was:
   (a) $2500 damage to property other than vehicles (after 1 December 1999)
   (b) $2500 damage to vehicle and property (after 1 December 1991 and prior to 1 December 1999)
   (c) $1000 damage to property (prior to 1 December 1991)

Note: crashes resulting from medical conditions or deliberate acts are excluded.

Contact Details:

Postal Address: Manager (Data Analysis)
Customer Services, Safety and Regulation Division
Department of Transport and Main Roads
PO Box 673
Fortitude Valley
Qld 4006

Phone: 07 3066 2236
Fax: 07 3066 2410
Email: DataAnalysis@tmr.qld.gov.au

Report 1

Crash Details by Crash Number

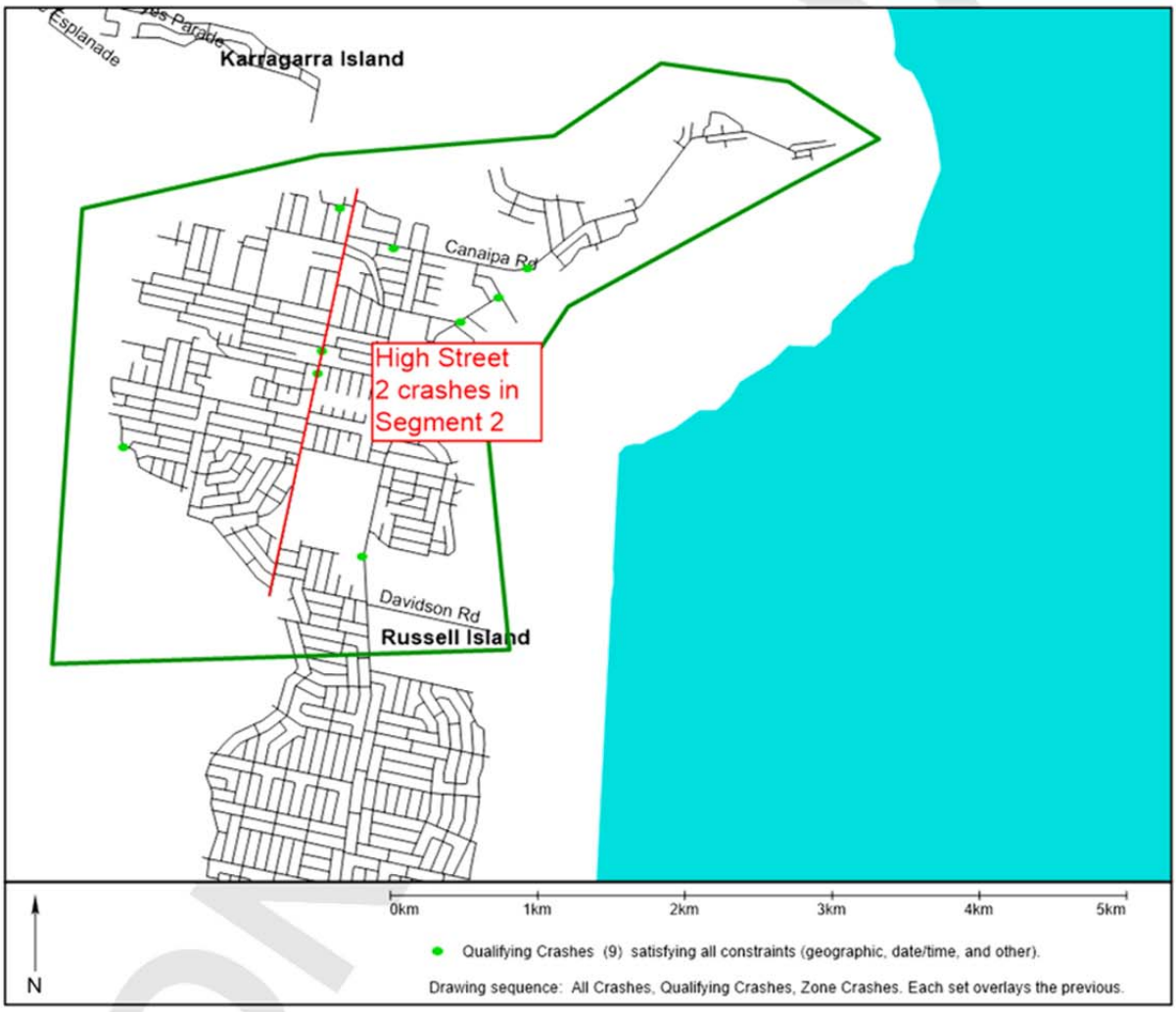
NOTE: This report has been limited to the maximum of 500 records.

Report Constraints

Geographic Constraints
Map

and

Date and Time Constraints
Continuous time: Jun-2012 to Dec-2017



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Report 1

Crash Details by Crash Number

Unit Number	2 of 2	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	UNK
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	41	**Damage**	Minor
Controller AgeGroup	40-49	**Unit Headed Direction**	West
Licence Type	Open		

Contributing Circumstances

Unit 1 MISCELLANEOUS

Unit 2 NOT APPLICABLE

Injury Details

Injured Person	1 of 1	**Age Group**	5-11
Unit Number	1	**Road User**	Bicycle Rider
Injury Severity	Fatality	**Restraint**	Not Applicable
Gender	M	**Helmet**	Not Worn

Crash Number	20141703823 (4 of 9)	**Longitude GDA94**	153.380182
Date and Time	Thu 4-Dec-2014 4pm	**DCA Coding**	Ped'N; Play; Work; Stand; Lie On C'Way(004)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Pedestrian
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Minor Injury
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	High St	**Lighting Condition**	Daylight
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.657077		

Crash Description

Pedestrian saw vehicle parked on vacant allotment next to his girlfriends address, approached driver whom he believed wanted to talk to him. Driver wound down her window and reversed suddenly hitting the pedestrian on his elbow and running over his right foot. Driver then left. QAS attended but did not transport. Pedestrian still able to stand on foot. Police spoke to driver who stated that the pedestrian came to her car all threatening and angry. Stated that the pedestrian kicked her passenger tyre and thumped the bonnet of her car. She stated that she wound up her windows and drove off. Stated that at no stage did the pedestrian hit the car. She denied hitting the pedestrian.

Unit Number	1 of 2	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	F	**Intended Action**	Start from parked
Controller Age	60	**Damage**	Unknown
Controller AgeGroup	60-69	**Unit Headed Direction**	North
Licence Type	Open		
Unit Number	2 of 2	**Licence State**	N/A
Unit Type	Pedestrian	**Origin State**	
Controller Gender	M	**Intended Action**	Remain stationary
Controller Age	49	**Damage**	Not applicable
Controller AgeGroup	40-49	**Unit Headed Direction**	North
Licence Type	Not applicable		

Contributing Circumstances

Unit 1 MISCELLANEOUS

Unit 2 MISCELLANEOUS

Injury Details

Injured Person	1 of 1	**Age Group**	40-49
Unit Number	2	**Road User**	Pedestrian
Injury Severity	Minor injury	**Restraint**	Not Applicable
Gender	M	**Helmet**	Not Applicable

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Report 1

Crash Details by Crash Number

Injury Details

Injured Person	1 of 1	**Age Group**	50-59
Unit Number	1	**Road User**	Driver
Injury Severity	Medically treated	**Restraint**	Fitted - Not Worn
Gender	M	**Helmet**	Not Applicable

Crash Number	20151482690 (6 of 9)	**Longitude GDA94**	153.380433
Date and Time	Wed 14-Oct-2015 10pm	**DCA Coding**	Off Path-Straight:Right Off Cway Hit Obj(704)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	High St	**Lighting Condition**	Darkness - lighted
Intersecting St	Highland St	**Atmospheric Cond.**	Clear
Latitude GDA94	-27.655676		

Crash Description

Police had attended a disturbance involving the driver at another address. The driver had driven off from that scene prior to police attendance. At the disturbance, his mother advised that he had been drinking rum most of the afternoon and that he had driven off in an unregistered vehicle her sister had given him. After leaving the disturbance police drove towards the station and observed a rural fire officer outside the fire station. He advised that there was a vehicle accident on High Street. Police attended this location and observed the drivers vehicle with extensive damage to the front end. Witnesses have observed the driver weaving along the road. The driver was breath tested which returned a reading of 0.195% and required to provide blood at the hospital. Driver transported to Redlands Hospital, appeared to suffer minor injuries only. Driver only has a learners permit.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	19	**Damage**	Extensive; unrepairable
Controller AgeGroup	17-20	**Unit Headed Direction**	North
Licence Type	Learner		

Contributing Circumstances

Unit 1 VIOLATION - OVER PRESCRIBED CONCENTRATION OF ALCOHOL

Injury Details

Injured Person	1 of 1	**Age Group**	17-20
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Fitted - Unknown if Worn
Gender	M	**Helmet**	Not Applicable

Crash Number	20161449269 (7 of 9)	**Longitude GDA94**	153.394181
Date and Time	Wed 3-Aug-2016 3pm	**DCA Coding**	Off Path-Curve: Off Cway Lt Bend Hit Obj(804)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	60
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Curved-View open
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Canaipa Rd	**Lighting Condition**	Daylight
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.650098		

Crash Description

The driver of unit 1 was travelling home to Sarmar Street Russell Island after collecting her child from the Russell Island State School. The driver stated that there was a car in front of her which caused her to lose control. No description of the vehicle. Unit 1 has then travelled across the road travelling over a concrete footpath with the front left end hitting a tree.

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Appendix H
Proposed sign layouts

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LOCATION :

HIGH STREET
RUSSELL ISLAND

DESCRIPTION :

SPEED LIMIT REVIEW - SEGMENT 1
PROPOSED SIGN CHANGES
SHEET 1 OF 4

SCALE : NOT TO SCALE
SHEET : 1 of 4
DRAWN BY : LJK
DRG. No : **SK-01**
DATE : 25 JANUARY 2018



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LOCATION :

HIGH STREET
RUSSELL ISLAND

DESCRIPTION :

SPEED LIMIT REVIEW - SEGMENT 1
PROPOSED SIGN CHANGES
SHEET 2 OF 4

SCALE :	NOT TO SCALE
SHEET :	2 of 4
DRAWN BY :	LJK
DRG. No :	SK-02
DATE :	25 JANUARY 2018



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LOCATION :
HIGH STREET
RUSSELL ISLAND

DESCRIPTION :
SPEED LIMIT REVIEW - SEGMENT 1
PROPOSED SIGN CHANGES
SHEET 3 OF 4

SCALE : NOT TO SCALE
SHEET : 3 of 4
DRAWN BY : LJK
DRG. No : **SK-03**
DATE : 25 JANUARY 2018



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LOCATION :

HIGH STREET
RUSSELL ISLAND

DESCRIPTION :

SPEED LIMIT REVIEW - SEGMENT 1
PROPOSED SIGN CHANGES
SHEET 4 OF 4

SCALE :	NOT TO SCALE
SHEET :	4 of 4
DRAWN BY :	LJK
DRG. No :	SK-04
DATE :	25 JANUARY 2018

DRAFT

DRAFT

DRAFT

Class Speed Matrix

ClassMatrix-504
Site: Canaipa Pt Dr Phnx 0.1EW
Description: **Canaipa Point Drive near Phoenix Street on Pole # P50038 Russell Island <50>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	19	.	.	.	.	.	.	.	.	.	.	.	19	0.5%
20 - 30	35	.	2	2	1	.	.	.	.	.	.	.	40	1.0%
30 - 40	93	3	6	1	.	1	.	.	.	.	.	.	104	2.6%
40 - 50	380	9	42	.	.	.	3	.	.	.	.	.	434	11.0%
50 - 60	1592	22	121	9	.	.	1	.	.	.	.	.	1745	44.2%
60 - 70	1154	26	87	3	.	1	.	.	.	2	.	.	1273	32.3%
70 - 80	243	3	37	1	.	1	.	.	.	.	.	.	285	7.2%
80 - 90	30	.	3	.	.	.	.	.	.	.	.	.	33	0.8%
90 - 100	10	.	1	.	.	.	.	.	.	.	.	.	11	0.3%
100 - 110	3	.	.	.	.	.	.	.	.	.	.	.	3	0.1%
110 - 120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120 - 130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	3559	63	299	16	1	3	4	0	0	2	0	0	3947	
	90.2%	1.6%	7.6%	0.4%	0.0%	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%		



RoadPro CONSULTING

Speed Limit Review

Canaipa Road and Canaipa Point Drive, Russell Island

Prepared for Redland City Council

13 February 2018

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Draft V3	02.02.2018	Lisa Shirley	Editorial amendments
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Client sign-off

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Document sign-off:
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1 Introduction

This report presents the findings of a formal speed limit review conducted on Canaipa Road and Canaipa Point Drive, Russell Island. The speed limit review has been undertaken by Roadpro Consulting at the request of Redland City Council.

The review has been conducted in accordance with the speed limit review process outlined in the *Manual of Uniform Traffic Control Devices* (MUTCD), Part 4: Speed Controls (Ninth Issue, 31 May 2017) and the Supplement to the MUTCD, Part 4: Speed Controls (May 2016).

Figures 1 and 2 illustrate the location of the speed limit review.



Figure 1: Location of speed limit review – Canaipa Road (Source: UBD Gregory's Australian City Streets v7.0)



Figure 2: Location of Speed Limit Review – Canaipa Point Drive (Source: UBD Gregory's Australian City Streets v7.0)

2 Site details

Canaipa Road and Canaipa Point Drive are both local government controlled roads that are managed by Redland City Council (Council). They are connecting roads located at the north-east end of Russell Island.

Canaipa Road extends for 1.79km between the intersections of High Street and Phoenix Street. The road name changes to Canaipa Point Drive at the intersection with Phoenix Street and continues east for 1.90km before terminating at a dead end. This speed limit review covers the combined 3.69km length of Canaipa Road and Canaipa Point Drive.

Canaipa Road and Canaipa Point Drive are situated in a growing urban area that is surrounded by residential development on both sides. The extent of development is unconsolidated at this stage, with dwellings constructed on approximately one third of the lots fronting Canaipa Road and one half of the lots fronting Canaipa Point Drive. The lots that have been developed are spread throughout the length of Canaipa Point Drive. However, on Canaipa Road, the developed lots are limited to three distinct areas that are separated from each other by several large pockets of undeveloped land.

Both roads consist of a single carriageway that operates with two-lane, two-way traffic flows. The road surface is sealed throughout with a width that varies between 5.5m and 6.0m on Canaipa Road and between 3.5m and 5.5m on Canaipa Point Drive.

At the time of the review, a 60km/h speed limit was signed along almost all of Canaipa Road, apart from a 60m section at the eastern end. A 50km/h limit was in place along the full length of Canaipa Point Drive.

3 Previous speed reviews

A search of the historical records in the QLIMITS (SLR QLD) program returned no records of previous reviews on the subject road section.

4 Traffic data

The average daily traffic volume (ADT) was obtained from count data collected by Council in November 2017. The four count sites yielded an ADT of 1150 vehicles per day (vpd) on Canaipa Road and ADTs of between 164 and 564 vpd on Canaipa Point Drive. The average commercial vehicle content on both roads was between 8% and 9%, apart from at the eastern end of Canaipa Point Drive where the commercial vehicle content was 4.6%.

Refer to **Appendix E** for further traffic volume details.

5 Homogeneity of road section

Part 4/4.3.2 of the MUTCD suggests the speed limit review process should be applied only to segments of road which are homogenous in terms of characteristics and speed environment.

A subjective assessment of the continuity of the roads was undertaken with regard to: functional classification, density of roadside development, frequency of accesses and intersections, visibility and setback of buildings, general speed environment, alignment, existing speed limits, traffic volumes, and pedestrian activity.

It was determined that for this review the subject road sections formed two separate homogenous segments:

- Segment 1 extends along Canaipa Road for 1.38km between the High Street intersection and 50m west of the Aquarius Road intersection.
- Segment 2 extends for 2.31km between 50m west of the Aquarius Road intersection and the road's terminus at Canaipa Point. This segment encompasses 410m at the eastern end of Canaipa Road and the entire 1.9km of Canaipa Point Drive.



Figure 3: Homogenous road segments

The relevant factors that resulted in the determination of these two segments were:

- Canaipa Road and Canaipa Point Drive formed one continuous route. Council's strategic road hierarchy showed the primary road function along the route transition from 'traffic carrying' to 'access' at the Phoenix Street intersection, which is the point where the two roads meet. However, the location at which the road's function changed was not entirely clear.

  There was a network of intersecting streets at the eastern end of Canaipa Road and along the full length of Canaipa Point Drive, which provided access to a local area comprised of approximately 539 residential lots. The primary function of roads within this local area was to provide safe access to properties and to other lower order streets.

  Beyond this local area, mobility and traffic efficiency should take precedence and it is at this point that the primary function is most likely to change between 'access' and 'traffic carrying'. The western boundary of the local area is situated on Canaipa Road at the intersection with Aquarius Road and Kamar Street, hence it is this intersection that has been assigned as the boundary between Homogenous Segment 1 and 2.

- A noticeable change occurred in the roadside environment on Canaipa Road near the intersection with Aquarius Road and Kamar Street. The road section west of the intersection was bordered by several large undeveloped lots with no visible buildings and almost no direct property access. East of the intersection, residential development became visible on both sides of the road and it was at this point that road users were most likely to perceive a change in speed environment.

- Segment 1 is currently signed with a 60km/h speed limit, whereas most of Segment 2, apart from a 345m section at the western end, is currently signed with a 50km/h speed limit.

6 Determination of appropriate speed limit

Part 4/4.2.1 of the MUTCD suggests the following criteria should be considered for a length of road in the determination of speed zones:

a) Stage 1 - road function
b) Stage 2 - prevailing speeds
c) Stage 3 - speed environment.

The MUTCD also suggests other issues, such as crash history and potential risk factors, be considered prior to the recommendation of an appropriate speed limit. The following analysis applies the standard procedure for the determination of an appropriate speed limit as described in Part 4/4.3.3 of the MUTCD.

6.1 Stage 1 - Road function

The initial assessment of the appropriate speed limit is made by identifying the typical speed limit associated with the road's function. This is a limit that in the first instance is likely to match the road users' expectations of the appropriate limit.

The process of identifying a typical speed limit for the homogenous road segment requires a determination to be made about the following criteria:

- functional classification
- roadside environment
- design standard.

6.1.1 Functional classification

Canaipa Road and Canaipa Point Drive served a mixture of functions in the road network hierarchy. Canaipa Road catered for the movement of people and goods between neighbourhoods and local areas on the north-east corner of the island and also provided a link into the main business centre. It was classified as a 'trunk collector' road in Council's strategic road network hierarchy.

Canaipa Point Drive was classified by Council as a 'local street' as its primary function was to provide access to abutting properties and to other lower order streets within a local area that encompassed Kibbinkibbinwa Point, Ooncooncoo Bay, and Canaipa Point.

However, as discussed in Section 4, the actual location where primary road function changed between 'traffic carrying' (trunk collector) and 'access' (local street), was not clearly identifiable. For the purpose of this review, it has been determined that the transition was likely to occur at the western boundary of the local residential area, which crossed Canaipa Road near the intersection with Aquarius Road and Kamar Street. Therefore, it is this intersection which has been selected as the point where the change in road function occurs.

Using the classifications shown in Tables A1 to A3, Appendix A, Part 4 of the MUTCD, and with reference to Council's road hierarchy system, the functional classification of each road segment has been identified as:

- Segment 1 – Trunk collector
- Segment 2 – Minor collector street.

6.1.2 Roadside environment

In accordance with the descriptions given in Appendix L, Part 4 of the MUTCD, roadside environments are typically classified using the following descriptions:

- urban area (built-up area)
- urban fringe
- rural settlement
- rural township
- rural hamlet
- rural residential area
- rural area.

Both roads were bordered by unconsolidated residential development. Apart from several large lots that were undeveloped, the average lot sizes were consistent with those found in a typical urban area and much less than the typical maximum residential lot size of 2000m^2. The roadside environment along the full length of each homogenous segment has therefore been identified as 'urban'.

6.1.3 Design standard

A lower speed limit than that suggested by functional classification and roadside environment, may be appropriate if the design standard of the road is not compatible with the higher speed.

The design standard relates to the level of service, mobility, and safety provided by design elements such as:

- horizontal and vertical curvature
- sight distance
- superelevation
- pavement, shoulder, and lane width
- gradients
- degree of access restriction.

The design standard along both roads was typical of that found in a developing urban area and did not present an unsafe operating environment for the existing 50km/h or 60km/h speed limits. A substandard horizontal curve is situated in Segment 2 near the Oasis Drive intersection; however, appropriate alignment warning and advisory speed signs were installed.

6.1.4 Typical speed limit

The typical speed limits for the road segment is given in Table 1. This speed limit has been determined by matching the relevant road type attributes with the speed limit hierarchy given in Table B1, Appendix B, Part 4 of the MUTCD.

STAGE 1				
Homogeneous segment	**Functional classification**	**Roadside environment**	**Design standard**	**Typical speed limit (km/h)**
1	Trunk collector road	Urban	Satisfactory	**60**
2	Minor collector street	Urban	Satisfactory	**50**

Table 1: Typical speed limits

6.2 Stage 2 - Prevailing traffic speeds

Part 4/4.2.3 of the MUTCD states that prevailing traffic speeds are a major factor in the determination of a speed limit.

Speed survey data was collected at one location on Canaipa Road and three locations on Canaipa Point Drive between Thursday 2 November and Friday 10 November 2017. Table 2 provides a statistical summary of the available data. Refer to **Appendix F** for further detail.

Segment	Location	No. of vehicles	Mean speed (km/h)	85th % speed (km/h)	Upper limit of 15km/h pace (km/h)	No. in pace (%)
1	Near Ritson Street	8075	56.2	64.8	65	64.24
2	Near Phoenix Street	4339	58.1	66.6	66	64.48
	No. 68 Canaipa Point Drive	3527	55.3	65.2	63	59.65
	Near Keats Street	1275	46.3	55.4	56	59.92

Table 2: Summary of speed survey data

In Segment 1, the speed distributions conformed to an acceptable distribution for the existing 60km/h speed limit (refer Table 3).

In Segment 2, the speed data obtained at two of the three sites (near Phoenix Street and number 60 Canaipa Point Drive) did not conform to an acceptable distribution for the existing 50km/h speed limit (Refer Table 3).

In cases where the speed data does not correlate with the existing speed limit, the upper limit of the 15km/h pace band is used to suggest an appropriate speed limit. In this case, the suggested speed limit at the two non-conforming sites is 60km/h (refer Table 3).

STAGE 2	
Homogenous segment	**Speed limit suggested by prevailing vehicle speeds (km/h)**
1	**60**
2	**60 (2 sites) and 50 (1 site)**

Table 3: Limits suggested by prevailing traffic speeds

The speed data shows that prevailing vehicle speeds are higher than expected at the western end of the existing 50km/h speed zone. This is most likely attributed to the lower levels of roadside development and access frequency at the western end of Segment 2, which both steadily increase as motorists travel east.

6.3 Stage 3 - Speed environment

The speed environment can be described as the elements of the road and traffic environment that collectively influence a road user's perception of an appropriate maximum travel speed. In accordance with Part 4/4.2.4 of the MUTCD, the QLIMITS program has been used to assess the speed environment.

The speed limits that QLIMITS has suggested for each road segment are shown in Table 4.

STAGE 3	
Homogenous segment	**Speed limit suggested by speed environment (km/h)**
1	**60**
2	**50**

Table 4: Limits suggested by speed environment

Important criteria that formed part of the speed environment assessment is documented in the following subsections. Refer to **Appendix C** for the detailed QLIMITS assessment report (Form F2).

6.3.1 Access frequency

Table 5 provides a summary of the frequency of roadside accesses by type for each segment.

Access Type	Number of accesses	
	Segment 1	Segment 2
Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (Weighting 1).	17	77
Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side road traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (Weighting 1).	4	17
Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (Weighting 2).	3	1
Average number of accesses per 100 m	**1.96**	**4.16**

Table 5: Frequency of road access by type

6.3.2 Crash history

A search of the Department of Transport and Main Roads' WebCrash2 database indicated there have been two casualty crashes on Canaipa Road in the five-year period between 1 June 2012 and 31 December 2017 (see note*). Both crashes occurred within Segment 1.

One crash involved a westbound vehicle colliding with a very young cyclist who appeared was attempting to cross the road near the Hawthornden Drive intersection. As a result of the contact, the cyclist suffered fatal injuries. There were no specific contributing factors identified by police as having contributed to the incident occurring.

The other crash was a single vehicle incident involving an eastbound driver losing control on the curve west of Aquarius Road. The vehicle crossed the westbound lane and concrete footpath prior to impacting with a tree. The driver was taken to hospital because of injuries sustained in the crash. Having an over-prescribed concentration of alcohol was identified as the primary factor contributing to the crash.

A copy of the crash data output from WebCrash2 is provided in **Appendix G**.

Note: At the time of extracting crash data, the WebCrash2 database was reporting all casualty crash data to 31 May 2017. The selected crash analysis period therefore represents the most recent five-year period in which a complete data set was available.*

6.3.3 Casualty crash rate comparison

The accepted manner of measuring road crashes is in terms of exposure to risk. For road segments, exposure is measured as the distance travelled. For the purpose of this review, the casualty crash rates have been computed in terms of equivalent risk unit (ERU) per 10^8 vehicle kilometres travelled (10^8 VKT).

The calculated or 'actual' casualty crash rates have been compared to typical average and typical critical rates from similar roads, to determine if the subject section has a safety problem. The average and critical rates for Queensland roads in urban and rural environments were obtained from Part 4, Tables E2 to E5 of the MUTCD.

The actual, average, and critical crash rates for each segment are given in Table 6.

Crash rate ($10^4 ERU per $10^8 Vehicle Kilometres Travelled (VKT))			
Segment	**Actual**	**Average**	**Critical**
1	2244	995.90	1086.50
2	0	Not Available (likely to be between 995.9 and 1494.4)	Not Available (likely to be between 1086.5 and 1672.0)

Table 6: Road segment crash rates

Part 4, Section E2, Appendix E of the MUTCD states that for comparison purposes, the following convention should be used to describe the crash rate in relation to typical crash rates:

- Low crash rate: Less than the average casualty crash rate
- Medium crash rate: Between average and critical casualty crash rates
- High crash rate: Greater than or equal to the critical casualty crash rate.

With reference to Table 6, Segment 2 has a low crash rate that is below the average rate for the road type. Segment 1 has a high crash rate that is above the critical rate.

Road sections that have an actual crash rate higher than the critical rate are commonly defined as 'high crash zones' and require additional safety considerations when under taking a speed limit review.

However, in this instance the high crash rate in Segment 1 is a consequence of splitting the longer traffic route into smaller segments and assessing the crash rate on each individual segment. In this regard, the presence of even a single crash has the potential to artificially inflate the crash rate.

The crash rate has therefore been recalculated for the combined length of both segments. The combined crash rate for the full continuous route is 839 (ERU) per (10^8 VKT). This rate is below the average and critical rate for the road type and indicates the road link as a whole does not have a road safety problem.

7 Criteria-based speed limit

At the time of review, a 50km/h speed limit was in place along the full length of Canaipa Point Drive and for 60m at the eastern end of Canaipa Road. This speed limit is the default limit for local streets and falls within a category of speed limits known as 'criteria based speed limits'.

A formal speed limit review is not required for the assessment of criteria-based speed limits, as they are determined in accordance with specific criteria for each type of limit. With regard to the '50k/h local street speed limit', the main determinant is the function of the street. If the primary function is to provide access to properties, or cater for limited neighbourhood movements, then the use of the 50km/h local street speed limit is generally appropriate. Higher speed limits are only considered on urban roads that have a primary function of carrying traffic.

As discussed in Section 5.1.1, the primary function of Segment 2 is to provide for direct access to abutting properties and access to other streets within the local area that also serve an access function. As safe access to properties has a higher priority than traffic efficiency and mobility, a 50km/h local street speed limit is considered to be the most appropriate limit for Segment 2.

8 Speed limit review correlation

Table 7 shows the overall correlation between the various stages of this speed limit review on each segment.

Stage	Description	Suggested speed (km/h)	
		Segment 1	Segment 2
1	Road function	60	50
2	Prevailing traffic speed	60	50 & 60
3	Speed environment (QLIMITS)	60	50
Correlation		**60**	**50**

Table 7: QLIMITS speed correlation

Table 7 shows there is a correlation between all three stages of the review process for Segment 1, resulting in a suggested speed limit of 60km/h.

Table 7 also shows there is a correlation between two stages of the review process for Segment 2, resulting in a suggested speed limit of 50km/h. Retention of the existing 50km/h local street speed limit is also considered appropriate due to the 'access' function this section of road serves (refer Section 6).

9 Recommendations

Table 8 shows the recommended speed limits for each road segment. These limits are based on outcomes using the speed limit review process outlined in Part 4 of the MUTCD. The recommended limits are in no way binding and the responsibility for the selection and implementation of an appropriate speed limit for the subject road segments rests with Council.

Segment	Recommended speed limit (km/h)
1	60
2	50

Table 8: Recommended speed limits

The key findings from this speed limit review are summarised below.

- Although the road name changes at the Phoenix Street intersection, Canaipa Road and Canaipa Point Drive formed one continuous route. The speed limits on both roads were considered concurrently when undertaking this speed limit review.
- The western end of the route carried traffic that primarily had trip origins and destinations outside a local area and was therefore considered to have a primary 'traffic carrying' function. Whereas the eastern end of the route primarily has trip origins and destinations within a defined local area of residential development and is therefore considered to have a primary 'access' function.
- A 60km/h speed limit was the most appropriate limit along the western end of the route and a 50km/h speed limit was the most appropriate limit along the eastern end of the route.

The point at which the speed limit should change from 60km/h to 50km/h (i.e. where the road function transitions from 'traffic carrying' to 'access') was not clearly defined. Although Council's strategic network hierarchy showed the transition to occur at the Phoenix Street intersection, there was no distinguishable traffic node or feature to verify that the road function changed at this point.

Roadside development is one of the most important issues to be considered in the determination of speed zones. To achieve an acceptable level of voluntary compliance, road users must be able to appreciate the apparent relationship to the abutting roadside development.

A visible change in speed environment was evident on Canaipa Road near the Aquarius Road and Kamar Street intersection. West of this intersection there was no visible development and virtually no direct property access. East of this intersection, residential development became visible on both sides of the road and direct access to properties and other access streets increased.

The speed limit transition from 60km/h to 50km/h has therefore been proposed on the western side of this intersection. Implementation of this recommendation would result in the existing 50km/h speed zone being extended 340m west of its current location.

This decision has been based on a subjective assessment of all available information, including an on-site assessment that was undertaken on Wednesday 6 December 2017.

9.1 Actions required

The following actions are required to implement the speed limits shown in Table 8:

Segment 1

1. No action required.

Segment 2

1. Remove one existing 60km/h speed limit sign currently installed on Canaipa Road east of the Michel Street intersection.
2. Install one new 50km/h speed limit sign and one new 60km/h speed limit sign on Canaipa Road, approximately 50m west of the intersection with Aquarius Road and Kamar Street.

   Refer to the proposed sign layouts shown in **Appendix H** for further details of the required signage works

9.2 Suggested action

To reinforce the 60km/h speed limit along Segment 1, Council could consider installing repeater speed signs as outlined in Part 4/5.2.9 of the MUTCD.



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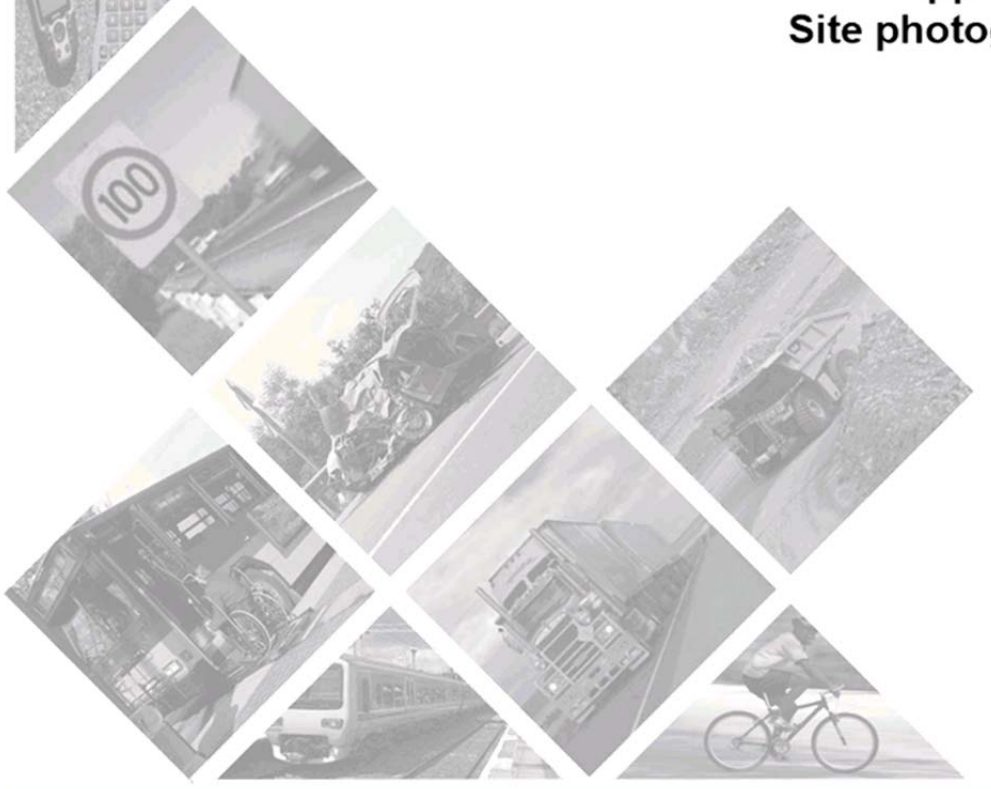
Appendix A
Site photographs



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Photograph 1: Eastbound view on Canaipa Road east of the High Street intersection (Segment 1).



Photograph 2: Eastbound view on Canaipa Road west of the Hawthornden Drive intersection (Segment 1).



Photograph 3: Eastbound view on Canaipa Road east of the Guthrie Street intersection (Segment 1).



Photograph 4: Eastbound view on Canaipa Road east of the Cestrum Street intersection (Segment 1).



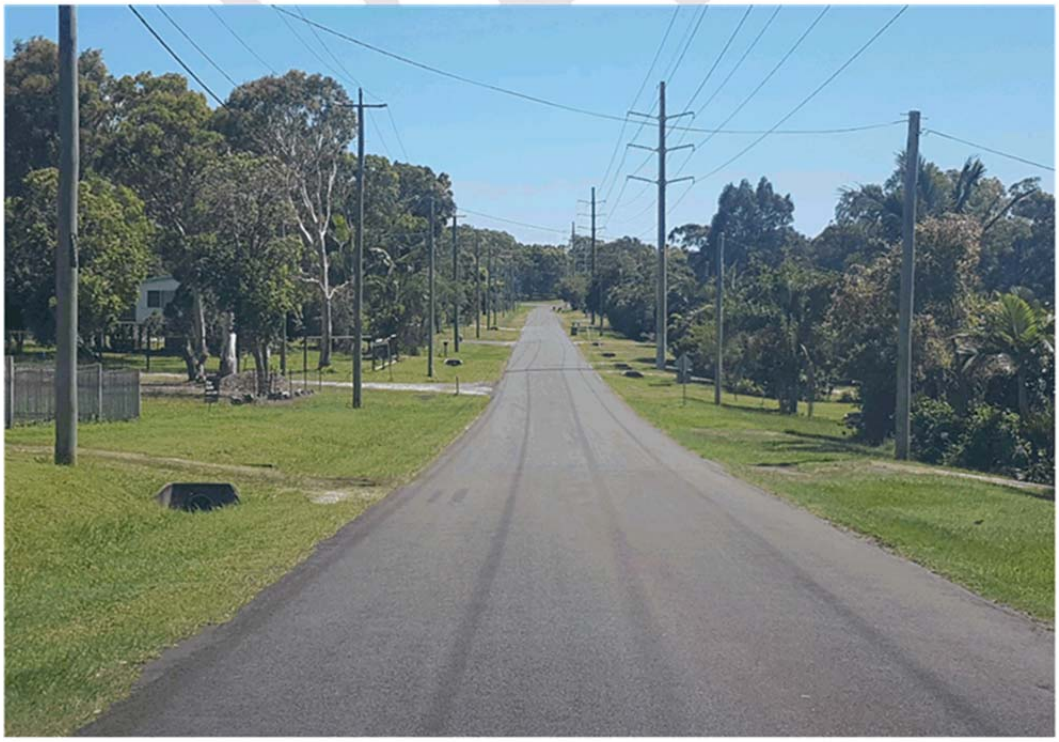
Photograph 5: Eastbound view on Canaipa Road west of the Aquarius Road and Kamar Street intersections (transition between Segment 1 and 2).



Photograph 6: Eastbound view on Canaipa Road west of the Michel Street intersection (approaching the transition between existing 60km/h and 50km/h speed limits - Segment 2).



Photograph 7: Eastbound view on Canaipa Point Drive west of the Oasis Drive intersection (Segment 2).



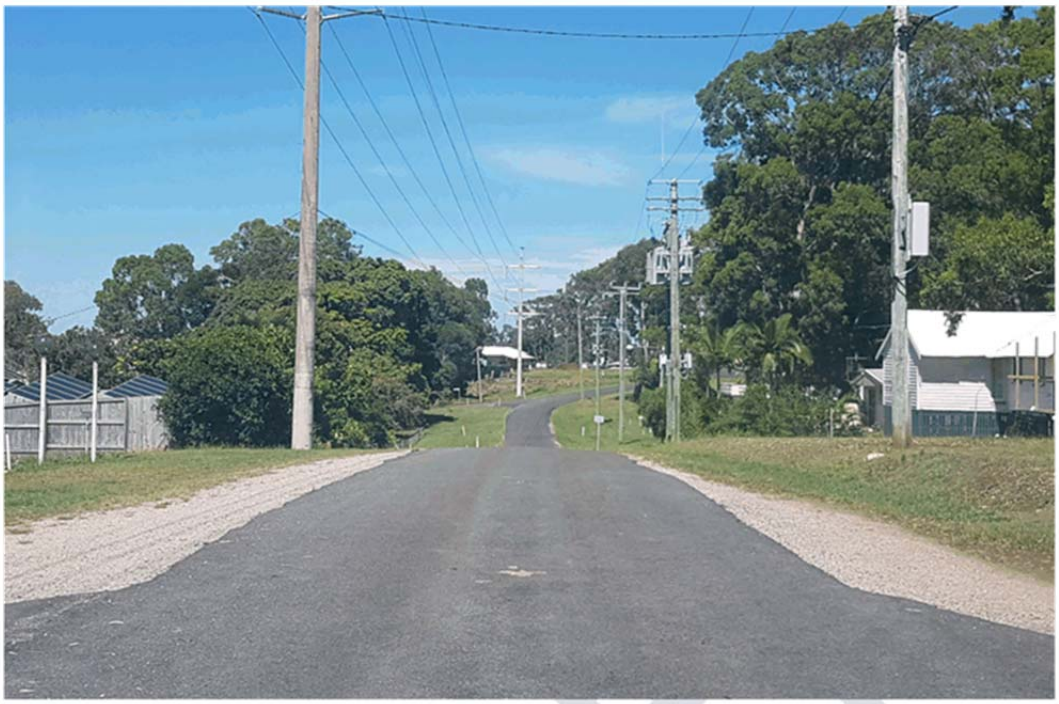
Photograph 8: Eastbound view on Canaipa Point Drive west of the Player Court intersection (Segment 2).



Photograph 9: Eastbound view on Canaipa Point Drive west of the Patterson Street intersection (Segment 2).



Photograph 10: Eastbound view on Canaipa Point Drive west of the Milton Street intersection (approach the road end - Segment 2).



Photograph 11: Westbound view on Canaipa Point Drive east of the Milton Street intersection (near the road end - Segment 2).



Photograph 12: Westbound view on Canaipa Road west of the Phoenix Street intersection (approaching the transition between existing 50km/h and 60km/h speed limits - Segment 2).



Photograph 13: Westbound view on Canaipa Road east of the Aquarius Road and Kamar Street intersections (transition between Segment 2 and 1).



Photograph 14: Westbound view on Canaipa Road west of the Ritson Street intersection (start of Segment 1).



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Appendix B
QLimits field data (Form F1)



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FORM F1 QLIMITS FIELD DATA FORM

If saving this form for use at a later date, please ensure that it is the most current version. See http://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx

LOCAL GOVERNMENT/DISTRICT Redland City Council **ROAD:** Canaipa Rd & Canaipa Point

LOCATION: Russell Island

RECORDER: Luke Kidd **DATE:** 26 January 2018

Tick (✓) the appropriate box to respond

1. LOCATION OF ROAD

The area in which this road section is located is generally:

(i)	Urban:	Fully built-up area with consolidated residential, commercial and industrial land uses.	☑
(ii)	Urban Fringe:	Less developed area typically containing low-density residential, small scale farming, future urban and other 'developing' land uses.	☐
(iii)	Rural Settlement:	Small settlements or townships located in rural areas which are typically located on through roads, and where all or most land development is concentrated on, or has direct access to, those through roads.	☐
(iv)	Rural:	Areas that are rural in nature, with large property or farm holdings. The only residential properties in these areas will be scattered homesteads and farmhouses.	☐

2. LENGTH OF ROAD

The length of road section is 3.69 km

3. UPPER LIMIT OF THE 15 km/h PACE

The upper limit of the 15km/h pace of free vehicles on this road section is varies km/h

4. DEVELOPMENT (for divided roads only)

The development on both sides of the road is:	balanced	☑
	unbalanced	☐

5. FREQUENCY OF ROADSIDE ACCESSES (for both sides of the road combined)

Note: (i) Abutting development on service roads is not considered and therefore only the points of access to the through traffic lanes are counted.
(ii) Crossroads are counted once each side of the road.

Abutting properties

(a) Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity.

Number of this type: Side 1 = 33 Side 2 = 61

(b) Average commercial establishments, local schools, caravan parks, light industries, public buildings and other units generating activity that is:

(i) continuous light

(ii) moderate at certain regular times, such as commuting hours

(iii) substantial at infrequent intervals

Number of this type: Side 1 = 0 Side 2 = 0

1

(c) Heavy industry, schools, shopping centres and other units generating
   (i) continuous moderate activity or
   (ii) substantial activity at certain regular times.

Number of this type: Side 1 = 0 Side 2 = 0

(d) Large shopping centres and other units generating substantial and continuous activity. Some large industries that are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity.

Number of this type: Side 1 = 0 Side 2 = 0

Intersections

(a) Intersecting roads of substantially lesser importance than the road being studied, or intersecting roads where side road traffic and turning movements have little effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 14 Side 2 = 7

(b) Intersecting roads of lesser importance than the road being studied but where side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 1 Side 2 = 4

(c) Signalised intersections, roundabouts and intersections with roads comparable to or of greater significance than the road being studied. Intersections which have a pronounced effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 0 Side 2 = 0

Note: (i) Abutting development on service roads is not considered and therefore only the points of access to the through traffic lanes are counted.
(ii) Crossroads are counted once each side of the road.

6. DIVIDED OR UNDIVIDED

The section of road being studied is:

- undivided ☑
- divided ☐

Note: (i) Double barrier lines do not constitute a median.
(ii) A painted median is sufficient to constitute a divided road if it extends for the full length of the section under consideration (excepting median breaks for turns, etc).

7. RESTRICTION OF ACCESS

The major part of this road has restriction of direct vehicular access on:

- neither side ☑
- one side ☐
- both sides ☐

Note: (i) This restriction may include service roads, river or railway line alongside the road or a large fenced-off area e.g. golf course, airport.

8. SETBACK

The setback of the through traffic lanes to the property boundary line is:

- less than 4 metres ☐
- 4-10 metres ☑
- more than 10 metres ☐

Note: (i) If development is balanced, the lower setback value should be used.
(ii) If development is unbalanced, the setback value for the more developed side should be used.

9. MEDIAN

The central median has a width of n/a metres

FORM F1: QLIMITS Field Data Form 2

10. PROTECTION OF TURNING/CROSSING VEHICLES

The median protects turning vehicles:
- fully ☐
- only partially or not at all ☑

11. NUMBER OF LANES

The total number of traffic lanes is 2 lanes

Note: (i) include through lanes in both directions.
(ii) do not include service roads or exclusive parking lanes.
(iii) if lanes are not clearly marked, count the number of lanes normally used by drivers during busy traffic periods.

12. FUNCTION OF ROAD

The main reason that vehicles use this section of road is:
- traffic movement ☑
- access to abutting properties ☑

13. ADJACENT ROAD SECTIONS

The speed limits on the adjoining road sections are: 0 km/h 0 km/h

14. FREEWAY

Is this road a motorway, freeway or expressway? NO ☑ YES ☐

15. LOW SPEED AREA

Is this road a low speed area?
- NO ☑
- YES (LATM area) ☐
- YES (shared-use zone) ☐

16. OTHER FACTORS

Is the road predominantly winding or hilly? NO ☑ YES ☐

Is the road unusually congested? NO ☑ YES ☐

17. SPECIAL ROADSIDE ACTIVITIES

Are there any schools along this road section? NO ☑ YES ☐

18. CASUALTY CRASH RATES

Compared to other similar road sections the casualty crash rate is:
- average or lower than average ☑
- a little higher than average ☐
- significantly higher than average ☐

Note: Care should be exercised when using historical crash rate data. Only use relevant data pertaining to crashes that have occurred whilst the road is in its current state, e.g. if an intersection has been signalised or a road recently reconstructed, only use crash data from the period following these changes.

19. TRAFFIC SIGNALS/ROUNDABOUTS

Are there any traffic signals or roundabouts along this road section? NO ☑ YES ☐



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Appendix C
QLimits detailed assessment reports (Form F2)



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Speed Limit Review – Queensland (SLR-QLD)
Detailed Assessment Report

Background Information

Analysed By: Luke Kidd.
User Reference: Canaipa Rd_Seg 1, Rev. 1
Road Name: Canaipa Road.
Road Location: High Street to 50m west of Aquarius Road.
Suburb: Russell Island.
GPS Start Point : .
GPS Finish Point: .
TMR Road Number: .
Local Government: 256, Redland City Council
Main Roads District: 13, Metropolitan
The need to review the speed limit on this road has occurred due to community request.
The length of the road section being assessed is 1.38 km
AADT on this road section is 1150 vpd
The existing speed limit is 60 km/h.

Adjacent Speed Zones

Approach 2: 50 km/h - Westbound

Recommended Speed Limit:

60

Stage 1: Road function

This section of Canaipa Road being assessed is located in a urban area.
The road type is: Trunk Collector Roads and Collector Roads.
The Typical Speed Limit is: 60 km/h.
The Existing Speed Limit **does** equal the Typical Speed Limit

Stage 2: Prevailing Traffic speed

Sample data on 8075 vehicles was analysed using ' '
The upper limit of 15 km/h pace is 65
The mean speed is 56 km/h
The 85th percentile speed is 65 km/h
Hence, the prevailing traffic speed data **does** correlate with the existing Speed Limit

Stage 3: QLIMITS

The suggested speed limit based on the speed environment analysis was **60 km/h** after allowing for site specific issues.

Additional issues considered:

- A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:
  - Presence of aged and/or disabled persons
  - Presence of roadside hazards
  - Narrow traffic lane width

Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

- The accident rate for this section of road is **significantly higher** than the average for this type of road. Further investigation of the possible causes for this increased accident rate is recommended. A review of the recommended speed limit may or may not be appropriate depending on local circumstances.

- Speed environment was assessed (Stage 3 was completed). Answers to the Speed Environment questions were as follows:
  - Has a comprehensive road safety audit been completed? NO
  - Did the road safety audit highlight deficiencies that have not been corrected? NO
  - Was the road safety audit conducted more than 3 years ago? NO
  - Is there a concern for pedestrian or cyclist safety along the road segment? NO
  - Are there high risk intersections in the road segment? NO

Frequency of Roadside Accesses

	Type of access	**Number**
A	Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (The weighting for this type of access is 1).	17
B	Average commercial establishment, local schools, caravan parks, light industries, public buildings and units generating activity which is either: 1. Continuous light. 2. Moderate at certain times, such as commuting hours. 3. Substantial at infrequent intervals. (The weighting for this type of access is 2).	0
C	Heavy industry, schools, shopping centres and other units generating continuous moderate activity or substantial activity at certain regular times. (The weighting for this type of access is 3).	0
D	Large shopping centres and other units generating substantial and continuous activity. Some large industries which are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity. (The weighting for this type of access is 4).	0
E	Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 1).	4
F	Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 2).	3
G	Unsignalised intersecting roads of comparable or greater significance than the road being assessed. Intersections which have pronounced effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 3).	0
H	Roundabouts and signalised intersecting roads. (The weighting for this type of access is 3).	0
	Average number of accesses per 100 m	1.95

Road Cross Section
The road is **Undivided**

Number of Lanes
The total number of traffic lanes on this section of road is **2**

Function of Road
The road is primarily used for **Traffic movement (freeway/arterial/sub arterial/trunk collector)**

Restrictions of Access
There are **no restrictions.**

Special Roadside Activities
A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:

- Presence of aged and/or disabled persons
- Presence of roadside hazards
- Narrow traffic lane width

Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

Number of crashes in the past 5 years:

Description	No. of crashes
Head-on	0
Rear-end	0
Lane change	0
Parallel lanes, turning	0
U-turn	0
Entering roadway	1
Overtaking, same direction	0
Hit parked vehicle	0
Hit railway train	0
Pedestrian	0
Permanent obstruction on carriageway	0
Hit animal	0
Off carriageway, on straight	0
Off carriageway, on straight, hit object	0
Out of control, on straight	0
Off carriageway on curve	0
Off carriageway, on curve, hit object	1
Out of control, on curve	0

The average annual equivalent crash risk is 13.00 (10^4)

Crash Rate
The crash rate is 2244 (10^4 ERUs per 10^8 VKT)

Stage 4: Speed correlation check & recommendations

The speed limit based on road function is **60 km/h.**

The speed limit suggested by current speed data is **60 km/h.**
The speed limit suggested by the speed environment (QLIMITS) is **60 km/h.**

Recommendations and authorisation

THE RECOMMENDED SPEED LIMIT IS 60 km/h

Speed Limit Review – Queensland (SLR-QLD)
Detailed Assessment Report

Background Information

Analysed By: Luke Kidd.
User Reference: Canaipa Point Drive_Seg 2, Rev. 1
Road Name: Canaipa Point Drive.
Road Location: 50m west of Aquaris Road to road end.
Suburb: Russell Island.
GPS Start Point : .
GPS Finish Point: .
TMR Road Number: .
Local Government: 256, Redland City Council
Main Roads District: 13, Metropolitan
The need to review the speed limit on this road has occurred due to community request.
The length of the road section being assessed is 2.31 km
AADT on this road section is 564 vpd
The existing speed limit is 60 km/h.

Adjacent Speed Zones
Approach 1: 60 km/h - Eastbound

Recommended Speed Limit:

50

Stage 1: Road function

This section of Canaipa Point Drive being assessed is located in a urban area.
The road type is: Trunk Collector Roads and Collector Roads.
The Typical Speed Limit is: 50 km/h.
The Existing Speed Limit **does not** equal the Typical Speed Limit

Stage 2: Prevailing Traffic speed

Sample data on 3527 vehicles was analysed using ' '
The upper limit of 15 km/h pace is 63
The mean speed is 55 km/h
The 85th percentile speed is 65 km/h
Hence, the prevailing traffic speed data **does not** correlate with the existing Speed Limit

Stage 3: QLIMITS

The suggested speed limit based on the speed environment analysis was **50 km/h** after allowing for site specific issues.

Additional issues considered:

- The upper limit of pace speed of 63 km/h is significantly higher than the recommended speed limit of 50 km/h. This represents a significant difference between the current behaviour of drivers and the recommended limit. Further investigation should be undertaken.

- Speed environment was assessed (Stage 3 was completed). Answers to the Speed Environment questions were as follows:
  - N/A (no questions were answered).

Frequency of Roadside Accesses

	Type of access	Number
A	Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (The weighting for this type of access is 1).	77
B	Average commercial establishment, local schools, caravan parks, light industries, public buildings and units generating activity which is either: 1. Continuous light. 2. Moderate at certain times, such as commuting hours. 3. Substantial at infrequent intervals. (The weighting for this type of access is 2).	0
C	Heavy industry, schools, shopping centres and other units generating continuous moderate activity or substantial activity at certain regular times. (The weighting for this type of access is 3).	0
D	Large shopping centres and other units generating substantial and continuous activity. Some large industries which are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity. (The weighting for this type of access is 4).	0
E	Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 1).	17
F	Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 2).	1
G	Unsignalised intersecting roads of comparable or greater significance than the road being assessed. Intersections which have pronounced effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 3).	0
H	Roundabouts and signalised intersecting roads. (The weighting for this type of access is 3).	0
	Average number of accesses per 100 m	4.15

Road Cross Section
The road is **Undivided**

Number of Lanes
The total number of traffic lanes on this section of road is **2**

Function of Road
The road is primarily used for **Access to abutting properties (Traffic carrying)**

Low Speed Area
There is no reason why this should be a low speed area.

Stage 4: Speed correlation check & recommendations

The speed limit based on road function is **50 km/h.**
The speed limit suggested by the speed environment (QLIMITS) is **50 km/h.**

Recommendations and authorisation

THE RECOMMENDED SPEED LIMIT IS 50 km/h



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Appendix D
QLimits checklist (Form F3)



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FORM F3 CHECKLIST FOR REVIEW OF EXISTING SPEED LIMIT

Not required for setting speed limits on roads in rural residential areas. See MUTCD Part 4 Section 3.4.

LOCATION IDENTIFICATION

Road Owner: ☐ MRD ☒ LGA

District Number: 13

LGA Number: 256

LGA Name: Redland City Council

Town/City: Russell Island

Suburb: Russell Island

Road Name: Canaipa Rd & Canaipa Point Drive

Road Section: High Street to road end

Road Number: n/a

Road Segment:

	Location or Reference Point	Chainage or Distance	GPS Coordinates (decimal degrees)	
			Latitude	Longitude
Start	High Street			
End	end of Canaipa Point Drive			

Existing Speed Limit: 60 & 50 km/h

AADT: 164 to 1150

REVIEWING OFFICER

Name: Luke Kidd

Employer: RoadPro Consulting

Address: 8 MacLeay Lane, Maroochydore, QLD

Phone No: 0459666608

Date of Review: 26 January 2018

Have you undertaken appropriate training in the application of Part 4? Yes ☒ No ☐

Notes:

1. The numbering convention used for the Checklist coincides with that used in MUTCD Part 4 Figure F1.
2. References to Figures and Tables are to those in Part 4 of the Manual of Uniform Traffic Control Devices.
3. Mark following selections with a tick.

1

SPEED LIMIT REVIEW

1. The need to review the speed limit on this road has occurred due to:
   - ☐ General Limit no longer applicable
   - ☐ Altered speed environment
   - ☐ Evidence of speed limit/vehicle speed discrepancies
   - ☐ Need to adjust speed zone lengths
   - ☑ Community request
   - ☐ Other (specify) .....

Stage 1 – Road Function Analysis

2. Road Function

   If the road is in a rural environment, go to Step 3.

   For a road in an urban environment, the function of the road has been identified as:
   - ☐ Access / Local street
   - ☑ Collector street
   - ☑ Trunk collector road
   - ☐ Sub-arterial road
   - ☐ Arterial road
   - ☐ Controlled access arterial road, Freeway

   If rural, go to Step 3

3. From Table B1 (Urban) or B2 (Rural), the typical speed limit is: 60 & 50 ..... km/h
4. The existing speed limit equals the typical speed limit?
   - ☑ Yes - go to Step 6
   - ☐ No - go to Step 5
5. Is it proposed to alter the road function to align the typical speed limit with the existing speed limit speed?
   - ☐ Yes - go to Step 18
   - ☐ No - go to Step 6

Stage 2 – Prevailing Vehicle Speed Analysis

6. Prevailing Vehicle Speed Data

(a) Collected using:
- ☐ Manual methods
- ☑ Automatic device (specify type)..... Metro Count .....
- ☐ Other (specify) ..... Metro Count Software .....

(b) Collected according to guidelines:
- ☑ Specified in Appendix G
- ☐ Other (specify) ..... Metro Count Software .....

(c) Analysed using:
- ☐ EsdeeMan version 3.0
- ☐ Manual methods
- ☑ Other (specify) ..... Metro Count Software .....

(d) Results from analysis:

No. of vehicles in sample varies - see report .....

Upper limit of 15 km/h pace: ..... km/h

% vehicles in the 15 km/h pace: .....%

85th %ile speed: ..... km/h

Mean speed: .....

7. Speed data correlates with existing speed limit? (see Table C1)
   - ☑ Yes - go to Step 11
   - ☑ No - go to Step 7a

7a. From Table C2,

Suggested speed limit is: 60 & (50-60) .... km/h

Go to Step 8.

Stage 3 – Speed Environment Analysis

8. QLIMITS

(a) Field Data Form F1 (Appendix D):
- ☑ Completed
- ☐ Copy attached

(b) Analysis Report Form F2 (Appendix D):

- ☒ Completed
- ☐ Copy attached

(c) QLIMITS recommended speed limit

60 & 50 ..... km/h

(d) QLIMITS flagged considerations?

- ☐ No
- ☒ Yes (see Report Form F2 (Appendix D))

Stage 4 – Correlation Check

9. Correlation check

(a) Outputs from each stage are:

Stage 1

Typical speed limit 60 & 50 ..... km/h

Stage 2

From Table C2

Suggested speed limit 60 & (50-60) ..... km/h

Stage 3

QLIMITS recommendation 60 & 50 ..... km/h

(b) Is there a correlation between two of the three outputs from Stages 1, 2 and 3 above?

- ☒ Yes 60 & 50 ..... km/h - go to Step 11
- ☐ No - go to Step 10

10. Have all data, QLIMITS input/output and road function been checked?

- ☐ No - go to Step 2
- ☐ Yes - go to Step 24

Other Criteria

11. (From Steps 7 and 9)

(a) The calculated casualty crash rate is:

839 ..... * 10^4 ERUs per 10^8 VKT

(b) The typical casualty crash rates are:

Average: 995.9 ..... * 10^4 ERUs per 10^8 VKT

Critical: 1086.5 ..... * 10^4 ERUs per 10^8 VKT

(c) The casualty crash rate / potential risk factor is comparatively:

- ☒ Low (=< Average)
- ☐ Medium (Between average and critical)
- ☐ High (>= Critical)

(d) Is casualty crash rate / potential risk factor high?

- ☐ Yes - go to Step 12
- ☒ No - Figure F1 leads to:
- ☐ Step 19
- ☐ Step 13

12. Crash investigation / road safety review or audit conducted by:

Name: -.....

Date: -.....

File/Report No: -.....

Go to Step 15

13. Has the review process suggested an increase in the speed limit?

- ☐ Yes - go to Step 14
- ☐ No - go to Step 23

14. Has a safety review (or road safety audit) identified any risk factors?

- ☐ Yes - go to Step 16
- ☐ No - go to Step 23

15. Has a crash investigation or safety review identified causal or risk factors?

- ☐ Yes - go to Step 16
- ☐ No - go to Step 22

16. Is treatment feasible?

- ☐ Yes - go to Step 17
- ☐ No - go to Step 21

17. (From Step 16)

Proposed treatments / works have been listed for the financial year:.....

Go to Step 20

18. (From Step 5)

See Figure F1, Note 18

Go to Step 17

19. (From Step 11 via Step 7)

Retain existing limit - go to Step 25

20. Consider whether an interim alteration to the speed limit is necessary.

Go to Step 25

21. (From Step 16)

Subject to Figure F1 (Note 21), it is considered appropriate to:

☐ Increase

☐ Decrease

the existing speed limit by ..... km/h

Go to Step 25

22. (From Step 15)

Retain existing speed limit with enhanced enforcement.

Go to Step 25

23. (From Step 13 or 14)

Adopt speed limit noted at 9(b).

Go to Step 25

24. (From Step 10)

The review of speed limits according to the process described in Figure F1 has failed to determine an appropriate speed limit. Action taken is as follows:

(a) ☐ The Checklist, together with all relevant data and information, has been referred to the responsible officer for consideration.

Referred to: .....

By: .....

RPEQ No: .....

Date: .....

The responsible officer now has responsibility for providing recommendations at Step 25.

(b) ☐ Input to the review requested from the Traffic Advisory Committee (TAC)

Committee meeting of ...../...../..... offered the following information:

.....

.....

.....

.....

.....

and/or advised a preferred speed limit of:

..... km/h

(c) Has information provided by the committee assisted in determining an appropriate limit?

☐ Yes - it is..... km/h

Go to Step 25

☐ No - (a) I concur the following speed limit for the section of road under consideration: ..... km/h

Concurred by (TAC Chair): .....

.....

Date: .....

25. Recommendation by Engineer

Following the completion of this checklist, which documents the process for the review of speed limits according to Figure F1 of Part 4 of the MUTCD, I submit the following:

Recommended Speed Limit: 60 & 50 km/h

Recommended by:

Name: .....

Position: .....

RPEQ No: .....

Date: .....

Authorisation for Deliberation

☐ The recommended speed limit is approved for deliberation in the SMC.

☐ The recommended speed limit is not approved for deliberation by the SMC for the following reasons:

.....

.....

.....

.....

.....

☐ The alternative speed limit to be discussed or retained is: ..... km/h

Reasons for the alternative speed limit are:

.....

.....

.....

.....

Authorised by: .....

Position:.....

(Responsible officer/Regional Director)

Date: .....

Endorsement by Speed Management Committee (SMC)

☐ The recommended speed limit has been endorsed by the SMC.

☐ The recommended speed limit has not been endorsed by the SMC and will now be sent back to the responsible officer for referral to the Speed Limit Review Panel (SLRP).

Recommendation by Speed Limit Review Panel (SLRP)

Following the deliberation by the SLRP, the chairperson will forward its recommendation to the responsible officer for consideration:

Recommended speed limit: ..... km/h

Recommended by:

Name:.....

(Chairperson SLRP)

Position:.....

RPEQ No:.....

Date:.....

Authorisation for Installation

☐ The recommended speed limit is authorised for installation according to the provisions of MUTCD Part 1, Appendix C.

☐ The recommended speed limit is not authorised for the following reasons:

.....

.....

.....

.....

.....

☐ The alternative speed limit to be installed or retained is: ..... km/h

Reasons for the alternative speed limit are:

.....

.....

.....

.....

.....

Authorised by: .....

Position:.....

(Responsible officer/Regional Director)

Date:.....

☐ Form M994 or equivalent local government Form completed by authorising officer and copy filed with this Checklist.

(Failure to complete this task could compromise the legality of the Speed Limit.)

26. Review / Evaluation

Will the existing speed limit be altered?

☐ Yes - program assessment to occur 1-4 weeks after installation.

☐ No - program for review in 5 years or sooner if required.

Where Steps 21, 22 or 23 have indicated that enhanced enforcement is required, complete the following:

Enhanced enforcement of this site by QPS has been requested by reporting the outcome for this speed limit review to:

☐ Local TAC (Traffic Advisory Committee)

☐ Regional Speed Management Advisory Committee

☐ Regional QPS Traffic Co-ordinator

Reported by: .....

Position:.....

Date:.....

☐ Written advice

☐ Other (specify).....

.....

.....

FORM F3: Checklist for review of existing speed limit 5



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Appendix E
Traffic volume data



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MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-506 -- English (ENA)

Datasets:

Site:	**[Canaipa Rd Ritson St] Canaipa Road near Ritson Street on Pole # 65659 Russell Island <60>**
Attribute:	Russell Island
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	19:00 Thursday, 2 November 2017 => 10:04 Friday, 10 November 2017,
Zone:	
File:	Canaipa Rd Ritson St.EC0 (Plus)
Identifier:	AE118HVT MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 8052 / 8524 (94.46%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-506
Site: Canaipa Rd Ritson St 0.1EW
Description: **Canaipa Road near Ritson Street on Pole # 65659 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	2.0	0.0	4.0	2.0	3.0	2.0	1.6	1.9
0100-0200	1.0	0.0	2.0	0.0	0.0	2.0	1.0	0.6	0.9
0200-0300	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.4	0.3
0300-0400	0.0	0.0	1.0	1.0	1.0	0.0	0.0	0.6	0.4
0400-0500	8.0	10.0	10.0	12.0	12.0	1.0	0.0	10.4	7.6
0500-0600	23.0	20.0	17.0	23.0	23.0	4.0	3.0	21.2	16.1
0600-0700	60.0	45.0	54.0	55.0	73.0	42.0	18.0	57.4	49.6
0700-0800	**107.0**	79.0	**116.0**	102.0	91.0	69.0	53.0	99.0	88.1
0800-0900	104.0	91.0	94.0	97.0	**121.0**	87.0	74.0	101.4	95.4
0900-1000	93.0	88.0	105.0	103.0	103.0	98.0	79.0	98.4	95.6
1000-1100	98.0	108.0	111.0	**131.0**	101.0	**103.0**	**88.0**	**109.8**	**105.7**
1100-1200	85.0	**115.0**	109.0	98.0	93.0	90.0	65.0	100.0	93.6
1200-1300	90.0	74.0	98.0	93.0	83.0	**94.0**	**85.0**	87.6	88.1
1300-1400	71.0	58.0	88.0	90.0	72.0	92.0	57.0	75.8	75.4
1400-1500	90.0	85.0	**118.0**	86.0	**120.0**	63.0	56.0	99.8	88.3
1500-1600	**123.0**	**98.0**	95.0	**100.0**	90.0	63.0	52.0	**101.2**	**88.7**
1600-1700	87.0	69.0	95.0	79.0	93.0	67.0	69.0	84.6	79.9
1700-1800	75.0	60.0	69.0	66.0	97.0	51.0	50.0	73.4	66.9
1800-1900	63.0	39.0	53.0	45.0	48.0	53.0	47.0	49.6	49.7
1900-2000	21.0	21.0	40.0	28.0	30.0	19.0	19.0	28.0	25.4
2000-2100	12.0	19.0	7.0	12.0	23.0	12.0	19.0	14.6	14.9
2100-2200	10.0	8.0	11.0	12.0	18.0	11.0	4.0	11.8	10.6
2200-2300	9.0	1.0	3.0	2.0	3.0	1.0	7.0	3.6	3.7
2300-2400	2.0	2.0	5.0	5.0	6.0	5.0	0.0	4.0	3.6
Totals									
0700-1900	1086.0	964.0	1151.0	1090.0	1112.0	930.0	775.0	1080.6	1015.4
0600-2200	1189.0	1057.0	1263.0	1197.0	1256.0	1014.0	835.0	1192.4	1115.9
0600-0000	1200.0	1060.0	1271.0	1204.0	1265.0	1020.0	842.0	1200.0	1123.1

0000-0000	1232.0	1092.0	1302.0	1245.0	1303.0	1030.0	848.0	1234.8	1150.3
AM Peak	0700	1100	0700	1000	0800	1000	1000		
	107.0	115.0	116.0	131.0	121.0	103.0	88.0		
PM Peak	1500	1500	1400	1500	1400	1200	1200		
	123.0	98.0	118.0	100.0	120.0	94.0	85.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-507 -- English (ENA)

Datasets:

Site:	**[Canaipa Rd Ritson St] Canaipa Road near Ritson Street on Pole # 65659 Russell Island <60>**
Attribute:	Russell Island
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	19:00 Thursday, 2 November 2017 => 10:04 Friday, 10 November 2017,
Zone:	
File:	Canaipa Rd Ritson St.EC0 (Plus)
Identifier:	AE118HVT MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 8052 / 8524 (94.46%)

Class Speed Matrix

ClassMatrix-507
Site: Canaipa Rd Ritson St 0.1EW
Description: **Canaipa Road near Ritson Street on Pole # 65659 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	47	.	.	1	2	.	.	.	.	.	.	.	50	0.6%
20 - 30	97	2	5	1	.	.	1	.	.	.	.	.	106	1.3%
30 - 40	224	17	20	5	4	.	7	.	.	.	.	.	277	3.4%
40 - 50	1146	37	101	6	1	2	8	.	1	.	.	.	1302	16.2%
50 - 60	3398	74	278	9	3	7	5	.	.	3	.	.	3777	46.9%
60 - 70	1835	25	180	5	3	2	1	.	.	1	.	.	2052	25.5%
70 - 80	365	.	44	2	.	.	.	.	.	.	.	.	411	5.1%
80 - 90	51	1	7	.	.	.	.	.	.	.	.	.	59	0.7%
90 - 100	11	.	2	.	.	.	.	.	.	.	.	.	13	0.2%
100 - 110	3	.	.	.	.	.	.	.	.	.	.	.	3	0.0%
110 - 120	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
120 - 130	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	7179	156	637	29	13	11	22	0	1	4	0	0	8052	
	89.2%	1.9%	7.9%	0.4%	0.2%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-503 -- English (ENA)

Datasets:

Site:	**[Canaipa Pt Dr Phnx] Canaipa Point Drive near Phoenix Street on Pole # P50038 Russell Island <50>**
Attribute:	Russell Island
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	11:00 Thursday, 2 November 2017 => 9:58 Friday, 10 November 2017,
Zone:	
File:	Canaipa Pt Dr Phnx.EC0 (Plus)
Identifier:	U462EWVX MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 3947 / 4514 (87.44%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-503
Site: Canaipa Pt Dr Phnx.0.1EW
Description: **Canaipa Point Drive near Phoenix Street on Pole # P50038 Russell Island <50>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	0.0	0.0	2.0	0.0	2.0	1.0	0.4	0.7
0100-0200	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.3
0200-0300	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.1
0300-0400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0400-0500	5.0	5.0	5.0	7.0	2.0	0.0	0.0	4.8	3.4
0500-0600	9.0	10.0	9.0	15.0	12.0	1.0	0.0	11.0	8.0
0600-0700	36.0	27.0	27.0	28.0	24.0	19.0	8.0	28.4	24.1
0700-0800	**54.0**	37.0	**67.0**	46.0	46.0	43.0	29.0	50.0	46.0
0800-0900	43.0	57.0	44.0	50.0	**58.0**	45.0	38.0	50.4	47.9
0900-1000	48.0	39.0	44.0	44.0	53.0	43.0	**45.0**	45.6	45.1
1000-1100	42.0	49.0	50.0	**68.0**	53.0	**48.0**	41.0	52.4	**50.1**
1100-1200	43.0	**71.0**	65.0	40.0	49.0	45.0	31.0	**53.6**	49.1
1200-1300	48.0	35.0	**60.0**	40.0	39.0	51.0	27.0	44.4	42.9
1300-1400	40.0	18.0	47.0	42.0	31.0	**55.0**	23.0	35.6	36.6
1400-1500	43.0	41.0	43.0	44.0	**52.0**	21.0	**44.0**	44.6	41.1
1500-1600	**48.0**	**48.0**	56.0	**66.0**	41.0	34.0	22.0	**51.8**	**45.0**
1600-1700	41.0	34.0	53.0	53.0	40.0	35.0	38.0	44.2	42.0
1700-1800	38.0	27.0	26.0	29.0	35.0	17.0	19.0	31.0	27.3
1800-1900	37.0	21.0	31.0	26.0	25.0	23.0	26.0	28.0	27.0
1900-2000	11.0	6.0	14.0	11.0	10.0	14.0	9.0	10.4	10.7
2000-2100	6.0	5.0	3.0	0.0	21.0	5.0	8.0	7.0	6.9
2100-2200	10.0	2.0	4.0	4.0	5.0	5.0	2.0	5.0	4.6
2200-2300	5.0	1.0	1.0	1.0	3.0	2.0	2.0	2.2	2.1
2300-2400	1.0	0.0	4.0	1.0	9.0	2.0	2.0	3.0	2.7
Totals									
0700-1900	525.0	477.0	586.0	548.0	522.0	460.0	383.0	531.6	500.1
0600-2200	588.0	517.0	634.0	591.0	582.0	503.0	410.0	582.4	546.4
0600-0000	594.0	518.0	639.0	593.0	594.0	507.0	414.0	587.6	551.3

0000-0000	608.0	533.0	653.0	617.0	608.0	513.0	415.0	603.8	563.9
AM Peak	0700	1100	0700	1000	0800	1000	0900		
	54.0	71.0	67.0	68.0	58.0	48.0	45.0		
PM Peak	1500	1500	1200	1500	1400	1300	1400		
	48.0	48.0	60.0	66.0	52.0	55.0	44.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-504 -- English (ENA)

Datasets:

Site:	**[Canaipa Pt Dr Phnx] Canaipa Point Drive near Phoenix Street on Pole # P50038 Russell Island <50>**
Attribute:	Russell Island
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	11:00 Thursday, 2 November 2017 => 9:58 Friday, 10 November 2017,
Zone:	
File:	Canaipa Pt Dr Phnx.EC0 (Plus)
Identifier:	U462EWVX MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 3947 / 4514 (87.44%)

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-497 -- English (ENA)

Datasets:

Site:	**[# 68 Canaipa Pt Dr] # 68 Canaipa Point Drive Russell Island<50>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 1
Survey Duration:	10:00 Thursday, 2 November 2017 => 9:53 Friday, 10 November 2017,
Zone:	
File:	# 68 Canaipa Pt Dr.EC0 (Plus)
Identifier:	U4576ZH8 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 3171 / 3645 (87.00%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-497
Site: # 68 Canaipa Pt Dr.1.2NS
Description: **# 68 Canaipa Point Drive Russell Island<50>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	0.0	0.0	2.0	0.0	2.0	0.0	0.4	0.6
0100-0200	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.3
0200-0300	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.1
0300-0400	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
0400-0500	4.0	5.0	3.0	3.0	2.0	0.0	0.0	3.4	2.4
0500-0600	8.0	10.0	9.0	16.0	10.0	0.0	0.0	10.6	7.6
0600-0700	23.0	20.0	23.0	21.0	14.0	14.0	7.0	20.2	17.4
0700-0800	**41.0**	25.0	50.0	37.0	31.0	34.0	25.0	36.8	34.7
0800-0900	37.0	50.0	41.0	43.0	43.0	32.0	24.0	42.8	38.6
0900-1000	32.0	36.0	36.0	33.0	**50.0**	31.0	34.0	37.4	36.0
1000-1100	34.0	38.0	47.0	**48.0**	47.0	38.0	**38.0**	42.8	41.4
1100-1200	37.0	**56.0**	**60.0**	34.0	44.0	**39.0**	26.0	**46.2**	**42.3**
1200-1300	43.0	26.0	50.0	29.0	30.0	41.0	20.0	35.6	34.1
1300-1400	30.0	18.0	35.0	32.0	27.0	**46.0**	17.0	28.4	29.3
1400-1500	36.0	36.0	38.0	31.0	**44.0**	21.0	**37.0**	37.0	34.7
1500-1600	**47.0**	**38.0**	**50.0**	**50.0**	33.0	28.0	17.0	**43.6**	**37.6**
1600-1700	32.0	26.0	45.0	38.0	28.0	27.0	31.0	33.8	32.4
1700-1800	35.0	23.0	19.0	22.0	32.0	14.0	14.0	26.2	22.7
1800-1900	25.0	12.0	27.0	24.0	17.0	14.0	21.0	21.0	20.0
1900-2000	9.0	7.0	8.0	9.0	7.0	11.0	5.0	8.0	8.0
2000-2100	5.0	5.0	1.0	0.0	16.0	5.0	7.0	5.4	5.6
2100-2200	9.0	2.0	3.0	1.0	1.0	5.0	2.0	3.2	3.3
2200-2300	4.0	0.0	1.0	1.0	1.0	2.0	0.0	1.4	1.3
2300-2400	1.0	0.0	1.0	1.0	8.0	3.0	3.0	2.2	2.4
Totals									
0700-1900	429.0	384.0	498.0	421.0	426.0	365.0	304.0	431.6	403.9
0600-2200	475.0	418.0	533.0	452.0	464.0	400.0	325.0	468.4	438.1
0600-0000	480.0	418.0	535.0	454.0	473.0	405.0	328.0	472.0	441.9

0000-0000	493.0	433.0	547.0	475.0	485.0	410.0	328.0	486.6	453.0
AM Peak	0700	1100	1100	1000	0900	1100	1000		
	41.0	56.0	60.0	48.0	50.0	39.0	38.0		
PM Peak	1500	1500	1500	1500	1400	1300	1400		
	47.0	38.0	50.0	50.0	44.0	46.0	37.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-498 -- English (ENA)

Datasets:

Site:	**[# 68 Canaipa Pt Dr] # 68 Canaipa Point Drive Russell Island<50>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 1
Survey Duration:	10:00 Thursday, 2 November 2017 => 9:53 Friday, 10 November 2017,
Zone:	
File:	# 68 Canaipa Pt Dr.EC0 (Plus)
Identifier:	U4576ZH8 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 3171 / 3645 (87.00%)

Class Speed Matrix

ClassMatrix-498
Site: # 68 Canaipa Pt Dr.1.2NS
Description: **# 68 Canaipa Point Drive Russell Island<50>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	38	.	1	1	1	.	.	.	.	.	.	.	41	1.3%
20 - 30	76	1	1	.	1	.	.	.	.	.	.	.	79	2.5%
30 - 40	93	4	27	1	.	.	2	.	.	.	.	.	127	4.0%
40 - 50	485	9	56	1	.	1	2	.	.	.	.	.	554	17.5%
50 - 60	1279	24	83	3	.	.	.	.	.	.	.	.	1389	43.8%
60 - 70	707	13	59	2	.	.	.	.	.	2	.	.	783	24.7%
70 - 80	145	.	18	.	1	.	.	.	.	.	.	.	164	5.2%
80 - 90	17	.	3	.	.	.	.	.	.	.	.	.	20	0.6%
90 - 100	7	.	.	.	.	.	.	.	.	.	.	.	7	0.2%
100 - 110	5	.	.	.	.	.	.	.	.	.	.	.	5	0.2%
110 - 120	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
120 - 130	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	2854	51	248	8	3	1	4	0	0	2	0	0	3171	
	90.0%	1.6%	7.8%	0.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-500 -- English (ENA)

Datasets:

Site:	**[Canaipa Pt Dr Keats] Canaipa Pt Dr near Keats Street on Pole # P233738 Russell Island<50>**
Attribute:	Russell Island
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 1
Survey Duration:	11:00 Thursday, 2 November 2017 => 9:44 Friday, 10 November 2017,
Zone:	
File:	Canaipa Pt Dr Keats.EC0 (Plus)
Identifier:	V74143GK MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 1149 / 1295 (88.73%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-500
Site: Canaipa Pt Dr Keats.1.2EW
Description: **Canaipa Pt Dr near Keats Street on Pole # P233738 Russell Island<50>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.3
0100-0200	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.1
0200-0300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0300-0400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0400-0500	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.6	0.4
0500-0600	7.0	3.0	5.0	8.0	5.0	0.0	0.0	5.6	4.0
0600-0700	6.0	8.0	10.0	6.0	7.0	4.0	3.0	7.4	6.3
0700-0800	5.0	11.0	20.0	14.0	4.0	13.0	16.0	10.8	11.9
0800-0900	11.0	19.0	15.0	**21.0**	9.0	13.0	7.0	15.0	13.6
0900-1000	8.0	14.0	8.0	6.0	18.0	4.0	11.0	10.8	9.9
1000-1100	5.0	16.0	**24.0**	19.0	**24.0**	14.0	**22.0**	17.6	17.7
1100-1200	**16.0**	**29.0**	19.0	19.0	12.0	**20.0**	14.0	**19.0**	**18.4**
1200-1300	3.0	9.0	10.0	11.0	12.0	**15.0**	8.0	9.0	9.7
1300-1400	13.0	7.0	10.0	10.0	9.0	9.0	6.0	9.8	9.1
1400-1500	8.0	12.0	13.0	9.0	14.0	2.0	**17.0**	11.2	10.7
1500-1600	**20.0**	**18.0**	17.0	**23.0**	13.0	7.0	7.0	**18.2**	**15.0**
1600-1700	7.0	12.0	**17.0**	21.0	10.0	13.0	9.0	13.4	12.7
1700-1800	17.0	9.0	8.0	10.0	**14.0**	6.0	1.0	11.6	9.3
1800-1900	10.0	4.0	13.0	5.0	9.0	4.0	8.0	8.2	7.6
1900-2000	3.0	4.0	3.0	2.0	1.0	6.0	2.0	2.6	3.0
2000-2100	0.0	0.0	0.0	0.0	4.0	3.0	4.0	0.8	1.6
2100-2200	0.0	0.0	2.0	0.0	0.0	4.0	0.0	0.4	0.9
2200-2300	2.0	0.0	2.0	0.0	2.0	2.0	0.0	1.2	1.1
2300-2400	1.0	0.0	0.0	1.0	1.0	0.0	3.0	0.6	0.9
Totals									
0700-1900	123.0	160.0	174.0	168.0	148.0	120.0	126.0	154.6	145.6
0600-2200	132.0	172.0	189.0	176.0	160.0	137.0	135.0	165.8	157.3
0600-0000	135.0	172.0	191.0	177.0	163.0	139.0	138.0	167.6	159.3

0000-0000	143.0	176.0	196.0	185.0	169.0	142.0	138.0	173.8	164.1
AM Peak	1100	1100	1000	0800	1000	1100	1000		
	16.0	29.0	24.0	21.0	24.0	20.0	22.0		
PM Peak	1500	1500	1600	1500	1700	1200	1400		
	20.0	18.0	17.0	23.0	14.0	15.0	17.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-501 -- English (ENA)

Datasets:

Site:	**[Canaipa Pt Dr Keats] Canaipa Pt Dr near Keats Street on Pole # P233738 Russell Island<50>**
Attribute:	Russell Island
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 1
Survey Duration:	11:00 Thursday, 2 November 2017 => 9:44 Friday, 10 November 2017,
Zone:	
File:	Canaipa Pt Dr Keats.EC0 (Plus)
Identifier:	V74143GK MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 1149 / 1295 (88.73%)

Class Speed Matrix

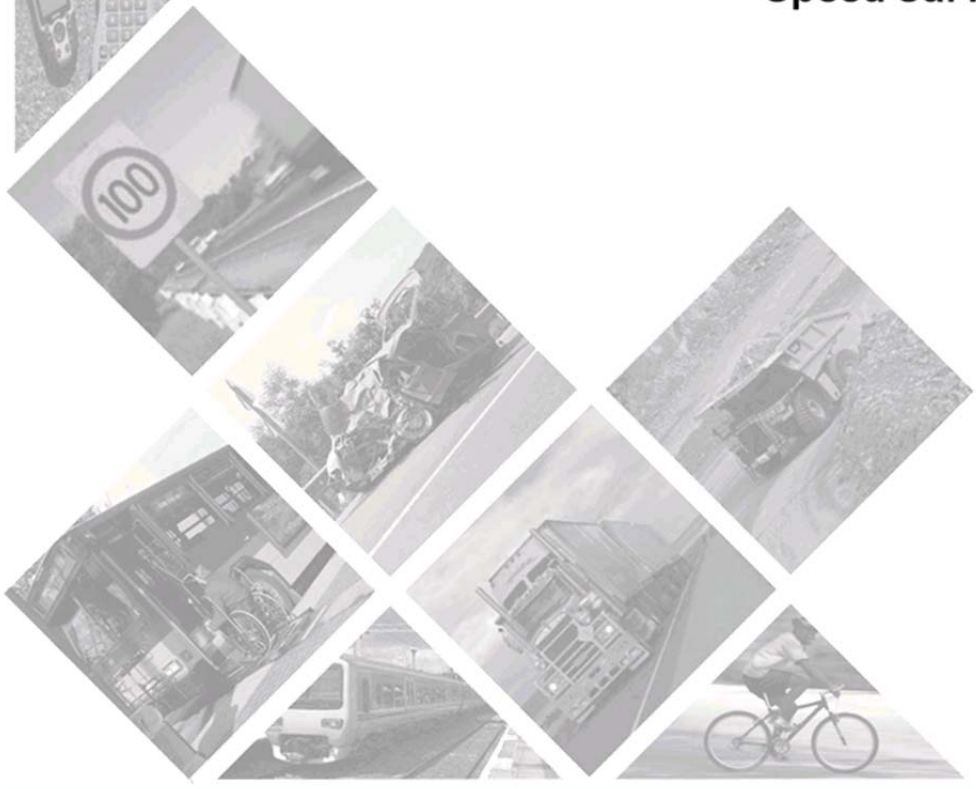
ClassMatrix-501
Site: Canaipa Pt Dr Keats 1.2EW
Description: **Canaipa Pt Dr near Keats Street on Pole # P233738 Russell Island<50>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	15	.	1	.	1	.	.	.	.	.	.	.	17	1.5%
20 - 30	54	.	1	.	.	.	.	.	.	.	.	.	55	4.8%
30 - 40	178	4	15	2	.	.	.	.	.	2	.	.	201	17.5%
40 - 50	451	5	18	1	.	.	.	.	.	.	.	.	475	41.3%
50 - 60	304	6	10	.	.	.	.	.	.	.	.	.	320	27.9%
60 - 70	72	.	2	.	.	.	.	.	.	.	.	.	74	6.4%
70 - 80	7	.	.	.	.	.	.	.	.	.	.	.	7	0.6%
80 - 90	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
90 - 100	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
100 - 110	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
110 - 120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120 - 130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	1081	15	47	3	1	0	0	0	0	2	0	0	1149	
	94.1%	1.3%	4.1%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%		



RoadPro
CONSULTING

Appendix F
Speed survey data



Traffic Engineering and Road Safety Specialists www.roadpro.net.au

MetroCount Traffic Executive
Speed Statistics

SpeedStat-21 -- English (ENA)

Datasets:

Site:	**[Canaipa Rd Ritson St] Canaipa Road near Ritson Street on Pole # 65659 Russell Island <60>**
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	19:00 Thursday, 2 November 2017 => 10:04 Friday, 10 November 2017
Zone:	
File:	Canaipa Rd Ritson St.EC0 (Plus)
Identifier:	AE118HVT MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**19:00 Thursday, 2 November 2017 => 10:04 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 8075 / 8525 (94.72%)

Speed Statistics

SpeedStat-21
Site: Canaipa Rd Ritson St.0.0EW
Description: **Canaipa Road near Ritson Street on Pole # 65659 Russell Island <60>**
Filter time: **19:00 Thursday, 2 November 2017 => 10:04 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 8075
Posted speed limit = 60 km/h, Exceeding = 2610 (32.32%), Mean Exceeding = 66.29 km/h
Maximum = 126.5 km/h, **Minimum** = 12.6 km/h, **Mean** = 56.2 km/h
85% Speed = 64.8 km/h, **95% Speed** = 71.3 km/h, **Median** = 56.5 km/h
15 km/h Pace = 50 - 65, **Number in Pace** = 5187 (64.24%)
Variance = 101.55, **Standard Deviation** = 10.08 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	8075	100.0%	0.00	0.00	0.00
10 - 20	51	0.6%	51	0.6%	8024	99.4%	0.00	0.00	0.00
20 - 30	104	1.3%	155	1.9%	7920	98.1%	0.00	0.00	0.00
30 - 40	274	3.4%	429	5.3%	7646	94.7%	0.00	0.00	0.00
40 - 50	1279	15.8%	1708	21.2%	6367	78.8%	0.00	0.00	0.00
50 - 60	3757	46.5%	5465	67.7%	2610	32.3%	0.00	0.00	0.00
60 - 70	2090	25.9%	7555	93.6%	520	6.4%	0.00	0.00	0.00
70 - 80	434	5.4%	7989	98.9%	86	1.1%	0.00	0.00	0.00
80 - 90	66	0.8%	8055	99.8%	20	0.2%	0.00	0.00	0.00
90 - 100	14	0.2%	8069	99.9%	6	0.1%	0.00	0.00	0.00
100 - 110	4	0.0%	8073	100.0%	2	0.0%	0.00	0.00	0.00
110 - 120	1	0.0%	8074	100.0%	1	0.0%	0.00	0.00	0.00
120 - 130	1	0.0%	8075	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	8075	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	8075	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	8075	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	8075	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	8075	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	8075	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	8075	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	5465	67.7%	2610	32.3%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-24 -- English (ENA)

Datasets:

Site:	**[Canaipa Pt Dr Phnx] Canaipa Point Drive near Phoenix Street on Pole # P50038 Russell Island <50>**
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	11:00 Thursday, 2 November 2017 => 9:58 Friday, 10 November 2017
Zone:	
File:	Canaipa Pt Dr Phnx.EC0 (Plus)
Identifier:	U462EWVX MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:00 Thursday, 2 November 2017 => 9:58 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 4339 / 4514 (96.12%)

Speed Statistics

SpeedStat-24
Site: Canaipa Pt Dr Phnx.0.0EW
Description: **Canaipa Point Drive near Phoenix Street on Pole # P50038 Russell Island <50>**
Filter time: **11:00 Thursday, 2 November 2017 => 9:58 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 4339
Posted speed limit = 60 km/h, Exceeding = 1796 (41.39%), Mean Exceeding = 66.57 km/h
Maximum = 106.1 km/h, **Minimum** = 10.0 km/h, **Mean** = 58.1 km/h
85% Speed = 66.6 km/h, **95% Speed** = 72.7 km/h, **Median** = 58.0 km/h
15 km/h Pace = 51 - 66, **Number in Pace** = 2798 (64.48%)
Variance = 97.70, **Standard Deviation** = 9.88 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	4339	100.0%	0.00	0.00	0.00
10 - 20	19	0.4%	19	0.4%	4320	99.6%	0.00	0.00	0.00
20 - 30	43	1.0%	62	1.4%	4277	98.6%	0.00	0.00	0.00
30 - 40	107	2.5%	169	3.9%	4170	96.1%	0.00	0.00	0.00
40 - 50	489	11.3%	658	15.2%	3681	84.8%	0.00	0.00	0.00
50 - 60	1885	43.4%	2543	58.6%	1796	41.4%	0.00	0.00	0.00
60 - 70	1415	32.6%	3958	91.2%	381	8.8%	0.00	0.00	0.00
70 - 80	328	7.6%	4286	98.8%	53	1.2%	0.00	0.00	0.00
80 - 90	38	0.9%	4324	99.7%	15	0.3%	0.00	0.00	0.00
90 - 100	11	0.3%	4335	99.9%	4	0.1%	0.00	0.00	0.00
100 - 110	4	0.1%	4339	100.0%	0	0.0%	0.00	0.00	0.00
110 - 120	0	0.0%	4339	100.0%	0	0.0%	0.00	0.00	0.00
120 - 130	0	0.0%	4339	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	4339	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	4339	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	4339	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	4339	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	4339	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	4339	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	4339	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	2543	58.6%	1796	41.4%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-22 -- English (ENA)

Datasets:

Site:	**[# 68 Canaipa Pt Dr] # 68 Canaipa Point Drive Russell Island<50>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 1
Survey Duration:	10:00 Thursday, 2 November 2017 => 9:53 Friday, 10 November 2017
Zone:	
File:	# 68 Canaipa Pt Dr.EC0 (Plus)
Identifier:	U4576ZH8 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**10:00 Thursday, 2 November 2017 => 9:53 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 3527 / 3645 (96.76%)

Speed Statistics

SpeedStat-22
Site: # 68 Canaipa Pt Dr.1.0NS
Description: **# 68 Canaipa Point Drive Russell Island<50>**
Filter time: **10:00 Thursday, 2 November 2017 => 9:53 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 3527
Posted speed limit = 60 km/h, Exceeding = 1128 (31.98%), Mean Exceeding = 66.55 km/h
Maximum = 116.3 km/h, **Minimum** = 11.7 km/h, **Mean** = 55.3 km/h
85% Speed = 65.2 km/h, **95% Speed** = 70.9 km/h, **Median** = 56.2 km/h
15 km/h Pace = 48 - 63, **Number in Pace** = 2104 (59.65%)
Variance = 128.02, **Standard Deviation** = 11.31 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	3527	100.0%	0.00	0.00	0.00
10 - 20	40	1.1%	40	1.1%	3487	98.9%	0.00	0.00	0.00
20 - 30	87	2.5%	127	3.6%	3400	96.4%	0.00	0.00	0.00
30 - 40	142	4.0%	269	7.6%	3258	92.4%	0.00	0.00	0.00
40 - 50	612	17.4%	881	25.0%	2646	75.0%	0.00	0.00	0.00
50 - 60	1518	43.0%	2399	68.0%	1128	32.0%	0.00	0.00	0.00
60 - 70	902	25.6%	3301	93.6%	226	6.4%	0.00	0.00	0.00
70 - 80	189	5.4%	3490	99.0%	37	1.0%	0.00	0.00	0.00
80 - 90	21	0.6%	3511	99.5%	16	0.5%	0.00	0.00	0.00
90 - 100	10	0.3%	3521	99.8%	6	0.2%	0.00	0.00	0.00
100 - 110	5	0.1%	3526	100.0%	1	0.0%	0.00	0.00	0.00
110 - 120	1	0.0%	3527	100.0%	0	0.0%	0.00	0.00	0.00
120 - 130	0	0.0%	3527	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	3527	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	3527	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	3527	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	3527	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	3527	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	3527	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	3527	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	2399	68.0%	1128	32.0%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-23 -- English (ENA)

Datasets:

Site:	**[Canaipa Pt Dr Keats] Canaipa Pt Dr near Keats Street on Pole # P233738 Russell Island<50>**
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 1
Survey Duration:	11:00 Thursday, 2 November 2017 => 9:44 Friday, 10 November 2017
Zone:	
File:	Canaipa Pt Dr Keats.EC0 (Plus)
Identifier:	V74143GK MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:00 Thursday, 2 November 2017 => 9:44 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 1275 / 1295 (98.46%)

Speed Statistics

SpeedStat-23
Site: Canaipa Pt Dr Keats.1.0EW
Description: **Canaipa Pt Dr near Keats Street on Pole # P233738 Russell Island<50>**
Filter time: **11:00 Thursday, 2 November 2017 => 9:44 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 1275
Posted speed limit = 60 km/h, Exceeding = 91 (7.14%), Mean Exceeding = 64.20 km/h
Maximum = 75.3 km/h, **Minimum** = 11.8 km/h, **Mean** = 46.3 km/h
85% Speed = 55.4 km/h, **95% Speed** = 61.6 km/h, **Median** = 46.8 km/h
15 km/h Pace = 41 - 56, **Number in Pace** = 764 (59.92%)
Variance = 97.83, **Standard Deviation** = 9.89 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	1275	100.0%	0.00	0.00	0.00
10 - 20	16	1.3%	16	1.3%	1259	98.7%	0.00	0.00	0.00
20 - 30	62	4.9%	78	6.1%	1197	93.9%	0.00	0.00	0.00
30 - 40	216	16.9%	294	23.1%	981	76.9%	0.00	0.00	0.00
40 - 50	532	41.7%	826	64.8%	449	35.2%	0.00	0.00	0.00
50 - 60	358	28.1%	1184	92.9%	91	7.1%	0.00	0.00	0.00
60 - 70	84	6.6%	1268	99.5%	7	0.5%	0.00	0.00	0.00
70 - 80	7	0.5%	1275	100.0%	0	0.0%	0.00	0.00	0.00
80 - 90	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
90 - 100	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
100 - 110	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
110 - 120	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
120 - 130	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	1275	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	1184	92.9%	91	7.1%



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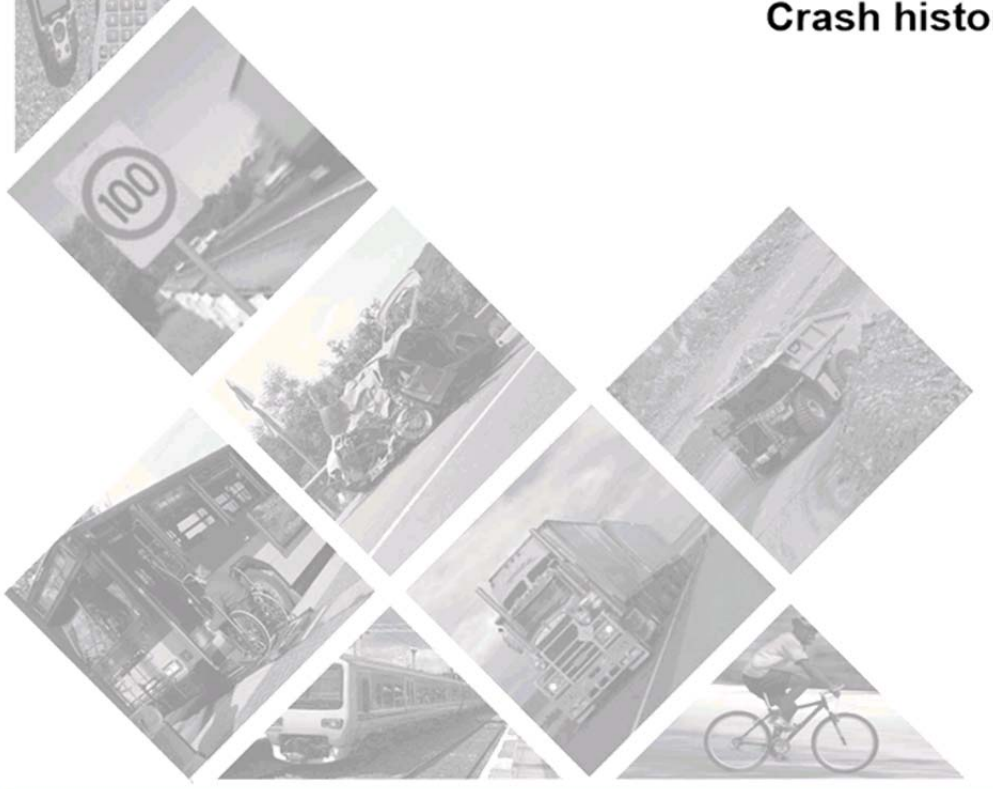
Appendix G
Crash history data



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Data Analysis
Customer Services, Safety and Regulation Division

WebCrash v2.3 Reports

The page numbers shown here are those of the overall PDF file (they range 1-10).
The PDF page numbers appear at the top left-hand corner of each page.
Pages within individual reports are numbered from 1 and appear at the top right-hand corner of each page.
When printing specific reports with Acrobat Reader, the PDF page numbers must be specified.

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Data Restrictions

Please note:-

IMPORTANT MESSAGE

Around 10% to 15% of non-fatal crash records for 1 July 2012 to 31 December 2014 are incomplete and unavailable. Data Analysis are addressing the issues to resolve this problem as soon as possible.

The crash data for 1 July 2012 to 31 December 2014 is being made available and users must exercise caution when analysing this data.

The data CAN be used to identify locations where crash frequency has increased, however, the degree of increase may be under-reported and some locations may not be identified. The data CAN be used to examine individual crash details.

The data is NOT suitable for:

* Time series trend analysis

* Comparison of characteristics

* Evaluation of crash reductions

* Evaluation of crash risk

* Crash rates (per VKT, per Vehicle type, per licence holder, per population)

With 10% to 15% of crash records unavailable the data is under-reported, biased and fairly limited for analytical purposes, however, it is considered a reasonable level of completeness for Black Spot submissions and examining individual crash details.

The Department of Transport and Main Roads (TMR) WebCrash system reports on the following crash data - fatal to 31 August 2017, hospitalisation to 31 May 2017, medical treatment to 31 May 2017, minor injury to 31 May 2017 and property damage only to 31 December 2010.

Road Crash Data Inclusion Requirements

Please also note that the information held in the RoadCrash database relating to crashes occurring within the last 12 months are considered preliminary as investigations into crashes can take up to 12 months to finalise. Please further note that to qualify as valid, crashes must meet the following criteria:

1. The crash occurred on a public road, and
2. A person was killed or injured, or
3. At least one vehicle was towed away, or
4. The value of property damage was:
   (a) $2500 damage to property other than vehicles (after 1 December 1999)
   (b) $2500 damage to vehicle and property (after 1 December 1991 and prior to 1 December 1999)
   (c) $1000 damage to property (prior to 1 December 1991)

Note: crashes resulting from medical conditions or deliberate acts are excluded.

Contact Details:

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Report 1

Crash Details by Crash Number

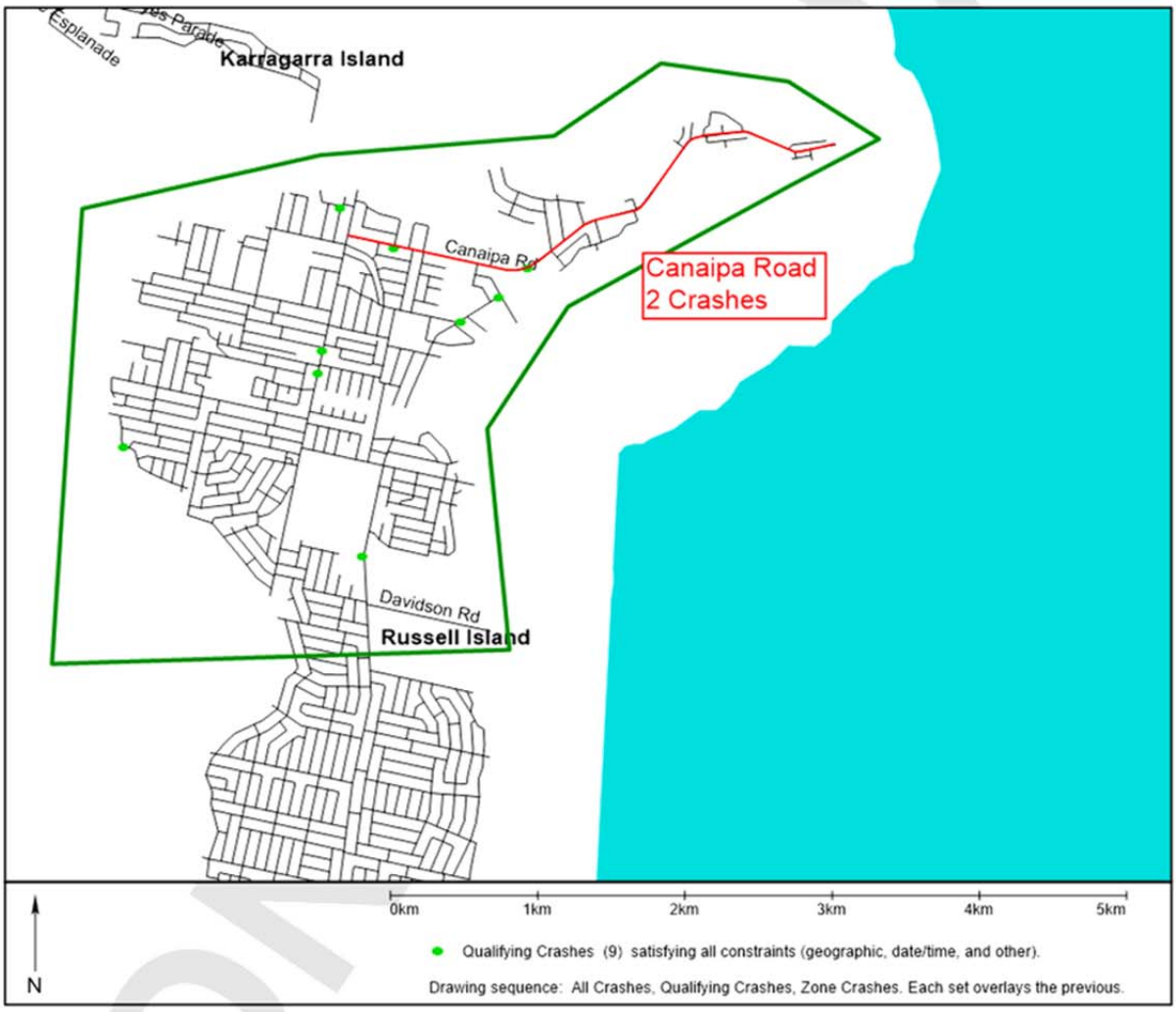
NOTE: This report has been limited to the maximum of 500 records.

Report Constraints

Geographic Constraints
Map

and

Date and Time Constraints
Continuous time: Jun-2012 to Dec-2017



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Report 1

Crash Details by Crash Number

Unit Number	1 of 2	**Licence State**	N/A
Unit Type	Bicycle	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	15	**Damage**	Not applicable
Controller AgeGroup	12-16	**Unit Headed Direction**	MISSING FROM wc_report_column_values
Licence Type	Not applicable		

Unit Number	2 of 2	**Licence State**	N/A
Unit Type	Car; Station Wagon	**Origin State**	QLD
Controller Gender	F	**Intended Action**	Go straight ahead
Controller Age	40	**Damage**	Minor
Controller AgeGroup	40-49	**Unit Headed Direction**	South
Licence Type			

Contributing Circumstances

Unit 1 DRIVER CONDITIONS - MISCELLANEOUS

Unit 2 NOT APPLICABLE

Injury Details

Injured Person	1 of 1	**Age Group**	12-16
Unit Number	1	**Road User**	Bicycle Rider
Injury Severity	Medically treated	**Restraint**	Not Applicable
Gender	M	**Helmet**	Unknown

Crash Number	20131541886 (3 of 9)	**Longitude GDA94**	153.384952
Date and Time	Tue 10-Dec-2013 4pm	**DCA Coding**	Veh'S Manoeuvring. Entering From Footway(408)
QT Region	South East Region (Mr)	**Crash Nature**	Angle
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Fatal
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	T Junction
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Canaipa Rd	**Lighting Condition**	Daylight
Intersecting St	Hawthornden Dr	**Atmospheric Cond.**	Clear
Latitude GDA94	-27.649214		

Crash Description

At about 4.50pm on Tuesday the 10th December 2013, xxxxxxxxxxxxxxxxxxxxxxxxxxxx was travelling along Canaipa Rd Russell Island in a grey Mitsubishi Magna sedan with Qld rego xxxxxx. This vehicle was travelling in a westerly direction. At the intersection with Hawthornden Dr a 8 year old child was riding a green bicycle and had come from a vacant block of land on the left hand side opposite Hawthornden Dr. The front left of the vehicle collided with the rider and bicycle and the riders head hit the front left side of the windscreen. The driver swerved to the right braked and stopped. He then drove to the left hand side of the road and stopped the vehicle. Ran back to the boy and commenced CPR. QAS arrived shortly after followed by Police.
A medivac was organised with QAS. Rider was transported to the Jackson Road helipad. Staff from EMQ worked on the child at the landing zone. The child was pronounced deceased by doctor from EMQ helicopter. Forensic crash unit attended scene.
Canaipa Rd is a sealed bitumen Road, no dividing line. Hawthornden Dr is an unsealed dirt road. Weather was overcast and daylight at the time. Cement footpath on southern side of Canaipa Rd. Canaipa Rd is wide enough for vehicles to travel in opposite directions.
(GCL has no record of blood sample for U2 at time of processing, 30/1/14)
3/2/14 - UNIT 1 CC 890 VS IUA 14 VALIDATED (SO)

Unit Number	1 of 2	**Licence State**	N/A
Unit Type	Bicycle	**Origin State**	UNK
Controller Gender	M	**Intended Action**	Enter Roadway
Controller Age	8	**Damage**	Not applicable
Controller AgeGroup	5-11	**Unit Headed Direction**	North
Licence Type	Not applicable		

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Report 1

Crash Details by Crash Number

Unit Number	2 of 2	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	UNK
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	41	**Damage**	Minor
Controller AgeGroup	40-49	**Unit Headed Direction**	West
Licence Type	Open		

Contributing Circumstances

Unit 1 MISCELLANEOUS

Unit 2 NOT APPLICABLE

Injury Details

Injured Person	1 of 1	**Age Group**	5-11
Unit Number	1	**Road User**	Bicycle Rider
Injury Severity	Fatality	**Restraint**	Not Applicable
Gender	M	**Helmet**	Not Worn

Crash Number	20141703823 (4 of 9)	**Longitude GDA94**	153.380182
Date and Time	Thu 4-Dec-2014 4pm	**DCA Coding**	Ped'N; Play; Work; Stand; Lie On C'Way(004)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Pedestrian
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Minor Injury
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	High St	**Lighting Condition**	Daylight
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.657077		

Crash Description

Pedestrian saw vehicle parked on vacant allotment next to his girlfriends address, approached driver whom he believed wanted to talk to him. Driver wound down her window and reversed suddenly hitting the pedestrian on his elbow and running over his right foot. Driver then left. QAS attended but did not transport. Pedestrian still able to stand on foot. Police spoke to driver who stated that the pedestrian came to her car all threatening and angry. Stated that the pedestrian kicked her passenger tyre and thumped the bonnet of her car. She stated that she wound up her windows and drove off. Stated that at no stage did the pedestrian hit the car. She denied hitting the pedestrian.

Unit Number	1 of 2	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	F	**Intended Action**	Start from parked
Controller Age	60	**Damage**	Unknown
Controller AgeGroup	60-69	**Unit Headed Direction**	North
Licence Type	Open		
Unit Number	2 of 2	**Licence State**	N/A
Unit Type	Pedestrian	**Origin State**	
Controller Gender	M	**Intended Action**	Remain stationary
Controller Age	49	**Damage**	Not applicable
Controller AgeGroup	40-49	**Unit Headed Direction**	North
Licence Type	Not applicable		

Contributing Circumstances

Unit 1 MISCELLANEOUS

Unit 2 MISCELLANEOUS

Injury Details

Injured Person	1 of 1	**Age Group**	40-49
Unit Number	2	**Road User**	Pedestrian
Injury Severity	Minor injury	**Restraint**	Not Applicable
Gender	M	**Helmet**	Not Applicable

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Report 1

Crash Details by Crash Number

Injury Details

Injured Person	1 of 1	**Age Group**	50-59
Unit Number	1	**Road User**	Driver
Injury Severity	Medically treated	**Restraint**	Fitted - Not Worn
Gender	M	**Helmet**	Not Applicable

Crash Number	20151482690 (6 of 9)	**Longitude GDA94**	153.380433
Date and Time	Wed 14-Oct-2015 10pm	**DCA Coding**	Off Path-Straight:Right Off Cway Hit Obj(704)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	High St	**Lighting Condition**	Darkness - lighted
Intersecting St	Highland St	**Atmospheric Cond.**	Clear
Latitude GDA94	-27.655676		

Crash Description

Police had attended a disturbance involving the driver at another address. The driver had driven off from that scene prior to police attendance. At the disturbance, his mother advised that he had been drinking rum most of the afternoon and that he had driven off in an unregistered vehicle her sister had given him. After leaving the disturbance police drove towards the station and observed a rural fire officer outside the fire station. He advised that there was a vehicle accident on High Street. Police attended this location and observed the drivers vehicle with extensive damage to the front end. Witnesses have observed the driver weaving along the road. The driver was breath tested which returned a reading of 0.195% and required to provide blood at the hospital. Driver transported to Redlands Hospital, appeared to suffer minor injuries only. Driver only has a learners permit.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	19	**Damage**	Extensive; unrepairable
Controller AgeGroup	17-20	**Unit Headed Direction**	North
Licence Type	Learner		

Contributing Circumstances

Unit 1 VIOLATION - OVER PRESCRIBED CONCENTRATION OF ALCOHOL

Injury Details

Injured Person	1 of 1	**Age Group**	17-20
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Fitted - Unknown if Worn
Gender	M	**Helmet**	Not Applicable

Crash Number	20161449269 (7 of 9)	**Longitude GDA94**	153.394181
Date and Time	Wed 3-Aug-2016 3pm	**DCA Coding**	Off Path-Curve: Off Cway Lt Bend Hit Obj(804)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	60
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Curved-View open
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Canaipa Rd	**Lighting Condition**	Daylight
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.650098		

Crash Description

The driver of unit 1 was travelling home to Sarmar Street Russell Island after collecting her child from the Russell Island State School. The driver stated that there was a car in front of her which caused her to lose control. No description of the vehicle. Unit 1 has then travelled across the road travelling over a concrete footpath with the front left end hitting a tree.

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Report 1

Crash Details by Crash Number

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car, Station Wagon	**Origin State**	
Controller Gender	F	**Intended Action**	Go straight ahead
Controller Age	47	**Damage**	Moderate - towed away
Controller AgeGroup	40-49	**Unit Headed Direction**	East
Licence Type	Open		

Contributing Circumstances

Unit 1 VIOLATION - OVER PRESCRIBED CONCENTRATION OF ALCOHOL

Injury Details

Injured Person	1 of 1	**Age Group**	40-49
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Fitted - Worn
Gender	F	**Helmet**	Not Applicable

Crash Number	20161801640 (8 of 9)	**Longitude GDA94**	153.392388
Date and Time	Sat 24-Sep-2016 6pm	**DCA Coding**	Off Path-Curve: Off Cway Lt Bend Hit Obj(804)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	T Junction
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Carissa St	**Lighting Condition**	Darkness - unlighted
Intersecting St	Anzac Dr	**Atmospheric Cond.**	Clear
Latitude GDA94	-27.651937		

Crash Description

On the 24/09/2016, Police detailed to attend Carissa street, Russell Island re single VEH crash. Police, QAS and rural Fire Brigade in attendance. Police observed VEH X had hit, and still in contact with, a large tree, off road on Carissa Street, Russell Island. On attendance, driver receiving treatment outside the drivers side door of the VEH. Witness X on scene. X witness/will say report available. Driver details, X. Heavy impact with the tree, off road. Air bags deployed Driver showed indicia of alcohol/drug influence. Driver X stated to Police that he remembers playing with the car radio, and then hitting a large bump, and being airborne, before impact of the tree. X denied being under the influence of alcohol or drugs. Driver was transported to the Redlands hospital by QAS from Russell Island. Rural fire brigade attending advised Police, no requirement to tow vehicle, no hazzard to street traffic, VEH to be towed at later date by owner. Police requested a job for local crews to attend the Redlands hospital to require a blood sample for dangerous drugs. Job no. X (24/09/2016) Police attended X listed home address ofX and TUW GODDARD's parents. X mother X , stated that X suffers from mental illness, and is currently taking a number of medications. X is being treated for ADHD, anxiety and depression. X is currently taking Ritalin and other forms of anti-depressants. X stated to Police that Mark had attended their house atX earlier in the evening, and she was concerned about his behaviour, which is due to the medication he is taking. X stated to Police that X seemed to have a short attention span, and at times seemed confused. Police advised by attending crew for blood requirement (W450) that driver had been diverted to the Princess Alexandra Hospital. Crew informed by X to disregard blood requirement job. Police unable to obtain blood sample within 3 hrs of accident.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car, Station Wagon	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	39	**Damage**	Extensive, unrepairable
Controller AgeGroup	30-39	**Unit Headed Direction**	North
Licence Type	Open		

Contributing Circumstances

Unit 1 LIGHTING - NO STREET LIGHTING
Unit 1 CONDITION - UNDER INFLUENCE OF LIQOUR/DRUG
Unit 1 DRIVER - MEDICAL CONDITION (HEART ATTACK, EPILEPSY ETC.)

Injury Details

Injured Person	1 of 1	**Age Group**	30-39
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Fitted - Worn
Gender	M	**Helmet**	Not Applicable

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Appendix H
Proposed sign layouts

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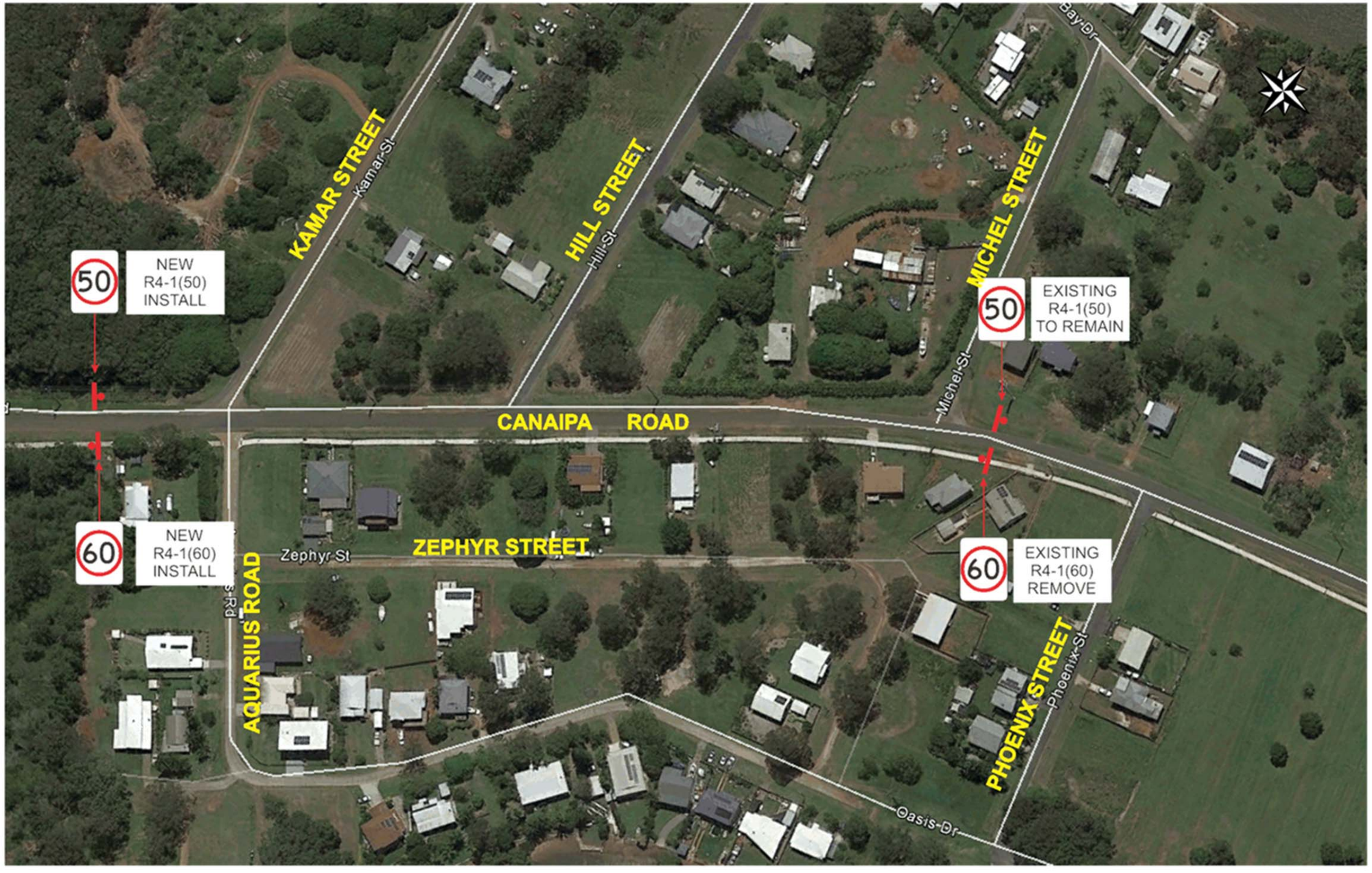

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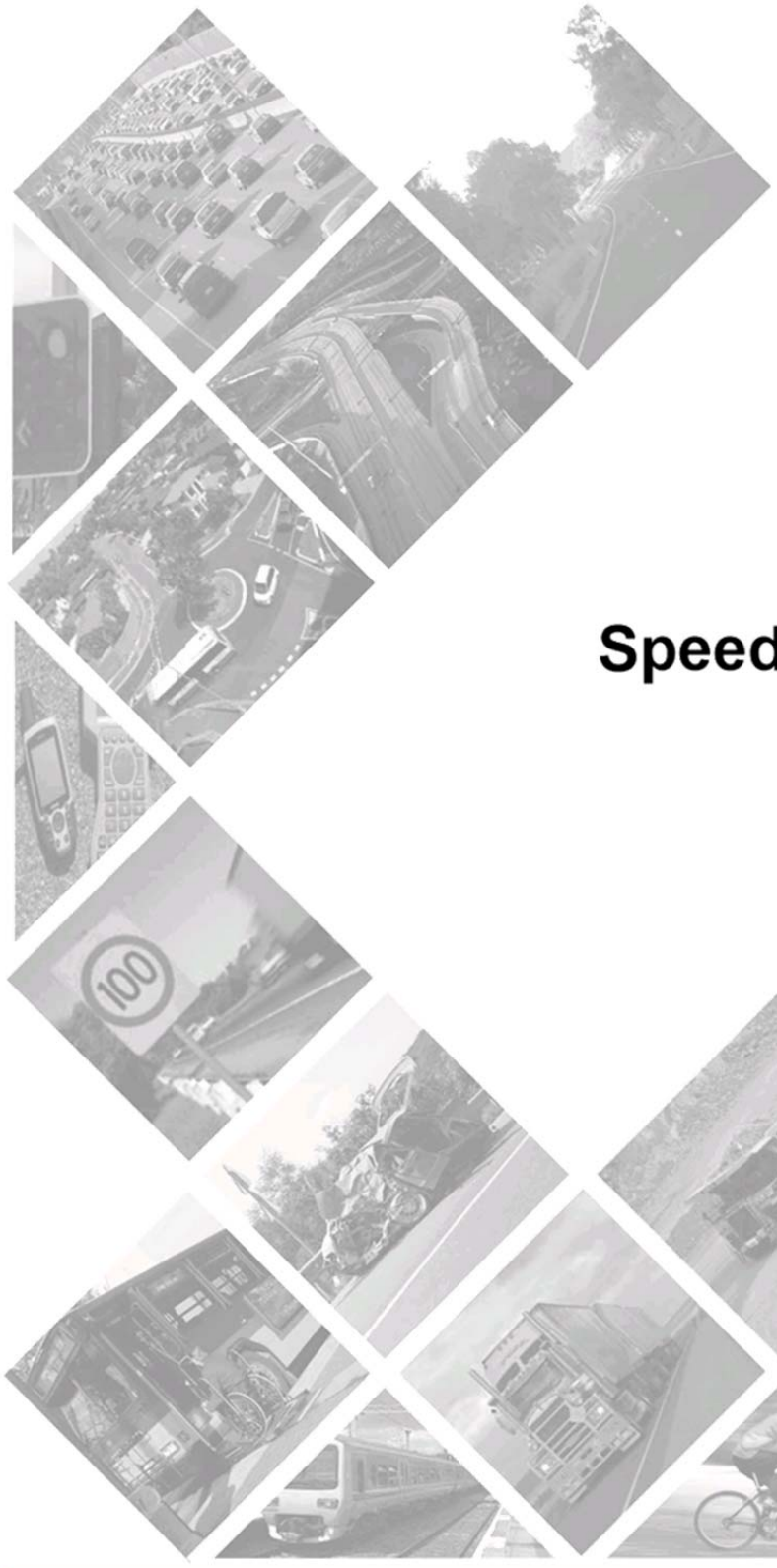
LOCATION :
CANAIPA ROAD
RUSSELL ISLAND

DESCRIPTION :
SPEED LIMIT REVIEW - SEGMENT 1
PROPOSED SIGN CHANGES
SHEET 1 OF 1

SCALE : NOT TO SCALE
SHEET : 1 of 1
DRAWN BY : LJK
DRG. No : **SK-01**
DATE : 25 JANUARY 2018



RoadPro CONSULTING

Speed Limit Review

Minjerriba Road, Russell Island

Prepared for Redland City Council

13 February 2018

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Document control

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Draft V1	26.01.2018	Luke Kidd	Initial draft
Draft V2	27.01.2018	Darren Shirley	Review
Draft V3	01.02.2018	Lisa Shirley	Editorial amendments
Final	13.02.2018	Darren Shirley	Final report

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Client sign-off

Prepared for:
Redland City Council

Project description:
Speed limit review: Minjerriba Road, Russell Island

Document sign-off:
The following officer acknowledges receipt of this document on behalf of Redland City Council:

Name Russell Smith

Position Adviser Traffic Safety

Signature _____ Date 13/02/2018

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1 Introduction

This report presents the findings of a formal speed limit review conducted on Minjerriba Road, Russell Island. The speed limit review has been undertaken by RoadPro Consulting at the request of Redland City Council.

The review has been conducted in accordance with the speed limit review process outlined in the *Manual of Uniform Traffic Control Devices* (MUTCD), Part 4: Speed Controls (Ninth Issue, 31 May 2017) and the Supplement to the MUTCD, Part 4: Speed Controls (May 2016).

Figure 1 illustrates the location of the speed limit review.

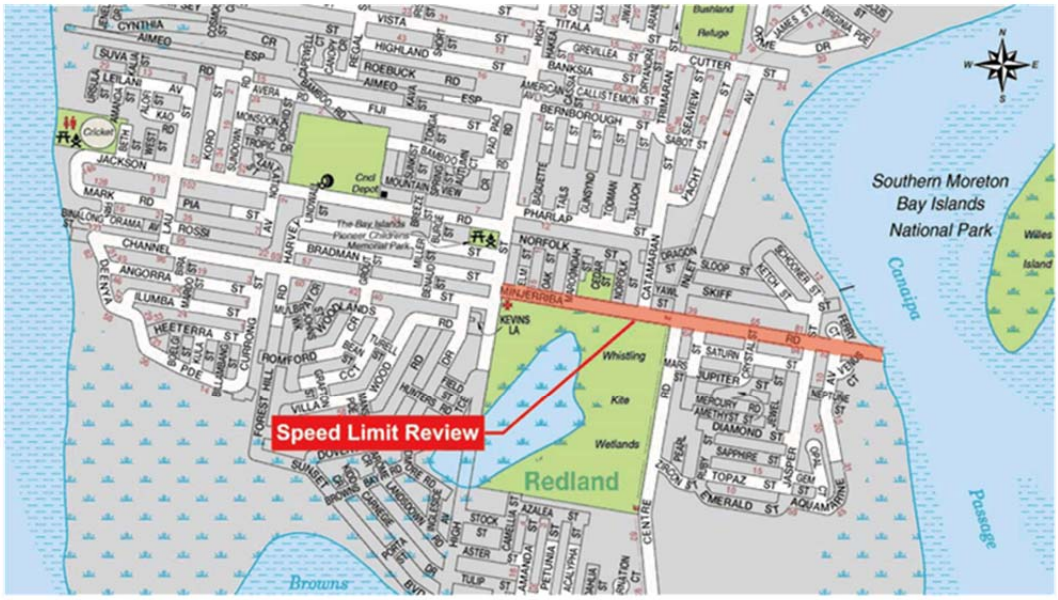

Figure 1: Location of speed limit review – Minjerriba Road (Source: UBD Gregory's Australian City Streets v7.0)

1.1 Abbreviations and acronyms

ADT	Annual Daily Traffic
ERU	Equivalent Risk Unit
MUTCD	*Manual of Uniform Traffic Control Devices*
VKT	vehicle kilometres travelled
vpd	vehicles per day

2 Site details

Minjerriba Road is situated at the northern end of Russell Island, approximately 1.8km south of the High Street Ferry Terminal. It is a local government controlled road that is managed by Redland City Council (Council).

The road extends east from High Street for 1.08km, terminating immediately east of the intersection with Ferry Court and Aquamarine Avenue. This speed limit review covers the entire 1.08km of Minjerriba Road.

Minjerriba Road is in a partially developed urban area and is bound by a mixture of residential lots and parkland on both sides.

The road has a single carriageway that operates with two-lane, two-way traffic flows. It is surfaced with a bitumen seal that has a typical width of 6.0m on the western side of Centre Road and widths that range between 5.0m and 5.5m on the eastern side of Centre Road.

At the time of the review a 60km/h speed limit was signed along the western section of Minjerriba Road and the section east of Centre Road was subject to the general local street speed limit of 50km/h.

3 Previous speed reviews

A search of the historical records in the QLIMITS (SLR QLD) program returned no records of previous reviews on the subject road section.

4 Traffic data

The average daily traffic (ADT) volume was obtained from count data collected by Council in November 2017. The count site, situated near the Oak Street intersection, yielded an ADT of 2249 vehicles per day, with a commercial vehicle content of 5.3%.

Refer to **Appendix E** for further traffic volume details.

5 Homogeneity of road section

Part 4/4.3.2 of the MUTCD suggests the speed limit review process should be applied only to segments of road which are homogenous in terms of characteristics and speed environment.

A subjective assessment of the continuity of the road was undertaken with regard to: functional classification, density of roadside development, frequency of accesses and intersections, visibility and setback of buildings, general speed environment, alignment, existing speed limits, and traffic volume.

It was determined that for this review, the subject road section formed two separate homogenous segments:

- Segment 1 extends for 560m between the intersections with High Street and Centre Road
- Segment 2 extends for 520m between the Centre Road intersection and approximately 10m east of the Aquamarine Avenue and Ferry Court intersection.



Figure 2: Homogenous road segments

The relevant factors that resulted in the determination of two segments were:

- The segment west of Centre Road provided an important 'traffic-carrying function', in contrast with the segment east of Centre Road that had a lower order function where access to properties dominated.
- The existing speed limits in each segment differed by 10km/h.
- The abutting land use in Segment 2 consisted solely of consolidated residential development. This differed from Segment 1 that had large areas of undeveloped land on both sides of the road, including the entire southern roadside and a block with a 130m frontage on the northern roadside that were both allocated as parkland.
- The road cross section narrowed on the eastern side of Centre Road and was more consistent with that expected in a lower speed environment.

6 Determination of appropriate speed limit

Part 4/4.2.1 of the MUTCD suggests the following criteria should be considered for a length of road in the determination of speed zones:

a) Stage 1 - road function
b) Stage 2 - prevailing speeds
c) Stage 3 - speed environment.

The MUTCD also suggests other issues, such as crash history and potential risk factors, be considered prior to the recommendation of an appropriate speed limit. The following analysis applies the standard procedure for the determination of an appropriate speed limit as described in Part 4/4.3.3 of the MUTCD.

6.1 Stage 1 - Road function

The initial assessment of the appropriate speed limit is made by identifying the typical speed limit associated with the road's function. This is a limit that in the first instance is likely to match the road users' expectations of the appropriate limit.

The process of identifying a typical speed limit for the homogenous road segment requires a determination to be made about the following criteria:

- functional classification
- roadside environment
- design standard.

6.1.1 Functional classification

Minjerriba Road served a mixture of functions in the road network hierarchy. The section west of Centre Road (Segment 1) formed part of the primary north-south transport link. Its principal function was to transport passengers and goods between neighbourhoods and local areas across Russell Island.

The section east of Centre Road (Segment 2) served as a lower order access road and collector street. Its primary function was to provide access to abutting properties and other access streets that serviced a local area of approximately 465 residential blocks.

Using the classifications shown in Tables A1 to A3, Appendix A, Part 4 of the MUTCD, and with reference to Council's road hierarchy system, the functional classification of each road segment have been identified as:

- Segment 1 – Trunk Collector
- Segment 2 – Minor Collector Street.

6.1.2 Roadside environment

In accordance with the descriptions given in Appendix L, Part 4 of the MUTCD, roadside environments are typically classified using the following descriptions:

- urban area (built-up area)
- urban fringe
- rural settlement
- rural township
- rural hamlet
- rural residential area
- rural area.

Minjerriba Road was situated in an area with a mixture of consolidated and developing residential land uses. Apart from the two large lots designated as parkland, the average lot sizes were consistent with those found in a typical urban area and much less than the typical maximum residential lot size of 2000m^2.

The roadside environment along the full length of Minjerriba Road has been identified as 'urban'.

6.1.3 Design standard

A lower speed limit than that suggested by functional classification and roadside environment, may be appropriate if the design standard of the road is not compatible with the higher speed.

The design standard relates to the level of service, mobility, and safety provided by design elements such as:

- horizontal and vertical curvature
- sight distance
- superelevation
- pavement, shoulder, and lane width
- gradients
- degree of access restriction.

The design standard along Minjerriba Road was typical of that found in many developing urban areas and did not present an unsafe operating environment for the existing 50km/h or 60km/h speed limits.

6.1.4 Typical speed limit

The typical speed limits for both road segments are given in Table 1. These limits have been determined by matching the relevant road type attributes with the speed limit hierarchy given in Table B1, Appendix B, Part 4 of the MUTCD.

STAGE 1				
Homogeneous segment	**Functional classification**	**Roadside environment**	**Design standard**	**Typical speed limit (km/h)**
1	Trunk collector road	Urban	Satisfactory	**60**
2	Minor collector street	Urban	Satisfactory	**50**

Table 1: Typical speed limits

6.2 Stage 2 - Prevailing traffic speeds

Part 4/4.2.3 of the MUTCD states that prevailing traffic speeds are a major factor in the determination of a speed limit.

Speed survey data was collected on Minjerriba Road between Thursday 2 November and Friday 10 November 2017. Table 2 provides a statistical summary of the available data. Refer to **Appendix F** for further detail.

Location	No. of vehicles	Mean speed (km/h)	85th % speed (km/h)	Upper limit of 15km/h pace (km/h)	No. in pace (%)
Near Oak Street intersection / westbound	7 815	61.0	68.4	68	71.44
Near Oak Street intersection / eastbound	7 912	61.2	68.0	68	73.95

Table 2: Summary of speed survey data

The speed data, which was collected in Segment 1, showed that the measured speed distributions conformed to an acceptable distribution for the existing 60km/h speed limit (refer Table 3).

STAGE 2	
Homogenous segment	**Speed limit suggested by prevailing vehicle speeds (km/h)**
1	**60**
2	**not available**

Table 3: Prevailing traffic speed

Data was not available to analyse prevailing vehicle speeds within Segment 2. However, as Segment 2 had been identified as an urban collector street, prevailing speed data was not required to make a speed limit determination. Instead, an appropriate limit has been established in accordance with the criteria-based speed limit process detailed in Section 3, Part 4 of the MUTCD. Reference should be made to Section 6 for further detail.

6.3 Stage 3 - Speed environment

The speed environment can be described as the elements of the road and traffic environment that collectively influence a road user's perception of an appropriate maximum travel speed. In accordance with Part 4/4.2.4 of the MUTCD, the QLIMITS program has been used to assess the speed environment.

The speed limits that QLIMITS have suggested for each road segment are shown in Table 4.

STAGE 3	
Homogenous segment	**Speed limit suggested by speed environment (km/h)**
1	**60**
2	**50**

Table 4: Limits suggested by speed environment

Important criteria that formed part of the speed environment assessment is documented in the following subsections. Refer to **Appendix C**, which contains the detailed QLIMITS Assessment Report (Form F2).

6.3.1 Access frequency

Table 5 provides a summary of the frequency of roadside accesses by type for each segment.

Access type	Number of accesses	
	Segment 1	Segment 2
Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (Weighting 1).	1	16
Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side road traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (Weighting 1).	5	3
Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (Weighting 2).		3
Unsignalised intersecting roads of comparable or greater significance that the road being assessed. Intersections which have pronounced effect on the traffic flow pattern of the road being considered. (Weighting 3).	1	
Average number of accesses per 100m	**1.61**	**4.81**

Table 5: Frequency of road access by type

6.3.2 Crash history

A search of the Department of Transport and Main Roads' WebCrash2 database indicated there have been no casualty crashes on Minjerriba Road in the five-year period between 1 June 2012 and 31 December 2017 (see note*). A copy of the crash data output from the WebCrash2 program is provided in **Appendix G**.

Note: At the time of extracting crash data, the WebCrash2 database was reporting all casualty crash data to 31 May 2017. The selected crash analysis period therefore represents the most recent five-year period in which a complete data set was available.*

6.3.3 Casualty crash rate comparison

The accepted manner of measuring road crashes is in terms of exposure to risk. For road segments, exposure is measured as the distance travelled. For the purpose of this review, the casualty crash rates have been computed in terms of equivalent risk unit (ERU) per 10^8 vehicle kilometres travelled (10^8 VKT).

The calculated or 'actual' casualty crash rates have been compared to typical average and typical critical rates from similar roads, to determine if the subject section has a safety problem. The average and critical rates for Queensland roads in urban and rural environments were obtained from Part 4, Tables E2 to E5 of the MUTCD.

The actual, average, and critical crash rates are given in Table 6.

Crash rate ($10^4 ERU per $10^8 Vehicle Kilometres Travelled (VKT))			
Segment	**Actual**	**Average**	**Critical**
1	0	995.9	1 086.5
2	0	995.9	1 086.5

Table 6: Minjerriba Road crash rates

Part 4, Section E2, Appendix E of the MUTCD states that for comparison purposes, the following convention should be used to describe the crash rate in relation to typical crash rates:

- Low crash rate: Less than the average casualty crash rate
- Medium crash rate: Between average and critical casualty crash rates
- High crash rate: Greater than or equal to the critical casualty crash rate.

With reference to Table 6, both road segments have a low crash rate, which is below the average rate for the road type.

7 Criteria-based speed limit

At the time of review, a 50km/h speed limit was in place on Minjerriba Road east of Centre Road, along the full length of Segment 2. This speed limit is the default limit for local streets and falls within a category of speed limits known as 'criteria-based speed limits'.

A formal speed limit review is not required for the assessment of criteria-based speed limits, as they are determined in accordance with specific criteria for each type of limit. With regard to the '50k/h local street speed limit', the main determinant is the function of the street. If the primary function is to provide access to properties, or cater for limited neighbourhood movements, then the use of the 50km/h local street speed limit is generally appropriate. Higher speed limits are only considered on urban roads that have a primary function of carrying traffic.

As discussed in Section 5.1.1, the primary function of Segment 2 was to provide for direct access to abutting properties and access to other streets within the local area, which also serve an access function. As safe access to properties has a higher priority than traffic efficiency and mobility, the existing 50km/h local street speed limit is the most appropriate limit for Segment 2.

8 Speed limit review correlation

Table 7 shows the overall correlation between the various stages of this speed limit review on both segments of Minjerriba Road.

Stage	Description	Suggested speed (km/h)	
		Segment 1	Segment 2
1	Road function	60	50
2	Prevailing traffic speed or existing speed limit	60	n/a
3	Speed environment (QLIMITS)	60	50
Correlation		**60**	**50**

Table 7: QLIMITS speed correlation

Table 7 shows there is a correlation between all three stages of the review process for Segment 1, resulting in a suggested speed limit of 60km/h.

Table 7 also shows there is a correlation between two stages of the review process for Segment 2, resulting in a suggested speed limit of 50km/h. Although prevailing speed data was not available in Segment 2, retention of the existing 50km/h local street speed limit is considered appropriate due to the 'access' function this section of road serves (refer Section 6).

9 Recommendations

Table 8 shows the recommended speed limits for Minjerriba Road. These limits are based on outcomes using the speed limit review process outlined in Part 4 of the MUTCD. The recommended limits are in no way binding and the responsibility for the selection and implementation of an appropriate speed limit for the subject road segments rests with Council.

Segment	Recommended speed limit (km/h)
1	60
2	50

Table 8: Recommended speed limits

9.1 Actions required

The following actions are required to implement the speed limits shown in Table 8:

1. No action required, existing speed signage in place for the 60km/h speed limit within Segment 1 and 50km/h speed limit in Segment 2.



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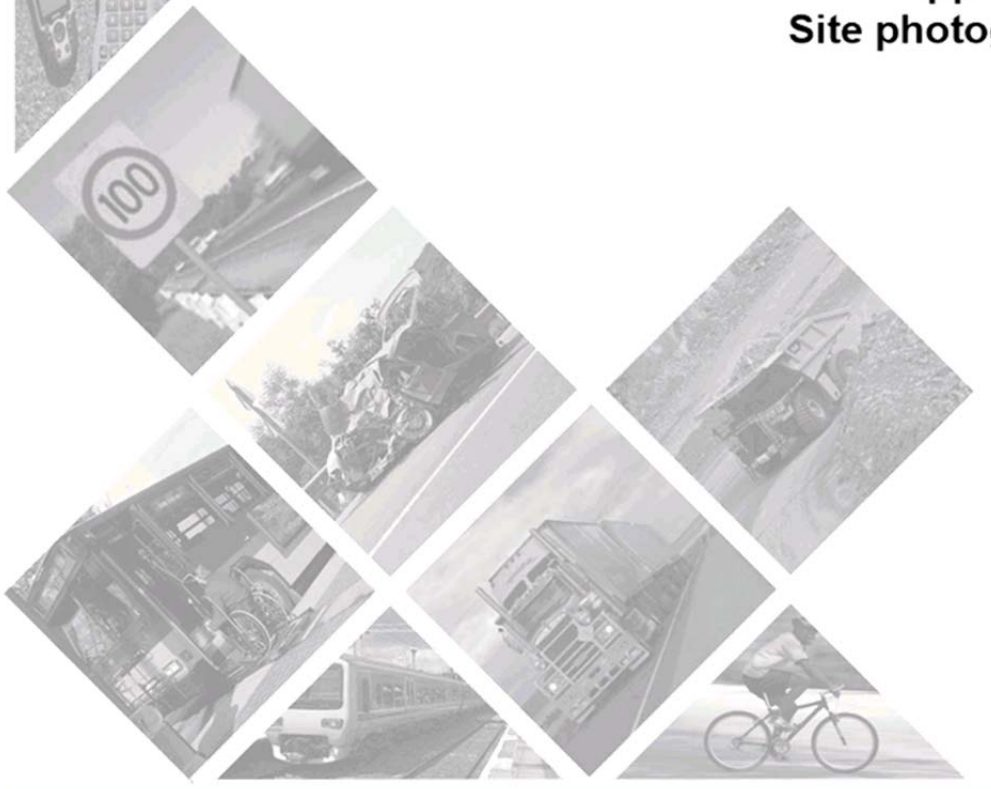
Appendix A
Site photographs



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Photograph 1: Eastbound view along Minjerriba Road from the High Street intersection (Segment 1).



Photograph 2: Eastbound view along Minjerriba Road mid-way between the High Street and Centre Road intersections (Segment 1).



Photograph 3: Eastbound view along Minjerriba Road on approach to Centre Road intersection (Segment 1).



Photograph 4: Eastbound view along Minjerriba Road from the Centre Road intersection (Segment 2).



Photograph 5: Eastbound view along Minjerriba Road mid-way between the Centre Road and Ferry Court intersections (Segment 2).



Photograph 6: Eastbound view along Minjerriba Road on approach to the Ferry Court intersection (Segment 2).



Photograph 7: Westbound view along Minjerriba Road from the Jasper Street intersection (Segment 2).



Photograph 8: Westbound view along Minjerriba Road on approach to the Centre Road intersection (Segment 2).



Photograph 9: Westbound view along Minjerriba Road from the Centre Road intersection (Segment 1).



Photograph 10: Westbound view along Minjerriba Road near the Oak Street intersection (Segment 1).



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Appendix B
QLimits field data (Form F1)



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FORM F1 QLIMITS FIELD DATA FORM

If saving this form for use at a later date, please ensure that it is the most current version. See http://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx

LOCAL GOVERNMENT/DISTRICT Redland City Council **ROAD:** Minjerriba Road

LOCATION: Russell Island

RECORDER: Luke Kidd **DATE:** 23 January 2018

Tick (✓) the appropriate box to respond

1. LOCATION OF ROAD

The area in which this road section is located is generally:

(i)	Urban:	Fully built-up area with consolidated residential, commercial and industrial land uses.	☑
(ii)	Urban Fringe:	Less developed area typically containing low-density residential, small scale farming, future urban and other 'developing' land uses.	☐
(iii)	Rural Settlement:	Small settlements or townships located in rural areas which are typically located on through roads, and where all or most land development is concentrated on, or has direct access to, those through roads.	☐
(iv)	Rural:	Areas that are rural in nature, with large property or farm holdings. The only residential properties in these areas will be scattered homesteads and farmhouses.	☐

2. LENGTH OF ROAD

The length of road section is 1.08 km

3. UPPER LIMIT OF THE 15 km/h PACE

The upper limit of the 15km/h pace of free vehicles on this road section is 68 km/h

4. DEVELOPMENT (for divided roads only)

The development on both sides of the road is:	balanced	☑
	unbalanced	☐

5. FREQUENCY OF ROADSIDE ACCESSES (for both sides of the road combined)

Note: (i) Abutting development on service roads is not considered and therefore only the points of access to the through traffic lanes are counted.
(ii) Crossroads are counted once each side of the road.

Abutting properties

(a) Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity.

Number of this type: Side 1 = 9 Side 2 = 8

(b) Average commercial establishments, local schools, caravan parks, light industries, public buildings and other units generating activity that is:

(i) continuous light

(ii) moderate at certain regular times, such as commuting hours

(iii) substantial at infrequent intervals

Number of this type: Side 1 = 0 Side 2 = 0

1

(c) Heavy industry, schools, shopping centres and other units generating
   (i) continuous moderate activity or
   (ii) substantial activity at certain regular times.

Number of this type: Side 1 = 0 Side 2 = 0

(d) Large shopping centres and other units generating substantial and continuous activity. Some large industries that are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity.

Number of this type: Side 1 = 0 Side 2 = 0

Intersections

(a) Intersecting roads of substantially lesser importance than the road being studied, or intersecting roads where side road traffic and turning movements have little effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 6 Side 2 = 2

(b) Intersecting roads of lesser importance than the road being studied but where side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 1 Side 2 = 2

(c) Signalised intersections, roundabouts and intersections with roads comparable to or of greater significance than the road being studied. Intersections which have a pronounced effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 0 Side 2 = 1

Note: (i) Abutting development on service roads is not considered and therefore only the points of access to the through traffic lanes are counted.
(ii) Crossroads are counted once each side of the road.

6. DIVIDED OR UNDIVIDED

The section of road being studied is:

- undivided ☑
- divided ☐

Note: (i) Double barrier lines do not constitute a median.
(ii) A painted median is sufficient to constitute a divided road if it extends for the full length of the section under consideration (excepting median breaks for turns, etc).

7. RESTRICTION OF ACCESS

The major part of this road has restriction of direct vehicular access on:

- neither side ☐
- one side ☑
- both sides ☐

Note: (i) This restriction may include service roads, river or railway line alongside the road or a large fenced-off area e.g. golf course, airport.

8. SETBACK

The setback of the through traffic lanes to the property boundary line is:

- less than 4 metres ☐
- 4-10 metres ☑
- more than 10 metres ☐

Note: (i) If development is balanced, the lower setback value should be used.
(ii) If development is unbalanced, the setback value for the more developed side should be used.

9. MEDIAN

The central median has a width of n/a metres

10. PROTECTION OF TURNING/CROSSING VEHICLES

The median protects turning vehicles:

- fully ☐
- only partially or not at all ☑

11. NUMBER OF LANES

The total number of traffic lanes is 2 lanes

Note: (i) include through lanes in both directions.
(ii) do not include service roads or exclusive parking lanes.
(iii) if lanes are not clearly marked, count the number of lanes normally used by drivers during busy traffic periods.

12. FUNCTION OF ROAD

The main reason that vehicles use this section of road is:

- traffic movement ☑
- access to abutting properties ☑

13. ADJACENT ROAD SECTIONS

The speed limits on the adjoining road sections are: 60 km/h 60 km/h

14. FREEWAY

Is this road a motorway, freeway or expressway? NO ☑ YES ☐

15. LOW SPEED AREA

Is this road a low speed area?

- NO ☑
- YES (LATM area) ☐
- YES (shared-use zone) ☐

16. OTHER FACTORS

Is the road predominantly winding or hilly? NO ☑ YES ☐

Is the road unusually congested? NO ☑ YES ☐

17. SPECIAL ROADSIDE ACTIVITIES

Are there any schools along this road section? NO ☑ YES ☑

18. CASUALTY CRASH RATES

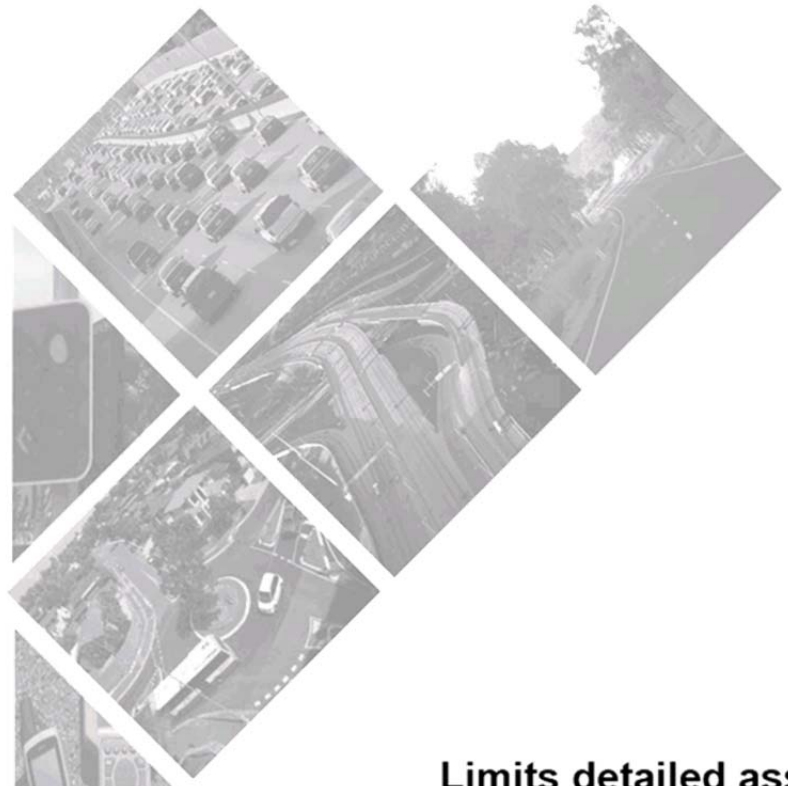
Compared to other similar road sections the casualty crash rate is:

- average or lower than average ☑
- a little higher than average ☐
- significantly higher than average ☐

Note: Care should be exercised when using historical crash rate data. Only use relevant data pertaining to crashes that have occurred whilst the road is in its current state, e.g. if an intersection has been signalised or a road recently reconstructed, only use crash data from the period following these changes.

19. TRAFFIC SIGNALS/ROUNDABOUTS

Are there any traffic signals or roundabouts along this road section? NO ☑ YES ☐



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Appendix C
Limits detailed assessment reports (Form F2)



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Speed Limit Review – Queensland (SLR-QLD)
Detailed Assessment Report

Background Information

Analysed By: Luke Kidd.
User Reference: Minjerriba_Seg1, Rev. 1
Road Name: Minjerriba Road.
Road Location: Hill Street to Centre Road.
Suburb: Russell Island.
GPS Start Point : -27.661817, 153.379405.
GPS Finish Point: -27.662665, 153.384963.
TMR Road Number: .
Local Government: 256, Redland City Council
Main Roads District: 13, Metropolitan
The need to review the speed limit on this road has occurred due to community request.
The length of the road section being assessed is 0.56 km
AADT on this road section is 2249 vpd
The existing speed limit is 60 km/h.

Adjacent Speed Zones
Approach 1: 60 km/h - Eastbound
Approach 2: 60 km/h - Westbound

Recommended Speed Limit:

60

Stage 1: Road function

This section of Minjerriba Road being assessed is located in a urban area.
The road type is: Trunk Collector Roads and Collector Roads.
The Typical Speed Limit is: 60 km/h.
The Existing Speed Limit **does** equal the Typical Speed Limit

Stage 2: Prevailing Traffic speed

Sample data on 7912 vehicles was analysed using ' '
The upper limit of 15 km/h pace is 68
The mean speed is 61 km/h
The 85th percentile speed is 68 km/h
Hence, the prevailing traffic speed data **does** correlate with the existing Speed Limit

Stage 3: QLIMITS

The suggested speed limit based on the speed environment analysis was **60 km/h** after allowing for site specific issues.

Comments
Design standard determined to be typical of a developing urban area and suitable for existing 60km/h speed limit. Crash history indicates no existing crash history. Straight geometry indicative of low crash risk.

Additional issues considered:

- A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:
  - Recreational or tourist traffic
  - Presence of aged and/or disabled persons
  - Presence of roadside hazards

- Narrow traffic lane width

Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

- Speed environment was assessed (Stage 3 was completed). Answers to the Speed Environment questions were as follows:
  - Has a comprehensive road safety audit been completed? NO
  - Did the road safety audit highlight deficiencies that have not been corrected? NO
  - Was the road safety audit conducted more than 3 years ago? NO
  - Is there a concern for pedestrian or cyclist safety along the road segment? NO
  - Are there high risk intersections in the road segment? NO

Frequency of Roadside Accesses

	Type of access	Number
A	Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (The weighting for this type of access is 1).	1
B	Average commercial establishment, local schools, caravan parks, light industries, public buildings and units generating activity which is either: 1. Continuous light. 2. Moderate at certain times, such as commuting hours. 3. Substantial at infrequent intervals. (The weighting for this type of access is 2).	0
C	Heavy industry, schools, shopping centres and other units generating continuous moderate activity or substantial activity at certain regular times. (The weighting for this type of access is 3).	0
D	Large shopping centres and other units generating substantial and continuous activity. Some large industries which are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity. (The weighting for this type of access is 4).	0
E	Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 1).	5
F	Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 2).	0
G	Unsignalised intersecting roads of comparable or greater significance than the road being assessed. Intersections which have pronounced effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 3).	1
H	Roundabouts and signalised intersecting roads. (The weighting for this type of access is 3).	0
	Average number of accesses per 100 m	1.6

Road Cross Section
The road is **Undivided**

Number of Lanes
The total number of traffic lanes on this section of road is **2**

Function of Road
The road is primarily used for **Traffic movement (freeway/arterial/sub arterial/trunk collector)**

Restrictions of Access
There are **restriction to one side only.**

Special Roadside Activities
A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:

- Recreational or tourist traffic
- Presence of aged and/or disabled persons
- Presence of roadside hazards
- Narrow traffic lane width

Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

Number of crashes in the past 5 years:

Description	No. of crashes
Head-on	0
Rear-end	0
Lane change	0
Parallel lanes, turning	0
U-turn	0
Entering roadway	0
Overtaking, same direction	0
Hit parked vehicle	0
Hit railway train	0
Pedestrian	0
Permanent obstruction on carriageway	0
Hit animal	0
Off carriageway, on straight	0
Off carriageway, on straight, hit object	0
Out of control, on straight	0
Off carriageway on curve	0
Off carriageway, on curve, hit object	0
Out of control, on curve	0

The average annual equivalent crash risk is 0.00 (10^4)

Stage 4: Speed correlation check & recommendations

The speed limit based on road function is **60 km/h.**

The speed limit suggested by current speed data is **60 km/h.**
The speed limit suggested by the speed environment (QLIMITS) is **60 km/h.**

Recommendations and authorisation

THE RECOMMENDED SPEED LIMIT IS 60 km/h

Speed Limit Review – Queensland (SLR-QLD)
Detailed Assessment Report

Background Information

Analysed By: Luke Kidd.
User Reference: Minjerriba_Seg2, Rev. 1
Road Name: Minjerriba Road.
Road Location: Centre Road to east of Aquamarine Ave.
Suburb: Russell Island.
GPS Start Point : -27.662665, 153.384963.
GPS Finish Point: -27.663475, 153.390293.
TMR Road Number: .
Local Government: 256, Redland City Council
Main Roads District: 13, Metropolitan
The need to review the speed limit on this road has occurred due to community request.
The length of the road section being assessed is 0.52 km
AADT on this road section is 2249 vpd
The existing speed limit is 60 km/h.

Recommended Speed Limit:

50

Stage 1: Road function

This section of Minjerriba Road being assessed is located in a urban area.
The road type is: Trunk Collector Roads and Collector Roads.
The Typical Speed Limit is: 50 km/h.
The Existing Speed Limit **does not** equal the Typical Speed Limit

Stage 2: Prevailing Traffic speed

Sample data on 600 vehicles was analysed using ' '
The upper limit of 15 km/h pace is 54
The mean speed is 52 km/h
The 85th percentile speed is 54 km/h
Hence, the prevailing traffic speed data **does not** correlate with the existing Speed Limit

Stage 3: QLIMITS

The suggested speed limit based on the speed environment analysis was **50 km/h** after allowing for site specific issues.

Additional issues considered:

- Speed environment was assessed (Stage 3 was completed). Answers to the Speed Environment questions were as follows:
  - N/A (no questions were answered).

Frequency of Roadside Accesses

	Type of access	Number
A	Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (The weighting for this type of access is 1).	16

B	Average commercial establishment, local schools, caravan parks, light industries, public buildings and units generating activity which is either: 1. Continuous light. 2. Moderate at certain times, such as commuting hours. 3. Substantial at infrequent intervals. (The weighting for this type of access is 2).	0
C	Heavy industry, schools, shopping centres and other units generating continuous moderate activity or substantial activity at certain regular times. (The weighting for this type of access is 3).	0
D	Large shopping centres and other units generating substantial and continuous activity. Some large industries which are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity. (The weighting for this type of access is 4).	0
E	Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 1).	3
F	Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 2).	3
G	Unsignalised intersecting roads of comparable or greater significance than the road being assessed. Intersections which have pronounced effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 3).	0
H	Roundabouts and signalised intersecting roads. (The weighting for this type of access is 3).	0
	Average number of accesses per 100 m	4.8

Road Cross Section
The road is **Undivided**

Number of Lanes
The total number of traffic lanes on this section of road is **2**

Function of Road
The road is primarily used for **Access to abutting properties (Traffic carrying)**

Low Speed Area
There is no reason why this should be a low speed area.

Stage 4: Speed correlation check & recommendations

The speed limit based on road function is **50 km/h.**

The speed limit suggested by current speed data is **50 km/h.**
The speed limit suggested by the speed environment (QLIMITS) is **50 km/h.**

Recommendations and authorisation

THE RECOMMENDED SPEED LIMIT IS 50 km/h



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Appendix D
QLimits checklist (Form F3)



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FORM F3 CHECKLIST FOR REVIEW OF EXISTING SPEED LIMIT

Not required for setting speed limits on roads in rural residential areas. See MUTCD Part 4 Section 3.4.

LOCATION IDENTIFICATION

Road Owner: ☐ MRD ☒ LGA

District Number: 13

LGA Number: 256

LGA Name: Redland City Council

Town/City: Russell Island

Suburb: Russell Island

Road Name: Minjerriba Road

Road Section: High Street to east of Ferry Court

Road Number: n/a

Road Segment:

	Location or Reference Point	Chainage or Distance	GPS Coordinates (decimal degrees)	
			Latitude	Longitude
Start	High Street			
End	East of Ferry Court			

Existing Speed Limit: 60 and 50 km/h

AADT: 2 249

REVIEWING OFFICER

Name: Luke Kidd

Employer: RoadPro Consulting

Address: 8 MacLeay Lane, Maroochydore, QLD

Phone No: 0459666608

Date of Review: 23 January 2018

Have you undertaken appropriate training in the application of Part 4? Yes ☒ No ☐

Notes:

1. The numbering convention used for the Checklist coincides with that used in MUTCD Part 4 Figure F1.
2. References to Figures and Tables are to those in Part 4 of the Manual of Uniform Traffic Control Devices.
3. Mark following selections with a tick.

1

SPEED LIMIT REVIEW

1. The need to review the speed limit on this road has occurred due to:
   - ☐ General Limit no longer applicable
   - ☐ Altered speed environment
   - ☐ Evidence of speed limit/vehicle speed discrepancies
   - ☐ Need to adjust speed zone lengths
   - ☑ Community request
   - ☐ Other (specify) .....

Stage 1 – Road Function Analysis

2. Road Function

   If the road is in a rural environment, go to Step 3.

   For a road in an urban environment, the function of the road has been identified as:
   - ☐ Access / Local street
   - ☑ Collector street
   - ☑ Trunk collector road
   - ☐ Sub-arterial road
   - ☐ Arterial road
   - ☐ Controlled access arterial road, Freeway

   If rural, go to Step 3

3. From Table B1 (Urban) or B2 (Rural), the typical speed limit is: 50 and 60 km/h
4. The existing speed limit equals the typical speed limit?
   - ☑ Yes - go to Step 6
   - ☐ No - go to Step 5
5. Is it proposed to alter the road function to align the typical speed limit with the existing speed limit speed?
   - ☐ Yes - go to Step 18
   - ☐ No - go to Step 6

Stage 2 – Prevailing Vehicle Speed Analysis

6. Prevailing Vehicle Speed Data

(a) Collected using:
- ☐ Manual methods
- ☑ Automatic device (specify type) Metro Count
- ☐ Other (specify) Metro Count Software

(b) Collected according to guidelines:
- ☑ Specified in Appendix G
- ☐ Other (specify) Metro Count Software

(c) Analysed using:
- ☐ EsdeeMan version 3.0
- ☐ Manual methods
- ☑ Other (specify) Metro Count Software

(d) Results from analysis:

No. of vehicles in sample: 7912

Upper limit of 15 km/h pace: 68 km/h

% vehicles in the 15 km/h pace: 73.95 %

85th %ile speed: 68 km/h

Mean speed: 61.2

7. Speed data correlates with existing speed limit? (see Table C1)
   - ☑ Yes - go to Step 11
   - ☐ No - go to Step 7a

7a. From Table C2,

Suggested speed limit is: n/a and 60 km/h

Go to Step 8.

Stage 3 – Speed Environment Analysis

8. QLIMITS

(a) Field Data Form F1 (Appendix D):
- ☐ Completed
- ☐ Copy attached

FORM F3: Checklist for review of existing speed limit 2

(b) Analysis Report Form F2 (Appendix D):

☐ Completed

☐ Copy attached

(c) QLIMITS recommended speed limit

..... km/h

(d) QLIMITS flagged considerations?

☐ No

☐ Yes (see Report Form F2 (Appendix D))

Stage 4 – Correlation Check

9. Correlation check

(a) Outputs from each stage are:

Stage 1

Typical speed limit 50 and 60 km/h

Stage 2

From Table C2

Suggested speed limit n/a and 60 km/h

Stage 3

QLIMITS recommendation 50 and 60 km/h

(b) Is there a correlation between two of the three outputs from Stages 1, 2 and 3 above?

☒ Yes 50 and 60 km/h - go to Step 11

☐ No - go to Step 10

10. Have all data, QLIMITS input/output and road function been checked?

☐ No - go to Step 2

☐ Yes - go to Step 24

Other Criteria

11. (From Steps 7 and 9)

(a) The calculated casualty crash rate is:

0 * 10^4 ERUs per 10^8 VKT

(b) The typical casualty crash rates are:

Average: 995.9 * 10^4 ERUs per 10^8 VKT

Critical: 1086.5 * 10^4 ERUs per 10^8 VKT

(c) The casualty crash rate / potential risk factor is comparatively:

☒ Low (=< Average)

☐ Medium (Between average and critical)

☐ High (>= Critical)

(d) Is casualty crash rate / potential risk factor high?

☐ Yes - go to Step 12

☒ No - Figure F1 leads to:

☒ Step 19

☐ Step 13

12. Crash investigation / road safety review or audit conducted by:

Name: .....

Date: .....

File/Report No: .....

Go to Step 15

13. Has the review process suggested an increase in the speed limit?

☐ Yes - go to Step 14

☐ No - go to Step 23

14. Has a safety review (or road safety audit) identified any risk factors?

☐ Yes - go to Step 16

☐ No - go to Step 23

15. Has a crash investigation or safety review identified causal or risk factors?

☐ Yes - go to Step 16

☐ No - go to Step 22

16. Is treatment feasible?

☐ Yes - go to Step 17

☐ No - go to Step 21

17. (From Step 16)

Proposed treatments / works have been listed for the financial year: .....

Go to Step 20

18. (From Step 5)

See Figure F1, Note 18

Go to Step 17

19. (From Step 11 via Step 7)

Retain existing limit - go to Step 25

20. Consider whether an interim alteration to the speed limit is necessary.

Go to Step 25

21. (From Step 16)

Subject to Figure F1 (Note 21), it is considered appropriate to:

☐ Increase

☐ Decrease

the existing speed limit by ..... km/h

Go to Step 25

22. (From Step 15)

Retain existing speed limit with enhanced enforcement.

Go to Step 25

23. (From Step 13 or 14)

Adopt speed limit noted at 9(b).

Go to Step 25

24. (From Step 10)

The review of speed limits according to the process described in Figure F1 has failed to determine an appropriate speed limit. Action taken is as follows:

(a) ☐ The Checklist, together with all relevant data and information, has been referred to the responsible officer for consideration.

Referred to: .....

By: .....

RPEQ No: .....

Date: .....

The responsible officer now has responsibility for providing recommendations at Step 25.

(b) ☐ Input to the review requested from the Traffic Advisory Committee (TAC)

Committee meeting of …../…../….. offered the following information:

.....

.....

.....

.....

.....

and/or advised a preferred speed limit of:

..... km/h

(c) Has information provided by the committee assisted in determining an appropriate limit?

☐ Yes - it is..... km/h

Go to Step 25

☐ No - (a) I concur the following speed limit for the section of road under consideration: ..... km/h

Concurred by (TAC Chair): .....

.....

Date: .....

25. Recommendation by Engineer

Following the completion of this checklist, which documents the process for the review of speed limits according to Figure F1 of Part 4 of the MUTCD, I submit the following:

Recommended Speed Limit: 50 and 60 km/h

Recommended by:

Name: .....

Position: .....

RPEQ No: .....

Date: .....

Authorisation for Deliberation

☐ The recommended speed limit is approved for deliberation in the SMC.

☐ The recommended speed limit is not approved for deliberation by the SMC for the following reasons:

.....

.....

.....

.....

.....

☐ The alternative speed limit to be discussed or retained is: ..... km/h

Reasons for the alternative speed limit are:

.....

.....

.....

.....

Authorised by: .....

Position:.....

(Responsible officer/Regional Director)

Date: .....

Endorsement by Speed Management Committee (SMC)

☐ The recommended speed limit has been endorsed by the SMC.

☐ The recommended speed limit has not been endorsed by the SMC and will now be sent back to the responsible officer for referral to the Speed Limit Review Panel (SLRP).

Recommendation by Speed Limit Review Panel (SLRP)

Following the deliberation by the SLRP, the chairperson will forward its recommendation to the responsible officer for consideration:

Recommended speed limit: ..... km/h

Recommended by:

Name:.....

(Chairperson SLRP)

Position:.....

RPEQ No:.....

Date:.....

Authorisation for Installation

☐ The recommended speed limit is authorised for installation according to the provisions of MUTCD Part 1, Appendix C.

☐ The recommended speed limit is not authorised for the following reasons:

.....

.....

.....

.....

.....

☐ The alternative speed limit to be installed or retained is: ..... km/h

Reasons for the alternative speed limit are:

.....

.....

.....

.....

.....

Authorised by: .....

Position:.....

(Responsible officer/Regional Director)

Date:.....

☐ Form M994 or equivalent local government Form completed by authorising officer and copy filed with this Checklist.

(Failure to complete this task could compromise the legality of the Speed Limit.)

26. Review / Evaluation

Will the existing speed limit be altered?

☐ Yes - program assessment to occur 1-4 weeks after installation.

☐ No - program for review in 5 years or sooner if required.

Where Steps 21, 22 or 23 have indicated that enhanced enforcement is required, complete the following:

Enhanced enforcement of this site by QPS has been requested by reporting the outcome for this speed limit review to:

☐ Local TAC (Traffic Advisory Committee)

☐ Regional Speed Management Advisory Committee

☐ Regional QPS Traffic Co-ordinator

Reported by: .....

Position:.....

Date:.....

☐ Written advice

☐ Other (specify).....

.....

.....

FORM F3: Checklist for review of existing speed limit 5



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Appendix E
Traffic volume data



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MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-491 -- English (ENA)

Datasets:

Site:	**[Minjerriba Road] Minjerriba Road near Oak Street on Pole # 232214 Russell Island <60>**
Attribute:	Rusell Island
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:45 Friday, 10 November 2017,
Zone:	
File:	Minjerriba Road.EC0 (Plus)
Identifier:	A549R1TV MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 15741 / 17679 (89.04%)

Weekly Vehicle Counts (Virtual Week)

Site: Minjerriba Road.0.1EW
Description: **Minjerriba Road near Oak Street on Pole # 232214 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	1 - 7
Hour									
0000-0100	1.0	2.0	2.0	4.0	1.0	9.0	5.0	2.0	3.4
0100-0200	0.0	0.0	0.0	0.0	0.0	7.0	3.0	0.0	1.4
0200-0300	5.0	0.0	0.0	3.0	0.0	2.0	0.0	1.6	1.4
0300-0400	9.0	3.0	5.0	7.0	9.0	4.0	1.0	6.6	5.4
0400-0500	24.0	29.0	30.0	24.0	30.0	5.0	2.0	27.4	20.6
0500-0600	47.0	50.0	46.0	44.0	39.0	14.0	18.0	45.2	36.9
0600-0700	86.0	114.0	117.0	108.0	113.0	71.0	38.0	107.6	92.4
0700-0800	150.0	171.0	141.0	139.0	175.0	135.0	120.0	155.2	147.3
0800-0900	177.0	180.0	184.0	163.0	189.0	160.0	143.0	178.6	170.9
0900-1000	**186.0**	156.0	188.0	197.0	196.0	225.0	**188.0**	184.6	190.9
1000-1100	166.0	**211.0**	206.0	**199.0**	207.0	**265.0**	181.0	197.8	**205.0**
1100-1200	181.0	205.0	**212.0**	196.0	**210.0**	224.0	176.0	**200.8**	200.6
1200-1300	163.0	**166.0**	170.0	179.0	184.0	162.0	**179.0**	172.4	**171.9**
1300-1400	153.0	124.0	138.0	176.0	163.0	**165.0**	146.0	150.8	152.1
1400-1500	180.0	162.0	**206.0**	**186.0**	199.0	141.0	127.0	**186.6**	171.6
1500-1600	**193.0**	161.0	157.0	183.0	154.0	152.0	154.0	169.6	164.9
1600-1700	177.0	150.0	163.0	155.0	**205.0**	132.0	153.0	170.0	162.1
1700-1800	123.0	107.0	124.0	130.0	161.0	99.0	114.0	129.0	122.6
1800-1900	122.0	102.0	91.0	107.0	116.0	90.0	57.0	107.6	97.9
1900-2000	57.0	70.0	66.0	50.0	75.0	43.0	42.0	63.6	57.6
2000-2100	28.0	28.0	22.0	30.0	40.0	33.0	25.0	29.6	29.4
2100-2200	24.0	11.0	15.0	28.0	26.0	16.0	20.0	20.8	20.0
2200-2300	12.0	11.0	14.0	17.0	22.0	18.0	12.0	15.2	15.1
2300-2400	0.0	4.0	11.0	5.0	21.0	11.0	0.0	8.2	7.4
Totals									
0700-1900	1971.0	1895.0	1980.0	2010.0	2159.0	1950.0	1738.0	2003.0	1957.6
0600-2200	2166.0	2118.0	2200.0	2226.0	2413.0	2113.0	1863.0	2224.6	2157.0
0600-0000	2178.0	2133.0	2225.0	2248.0	2456.0	2142.0	1875.0	2248.0	2179.6
0000-0000	2264.0	2217.0	2308.0	2330.0	2535.0	2183.0	1904.0	2330.8	2248.7
AM Peak	0900	1000	1100	1000	1100	1000	0900		
	186.0	211.0	212.0	199.0	210.0	265.0	188.0		
PM Peak	1500	1200	1400	1400	1600	1300	1200		
	193.0	166.0	206.0	186.0	205.0	165.0	179.0		

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-492 -- English (ENA)

Datasets:

Site:	**[Minjerriba Road] Minjerriba Road near Oak Street on Pole # 232214 Russell Island <60>**
Attribute:	Rusell Island
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:45 Friday, 10 November 2017,
Zone:	
File:	Minjerriba Road.EC0 (Plus)
Identifier:	A549R1TV MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 15741 / 17679 (89.04%)

Class Speed Matrix

ClassMatrix-492
Site: Minjerriba Road.0.1EW
Description: **Minjerriba Road near Oak Street on Pole # 232214 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	18	2	.	.	.	.	.	.	.	.	.	.	20	0.1%
20 - 30	59	.	4	8	.	.	.	.	.	.	.	.	71	0.5%
30 - 40	109	4	9	2	2	.	.	.	.	.	.	.	126	0.8%
40 - 50	619	36	83	6	3	.	10	.	1	.	.	.	758	4.8%
50 - 60	5777	189	294	17	4	7	5	.	10	4	.	.	6307	40.1%
60 - 70	6349	143	247	7	5	5	2	.	3	5	.	.	6766	43.0%
70 - 80	1290	22	77	2	2	.	.	.	.	.	.	.	1393	8.8%
80 - 90	208	1	12	.	.	.	.	.	.	.	.	.	221	1.4%
90 - 100	56	.	1	.	.	.	.	.	.	.	.	.	57	0.4%
100 - 110	20	.	.	.	.	.	.	.	.	.	.	.	20	0.1%
110 - 120	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
120 - 130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130 - 140	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	14507	397	727	42	16	12	17	0	14	9	0	0	15741	
	92.2%	2.5%	4.6%	0.3%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%		



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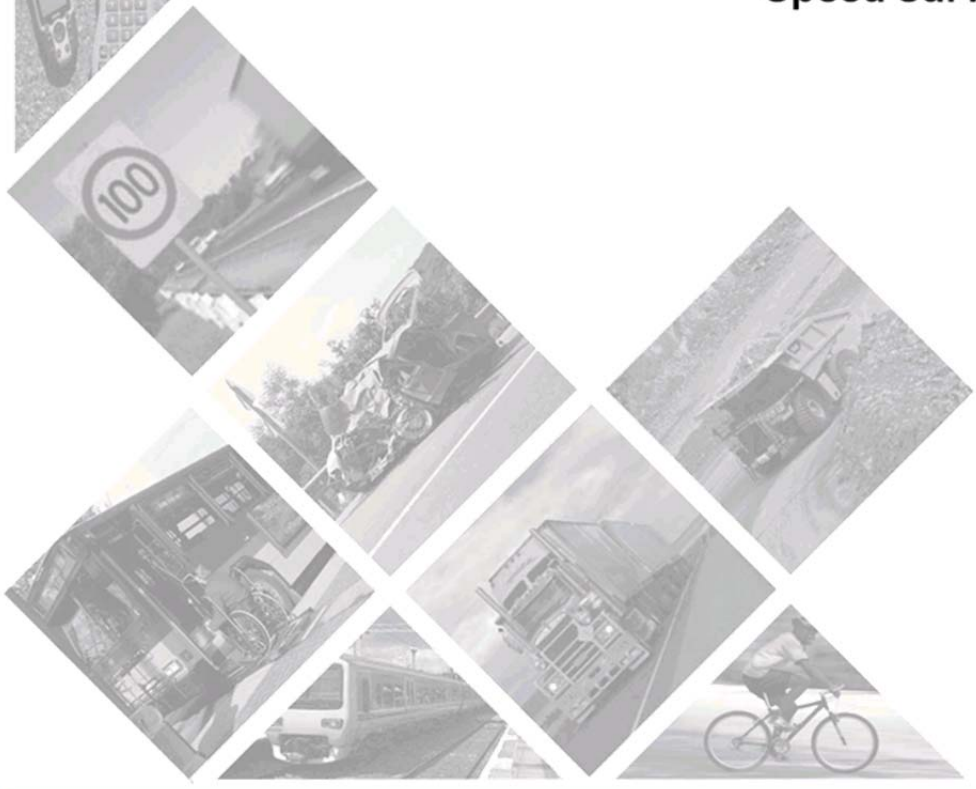
Appendix F
Speed survey data



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MetroCount Traffic Executive
Speed Statistics

SpeedStat-9 -- English (ENA)

Datasets:

Site:	**[Minjerriba Road] Minjerriba Road near Oak Street on Pole # 232214 Russell Island <60>**
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:45 Friday, 10 November 2017
Zone:	
File:	Minjerriba Road.EC0 (Plus)
Identifier:	A549R1TV MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**13:00 Thursday, 2 November 2017 => 10:45 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	East (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 7912 / 17679 (44.75%)

Speed Statistics

SpeedStat-9
Site: Minjerriba Road.0.0EW
Description: **Minjerriba Road near Oak Street on Pole # 232214 Russell Island <60>**
Filter time: **13:00 Thursday, 2 November 2017 => 10:45 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(E) Sp(10,160) Headway(>4)

Vehicles = 7912
Posted speed limit = 60 km/h, Exceeding = 4420 (55.86%), Mean Exceeding = 66.44 km/h
Maximum = 135.9 km/h, **Minimum** = 13.2 km/h, **Mean** = 61.2 km/h
85% Speed = 68.0 km/h, **95% Speed** = 73.8 km/h, **Median** = 60.8 km/h
15 km/h Pace = 53 - 68, **Number in Pace** = 5851 (73.95%)
Variance = 70.78, **Standard Deviation** = 8.41 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	7912	100.0%	0.00	0.00	0.00
10 - 20	11	0.1%	11	0.1%	7901	99.9%	0.00	0.00	0.00
20 - 30	29	0.4%	40	0.5%	7872	99.5%	0.00	0.00	0.00
30 - 40	65	0.8%	105	1.3%	7807	98.7%	0.00	0.00	0.00
40 - 50	357	4.5%	462	5.8%	7450	94.2%	0.00	0.00	0.00
50 - 60	3030	38.3%	3492	44.1%	4420	55.9%	0.00	0.00	0.00
60 - 70	3568	45.1%	7060	89.2%	852	10.8%	0.00	0.00	0.00
70 - 80	700	8.8%	7760	98.1%	152	1.9%	0.00	0.00	0.00
80 - 90	102	1.3%	7862	99.4%	50	0.6%	0.00	0.00	0.00
90 - 100	33	0.4%	7895	99.8%	17	0.2%	0.00	0.00	0.00
100 - 110	15	0.2%	7910	100.0%	2	0.0%	0.00	0.00	0.00
110 - 120	1	0.0%	7911	100.0%	1	0.0%	0.00	0.00	0.00
120 - 130	0	0.0%	7911	100.0%	1	0.0%	0.00	0.00	0.00
130 - 140	1	0.0%	7912	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	7912	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	7912	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	7912	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	7912	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	7912	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	7912	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	3492	44.1%	4420	55.9%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-8 -- English (ENA)

Datasets:

Site:	**[Minjerriba Road] Minjerriba Road near Oak Street on Pole # 232214 Russell Island <60>**
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:45 Friday, 10 November 2017
Zone:	
File:	Minjerriba Road.EC0 (Plus)
Identifier:	A549R1TV MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**13:00 Thursday, 2 November 2017 => 10:45 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 7815 / 17679 (44.20%)

Speed Statistics

SpeedStat-8
Site: Minjerriba Road.0.0EW
Description: **Minjerriba Road near Oak Street on Pole # 232214 Russell Island <60>**
Filter time: **13:00 Thursday, 2 November 2017 => 10:45 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(W) Sp(10,160) Headway(>4)

Vehicles = 7815
Posted speed limit = 60 km/h, Exceeding = 4136 (52.92%), Mean Exceeding = 66.73 km/h
Maximum = 115.9 km/h, **Minimum** = 16.2 km/h, **Mean** = 61.0 km/h
85% Speed = 68.4 km/h, **95% Speed** = 74.9 km/h, **Median** = 60.1 km/h
15 km/h Pace = 53 - 68, **Number in Pace** = 5583 (71.44%)
Variance = 71.91, **Standard Deviation** = 8.48 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	7815	100.0%	0.00	0.00	0.00
10 - 20	8	0.1%	8	0.1%	7807	99.9%	0.00	0.00	0.00
20 - 30	36	0.5%	44	0.6%	7771	99.4%	0.00	0.00	0.00
30 - 40	48	0.6%	92	1.2%	7723	98.8%	0.00	0.00	0.00
40 - 50	382	4.9%	474	6.1%	7341	93.9%	0.00	0.00	0.00
50 - 60	3205	41.0%	3679	47.1%	4136	52.9%	0.00	0.00	0.00
60 - 70	3225	41.3%	6904	88.3%	911	11.7%	0.00	0.00	0.00
70 - 80	733	9.4%	7637	97.7%	178	2.3%	0.00	0.00	0.00
80 - 90	143	1.8%	7780	99.6%	35	0.4%	0.00	0.00	0.00
90 - 100	29	0.4%	7809	99.9%	6	0.1%	0.00	0.00	0.00
100 - 110	5	0.1%	7814	100.0%	1	0.0%	0.00	0.00	0.00
110 - 120	1	0.0%	7815	100.0%	0	0.0%	0.00	0.00	0.00
120 - 130	0	0.0%	7815	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	7815	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	7815	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	7815	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	7815	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	7815	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	7815	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	7815	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	3679	47.1%	4136	52.9%



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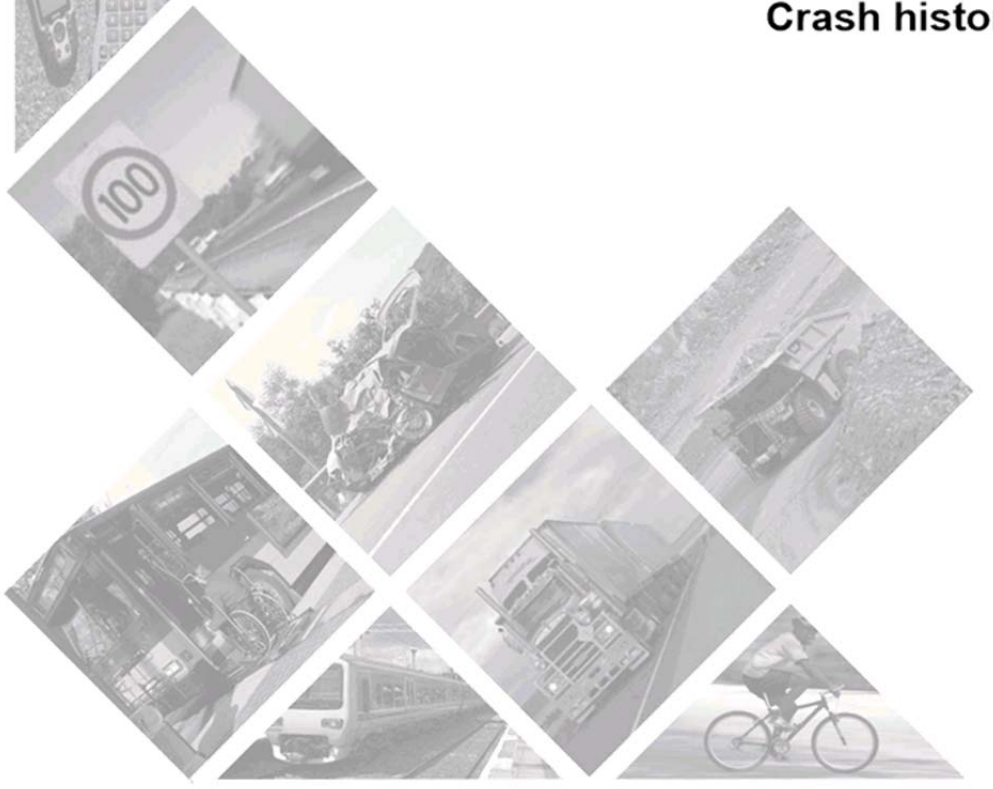
Appendix G
Crash history data



Traffic Engineering and Road Safety Specialists www.roadpro.net.au

Data Analysis
Customer Services, Safety and Regulation Division

WebCrash v2.3 Reports

The page numbers shown here are those of the overall PDF file (they range 1-10).
The PDF page numbers appear at the top left-hand corner of each page.
Pages within individual reports are numbered from 1 and appear at the top right-hand corner of each page.
When printing specific reports with Acrobat Reader, the PDF page numbers must be specified.

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1. Crash Details by Crash Number 3

Data Restrictions

Please note:-

IMPORTANT MESSAGE

Around 10% to 15% of non-fatal crash records for 1 July 2012 to 31 December 2014 are incomplete and unavailable. Data Analysis are addressing the issues to resolve this problem as soon as possible.

The crash data for 1 July 2012 to 31 December 2014 is being made available and users must exercise caution when analysing this data.

The data CAN be used to identify locations where crash frequency has increased, however, the degree of increase may be under-reported and some locations may not be identified. The data CAN be used to examine individual crash details.

The data is NOT suitable for:

* Time series trend analysis

* Comparison of characteristics

* Evaluation of crash reductions

* Evaluation of crash risk

* Crash rates (per VKT, per Vehicle type, per licence holder, per population)

With 10% to 15% of crash records unavailable the data is under-reported, biased and fairly limited for analytical purposes, however, it is considered a reasonable level of completeness for Black Spot submissions and examining individual crash details.

The Department of Transport and Main Roads (TMR) WebCrash system reports on the following crash data - fatal to 31 August 2017, hospitalisation to 31 May 2017, medical treatment to 31 May 2017, minor injury to 31 May 2017 and property damage only to 31 December 2010.

Road Crash Data Inclusion Requirements

Please also note that the information held in the RoadCrash database relating to crashes occurring within the last 12 months are considered preliminary as investigations into crashes can take up to 12 months to finalise. Please further note that to qualify as valid, crashes must meet the following criteria:

1. The crash occurred on a public road, and
2. A person was killed or injured, or
3. At least one vehicle was towed away, or
4. The value of property damage was:
   (a) $2500 damage to property other than vehicles (after 1 December 1999)
   (b) $2500 damage to vehicle and property (after 1 December 1991 and prior to 1 December 1999)
   (c) $1000 damage to property (prior to 1 December 1991)

Note: crashes resulting from medical conditions or deliberate acts are excluded.

Contact Details:

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Fortitude Valley
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Report 1

Crash Details by Crash Number

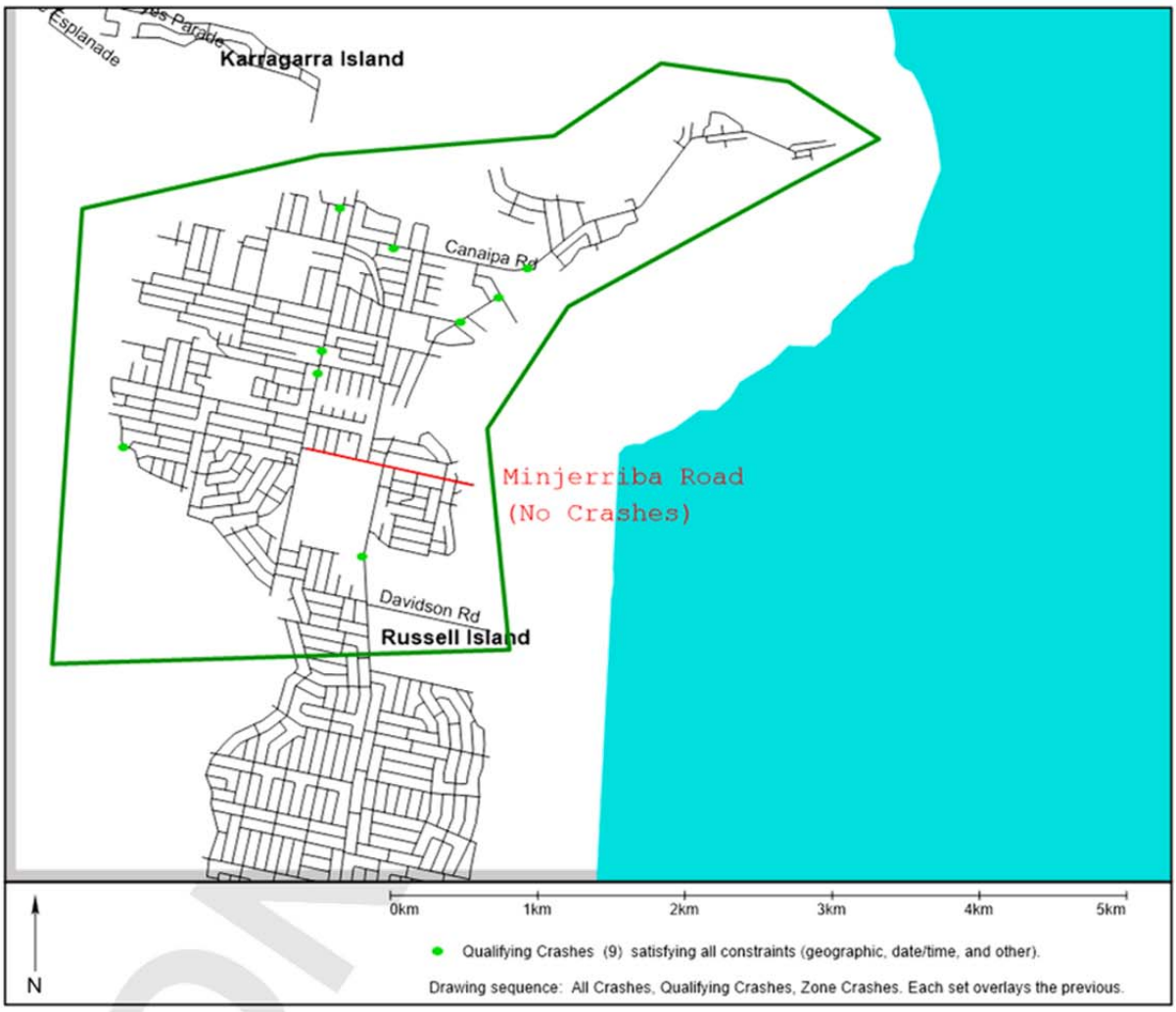
NOTE: This report has been limited to the maximum of 500 records.

Report Constraints

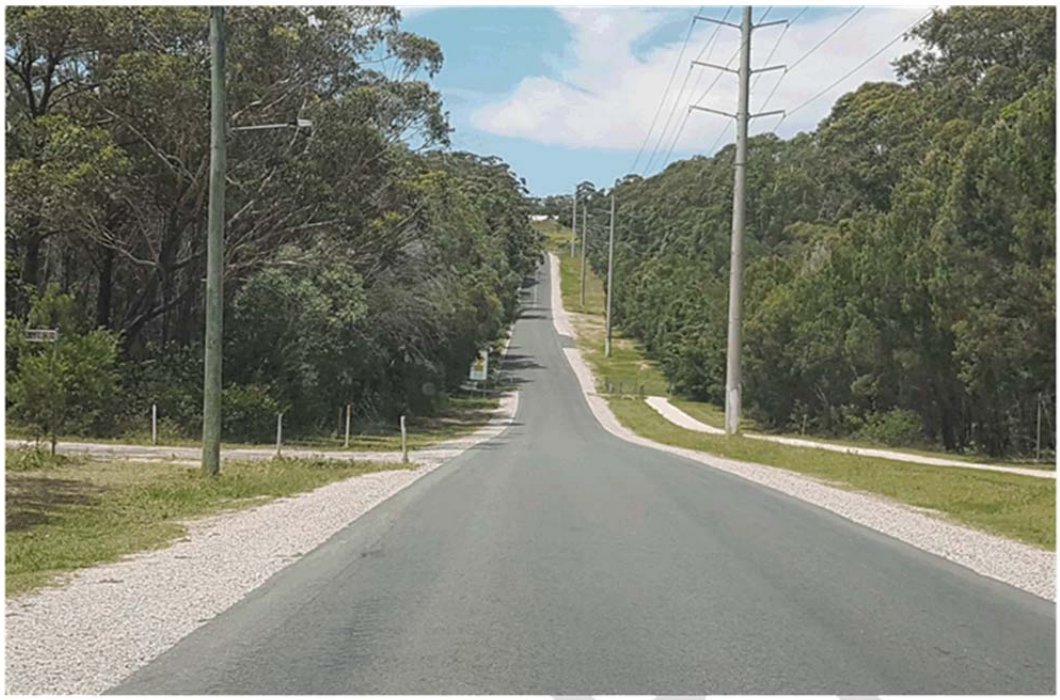
Geographic Constraints
Map

and

Date and Time Constraints
Continuous time: Jun-2012 to Dec-2017



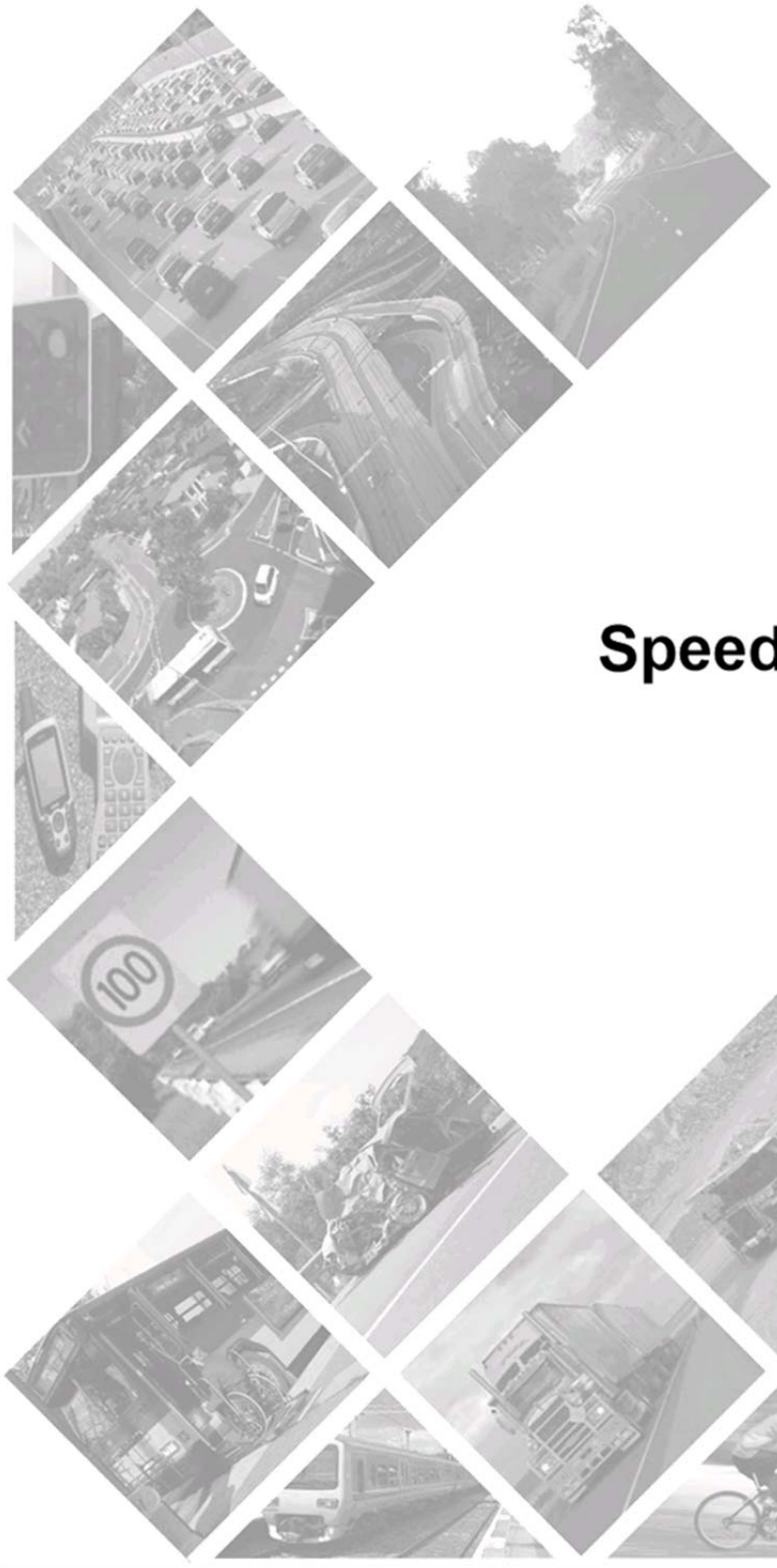
CONFIDENTIAL



Photograph 1: Southbound view along Centre Road south of the Minjerriba Road intersection.



Photograph 2: Southbound view along Centre Road south of the Davidson Road intersection.



RoadPro CONSULTING

Speed Limit Review

Centre Road, Russell Island

Prepared for Redland City Council

13 February 2018

Traffic Engineering and Road Safety Specialists www.roadpro.net.au

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Document control

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Draft V1	26.01.2018	Luke Kidd	Initial draft
Draft V2	27.01.2018	Darren Shirley	Review
Draft V3	01.02.2018	Lisa Shirley	Editorial amendments
Final	13.02.2018	Darren Shirley	Final report

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Client sign-off

Prepared for:
Redland City Council

Project description:
Speed limit review: Centre Road, Russell Island

Document sign-off:
The following officer acknowledges receipt of this document on behalf of Redland City Council:

Name Russell Smith

Position Adviser Traffic Safety

Signature _____ Date 13/02/2018

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1 Introduction

This report presents the findings of a formal speed limit review conducted on Centre Road, Russell Island. The speed limit review has been undertaken by RoadPro Consulting at the request of Redland City Council.

The review has been conducted in accordance with the speed limit review process outlined in the *Manual of Uniform Traffic Control Devices* (MUTCD), Part 4: Speed Controls (Ninth Issue, 31 May 2017) and the Supplement to the MUTCD, Part 4: Speed Controls (May 2016).

Figure 1 illustrates the location of the speed limit review.



Figure 1: Location of speed limit review –Centre Road (Source: UBD Gregory's Australian City Streets v7.0)

2 Site details

Centre Road is situated on Russell Island, which is the largest of the Southern Moreton Bay Islands. It is a local government controlled road that is managed by Redland City Council (Council). Centre Road extends for 4.03km, between the intersections with Minjerriba Road and Glendale Road. This speed limit review covers the entire 4.03km road length.

Centre Road is in a partially developed urban area that is bound by a mixture of residential allotments and wetlands on both sides. The road has a single carriageway that operates with two-lane, two-way traffic flows. It has a typical seal width of 6.0m, which widens to 7.0m in isolated areas.

At the time of the review a 60km/h speed limit was signed along the entire length of Centre Road.

3 Previous speed reviews

A search of the historical records in the QLIMITS (SLR QLD) program returned no records of previous reviews on the subject road section.

4 Traffic data

The average daily traffic volume (ADT) was obtained from count data collected by Council in November 2017. The five count sites yielded ADTs that ranged from 480 vehicles per day at the southern end and 1924 vehicles per day at the northern end, with a commercial vehicle content of between 4.1% and 6.9%. Refer to **Appendix E** for further traffic volume details.

5 Homogeneity of road section

Part 4/4.3.2 of the MUTCD suggests the speed limit review process should be applied only to segments of road which are homogenous in terms of characteristics and speed environment.

A subjective assessment of the continuity of the road was undertaken with regard to: functional classification, density of roadside development, frequency of accesses and intersections, visibility and setback of buildings, general speed environment, alignment, existing speed limits, and traffic volume. It has been determined that for this review, the subject road section formed one homogenous segment.

The relevant factors that resulted in the determination of one segment were:

- The function of Centre Road remained constant along its entire length.
- Road alignment, grade, cross section, and geometric standard were consistent.
- The road was situated in a developing urban area where the abutting land use consisted of unconsolidated residential development and wetland areas. The land use and extent of roadside development were generally consistent throughout.
- An existing 60km/h speed limit was posted along the full road length.

6 Determination of appropriate speed limit

Part 4/4.2.1 of the MUTCD suggests the following criteria should be considered for a length of road in the determination of speed zones:

a) Stage 1 - road function
b) Stage 2 - prevailing speeds
c) Stage 3 - speed environment.

The MUTCD also suggests other issues, such as crash history and potential risk factors, be considered prior to the recommendation of an appropriate speed limit. The following analysis applies the standard procedure for the determination of an appropriate speed limit as described in Part 4/4.3.3 of the MUTCD.

6.1 Stage 1 - Road function

The initial assessment of the appropriate speed limit is made by identifying the typical speed limit associated with the road's function. This is a limit that in the first instance is likely to match the road users' expectations of the appropriate limit.

The process of identifying a typical speed limit for the homogenous road segment requires a determination to be made about the following criteria:

- functional classification
- roadside environment
- design standard.

6.1.1 Functional classification

Centre Road formed part of a primary north-south transport link. Although it provided for a limited amount of direct property access, its main function was to transport passengers and goods between neighbourhoods and local areas across Russell Island.

Using the classifications shown in Tables A1 to A3, Appendix A, Part 4 of the MUTCD, and with reference to Council's road hierarchy system, the functional classification of Centre Road has been identified as a 'trunk collector'.

6.1.2 Roadside environment

In accordance with the descriptions given in Appendix L, Part 4 of the MUTCD, roadside environments are typically classified using the following descriptions:

- urban area (built-up area)
- urban fringe
- rural settlement
- rural township
- rural hamlet
- rural residential area
- rural area.

Centre Road was situated in a developing area where there is a mixture of isolated pockets of consolidated residential development and future residential land use. There was several large undeveloped lots fronting both sides of the road that contained wetland areas. However, apart from the wetlands, the average lot sizes were consistent with those found in an urban area and much less than the typical maximum residential lot size of 2000m^2.

Although there was a substantial amount of undeveloped land fronting the road, the presence of kerb/channel and a wide concrete path along most of the western roadside contributed to establishing the urban character of the area, as opposed to that of a semi-rural or urban fringe area.

The roadside environment along the full length of Centre Road has been identified as 'urban'.

6.1.3 Design standard

A lower speed limit than that suggested by functional classification and roadside environment, may be appropriate if the design standard of the road is not compatible with the higher speed.

The design standard relates to the level of service, mobility, and safety provided by design elements such as:

- horizontal and vertical curvature
- sight distance
- superelevation
- pavement, shoulder, and lane width
- gradients
- degree of access restriction.

The design standard along Centre Road was typical of that found in many developing urban areas and did not present an unsafe operating environment for the existing 60km/h speed limit.

6.1.4 Typical speed limit

The typical speed limits for the road segment is given in Table 1. This speed limit has been determined by matching the relevant road type attributes with the speed limit hierarchy given in Table B1, Appendix B, Part 4 of the MUTCD.

STAGE 1			
Functional classification	**Roadside environment**	**Design standard**	**Typical speed limit (km/h)**
Trunk collector road	Urban	Satisfactory	**60**

Table 1: Typical speed limit

6.2 Stage 2 - Prevailing traffic speeds

Part 4/4.2.3 of the MUTCD states that prevailing traffic speeds are a major factor in the determination of a speed limit.

Speed survey data was collected at five sites on Centre Road between Thursday 2 November and Friday 10 November 2017. Table 2 provides a statistical summary of the available data. Refer to **Appendix F** for further detail.

Site number	Location	No. of vehicles	Mean speed (km/h)	85th % speed (km/h)	Upper limit of 15km/h pace (km/h)	No. in pace (%)
1	Number 15 Centre Road	9 286	63.3	71.6	70	66.50
2	100m north of Penn Street	13 516	67.3	75.2	74	67.80
3	South of Stradbroke Drive	3 598	61.9	73.4	72	58.42
4	Near Neenes Place	11 770	66.6	74.9	73	66.02
5	Near Zinnia Street	11 875	65.0	73.4	73	64.98

Table 2: Summary of speed survey data

The speed data at each site showed that the measured speed distributions did not conform to an acceptable distribution for the existing 60km/h speed limit. In cases where the speed data did not correlate with the existing speed limit, the upper limit of the 15km/h pace band was used to suggest an appropriate speed limit (refer Table 3).

STAGE 2	
Site number	**Speed limit suggested by upper limit of the 15km/h pace (km/h)**
1	**70**
2	**70**
3	**70**
4	**70**
5	**70**

Table 3: Limit suggested by speed data

6.3 Stage 3 - Speed environment

The speed environment can be described as the elements of the road and traffic environment that collectively influence a road user's perception of an appropriate maximum travel speed. In accordance with Part 4/4.2.4 of the MUTCD, the QLIMITS program has been used to assess the speed environment.

The speed limit that QLIMITS suggested for Centre Road is shown in Table 4.

STAGE 3
Speed limit suggested by speed environment (km/h)
60

Table 4: Limit suggested by speed environment

Important criteria that formed part of the speed environment assessment is documented in the following subsections. Refer to **Appendix C** for the detailed QLIMITS assessment report (Form F2).

6.3.1 Access frequency

Table 5 provides a summary of the frequency of roadside access along Centre Road.

Access type	Number of accesses
Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (Weighting 1).	24
Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side road traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (Weighting 1).	16
Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (Weighting 2).	14
Average number of accesses per 100m	**1.34**

Table 5: Frequency of road access by type

6.3.2 Crash history

A search of the Department of Transport and Main Roads' WebCrash2 database indicated there have been four casualty crashes on Centre Road, in the five-year period between 1 June 2012 and 31 December 2017 (see note*).

Three of these incidents were single vehicle crashes that involved a driver losing control, or failing to negotiate an intersection turn, resulting in the vehicle leaving the road and striking a tree or power pole. One of these crashes occurred in wet conditions and another during the hours of darkness in a location where street lighting was not present.

The sole multi-unit crash involved a vehicle striking a youth that was riding a skateboard along the edge of the road north of the Kurrajong Road intersection. The impact resulted in the young rider sustaining fatal injuries. Factors that were identified by police as having contributed to the crash included the vehicle driver having an overprescribed concentration of alcohol in their system and miscellaneous vehicle defects.

At the time of the crash in June 2014, an off-road shared path was not present; however, a high-standard concrete path has since been constructed along the footpath and extends between the Minjerriba Road and Stradbroke Drive intersections. This off-road path is likely to reduce the risk of future conflict between vehicles and pedestrians or those using wheeled mobility aids.

Table 6 provides a count of the casualty crashes by severity and type along Centre Road. A copy of the crash data output from the WebCrash2 program is provided in **Appendix G**.

DCA Code	Fatal	Hospitalisation	Medical treatment	Minor injury	Property damage only	Total
Pedestrian: Walking with traffic (005)	1					1
Off path on straight: Right off carriageway into object (704)			2			2
Off path on curve: Off right bend into object (803)		1				1

Table 6: Crash count by severity and type

Note: At the time of extracting crash data, the WebCrash 2 database was reporting all casualty crash data to 31 May 2017. The selected crash analysis period therefore represents the most recent five-year period in which a complete data set was available.*

6.3.3 Casualty crash rate comparison

The accepted manner of measuring road crashes is in terms of exposure to risk. For road segments, exposure is measured as the distance travelled. For the purpose of this review, the casualty crash rates have been computed in terms of equivalent risk unit (ERU) per 10^8 vehicle kilometres travelled (10^8 VKT).

The calculated or 'actual' casualty crash rates have been compared to typical average and typical critical rates from similar roads, to determine if the subject section has a safety problem. The average and critical rates for Queensland roads in urban and rural environments were obtained from Part 4, Tables E2 to E5 of the MUTCD.

The actual, average, and critical crash rates are given in Table 7.

Crash rate ($10^4 ERU per $10^8 Vehicle Kilometres Travelled (VKT))		
Actual	**Average**	**Critical**
1131	995.9	1086.5

Table 7: Crash rates

Part 4, Section E2, Appendix E of the MUTCD states that for comparison purposes, the following convention should be used to describe the crash rate in relation to typical crash rates:

- Low crash rate: Less than the average casualty crash rate
- Medium crash rate: Between average and critical casualty crash rates
- High crash rate: Greater than or equal to the critical casualty crash rate.

With reference to Table 7, Centre Road has a high crash rate that is above the critical rate for the road type. Road sections that have an actual crash rate higher than the critical rate are commonly defined as 'high crash zones' and require additional safety considerations when undertaking a speed limit review.

A high crash rate typically requires a crash investigation or safety review to be undertaken to identify the cause of the crashes, to determine if remedial treatment is required, and to determine the implications of the situation with regard to the preferred speed limit (Appendix E1, Part 4 of the MUTCD). A crash investigation may identify the potential significance of contributing factors, including incidents where speed has played a role. A considerable number of roadside hazards within the clear zone area or the presence of substandard road conditions may also indicate that an artificially reduced speed limit may be warranted to reduce the frequency and/or severity of crashes.

A formal crash investigation or safety review was not conducted as part of this speed limit review on Centre Road. However, the crash descriptions, locations, and contributing circumstances detailed in the crash reports do not suggest there are any common trends or crash clusters. Furthermore, the crash details complied by the investigating police officers do not indicate that excessive vehicle speeds played a role in the reported crashes.

The flat grade, straight alignment, even surface, and uniform geometric consistency of Centre Road also made it an undemanding road to negotiate. Consequently, the road environment itself, was considered unlikely to pose an elevated crash risk.

Isolated hazards were present within the clear zone throughout the length of Centre Road. These included power poles, trees, culvert headwalls, and intersecting slopes at culverts ends. However, due to the predominantly straight horizontal alignment, there were very few locations where fixed objects are situated in areas that have a high risk of being struck, for example, outside of a tight curve, or where protective treatments, such as safety barrier, would be warranted. Objects that may pose an elevated risk are limited to those at intersections where vehicles are braking and manoeuvring to perform a turn or to avoid conflict with another vehicle. The isolated nature of these hazards and the high standard of visibility available to traffic at these sites, would suggest that an arbitrarily lowered speed limit is not justified.

7 Speed limit review correlation

Table 8 shows the overall correlation between the various stages of this speed limit review on Centre Road.

Stage	Description	Suggested speed (km/h)
1	Road function	60
2	Prevailing traffic speed or existing speed limit	70
3	Speed environment (QLIMITS)	60
Correlation		**60**

Table 8: QLIMITS speed correlation

Table 8 shows there was a correlation between two of the three stages of the review process, resulting in a suggested speed limit of 60km/h.

The prevailing vehicle speeds from Stage 2 indicated that vehicles were travelling at speeds that would normally be expected in a 70km/h speed zone. However, this can be attributed to the developing nature of the roadside and the substantial number of abutting lots that are currently undeveloped. As visible roadside development increases over time, in conjunction with an increased frequency of direct property access, it is likely prevailing speeds will more closely align with the 60km/h speed limit.

8 Recommendations

Table 9 shows the recommended speed limit for Centre Road. This limit is based on outcomes using the speed limit review process outlined in Part 4 of the MUTCD. The recommended limit is in no way binding and the responsibility for the selection and implementation of an appropriate speed limit for the subject road segment rests with Council.

Recommended speed limit (km/h)
60

Table 9: Recommended speed limit

8.1 Actions required

The following actions are required to implement the speed limit shown in Table 9:

1. No action required, existing speed signage in place for a 60km/h speed limit along Centre Road.

8.2 Suggested actions

As discussed in Section 5.3.3, Centre Road had a high casualty crash rate that is above the critical crash rate for the road type. The detailed process for the determination of speed limits shown on the flowchart in the MUTCD, Part 4, Appendix F, Figure F1, includes a requirement to conduct a crash investigation or safety review if a high casualty crash rate has been identified.

The discussion provided in Sections 5.3.2 and 5.3.3 mentioned the crash history on Centre Road and road-related risk factors identified during the speed limit review process. However, the opinions provided in these sections have been drawn primarily from a review of the details contained in the crash reports, in conjunction with a visual assessment of the road and roadside undertaken during on-site inspections.

A formal crash investigation or safety review was not undertaken as part of this speed limit review. Council may therefore wish to undertake further detailed investigations to identify risk factors or hazards that may need to be addressed prior to retaining the existing 60km/h speed limit.

Furthermore, to reinforce the speed limit, Council could consider installing repeater 60km/h speed signs as outlined in Part 4/5.2.9 of the MUTCD.



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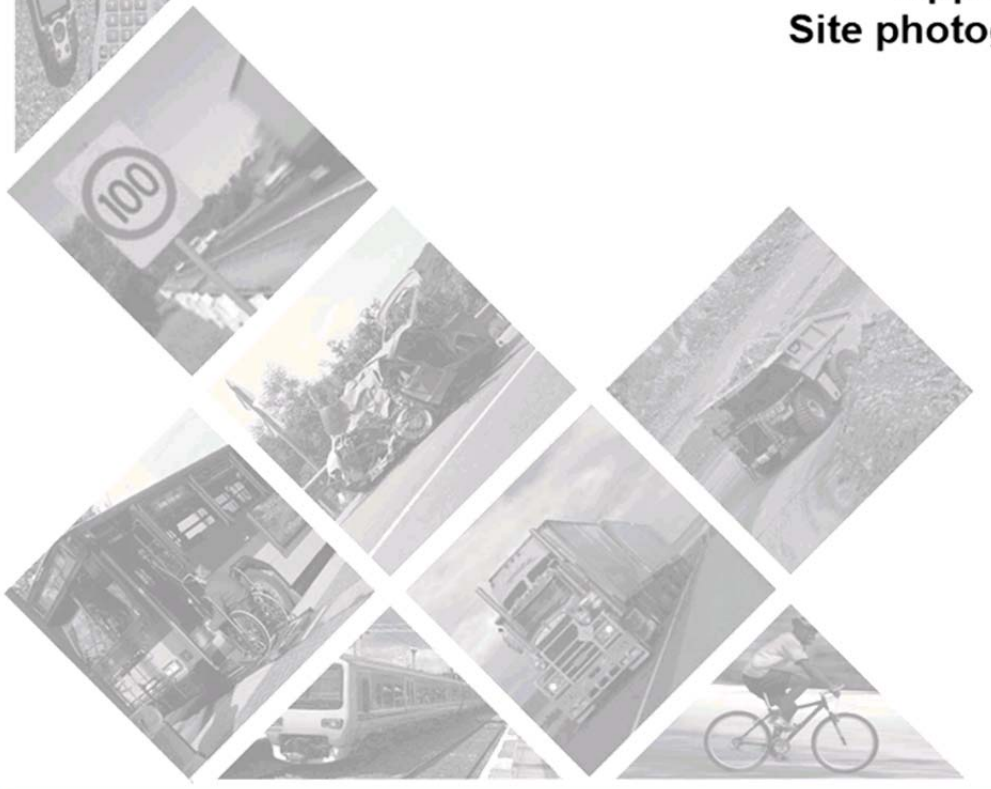
Appendix A
Site photographs



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Photograph 3: Southbound view along Centre Road north of the Barcelona Terrace intersection.



Photograph 4: Southbound view along Centre Road north of the Gay Terrace intersection.



Photograph 5: Southbound view along Centre Road south of the Hume Street intersection.



Photograph 6: Southbound view along Centre Road north of the Waikiki Beach Road and Stradbroke Drive intersections.



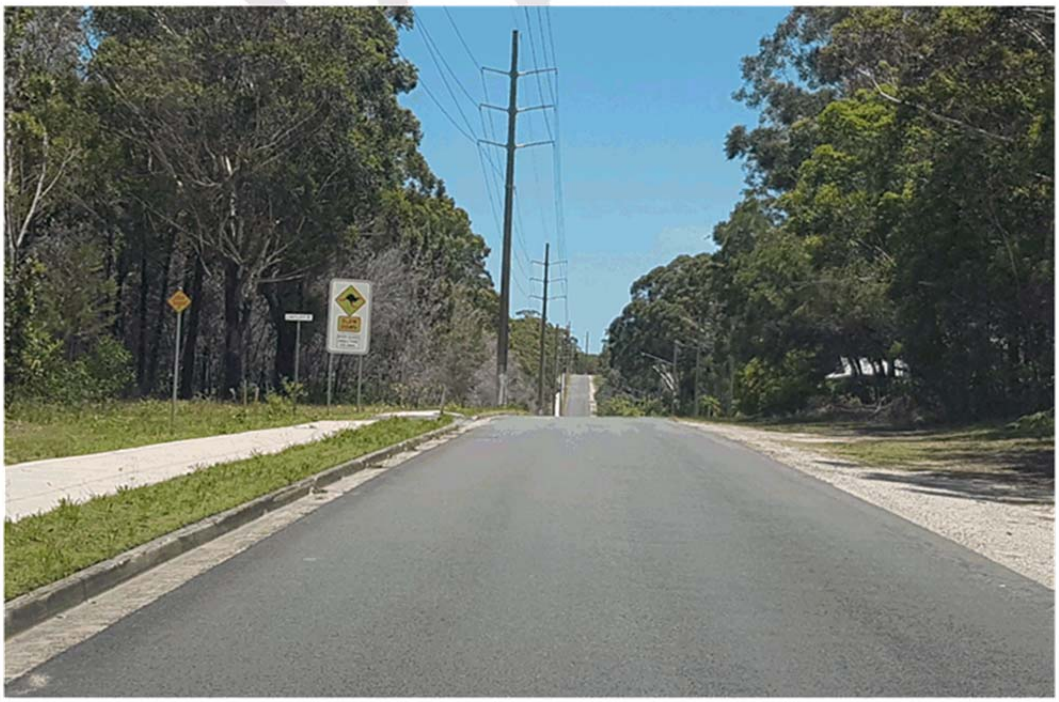
Photograph 7: Southbound view along Centre Road south of the Cunningham Avenue intersection.



Photograph 8: Southbound view along Centre Road north of the Glendale Road intersection.



Photograph 9: Northbound view along Centre Road north of the Glendale Road intersection.



Photograph 10: Northbound view along Centre Road south of the Nautilus Parade intersection.



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Appendix B
QLimits field data (Form F1)



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FORM F1 QLIMITS FIELD DATA FORM

If saving this form for use at a later date, please ensure that it is the most current version. See http://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx

LOCAL GOVERNMENT/DISTRICT Redland City Council **ROAD:** Centre Road

LOCATION: Russell Island

RECORDER: Luke Kidd **DATE:** 24 January 2018

Tick (✓) the appropriate box to respond

1. LOCATION OF ROAD

The area in which this road section is located is generally:

(i)	Urban:	Fully built-up area with consolidated residential, commercial and industrial land uses.	☑
(ii)	Urban Fringe:	Less developed area typically containing low-density residential, small scale farming, future urban and other 'developing' land uses.	☐
(iii)	Rural Settlement:	Small settlements or townships located in rural areas which are typically located on through roads, and where all or most land development is concentrated on, or has direct access to, those through roads.	☐
(iv)	Rural:	Areas that are rural in nature, with large property or farm holdings. The only residential properties in these areas will be scattered homesteads and farmhouses.	☐

2. LENGTH OF ROAD

The length of road section is 4.03 km

3. UPPER LIMIT OF THE 15 km/h PACE

The upper limit of the 15km/h pace of free vehicles on this road section is 73 km/h

4. DEVELOPMENT (for divided roads only)

The development on both sides of the road is:	balanced	☑
	unbalanced	☐

5. FREQUENCY OF ROADSIDE ACCESSES (for both sides of the road combined)

Note: (i) Abutting development on service roads is not considered and therefore only the points of access to the through traffic lanes are counted.
(ii) Crossroads are counted once each side of the road.

Abutting properties

(a) Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity.

Number of this type: Side 1 = 16 Side 2 = 8

(b) Average commercial establishments, local schools, caravan parks, light industries, public buildings and other units generating activity that is:

(i) continuous light

(ii) moderate at certain regular times, such as commuting hours

(iii) substantial at infrequent intervals

Number of this type: Side 1 = 0 Side 2 = 0

1

(c) Heavy industry, schools, shopping centres and other units generating
   (i) continuous moderate activity or
   (ii) substantial activity at certain regular times.

Number of this type: Side 1 = 0 Side 2 = 0

(d) Large shopping centres and other units generating substantial and continuous activity. Some large industries that are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity.

Number of this type: Side 1 = 0 Side 2 = 0

Intersections

(a) Intersecting roads of substantially lesser importance than the road being studied, or intersecting roads where side road traffic and turning movements have little effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 8 Side 2 = 8

(b) Intersecting roads of lesser importance than the road being studied but where side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 4 Side 2 = 3

(c) Signalised intersections, roundabouts and intersections with roads comparable to or of greater significance than the road being studied. Intersections which have a pronounced effect on the traffic flow pattern of the road being studied.

Number of this type: Side 1 = 0 Side 2 = 0

Note: (i) Abutting development on service roads is not considered and therefore only the points of access to the through traffic lanes are counted.
(ii) Crossroads are counted once each side of the road.

6. DIVIDED OR UNDIVIDED

The section of road being studied is:

- undivided ☑
- divided ☐

Note: (i) Double barrier lines do not constitute a median.
(ii) A painted median is sufficient to constitute a divided road if it extends for the full length of the section under consideration (excepting median breaks for turns, etc).

7. RESTRICTION OF ACCESS

The major part of this road has restriction of direct vehicular access on:

- neither side ☑
- one side ☐
- both sides ☐

Note: (i) This restriction may include service roads, river or railway line alongside the road or a large fenced-off area e.g. golf course, airport.

8. SETBACK

The setback of the through traffic lanes to the property boundary line is:

- less than 4 metres ☐
- 4-10 metres ☑
- more than 10 metres ☐

Note: (i) If development is balanced, the lower setback value should be used.
(ii) If development is unbalanced, the setback value for the more developed side should be used.

9. MEDIAN

The central median has a width of n/a metres

FORM F1: QLIMITS Field Data Form 2

10. PROTECTION OF TURNING/CROSSING VEHICLES

The median protects turning vehicles:

- fully ☐
- only partially or not at all ☑

11. NUMBER OF LANES

The total number of traffic lanes is 2 lanes

Note: (i) include through lanes in both directions.
(ii) do not include service roads or exclusive parking lanes.
(iii) if lanes are not clearly marked, count the number of lanes normally used by drivers during busy traffic periods.

12. FUNCTION OF ROAD

The main reason that vehicles use this section of road is:

- traffic movement ☑
- access to abutting properties ☐

13. ADJACENT ROAD SECTIONS

The speed limits on the adjoining road sections are: 60 km/h 60 km/h

14. FREEWAY

Is this road a motorway, freeway or expressway? NO ☑ YES ☐

15. LOW SPEED AREA

Is this road a low speed area?

- NO ☑
- YES (LATM area) ☐
- YES (shared-use zone) ☐

16. OTHER FACTORS

Is the road predominantly winding or hilly? NO ☑ YES ☐

Is the road unusually congested? NO ☑ YES ☐

17. SPECIAL ROADSIDE ACTIVITIES

Are there any schools along this road section? NO ☑ YES ☑

18. CASUALTY CRASH RATES

Compared to other similar road sections the casualty crash rate is:

- average or lower than average ☐
- a little higher than average ☐
- significantly higher than average ☑

Note: Care should be exercised when using historical crash rate data. Only use relevant data pertaining to crashes that have occurred whilst the road is in its current state, e.g. if an intersection has been signalised or a road recently reconstructed, only use crash data from the period following these changes.

19. TRAFFIC SIGNALS/ROUNDABOUTS

Are there any traffic signals or roundabouts along this road section? NO ☑ YES ☐



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Appendix C
QLimits detailed assessment reports (Form F2)



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Speed Limit Review – Queensland (SLR-QLD)
Detailed Assessment Report

Background Information

Analysed By: Luke Kidd.
User Reference: Centre Road, Rev. 1
Road Name: Centre Road.
Road Location: Minjerriba Road to Glendale Road.
Suburb: Russell Island.
GPS Start Point : -27.662691, 153.384944.
GPS Finish Point: -27.698816, 153.381929.
TMR Road Number: .
Local Government: 256, Redland City Council
Main Roads District: 13, Metropolitan
The need to review the speed limit on this road has occurred due to community request.
The length of the road section being assessed is 4.03 km
AADT on this road section is 1924 vpd
The existing speed limit is 60 km/h.

Adjacent Speed Zones
Approach 1: 60 km/h - Southbound
Approach 2: 60 km/h - Northbound

Recommended Speed Limit:

60

Stage 1: Road function

This section of Centre Road being assessed is located in a urban area.
The road type is: Trunk Collector Roads and Collector Roads.
The Typical Speed Limit is: 60 km/h.
The Existing Speed Limit **does** equal the Typical Speed Limit

Stage 2: Prevailing Traffic speed

Sample data on 11770 vehicles was analysed using ' '
The upper limit of 15 km/h pace is 73
The mean speed is 67 km/h
The 85th percentile speed is 75 km/h
Hence, the prevailing traffic speed data **does not** correlate with the existing Speed Limit

Stage 3: QLIMITS

The suggested speed limit based on the speed environment analysis was **60 km/h** after allowing for site specific issues.

Comments
High prevailing speeds likely due to undeveloped nature of roadside. As development continues, speeds are likely to reduce. Higher speed limit not appropriate due to urban environment and high crash rate.

Additional issues considered:

- The upper limit of pace speed of 73 km/h is significantly higher than the recommended speed limit of 60 km/h. This represents a significant difference between the current behaviour of drivers and the recommended limit. Further investigation should be undertaken.

- A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:
  - Recreational or tourist traffic
  - Presence of aged and/or disabled persons
  - Presence of roadside hazards
  - Narrow traffic lane width

  Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

- The accident rate for this section of road is **significantly higher** than the average for this type of road. Further investigation of the possible causes for this increased accident rate is recommended. A review of the recommended speed limit may or may not be appropriate depending on local circumstances.

- Speed environment was assessed (Stage 3 was completed). Answers to the Speed Environment questions were as follows:
  - N/A (no questions were answered).

Frequency of Roadside Accesses

	Type of access	Number
A	Residences, small commercial establishments, small public buildings and other units which generate light and/or occasional activity. (The weighting for this type of access is 1).	24
B	Average commercial establishment, local schools, caravan parks, light industries, public buildings and units generating activity which is either: 1. Continuous light. 2. Moderate at certain times, such as commuting hours. 3. Substantial at infrequent intervals. (The weighting for this type of access is 2).	0
C	Heavy industry, schools, shopping centres and other units generating continuous moderate activity or substantial activity at certain regular times. (The weighting for this type of access is 3).	0
D	Large shopping centres and other units generating substantial and continuous activity. Some large industries which are tourist attractions or for some other reason generate substantial traffic volumes would be included in this activity. (The weighting for this type of access is 4).	0
E	Unsignalised intersecting roads of substantially lesser importance than the road being assessed, or intersecting roads where side traffic and turning movements have little effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 1).	16
F	Unsignalised intersecting roads of lesser importance than the road being assessed but where the side road traffic and turning movements are such that the intersection has appreciable effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 2).	7
G	Unsignalised intersecting roads of comparable or greater significance than the road being assessed. Intersections which have pronounced effect on the traffic flow pattern of the road being considered. (The weighting for this type of access is 3).	0
H	Roundabouts and signalised intersecting roads. (The weighting for this type of access is 3).	0

	Average number of accesses per 100 m	1.33

Road Cross Section
The road is **Undivided**

Number of Lanes
The total number of traffic lanes on this section of road is **2**

Function of Road
The road is primarily used for **Traffic movement (freeway/arterial/sub arterial/trunk collector)**

Restrictions of Access
There are **no restrictions.**

Special Roadside Activities
A lower speed limit may be appropriate due to the presence of special roadside activities in the area. These include:

- Recreational or tourist traffic
- Presence of aged and/or disabled persons
- Presence of roadside hazards
- Narrow traffic lane width

Note: A Road safety audit has NOT been conducted to assess roadside activities or hazards

Number of crashes in the past 5 years:

Description	No. of crashes
Head-on	0
Rear-end	0
Lane change	0
Parallel lanes, turning	0
U-turn	0
Entering roadway	0
Overtaking, same direction	0
Hit parked vehicle	0
Hit railway train	0
Pedestrian	1
Permanent obstruction on carriageway	0
Hit animal	0
Off carriageway, on straight	0
Off carriageway, on straight, hit object	2
Out of control, on straight	0
Off carriageway on curve	0
Off carriageway, on curve, hit object	1
Out of control, on curve	0

The average annual equivalent crash risk is 32.00 (10^4)

Crash Rate
The crash rate is 1131 (10^4 ERUs per 10^8 VKT)

Stage 4: Speed correlation check & recommendations

The speed limit based on road function is **60 km/h.**

The speed limit suggested by current speed data is **70 km/h.**
The speed limit suggested by the speed environment (QLIMITS) is **60 km/h.**

Recommendations and authorisation

THE RECOMMENDED SPEED LIMIT IS 60 km/h



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Appendix D
QLimits checklist (Form F3)



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FORM F3 CHECKLIST FOR REVIEW OF EXISTING SPEED LIMIT

Not required for setting speed limits on roads in rural residential areas. See MUTCD Part 4 Section 3.4.

LOCATION IDENTIFICATION

Road Owner: ☐ MRD ☒ LGA

District Number: 13

LGA Number: 256

LGA Name: Redland City Council

Town/City: Russell Island

Suburb: Russell Island

Road Name: Centre Road

Road Section: Minjerriba Road to Glendale Road

Road Number: n/a

Road Segment:

	Location or Reference Point	Chainage or Distance	GPS Coordinates (decimal degrees)	
			Latitude	Longitude
Start	Minjerriba Road			
End	Glendale Road			

Existing Speed Limit: 60 km/h

AADT: 1924

REVIEWING OFFICER

Name: Luke Kidd

Employer: RoadPro Consulting

Address: 8 MacLeay Lane, Maroochydore, QLD

Phone No: 0459666608

Date of Review: 24 January 2018

Have you undertaken appropriate training in the application of Part 4? Yes ☒ No ☐

Notes:

1. The numbering convention used for the Checklist coincides with that used in MUTCD Part 4 Figure F1.
2. References to Figures and Tables are to those in Part 4 of the Manual of Uniform Traffic Control Devices.
3. Mark following selections with a tick.

SPEED LIMIT REVIEW

1. The need to review the speed limit on this road has occurred due to:
   - ☐ General Limit no longer applicable
   - ☐ Altered speed environment
   - ☐ Evidence of speed limit/vehicle speed discrepancies
   - ☐ Need to adjust speed zone lengths
   - ☒ Community request
   - ☐ Other (specify) .....

Stage 1 – Road Function Analysis

2. Road Function

   If the road is in a rural environment, go to Step 3.

   For a road in an urban environment, the function of the road has been identified as:
   - ☐ Access / Local street
   - ☐ Collector street
   - ☒ Trunk collector road
   - ☐ Sub-arterial road
   - ☐ Arterial road
   - ☐ Controlled access arterial road, Freeway

   If rural, go to Step 3

3. From Table B1 (Urban) or B2 (Rural), the typical speed limit is: 60 km/h
4. The existing speed limit equals the typical speed limit?
   - ☒ Yes - go to Step 6
   - ☐ No - go to Step 5
5. Is it proposed to alter the road function to align the typical speed limit with the existing speed limit speed?
   - ☐ Yes - go to Step 18
   - ☐ No - go to Step 6

Stage 2 – Prevailing Vehicle Speed Analysis

6. Prevailing Vehicle Speed Data

(a) Collected using:
- ☐ Manual methods
- ☒ Automatic device (specify type) Metro Count
- ☐ Other (specify) Metro Count Software

(b) Collected according to guidelines:
- ☒ Specified in Appendix G
- ☐ Other (specify) Metro Count Software

(c) Analysed using:
- ☐ EsdeeMan version 3.0
- ☐ Manual methods
- ☒ Other (specify) Metro Count Software

(d) Results from analysis:

No. of vehicles in sample: 11770

Upper limit of 15 km/h pace: 73 km/h

% vehicles in the 15 km/h pace: 66.02 %

85th %ile speed: 75 km/h

Mean speed: 67

7. Speed data correlates with existing speed limit? (see Table C1)
   - ☐ Yes - go to Step 11
   - ☒ No - go to Step 7a

7a. From Table C2,

Suggested speed limit is: 70 km/h

Go to Step 8.

Stage 3 – Speed Environment Analysis

8. QLIMITS

(a) Field Data Form F1 (Appendix D):
- ☒ Completed
- ☐ Copy attached

(b) Analysis Report Form F2 (Appendix D):

- [x] Completed
- [ ] Copy attached

(c) QLIMITS recommended speed limit

60 ..... km/h

(d) QLIMITS flagged considerations?

- [ ] No
- [x] Yes (see Report Form F2 (Appendix D))

Stage 4 – Correlation Check

9. Correlation check

(a) Outputs from each stage are:

Stage 1

Typical speed limit 60 ..... km/h

Stage 2

From Table C2

Suggested speed limit 70 ..... km/h

Stage 3

QLIMITS recommendation 60 ..... km/h

(b) Is there a correlation between two of the three outputs from Stages 1, 2 and 3 above?

- [ ] Yes 60 ..... km/h - go to Step 11
- [ ] No - go to Step 10

10. Have all data, QLIMITS input/output and road function been checked?

- [ ] No - go to Step 2
- [ ] Yes - go to Step 24

Other Criteria

11. (From Steps 7 and 9)

(a) The calculated casualty crash rate is:

1131 ..... * 10^4 ERUs per 10^8 VKT

(b) The typical casualty crash rates are:

Average: 995.9 ..... * 10^4 ERUs per 10^8 VKT

Critical: 1086.5 ..... * 10^4 ERUs per 10^8 VKT

(c) The casualty crash rate / potential risk factor is comparatively:

- [ ] Low (=< Average)
- [ ] Medium (Between average and critical)
- [x] High (>= Critical)

(d) Is casualty crash rate / potential risk factor high?

- [x] Yes - go to Step 12
- [ ] No - Figure F1 leads to:
- [ ] Step 19
- [ ] Step 13

12. Crash investigation / road safety review or audit conducted by:

Name: -.....

Date: -.....

File/Report No: -.....

Go to Step 15

13. Has the review process suggested an increase in the speed limit?

- [ ] Yes - go to Step 14
- [ ] No - go to Step 23

14. Has a safety review (or road safety audit) identified any risk factors?

- [ ] Yes - go to Step 16
- [ ] No - go to Step 23

15. Has a crash investigation or safety review identified causal or risk factors?

- [ ] Yes - go to Step 16
- [ ] No - go to Step 22

16. Is treatment feasible?

- [ ] Yes - go to Step 17
- [ ] No - go to Step 21

17. (From Step 16)

Proposed treatments / works have been listed for the financial year:.....

Go to Step 20

18. (From Step 5)

See Figure F1, Note 18

Go to Step 17

19. (From Step 11 via Step 7)

Retain existing limit - go to Step 25

20. Consider whether an interim alteration to the speed limit is necessary.

Go to Step 25

21. (From Step 16)

Subject to Figure F1 (Note 21), it is considered appropriate to:

☐ Increase

☐ Decrease

the existing speed limit by ..... km/h

Go to Step 25

22. (From Step 15)

Retain existing speed limit with enhanced enforcement.

Go to Step 25

23. (From Step 13 or 14)

Adopt speed limit noted at 9(b).

Go to Step 25

24. (From Step 10)

The review of speed limits according to the process described in Figure F1 has failed to determine an appropriate speed limit. Action taken is as follows:

(a) ☐ The Checklist, together with all relevant data and information, has been referred to the responsible officer for consideration.

Referred to: .....

By: .....

RPEQ No: .....

Date: .....

The responsible officer now has responsibility for providing recommendations at Step 25.

(b) ☐ Input to the review requested from the Traffic Advisory Committee (TAC)

Committee meeting of …../…../….. offered the following information:

.....

.....

.....

.....

.....

and/or advised a preferred speed limit of:

..... km/h

(c) Has information provided by the committee assisted in determining an appropriate limit?

☐ Yes - it is..... km/h

Go to Step 25

☐ No - (a) I concur the following speed limit for the section of road under consideration: ..... km/h

Concurred by (TAC Chair): .....

.....

Date: .....

25. Recommendation by Engineer

Following the completion of this checklist, which documents the process for the review of speed limits according to Figure F1 of Part 4 of the MUTCD, I submit the following:

Recommended Speed Limit: 60 km/h

Recommended by:

Name: .....

Position: .....

RPEQ No: .....

Date: .....

Authorisation for Deliberation

☐ The recommended speed limit is approved for deliberation in the SMC.

☐ The recommended speed limit is not approved for deliberation by the SMC for the following reasons:

.....

.....

.....

.....

.....

☐ The alternative speed limit to be discussed or retained is: ..... km/h

Reasons for the alternative speed limit are:

.....

.....

.....

.....

Authorised by: .....

Position:.....

(Responsible officer/Regional Director)

Date: .....

Endorsement by Speed Management Committee (SMC)

☐ The recommended speed limit has been endorsed by the SMC.

☐ The recommended speed limit has not been endorsed by the SMC and will now be sent back to the responsible officer for referral to the Speed Limit Review Panel (SLRP).

Recommendation by Speed Limit Review Panel (SLRP)

Following the deliberation by the SLRP, the chairperson will forward its recommendation to the responsible officer for consideration:

Recommended speed limit: ..... km/h

Recommended by:

Name:.....

(Chairperson SLRP)

Position:.....

RPEQ No:.....

Date:.....

Authorisation for Installation

☐ The recommended speed limit is authorised for installation according to the provisions of MUTCD Part 1, Appendix C.

☐ The recommended speed limit is not authorised for the following reasons:

.....

.....

.....

.....

.....

☐ The alternative speed limit to be installed or retained is: ..... km/h

Reasons for the alternative speed limit are:

.....

.....

.....

.....

.....

Authorised by: .....

Position:.....

(Responsible officer/Regional Director)

Date:.....

☐ Form M994 or equivalent local government Form completed by authorising officer and copy filed with this Checklist.

(Failure to complete this task could compromise the legality of the Speed Limit.)

26. Review / Evaluation

Will the existing speed limit be altered?

☐ Yes - program assessment to occur 1-4 weeks after installation.

☐ No - program for review in 5 years or sooner if required.

Where Steps 21, 22 or 23 have indicated that enhanced enforcement is required, complete the following:

Enhanced enforcement of this site by QPS has been requested by reporting the outcome for this speed limit review to:

☐ Local TAC (Traffic Advisory Committee)

☐ Regional Speed Management Advisory Committee

☐ Regional QPS Traffic Co-ordinator

Reported by: .....

Position:.....

Date:.....

☐ Written advice

☐ Other (specify).....

.....

.....

FORM F3: Checklist for review of existing speed limit 5



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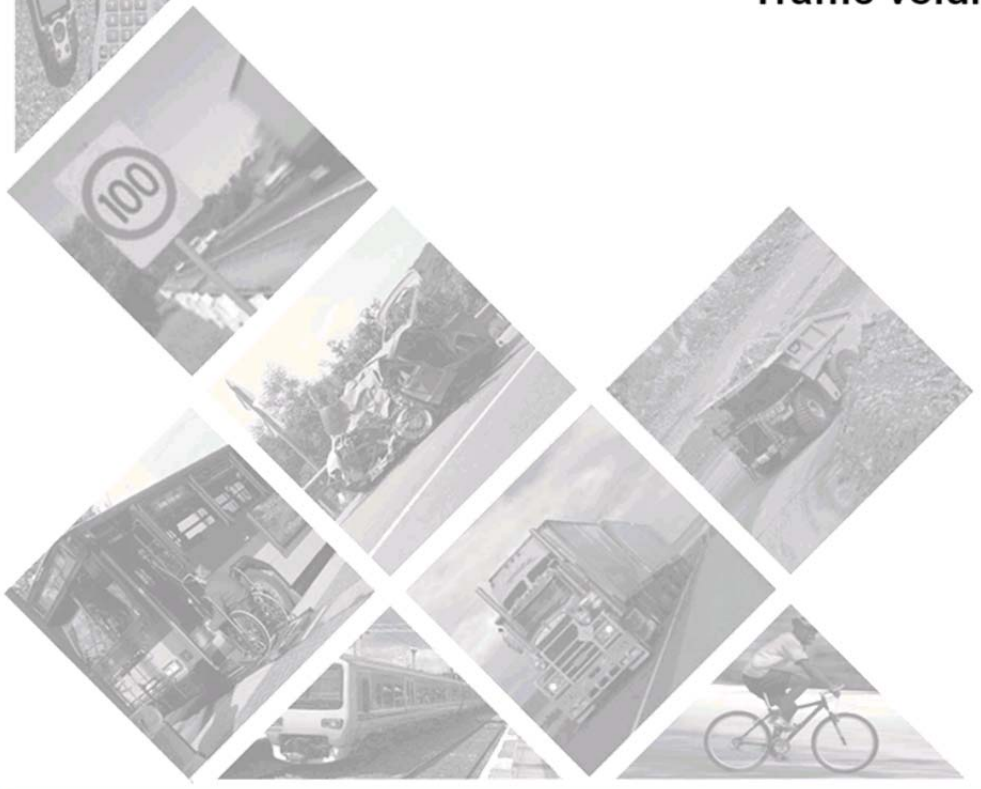
Appendix E
Traffic volume data



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MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-494 -- English (ENA)

Datasets:

Site:	**[# 15 Centre Road] # 15 Centre Road on Pole # 233846 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:38 Friday, 10 November 2017,
Zone:	
File:	# 15 Centre Road.EC0 (Plus)
Identifier:	E384ATME MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 13471 / 15062 (89.44%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-494
Site: # 15 Centre Road.0.1NS
Description: **# 15 Centre Road on Pole # 233846 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	1.0	1.0	2.0	4.0	1.0	8.0	5.0	1.8	3.1
0100-0200	0.0	1.0	0.0	0.0	0.0	8.0	3.0	0.2	1.7
0200-0300	5.0	0.0	0.0	3.0	0.0	2.0	0.0	1.6	1.4
0300-0400	8.0	3.0	4.0	6.0	8.0	3.0	1.0	5.8	4.7
0400-0500	19.0	21.0	24.0	20.0	25.0	5.0	1.0	21.8	16.4
0500-0600	43.0	45.0	35.0	37.0	33.0	14.0	17.0	38.6	32.0
0600-0700	70.0	88.0	88.0	92.0	91.0	56.0	37.0	85.8	74.6
0700-0800	123.0	136.0	118.0	116.0	138.0	103.0	92.0	126.2	118.0
0800-0900	154.0	159.0	161.0	146.0	162.0	136.0	113.0	156.4	147.3
0900-1000	**158.0**	145.0	155.0	**184.0**	161.0	185.0	168.0	160.6	165.1
1000-1100	135.0	**178.0**	175.0	167.0	**181.0**	**238.0**	**171.0**	167.2	**177.9**
1100-1200	153.0	170.0	**181.0**	174.0	177.0	179.0	151.0	**171.0**	169.3
1200-1300	143.0	**148.0**	149.0	149.0	158.0	141.0	**152.0**	149.4	**148.6**
1300-1400	137.0	113.0	113.0	139.0	146.0	137.0	134.0	129.6	131.3
1400-1500	153.0	139.0	**163.0**	**164.0**	167.0	127.0	111.0	**157.2**	146.3
1500-1600	**163.0**	142.0	124.0	146.0	139.0	**144.0**	137.0	142.8	142.1
1600-1700	141.0	126.0	141.0	134.0	**183.0**	117.0	129.0	145.0	138.7
1700-1800	108.0	100.0	110.0	108.0	134.0	90.0	96.0	112.0	106.6
1800-1900	103.0	93.0	78.0	88.0	104.0	84.0	53.0	93.2	86.1
1900-2000	46.0	59.0	52.0	41.0	65.0	40.0	42.0	52.6	49.3
2000-2100	25.0	24.0	19.0	21.0	38.0	30.0	19.0	25.4	25.1
2100-2200	25.0	8.0	14.0	20.0	22.0	16.0	18.0	17.8	17.6
2200-2300	9.0	9.0	12.0	13.0	21.0	20.0	11.0	12.8	13.6
2300-2400	0.0	4.0	11.0	5.0	21.0	12.0	0.0	8.2	7.6
Totals									
0700-1900	1671.0	1649.0	1668.0	1715.0	1850.0	1681.0	1507.0	1710.6	1677.3
0600-2200	1837.0	1828.0	1841.0	1889.0	2066.0	1823.0	1623.0	1892.2	1843.9
0600-0000	1846.0	1841.0	1864.0	1907.0	2108.0	1855.0	1634.0	1913.2	1865.0

0000-0000	1922.0	1912.0	1929.0	1977.0	2175.0	1895.0	1661.0	1983.0	1924.4
AM Peak	0900	1000	1100	0900	1000	1000	1000		
	158.0	178.0	181.0	184.0	181.0	238.0	171.0		
PM Peak	1500	1200	1400	1400	1600	1500	1200		
	163.0	148.0	163.0	164.0	183.0	144.0	152.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-495 -- English (ENA)

Datasets:

Site:	**[# 15 Centre Road] # 15 Centre Road on Pole # 233846 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:38 Friday, 10 November 2017,
Zone:	
File:	# 15 Centre Road.EC0 (Plus)
Identifier:	E384ATME MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 13471 / 15062 (89.44%)

Class Speed Matrix

ClassMatrix-495
Site: # 15 Centre Road.0.1NS
Description: **# 15 Centre Road on Pole # 233846 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	8	.	.	.	.	.	.	.	.	.	.	.	8	0.1%
20 - 30	28	.	2	2	.	.	.	.	.	.	.	.	32	0.2%
30 - 40	66	1	5	1	3	.	.	.	.	.	.	.	76	0.6%
40 - 50	143	9	31	11	2	.	3	.	.	.	.	.	199	1.5%
50 - 60	1802	81	156	9	1	1	13	.	.	.	.	.	2063	15.3%
60 - 70	6107	194	336	16	4	5	16	.	11	4	.	.	6693	49.7%
70 - 80	3143	82	204	8	5	5	5	.	2	5	.	.	3459	25.7%
80 - 90	644	10	45	3	.	.	1	.	1	.	.	.	704	5.2%
90 - 100	163	.	9	.	.	.	.	.	.	.	.	.	172	1.3%
100 - 110	39	.	.	.	.	.	.	.	.	.	.	.	39	0.3%
110 - 120	11	.	1	.	.	.	.	.	.	.	.	.	12	0.1%
120 - 130	10	.	1	.	.	.	.	.	.	.	.	.	11	0.1%
130 - 140	3	.	.	.	.	.	.	.	.	.	.	.	3	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	12167	377	790	50	15	11	38	0	14	9	0	0	13471	
	90.3%	2.8%	5.9%	0.4%	0.1%	0.1%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-485 -- English (ENA)

Datasets:

Site:	**[Centre Rd Penn St] Centre Road 100 Mtrs North of Penn Street on Pole # 233832 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:22 Friday, 10 November 2017,
Zone:	
File:	Centre Rd Penn St.EC0 (Plus)
Identifier:	L91294XF MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 8997 / 10004 (89.93%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-485
Site: Centre Rd Penn St.0.1NS
Description: **Centre Road 100 Mtrs North of Penn Street on Pole # 233832 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	2.0	1.0	2.0	4.0	1.0	5.0	3.0	2.0	2.6
0100-0200	0.0	1.0	0.0	0.0	0.0	7.0	4.0	0.2	1.7
0200-0300	4.0	1.0	0.0	1.0	0.0	2.0	0.0	1.2	1.1
0300-0400	6.0	2.0	2.0	4.0	6.0	1.0	1.0	4.0	3.1
0400-0500	18.0	16.0	17.0	16.0	17.0	1.0	1.0	16.8	12.3
0500-0600	21.0	21.0	20.0	17.0	20.0	6.0	10.0	19.8	16.4
0600-0700	39.0	52.0	53.0	49.0	64.0	45.0	30.0	51.4	47.4
0700-0800	81.0	84.0	67.0	70.0	89.0	81.0	64.0	78.2	76.6
0800-0900	91.0	101.0	109.0	103.0	114.0	102.0	65.0	103.6	97.9
0900-1000	**98.0**	98.0	108.0	**117.0**	108.0	122.0	101.0	105.8	107.4
1000-1100	78.0	**110.0**	**119.0**	116.0	**116.0**	**160.0**	**114.0**	**107.8**	**116.1**
1100-1200	85.0	102.0	112.0	102.0	100.0	133.0	113.0	100.2	106.7
1200-1300	89.0	94.0	97.0	111.0	96.0	82.0	**121.0**	97.4	98.6
1300-1400	77.0	72.0	67.0	86.0	108.0	91.0	89.0	82.0	84.3
1400-1500	114.0	93.0	**114.0**	**114.0**	113.0	80.0	89.0	**109.6**	**102.4**
1500-1600	**118.0**	**109.0**	86.0	101.0	95.0	**95.0**	88.0	101.8	98.9
1600-1700	97.0	88.0	96.0	100.0	**117.0**	83.0	79.0	99.6	94.3
1700-1800	76.0	66.0	75.0	92.0	102.0	67.0	71.0	82.2	78.4
1800-1900	74.0	62.0	56.0	51.0	78.0	66.0	34.0	64.2	60.1
1900-2000	23.0	36.0	44.0	27.0	57.0	35.0	25.0	37.4	35.3
2000-2100	15.0	14.0	21.0	12.0	25.0	18.0	14.0	17.4	17.0
2100-2200	14.0	8.0	10.0	16.0	19.0	13.0	11.0	13.4	13.0
2200-2300	5.0	5.0	10.0	10.0	20.0	9.0	6.0	10.0	9.3
2300-2400	0.0	3.0	8.0	2.0	11.0	6.0	0.0	4.8	4.3
Totals									
0700-1900	1078.0	1079.0	1106.0	1163.0	1236.0	1162.0	1028.0	1132.4	1121.7
0600-2200	1169.0	1189.0	1234.0	1267.0	1401.0	1273.0	1108.0	1252.0	1234.4
0600-0000	1174.0	1197.0	1252.0	1279.0	1432.0	1288.0	1114.0	1266.8	1248.0

0000-0000	1225.0	1239.0	1293.0	1321.0	1476.0	1310.0	1133.0	1310.8	1285.3
AM Peak	0900	1000	1000	0900	1000	1000	1000		
	98.0	110.0	119.0	117.0	116.0	160.0	114.0		
PM Peak	1500	1500	1400	1400	1600	1500	1200		
	118.0	109.0	114.0	114.0	117.0	95.0	121.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-486 -- English (ENA)

Datasets:

Site:	**[Centre Rd Penn St] Centre Road 100 Mtrs North of Penn Street on Pole # 233832 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:22 Friday, 10 November 2017,
Zone:	
File:	Centre Rd Penn St.EC0 (Plus)
Identifier:	L91294XF MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 8997 / 10004 (89.93%)

Class Speed Matrix

ClassMatrix-486
Site: Centre Rd Penn St.0.1NS
Description: **Centre Road 100 Mtrs North of Penn Street on Pole # 233832 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	5	.	.	.	.	.	.	.	.	.	.	.	5	0.1%
20 - 30	24	.	2	.	.	.	.	.	.	.	.	.	26	0.3%
30 - 40	75	4	12	1	.	.	.	.	.	.	.	.	92	1.0%
40 - 50	326	14	26	5	4	.	.	.	.	.	.	.	375	4.2%
50 - 60	2418	68	105	5	1	.	4	.	.	.	.	.	2601	28.9%
60 - 70	3981	78	124	2	1	2	4	.	.	.	.	.	4192	46.6%
70 - 80	1301	15	45	.	2	.	1	.	.	.	.	.	1364	15.2%
80 - 90	234	2	15	2	.	.	.	.	.	.	.	.	253	2.8%
90 - 100	52	.	1	.	.	.	.	.	.	.	.	.	53	0.6%
100 - 110	25	1	1	.	.	.	.	.	.	.	.	.	27	0.3%
110 - 120	5	.	.	.	.	.	.	.	.	.	.	.	5	0.1%
120 - 130	2	.	.	.	.	.	.	.	.	.	.	.	2	0.0%
130 - 140	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
140 - 150	.	.	1	.	.	.	.	.	.	.	.	.	1	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	8449	182	332	15	8	2	9	0	0	0	0	0	8997	
	93.9%	2.0%	3.7%	0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-488 -- English (ENA)

Datasets:

Site:	**[Centre Rd Strdbk Dr] Centre Road just south of Stradbroke Drive on Pole # 233823 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:16 Friday, 10 November 2017,
Zone:	
File:	Centre Rd Strdbk Dr.EC0 (Plus)
Identifier:	N597G7GG MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 3357 / 3696 (90.83%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-488
Site: Centre Rd Strdbk Dr.0.1NS
Description: **Centre Road just south of Stradbroke Drive on Pole # 233823 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.6	0.6
0100-0200	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.4	0.6
0200-0300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0300-0400	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.6	0.6
0400-0500	4.0	4.0	6.0	5.0	4.0	0.0	1.0	4.6	3.4
0500-0600	4.0	7.0	6.0	7.0	4.0	2.0	8.0	5.6	5.4
0600-0700	11.0	20.0	15.0	15.0	15.0	19.0	10.0	15.2	15.0
0700-0800	32.0	30.0	17.0	27.0	40.0	31.0	20.0	29.2	28.1
0800-0900	29.0	36.0	37.0	30.0	46.0	28.0	28.0	35.6	33.4
0900-1000	**35.0**	24.0	38.0	41.0	43.0	36.0	53.0	36.2	38.6
1000-1100	28.0	28.0	25.0	**46.0**	**51.0**	56.0	44.0	35.6	39.7
1100-1200	34.0	**39.0**	**49.0**	41.0	39.0	**56.0**	**61.0**	**40.4**	**45.6**
1200-1300	36.0	**43.0**	38.0	32.0	45.0	36.0	44.0	38.8	39.1
1300-1400	25.0	29.0	33.0	29.0	42.0	**49.0**	48.0	31.6	36.4
1400-1500	37.0	24.0	**51.0**	**40.0**	38.0	35.0	**51.0**	38.0	**39.4**
1500-1600	**41.0**	40.0	30.0	34.0	48.0	38.0	39.0	38.6	38.6
1600-1700	35.0	33.0	42.0	38.0	47.0	38.0	41.0	**39.0**	39.1
1700-1800	33.0	37.0	26.0	25.0	**50.0**	24.0	31.0	34.2	32.3
1800-1900	19.0	25.0	18.0	21.0	26.0	25.0	13.0	21.8	21.0
1900-2000	10.0	7.0	12.0	9.0	12.0	9.0	7.0	10.0	9.4
2000-2100	8.0	3.0	6.0	6.0	5.0	6.0	4.0	5.6	5.4
2100-2200	5.0	3.0	0.0	8.0	8.0	1.0	3.0	4.8	4.0
2200-2300	0.0	1.0	2.0	2.0	8.0	3.0	0.0	2.6	2.3
2300-2400	1.0	1.0	4.0	0.0	4.0	0.0	0.0	2.0	1.4
Totals									
0700-1900	384.0	388.0	404.0	404.0	515.0	452.0	473.0	419.0	431.4
0600-2200	418.0	421.0	437.0	442.0	555.0	487.0	497.0	454.6	465.3
0600-0000	419.0	423.0	443.0	444.0	567.0	490.0	497.0	459.2	469.0

0000-0000	429.0	437.0	455.0	458.0	576.0	495.0	507.0	471.0	479.6
AM Peak	0900	1100	1100	1000	1000	1100	1100		
	35.0	39.0	49.0	46.0	51.0	56.0	61.0		
PM Peak	1500	1200	1400	1400	1700	1300	1400		
	41.0	43.0	51.0	40.0	50.0	49.0	51.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-489 -- English (ENA)

Datasets:

Site:	**[Centre Rd Strdbk Dr] Centre Road just south of Stradbroke Drive on Pole # 233823 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:16 Friday, 10 November 2017,
Zone:	
File:	Centre Rd Strdbk Dr.EC0 (Plus)
Identifier:	N597G7GG MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 3357 / 3696 (90.83%)

Class Speed Matrix

ClassMatrix-489
Site: Centre Rd Strdbk Dr.0.1NS
Description: **Centre Road just south of Stradbroke Drive on Pole # 233823 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	26	.	1	.	.	.	.	.	.	.	.	.	27	0.8%
20 - 30	75	1	23	2	.	.	.	.	.	.	.	.	101	3.0%
30 - 40	180	2	16	1	2	.	.	.	.	.	.	.	201	6.0%
40 - 50	110	1	17	1	2	.	1	.	.	.	.	.	132	3.9%
50 - 60	590	17	35	.	.	.	2	.	.	.	.	.	644	19.2%
60 - 70	1317	31	55	.	3	.	4	.	.	.	.	.	1410	42.0%
70 - 80	635	8	22	.	.	1	1	.	.	.	.	.	667	19.9%
80 - 90	134	.	7	1	.	.	1	.	.	.	.	.	143	4.3%
90 - 100	20	.	.	.	.	.	.	.	.	.	.	.	20	0.6%
100 - 110	7	.	.	.	.	.	.	.	.	.	.	.	7	0.2%
110 - 120	4	.	.	.	.	.	.	.	.	.	.	.	4	0.1%
120 - 130	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
130 - 140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140 - 150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	3099	60	176	5	7	1	9	0	0	0	0	0	3357	
	92.3%	1.8%	5.2%	0.1%	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-479 -- English (ENA)

Datasets:

Site:	**[Centre Rd Neenes] Centre Road near Neenes place on Pole # 233837 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:28 Friday, 10 November 2017,
Zone:	
File:	Centre Rd Neenes.EC0 (Plus)
Identifier:	R5404WHX MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 11658 / 12954 (90.00%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-479
Site: Centre Rd Neenes 0.1NS
Description: **Centre Road near Neenes place on Pole # 233837 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	1.0	1.0	2.0	4.0	1.0	5.0	4.0	1.8	2.6
0100-0200	0.0	1.0	0.0	0.0	0.0	9.0	3.0	0.2	1.9
0200-0300	5.0	0.0	0.0	1.0	0.0	2.0	0.0	1.2	1.1
0300-0400	7.0	3.0	4.0	5.0	7.0	2.0	1.0	5.2	4.1
0400-0500	20.0	20.0	24.0	21.0	24.0	3.0	1.0	21.8	16.1
0500-0600	38.0	37.0	30.0	29.0	30.0	11.0	12.0	32.8	26.7
0600-0700	61.0	74.0	70.0	74.0	81.0	60.0	38.0	72.0	65.4
0700-0800	98.0	106.0	95.0	87.0	119.0	99.0	81.0	101.0	97.9
0800-0900	119.0	137.0	132.0	131.0	139.0	125.0	98.0	131.6	125.9
0900-1000	124.0	125.0	131.0	139.0	136.0	167.0	140.0	131.0	137.4
1000-1100	104.0	**148.0**	148.0	**142.0**	**153.0**	**215.0**	**152.0**	**139.0**	**151.7**
1100-1200	**124.0**	133.0	**149.0**	140.0	142.0	167.0	147.0	137.6	143.1
1200-1300	115.0	123.0	127.0	132.0	135.0	114.0	**145.0**	126.4	127.3
1300-1400	108.0	87.0	93.0	113.0	132.0	120.0	112.0	106.6	109.3
1400-1500	132.0	126.0	**142.0**	**142.0**	147.0	109.0	105.0	**137.8**	**129.0**
1500-1600	**149.0**	**126.0**	112.0	122.0	125.0	**126.0**	116.0	126.8	125.1
1600-1700	131.0	103.0	122.0	123.0	**158.0**	105.0	117.0	127.4	122.7
1700-1800	100.0	85.0	93.0	108.0	124.0	87.0	93.0	102.0	98.6
1800-1900	90.0	80.0	75.0	75.0	93.0	75.0	48.0	82.6	76.6
1900-2000	34.0	56.0	52.0	36.0	63.0	37.0	32.0	48.2	44.3
2000-2100	23.0	19.0	22.0	19.0	32.0	24.0	17.0	23.0	22.3
2100-2200	21.0	8.0	12.0	22.0	21.0	16.0	19.0	16.8	17.0
2200-2300	8.0	6.0	11.0	12.0	21.0	17.0	11.0	11.6	12.3
2300-2400	0.0	4.0	9.0	5.0	19.0	12.0	0.0	7.4	7.0
Totals									
0700-1900	1394.0	1379.0	1419.0	1454.0	1603.0	1509.0	1354.0	1449.8	1444.6
0600-2200	1533.0	1536.0	1575.0	1605.0	1800.0	1646.0	1460.0	1609.8	1593.6
0600-0000	1541.0	1546.0	1595.0	1622.0	1840.0	1675.0	1471.0	1628.8	1612.9

0000-0000	1612.0	1608.0	1655.0	1682.0	1902.0	1707.0	1492.0	1691.8	1665.4
AM Peak	1100	1000	1100	1000	1000	1000	1000		
	124.0	148.0	149.0	142.0	153.0	215.0	152.0		
PM Peak	1500	1500	1400	1400	1600	1500	1200		
	149.0	126.0	142.0	142.0	158.0	126.0	145.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-480 -- English (ENA)

Datasets:

Site:	**[Centre Rd Neenes] Centre Road near Neenes place on Pole # 233837 Russell Island <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:28 Friday, 10 November 2017,
Zone:	
File:	Centre Rd Neenes.EC0 (Plus)
Identifier:	R5404WHX MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 11658 / 12954 (90.00%)

Class Speed Matrix

ClassMatrix-480
Site: Centre Rd Neenes 0.1NS
Description: **Centre Road near Neenes place on Pole # 233837 Russell Island <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	10	1	.	.	.	.	.	.	.	.	.	.	11	0.1%
20 - 30	24	.	.	.	.	.	.	.	.	.	.	.	24	0.2%
30 - 40	69	1	5	1	1	.	.	.	.	.	.	.	77	0.7%
40 - 50	159	7	11	1	2	.	.	.	.	.	.	.	180	1.5%
50 - 60	2100	62	111	6	1	.	4	.	.	.	.	.	2284	19.6%
60 - 70	5245	132	199	4	4	5	2	.	.	.	.	.	5591	48.0%
70 - 80	2497	46	134	1	5	.	4	.	.	.	.	.	2687	23.0%
80 - 90	562	8	33	2	.	.	.	.	.	.	.	.	605	5.2%
90 - 100	129	1	7	.	.	.	.	.	.	.	.	.	137	1.2%
100 - 110	30	.	1	.	.	.	.	.	.	.	.	.	31	0.3%
110 - 120	17	.	.	.	.	.	.	.	.	.	.	.	17	0.1%
120 - 130	9	.	1	.	.	.	.	.	.	.	.	.	10	0.1%
130 - 140	2	.	.	.	.	.	.	.	.	.	.	.	2	0.0%
140 - 150	2	.	.	.	.	.	.	.	.	.	.	.	2	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	10855	258	502	15	13	5	10	0	0	0	0	0	11658	
	93.1%	2.2%	4.3%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%		

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-482 -- English (ENA)

Datasets:

Site:	**[Centre Rd Nr Zinnia] Centre Road Near Zinnia Street on Pole # 233839 <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:33 Friday, 10 November 2017,
Zone:	
File:	Centre Rd Nr Zinnia.EC0 (Plus)
Identifier:	HJ40D4J9 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 11761 / 13088 (89.86%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-482
Site: Centre Rd Nr Zinnia 0.1NS
Description: **Centre Road Near Zinnia Street on Pole # 233839 <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	1.0	1.0	2.0	4.0	1.0	5.0	4.0	1.8	2.6
0100-0200	0.0	1.0	0.0	0.0	0.0	8.0	3.0	0.2	1.7
0200-0300	5.0	0.0	0.0	1.0	0.0	2.0	0.0	1.2	1.1
0300-0400	8.0	3.0	4.0	5.0	8.0	3.0	1.0	5.6	4.6
0400-0500	20.0	21.0	24.0	21.0	25.0	5.0	1.0	22.2	16.7
0500-0600	35.0	36.0	30.0	30.0	30.0	11.0	14.0	32.2	26.6
0600-0700	61.0	74.0	70.0	73.0	81.0	55.0	39.0	71.8	64.7
0700-0800	101.0	108.0	97.0	87.0	120.0	101.0	80.0	102.6	99.1
0800-0900	121.0	135.0	137.0	131.0	140.0	123.0	96.0	132.8	126.1
0900-1000	**127.0**	122.0	128.0	**146.0**	138.0	171.0	141.0	132.2	139.0
1000-1100	100.0	**151.0**	150.0	139.0	**157.0**	**213.0**	**155.0**	139.4	**152.1**
1100-1200	126.0	135.0	**153.0**	139.0	150.0	165.0	148.0	**140.6**	145.1
1200-1300	114.0	124.0	128.0	134.0	138.0	114.0	**146.0**	127.6	128.3
1300-1400	109.0	87.0	96.0	116.0	134.0	121.0	110.0	108.4	110.4
1400-1500	135.0	**127.0**	**149.0**	**142.0**	148.0	111.0	106.0	**140.2**	**131.1**
1500-1600	**147.0**	125.0	115.0	128.0	130.0	**130.0**	116.0	129.0	127.3
1600-1700	127.0	104.0	126.0	121.0	**164.0**	104.0	119.0	128.4	123.6
1700-1800	98.0	85.0	98.0	106.0	120.0	80.0	88.0	101.4	96.4
1800-1900	92.0	84.0	78.0	79.0	94.0	79.0	48.0	85.4	79.1
1900-2000	35.0	56.0	53.0	39.0	66.0	39.0	33.0	49.8	45.9
2000-2100	24.0	21.0	21.0	18.0	32.0	25.0	17.0	23.2	22.6
2100-2200	21.0	8.0	13.0	21.0	21.0	16.0	19.0	16.8	17.0
2200-2300	8.0	6.0	9.0	12.0	20.0	18.0	10.0	11.0	11.9
2300-2400	0.0	4.0	9.0	5.0	20.0	11.0	0.0	7.6	7.0
Totals									
0700-1900	1397.0	1387.0	1455.0	1468.0	1633.0	1512.0	1353.0	1468.0	1457.9
0600-2200	1538.0	1546.0	1612.0	1619.0	1833.0	1647.0	1461.0	1629.6	1608.0
0600-0000	1546.0	1556.0	1630.0	1636.0	1873.0	1676.0	1471.0	1648.2	1626.9

0000-0000	1615.0	1618.0	1690.0	1697.0	1937.0	1710.0	1494.0	1711.4	1680.1
AM Peak	0900	1000	1100	0900	1000	1000	1000		
	127.0	151.0	153.0	146.0	157.0	213.0	155.0		
PM Peak	1500	1400	1400	1400	1600	1500	1200		
	147.0	127.0	149.0	142.0	164.0	130.0	146.0		

* - No data.

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-483 -- English (ENA)

Datasets:

Site:	**[Centre Rd Nr Zinnia] Centre Road Near Zinnia Street on Pole # 233839 <60>**
Attribute:	Russell Island
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:33 Friday, 10 November 2017,
Zone:	
File:	Centre Rd Nr Zinnia.EC0 (Plus)
Identifier:	HJ40D4J9 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.06)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017 (7)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 11761 / 13088 (89.86%)

Class Speed Matrix

ClassMatrix-483
Site: Centre Rd Nr Zinnia 0.1NS
Description: **Centre Road Near Zinnia Street on Pole # 233839 <60>**
Filter time: **0:00 Friday, 3 November 2017 => 0:00 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Speed (km/h)	Class												Speed Totals	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
	1	2	3	4	5	6	7	8	9	10	11	12		
10 - 20	11	.	1	.	.	.	.	.	.	.	.	.	12	0.1%
20 - 30	71	.	4	1	.	.	1	.	.	.	.	.	77	0.7%
30 - 40	111	1	19	.	2	.	.	.	.	.	.	.	133	1.1%
40 - 50	278	10	32	2	3	.	.	.	.	.	.	.	325	2.8%
50 - 60	2376	75	135	6	.	1	4	.	.	.	.	.	2597	22.1%
60 - 70	5320	121	181	3	5	2	6	.	.	.	.	.	5638	47.9%
70 - 80	2226	49	93	1	3	.	1	.	.	.	.	.	2373	20.2%
80 - 90	432	3	22	2	.	.	.	.	.	.	.	.	459	3.9%
90 - 100	83	.	3	.	.	.	.	.	.	.	.	.	86	0.7%
100 - 110	31	.	1	.	.	.	.	.	.	.	.	.	32	0.3%
110 - 120	16	.	2	.	.	.	.	.	.	.	.	.	18	0.2%
120 - 130	4	.	.	.	.	.	.	.	.	.	.	.	4	0.0%
130 - 140	5	.	.	.	.	.	.	.	.	.	.	.	5	0.0%
140 - 150	2	.	.	.	.	.	.	.	.	.	.	.	2	0.0%
150 - 160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Class Totals	10966	259	493	15	13	3	12	0	0	0	0	0	11761	
	93.2%	2.2%	4.2%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%		



RoadPro
CONSULTING

Appendix F
Speed survey data



Traffic Engineering and Road Safety Specialists www.roadpro.net.au

MetroCount Traffic Executive
Speed Statistics

SpeedStat-11 -- English (ENA)

Datasets:

Site:	**[# 15 Centre Road] # 15 Centre Road on Pole # 233846 Russell Island <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:38 Friday, 10 November 2017
Zone:	
File:	# 15 Centre Road.EC0 (Plus)
Identifier:	E384ATME MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**13:00 Thursday, 2 November 2017 => 10:38 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 13516 / 15062 (89.74%)

Speed Statistics

SpeedStat-11
Site: # 15 Centre Road.0.0NS
Description: **# 15 Centre Road on Pole # 233846 Russell Island <60>**
Filter time: **13:00 Thursday, 2 November 2017 => 10:38 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 13516
Posted speed limit = 60 km/h, Exceeding = 11173 (82.66%), Mean Exceeding = 69.89 km/h
Maximum = 138.5 km/h, **Minimum** = 12.9 km/h, **Mean** = 67.3 km/h
85% Speed = 75.2 km/h, **95% Speed** = 82.4 km/h, **Median** = 66.2 km/h
15 km/h Pace = 59 - 74, **Number in Pace** = 9164 (67.80%)
Variance = 89.78, **Standard Deviation** = 9.48 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	13516	100.0%	0.00	0.00	0.00
10 - 20	8	0.1%	8	0.1%	13508	99.9%	0.00	0.00	0.00
20 - 30	30	0.2%	38	0.3%	13478	99.7%	0.00	0.00	0.00
30 - 40	73	0.5%	111	0.8%	13405	99.2%	0.00	0.00	0.00
40 - 50	192	1.4%	303	2.2%	13213	97.8%	0.00	0.00	0.00
50 - 60	2040	15.1%	2343	17.3%	11173	82.7%	0.00	0.00	0.00
60 - 70	6618	49.0%	8961	66.3%	4555	33.7%	0.00	0.00	0.00
70 - 80	3542	26.2%	12503	92.5%	1013	7.5%	0.00	0.00	0.00
80 - 90	755	5.6%	13258	98.1%	258	1.9%	0.00	0.00	0.00
90 - 100	188	1.4%	13446	99.5%	70	0.5%	0.00	0.00	0.00
100 - 110	39	0.3%	13485	99.8%	31	0.2%	0.00	0.00	0.00
110 - 120	15	0.1%	13500	99.9%	16	0.1%	0.00	0.00	0.00
120 - 130	12	0.1%	13512	100.0%	4	0.0%	0.00	0.00	0.00
130 - 140	4	0.0%	13516	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	13516	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	13516	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	13516	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	13516	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	13516	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	13516	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	2343	17.3%	11173	82.7%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-14 -- English (ENA)

Datasets:

Site:	**[Centre Rd Penn St] Centre Road 100 Mtrs North of Penn Street on Pole # 233832 Russell Island <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:22 Friday, 10 November 2017
Zone:	
File:	Centre Rd Penn St.EC0 (Plus)
Identifier:	L91294XF MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**13:00 Thursday, 2 November 2017 => 10:22 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 9286 / 10004 (92.82%)

Speed Statistics

SpeedStat-14
Site: Centre Rd Penn St.0.0NS
Description: **Centre Road 100 Mtrs North of Penn Street on Pole # 233832 Russell Island <60>**
Filter time: **13:00 Thursday, 2 November 2017 => 10:22 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 9286
Posted speed limit = 60 km/h, Exceeding = 6113 (65.83%), Mean Exceeding = 68.09 km/h
Maximum = 147.6 km/h, **Minimum** = 17.1 km/h, **Mean** = 63.3 km/h
85% Speed = 71.6 km/h, **95% Speed** = 78.1 km/h, **Median** = 62.6 km/h
15 km/h Pace = 55 - 70, **Number in Pace** = 6175 (66.50%)
Variance = 91.01, **Standard Deviation** = 9.54 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	9286	100.0%	0.00	0.00	0.00
10 - 20	4	0.0%	4	0.0%	9282	100.0%	0.00	0.00	0.00
20 - 30	27	0.3%	31	0.3%	9255	99.7%	0.00	0.00	0.00
30 - 40	93	1.0%	124	1.3%	9162	98.7%	0.00	0.00	0.00
40 - 50	386	4.2%	510	5.5%	8776	94.5%	0.00	0.00	0.00
50 - 60	2663	28.7%	3173	34.2%	6113	65.8%	0.00	0.00	0.00
60 - 70	4300	46.3%	7473	80.5%	1813	19.5%	0.00	0.00	0.00
70 - 80	1442	15.5%	8915	96.0%	371	4.0%	0.00	0.00	0.00
80 - 90	275	3.0%	9190	99.0%	96	1.0%	0.00	0.00	0.00
90 - 100	59	0.6%	9249	99.6%	37	0.4%	0.00	0.00	0.00
100 - 110	26	0.3%	9275	99.9%	11	0.1%	0.00	0.00	0.00
110 - 120	7	0.1%	9282	100.0%	4	0.0%	0.00	0.00	0.00
120 - 130	3	0.0%	9285	100.0%	1	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	9285	100.0%	1	0.0%	0.00	0.00	0.00
140 - 150	1	0.0%	9286	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	9286	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	9286	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	9286	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	9286	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	9286	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	3173	34.2%	6113	65.8%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-15 -- English (ENA)

Datasets:

Site:	**[Centre Rd Strdbk Dr] Centre Road just south of Stradbroke Drive on Pole # 233823 Russell Island <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:16 Friday, 10 November 2017
Zone:	
File:	Centre Rd Strdbk Dr.EC0 (Plus)
Identifier:	N597G7GG MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**13:00 Thursday, 2 November 2017 => 10:16 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 3598 / 3696 (97.35%)

Speed Statistics

SpeedStat-15
Site: Centre Rd Strdbk Dr.0.0NS
Description: **Centre Road just south of Stradbroke Drive on Pole # 233823 Russell Island <60>**
Filter time: **13:00 Thursday, 2 November 2017 => 10:16 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 3598
Posted speed limit = 60 km/h, Exceeding = 2400 (66.70%), Mean Exceeding = 69.19 km/h
Maximum = 126.8 km/h, **Minimum** = 15.3 km/h, **Mean** = 61.9 km/h
85% Speed = 73.4 km/h, **95% Speed** = 80.3 km/h, **Median** = 63.7 km/h
15 km/h Pace = 57 - 72, **Number in Pace** = 2102 (58.42%)
Variance = 191.80, **Standard Deviation** = 13.85 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	3598	100.0%	0.00	0.00	0.00
10 - 20	28	0.8%	28	0.8%	3570	99.2%	0.00	0.00	0.00
20 - 30	110	3.1%	138	3.8%	3460	96.2%	0.00	0.00	0.00
30 - 40	218	6.1%	356	9.9%	3242	90.1%	0.00	0.00	0.00
40 - 50	142	3.9%	498	13.8%	3100	86.2%	0.00	0.00	0.00
50 - 60	700	19.5%	1198	33.3%	2400	66.7%	0.00	0.00	0.00
60 - 70	1494	41.5%	2692	74.8%	906	25.2%	0.00	0.00	0.00
70 - 80	715	19.9%	3407	94.7%	191	5.3%	0.00	0.00	0.00
80 - 90	157	4.4%	3564	99.1%	34	0.9%	0.00	0.00	0.00
90 - 100	21	0.6%	3585	99.6%	13	0.4%	0.00	0.00	0.00
100 - 110	8	0.2%	3593	99.9%	5	0.1%	0.00	0.00	0.00
110 - 120	4	0.1%	3597	100.0%	1	0.0%	0.00	0.00	0.00
120 - 130	1	0.0%	3598	100.0%	0	0.0%	0.00	0.00	0.00
130 - 140	0	0.0%	3598	100.0%	0	0.0%	0.00	0.00	0.00
140 - 150	0	0.0%	3598	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	3598	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	3598	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	3598	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	3598	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	3598	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	1198	33.3%	2400	66.7%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-12 -- English (ENA)

Datasets:

Site:	**[Centre Rd Neenes] Centre Road near Neenes place on Pole # 233837 Russell Island <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:28 Friday, 10 November 2017
Zone:	
File:	Centre Rd Neenes.EC0 (Plus)
Identifier:	R5404WHX MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**13:00 Thursday, 2 November 2017 => 10:28 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 11770 / 12954 (90.86%)

Speed Statistics

SpeedStat-12
Site: Centre Rd Neenes.0.0NS
Description: **Centre Road near Neenes place on Pole # 233837 Russell Island <60>**
Filter time: **13:00 Thursday, 2 November 2017 => 10:28 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 11770
Posted speed limit = 60 km/h, Exceeding = 9244 (78.54%), Mean Exceeding = 69.78 km/h
Maximum = 147.4 km/h, **Minimum** = 13.3 km/h, **Mean** = 66.6 km/h
85% Speed = 74.9 km/h, **95% Speed** = 82.8 km/h, **Median** = 65.5 km/h
15 km/h Pace = 58 - 73, **Number in Pace** = 7770 (66.02%)
Variance = 96.60, **Standard Deviation** = 9.83 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	11770	100.0%	0.00	0.00	0.00
10 - 20	9	0.1%	9	0.1%	11761	99.9%	0.00	0.00	0.00
20 - 30	24	0.2%	33	0.3%	11737	99.7%	0.00	0.00	0.00
30 - 40	76	0.6%	109	0.9%	11661	99.1%	0.00	0.00	0.00
40 - 50	173	1.5%	282	2.4%	11488	97.6%	0.00	0.00	0.00
50 - 60	2244	19.1%	2526	21.5%	9244	78.5%	0.00	0.00	0.00
60 - 70	5596	47.5%	8122	69.0%	3648	31.0%	0.00	0.00	0.00
70 - 80	2783	23.6%	10905	92.7%	865	7.3%	0.00	0.00	0.00
80 - 90	649	5.5%	11554	98.2%	216	1.8%	0.00	0.00	0.00
90 - 100	149	1.3%	11703	99.4%	67	0.6%	0.00	0.00	0.00
100 - 110	32	0.3%	11735	99.7%	35	0.3%	0.00	0.00	0.00
110 - 120	21	0.2%	11756	99.9%	14	0.1%	0.00	0.00	0.00
120 - 130	11	0.1%	11767	100.0%	3	0.0%	0.00	0.00	0.00
130 - 140	2	0.0%	11769	100.0%	1	0.0%	0.00	0.00	0.00
140 - 150	1	0.0%	11770	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	11770	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	11770	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	11770	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	11770	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	11770	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	2526	21.5%	9244	78.5%

MetroCount Traffic Executive
Speed Statistics

SpeedStat-13 -- English (ENA)

Datasets:

Site:	**[Centre Rd Nr Zinnia] Centre Road Near Zinnia Street on Pole # 233839 <60>**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	13:00 Thursday, 2 November 2017 => 10:33 Friday, 10 November 2017
Zone:	
File:	Centre Rd Nr Zinnia.EC0 (Plus)
Identifier:	HJ40D4J9 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15315)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**13:00 Thursday, 2 November 2017 => 10:33 Friday, 10 November 2017**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	Greater than 4.00 seconds. - (Headway)
Name:	Speed_15Pace
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 11875 / 13088 (90.73%)

Speed Statistics

SpeedStat-13
Site: Centre Rd Nr Zinnia.0.0NS
Description: **Centre Road Near Zinnia Street on Pole # 233839 <60>**
Filter time: **13:00 Thursday, 2 November 2017 => 10:33 Friday, 10 November 2017**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>4)

Vehicles = 11875
Posted speed limit = 60 km/h, Exceeding = 8729 (73.51%), Mean Exceeding = 69.13 km/h
Maximum = 144.1 km/h, **Minimum** = 13.4 km/h, **Mean** = 65.0 km/h
85% Speed = 73.4 km/h, **95% Speed** = 80.6 km/h, **Median** = 64.4 km/h
15 km/h Pace = 58 - 73, **Number in Pace** = 7716 (64.98%)
Variance = 107.15, **Standard Deviation** = 10.35 km/h

Speed Bins (Partial days)

Speed	Bin		Below		Above		Energy	vMult	n * vMult
0 - 10	0	0.0%	0	0.0%	11875	100.0%	0.00	0.00	0.00
10 - 20	11	0.1%	11	0.1%	11864	99.9%	0.00	0.00	0.00
20 - 30	81	0.7%	92	0.8%	11783	99.2%	0.00	0.00	0.00
30 - 40	137	1.2%	229	1.9%	11646	98.1%	0.00	0.00	0.00
40 - 50	320	2.7%	549	4.6%	11326	95.4%	0.00	0.00	0.00
50 - 60	2597	21.9%	3146	26.5%	8729	73.5%	0.00	0.00	0.00
60 - 70	5604	47.2%	8750	73.7%	3125	26.3%	0.00	0.00	0.00
70 - 80	2461	20.7%	11211	94.4%	664	5.6%	0.00	0.00	0.00
80 - 90	506	4.3%	11717	98.7%	158	1.3%	0.00	0.00	0.00
90 - 100	94	0.8%	11811	99.5%	64	0.5%	0.00	0.00	0.00
100 - 110	32	0.3%	11843	99.7%	32	0.3%	0.00	0.00	0.00
110 - 120	19	0.2%	11862	99.9%	13	0.1%	0.00	0.00	0.00
120 - 130	7	0.1%	11869	99.9%	6	0.1%	0.00	0.00	0.00
130 - 140	5	0.0%	11874	100.0%	1	0.0%	0.00	0.00	0.00
140 - 150	1	0.0%	11875	100.0%	0	0.0%	0.00	0.00	0.00
150 - 160	0	0.0%	11875	100.0%	0	0.0%	0.00	0.00	0.00
160 - 170	0	0.0%	11875	100.0%	0	0.0%	0.00	0.00	0.00
170 - 180	0	0.0%	11875	100.0%	0	0.0%	0.00	0.00	0.00
180 - 190	0	0.0%	11875	100.0%	0	0.0%	0.00	0.00	0.00
190 - 200	0	0.0%	11875	100.0%	0	0.0%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

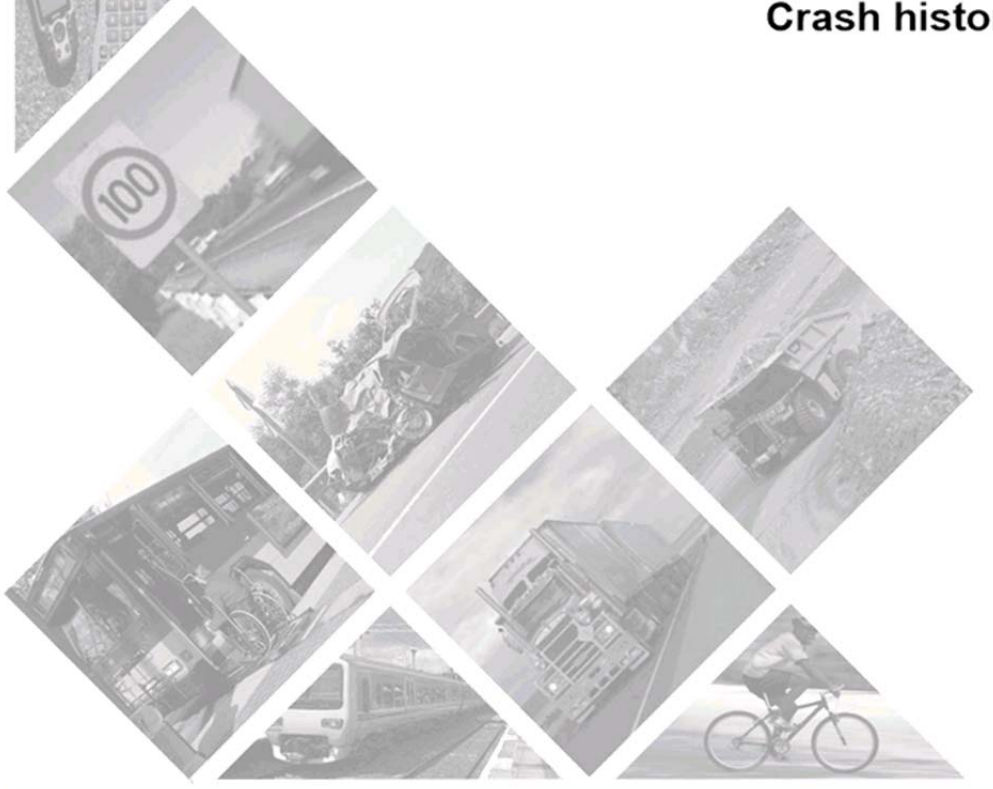
Speed limit fields (Partial days)

	Limit	Below		Above	
0	60 (PSL)	3146	26.5%	8729	73.5%



RoadPro
CONSULTING

Appendix G
Crash history data



Traffic Engineering and Road Safety Specialists www.roadpro.net.au

Data Analysis
Customer Services, Safety and Regulation Division

WebCrash v2.3 Reports

The page numbers shown here are those of the overall PDF file (they range 1-10).
The PDF page numbers appear at the top left-hand corner of each page.
Pages within individual reports are numbered from 1 and appear at the top right-hand corner of each page.
When printing specific reports with Acrobat Reader, the PDF page numbers must be specified.

Table of Contents

1. Crash Details by Crash Number 3

Data Restrictions

Please note:-

IMPORTANT MESSAGE

Around 10% to 15% of non-fatal crash records for 1 July 2012 to 31 December 2014 are incomplete and unavailable. Data Analysis are addressing the issues to resolve this problem as soon as possible.

The crash data for 1 July 2012 to 31 December 2014 is being made available and users must exercise caution when analysing this data.

The data CAN be used to identify locations where crash frequency has increased, however, the degree of increase may be under-reported and some locations may not be identified. The data CAN be used to examine individual crash details.

The data is NOT suitable for:

* Time series trend analysis

* Comparison of characteristics

* Evaluation of crash reductions

* Evaluation of crash risk

* Crash rates (per VKT, per Vehicle type, per licence holder, per population)

With 10% to 15% of crash records unavailable the data is under-reported, biased and fairly limited for analytical purposes, however, it is considered a reasonable level of completeness for Black Spot submissions and examining individual crash details.

The Department of Transport and Main Roads (TMR) WebCrash system reports on the following crash data - fatal to 31 August 2017, hospitalisation to 31 May 2017, medical treatment to 31 May 2017, minor injury to 31 May 2017 and property damage only to 31 December 2010.

Road Crash Data Inclusion Requirements

Please also note that the information held in the RoadCrash database relating to crashes occurring within the last 12 months are considered preliminary as investigations into crashes can take up to 12 months to finalise. Please further note that to qualify as valid, crashes must meet the following criteria:

1. The crash occurred on a public road, and
2. A person was killed or injured, or
3. At least one vehicle was towed away, or
4. The value of property damage was:
   (a) $2500 damage to property other than vehicles (after 1 December 1999)
   (b) $2500 damage to vehicle and property (after 1 December 1991 and prior to 1 December 1999)
   (c) $1000 damage to property (prior to 1 December 1991)

Note: crashes resulting from medical conditions or deliberate acts are excluded.

Contact Details:

Postal Address: Manager (Data Analysis)
Customer Services, Safety and Regulation Division
Department of Transport and Main Roads
PO Box 673
Fortitude Valley
Qld 4006

Phone: 07 3066 2236
Fax: 07 3066 2410
Email: DataAnalysis@tmr.qld.gov.au

Report 1

Crash Details by Crash Number

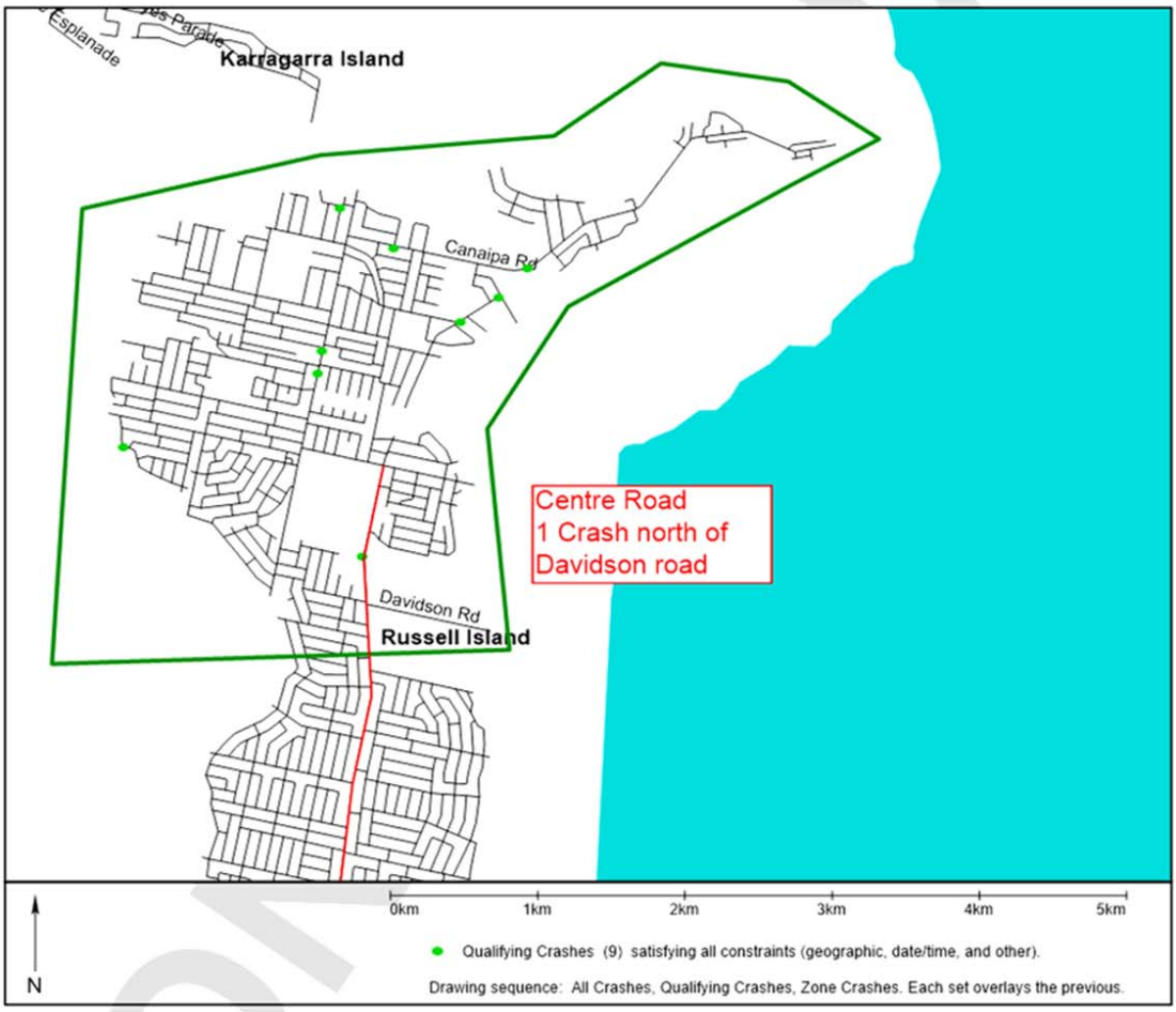
NOTE: This report has been limited to the maximum of 500 records.

Report Constraints

Geographic Constraints
Map

and

Date and Time Constraints
Continuous time: Jun-2012 to Dec-2017



CONFIDENTIAL

Report 1

Crash Details by Crash Number

Crash Number	20130125243 (1 of 9)	**Longitude GDA94**	153.383982
Date and Time	Wed 30-Jan-2013 12pm	**DCA Coding**	Off Path-Curve: Off Cway Rt Bend Hit Obj(803)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	60
LGA	Redland Shire Council(34)	**Crash Severity**	Hospitalisation
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Wet
Police District	South Brisbane(502)	**Horiz. Alignment**	Curved-View obscured
Police Division	Russell Island(00074)	**Vert. Alignment**	Grade
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Centre Rd	**Lighting Condition**	Daylight
Intersecting St		**Atmospheric Cond.**	Raining
Latitude GDA94	-27.668073		

Crash Description

Single vehicle traffic accident. Unit 1 was travelling northbound along Centre Road Russell Island. Vehicle has come over a hill 200 metres prior to Zircon Street. Vehicle has crossed over to the right hand side of the road and spun in the wet road. Vehicle has collided with a tree on the right hand side of the road. Tree has collided with drivers side door of the vehicle. Driver has remained entrapped for 3 hours whilst rescue work has been undertaken. Vehicle was towed from scene. Vehicle is written off.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	UNK
Controller Gender	F	**Intended Action**	Go straight ahead
Controller Age	37	**Damage**	Extensive; unrepairable
Controller AgeGroup	30-39	**Unit Headed Direction**	North
Licence Type	Provisional		

Contributing Circumstances

Unit 1 ROAD - WET/SLIPPERY

Injury Details

Injured Person	1 of 3	**Age Group**	17-20
Unit Number	1	**Road User**	Passenger
Injury Severity	Hospitalised	**Restraint**	Fitted - Not Worn
Gender	M	**Helmet**	Not Applicable
Injured Person	2 of 3	**Age Group**	40-49
Unit Number	1	**Road User**	Passenger
Injury Severity	Hospitalised	**Restraint**	Fitted - Unknown if Worn
Gender	M	**Helmet**	Not Applicable
Injured Person	3 of 3	**Age Group**	30-39
Unit Number	1	**Road User**	Driver
Injury Severity	Hospitalised	**Restraint**	Unknown
Gender	F	**Helmet**	Not Applicable

Crash Number	20130231338 (2 of 9)	**Longitude GDA94**	153.381134
Date and Time	Sun 24-Feb-2013 3pm	**DCA Coding**	Veh'S Opposite Approach: Head On(201)
QT Region	South East Region (Mr)	**Crash Nature**	Head-On
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Medical Treatment
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	T Junction
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Curved-View open
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Bayview Rd	**Lighting Condition**	Daylight
Intersecting St	Cambridge Rd	**Atmospheric Cond.**	Clear
Latitude GDA94	-27.646981		

Crash Description

Unit 1 is a bicycle rider, unit 2 is a motor vehicle, the incident location is Bayview Road, Russell Island, approximately 5 metres east of Cambridge Road, both roads terminate at the intersection requiring all traffic to turn into the other road, unit 2 was approaching the intersection, travelling west on Bayview Road, unit 1 was travelling north on Cambridge Road, unit 1 has cut the corner of the intersection whilst travelling at speed, travelled onto the wrong side of the road and run into the front of unit 2 as it stopped just prior to the intersection. Collision has occurred on the southern side of Bayview Road, indicating unit 1 was on the incorrect side of the road.

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Report 1

Crash Details by Crash Number

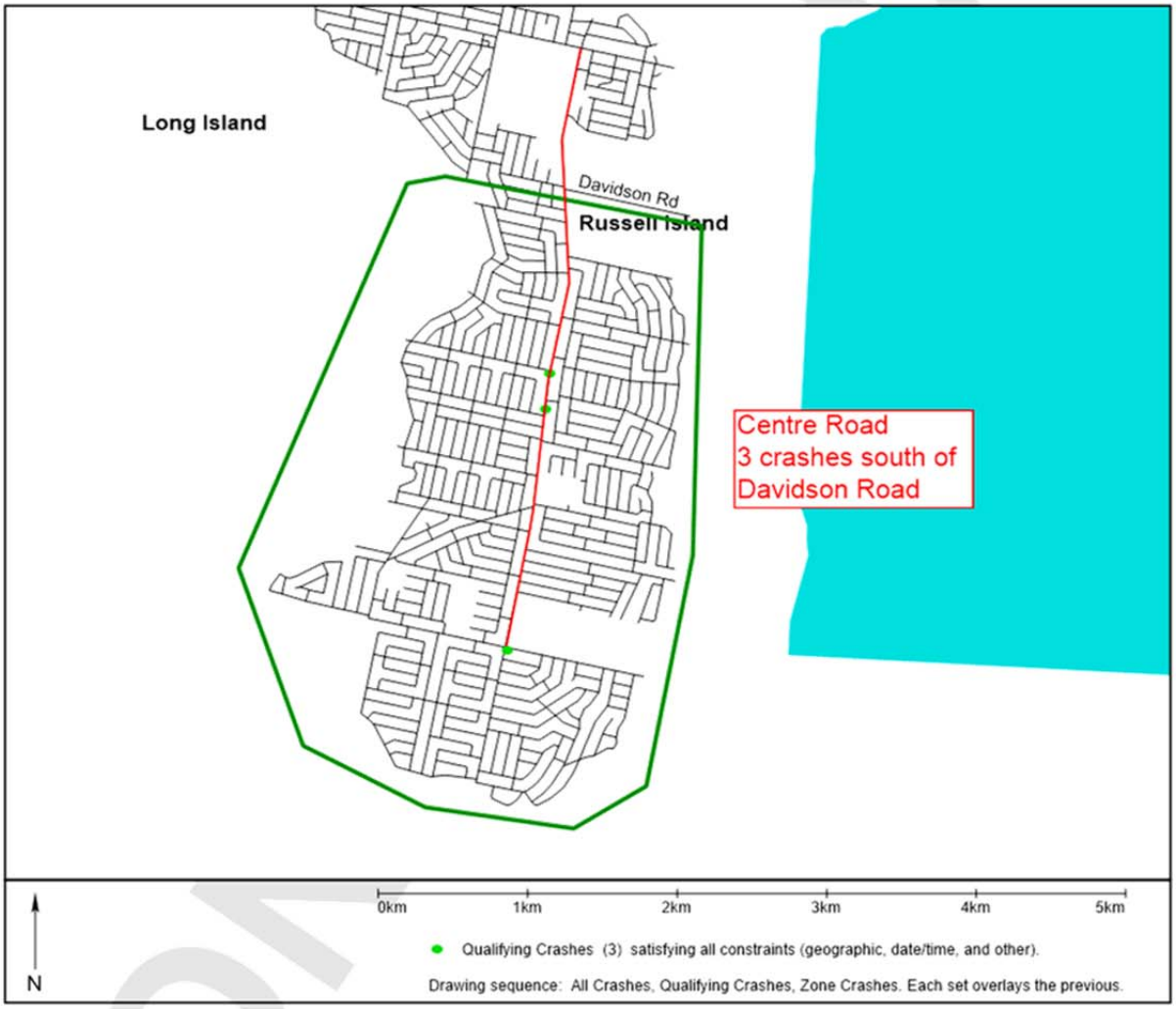
NOTE: This report has been limited to the maximum of 500 records.

Report Constraints

Geographic Constraints
Map

and

Date and Time Constraints
Continuous time: Jun-2012 to Dec-2017



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Report 1

Crash Details by Crash Number

Crash Number	20131491674 (1 of 3)	**Longitude GDA94**	153.382099
Date and Time	Sat 30-Nov-2013 2am	**DCA Coding**	Off Path-Straight:Right Off Cway Hit Obj(704)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	60
LGA	Redland Shire Council(34)	**Crash Severity**	Medical Treatment
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	T Junction
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Glendale Rd	**Lighting Condition**	Darkness - unlighted
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.698873		

Crash Description

Unit 1 travelling south on Centre Road, turning left onto Glendale Road, no stop sign or give way sign as it is a continuation of main road, unit 1 lost control, ran off the road and collided with a power pole on the south eastern side of the road. Unit 1 extensively damaged on front end, unrepairable write off. Vehicle stolen at time of incident, related occurrence QP1301491337 refers. Search of area later located xxxxxxxxx, outside time frame for breath test, conveyed to hospital for treatment, not admitted, charged with UUMV and unlicenced driving. Enquiries later established xxxxxxx as passenger, also conveyed to hospital for treatment, not admitted, not in public interest to charge asxxxxxxxxxxis a minor and only admitted involvement to Police when urged to seek medical treatment as a result of injuries sustained. Owner notified and arranged removal of vehicle. SOC attended and photographed scene. No further action required.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	15	**Damage**	Extensive; unrepairable
Controller AgeGroup	12-16	**Unit Headed Direction**	East
Licence Type			

Contributing Circumstances

Unit 1 LIGHTING - NO STREET LIGHTING
Unit 1 DRIVER - UNDERAGE (INEXPERIENCE)

Injury Details

Injured Person	1 of 2	**Age Group**	12-16
Unit Number	1	**Road User**	Driver
Injury Severity	Medically treated	**Restraint**	Fitted - Not Worn
Gender	M	**Helmet**	Not Applicable
Injured Person	2 of 2	**Age Group**	12-16
Unit Number	1	**Road User**	Passenger
Injury Severity	Medically treated	**Restraint**	Unknown
Gender	F	**Helmet**	Not Applicable

Crash Number	20140576804 (2 of 3)	**Longitude GDA94**	153.383784
Date and Time	Wed 30-Apr-2014 1pm	**DCA Coding**	Off Path-Straight:Right Off Cway Hit Obj(704)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Fixed Obstruction Or Temporary Object
MR District	Metropolitan District (Mr)	**Speed Limit**	60
LGA	Redland Shire Council(34)	**Crash Severity**	Medical Treatment
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Centre Rd	**Lighting Condition**	Daylight
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.684364		

Crash Description

Unit 1 travelling south on Centre Road, Russell Island, travelled slightly off road into gravel on left side of road, over corrected, travelled accross road, up kerbing and into tree on opposite side of the road. Extensive damage to vehicle. Driver issued TIN for Fail to maintain proper control of vehicle.

Unit Number	1 of 1	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	
Controller Gender	F	**Intended Action**	Go straight ahead
Controller Age	47	**Damage**	Extensive; unrepairable
Controller AgeGroup	40-49	**Unit Headed Direction**	South
Licence Type	Open		

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Report 1

Crash Details by Crash Number

Contributing Circumstances
Unit 1 VIOLATION - UNDUE CARE AND ATTENTION

Injury Details

Injured Person	1 of 1	**Age Group**	40-49
Unit Number	1	**Road User**	Driver
Injury Severity	Medically treated	**Restraint**	Fitted - Worn
Gender	F	**Helmet**	Not Applicable

Crash Number	20140759953 (3 of 3)	**Longitude GDA94**	153.383973
Date and Time	Sat 7-Jun-2014 5pm	**DCA Coding**	Ped'N: Hit Walking With Traffic(005)
QT Region	South East Region (Mr)	**Crash Nature**	Hit Pedestrian
MR District	Metropolitan District (Mr)	**Speed Limit**	50
LGA	Redland Shire Council(34)	**Crash Severity**	Fatal
SLA (Suburb)	Redland (S) Bal(6283)	**Roadway Feature**	Not Applicable
Police Region	Brisbane	**Roadway Surface**	Sealed - Dry
Police District	South Brisbane(502)	**Horiz. Alignment**	Straight
Police Division	Russell Island(00074)	**Vert. Alignment**	Level
Road Authority	Local Govt	**Traffic Control**	No Traffic Control
Street	Centre Rd	**Lighting Condition**	Dawn/Dusk
Intersecting St		**Atmospheric Cond.**	Clear
Latitude GDA94	-27.682187		

Crash Description

BRIEF DESCRIPTION OF INCIDENT The location where the incident occurred is Centre Road Russell Island. Centre Road is a sealed bitumen road that runs in a north south direction. It is signed 60k/h. There are no line markings however the road itself is approximately 7m wide, wide enough for 2 vehicles to pass safely in opposite directions. There are no footpaths along Centre Road. There are street lights along Centre Road at the incident location, they are approximately 150m apart. At approximately 5.15pm on Saturday 7 June 2014, vehicle XXXXX (a 1984 red Toyota Landcruiser) was being driven, south along Centre Road Russell Island. Also travelling south along Centre Road was XXXXX XXXXX (the deceased), he was riding a skateboard along the edge of the road. The Red Toyota Landcruiser has approached the deceased from behind and just past the intersection with Kurrajong Street has struck him along the left side of the vehicle causing damage to the left front indicator and parking light assembly and left side win mirror. The deceased was catapulted into the air and came to rest 10m from the point of impact.

Unit Number	1 of 2	**Licence State**	QLD
Unit Type	Car; Station Wagon	**Origin State**	UNK
Controller Gender	M	**Intended Action**	Go straight ahead
Controller Age	44	**Damage**	Minor
Controller AgeGroup	40-49	**Unit Headed Direction**	South
Licence Type	Open		

Unit Number	2 of 2	**Licence State**	N/A
Unit Type	Wheeled Recreation Device	**Origin State**	UNK
Controller Gender	M	**Intended Action**	Walk with traffic
Controller Age	14	**Damage**	Not applicable
Controller AgeGroup	12-16	**Unit Headed Direction**	South
Licence Type	Not applicable		

Contributing Circumstances

Unit 1 VIOLATION - OVER PRESCRIBED CONCENTRATION OF ALCOHOL
Unit 1 VEHICLE DEFECTS - MISCELLANEOUS

Unit 2 NOT APPLICABLE

Injury Details

Injured Person	1 of 1	**Age Group**	12-16
Unit Number	2	**Road User**	Pedestrian
Injury Severity	Fatality	**Restraint**	Not Applicable
Gender	M	**Helmet**	Not Applicable

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Technical Memo

Date:	Thursday, 29 March 2018
To:	Wes Davis
From:	Michael Wong
SUBJECT:	RUSSELL ISLAND LIGHTING ASSESSMENT

1 INTRODUCTION

Calibre was engaged by Redland City Council (RCC) to undertake a lighting assessment for five roads located on Russell Island. This lighting assessment is in response to the Coroners Findings of Inquest into a death that occurred on one of the five roads under assessment. A recommendation made in the Coroners Findings of Inquest was that the street lighting on Russell Island's major routes should be assessed to determine if they are in accordance with relevant standards. In addition to this recommendation, RCC requested the assessment of the lighting requirements for the existing pedestrian crossings and associated raised traffic islands within the assessment area.

The five major routes under assessment are as follows:

1. High Street
2. Canaipa Road
3. Canaipa Point Drive
4. Minjerriba Road
5. Centre Road

2 BASE DATA & STANDARDS

The base data utilised for this assessment has been compiled from aerial imagery, Energex Maps, ADT provided by RCC, and a site investigation conducted by Calibre on 6 February 2018.

The street lighting assessment for Russell Island determined if the existing Rate 2 lighting is in accordance with the following:

- AS/NZS 1158:2005 Lighting for roads and public spaces;
- Energex's Public Lighting Design Manual EX00767 Ver 3 for Rate 2 Street Lighting;
- Redland City Council Street Lighting Policy POL-2350;
- Redland's Standard Drawing R-RSC-15;
- Redland's Planning Scheme Part 11, Policy 9, Chapter 9; and
- Redland's Red-e-maps.

At the pre-start meeting held on 6 February 2018, Calibre noted that the Local Streets classifications provided in RCC's project brief did not appear to reflect the existing situation and that RCC's current Planning Scheme was referencing a superseded version of AS/NZS 1158. As agreed with RCC, Calibre undertook a review and recommended the road classification and lighting categories for each road.

From a review of the superseded AS/NZS 1158 and current standard, RCC's standard drawing R-RSC-15, Redland's Planning Scheme, and ADT provided by RCC, a recommended road classification and lighting category was determined for each road; as presented in **Table 2-1**.

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Table 2-1 Summary of Lighting Category Recommendations

Location	ADT (X)	Classification as per brief (Current)	Recommended Classification and ADT range (Based on ADT and Standard Drawing R-RSC-15)	Lighting Requirements (based on recommended classification and RCC's planning scheme)	Recommended equivalent Current Lighting Standard Category	Comments
High Street	3745	Local Road	Trunk Collector (X < 10,000)	V5	**V5**	
Canaipa Road	1235	Trunk Collector	Collector Street (X < 3,000)	B1	**P3**	
Canaipa Point Drive	604	Local Road	Access Street (X < 1,000)	B2	**P4**	
Minjerriba Road (West)	2331	Local Road	Collector Street (X < 3,000)	B1	**P3**	Section west of Centre Road intersection
Minjerriba Road (East)	Not available (refer comments)	Local Road	Access Street (X < 1,000)	B2	**P4**	Section east of Centre Road intersection. No traffic data was available for this section of road, however, from site observations and properties serviced, this section was classified as an Access Street.
Centre Road (North)	1981	Local Road	Collector Street (X < 3,000)	B1	**P3**	Section north of Stradbroke Drive intersection.
Centre Road (South)	471	Local Road	Access Street (X < 1,000)	B2	**P4**	Section south of Stradbroke Drive intersection.

RCC reviewed and endorsed the recommended road classifications and lighting categories.

3 ASSESSMENT

Following analysis of the base data and lighting categories endorsed by RCC, minimum lighting requirements were determined in accordance with Redland's Planning Scheme and Energex's Standards for each road. A lighting model and isolux diagrams were developed for all street lighting on the roads under assessment.

Based on minimum lighting requirements, the maximum spacing for each lighting category was determined for Energex's recommended luminaires and mounting heights. In order to determine the adequacy of each road, these spacing requirements and the isolux diagrams were analysed against existing street lighting arrangements. It should be noted that as part of RCC's Planning Scheme, M50 luminaires are preferred with S70 being permitted if considered practical. In accordance with current Energex standards, M50 and M125 luminaires are obsolescent.

The lighting requirements and existing lighting for each location are detailed on the isolux diagram drawings provided in **Attachment A.**

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Technical Memo

CONTINUED

3.1 High Street

From Section 2, High Street was endorsed as a V5 lighting category. Assessment of the existing lighting found that majority of the lighting along High Street is insufficient. Table 3-1 shows Energex's recommended lighting requirements for lighting category V5 against High Street's existing lighting.

Table 3-1 Summary of High Street lighting assessment

	High Street (V5)		
	Luminaire (Type)	Mounting Height (m)	Maximum Spacing (m)
Recommended Requirement	S100 / S150	9.0 / 10.5	50 / 62
Existing street lighting	M50 / M125 / S70	6.5 to 8.0 (varies)	19 to 189 (varies)

From site observations, the street lighting along High Street varies significantly along the corridor. The luminaires vary between M50, M125 and S70 with mounting heights ranging from 6.5m to 8.0m. The light emitted from the existing luminaries is considerably less than the arrangement recommended by Energex to meet minimum requirements for lighting category V5.

To rectify this non-compliance with standards, the existing street lighting should be replaced with S100 or S150 luminaires that comply with the recommended mounting height and maximum spacing. The existing power poles could potentially be utilised to install new outreaches and luminaires.

An existing zebra crossing is located near the Fern Terrace intersection at the Russell Island State School. An existing street light is located at the crossing and provides lighting for the crossing, but does not comply with AS1158.4:2015 requirements for lighting of pedestrian crossings. As mentioned in AS1158.4:2015, it is preferable for the zebra crossing to be lit to a higher standard, but is to be determined by road controlling authority. Installation of a floodlighting should be considered for this crossing.

3.2 Canaipa Road

Canaipa Road was endorsed as a P3 lighting category. Assessment of the existing lighting found that lighting along the entire length of Canaipa Road is insufficient. Table 3-2 shows Energex's recommended lighting requirements for lighting category P3 against Canaipa Road's existing lighting.

Table 3-2 Summary of Canaipa Road lighting assessment

	Canaipa Road (P3)		
	Luminaire (Type)	Mounting Height (m)	Maximum Spacing (m)
Recommended Requirement	S70	7.5	54
Existing street lighting	M50 / S70	6.5 to 7.5 (varies)	52 to 545 (varies)

From site observations, the luminaires vary between M50 and S70 with mounting heights ranging from 6.5m to 7.5m. The light emitted from the existing luminaries is significantly less than the arrangement recommended by Energex to meet minimum requirements for lighting category P3, with long sections of road unlit.

To rectify this non-compliance with standards, the existing street lighting should be replaced with S70 luminaires that comply with the recommended mounting height and maximum spacing. The existing power poles could potentially be utilised to install new outreaches and luminaires.

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Technical Memo

CONTINUED

3.3 Canaipa Point Drive

Canaipa Point Drive was endorsed as a P4 lighting category. Assessment of the existing lighting found that majority of the lighting along Canaipa Point Drive is insufficient. Table 3-3 shows Energex's recommended lighting requirements for lighting category P4 against Canaipa Point Drive's existing lighting.

Table 3-3 Summary of Canaipa Point Drive Road lighting assessment

	Canaipa Point Drive (P4)		
	Luminaire (Type)	Mounting Height (m)	Maximum Spacing (m)
Recommended Requirement	S70	7.5	67
Existing street lighting	M50 / S70	6.5 to 7.5 (varies)	55 to 352 (varies)

From site observations, the luminaires vary between M50 and S70 with mounting heights ranging from 6.5m to 7.5m. The light emitted from the existing luminaries is significantly less than the arrangement recommended by Energex to meet minimum requirements for lighting category P4, with long sections of road unlit.

To rectify this non-compliance with standards, the existing street lighting should be replaced with S70 luminaires that comply with the recommended mounting height and maximum spacing. The existing power poles could potentially be utilised to install new outreaches and luminaires.

3.4 Minjerriba Road

Minjerriba Road was endorsed with lighting categories of P3 and P4 for different sections of the road. The east of the Minjerriba Road / Centre Road intersection is classified P4 with the west being assessed under P3. Assessment of the existing lighting found that majority of the lighting along Minjerriba Road is insufficient. Table 3-4 and Table 3-5 shows Energex's recommended lighting requirements for lighting categories P3 and P4, respectively, against Minjerriba Road's existing lighting.

Table 3-4 Summary of Minjerriba Road (West) lighting assessment

	Minjerriba Road (West) (P3)		
	Luminaire (Type)	Mounting Height (m)	Maximum Spacing (m)
Recommended Requirement	S70	7.5	54
Existing street lighting	CFL32	6.5 to 7.0 (varies)	46 to 419 (varies)

Table 3-5 Summary of Minjerriba Road (East) lighting assessment

	Minjerriba Road (East) (P4)		
	Luminaire (Type)	Mounting Height (m)	Maximum Spacing (m)
Recommended Requirement	CFL32 / S70	7.5	56 / 67

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CONTINUED

Existing street lighting	M50 / M125 / CFL32	5.5 to 8.0 (varies)	80 to 191 (varies)

From site observations, the luminaires vary between M50, M125 and CFL32 with mounting heights ranging from 5.5m to 8m, with a street light positioned at pedestrian crossing point. From site observations, no warning signage for the pedestrian crossing has been installed. Lighting for this crossing does not comply with AS1158.4:2015 requirements and floodlighting should be considered. As a minimum, warning signage should be installed if flood lighting is not deemed required by RCC. The light emitted from the existing luminaries is significantly less than the arrangement recommended by Energex to meet minimum requirements for lighting categories P3 and P4.

To rectify this non-compliance with standards, the existing street lighting should be replaced with S70 luminaires and CFL32 or S70 luminaires that comply with the recommended mounting height and maximum spacing for lighting subcategories P3 and P4 respectively. The existing power poles could potentially be utilised to install new outreaches and luminaires.

3.5 Centre Road

Centre Road was endorsed with lighting categories of P3 and P4 for different sections of the road. South of Stradbroke Drive intersection is classified P4, with the northern section of the road classified P3. Assessment of the existing lighting found that lighting along the entire length of Centre Road is insufficient. Table 3-6 and Table 3-7 shows Energex's recommended lighting requirements for lighting categories P3 and P4, respectively, against Centre Road's existing lighting.

Table 3-6 Summary of Centre Road (North) lighting assessment

	Centre Road (North) (P3)		
	Luminaire (Type)	Mounting Height (m)	Maximum Spacing (m)
Recommended Requirement	S70	7.5	54
Existing street lighting	M50 / CFL32 / S70	6.5 to 8.0 (varies)	72 to 860 (varies)

Table 3-7 Summary of Centre Road (South) lighting assessment

	Centre Road (South) (P4)		
	Luminaire (Type)	Mounting Height (m)	Maximum Spacing (m)
Recommended Requirement	S70	7.5	67
Existing street lighting	M50 / CFL32 / S70	7.5 to 8.0 (varies)	267 to 665 (varies)

From site observations, the luminaires vary between M50, CFL32 and SL70 with mounting heights ranging from 6.5m to 8.0m. It appears that the existing lighting for the southern section of Centre Road is used as flag lighting at intersections. A review of RCC's density zones using Red-e-map, shows that the properties along the southern section are classified as a Conservation Zones. A significant amount of properties along both sides of the southern section of Centre Road are identified as conservation zones. In accordance with section 9.9.5.5 in Redland's Planning Scheme Policy 9 for minor roads, if RCC deem that this section of road is servicing conservation zones and table one of this Policy is not applicable, then the lighting may be spaced with one street light for every five lots or at a maximum spacing of 120m .

The light emitted from the existing luminaries is significantly less than the arrangement recommended by Energex to meet minimum requirements for lighting categories P3 and P4. To rectify this non-compliance with standards, the existing street

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Technical Memo
CONTINUED

lighting should be replaced with S70 luminaires that comply with the recommended mounting height and maximum spacing for lighting subcategories P3 and P4 respectively. The existing power poles could potentially be utilised to install new outreaches and luminaires.

As part of the site investigation, it was noticed that a recent installation of a footpath and pedestrian crossing on Centre Road approximately 350m from the Minjerriba Road intersection does not have any lighting located at the crossing point. A section of this footpath also diverts behind trees away from the road corridor for approximately 300m, which blocks lighting provided by street lighting on other side of road corridor. This creates a safety hazard for pedestrians at night as there is no pathway lighting behind these trees.

4 CONCLUSION

The purpose of this lighting assessment was to determine whether the existing street lighting along the five roads were in accordance with current standards. Based on the information available, site observations and assessments undertaken, it was found that the lighting for all five roads did not comply with current standards for either the entire or majority of its length. This non-compliance was primarily due to the spacing between luminaries being greater than the maximum allowed, with long sections of road unlit.

As part of this assessment, lighting for pedestrian crossing and raised islands were to be assessed. An existing zebra crossing with raised island on High Street has a street lighting positioned at the crossing. This street lighting provides a minimal amount of light for the pedestrian crossing and flood lighting should be considered if warranted by nighttime usage levels.

A recently constructed footpath and crossing was identified on Centre Road during the site visit and it was observed that no lighting has been provided along the footpath at some locations and at the crossing point. This lack of lighting creates a high risk to pedestrian safety.

5 RECOMMENDATIONS

It is recommended that RCC consider undertaking the following upgrade works for the lighting to comply with current standards:

- Lighting to be installed at Centre Road pedestrian crossing. This is recommended to be identified as a high safety risk for pedestrians and should be undertaken urgently;
- Installation of floodlighting at High Street and Minjerriba Road pedestrian crossings at local council's discretion;
- Existing street lighting to be replaced with recommended luminaire and outreaches; and
- New luminaires to be installed on existing poles or new poles to fulfil maximum spacing requirements.

See Table 5-1 for a high level construction cost estimate for undertaking the recommended works.

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CONTINUED

Table 5-1 High Level Construction Cost Estimate

	High Level Costs						
	Replace luminaire and outreaches		Install new luminaire and outreach on existing or new poles		Install lighting for pedestrian crossing / pathway lighting behind trees		Approximate Total Cost
	Quantity	Cost	Quantity	Cost	Quantity	Cost	
High Street	19	$60,000	14	$100,000	1	$20,000	$180,000
Canaipa Road	7	$20,000	24	$130,000	-		$150,000
Canaipa Point Drive	6	$12,000	22	$120,000	-		$132,000
Minjerriba Road	5	$10,000	12	$60,000	1	$20,000	$90,000
Centre Road	4	$8,000	35	$230,000	1 (including pathway lighting)	$50,000	$288,000
						Sub-total	$840,000
						Contingency (50%)	$420,000
						Estimated Total Cost	$1,260,000

Prepared by:

Leonardo Sebastiao

Designer

Reviewed by:

Michael Wong

Senior Engineer

RPEQ: 16602

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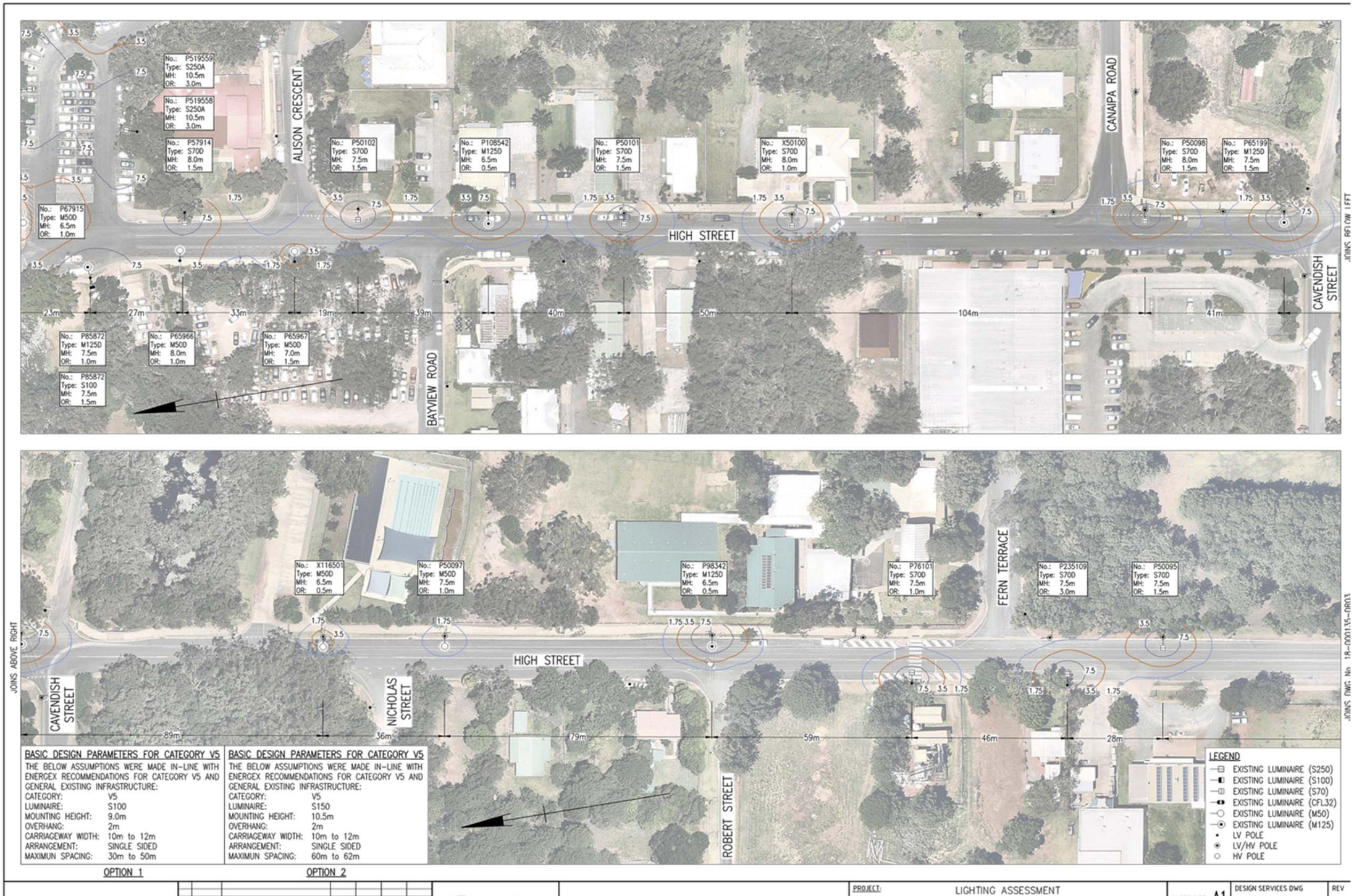
CONTINUED

ATTACHMENT A

ISOLUX DIAGRAM DRAWINGS



BASIC DESIGN PARAMETERS FOR CATEGORY V5

THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY V5 AND GENERAL EXISTING INFRASTRUCTURE:

CATEGORY:	V5
LUMINAIRE:	S100
MOUNTING HEIGHT:	9.0m
OVERHANG:	2m
CARRIAGEWAY WIDTH:	10m to 12m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	30m to 50m

OPTION 1

BASIC DESIGN PARAMETERS FOR CATEGORY V5

THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY V5 AND GENERAL EXISTING INFRASTRUCTURE:

CATEGORY:	V5
LUMINAIRE:	S150
MOUNTING HEIGHT:	10.5m
OVERHANG:	2m
CARRIAGEWAY WIDTH:	10m to 12m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	60m to 62m

OPTION 2

LEGEND

- EXISTING LUMINAIRE (S250)
- EXISTING LUMINAIRE (S100)
- EXISTING LUMINAIRE (S70)
- EXISTING LUMINAIRE (CFL32)
- EXISTING LUMINAIRE (M50)
- EXISTING LUMINAIRE (M125)
- LV POLE
- LV/HV POLE
- HV POLE

1:500 0 5 10 15 20m

REV	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED	APPRVD
A	13.03.18	ORIGINAL ISSUE	LMS	-	MW	-

Redland CITY COUNCIL

PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND

TITLE: HIGH STREET EXISTING ISOLUX DIAGRAM

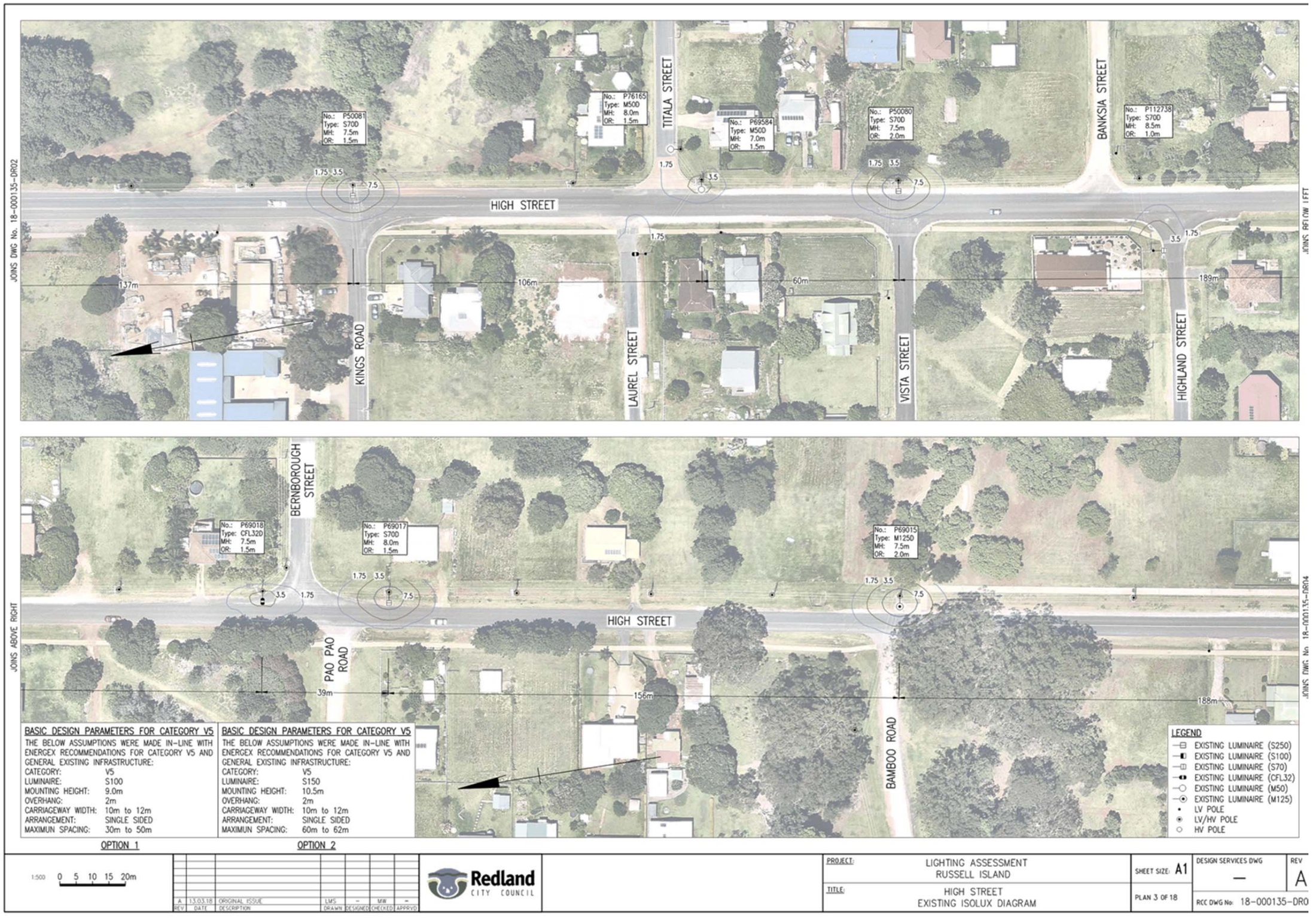
SHEET SIZE: A1

PLAN 2 OF 18

DESIGN SERVICES DWG: —

REV: A

RCC DWG No: 18-000135-DRO


HIGH STREET
TITALA STREET
BANKSIA STREET
KINGS ROAD
LAUREL STREET
VISTA STREET
HIGHLAND STREET
No.: P50081 Type: S70D MH: 7.5m OR: 1.5m
No.: P76165 Type: M50D MH: 8.0m OR: 1.5m
No.: P69584 Type: M50D MH: 7.0m OR: 1.5m
No.: P50080 Type: S70D MH: 7.5m OR: 2.0m
No.: P112738 Type: S70D MH: 8.5m OR: 1.0m
137m
106m
60m
189m
JOINS DWG No. 18-000135-DR02
BERNBOROUGH STREET
PAO PAO ROAD
BAMBOO ROAD
No.: P69018 Type: CFL32D MH: 7.5m OR: 1.5m
No.: P69017 Type: S70D MH: 8.0m OR: 1.5m
No.: P69015 Type: M125D MH: 7.5m OR: 2.0m
39m
156m
188m
JOINS ABOVE RIGHT
JOINS DWG No. 18-000135-DR04
BASIC DESIGN PARAMETERS FOR CATEGORY V5
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY V5 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: V5
LUMINAIRE: S100
MOUNTING HEIGHT: 9.0m
OVERHANG: 2m
CARRIAGEWAY WIDTH: 10m to 12m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 30m to 50m
OPTION 1
BASIC DESIGN PARAMETERS FOR CATEGORY V5
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY V5 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: V5
LUMINAIRE: S150
MOUNTING HEIGHT: 10.5m
OVERHANG: 2m
CARRIAGEWAY WIDTH: 10m to 12m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 60m to 62m
OPTION 2
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: HIGH STREET EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 3 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR0



BASIC DESIGN PARAMETERS FOR CATEGORY V5	
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY V5 AND GENERAL EXISTING INFRASTRUCTURE:	
CATEGORY:	V5
LUMINAIRE:	S100
MOUNTING HEIGHT:	9.0m
OVERHANG:	2m
CARRIAGEWAY WIDTH:	10m to 12m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	30m to 50m

OPTION 1

BASIC DESIGN PARAMETERS FOR CATEGORY V5	
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY V5 AND GENERAL EXISTING INFRASTRUCTURE:	
CATEGORY:	V5
LUMINAIRE:	S150
MOUNTING HEIGHT:	10.5m
OVERHANG:	2m
CARRIAGEWAY WIDTH:	10m to 12m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	60m to 62m

OPTION 2

LEGEND
- EXISTING LUMINAIRE (S250)
- EXISTING LUMINAIRE (S100)
- EXISTING LUMINAIRE (S70)
- EXISTING LUMINAIRE (CFL32)
- EXISTING LUMINAIRE (M50)
- EXISTING LUMINAIRE (M125)
- LV POLE
- LV/HV POLE
- HV POLE

1:500 0 5 10 15 20m

REV	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED	APPRVD
A	13.03.18	ORIGINAL ISSUE	LMS	–	MW	–

Redland CITY COUNCIL

PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND

TITLE: HIGH STREET EXISTING ISOLUX DIAGRAM

SHEET SIZE: A1

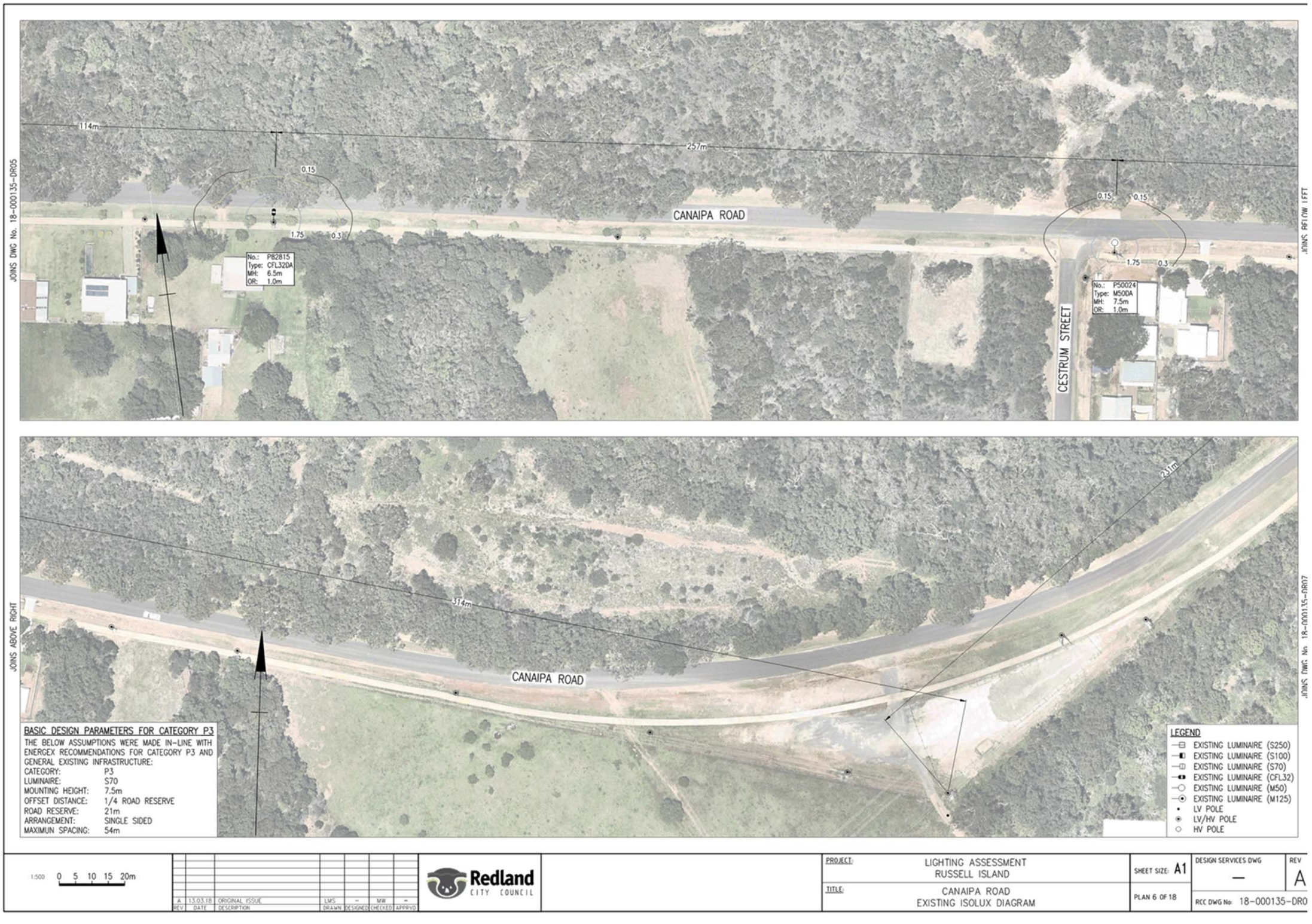
PLAN 4 OF 18

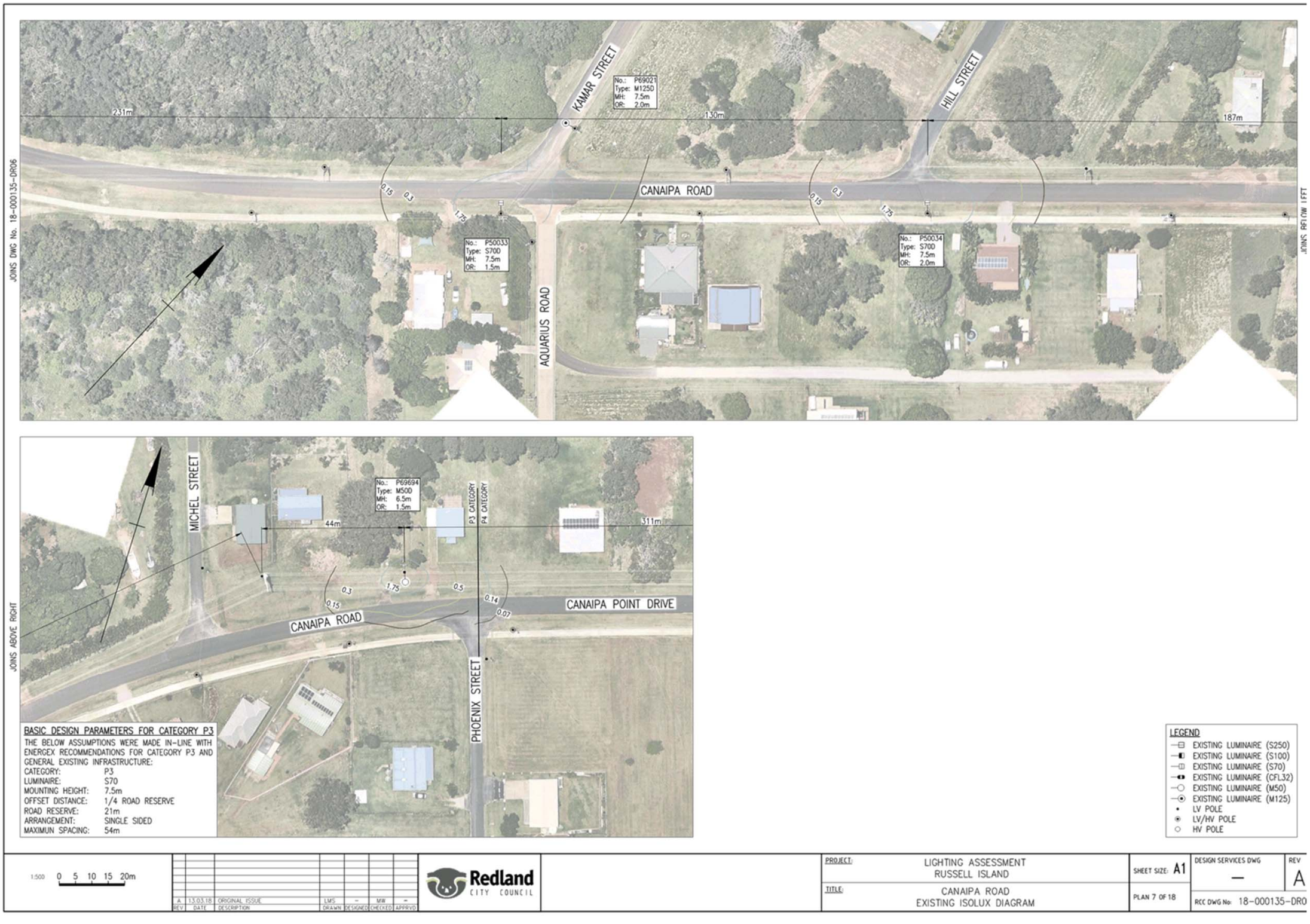
DESIGN SERVICES DWG: –

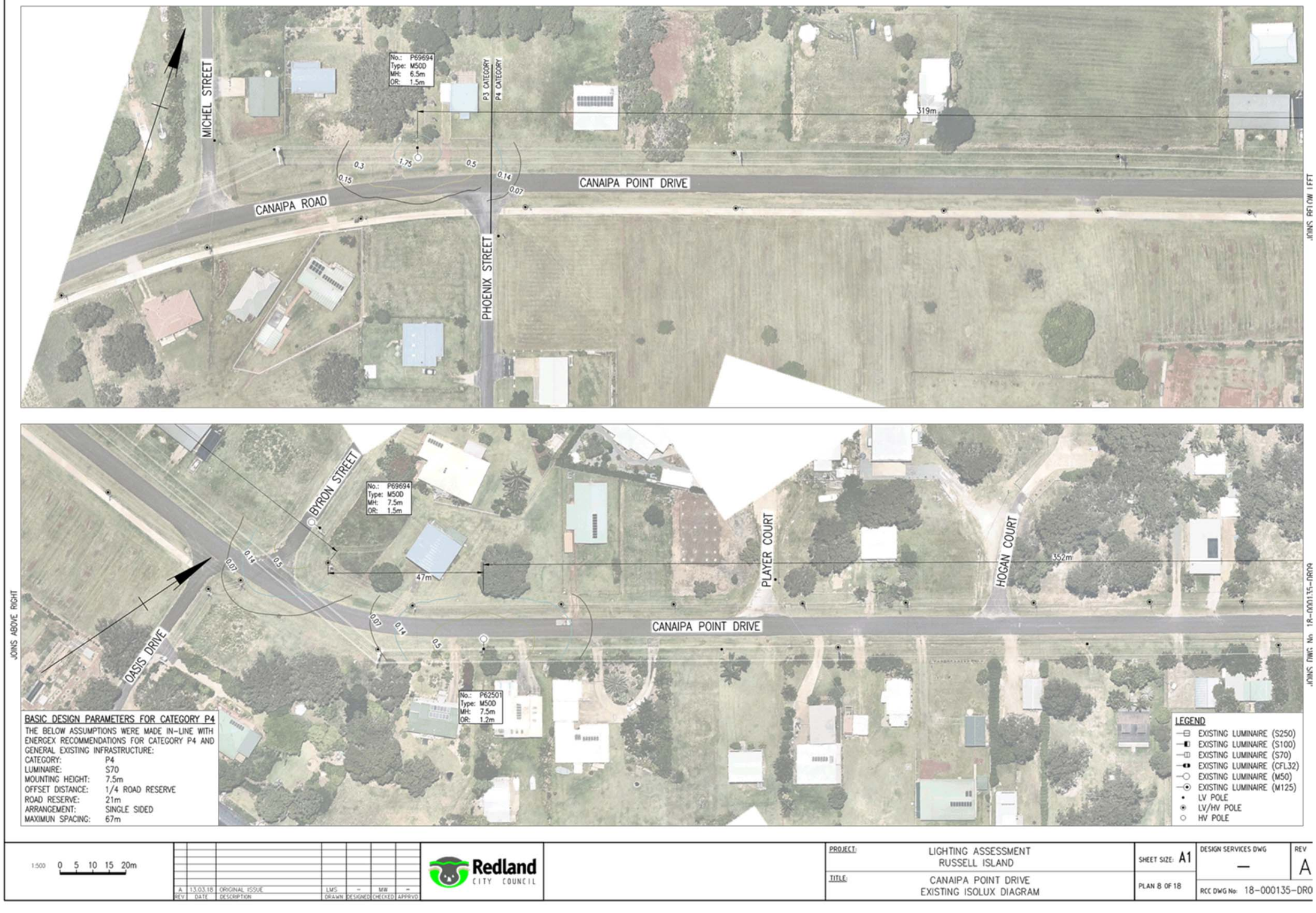
REV: A

RCC DWG No: 18-000135-DR0

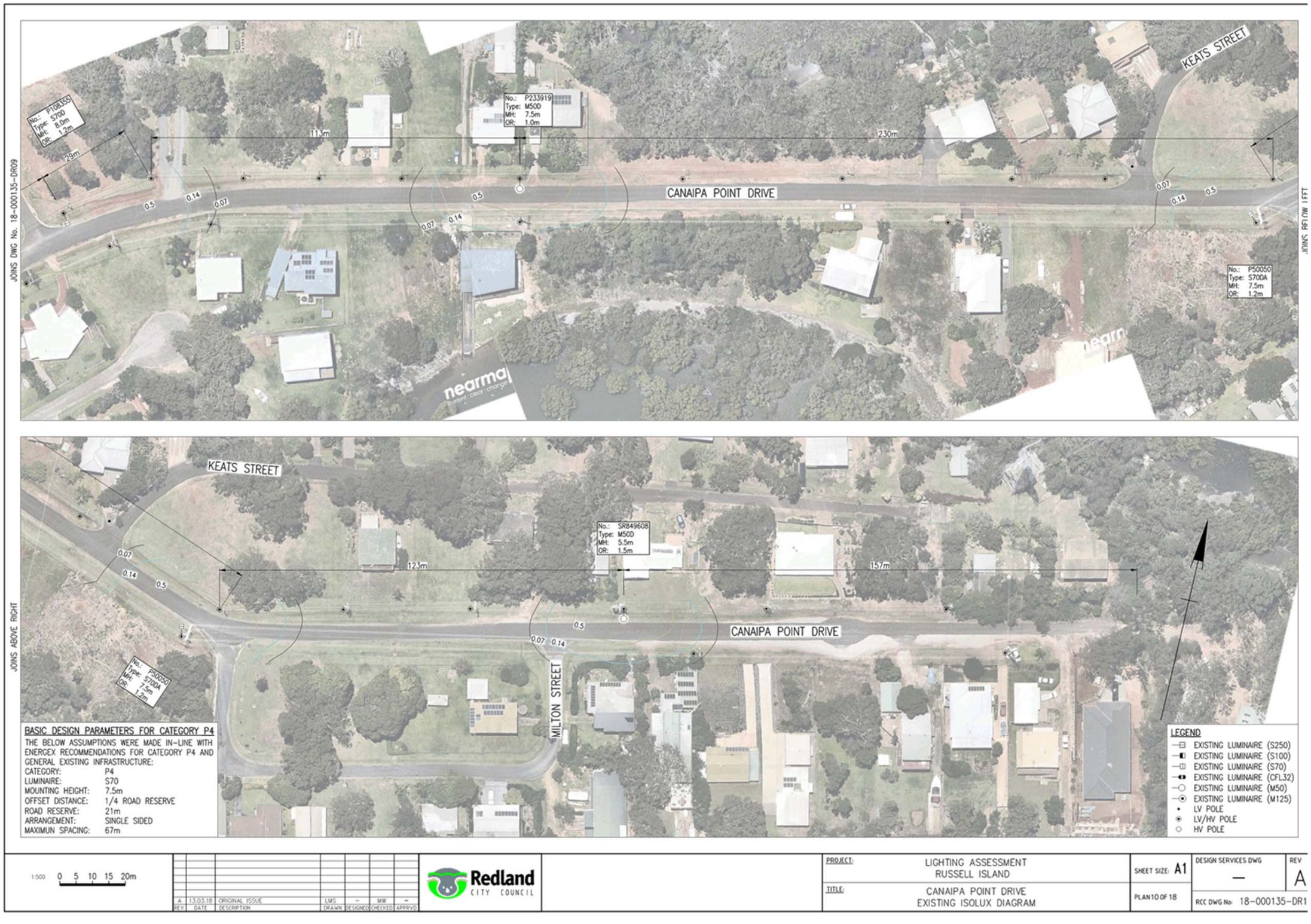

HIGH STREET
CANAIPA ROAD
RITSON STREET
169m
52m
No.: P50104
Type: M50D
MH: 6.5m
OR: 0.3m
No.: P69217
Type: M50D
MH: 8.5m
OR: 2.0m
JOINS ABOVE LEFT
HAWTHORNDEN DRIVE
WILMA CRESCENT
WILMA CRESCENT
105m
77m
131m
114m
CANAIPA ROAD
No.: P69217
Type: M50D
MH: 8.5m
OR: 2.0m
No.: P50105
Type: S100A
MH: 7.5m
OR: 2.0m
No.: X17487
Type: S70D
MH: 7.5m
OR: 1.5m
No.: P88091
Type: M50DA
MH: 6.5m
OR: 1.0m
GUTHRIE STREET
AKEBIA STREET
JOINS ABOVE RIGHT
BASIC DESIGN PARAMETERS FOR CATEGORY P3
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P3 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P3
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 54m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CANAIPA ROAD EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 5 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DRO

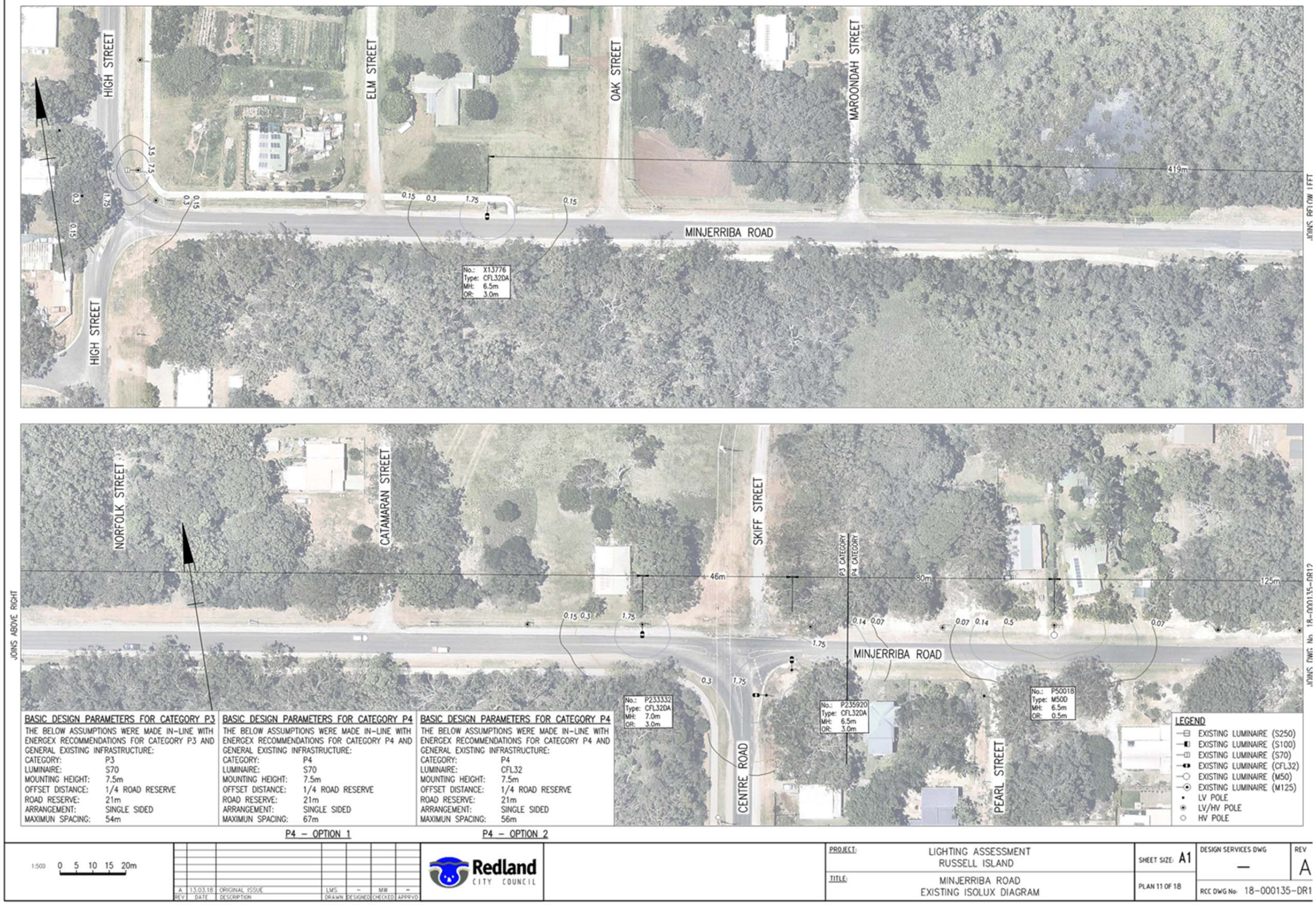

JOINS DWG No. 18-000135-DR05
114m
257m
0.15
1.75
0.3
CANAIPA ROAD
No.: P82815
Type: CFL32DA
MH: 6.5m
OR: 1.0m
0.15
0.15
1.75
0.3
CESTRUM STREET
No.: P50024
Type: M50DA
MH: 7.5m
OR: 1.0m
JOINS DWG No. 18-000135-DR07
JOINS ABOVE RIGHT
314m
231m
CANAIPA ROAD
BASIC DESIGN PARAMETERS FOR CATEGORY P3
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P3 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P3
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 54m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
REV A
DATE 13.03.18
DESCRIPTION ORIGINAL ISSUE
DRAWN LMS
DESIGNED -
CHECKED MW
APPRVD -
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CANAIPA ROAD EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 6 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR0


KAMAR STREET
HILL STREET
CANAIPA ROAD
AQUARIUS ROAD
No.: P69021
Type: M125D
MH: 7.5m
OR: 2.0m
No.: P50033
Type: S70D
MH: 7.5m
OR: 1.5m
No.: P50034
Type: S70D
MH: 7.5m
OR: 2.0m
231m
130m
187m
0.15
0.3
1.75
JOINS DWG No. 18-000135-DR06
MICHEL STREET
No.: P69694
Type: M50D
MH: 6.5m
OR: 1.5m
P3 CATEGORY
P4 CATEGORY
44m
311m
0.5
0.14
0.07
CANAIPA POINT DRIVE
PHOENIX STREET
JOINS ABOVE RIGHT
BASIC DESIGN PARAMETERS FOR CATEGORY P3
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P3 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P3
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 54m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CANAIPA ROAD EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 7 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR0


MICHEL STREET
No.: P69694
Type: M50D
MH: 6.5m
OR: 1.5m
P3 CATEGORY
P4 CATEGORY
319m
CANAIPA POINT DRIVE
CANAIPA ROAD
PHOENIX STREET
JOINS ABOVE RIGHT
BYRON STREET
No.: P69694
Type: M50D
MH: 7.5m
OR: 1.5m
47m
PLAYER COURT
HOGAN COURT
352m
OASIS DRIVE
No.: P62501
Type: M50D
MH: 7.5m
OR: 1.2m
BASIC DESIGN PARAMETERS FOR CATEGORY P4
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P4 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P4
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 67m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CANAIPA POINT DRIVE EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 8 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DRO


JOINS DWG No. 18-000135-DR08
No.: P50043
Type: M50D
MH: 6.5m
OR: 1.2m
No.: P50044
Type: M50D
MH: 7.5m
OR: 1.0m
THOMPSON ESPLANADE
WRIGHT STREET
119m
79m
89m
CANAIPA POINT DRIVE
0.07
0.14
0.5
JOINS ABOVE RIGHT
WRIGHT STREET
PATTERSON STREET
STEVENSON COURT
No.: P88548
Type: S70D
MH: 7.5m
OR: 1.5m
No.: P88549
Type: S70D
MH: 7.5m
OR: 1.2m
No.: P108354
Type: S70DA
MH: 7.5m
OR: 1.2m
No.: P108355
Type: S70D
MH: 8.0m
OR: 1.2m
89m
130m
80m
55m
29m
JOINS DWG No 18-000135-DR10
BASIC DESIGN PARAMETERS FOR CATEGORY P4
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P4 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P4
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 67m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CANAIPA POINT DRIVE EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 9 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR0


KEATS STREET
CANAIPA POINT DRIVE
No.: P106355
Type: S70D
MH: 8.0m
OR: 1.2m
No.: P233919
Type: M500
MH: 7.5m
OR: 1.0m
No.: P50050
Type: S70DA
MH: 7.5m
OR: 1.2m
113m
230m
29m
0.5
0.14
0.07
JOINS DWG No. 18-000135-DR09
JOINS ABOVE RIGHT
KEATS STREET
CANAIPA POINT DRIVE
MILTON STREET
No.: SR849608
Type: M50D
MH: 5.5m
OR: 1.5m
No.: P50050
Type: S70DA
MH: 7.5m
OR: 1.2m
123m
157m
BASIC DESIGN PARAMETERS FOR CATEGORY P4
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P4 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P4
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 67m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CANAIPA POINT DRIVE EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 10 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR1



BASIC DESIGN PARAMETERS FOR CATEGORY P3

THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P3 AND GENERAL EXISTING INFRASTRUCTURE:

CATEGORY:	P3
LUMINAIRE:	S70
MOUNTING HEIGHT:	7.5m
OFFSET DISTANCE:	1/4 ROAD RESERVE
ROAD RESERVE:	21m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	54m

BASIC DESIGN PARAMETERS FOR CATEGORY P4

THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P4 AND GENERAL EXISTING INFRASTRUCTURE:

CATEGORY:	P4
LUMINAIRE:	S70
MOUNTING HEIGHT:	7.5m
OFFSET DISTANCE:	1/4 ROAD RESERVE
ROAD RESERVE:	21m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	67m

P4 – OPTION 1

BASIC DESIGN PARAMETERS FOR CATEGORY P4

THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P4 AND GENERAL EXISTING INFRASTRUCTURE:

CATEGORY:	P4
LUMINAIRE:	CFL32
MOUNTING HEIGHT:	7.5m
OFFSET DISTANCE:	1/4 ROAD RESERVE
ROAD RESERVE:	21m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	56m

P4 – OPTION 2

1:500 0 5 10 15 20m

REV	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED	APPRVD
A	13.03.18	ORIGINAL ISSUE	LMS	–	MW	–

Redland CITY COUNCIL

PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND

TITLE: MINJERRIBA ROAD EXISTING ISOLUX DIAGRAM

SHEET SIZE: A1

PLAN 11 OF 18

DESIGN SERVICES DWG: –

REV: A

RCC DWG No: 18-000135-DR1



BASIC DESIGN PARAMETERS FOR CATEGORY P4	
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P4 AND GENERAL EXISTING INFRASTRUCTURE:	
CATEGORY:	P4
LUMINAIRE:	S70
MOUNTING HEIGHT:	7.5m
OFFSET DISTANCE:	1/4 ROAD RESERVE
ROAD RESERVE:	21m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	67m

OPTION 1

BASIC DESIGN PARAMETERS FOR CATEGORY P4	
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P4 AND GENERAL EXISTING INFRASTRUCTURE:	
CATEGORY:	P4
LUMINAIRE:	CFL32
MOUNTING HEIGHT:	7.5m
OFFSET DISTANCE:	1/4 ROAD RESERVE
ROAD RESERVE:	21m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	56m

OPTION 2

LEGEND
- EXISTING LUMINAIRE (S250)
- EXISTING LUMINAIRE (S100)
- EXISTING LUMINAIRE (S70)
- EXISTING LUMINAIRE (CFL32)
- EXISTING LUMINAIRE (M50)
- EXISTING LUMINAIRE (M125)
- LV POLE
- LV/HV POLE
- HV POLE

1:500 0 5 10 15 20m

REV	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED	APPRVD
A	13.03.18	ORIGINAL ISSUE	LMS	-	MW	-

Redland CITY COUNCIL

PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND

TITLE: MINJERRIBA ROAD EXISTING ISOLUX DIAGRAM

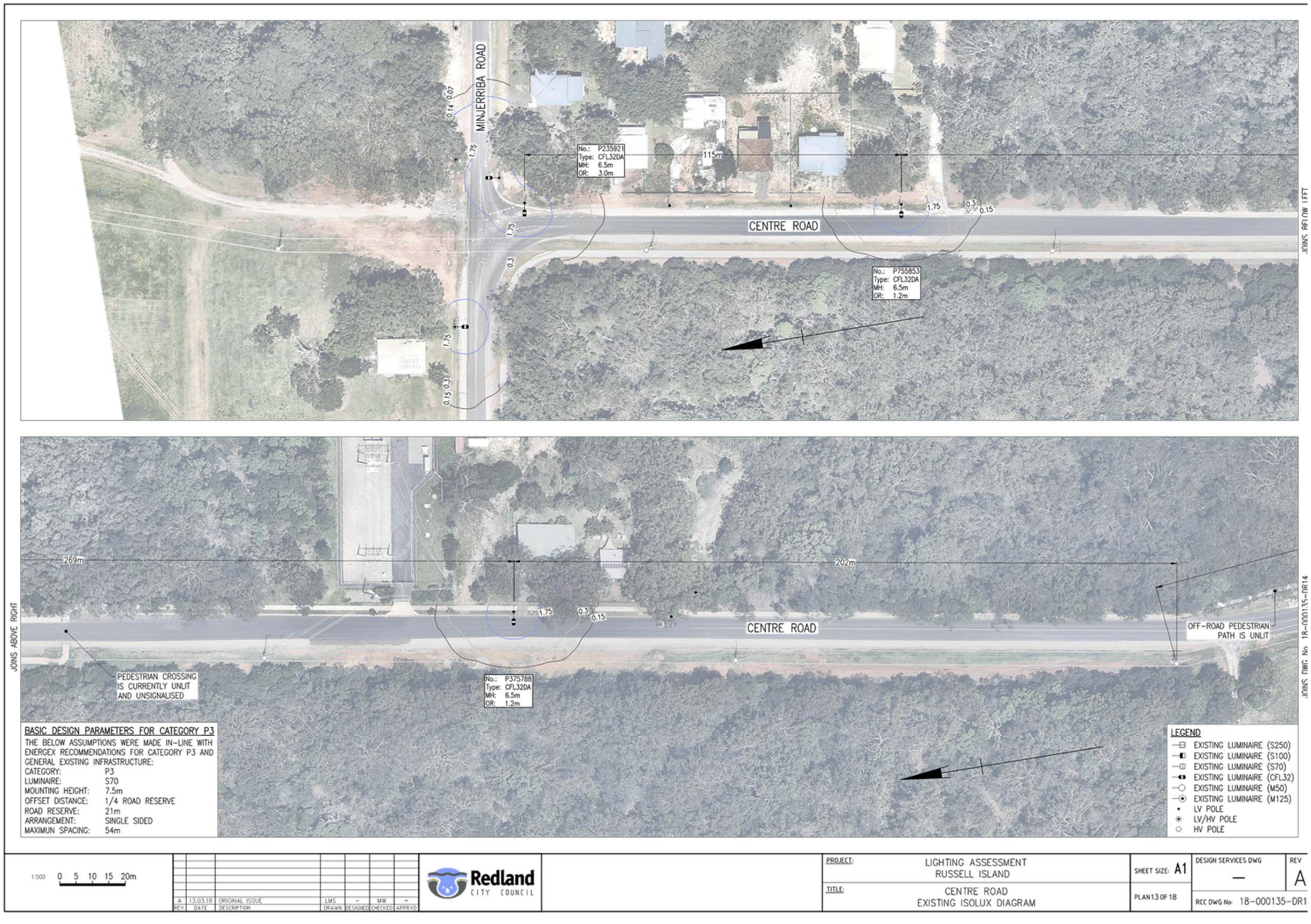
SHEET SIZE: A1

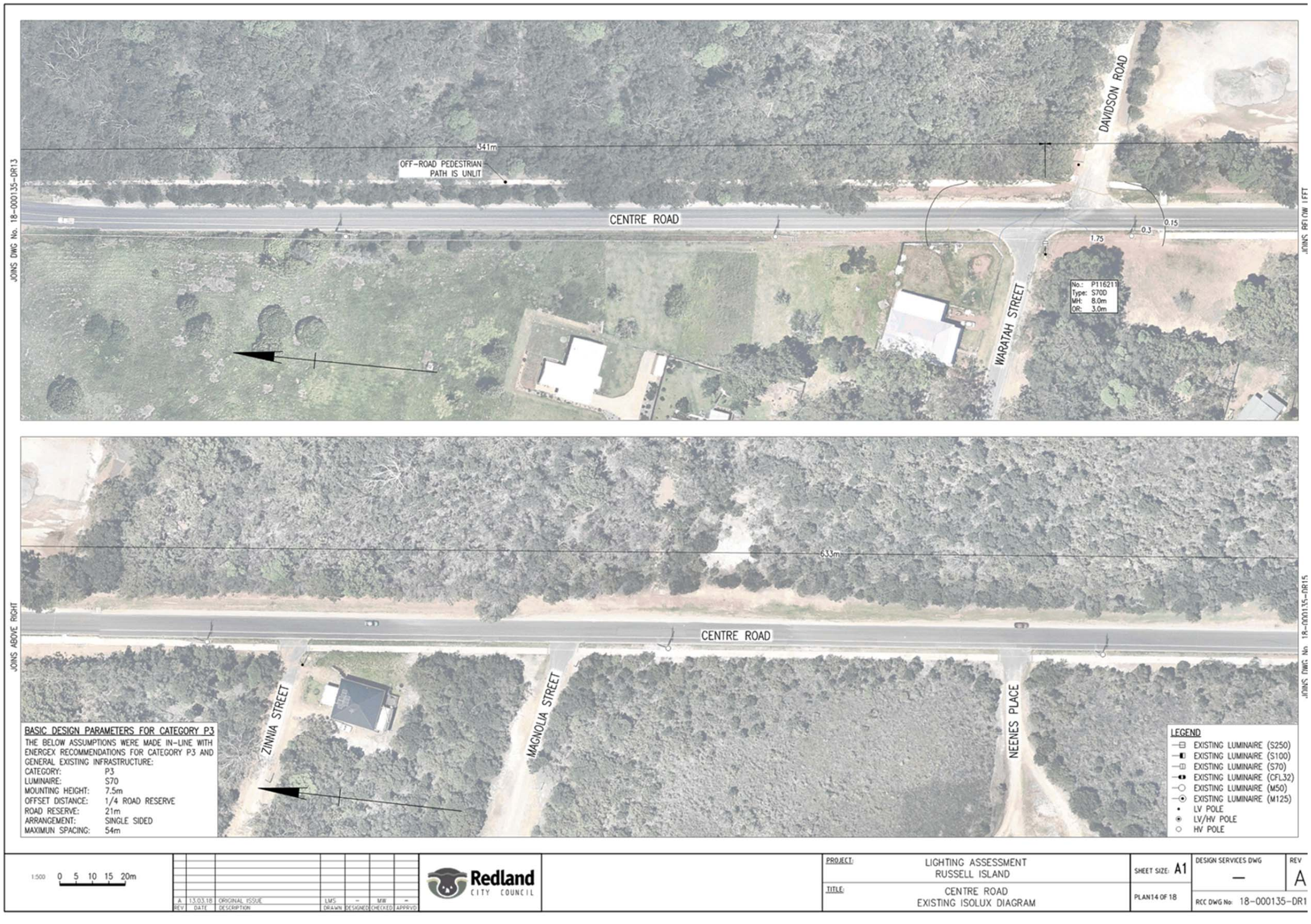
PLAN12 OF 18

DESIGN SERVICES DWG: —

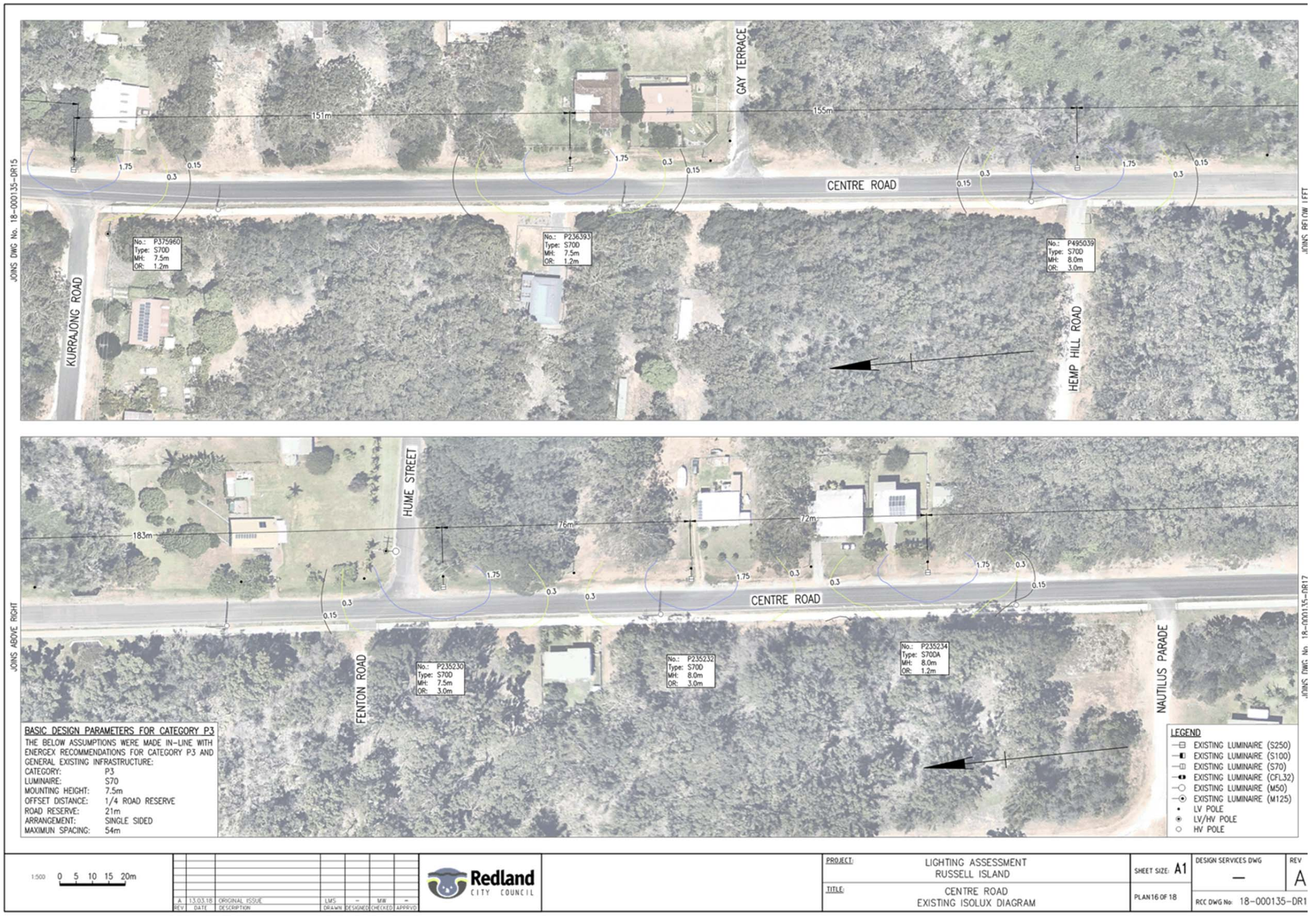
REV: A

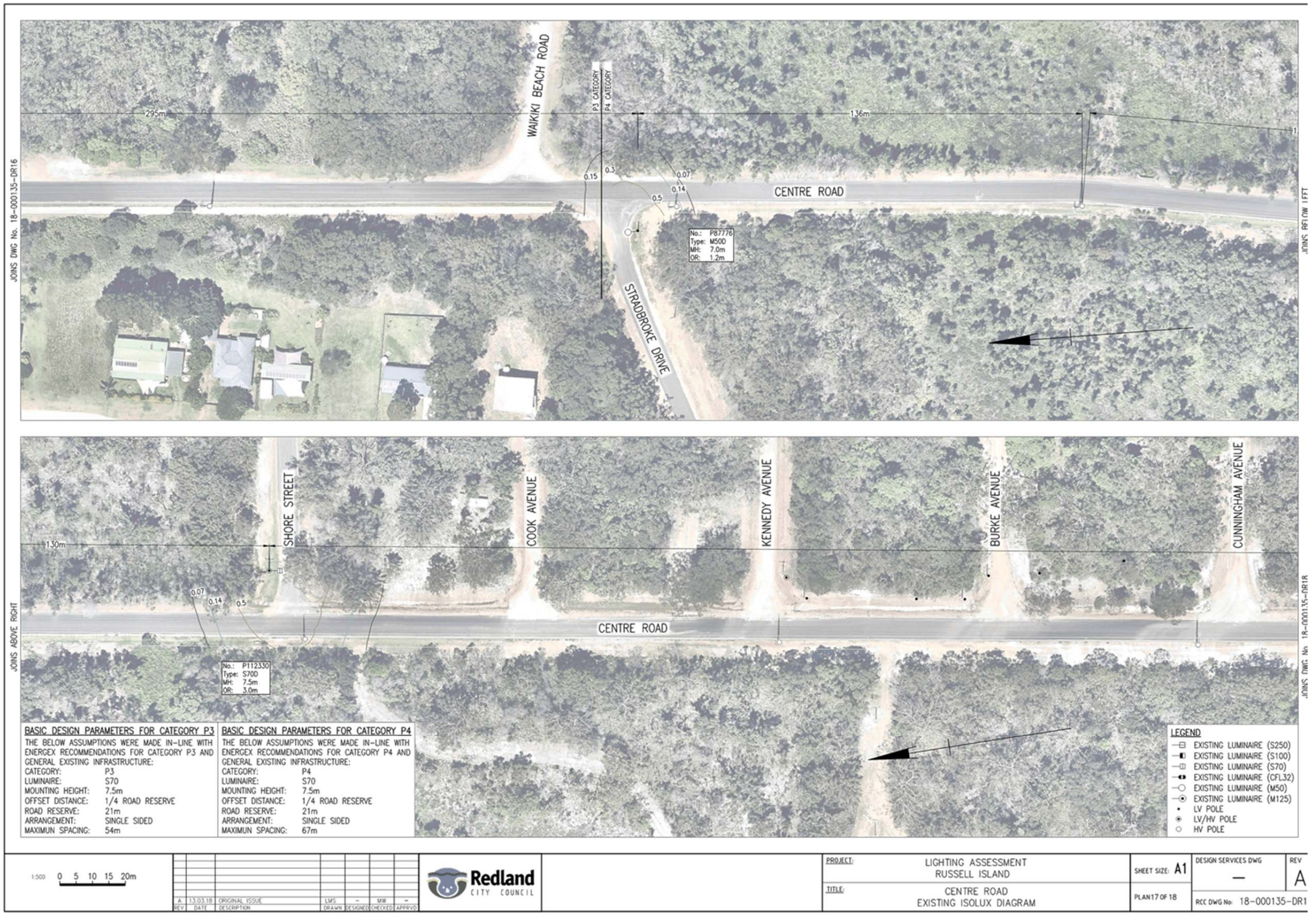
RCC DWG No: 18-000135-DR1


MINJERRIBA ROAD
CENTRE ROAD
No.: P235921
Type: CFL32DA
MH: 6.5m
OR: 3.0m
No.: P755853
Type: CFL32DA
MH: 6.5m
OR: 1.2m
115m
269m
202m
JOINS ABOVE RIGHT
PEDESTRIAN CROSSING IS CURRENTLY UNLIT AND UNSIGNALISED
OFF-ROAD PEDESTRIAN PATH IS UNLIT
No.: P375788
Type: CFL32DA
MH: 6.5m
OR: 1.2m
BASIC DESIGN PARAMETERS FOR CATEGORY P3
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P3 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P3
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 54m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CENTRE ROAD EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 13 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR1


JOINS DWG No. 18-000135-DR13
341m
OFF-ROAD PEDESTRIAN PATH IS UNLIT
CENTRE ROAD
DAVIDSON ROAD
WARATAH STREET
No.: P116211
Type: S70D
MH: 8.0m
OR: 3.0m
1.75
0.3
0.15
JOINS DWG No. 18-000135-DR14
JOINS ABOVE RIGHT
633m
CENTRE ROAD
ZINNIA STREET
MAGNOLIA STREET
NEENES PLACE
JOINS DWG No. 18-000135-DR15
BASIC DESIGN PARAMETERS FOR CATEGORY P3
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P3 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P3
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 54m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
REV A DATE 13.03.18 DESCRIPTION ORIGINAL ISSUE DRAWN LMS DESIGNED - CHECKED MW APPRVD -
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CENTRE ROAD EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 14 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR1


JOINS DWG No. 18-000135-DR14
CENTRE ROAD
227m
JOINS DWG No. 18-000135-DR15
JOINS ABOVE RIGHT
BARCELONA TERRACE
PENN STREET
No.: P494934
Type: S70D
MH: 7.5m
OR: 3.0m
274m
94m
1.75
0.3
0.15
CENTRE ROAD
ROSE BAY DRIVE
No.: P763446
Type: M500A
MH: 6.5m
OR: 1.2m
BASIC DESIGN PARAMETERS FOR CATEGORY P3
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P3 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P3
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 54m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CENTRE ROAD EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 15 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR1


JOINS DWG No. 18-000135-DR15
KURRAJONG ROAD
GAY TERRACE
CENTRE ROAD
HEMP HILL ROAD
151m
155m
No.: P375960
Type: S70D
MH: 7.5m
OR: 1.2m
No.: P236393
Type: S70D
MH: 7.5m
OR: 1.2m
No.: P495039
Type: S70D
MH: 8.0m
OR: 3.0m
JOINS ABOVE RIGHT
HUME STREET
FENTON ROAD
CENTRE ROAD
NAUTILUS PARADE
183m
76m
72m
No.: P235230
Type: S70D
MH: 7.5m
OR: 3.0m
No.: P235232
Type: S70D
MH: 8.0m
OR: 3.0m
No.: P235234
Type: S70DA
MH: 8.0m
OR: 1.2m
JOINS DWG No. 18-000135-DR17
BASIC DESIGN PARAMETERS FOR CATEGORY P3
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P3 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P3
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 54m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CENTRE ROAD EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 16 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR1


WAIKIKI BEACH ROAD
P3 CATEGORY
P4 CATEGORY
295m
136m
CENTRE ROAD
STRADBROKE DRIVE
0.15
0.3
0.07
0.14
0.5
No.: P87776
Type: M500
MH: 7.0m
OR: 1.2m
JOINS DWG No. 18-000135-DR16
JOINS DWG No. 18-000135-DR17
SHORE STREET
COOK AVENUE
KENNEDY AVENUE
BURKE AVENUE
CUNNINGHAM AVENUE
130m
CENTRE ROAD
No.: P112330
Type: S700
MH: 7.5m
OR: 3.0m
JOINS ABOVE RIGHT
BASIC DESIGN PARAMETERS FOR CATEGORY P3
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P3 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P3
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 54m
BASIC DESIGN PARAMETERS FOR CATEGORY P4
THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P4 AND GENERAL EXISTING INFRASTRUCTURE:
CATEGORY: P4
LUMINAIRE: S70
MOUNTING HEIGHT: 7.5m
OFFSET DISTANCE: 1/4 ROAD RESERVE
ROAD RESERVE: 21m
ARRANGEMENT: SINGLE SIDED
MAXIMUN SPACING: 67m
LEGEND
EXISTING LUMINAIRE (S250)
EXISTING LUMINAIRE (S100)
EXISTING LUMINAIRE (S70)
EXISTING LUMINAIRE (CFL32)
EXISTING LUMINAIRE (M50)
EXISTING LUMINAIRE (M125)
LV POLE
LV/HV POLE
HV POLE
1:500 0 5 10 15 20m
A 13.03.18 ORIGINAL ISSUE LMS - MW -
REV DATE DESCRIPTION DRAWN DESIGNED CHECKED APPRVD
Redland CITY COUNCIL
PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND
TITLE: CENTRE ROAD EXISTING ISOLUX DIAGRAM
SHEET SIZE: A1
PLAN 17 OF 18
DESIGN SERVICES DWG —
REV A
RCC DWG No: 18-000135-DR1



BASIC DESIGN PARAMETERS FOR CATEGORY P4

THE BELOW ASSUMPTIONS WERE MADE IN-LINE WITH ENERGEX RECOMMENDATIONS FOR CATEGORY P4 AND GENERAL EXISTING INFRASTRUCTURE:

CATEGORY:	P4
LUMINAIRE:	S70
MOUNTING HEIGHT:	7.5m
OFFSET DISTANCE:	1/4 ROAD RESERVE
ROAD RESERVE:	21m
ARRANGEMENT:	SINGLE SIDED
MAXIMUN SPACING:	67m

LEGEND

- EXISTING LUMINAIRE (S250)
- EXISTING LUMINAIRE (S100)
- EXISTING LUMINAIRE (S70)
- EXISTING LUMINAIRE (CFL32)
- EXISTING LUMINAIRE (M50)
- EXISTING LUMINAIRE (M125)
- LV POLE
- LV/HV POLE
- HV POLE

1:500 0 5 10 15 20m

REV	DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED	APPRVD
A	13.03.18	ORIGINAL ISSUE	LMS	–	MW	–

Redland CITY COUNCIL

PROJECT: LIGHTING ASSESSMENT RUSSELL ISLAND

TITLE: CENTRE ROAD EXISTING ISOLUX DIAGRAM

SHEET SIZE: A1

PLAN 18 OF 18

DESIGN SERVICES DWG: –

REV: A

RCC DWG No: 18-000135-DR1

May 2018

Russell Island Pathway/Shared Pathway Assessment

Assessment of the major traffic routes on Russell Island revealed that existing pathways are provided along the road sections listed below. Some pathway construction standards (width) provide for shared pedestrian & cycle usage, although these sections are not specifically designated as shared facilities.

1. High St (Ferry Terminal to Minjerriba Road)
2. Minjerriba Rd (High Street to Centre Road)
3. Centre Rd (Minjerriba Road to Stradbroke Drive)
4. Canaipa Rd (High Street to Phoenix Street)
5. Canaipa Point Drive (Phoenix Street to Oasis Drive)

The assessment identified missing links in the pathway system where currently no concrete pathways are provided. These are detailed in the listing below. The missing pathway sections have been included on the future pathway works list. Timing of future works is subject to priority and available budget at a council wide level.

Community consultation will also be required prior to works being designed to ensure the preferences of the Russell Island community are taken into consideration on the priority and scope of works.

1. Centre Road (Stradbroke Drive to Glendale Road)
2. Glendale Road (Centre Road to Crescent Drive)
3. Canaipa Point Drive (Oasis Drive to Keats Street)

Assessment Completed by Ebrahim Ibrahim, Roadside Asset Engineer, Traffic & Transport Asset Management, City Infrastructure Group, Redland City Council.

Pathways listed for future footpath program for Russell Island

Centre Road (Stradbroke Drive to Glendale Road) – (935m x 2m wide)



Glendale Road (Centre Road to Crescent Drive) (671m x 2m wide)



Canaipa Point Drive (Oasis Drive to Keats Street) – (1.29km x 2m wide)

This project may be split into two construction stages



Office of the Mayor

Redland City Council

PO Box 21,
Cleveland Qld 4163

Business hours 07 3829 8235
Email mayor@redland.qld.gov.au
www.redland.qld.gov.au



30 August 2017

Our Ref: A2537057
KW:McN:hs

The Honourable Annastacia Palaszczuk MP
Premier of Queensland
PO Box 15185
CITY EAST QLD 4002

Email: thepremier@premiers.qld.gov.au

Dear Premier

As you may be aware the Coroner recently handed down findings on the death of Ethan Stephenson on Russell Island in 2014. The Coroner's findings make several recommendations to the State Government to improve safety in our community and I write to request your Government's urgent attention to these important matters.

The recommendations in the Coroner's report include introducing a public bus service to Russell Island, utilising the Translink Go-Card system. I would recommend this suggested bus service be extended to all Redland City islands. Our islands are one of our greatest assets but their isolation also presents considerable challenges that a Translink connected bus service would help overcome.

The Coroner's report also recommends increased police presence and facilities such as vehicle mounted radar and drug testing devices on Russell Island. Council supports this recommendation and again I request this be explored across all islands.

Other recommendations contained within the report include the State Government Department of Transport and Main Roads taking the lead on a safety campaign in consultation with Council and the Russell Island Primary School to promote safe road use by children. The Coroner also suggests a nominated Police Liaison Officer attend each Redland Transport Advisory Group meeting. Council stands ready to play an active role in both of these recommendations and would welcome contact from the relevant person within State Government to progress.

Council will be discussing the Coroner's recommendations at a future General Meeting where we will consider the actions the Coroner has suggested Council implement. These include reviewing speed limits on Russell Island through the Redland City Speed Management Committee.

If you would like to discuss the matters outlined in this letter please contact my Executive Officer, Mr Allan McNeil on telephone 3829 8874 or email allan.mcneil@redland.qld.gov.au

Yours sincerely

Mayor Karen Williams
Redland City Council

cc: Minister for Police, Fire and Emergency Services – Hon Mark Ryan MP
Minister for Communities – Hon Shannon Fentiman MP
Acting Minister for Transport – Hon Dr Steven Miles MP
State Member for Redlands – Mr Matt McEachan MP
State Member for Cleveland – Dr Mark Robinson MP
State Member for Capalaba – Mr Don Brown MP
Councillors

20170829 ministerial - premier of queensland - mayor outgoing - coroner's findings ethan stephenson russell island 2014 (a2537057).docx

Queensland Government

Office of the
Premier of Queensland
Minister for the Arts

For reply please quote: *ECP/CMC – TF/17/11935 – DOC/17/160508*
Your reference: *A2537057 KW:McN:hs*

1 William Street Brisbane
PO Box 15185 City East
Queensland 4002 Australia
Telephone +61 7 3719 7000
Email ThePremier@premiers.qld.gov.au
Website www.thepremier.qld.gov.au

27 OCT 2017

Councillor Karen Williams
Mayor
Redland City Council
PO Box 21
CLEVELAND QLD 4163



Dear Councillor Williams

Thank you for your letter of 30 August 2017 regarding the Coroner's recommendations following the death of Ethan Stephenson on Russell Island in 2014. I have been requested to reply to you on behalf of the Premier and Minister for the Arts and I apologise for the delay in responding.

I appreciate the Redland City Council's (the Council) commitment to the implementation of the Coroner's findings following the tragic and untimely death of Ethan Stephenson.

With regard to the Coroner's recommendation to increase the current police presence and facilities on Russell Island (Recommendation 8(b)i), the Queensland Police Service (QPS) has advised that the policing response to Russell Island continues to be supported with resources including investigative, forensic and other specialist capabilities from the Bayside Patrol Group, the South Brisbane District and other specialised QPS units as required.

Resource requirements in response to calls for service, including any need for the redeployment of general duties staff from the mainland, are monitored in real time by District and Regional Duty Officers on a 24 hour basis. A review is also underway to identify options for resource allocation on the Bay Islands within Brisbane Region, including Russell Island.

As you may be aware, the Officer in Charge of the Bayside Patrol Group Road Policing Unit already attends the Redland Transport Advisory Group meeting in line with the Coroner's Recommendation 8(b)vii, and provides feedback from each meeting to all relevant stakeholders.

With regard to the establishment and promotion of a road safety campaign at Russell Island State School (RISS), the Department of Education and Training (DET) has advised it will inform the Principal of RISS of the outcomes of the Coroner's inquest.

DET officers will work with RISS, the Department of Transport and Main Roads (DTMR) and the Council to establish a Safe School Travel (SafeST) Committee to consider the outcomes of the Coroner's inquest, determine actions and develop timeframes to address the relevant recommendations.

It is anticipated that the SafeST Committee will include representatives from RISS, DET's Infrastructure Services Branch, DTMR, the Council and other relevant stakeholders as necessary.

DTMR has advised it is carefully considering the findings and recommendations of the Coroner, including the provision of public bus service to Russell Island, and a thorough response to the Coroner's recommendations will be published on the Queensland Courts website in early 2018. DTMR will continue to work with the Council, RISS, QPS and the Queensland Ambulance Service to ensure that road safety is improved for residents of Russell Island. In the meantime, should the Council wish to contact DTMR to discuss further, please contact Ms Barbara Bogiatzis, Acting Corporate Counsel (Legal Services), DTMR on telephone (07) 3066 7015 or by email at Barbara.A.Bogiatzis@tmr.qld.gov.au.

Again, thank you for taking the time to write to the Premier and I hope this information is of assistance to you.

Yours sincerely



DENISE SPINKS
DEPUTY CHIEF OF STAFF

15 MAYORAL MINUTE

Nil

16 NOTICES OF MOTION TO REPEAL OR AMEND A RESOLUTIONS

Nil

17 NOTICES OF MOTION

17.1 CR TALTY - REDLAND CITY YOUTH COUNCIL

In accordance with s.3(4) of POL-3127 *Council Meeting Standing Orders* notice is hereby given, that at the General Meeting scheduled for 20 June 2018, I intend to move as follows:

COUNCIL RESOLUTION 2018/59

Moved by: **Cr Julie Talty**
Seconded by: **Cr Murray Elliott**

That Council resolves to:

1. **investigate the establishment of a Redland City Youth Council; and**
2. **provide a report back to Council for consideration, including possible criteria for Youth Council participants, selection methods and criteria and associated costs.**

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

BACKGROUND

A Youth Council is recognised as an initiative for young people to engage with Council and be heard and empowered regarding the issues they care about.

Several Councils across the state currently host Youth Councils and Redland City has also previously hosted its own Youth Council.

Redland City Council has a Redlands Youth Strategy 2015-2020 aimed at help young people feel safe and respected and make sure we keep young people in mind as we create and care for meaningful places in the Redlands. This strategy is built on five key commitments: Safe spaces, Things to do, Advocacy for young people in the Redlands, Learning and earning opportunities, Participation and connection to community. A Youth Council could be designed in a way to complement these commitments.

18 URGENT BUSINESS WITHOUT NOTICE

Nil

19 CONFIDENTIAL ITEMS

MOTION TO MOVE INTO CLOSED SESSION AT 11.05AM

PROCEDURAL RESOLUTION 2018/60

Moved by: Cr Murray Elliott
Seconded by: Cr Julie Talty

That Council considers the confidential report(s) listed below in a meeting closed to the public in accordance with Section 275(1) of the *Local Government Regulation 2012*:

19.1 Resumption of Easement For Open Space and Pathway Purposes - School of Arts Road, Redland Bay

This matter is considered to be confidential under Section 275(1) - (h) of the *Local Government Regulation 2012,* and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with other business for which a public discussion would be likely to prejudice the interests of the local government or someone else, or enable a person to gain a financial advantage.

19.2 Appeal 1506 of 2018- Barro Quarry Appeal Update (MCU17/0149)

This matter is considered to be confidential under Section 275(1) - (f) of the *Local Government Regulation 2012*, and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with starting or defending legal proceedings involving the local government.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

MOTION TO MOVE OUT OF CLOSED SESSION AT 11.26AM

PROCEDURAL RESOLUTION 2018/61

Moved by: Cr Mark Edwards
Seconded by: Cr Murray Elliott

That Council moves out of Closed Council into Open Council.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

19.1 RESUMPTION OF EASEMENT FOR OPEN SPACE AND PATHWAY PURPOSES - SCHOOL OF ARTS ROAD, REDLAND BAY

PROCEDURAL RESOLUTION 2018/62

Moved by: Cr Murray Elliott
Seconded by: Cr Mark Edwards

That Council resolves that this matter lie on the table until the General Meeting of Council 25 July 2018.

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

19.2 APPEAL 1506 OF 2018- BARRO QUARRY APPEAL UPDATE (MCU17/0149)

COUNCIL RESOLUTION 2018/63

Moved by: Cr Murray Elliott
Seconded by: Cr Peter Mitchell

That Council resolves to instruct its solicitors to:

1. **amend the reasons for refusal of the application to those identified in attachment 2;**
2. **make any other minor adjustments necessary to further particularise the reasons identified in 1) above;**
3. **negotiate with the appellant seeking to resolve concerns relating to air quality, noise, traffic and the timing of conditions in the Minister's Decision;**
4. **report back to Council as soon as practicable to advise whether the outcomes sought in 3) above have been achieved; and**
5. **maintain this report as confidential until the conclusion of the appeal.**

CARRIED 8/0

Crs Peter Mitchell, Lance Hewlett, Mark Edwards, Julie Talty, Murray Elliott, Tracey Huges, Paul Gleeson and Paul Bishop voted FOR the motion.

Crs Karen Williams, Wendy Boglary and Paul Gollè were absent from the meeting.

20 MEETING CLOSURE

The Meeting closed at 11.27am.

The minutes of this meeting were confirmed at the General Meeting held on 25 July 2018.

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CHAIRPERSON