

# Yeronga Priority Development Area Infrastructure Planning Background Report

July 2023



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# 1 Background

The Yeronga Development Area (PDA) was declared on 10 August 2018 under the *Economic Development Act 2012* (the Act)<sup>1</sup>. The Yeronga PDA Development Scheme (the development scheme) is applicable to all land within the boundaries of the PDA as well as to development outside the PDA if that development is declared to be PDA-associated development. The development scheme became effective on 9 August 2019.

The Development Charges and Offsets Plan (DCOP) provides guidance on infrastructure matters by stating the Development Charges applicable to development within the PDA, identifying any Trunk Infrastructure within the water supply, sewerage, stormwater, transport, public parks and community facilities networks made necessary by development of the PDA as well as matters relevant to calculating a Credit, offset or refund for the provision of trunk infrastructure.

The PDA is located within the Brisbane City Council (BCC) local government area. A map showing the extent and boundary of the PDA is provided in Appendix A – Yeronga PDA boundary map.

## 1.1 Purpose of Infrastructure Planning Background Report (IPBR)

This IPBR documents information relevant to infrastructure planning and development charging in the Yeronga PDA. The report will assist users of the PDA development scheme (section 3 Infrastructure Plan) and the DCOP to understand how infrastructure planning was undertaken and how Development Charges were determined.

Additionally, section 5 of this report outlines the Desired Standard of Service (DSS) for the Yeronga PDA. The DSS is a summary of the trunk and non-trunk design standards used to inform the planning of the infrastructure networks. These standards also provide guidance to applicants of the form, type and arrangement of infrastructure that is likely to be acceptable to EDQ in the Yeronga PDA.

These standards generally reflect those currently adopted by BCC and Urban Utilities (UU) under the Local Government Infrastructure Plan (LGIP) and Netserv Plan, except where specific reference indicates otherwise.

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<sup>1</sup> See section 8 of the ED Act.

## 2 Growth projections

### 2.1 Introduction

The projections of future residential and non-residential growth in the Yeronga PDA provide a consistent basis for the planning of infrastructure to service the PDA. The following section is a summary of the growth projections prepared for the PDA.

### 2.2 Growth projection years

The Yeronga growth projections are based on the anticipated staging of development and were prepared for:

- the base date 2020 and the following projection years:
  - 2023
  - 2026.

### 2.3 Potential development capacity

Assumptions about the timing of development have been prepared by the MEDQ having regard to the likely staging of development that may be proposed for the PDA.

The development capacity estimated to be achieved within the PDA was prepared by EDQ having regard to the land use and built form requirements of the development scheme.

### 2.4 Development constraints

The key development constraint is flooding which impacts a portion of the PDA closest to the railway line. It has been assumed that building development within this portion of the PDA will not be feasible. Noise from the adjoining railway line is capable of being mitigated and does not impact the potential development yield of the PDA.

### 2.5 Growth rates

The rate of growth for residential and non-residential development in the PDA was determined by the MEDQ having regard to the likely staging of development that may be proposed for the PDA. Development that may be proposed for the PDA was determined having regard to an assessment of market demands in the area. It has been assumed that the PDA will be fully developed by 2026.

### 2.6 Growth projection summary

The growth projections for the PDA are summarised in Table 1 and Table 2.

**Table 1 – Residential dwellings and non-residential floor space projections**

Column 1 Description	Column 2 Projections by year		
	Base date (2020)	2023	2026
Attached/Semi-Detached Dwellings	0	73	262
Educational Facility (GFA)	21,674	0	0
Commercial Office (GFA)	0	3,000	6,000
Community (GFA)	0	730	730

**Table 2 – Population and employment projections**

Column 1 Description	Column 2 Projections by year		
	Base date (2020)	2023	2026
Population	0	256	917
Employment	217	96	181

### 3 Demand projections

Growth projections are converted into demand projections to enable infrastructure planning to be undertaken.

Networks express demand using different demand units. The demand units used by each local network in the PDA are as follows:

- for the water supply network, equivalent persons (EP)
- for the sewerage network, equivalent persons (EP)
- for the stormwater quantity network, impervious area (imp area)
- for the transport network, trips per day (trips)
- for the public parks and community facilities network, equivalent persons (EP).

The demand generation rates used by each network to convert growth projections into demand are stated in Table 3.

**Table 3 – Demand generation rates**

Column 1 Development scheme zone / area	Column 2 Demand generation rate for an infrastructure network						
	Water supply network (EP)	Sewerage network (EP)	Stormwater quantity network (Imp m2 / m2 dev area)			Transport network (vpd/dwelling or vpd/m2 GFA)	Public parks and community facilities (EP)
			2020	2023	2026		
Attached/Semi-Detached Dwellings	1.75	1.75	0.9	0.9	0.9	4.2	1.75
Educational Facility (GFA)	0.0113	0.0113				0.2	0
Commercial Office (GFA)	0.006	0.006				0.16	0
Community (GFA)	0.006	0.006				0.1	0
Source	<i>South East Queensland Water Supply and Sewerage Design and Construction Code (SEQ Code)</i>	<i>South East Queensland Water Supply and Sewerage Design and Construction Code (SEQ Code)</i>	<i>BCC LGIP Schedule 3 – SC3.1.3—Planned density and demand generation rate for a Trunk Infrastructure network (Principal Centre Zone)</i>			<i>Rates reflect typical industry averages</i>	<i>Rates calculated using an occupancy rate of 1.75 persons per dwelling</i>

The demand projections for each network are stated in Table 4.



**Table 4 – Demand projection rates**

**Existing and projected demand for the water supply network**

Column 1 Service catchment	Column 2 Existing and projected demand (EP)		
	Base date (2020)	2023	2026
Yeronga PDA	245	150	555

**Existing and projected demand for the sewerage network**

Column 1 Service catchment	Column 2 Existing and projected demand (EP)		
	Base date (2020)	2023	2026
Yeronga PDA	245	150	555

**Existing and projected demand for the stormwater network**

Column 1 Service catchment	Column 2 Existing and projected demand (Imp Ha)		
	Base date (2020)	2023	2026
Yeronga PDA	2.58	2.41	2.41

**Existing and projected demand for the transport network**

Column 1 Service catchment	Column 2 Existing and projected demand (trips)		
	Base date (2020)	2023	2026
Yeronga PDA	4,335	562	1,374

**Existing and projected demand for the public parks and land for community facilities**

Column 1 Service catchment	Column 2 Existing and projected demand (EP)		
	Base date (2020)	2023	2026
Yeronga PDA	0	128	515

## 4 Desired standards of service

### 4.1 Water supply

The Desired Standards of Service (DSS) for the water supply network are those stated in the South East Queensland Design and Construction Code, as may be amended from time to time.

### 4.2 Sewerage

The DSS for the sewerage network are those stated in the South East Queensland Design and Construction Code, as may be amended from time to time.

### 4.3 Stormwater

The DSS for the stormwater network are those stated in the *Brisbane City Plan 2014*, State Planning Policy 2017 and the Queensland Urban Drainage Manual, Second Edition 2007.

### 4.4 Transport

The DSS for the transport network are those stated in the Brisbane City Plan 2014 Local Government Infrastructure Plan (LGIP).

### 4.5 Public parks and land for community facilities

The DSS for the Public parks and land for community facilities network are those stated in the Brisbane City Plan 2014 Local Government Infrastructure Plan (LGIP) and supporting policy, as may be amended from time to time.

Future community facilities will be delivered to meet the specifications of the Department of Communities, Child Safety and Disability Services.

# 5 Infrastructure planning

## 5.1 Introduction

Infrastructure planning for the Yeronga PDA was undertaken using a planning horizon of 2026. This horizon was chosen to align with the time period within which the PDA is expected to be fully developed. The DCOP identifies infrastructure requirements external to the PDA only if the infrastructure is made necessary by development of the PDA. These requirements are subject to further assessment and discussion with the relevant agency.

## 5.2 Water supply

Planning of water supply infrastructure to service development within the PDA is documented in the following report:

- Yeronga PDA External Water Network Augmentation Works – Briefing Note, Stantec, 14 October 2021 (Appendix B – Yeronga PDA External Water Network Augmentation Works - Briefing Note)

It has been determined that:

- an upgrade of the existing DN100 water main in Ovendean Street between Fairfield Road and Park Road to a DN150 is required
- internal water supply reticulation mains that connect the development to the existing water supply network will be required.

A determination of whether the identified infrastructure is trunk or non-Trunk Infrastructure is provided in Table 5.

## 5.3 Sewerage

Planning of sewerage infrastructure to service development within the PDA is documented in the:

- Urban Utilities Services Advice Notice – 70 Park Road, Yeronga, Urban Utilities, 5 May 2021 (Appendix C – Urban Utilities Services Advice Notice - 70 Park Road, Yeronga).

It has been determined that:

- the existing external sewerage network has capacity to service the Yeronga PDA and that no augmentations are required to the external network
- internal sewerage reticulation mains that connect the development to the existing sewerage network will be required.

A determination of whether the identified infrastructure is trunk or non-Trunk Infrastructure is provided in Table 5.

## 5.4 Stormwater

Planning of stormwater infrastructure has been undertaken to service an assumed amount of development within the PDA similar to that stated in Section 2 of this DCOP. The planning is documented in a report titled:

- Former Yeronga TAFE - 70 Park Road, Yeronga – Engineering Site Analysis Report, Jacobs, 14 December 2018 (Appendix D)

It was determined that:

- the development site is generally unaffected by flooding from the Brisbane River.
- the site is affected by flooding from overland flow paths and development of the PDA need to account for and design an appropriate drainage system to convey this flow through the site.
- the northern portion of the PDA is the lowest point within the site and the entire PDA and part of the adjacent school site drains to this location. This portion of the site is considered to be constrained from future development.
- future development of the PDA is unlikely to result in an increase in the amount of impervious area when compared with the previous TAFE use of the site. Consequently, the amount of stormwater runoff from the site is not expected to increase when compared with the previous TAFE use of the site.
- as the existing stormwater quantity network is providing a satisfactory level of service, no new external stormwater quantity infrastructure is planned to service the PDA.
- internal pipe infrastructure within the site will be required to convey stormwater runoff to the lawful point of discharge
- to achieve the water quality objectives of the State Planning Policy, an on-site solution will be needed. This could take the form of a centralised bio-retention basin or decentralised treatment throughout the PDA.

A determination of whether the identified infrastructure is trunk or non-Trunk Infrastructure is provided in Table 5.

## 5.5 Transport

Planning of transport infrastructure has been undertaken to service an assumed amount of development within the PDA similar to that stated in Section 2 of this DCOP. The planning is documented in the following reports:

- Former Yeronga TAFE - 70 Park Road, Yeronga – Engineering Site Analysis Report, Jacobs, 14 December 2018 (Appendix D)
- Technical Note: Transport Infrastructure Development Contributions June 2022 – Point8 (Appendix E)

It was determined that:

- an internal road within the site may be required. This internal road could enter/exit to Park Road and Villa Street, however road safety design risks will have to be managed in the design of these non-signalised intersections.
- the existing external network has capacity to service the Yeronga PDA and that no immediate augmentations are required to existing roads. However, upgrades will be required into the future as growth from the PDA and surrounding areas continue to put pressure on existing infrastructure.
- several local active transport upgrades have been identified through feedback from the local community as being required in the medium/long term. Funding has been prioritised to these upgrades in the DCOP in response to the consultation feedback received.
- an intersection upgrade at Park Road and Villa Street has been identified as required in the medium/long term and a portion of infrastructure charges will be allocated to that upgrade.

A determination of whether the identified infrastructure is trunk or non-Trunk Infrastructure is provided in Table 5.

## 5.6 Public parks and land for community facilities

The PDA development scheme proposes a community facility to be available for use by local community organisations. MEDQ anticipate that this facility will require 930m<sup>2</sup> of land.

A determination of whether the identified infrastructure is trunk or non-Trunk Infrastructure is provided in Table 5.

**Table 5 – Infrastructure funding determination**

Infrastructure network	Infrastructure details	Trunk/non-trunk	Funding source
Water supply	Internal water reticulation network.	Non-trunk	Developer
	Upgrade of existing DN100 water main in Ovendean Street between Fairfield Rd and Park Rd to DN150	Trunk	Developer charges
Sewerage	Internal sewerage reticulation network	Non-trunk	Developer
Stormwater (quantity and quality)	On-site stormwater quality solution.	Non-trunk	Developer
Transport (roads, intersections, pedestrian and cycle paths)	Non-signalised intersection(s) to provide site access from Villa Street or Park Road.	Non-trunk	Developer
	Internal local access roads.	Non-trunk	Developer
	Intersection - Contribution towards Villa Rd/Park Rd intersection upgrade	Trunk	Development Charges

	Park Rd – widen the existing footpath on the western side of Park Road, between Dublin Street and the northern boundary of 25 Park Rd	Trunk	Development Charges
	Contribution towards upgrades to Christensen St to facilitate safer cycling and walking	Trunk	Development Charges
	Contribution towards upgrades on Lake Street to facilitate safer cycling and walking	Trunk	Development Charges
	Contribution towards upgrades on Honour Avenue to facilitate safer cycling and walking	Trunk	Development Charges
Public parks and land for community facilities	Land for community centre.	Trunk	Development Charges
Electricity and gas	As required	Other	Developer
Telecommunications	As required	Other	Developer

## 6 Infrastructure costs

The cost of infrastructure has been determined as follows.

### 6.1 Cost of land

The cost of infrastructure (land) for the community facility was determined through a site-specific valuation.

### 6.2 Cost of works

The cost of future infrastructure (works) for each network is stated in Table 6.

**Table 6 – Cost of future Trunk Infrastructure (works)**

Column 1 Network	Column 2 Source
Water supply	Cost estimate prepared by Rider Levett Bucknall Qld Pty Ltd.
Sewerage	No future Trunk Infrastructure has been identified.
Stormwater	No future Trunk Infrastructure has been identified.
Transport	Cost prepared by Point 8.
Public parks and land for community facilities	No works component applicable for land for community facility.

### 6.3 On-costs allowance

On-costs represent the owner's project costs and may include:

- survey for the work
- geotechnical investigations for the work
- strategic planning
- detailed design for the work
- project management, procurement and contract administration
- environmental investigations for the work, and
- portable long-service leave payment for a construction contract for the work.

The on-costs allowances that have been applied to infrastructure costs in the PDA are stated in Table 7.

**Table 7 – On-cost allowance**

Network	On-costs allowance
Water supply	23%.
Sewerage	No future Trunk Infrastructure has been identified.
Stormwater	No future Trunk Infrastructure has been identified.
Transport	15%.
Public parks and land for community facilities	0%.

## 6.4 Contingency allowance

A contingency allowance is included in the cost of future infrastructure works to deal with known risks. The level of contingency allowance applied for infrastructure works in each network are stated in Table 8.

**Table 8 – Contingency allowance**

Network	Contingency allowance
Water supply	30%
Sewerage	No future Trunk Infrastructure has been identified.
Stormwater	No future Trunk Infrastructure has been identified.
Transport	Up to 50%.
Public parks and land for community facilities	0%



## 7 Development Charges

Development charges are imposed on development in the PDA to fund Trunk Infrastructure which has been provided or is planned to be provided to service the PDA. The following Development Charges apply in the PDA.

- infrastructure charges.

The infrastructure charges for the Yeronga PDA are those currently outlined in the Yeronga PDA DCOP.

### 7.1 Infrastructure charges

Infrastructure charges imposed on development within the Yeronga PDA will fund the provision of Trunk Infrastructure made necessary by development of the Yeronga PDA. Trunk infrastructure is identified in Table 9 – Schedule of Works **Error! Reference source not found.**

### 7.2 Funding non- Trunk Infrastructure and other infrastructure

Non- Trunk Infrastructure and other infrastructure that is made necessary by development of the Yeronga PDA will be delivered and/or funded by parties undertaking development.

**Table 9 – Schedule of Works**

**Schedule of future Trunk Infrastructure works – Water Supply**

DCOP ID	Map ref	Infrastructure type	Infrastructure description	Estimated timing	Land cost	Works base cost	Works on-costs	Works contingency	Total works cost <sup>1</sup>	Estimated cost <sup>2</sup>
WAT-01	2	Water Main	Upgrade of existing DN100 water main in Ovendean Street between Fairfield Rd and Park Rd to DN150	2023	N/A	\$870,000	\$103,868	\$175,915	\$1,149,783	\$1,149,783

Notes:

- 1 – The total works cost is the sum of the following: construction cost, construction on costs and construction contingency.
- 2 – The estimated cost is the sum of the following: land cost and total works cost. This is expressed in FY 2022/23 dollars.

**Schedule of future Trunk Infrastructure works – Public Parks and Community Facilities**

DCOP ID	Map ref	Infrastructure type	Infrastructure description	Estimated timing	Land cost	Works base cost	Works on-costs	Works contingency	Total works cost <sup>1</sup>	Estimated cost <sup>2</sup>
CF-01	2	Community Facility	Land for a future Yeronga Community Facility	2023	\$422,320	\$0	\$0	\$0	\$0	\$422,320
CF-02	2	Community Facility	Public Realm Land	2023	\$302,400	\$0	\$0	\$0	\$0	\$302,400

Notes:

- 1 – The total works cost is the sum of the following: construction cost, construction on costs and construction contingency.
- 2 – The estimated cost is the sum of the following: land cost and total works cost. This is expressed in FY 2022/23 dollars.

## Schedule of future Trunk Infrastructure works – Transport

DCOP ID	Map ref	Infrastructure type	Infrastructure description	Estimated timing	Land cost	Works base cost	Works on- costs	Works contingency	Total works cost <sup>1</sup>	PDA % of cost	Estimated cost <sup>2</sup>
I - 01	2	Intersection	Contribution towards Villa Rd/Park Rd intersection upgrade	When the upgrade is delivered	-	\$1,698,987	\$368,067	\$643,258	\$2,705,312	4.7%	\$126,850
AT – 01	2	Pathway Upgrade	Park Rd – widen the existing footpath on the western side of Park Road, between Dublin Street and the northern boundary of 25 Park Rd	2023	N/A	\$225,726	\$42,840	\$46,310	\$314,876	N/A	\$314,876
AT – 02	2	Pathway Upgrade	Contribution towards upgrades to Christensen St to facilitate safer cycling and walking	When the upgrade is delivered	-	\$142,367	\$27,019	\$29,208	\$198,594	N/A	\$198,594
AT – 03	2	Pathway Upgrade	Contribution towards upgrades on Lake Street to facilitate safer cycling and walking	When the upgrade is delivered	-	\$189,688	\$36,000	\$38,916	\$264,605	N/A	\$264,605
AT – 04	2	Pathway Upgrade	Contribution towards upgrades on Honour Avenue to facilitate safer cycling and walking	When the upgrade is delivered	-	\$232,600	\$44,145	\$47,720	\$324,465	N/A	\$324,465

### Notes:

- 1 – The total works cost is the sum of the following: construction cost, construction on costs and construction contingency.
- 2 – The estimated cost is the sum of the following: land cost and total works cost. This is expressed in FY 2022/23 dollars.

# Appendix A – Yeronga PDA boundary map



# **Appendix B – Yeronga PDA External Water Network Augmentation Works - Briefing Note**

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<b>Subject</b>	<b>Yeronga Development Water Demand Analysis</b>	<b>Project Name</b>	Yeronga Heart
<b>Attention</b>		<b>Project No.</b>	IH141300
<b>From</b>	Gabriella Lucchi		
<b>Date</b>	9 August 2019		
<b>Copies to</b>	<b>Steve Gager</b>		

Based on the request from Economic Development Queensland (EDQ), the water demands of the proposed development have been analysed to evaluate the network's ability to meet demands. The water demands have been calculated in accordance with SEQ Water Supply and Sewerage Design and Construction Code (2013) and the Queensland Government's Planning Guidelines for Water Supply and Sewerage (2010).

**Proposed Development Demands**

To determine the number of Equivalent Persons (EP) of the new development, Appendix A4 of the SEQ Water Supply and Sewerage Design and Construction Code and Table A of the Planning Guidelines for Water Supply and Sewerage were utilised. Where the Queensland Government's Planning Guidelines provided a more specific estimate of EP for a particular Lot, this was used over the SEQ Code guidelines which in some instances is more general. The estimated EP for each Lot and the total development is provided below in **Table 1** and is 695 EPs.

**Table 1: Determination of EP**

Land Use / Development Parcel	Adopted Equivalent Persons (EP)
Lot 1.1 – Road Reserve	0
Lot 2.01 – Yeronga Community Centre	36
Lot 4.01 – Community Retail – Lauden	
Retail Area	18
Apartments	38
Lot 4.02 – Transforming Townhouses – Lauden	16
Lot 4.03 – Transforming Townhouses – Lauden	16
Lot 4.04 – Transforming Townhouses – Lauden	16
Lot 4.05 – Transforming Townhouses – Lauden	16
Lot 4.06 – Transforming Townhouses – Lauden	16
Lot 4.07 – Courtyard Townhouses – Lauden	20
Lot 5.01 – Smarter Smaller – Brisbane Housing Company	145



Land Use / Development Parcel	Adopted Equivalent Persons (EP)
Lot 6.01 – Aging in Place – Retire Australia	104
Lot 6.02 – Aging in Place – Retire Australia	57
Lot 6.03 – Aging in Place – Retire Australia	134
Lot 7.01 – Community Health and Wellbeing – Heathley	
Child Care Centre	24
Food and Beverage	2
Child Health Queensland	37
<b>TOTAL EP</b>	<b>695</b>

**Water Supply Requirements**

The water supply flow parameters for the network were calculated in accordance with Table 4.1 of the SEQ Water Supply and Sewerage Design and Construction Code. With an EP of 695, the flow parameters calculated for the development are provided below in **Table 2**.

**Table 2: Flow Parameters**

Flow Parameter	Flow (L/d)	Flow (L/s)
<b>Average Day Demand (AD)</b> $AD = (\text{demand category AD} \times EP) + (NRW \times EP)$ $= (230 \text{ L/EP/d} \times EP) + (30 \text{ L/EP/d} \times EP)$	180,679	2.09
<b>Peak Day Demand (PD)</b> $PD = (\text{demand category PD/AD} \times AD) + (NRW \times EP)$ <i>(Assuming high density res PD/AD factor = 2)</i>	340,511	3.94
<b>Peak Hour Demand (PH)</b> $PH = (\text{demand category PH/AD} \times AD) + (NRW \times EP)$ <i>(Assuming high density res PH/AD factor = 3.5)</i>	580,258	6.72

Appendix A below provides full water demand calculations with the determination of EP.

**Appendix A – Determination of EP and Water Demand Analysis**



YERONGA HEART YIELD SUMMARY

DEMAND REQUIREMENTS - Determination of EP

Average Day Demand	230 L/EP/d
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Development Parcels	Site Area (m2)	GBA	Apartment Yield	Net dev area (Ha)	SEQ Water & Sewerage Planning Guidelines	QLD Planning Guidelines for Water Supply and Sewerage	Adopted EP
					EP	EP	
Lot 1.01 - Road Reserve	2951	n/a	n/a				
Lot 2.01 Yeronga Community Centre	1155	1279	n/a	0.1155	2	36	36
Lot 4.01 - Community Retail - Laudan	1523	4612	21	0.1523	7		
Retail Area (Net Letable Area)	741					18	18
Apartments			21		38		38
Lot 4.02 - Transforming Townhouses - Laudan (Townhouses)	803	1675	9		16		16
Lot 4.03 - Transforming Townhouses - Laudan (Townhouses)	802	1675	9		16		16
Lot 4.04 - Transforming Townhouses - Laudan (Townhouses)	801	1675	9		16		16
Lot 4.05 - Transforming Townhouses - Laudan (Townhouses)	801	1675	9		16		16
Lot 4.06 - Transforming Townhouses - Laudan (Townhouses)	800	1675	9		16		16
Lot 4.07 - Courtyard Townhouses - Laudan (Townhouses)	1510	2257	11		20		20
Proposed Parkland (Pt of Lot 4.07)	3634	n/a	n/a				
Lot 5.01 - Smarter Smaller - Brisbane Housing Company (Apartments)	2693	7571	81		145		145
Lot 6.01 - Aging in Place - Retire Australia (Apartments)	5402	10457	58		104		104
Lot 6.02 - Aging in Place - Retire Australia (Apartments)	1402	6337	32		57		57
Lot 6.03 - Aging in Place - Retire Australia (Apartments)	3962	11322	75		134		134
Lot 7.01 - Community Health and Wellbeing - Heathley	2673	9601	n/a	0.2673	16		
Child Care Centre (Net Letable Area) (Assuming 100 staff&students)	1230					24	24
Food and Beverage (Net Letable Area)	25					2	2
Child Health Queensland	1557					37	37
	30912	61810	323				695

Shaded cell = adopted guideline

WATER DEMAND ANALYSIS

Average Day Demand (AD)

**Average Day Demand (AD)**

$$AD = (\text{demand category AD}_{L/EP/day} \times EPs) + (NRW_{L/EP/day} \times EPs)$$

AD (excluding NRW)	=230 L/EP/d	
	159,832 L/d	
Non-Revenue Water (NRW)	=30 L/EP/d	
	20,848 L/d	
Tot. Average Day Demand (AD)	180,679 L/d	2.09 L/s

Peak Day Demand (PD)

**Peak Day Demand (PD)**

$$PD = (\text{demand category PD/AD} \times AD_{L/EP/day} \times EPs) + (NRW_{L/EP/day} \times EPs)$$

PD/AD factor	2 (assuming high density res)	
Peak Day Demand (PD)	340,511 L/d	3.94 L/s

Peak Hour Demand (PH)

**Peak Hour Demand (PH)**

$$PH = (\text{demand category PH/AD} \times AD_{L/EP/day} \times EPs) + (NRW_{L/EP/day} \times EPs)$$

PH/AD factor	3.5 (assuming high density res)	
Peak Hour Demand (PH)	580,258 L/d	6.72 L/s

# **Appendix C – Urban Utilities Services Advice Notice - 70 Park Road, Yeronga**

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

Dear Applicant,

**Queensland Urban Utilities Services Advice Notice**

QUU Application Number: [REDACTED]  
Applicant Name: [REDACTED]  
Street Address: 70 Park Road, Yeronga  
Real Property Description: Lot 3 on SP300888

Proposed service connection/alteration/disconnection type:

Drinking water	<input checked="" type="checkbox"/>
Non-drinking water	<input type="checkbox"/>
Wastewater	<input checked="" type="checkbox"/>

Queensland Urban Utilities provides this Services Advice Notice in response to the request received on 22<sup>nd</sup> January 2019. In accordance with section 99BRAC(3) of the *South East Queensland Water (Distribution and Retail Restructuring) Act 2009*, this Services Advice Notice provides advice about the proposed connection having regard to the connections policy in the Queensland Urban Utilities Water Netserv Plan, the charges and conditions that may apply to the connection and other relevant matters about the connection. All terms used in this Services Advice Notice are defined by reference to the Queensland Urban Utilities Water Netserv Plan.

This Services Advice Notice does not constitute an application for connection, is not an approval to connect to the Queensland Urban Utilities network(s) and does not bind any future Queensland Urban Utilities' decision if the applicant applies for a connection.

Queensland Urban Utilities understands that the proposed development will consist of 232 residential units, 330 m<sup>2</sup> of retail space and 1483 m<sup>2</sup> of community space in a 6 storey building complex. As per the request for a Service Advice Notice submitted, a material change of use will be applied for as part of this development.

The applicant has requested advice on any upgrades required to existing infrastructure and sizing.

Based on your proposal and discussion with Queensland Urban Utilities officers, the following advice is provided:

## Queensland Urban Utilities Services Advice

### Infrastructure and Design

A map of existing water and wastewater infrastructure at the vicinity of subject property is provided in Figure 1 below.

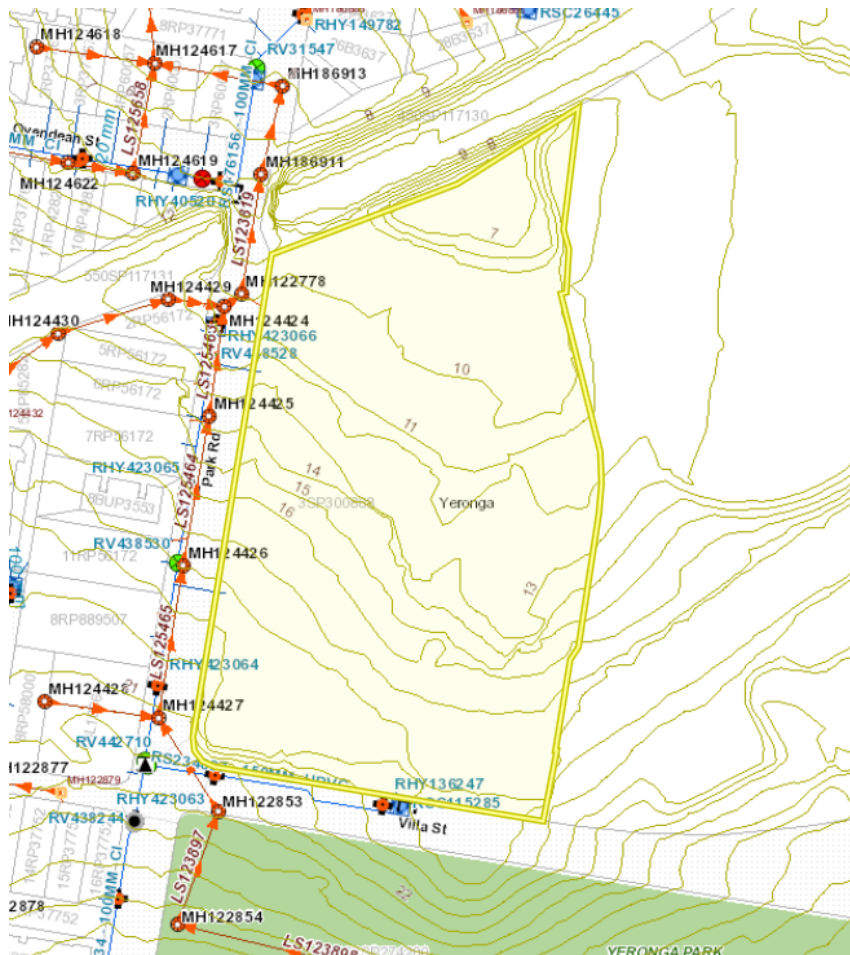


Figure 1: Existing infrastructure within the vicinity of the subject site

#### Water

The subject site is currently serviced by multiple connections from the existing 150 mm water main in Villa Street and the existing 125mm PE water main in Park Road. Both these water mains are dead end mains and are supplied from one direction only.

██████████ has proposed to provide a loop main in a future Council Road inside the property, connecting these 2 water mains.

Queensland Urban Utilities does not object to the proposed water supply arrangement.

#### Wastewater

The subject site is currently serviced by a property connection on existing 150 mm sewer main in Park Road. Flows from the site are transferred to a larger diameter main at a short distance.

The existing combined drain through the subject site must be disestablished. Upstream properties serviced by the combined drain must be provided with a new reticulated sewer service.

Developments must accommodate upstream properties by enabling access to the reticulated sewer network in the process of developing a site. It is a design requirement in the *SEQ WS&S D&C Code* that developments enable future extension of the sewerage to ensure upstream properties can also develop.

The wastewater infrastructure shall terminate in a location and in an arrangement that allows future connection to the network to be made without requiring the consent of private landowners.

All property connections within the subject site servicing upstream properties must be upsized to a minimum DN160 PE100 size.

Where upstream properties do not have an existing property connection, and where the development is likely to isolate upstream properties from the sewer, a property connection through the subject site and servicing the upstream lot must be provided.

Note that the water & wastewater infrastructure required for the proposed development is to be provided in accordance with QUU requirements, including but not limited to the *SEQ Water Supply and Sewerage Design and Construction Code* (SEQ WS&S D&C Code, 2013), or current equivalent.

## Network Demand and Capacity

### Water

An assessment of the water supply available at the site, including computational hydraulic modelling of the network under peak demand and fire flow conditions, has been completed.

The analysis assumes a Peak Hour Demand of 4.3 L/s (corresponding to the details of the proposed development).

**Table 1: Indicative Flow and Pressure Advice**

Assumed Connection Main	Estimated RL Connection (m AHD)	Hydraulic Grade Line (m AHD)			Pressure (kPa) <sup>1</sup>		
		0 L/s	5 L/s	10 L/s	0 L/s	5 L/s	10 L/s
150mm UPVC main in Villa St Constructed in 2002	20.1	80.1	77.1	72.1	589	559	510
125mm PE main in Park Rd Constructed in 2016	17.0	81.0	78.0		628	598	

**Notes:** <sup>1</sup> Modelled pressure in supply main, relative to the estimated connection RL (m AHD).

<sup>2</sup> Designers are required to adjust the Hydraulic Grade Line/Pressure model results for site/building RL differences and calculate the extra hydraulic losses from point of connection with the main.

<sup>3</sup> Field performance of cast iron spun (or cement) lined mains can be variable. Field testing to ascertain actual pressure drops may be advisable.

<sup>4</sup> Indicative flow and pressure results assume a background demand of 2/3 Peak Hour has been applied throughout the network.

### Disclaimer

Information provided by Queensland Urban Utilities is based on hydraulic modelling ("Hydraulic Modelling Information"). Model results are for the anticipated performance. **The Hydraulic Modelling Information has not been verified by field measurements and may be inaccurate due to field conditions.**

**As such, users relying on Hydraulic Modelling Information do so at their own risk and should make their own independent investigations to verify model outputs.**

The Hydraulic Modelling Information does not state nor imply a guaranteed level of service. Designers are referred to Queensland Urban Utilities' Customer Charter and Customer Service Standards for facility hydraulic service considerations. **Queensland Urban Utilities does**

not provide a service of minimum flows and pressures to private fire-fighting systems.

Due to changing operational circumstances, pressure and flows delivered to a service may vary. Designers are advised to make adequate provisions within the fire system installation for the pressure, flow and reliability requirements, for the life of the system.

The existing water infrastructure at the vicinity of the subject site has insufficient capacity to service the proposed development in accordance with the SEQ WS&S D&C Code.

To service the proposed development in accordance with the SEQ WS&S D&C Code, the developer is required to upgrade the existing water main in Dublin Street from Point A to Point B with a 150 mm pipe, as indicated in Figure 2.

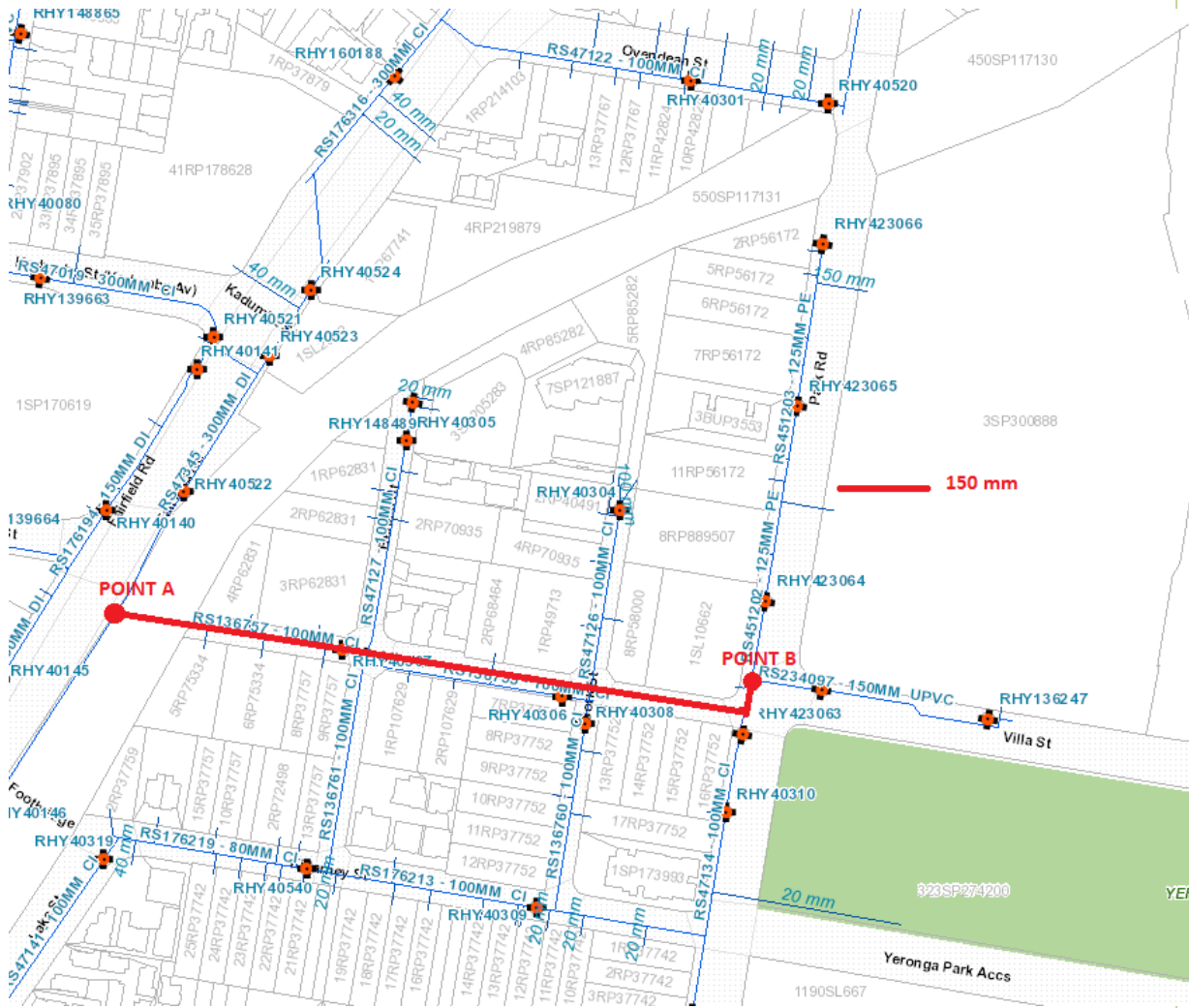


Figure 2: Proposed Water Main Upgrade in Dublin Street

### Wastewater

A hydraulic assessment of the sewerage network servicing the site under peak wet weather flow conditions has been completed.

The analysis assumes a Peak Wet Weather Flow from the development of 5.41 L/s (corresponding to the details of the proposed development).

According to the information supplied by [REDACTED] this development will consist of approximately 445 EP. The analysis contained in this Service Advice Notice is not an endorsement of the full extent of the proposed development beyond land use totalling 445 EP.



The assessment indicates that the localised gravity mains at the vicinity of the subject site have sufficient capacity to service the proposed development.

If reuse of existing wastewater property connection is intended as part of the servicing arrangement for this development, Queensland Urban Utilities need to be satisfied that the connection is:

- Suitably located
- Has the hydraulic capacity to meet the requirements of the proposed development
- Is in sound condition as assessed by CCTV, material and age

At this stage, the grade and condition of the existing sewer property connection is unknown. To reuse the existing property connection, the applicant will need to provide the following information prior to receiving a Connection Certificate :

- CCTV inspection of the existing property connection to confirm the pipe condition
- confirmation that the hydraulic capacity of the existing property connection meets the requirements of the proposed development

Reuse of an existing property connection must be endorsed and signed off by a Registered Professional Engineer of Queensland (RPEQ). Where investigations determine that a property connection cannot be reused, a new connection will be required. Queensland Urban Utilities recommends that investigations be undertaken as soon as practical in order to avoid delays at the end of the project.

#### Infrastructure Charges (as at 1 July 2018)

Infrastructure Charges will be levied in accordance with the Queensland Urban Utilities' Water Netserv Plan (Part A) Charges Schedule applicable at the time the water approval application is lodged.

Further information is available at the following website:

<https://www.urbanutilities.com.au/development-services/help-and-advice/water-netserv-plan>

#### Trade Waste

The **proposed development** (the subject of this Services Advice Notice) has been identified as a potential generator of Trade Waste. Trade Waste is water-borne waste from business, trade or manufacturing premises excluding domestic sewerage, stormwater, and prohibited substances. It is an offence under section 193(1) of the **Water Supply (Safety and Reliability) Act 2008** to discharge trade waste into Queensland Urban Utilities' infrastructure without a Trade Waste Approval.

To obtain a Trade Waste Approval, the proponent for the proposed development must submit an application to Queensland Urban Utilities, who will assess and decide the application. Any Trade Waste Approval granted by Queensland Urban Utilities will be subject to Trade Waste Approval conditions and the Queensland Urban Utilities Trade Waste Environmental Management Plan (**TWEMP**).

The TWEMP and an online application form are available on the Queensland Urban Utilities website:

[www.urbanutilities.com.au/business/business-services/trade-waste](http://www.urbanutilities.com.au/business/business-services/trade-waste)

For advice on the suitability of waste for discharge to sewer, and likely Trade Waste Approval

conditions, you may contact Queensland Urban Utilities Trade Waste section on **13 26 57**.

Proposed trade waste drainage solutions will be assessed for compliance with plumbing and drainage regulations and the requirements of the TWEMP at the time of plumbing compliance assessment. Proposed trade waste solutions that do not meet the requirements in the TWEMP and plumbing and drainage regulations may result in delays to the plumbing compliance process and the issue of a Trade Waste Approval.

Further information is available at the following website:

<https://www.urbanutilities.com.au/business/business-services/trade-waste>

### Connection Application Process

A formal assessment as to whether your application qualifies as a Standard Connection, Minor Works Approval, or Major Works Approval will be resolved on application for a Water Approval. For the purposes of preliminary advice, and based on the information provided, it is expected that the following applications will be required to assess the ability to connect to Queensland Urban Utilities networks:

#### 1. Network and/or Property Service Connection – Minor Works

The Water Approval will require connection works to be undertaken. These works are expected to be available under the Endorsed Consultant Certification Scheme for Minor Works. You will be able to choose a QUU Endorsed Consultant and a contractor to appoint to design and construct the works, including live works in most cases (Permit to Work required) and then maintain the works for a specified period (usually 12 months) in accordance with the conditions stated in your Water Approval (including compliance with the *SEQ WS&S D&C Code*). Further information regarding the Endorsed Consultant Certification Scheme for Minor Works is available at: <http://www.urbanutilities.com.au/development-services/our-services/water-and-sewerage-connections/endorsed-consultant-certification-scheme>

#### 1. Network and/or Property Service Connection – Major Works

The Water Approval will require connection works to be undertaken. You will be able to choose which consultants and contractors to appoint to design and construct the works, including live works (in most cases) and then maintain the works for a specified period (usually 12 months) in accordance with the conditions stated in your Water Approval.

Please note that the information provided within this section is subject to the specific aspects of the development and water application.

### Fees and Charges

Queensland Urban Utilities fees and charges are stated in the Queensland Urban Utilities' Water Netserv Plan (Part A) Charges Schedule. The fees and charges that are likely to be associated with these applications are outlined below:

#### 1. Application Phase

Base Application Fee – Property Services Connection \$609 (per connection / disconnection / alteration)

Base Application Fee – Network (1-10 lots) \$609 (per application for each service)

Fast-track application process (up to 10 lots only) \$2,436 (per application for each service)

#### 2. Design, Construction and Maintenance Phases

Minor Works

Certification Scheme Audit and Compliance Fee \$530 (per application for each service)



## Major Works

### **Design Approval Fee (reticulation)**

Property Service Connection Fee \$2,128 (per connection / disconnection / alteration)

### **Re-checking Amended Plans Fee**

Re-checking Amended Plans Fee \$602 per plan

### **Works Inspection Fee (reticulation)**

Works Inspection Fee Type A \$365 (per inspection)

Works Re-inspection Fee Type A \$547 (per inspection)

#### Notes:

1. The customer may incur additional fees and charges during the approval and works phase, including but not limited to, fees levied by the RPEQ and construction contractor, fees associated with the provision of maintenance / uncompleted works bond(s), re-checking amended plans fees, re-inspection of works fees and infrastructure agreement preparation fees;
2. The above estimates are indicative only and are subject to review of the detailed application upon lodgement; and
3. Please refer to the *QUU Water Netserv Plan* - for further details / clarifications on Fees and Charges.

## **Time Frames for Assessment**

### **Connection Assessments (for applications other than Standard Connection)**

To be completed within 20 business days of receipt of Properly Made Connection Application (including payment of the relevant assessment fee), or within a further 20 business days of receipt of requested information (unless extended by agreement).

### **Design Phase**

For Minor Works:

Typically, for an application which is classified as **minor works**, no assessment of the design phase is expected to be required from Queensland Urban Utilities.

However, Queensland Urban Utilities may audit a selection of certified designs based on its assessment of the risk of non-compliance

For Major Works:

Typically for an application classified as **major works**, the assessment of the design phase is to be completed within 20 business days of receipt of all designs.

This Services Advice Notice is current for a period of two (2) years from the date of issue. Should you wish to proceed with applying for a service connection please lodge your application via Queensland Urban Utilities Development Services Online Lodgement Portal at <http://www.urbanutilities.com.au/development-services>. Please include your Services Advice Notice reference number in your application.

Queensland Urban Utilities may, at its discretion, provide a reduced fee for a service connection application based on this Services Advice Notice if your application is received within 12 months of the date of issue and is substantially in accordance with the proposal upon which this advice was issued.

If you have any questions in relation to this Service Advice Notice, please do not hesitate to contact your account manager, Vindy Hapuarachchi on 07 3855 6251 or [vindy.hapuarachchi@urbanutilities.com.au](mailto:vindy.hapuarachchi@urbanutilities.com.au).

Alternatively, please email [DCMTenquiries@urbanutilities.com.au](mailto:DCMTenquiries@urbanutilities.com.au).

Yours sincerely



**Sajid Imam Syed**  
Development Assessment Team Leader  
Queensland Urban Utilities

# **Appendix D – Former Yeronga TAFE - 70 Park Road, Yeronga - Engineering Site Analysis Report**



## Yeronga RFP Evaluation

Economic Development Queensland

### Technical Note - Yeronga Heart Traffic and Transport

IH141300-E-CT-RP-0001 | A

20 June 2019

DILGP-EDQ-1175-18

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## Yeronga RFP Evaluation

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Project Manager: Steve Gager  
Author: Angela Sun/Alexander Pollock  
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## Important note about your report

The sole purpose of this technical report and the associated services performed by Jacobs is to document the assessment of proponents as Engineering Advisor of the supply service provisions and civil infrastructure which would be required and undertaken for the development, in accordance with the scope of services set out in the contract between Jacobs and the Client.

In preparing this report, Jacobs has relied upon, and presumed accurate, any information provided by the Client, data available from Brisbane City Council (BCC) eMap, BCC City Plan 2014, planning documentation (such as QUDM, SEQ Code), discussion meetings and/or from other sources, such as development yields, flood modelling information, drainage capacity reports, background traffic counts and traffic generation rates etc. Except as otherwise stated in the report, Jacobs has not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our conclusions and recommendations as expressed in this report may change.

Jacobs derived the data in this report from information sourced from the Client (if any) and/or available in the public domain at the time or times outlined in this report. The passage of time, manifestation of latent conditions or impacts of future events may require further examination of the project and subsequent data analysis, and re-evaluation of the data, findings, observations and conclusions expressed in this report. Jacobs has prepared this report in accordance with the usual care and thoroughness of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

This report should be read in full and no excerpts are to be taken as representative of the findings. No responsibility is accepted by Jacobs for use of any part of this report in any other context.

This report has been prepared on behalf of, and for the exclusive use of, Jacobs's Client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the Client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.

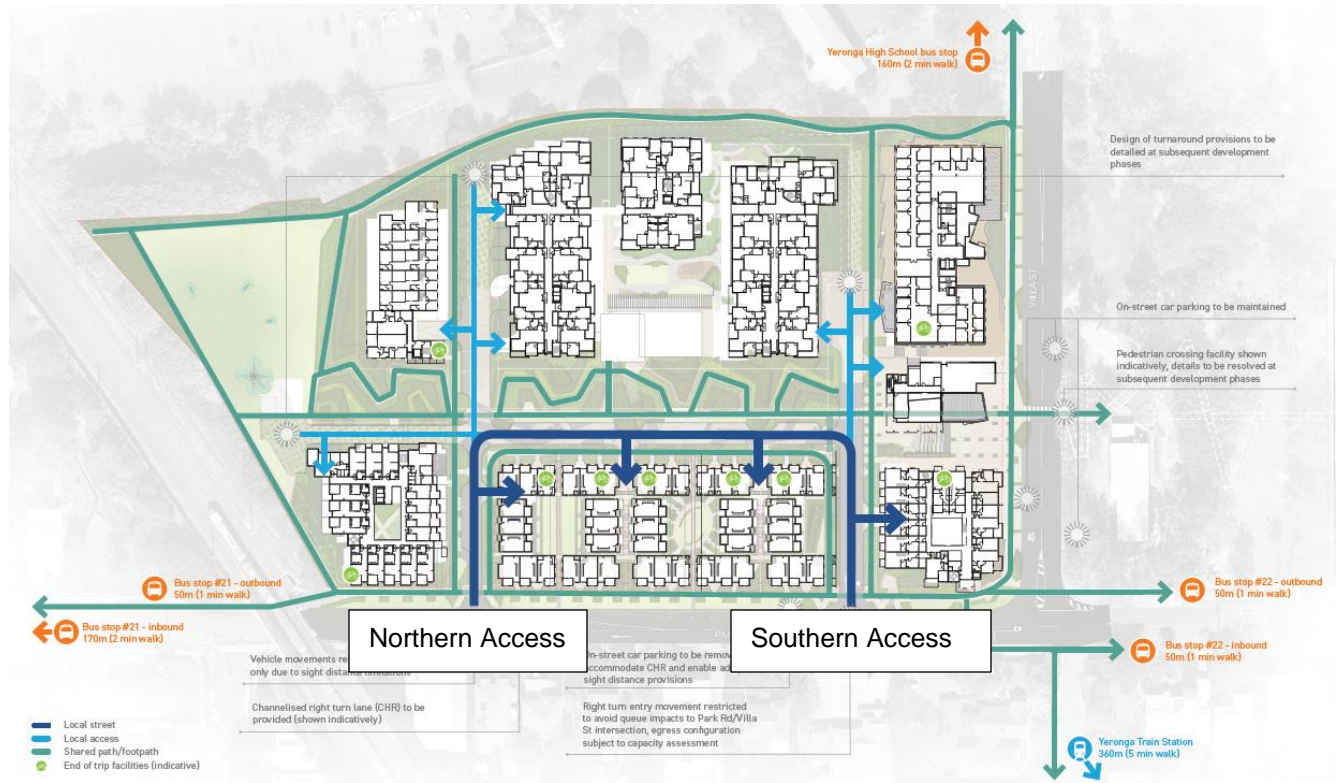
# 1. Introduction

This technical note is to accompany the Engineering Aspects Advisor Assessment and provides a high-level traffic and transport assessment of the Yeronga Heart proponent, outlining major differences with the assumed development of the site as in the Engineering Site Analysis Report<sup>1</sup>. The assessment is based on a nominal development opening year of 2020 and a future design year of 2030 (10 years beyond the opening year).

The proponent has provided a detailed masterplan covering all aspects of the requirements including built form, public realm, on grade infrastructure and landscape. A ‘U’ shaped internal road forms two t-intersections with Park Road. The southern intersection is intended to be an all movements exit for the site and a left in entry, whereas the northern intersection is intended to be a left-in/left-out arrangement with a northbound right-turn in.

The concept plan for the proponent is as shown in Figure 1.

Figure 1 - Yeronga Heart concept plan



The concept plan for the assumed development of the site as in the Engineering Site Analysis Report is as shown in Figure 2. The assumed development provided two access points, one each on Villa Street and Park Road.

<sup>1</sup> Former Yeronga TAFE – 70 Park Road, Yeronga, Jacobs 2018, IH141300-E-CC-RP-0002|D



Figure 2 - Assumed development concept plan



Due to the increase in yield for the site beyond that envisaged during the feasibility stage and the proposed single exit point, there are concerns regarding traffic performance and capacity. Traffic queues within the site may be an issue and traffic may find it difficult to turn right out of the site onto Park Road without signalisation. External traffic impacts may require further mitigation measures due to interaction with the existing Villa Street intersection (60m nominal separation).

To understand these impacts, a traffic and transport assessment of the traffic generation and distribution has been conducted. Site access treatment, car parking supply, service vehicle access and circulation, public transport, active transport and car sharing opportunities will not be addressed in this technical note and is assumed to be provided by the proponent.

## 2. Traffic assessment

### 2.1 Traffic generation and distribution

The traffic generation from the development associated with the range of proposed uses (residential, retail, allied health and community uses) as set out by the proponent in their 150419 Clarifications document is presented in Table 1.

Table 1 – Yeronga Heart trip generation and directional split

Type of Use	Number of Units	Peak Hour Trip Generation Rate		Peak Hour Trip Generation (vph)		Directional Split (In/Out for AM and Out/In for PM)
		AM	PM	AM	PM	
Multiple dwelling (Lot A)	8 dwellings	0.5 per dwelling	0.5 per dwelling	4	4	25/75
Multiple dwelling (Lot B-F)	45 dwellings	0.5 per dwelling	0.5 per dwelling	23	23	25/75
Multiple dwelling (Lot G)	21 dwellings	0.5 per dwelling	0.5 per dwelling	11	11	25/75
Retail (Lot G)	4 staff spaces	0.5 per staff space	0.5 per staff space	2	2	60/40
Retirement facility	157 ILUs	0.1 per room	0.1 per room	16	16	60/40
Residential care facility	30 beds	0.1 per bed	0.1 per bed	3	3	60/40
Multiple dwelling (BHC)	90 dwellings	0.2 per dwelling	0.2 per dwelling	18	18	25/75
Allied Health / Office	4500 sqm GFA	1.6 per 100 m <sup>2</sup> GFA	1.2 per 100 m <sup>2</sup> GFA	72	54	60/40
Child care centre	70 children	1 per child	0.95 per child	70	67	60/40
Community Use	16 staff	0.5 per staff member	0.5 per staff member	8	8	60/40
			<b>Total</b>	<b>227</b>	<b>206</b>	AM (118 in / 110 out) PM (102 in / 105 out)

AM and PM peak hours are assumed to be typical journey to/from work trip time periods, 7:30 am – 8:30am and 4:30pm – 5:30pm.

The peak hour trip generation rates provided appear to be consistent with recent surveys undertaken by RMS on similar developments in inner city locations in Sydney and average recommended rates from Trip Generation Guide (RMS, 2002). As this is a concept design and exact details on the land use operations and number of units have not been given, trip generation data should be refined as further details are resolved.

The proponent’s trip generation is 227 vehicles per hour (vph) for the AM peak and 206 vph for PM peak compared to the assumed development concept plan’s trip generation of 139 vph in each peak. This represents an increase of 88 vph (63%) and 67 (48%) in the AM and PM peaks respectively.

The proponent’s in/out splits were 60/40 for the AM peak and 40/60 for the PM peak, however, it is unclear how this value was estimated. Based on the proposed land uses, in / out splits have been estimated based on each land use type as presented in Table 1. When applied to the individual land uses the total in/out split was estimated to be close to 50/50 in both peaks compared to the assumed development concept plan’s total in/out split of 15/85 for the AM peak and 85/15 for the PM peak.

Table 2 summarises the differences in trip generation and distribution between the proponent’s Yeronga Heart development and the assumed development concept.

**Table 2 - Development Comparison**

	Assumed Development	Yeronga Heart
<b>Total Trips Per Peak hour</b>	139	228
<b>In/Out Ratio AM Peak</b>	15/85	52/48
<b>In/Out Ratio PM Peak</b>	85/15	49/51
<b>AM Peak In/Out (vph)</b>	21/118	118/110
<b>PM Peak In/Out (vph)</b>	118/21	102/105
<b>Access use</b>	Villa St - 70% in/70% out Park Rd - 30% in/30% out	Park Rd (north) - entry only Park Rd (south) - entry/exit
<b>Trip Distribution</b>	Park Rd north 40% Park Rd south 20% Villa St east 40%	Park Rd north 27% Park Rd south 43% Villa St east 30%
<b>Increase in traffic from development</b>	Up to 140 vph	Up to 230 vph
<b>% increase in traffic volume at Park Road/Villa Street intersection</b>	4-5%	18-24%

Table 3 shows the development trip distribution between the Park Road (north) - entry only and Park Road (south) - entry/exit in the AM and PM peak period. It is assumed that 30% of entry traffic from the Park Road north approach uses the southern entry point to the development and the remaining 70% uses the northern access.

**Table 3 –Yeronga Heart trip distribution between Park Road (north) and Park Road (south) access points**

	AM Peak Trips (vph)			PM Peak Trips (vph)		
	In	Out	Total	In	Out	Total
Park Road (north) entry only	109	0	109	93	0	93
Park Road (south) entry/exit	9	110	119	9	105	114
<b>Total</b>	<b>118</b>	<b>110</b>	<b>228</b>	<b>102</b>	<b>105</b>	<b>207</b>

## 2.2 Traffic impacts from development

For a development capable of having a significant adverse impact on the external transport system or the adjacent community, including land uses with high trip-end densities, Brisbane City Council (council) requires a transport impact assessment (TIA) report. The TIA needs to include assessment of the traffic operations for the site and the adjacent transport network (streets and intersections) within the sphere of impact of the development.

The sphere of impact of the development is typically determined based on a minimum nominal threshold increase (usually 5%) in traffic volumes through intersections near the development.

Table 4 summarises the % increase in traffic volumes due to the Yeronga Heart development at key intersections providing access to/from the development in the nominal opening year (2020).

The overall traffic increase at Park Road and Villa Street intersection is expected to be between 18-24% of background traffic at opening year. There will also be a 10% traffic increase at Park Road and School Street intersection, 200m south of Park Road and Villa Street intersection. The overall intersection impacts will be less significant further away from the development, e.g. 2% at Park Road/Fairfield Road intersection and 1% at Villa Street/Ipswich Road intersection.

The greatest impact from Yeronga Heart development is likely to be along Park Road between Fairfield Road and School Road where two site access points are proposed. Although no site access is proposed on Villa Street from Yeronga Heart development, there will be a 15%-38% traffic increase along Villa Street between Ipswich Road and Park Road in the nominal opening year, however the absolute change in the one-way traffic volume is relatively modest (less than 35 vph).

Table 4 –Key intersection impacts – Opening year 2020

Intersection & key approach movements	AM Peak Trips (vph)			PM Peak Trips (vph)		
	Background	Development	% Impact	Background	Development	% Impact
<b>Park Road/Villa Street</b>						
Park Road north approach	208	78	38%	340	79	23%
Villa Street east approach	181	35	19%	111	31	28%
Park Road south approach	512	54	11%	202	41	20%
<b>Intersection total</b>	<b>909</b>	<b>167</b>	<b>18%</b>	<b>666</b>	<b>160</b>	<b>24%</b>
<b>Park Road/School Street</b>						
Park Road north approach	227	45	20%	365	47	13%
<b>Intersection total</b>	<b>1006</b>	<b>99</b>	<b>10%</b>	<b>858</b>	<b>88</b>	<b>10%</b>
<b>Park Road/Fairfield Road</b>						
Park Road approach	436	32	7%	101	26	26%
<b>Intersection total</b>	<b>3542</b>	<b>61</b>	<b>2%</b>	<b>3524</b>	<b>56</b>	<b>2%</b>

Intersection & key approach movements	AM Peak Trips (vph)			PM Peak Trips (vph)		
	Background	Development	% Impact	Background	Development	% Impact
<b>Villa Street/Ipswich Road</b>						
Villa Street west approach	86	33	38%	217	32	15%
<b>Intersection total</b>	<b>5112</b>	<b>68</b>	<b>1%</b>	<b>4988</b>	<b>63</b>	<b>1%</b>

For the purposes of this evaluation traffic assessment has been limited to the proposed site access treatments and capacity analysis of the Park Road (south) Access and Park Road and Villa Street intersection. It is understood that consideration of wider traffic impacts will be required in a later assessment.

### 2.3 Access treatment assessment

The types of right-turn and left-turn treatments available, as defined by the Austroads Guide to Road Design – Part 4A: Unsignalised and Signalised Intersection (AGRDR Part 4), are as follows:

- A basic turn treatment (BA) where turning vehicles may share the lane with through traffic movements
- An auxiliary lane turn treatment (AU) where a separate lane is provided to enable the turn to be performed in an additional lane
- A channelised turn treatment (CH) which provides a traffic island to enhance the safety of right-turning or left-turning vehicles.

Illustration of each type of turn is shown in Appendix F of Jacobs Engineering Site Analysis Report.

The two development access points were assessed to determine the appropriate left and right-turn treatment types in accordance with the above listed treatment types.

Warrants for turn treatments on Park Road north and south access points were assessed using Department of Transport and Main Roads (DTMR) Supplement to AGRDR Part 4 (Figure 3). The design speed along the subject section of both streets is less than 70 km/h. Figure 4 was used to calculate the value of the major road traffic volume parameter (QM).

Figure 3 - Warrants for turn treatments on the major road at unsignalised intersections

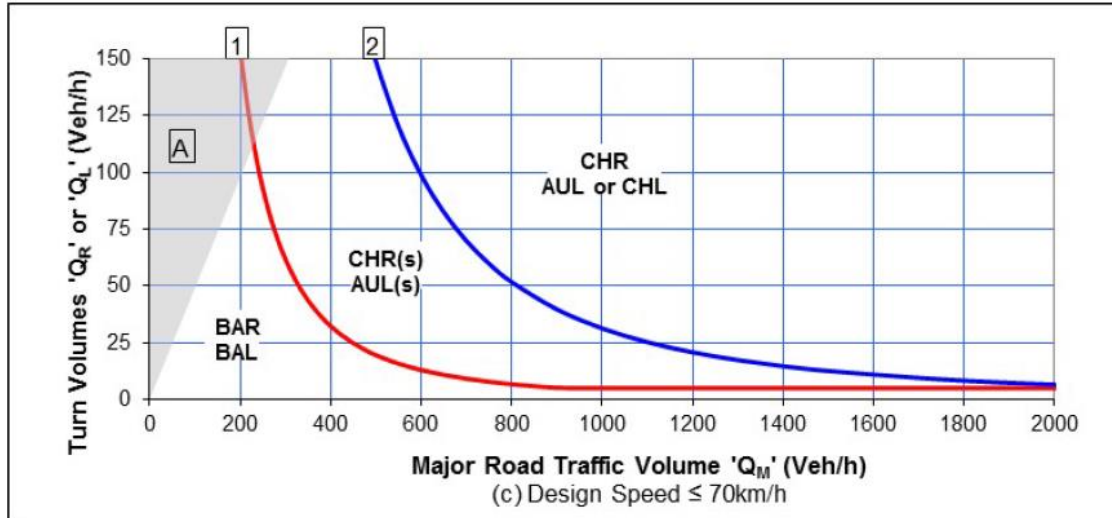
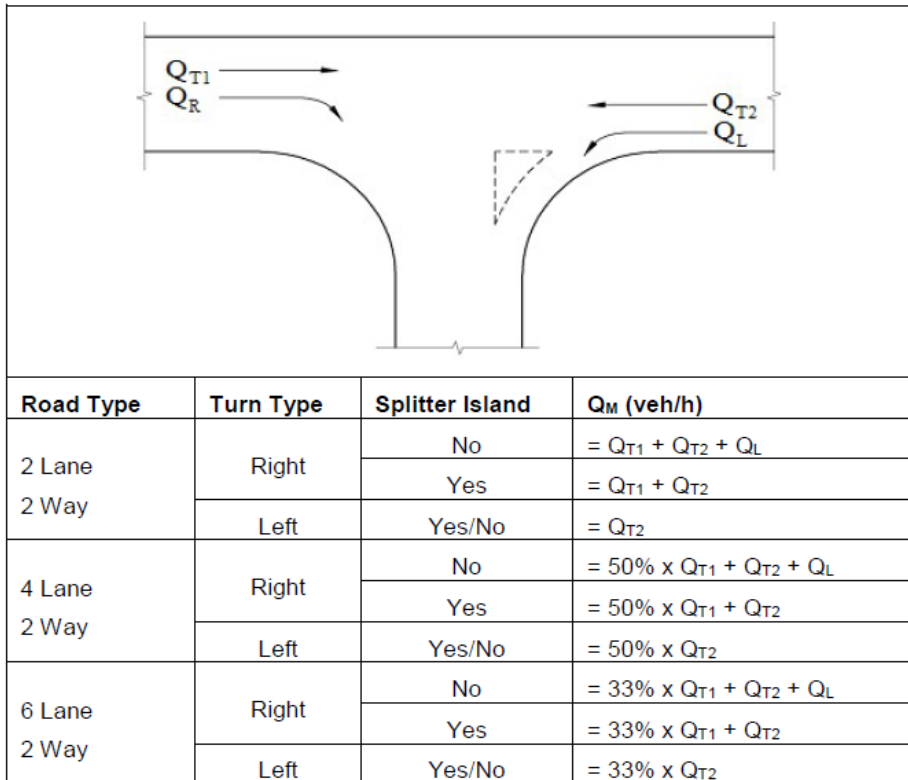


Figure 4 - Calculation of the major road traffic volume parameter QM





Background traffic volumes for Park Road in 2020 and 2030 were sourced from Yeronga TAFE Traffic Advice (Point8, 2017). This data was used to calculate the opening year and design year traffic volumes (2020 and 2030) at each access point. Table 5 and

Table 6 illustrate the turn warrants assessment parameters and outcomes for opening year 2020 and design year 2030. As the AM peak trip generation was greater than the PM peak, the following table is based on AM peak volumes.

**Table 5 - Turn warrants assessment parameters and outcomes – opening year 2020**

	<b>Q<sub>T1</sub></b> (veh/h)	<b>Q<sub>R</sub></b> (veh/h)	<b>Q<sub>T2</sub></b> (veh/h)	<b>Q<sub>L</sub></b> (veh/h)	<b>Q<sub>M</sub> Left Turn</b> (veh/h)	<b>Left Turn Type</b>	<b>Q<sub>M</sub> Right Turn</b> (veh/h)	<b>Right Turn Type</b>
Park Road (north) Access	397	89	208	20	208	BAL	625	CHR
Park Road (south) Access	397	0	208	9	208	BAL	614	N/A

**Table 6 - Turn warrants assessment parameters and outcomes – design year 2030**

	<b>Q<sub>T1</sub></b> (veh/h)	<b>Q<sub>R</sub></b> (veh/h)	<b>Q<sub>T2</sub></b> (veh/h)	<b>Q<sub>L</sub></b> (veh/h)	<b>Q<sub>M</sub> Left Turn</b> (veh/h)	<b>Left Turn Type</b>	<b>Q<sub>M</sub> Right Turn</b> (veh/h)	<b>Right Turn Type</b>
Park Road (north) Access	517	89	271	20	271	BAL	808	CHR
Park Road (south) Access	517	0	271	9	271	BAL	797	N/A

The above turn warrants assessment suggests a basic left turn (BAL) and a channelised right turn (CHR) arrangement would be required at Park Road (north) Access and a basic left turn (BAL) arrangement for Park Road (south) Access.

Yeronga Heart development has proposed an indented right turn lane at Park Road (north) Access. Based on the assumed development trip generation, the current concept design right turn lane length (approximately 87m) is sufficient to accommodate the right turning demands.

For Park Road (south) Access, right turn site entry movement has been restricted to avoid queue impacts to Park Road and Villa Street intersection however a right turn exit movement is proposed from the site to Park Road via a median break. A capacity assessment has been undertaken and detailed in Section 2.4 to confirm the proposed arrangement would work without any major impacts to the surrounding network including the internal road.

The location of Park Road (south) Access is approximately 55m from Park Road and Villa Street Intersection (centre to centre) which meets the council's minimum requirement of an access driveway from a major road intersection (30m from the property boundary of the intersecting road). The proposed separation of Park Road (north) Access and Park Road (south) Access is approximately 100m (centre to centre) which also exceeds the council's minimum requirements (15m along the kerb).

## 2.4 SIDRA analysis

SIDRA analysis was undertaken for the Park Road (south) Access and Park Road and Villa Street Intersection using the calculated trip generation data and background traffic volumes for Park Road in 2020 and 2030 which were sourced from Yeronga TAFE Traffic Advice (Point8, 2017). The analysis assumes 30% of entry traffic from the Park Road north approach uses the southern entry point to the development as detailed in Section 2.1 of this report.

The analysis was to confirm the network in the proximity of the development would operate within the acceptable level of operation in the nominal opening year and design year (10 years beyond the opening year).

### 2.4.1 Park Road (south) Access

SIDRA results of Park Road South Access for 2020 and 2030 are shown in Table 7 and Table 8. Based on the proposed access arrangement, there will be minimum impacts for all approaches in both 2020 and 2030. Queues within the site access would be no more than one vehicle length (5.5m) in all scenarios analysed.

**Table 7: Park Road (south) Access – 2020 AM and PM peak period**

Movement	AM Peak			PM Peak		
	Degree of Saturation	Average Delay (sec)	95% Back of Queue (m)	Degree of Saturation	Average Delay (sec)	95% Back of Queue (m)
Park Road south approach	0.25	0.0	0.0	0.12	0.0	0.0
South Access	0.11	7.1	2.8	0.10	7.1	2.7
Park Road north approach	0.11	0.2	0.0	0.18	0.2	0.0
<b>Intersection total</b>	<b>0.25</b>	<b>1.0</b>	<b>2.8</b>	<b>0.18</b>	<b>1.2</b>	<b>2.7</b>

**Table 8: Park Road South Access – 2030 AM and PM peak period**

Movement	AM Peak			PM Peak		
	Degree of Saturation	Average Delay (sec)	95% Back of Queue (m)	Degree of Saturation	Average Delay (sec)	95% Back of Queue (m)
Park Road south approach	0.31	0.0	0.0	0.15	0.0	0.0
South Access	0.13	7.8	3.2	0.12	7.8	3.0
Park Road north approach	0.14	0.2	0.0	0.23	0.1	0.0
<b>Intersection total</b>	<b>0.31</b>	<b>0.9</b>	<b>3.2</b>	<b>0.23</b>	<b>1.0</b>	<b>3.0</b>

### 2.4.2 Park Road and Villa Street Intersection

SIDRA results of Park Road and Villa Street Intersection for 2020 and 2030 are shown in Table 9 and Table 10.



Table 9: Park Road and Villa Street Intersection – 2020 AM and PM peak period

Movement	AM Peak			PM Peak		
	Degree of Saturation	Average Delay (sec)	95% Back of Queue (m)	Degree of Saturation	Average Delay (sec)	95% Back of Queue (m)
<b>Without development</b>						
Park Road south approach	0.31	2.5	9.8	0.13	3.3	4.2
East approach (Villa Street)	0.25	10.8	7.0	0.15	10.5	4.0
Park Road north approach	0.12	1.5	0.3	0.19	1.0	0.7
West approach (Dublin Street)	0.01	11.5	0.3	0.02	9.5	0.4
<b>Intersection total</b>	<b>0.31</b>	<b>4.0</b>	<b>9.8</b>	<b>0.19</b>	<b>3.5</b>	<b>4.2</b>
<b>With development</b>						
Park Road south approach	0.35	2.6	11.3	0.16	3.2	5.0
East approach (Villa Street)	0.41	14.5	14.6	0.25	12.1	6.5
Park Road north approach	0.16	1.8	0.3	0.23	1.3	0.7
West approach (Dublin Street)	0.02	12.5	0.4	0.02	10.0	0.5
<b>Intersection total</b>	<b>0.41</b>	<b>4.9</b>	<b>14.6</b>	<b>0.25</b>	<b>3.9</b>	<b>6.5</b>

Table 10: Park Road and Villa Street Intersection – 2030 AM and PM peak period

Movement	AM Peak			PM Peak		
	Degree of Saturation	Average Delay (sec)	95% Back of Queue (m)	Degree of Saturation	Average Delay (sec)	95% Back of Queue (m)
<b>Without development</b>						
Park Road south approach	0.41	2.9	16.4	0.18	3.9	6.4
East approach (Villa Street)	0.43	14.6	16.3	0.24	12.0	6.4
Park Road north approach	0.15	1.6	0.5	0.24	1.0	0.9
West approach (Dublin Street)	0.03	14.1	0.6	0.03	10.4	0.6
<b>Intersection total</b>	<b>0.43</b>	<b>5.1</b>	<b>16.4</b>	<b>0.24</b>	<b>3.9</b>	<b>6.4</b>
<b>With development</b>						
Park Road south approach	0.46	3.4	22.5	0.22	3.9	7.6
East approach (Villa Street)	0.69	24.9	36.0	0.37	15.2	11.8
Park Road north approach	0.19	1.8	0.5	0.29	1.2	1.0
West approach (Dublin Street)	0.03	15.7	0.7	0.03	11.2	0.7
<b>Intersection total</b>	<b>0.69</b>	<b>7.4</b>	<b>36.0</b>	<b>0.37</b>	<b>4.6</b>	<b>11.8</b>

The SIDRA analysis indicates the development will have a marginal impact on the intersection operation in the opening year 2020 in both AM and PM peak periods, with average delays increasing by less than 1 second in both peaks. In 2030, the intersection will experience increased average delays but still less than 3 seconds. Queues on the Villa Street approach will increase from 16.4 metres to 36.0 metres in the AM Peak as the result of development traffic. However, the overall intersection operation measured in degree of saturation (0.69) remains below the maximum practical acceptance level for an unsignalised intersection of 0.8.

The extent of development's traffic operational impacts and mitigation measures should be confirmed with the council and documented in Yeronga Heart's TIA along with DA submission should the proponent's tender be successful.

## **2.5 Internal street network**

Similar to the assumed development assessment, the cross-sections for internal streets and accesses have sufficient space to accommodate 2-way traffic with on-street parallel parking either on one side or both sides of the road. There are sufficient footpath widths for pedestrians and/or bicycle users. It should be noted that these streets are within a residential development with potential high pedestrian activities, hence the speed limits are recommended to be no more than 30km/h for the local streets and possibly no more than 20km/h for local accesses connecting between individual units.

### 3. Summary of findings

This technical note provides a high-level traffic and transport assessment of the Yeronga Heart proponent, outlining major differences with the assumed development of the site from the Engineering Site Analysis Report.

The key findings drawn from the assessment are:

- The proponent's trip generation is 227 vehicle per hour (vph) for the AM peak and 206 vph for PM peak compared to the assumed development concept plan's trip generation of 139 vph in each peak. This represents an increase of 88 vph (63%) and 67 (48%) in the AM and PM peaks respectively.
- The overall traffic increase at Park Road and Villa Street Intersection is expected to be between 18-24% of background traffic at opening year.
- Location and configuration of the two Park Street access points are in accordance with Council's requirements.
- Both Park Street northern and southern accesses appear to have adequate capacity to accommodate traffic in nominal opening year 2020 and design year 2030.
- Yeronga Heart's development is unlikely to have major impacts on Park Road and Villa Street Intersection which is located in close vicinity of the development. The intersection should operate within the accepted level of capacity with the development traffic.
- The successful proponent will however be required to prepare a Transport Impact Assessment (TIA) to assess the wider impacts to the surrounding traffic network. The successful proponent would need to confirm the geographic extent of this impact assessment with Council prior to undertaking the TIA.
- Site access treatment, car parking supply, service vehicle access and circulation, public transport, active transport and car sharing opportunities have not been addressed in this technical note. The successful proponent will be required to address these transport related aspects in the TIA.

# **Appendix E – Technical Note: Transport Infrastructure Development Contributions June 2022**



# Technical Note

## Transport Infrastructure Development Contributions

Economic Development Queensland  
P22049

June 2022

PROJECT NAME	Yeronga Priority Development Area	DATE	24/06/2022
PROJECT NUMBER	P22049	REVISION	A
TECHNICAL NOTE TITLE	Transport Infrastructure Development Contributions		
PREPARED BY	Mark Plattz	REVIEWED BY	Mark Plattz
PREPARED FOR	Economic Development Queensland	ISSUED TO	Kate Keleher

Version: 6

## SUMMARY

The Yeronga Priority Development Area (PDA) facilitates the development of master-planned residential, commercial and community uses located on the north-eastern corner of the Park Road and Villa Street intersection in Yeronga.

This Technical Note has been prepared for Economic Development Queensland (EDQ). It summarises the calculation and documentation of the monetary contribution by the development of the PDA towards transport infrastructure nominated in the PDA Draft Development Charges and Offset Plan (DCOP).

The calculated development proportion has been based on a user-pays principle. The estimated volume of active transport and private vehicles attributable to the Yeronga PDA as a proportion of all other traffic utilising each infrastructure item has been applied to the cost estimate of the infrastructure item to determine the Yeronga PDA's monetary contribution.

Table 1 below summarises the development proportion and the resultant monetary contribution towards each infrastructure item nominated. It is important to note that a key limitation of this Technical Note is that no engineering design has been undertaken to support the nominated transport infrastructure nor the cost estimates prepared. The cost estimates have been based on aerial imagery, familiarity with the site and environs, and engineering judgement relating to construction methods and potential site constraints and opportunities.

Table 1: Development Contributions

ITEM	YERONGA PDA PROPORTION	YERONGA PDA CONTRIBUTION
1. Park Road/Villa Street intersection upgrade	4.7%	\$126,850.31
2. Park Road pathway widening	2.5%	\$8,005
3. Christensen Street active transport upgrade	6.2%	\$12,285
4. Lake Street active transport upgrade	11.2%	\$29,577
5. Honour Avenue active transport upgrade	3.9%	\$12,730

## INTRODUCTION

This Technical Note has been prepared for EDQ. It summarises the calculation and documentation of the monetary contribution by the development of the PDA towards transport infrastructure nominated in the PDA DCOP.

The DCOP nominates several trunk transport infrastructure items as part of delivering the PDA. The DCOP allows for a partial contribution towards trunk infrastructure equal to the PDA's estimated proportional usage of each infrastructure item.

This Technical Note will present the:

- transport infrastructure items
- total number of existing users
- estimated volume of PDA users
- estimated the target out-turn costs to deliver each infrastructure item
- PDA proportion and monetary contribution for each infrastructure item

It is important to note that a key limitation of this Technical Note is that no engineering design has been undertaken to support the nominated transport infrastructure nor the cost estimates prepared. The cost estimates have been based on aerial imagery, familiarity with the site and environs, and engineering judgement relating to construction methods and potential site constraints and opportunities.

The calculated development proportion has been based on a user-pays principle. The estimated volume of active transport and private vehicles attributable to the Yeronga PDA as a proportion of all other traffic utilising each infrastructure item has been applied to the cost estimate of the infrastructure item to determine the Yeronga PDA's monetary contribution.

The basis of the development proportion calculations is summarised below for the vehicular transport infrastructure item:

- Source traffic generation estimate for all available time periods documented in the Yeronga PDA Master Plan application
- Source existing traffic surveys provided in the Yeronga PDA Master Plan application
- Project background traffic surveys to the expected year of infrastructure delivery
- Quantify PDA development traffic utilising the vehicular transport infrastructure item based on trip distribution documented in the Yeronga PDA Master Plan application
- Calculation of Yeronga PDA proportion based on PDA traffic generation against projected background traffic

The basis of the development proportion calculations is summarised below for the active transport infrastructure items:

- Estimate the quantum of persons arriving or departing the Yeronga PDA daily
- Determine the proportion of active transport users generated by the Yeronga PDA
- Project background active transport surveys to the expected year of infrastructure delivery
- Quantify PDA active transport trips utilising each active transport infrastructure item based on trip distribution documented in the Yeronga PDA Master Plan application
- Calculation of Yeronga PDA proportion based on PDA traffic generation against projected background traffic

## NOMINATED TRANSPORT INFRASTRUCTURE

The list below presents transport infrastructure items are nominated in the DCOP:

1. Park Road/Villa Street intersection upgrade
  - Upgrade the existing give-way intersection to a signalised intersection
  - Road widening on the south-east corner
  - Road widening on the north-east corner
  - Road widening on the south-west corner
  - partial land resumption to properties 27, 29 and 31 Dublin Street and 51 Park Road
  - closure of eastbound movements on Dublin Street onto Park Road
  - Provision of a short right turn pocket from Park Road (south) to Villa Street in addition to a stand-up through lane
  - Provision of a short right turn pocket from Villa Street to Park Road in addition to a stand-up left turn lane
  - Provision of a short raised concreted median island on Park Road (north)
  - Removal of the existing signalised pedestrian crossing on Park Road, just north of Villa Street
2. Park Road pathway widening:
  - The western side between Dublin Street and the northern boundary of 25 Park Road
  - Widening pathway to generally 3.0m, except where constrained by existing public realm infrastructure, significant street trees and/or public utilities
  - Located wholly within the verge
  - Include a taper at the northern end to join smoothly to the existing path under the rail overpass
3. Christensen Street active transport upgrade:
  - The northern side between Lake Street and Park Road, widen the existing footpath to generally 1.8m, except where constrained by existing public realm infrastructure, significant street trees and/or public utilities
  - Provision of on-road advisory bicycle lanes
4. Lake Street active transport upgrade:
  - Eastern side between School Road and Killarney Street
  - widen existing footpath to generally 1.8m, except where constrained by existing public realm infrastructure, significant street trees and/or public utilities
5. Honour Avenue active transport upgrade:
  - Widen access point from Park Road onto Honour Avenue
  - Upgrade traffic calming devices along Honour Avenue to provide improved cyclist movement
  - Provide as required on-road cycle lanes



## COST ESTIMATES

Cost estimates have been based on the above infrastructure descriptions. No engineering design has been undertaken to support the cost estimates. The following summarises the assumptions and exclusions of each of the estimates:

- Construction commences mid-2026
- Cost estimates represent at best a P30 estimate certainty
- All land resumption costs excluded
- No Dial Before You Dig information has been sourced
- Allowances only for public utility and service requirements
- 5% design fees
- 10% project management fees
- 5% principal auxiliary fees
- 50% contingency
- 8% site overheads
- 5.1% annual cost escalation

Table 2 below presents the cost estimates for each nominated transport infrastructure. Detailed breakdowns of each cost estimate are provided in the Supporting Information.

Table 2: Cost Estimates

ITEM	COST ESTIMATE
1. Park Road/Villa Street intersection upgrade	\$2,705,312
2. Park Road pathway widening	\$314,876
3. Christensen Street active transport upgrade	\$198,594
4. Lake Street active transport upgrade	\$264,605
5. Honour Avenue active transport upgrade	\$324,465

## BACKGROUND DATA

The development contribution calculations have been prepared based on traffic survey data procured as part of this study and information supplied as part of the development application for the Yeronga PDA. The information relied upon are:

- Parkside Yeronga Master Plan Traffic Impact Assessment Issue B dated 16 September 2021
- A vehicle survey at the intersection of Park Road/Villa Street dated 25 May 2021 undertaken as part of the Applicant's development application
- A pedestrian survey at the intersection of Park Road/Villa Street dated 21 July 2020 undertaken as part of the Applicant's development application
- Pedestrian and cyclist surveys were undertaken at the following locations on Tuesday, 7 June 2022:
  - Park Road/Killarney Street
  - Lake Street/Christensen Street
  - Christensen Street/Park Road
- Australian Bureau of Statistics 2016 Census data for Yeronga (Area Code SSC33249)

## CONTRIBUTION TO VEHICULAR TRANSPORT INFRASTRUCTURE

The PDA apportionment and, therefore, monetary contribution to the signalised intersection upgrade of the Park Road/Villa Street is the result of the vehicular trips generated by the PDA as a proportion to existing traffic volumes through the intersection.

Recent traffic surveys provided within the PDA Master Plan Traffic Impact Assessment have been utilised in this assessment. These traffic surveys were undertaken for the 7am-9am AM and 2pm-6pm PM periods. A 1.5% annual linear growth rate has been applied to the survey data to represent the estimated background traffic when the infrastructure is delivered. The projected growth rate has been adopted from the PDA Master Plan Traffic Impact Assessment. These future volumes form the base volume to determine the proportion. The existing traffic volume during this period is presented in Table 3 below.

Table 3: PDA Vehicle Trip Proportion (based on May 2021 survey)

TIME PERIOD	TOTAL SURVEY VOLUME	PDA GENERATED TRIPS	PROPORTION
AM peak	2,887	130	4.5%
School peak	2,242	95	4.2%
PM peak	2,548	135	5.3%
<b>TOTAL</b>	<b>7,678</b>	<b>360</b>	<b>4.7%</b>

## CONTRIBUTION TO ACTIVE TRANSPORT INFRASTRUCTURE

The PDA proportion and, therefore, monetary contribution to each active transport infrastructure item is the resultant of the trips generated by the PDA as a proportion to existing user volumes at each location. Active transport user surveys were undertaken at three key locations identified in Background Data, and the pedestrian survey at the Park Road/Villa Street provided within the PDA Master Plan Traffic Impact Assessment have been utilised in this assessment. The total 24-hour two-way volume along each link has been utilised as the base volume to determine the proportion. The active transport surveys have been summarised and included within the Supporting Data.

The estimation of PDA-generated active transport trips has been undertaken by:

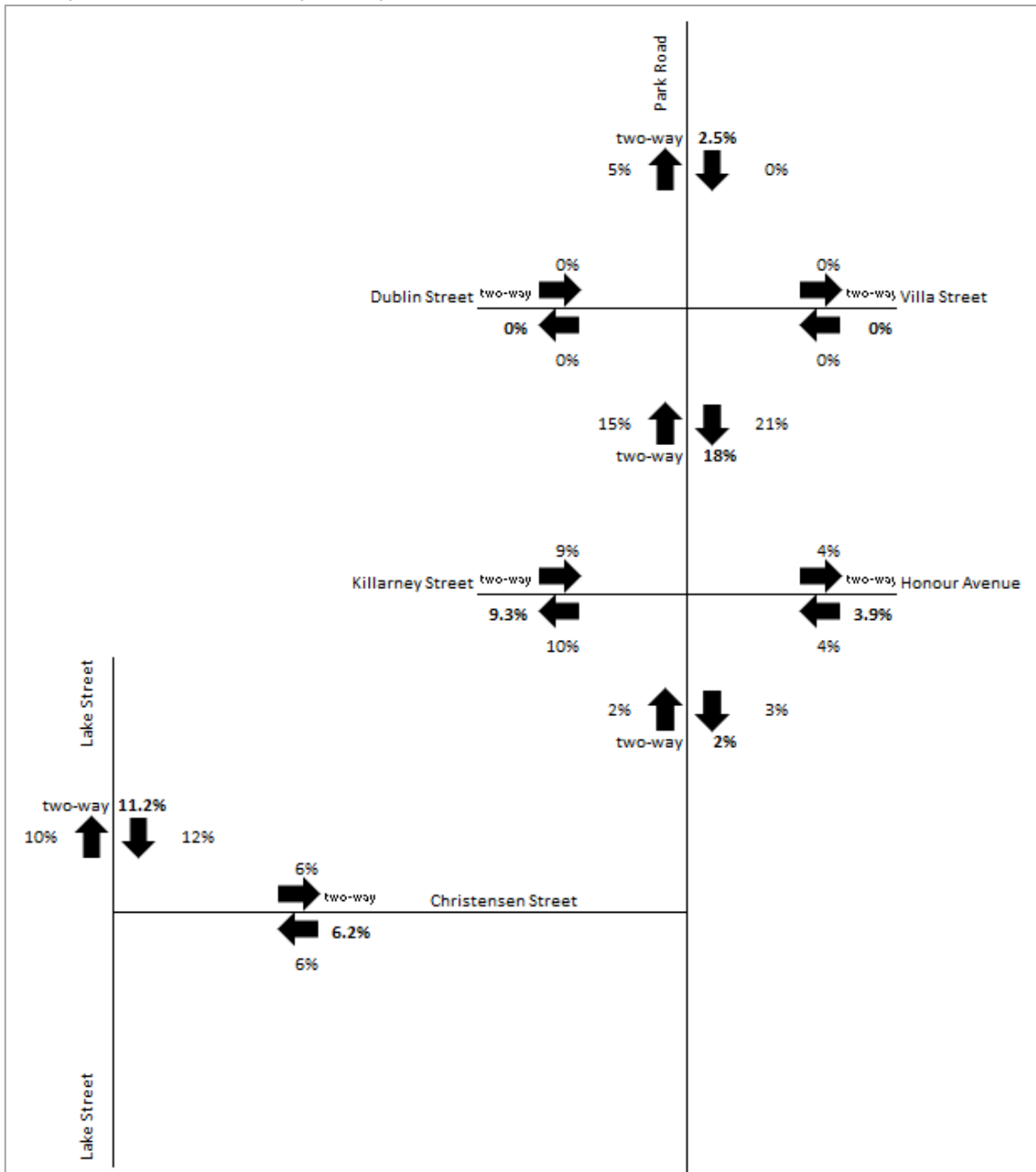
- Determine the approved number of dwellings, retirement units and commercial and community use floor space
- Apply equivalencies of dwelling units and floor space to determine the number of residents and employees arriving and leaving the PDA. The equivalencies utilised are:
  - 2.3 persons per private household for Yeronga, based on 2016 Census data (provided in the Supporting Data)
  - 1.12 person per retirement unit, based on Queensland statistics in the 2021 Retirement Census, Property Council of Australia
  - 12sq.m GFA maximum workplace density for commercial uses. 2019 State Government Guideline 3. Office accommodation workspace and fit-out standards).
  - The maximum workplace density for commercial uses has also been applied to the community uses proposed in the PDA.
- Assume each person undertakes a single two-way trip to/from the PDA on a typical day that could potentially be undertaken by an active transport mode
- Apply a 4.2% cycling mode share to all two-way trips for a typical day to determine active transport demand. The cycling mode share applied has been determined based on 2016 Census data for Yeronga (provided in the Supporting Data)
- A 1.5% annual linear growth rate has been applied to the survey data to represent the estimated background traffic when the infrastructure is delivered. The projected growth rate has been adopted from the PDA Master Plan Traffic Impact Assessment.
- Active transport trip distribution applies the same as the vehicular trip distribution documented in the PDA's Master Plan Traffic Impact Assessment Issue B dated 16 September 2021, Table 7.4

The resultant trip totals and distribution on the active transport network are presented in Table 4 and Figure 1.

Table 4: Estimated Active Transport Trips

LAND USE	YIELD	EQUIVALENT PERSONS	ACTIVE TRANSPORT TRIPS	TO/FROM SOUTH & SOUTH EAST	TO/FROM WEST	TO/FROM NORTH
Commercial	6,000sq.m GFA	500	21	7	11	3
Residential	116 dwellings	267	11	5	4	2
Retirement Living	178 dwellings	199	8	4	3	1
Community Use	730 GFA	61	3	1	1	0
<b>TOTAL</b>		<b>1,027</b>	<b>43</b>	<b>17</b>	<b>20</b>	<b>6</b>

Figure I: Proportion of Active Transport Trips



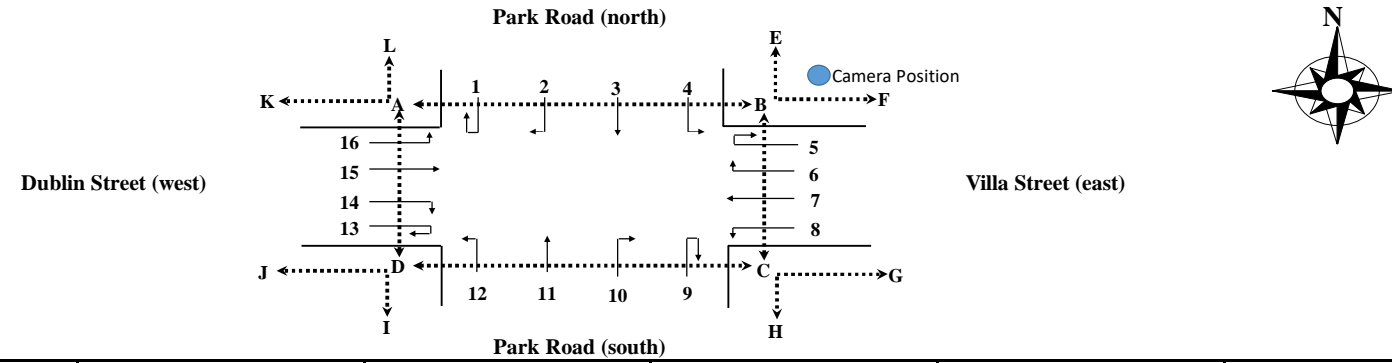
## Appendix A

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Supporting Information

**AUSTRAFFIC VIDEO INTERSECTION COUNT**

Site No.: 1 Weather: Fine  
 Location: Park Road/Villa Street/Dublin Street, Yeronga  
 Day/Date: Tuesday, 21 July 2020  
 AM Peak: Hour ending - 9:00 AM  
 PM Peak: Hour ending - 3:30 PM



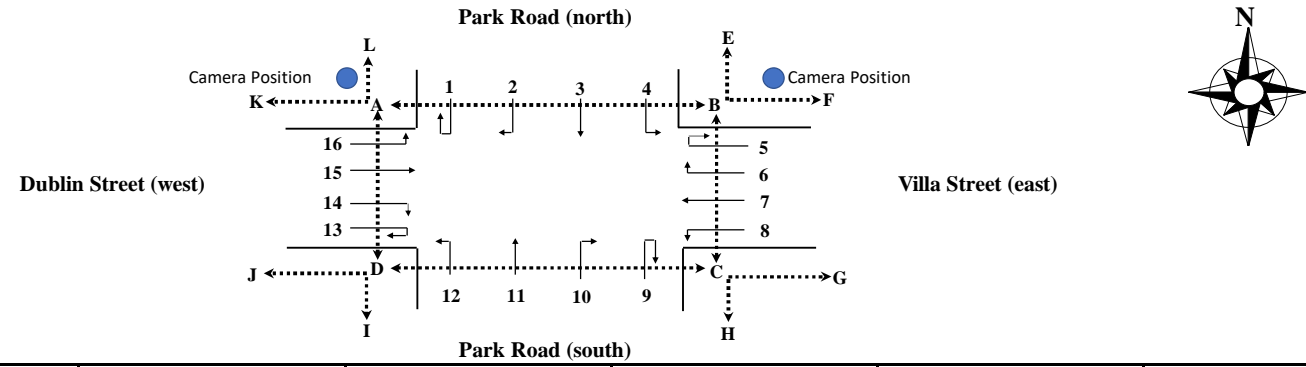
TIME (1/4 hr end)	Movement 1				Movement 2				Movement 3				Movement 4				Movement 5				Movement 6				Movement 7				Movement 8			
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists				
7:15 AM	0	0	0	0	1	0	1	0	17	0	17	0	5	0	5	0	0	0	0	0	14	0	14	1	0	1	0	6	1	7	0	
7:30 AM	0	0	0	0	1	0	1	0	18	0	18	0	6	2	8	0	0	0	0	0	6	0	6	1	1	0	1	0	15	0	15	0
7:45 AM	0	0	0	0	0	0	0	0	20	2	22	0	6	0	6	0	0	0	0	0	6	0	6	1	1	0	1	0	11	0	11	0
8:00 AM	0	0	0	0	1	0	1	0	17	1	18	1	14	0	14	0	0	0	0	0	10	1	11	1	1	0	1	0	16	0	16	1
8:15 AM	0	0	0	0	1	0	1	0	18	1	19	0	7	0	7	0	0	0	0	0	6	0	6	1	1	0	1	0	18	1	19	0
8:30 AM	0	0	0	0	1	0	1	0	33	1	34	0	15	0	15	0	0	0	0	0	6	0	6	2	0	1	1	0	31	0	31	0
8:45 AM	0	0	0	0	0	0	0	0	60	0	60	0	16	0	16	0	0	0	0	0	14	0	14	0	2	0	2	0	76	0	76	0
9:00 AM	0	0	0	0	0	0	0	0	56	1	57	0	6	0	6	0	0	0	0	0	2	0	2	1	2	0	2	0	27	0	27	0
2 hr Total	0	0	0	0	5	0	5	0	239	6	245	1	75	2	77	0	0	0	0	0	64	1	65	8	7	2	9	0	200	2	202	1
AM Peak	0	0	0	0	2	0	2	0	167	3	170	0	44	0	44	0	0	0	0	0	28	0	28	4	4	1	5	0	152	1	153	0

TIME (1/4 hr end)	Movement 1				Movement 2				Movement 3				Movement 4				Movement 5				Movement 6				Movement 7				Movement 8			
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists
2:15 PM	0	0	0	0	2	0	2	0	23	1	24	0	7	0	7	0	1	0	1	0	3	0	3	0	3	0	3	0	10	0	10	0
2:30 PM	0	0	0	0	1	0	1	0	34	0	34	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	0	7	0	7	0
2:45 PM	0	0	0	0	4	0	4	0	34	1	35	1	6	0	6	0	0	0	0	0	6	0	6	0	0	0	0	0	8	0	8	0
3:00 PM	0	0	0	0	1	0	1	0	55	1	56	0	12	0	12	0	1	0	1	0	20	1	21	0	3	0	3	0	73	1	74	0
3:15 PM	0	0	0	0	1	0	1	0	51	1	52	0	6	0	6	1	0	0	0	0	5	0	5	0	0	0	0	0	22	1	23	0
3:30 PM	0	0	0	0	1	0	1	0	44	0	44	0	2	0	2	1	0	0	0	0	7	0	7	0	0	0	0	0	12	2	14	0
3:45 PM	0	0	0	0	1	0	1	0	34	3	37	0	8	1	9	0	0	0	0	0	5	0	5	0	0	0	0	0	11	1	12	0
4:00 PM	0	0	0	0	0	0	0	0	46	1	47	1	7	0	7	1	0	0	0	0	7	0	7	0	0	0	0	0	13	0	13	0
4:15 PM	0	0	0	0	0	0	0	0	49	0	49	0	12	0	12	0	0	0	0	0	18	0	18	1	2	0	2	0	19	0	19	0
4:30 PM	0	0	0	0	6	0	6	0	63	2	65	2	4	0	4	0	0	0	0	0	9	0	9	0	0	0	0	0	12	0	12	0
4:45 PM	0	0	0	0	4	0	4	0	58	1	59	3	10	0	10	1	0	0	0	0	14	0	14	0	1	0	1	0	13	0	13	0
5:00 PM	0	0	0	0	3	0	3	0	68	1	69	3	14	0	14	1	0	0	0	0	11	0	11	0	1	0	1	0	8	0	8	0
5:15 PM	0	0	0	0	3	0	3	0	69	1	70	2	9	0	9	0	0	0	0	0	10	0	10	1	0	0	0	0	11	0	11	0
5:30 PM	0	0	0	0	3	0	3	0	65	1	66	1	17	0	17	0	0	0	0	0	3	0	3	1	2	0	2	0	15	0	15	0
5:45 PM	0	0	0	0	3	0	3	0	68	1	69	1	11	0	11	0	0	0	0	0	9	0	9	0	1	0	1	0	10	0	10	0
6:00 PM	0	0	0	0	2	0	2	0	49	2	51	3	7	0	7	0	0	0	0	0	4	0	4	1	1	0	1	0	11	0	11	0
4 hr Total	0	0	0	0	35	0	35	0	810	17	827	17	136	1	137	5	2	0	2	0	136	1	137	4	14	0	14	0	255	5	260	0
PM Peak	0	0	0	0	7	0	7	0	184	3	187	1	26	0	26	2	1	0	1	0	38	1	39	0	3	0	3	0	115	4	119	0



**AUSTRAFFIC VIDEO INTERSECTION COUNT**

Site No.: 1      Weather: Fine  
 Location: Park Road/Villa Street/Dublin Street, Yeronga  
 Day/Date: Tuesday, 25 May 2021  
 AM Peak: Hour ending - 9:00 AM  
 PM Peak: Hour ending - 5:15 PM



TIME (1/4 hr end)	Movement 1				Movement 2				Movement 3				Movement 4				Movement 5				Movement 6				Movement 7				Movement 8			
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists				
7:15 AM	0	0	0	0	0	0	0	0	23	3	26	0	6	1	7	0	0	0	0	8	0	8	0	0	0	0	7	0	7	0		
7:30 AM	0	0	0	0	3	1	4	0	32	2	34	0	4	1	5	0	0	0	5	0	5	0	1	0	1	0	14	0	14	0		
7:45 AM	0	0	0	0	0	0	0	0	27	4	31	0	11	0	11	0	0	0	10	0	10	0	0	0	0	0	18	0	18	1		
8:00 AM	0	0	0	0	0	0	0	0	35	2	37	2	16	0	16	1	0	0	5	1	6	1	0	0	0	0	20	0	20	0		
8:15 AM	0	0	0	0	1	0	1	0	31	0	31	1	9	0	9	1	0	0	5	0	5	1	1	0	1	0	21	0	21	0		
8:30 AM	0	0	0	0	1	0	1	0	30	1	31	0	12	0	12	0	0	0	14	0	14	1	1	0	1	0	34	0	34	0		
8:45 AM	0	0	0	0	0	0	0	0	53	3	56	1	20	0	20	0	0	0	8	0	8	2	0	0	0	0	60	0	60	1		
9:00 AM	0	0	0	0	4	1	5	0	45	6	51	0	7	0	7	0	0	0	11	1	12	0	0	0	0	0	27	0	27	0		
2 hr Total	0	0	0	0	9	2	11	0	276	21	297	4	85	2	87	2	0	0	66	2	68	5	3	0	3	0	201	0	201	2		
AM Peak	0	0	0	0	6	1	7	0	159	10	169	2	48	0	48	1	0	0	38	1	39	4	2	0	2	0	142	0	142	1		

TIME (1/4 hr end)	Movement 1				Movement 2				Movement 3				Movement 4				Movement 5				Movement 6				Movement 7				Movement 8			
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists				
2:15 PM	0	0	0	0	1	0	1	0	30	1	31	0	3	0	3	0	0	0	3	0	3	0	0	0	0	0	8	0	8	0		
2:30 PM	0	0	0	0	1	0	1	0	31	5	36	1	2	1	3	1	0	0	1	0	1	0	0	0	0	0	9	1	10	0		
2:45 PM	0	0	0	0	3	0	3	0	53	1	54	0	13	0	13	0	0	0	2	0	2	0	0	0	0	0	7	0	7	0		
3:00 PM	0	0	0	0	1	0	1	0	59	2	61	0	12	1	13	0	0	0	15	0	15	0	0	0	0	0	63	1	64	1		
3:15 PM	0	0	0	0	2	0	2	0	67	4	71	2	5	0	5	0	0	0	7	0	7	1	0	0	0	0	26	2	28	0		
3:30 PM	0	0	0	0	3	0	3	0	77	0	77	2	9	0	9	0	0	0	8	0	8	0	0	0	0	0	17	1	18	0		
3:45 PM	0	0	0	0	2	0	2	0	61	1	62	2	13	0	13	0	0	0	9	0	9	0	1	0	1	0	18	0	18	0		
4:00 PM	0	0	0	0	3	0	3	0	67	2	69	2	11	0	11	0	0	0	11	0	11	0	1	0	1	0	10	0	10	0		
4:15 PM	0	0	0	0	1	0	1	0	95	0	95	0	8	0	8	0	0	0	9	0	9	0	0	0	0	0	22	0	22	1		
4:30 PM	0	0	0	0	3	0	3	0	97	1	98	2	17	1	18	1	0	0	17	0	17	0	1	0	1	0	10	0	10	0		
4:45 PM	0	0	0	0	4	0	4	0	73	3	76	2	10	2	12	0	0	0	7	0	7	0	0	0	0	1	19	0	19	0		
5:00 PM	0	0	0	0	3	0	3	0	106	1	107	2	22	0	22	1	0	0	6	0	6	0	0	0	0	0	9	0	9	0		
5:15 PM	0	0	0	0	2	0	2	0	103	1	104	1	15	0	15	0	0	0	11	0	11	1	2	0	2	0	18	0	18	0		
5:30 PM	0	0	0	0	2	0	2	0	95	1	96	1	18	0	18	1	0	0	10	0	10	0	0	0	0	0	14	0	14	0		
5:45 PM	0	0	0	0	2	0	2	0	86	1	87	2	16	0	16	1	0	0	5	0	5	0	2	0	2	0	23	0	23	0		
6:00 PM	0	0	0	0	0	0	0	0	71	1	72	3	21	0	21	0	0	0	14	0	14	0	0	0	0	0	28	0	28	0		
4 hr Total	0	0	0	0	33	0	33	0	1171	25	1196	22	195	5	200	5	0	0	135	0	135	2	8	0	1	0	301	5	306	2		
PM Peak	0	0	0	0	12	0	12	0	379	6	385	7	64	3	67	2	0	0	41	0	41	1	3	0	3	0	56	0	56	0		











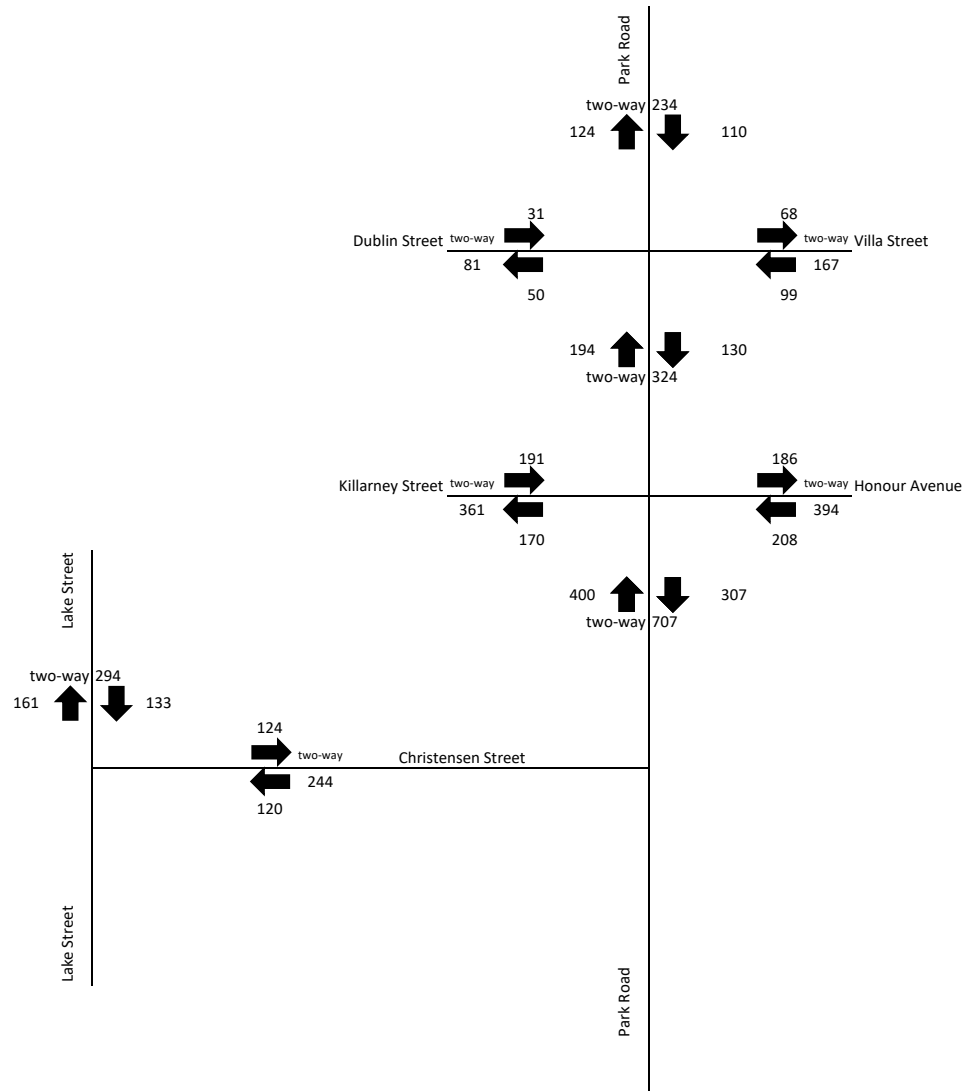


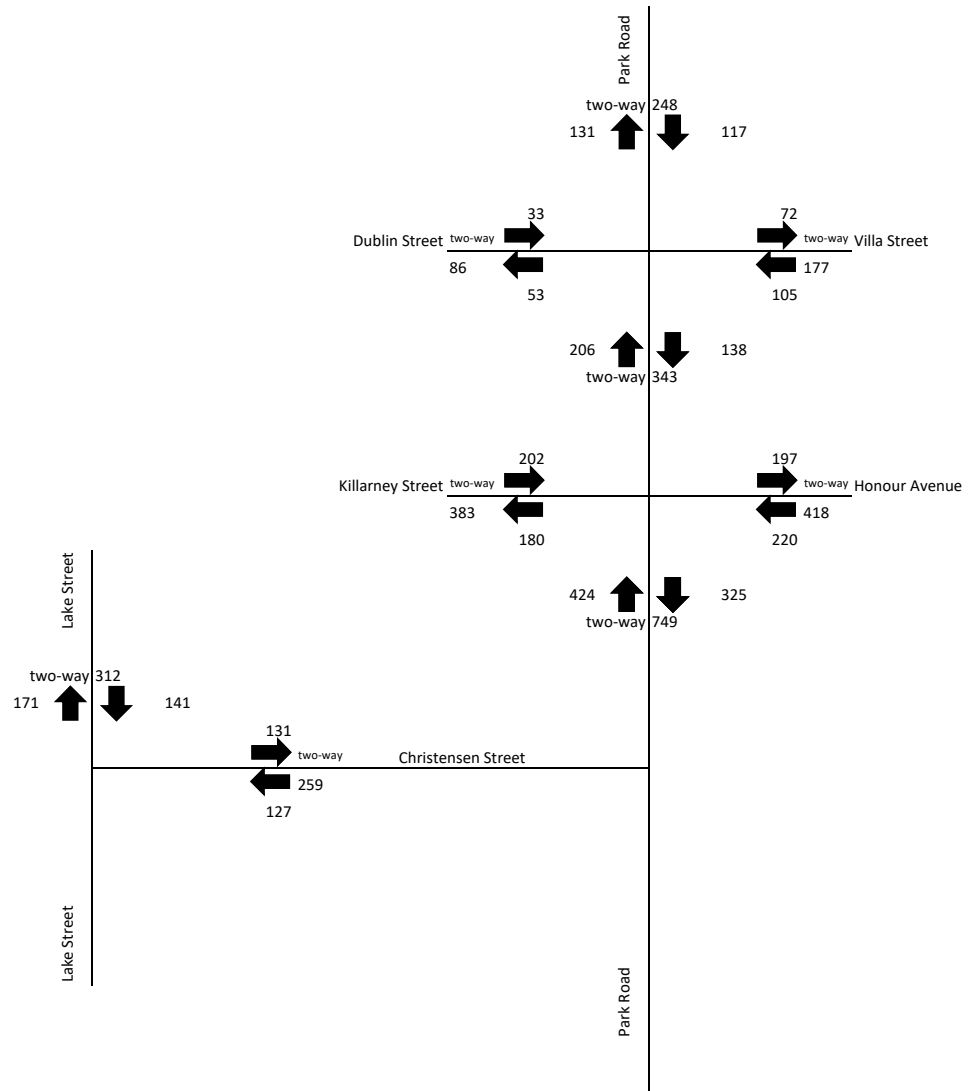


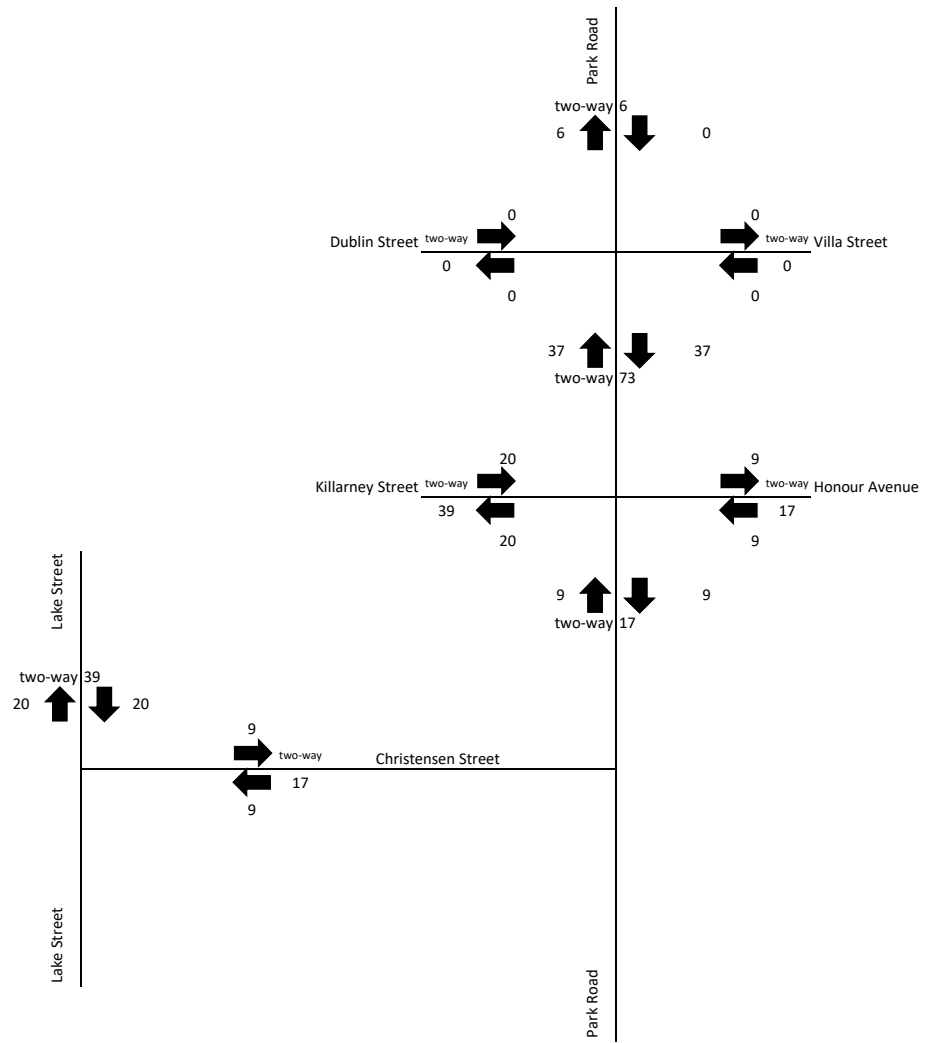




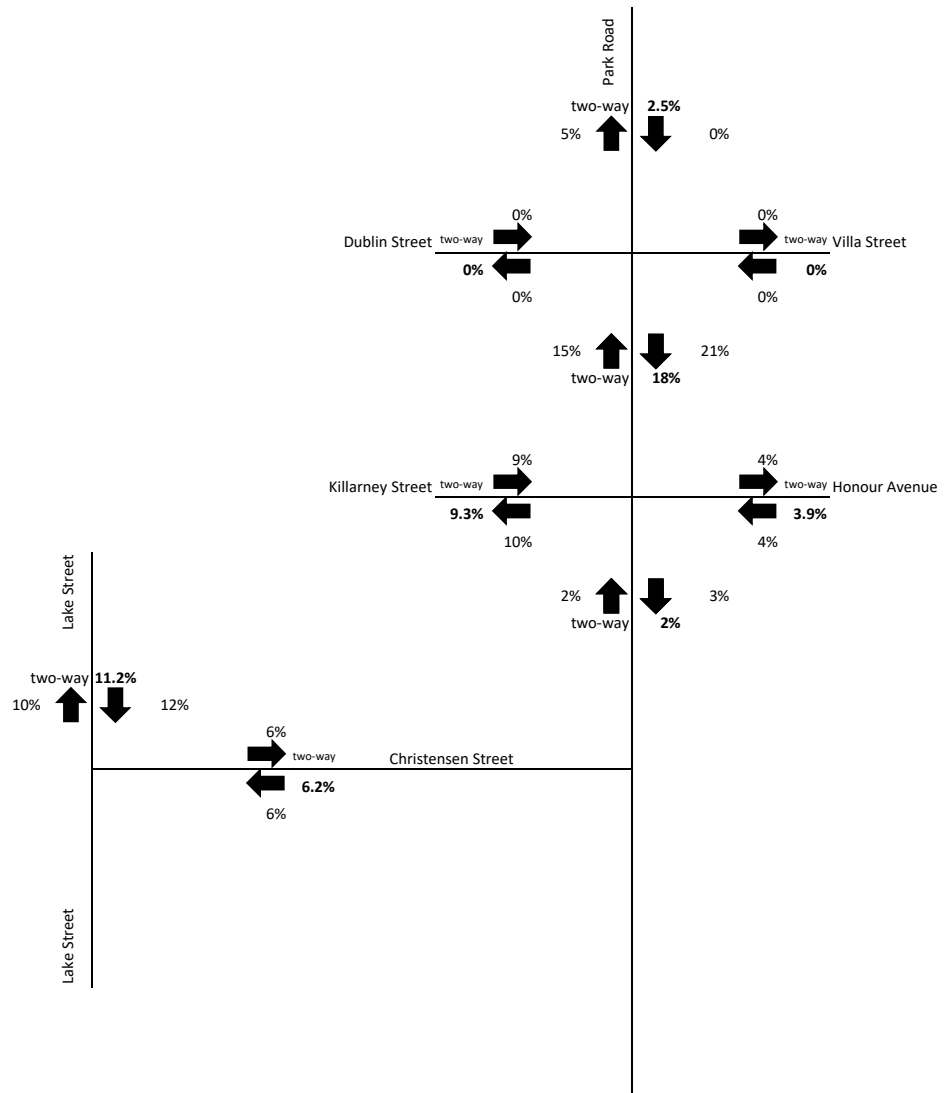








Date: 24/06/2022



Point8

**CONSTRUCTION ESTIMATE SUMMARY**ESTIMATE TYPE : **CONCEPT DESIGN**  Estimate TypeCONTRACTOR TYPE : **EXTERNAL**  Contractor TypePROJECT NUMBER: **P22049**PROJECT : **Yeronga PDA Transport Infrastructure Contributions**LOCATION : **Park Road (Intersection w/ Villa Street/Dublin Street), Yeronga**Client: **EDQ**

NOTE: THIS ESTIMATE IS VALID FOR THE SCOPE OF WORKS PRESENTED ON -

REFERENCE PLANS : DATE OF ESTIMATE : **22 June 2022**DATE OF CONSTRUCTION : **1 June 2026**

Estimate Version: P8-2021/2022 v1

**CONSTRUCTION ESTIMATE**

<b>SUB TOTAL [Direct Job Cost]</b>	[Total of Civil, S&L, Services]	<b>\$1,226,889.89</b>
<b>QS / Scope Contingency - (CI)</b>	<b>50.00%</b>	<b>\$613,444.95</b>
<b>SUB TOTAL [D. J. C. + Cont.]</b>	[Sub-Total plus CI Contingency]	<b>\$1,840,334.84</b>
<b>Site Overheads</b>	<b>8.00%</b>	<b>\$147,226.79</b>

**LIMB 1: REIMBURSABLES**

<b>SUB TOTAL [Direct Job Cost plus OH's]</b>		<b>\$1,987,561.63</b>
<b>Wet Weather Contingency</b>	<b>1.50%</b>	<b>\$29,813.42</b>
<b>Cost Escalation - at CPI (5.1) for = Year</b>	<b>5.10%</b>	<b>\$319,869.52</b>
<a href="http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0">http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0</a>		
<b>Total Limb 1 - [ Reimbursable Costs ]</b>		<b>\$2,337,244.57</b>

**LIMB 2: FEE / MARGIN**

<b>Profit Margin</b>	<b>0.00%</b>	<b>\$0.00</b>
<b>Total Limb 2 - [ Contractor's Fee ]</b>		<b>\$0.00</b>

**LIMB 3: PRINCIPAL FEES**

<b>Design Fees</b>	<b>5.00%</b>	<b>\$92,016.74</b>
<b>Project Management Fees</b>	<b>10.00%</b>	<b>\$184,033.48</b>
<b>Principal's Auxiliary Fees</b>	<b>5.00%</b>	<b>\$92,016.74</b>
<b>Total Limb 3 - [ Principal's Fees ]</b>		<b>\$368,066.97</b>

**CONSTRUCTION ESTIMATE****\$2,705,311.54**

Anticipated Project Duration	
Anticipated Project (Construction Contract) Duration (weeks)	28 w

## SUMMARY OF CONSTRUCTION ESTIMATE

Civil Works	Amount: \$
1. Preliminary Items	\$59,898.54
2. Drainage	\$0.00
3. Roadworks	\$290,684.26
<b>CIVIL WORKS TOTAL</b>	<b>\$350,582.80</b>

Signs and Pavement Marking	Amount: \$
Signs - Sub Total	\$0
Supervision & Administration 10.0%	\$0
<b>SIGNS TOTAL</b>	<b>\$0</b>
Pavement Marking - Sub Total	\$6,258
Supervision & Administration 10.0%	\$626
<b>PAVEMENT MARKING TOTAL</b>	<b>\$6,884</b>
<b>SIGNS AND PAVEMENT MARKING TOTAL</b>	<b>\$6,883.77</b>

Public Services	Service Authority Quote	M.Fee	Amount: \$
1. QUU : Water Reticulation	\$150,000		\$150,000
2. QUU : Sewerage	\$0		\$0
3. Telecommunications	\$175,000		\$175,000
4. Gas	\$0		\$0
5. Energex	\$175,000		\$175,000
6. Street Lighting [Rate 2 & Rate 3]	\$35,000	10%	\$38,500
7. Traffic Signals [excluding Conduiting]	\$0		\$0
8. Traffic Signals [new Signal Controller]	\$217,500		\$217,500
9. Landscaping [Built Env. Planting]	\$50,000	10%	\$55,000
<b>PUBLIC SERVICES TOTAL</b>			<b>\$811,000.00</b>

Point8

**CONSTRUCTION ESTIMATE SUMMARY**ESTIMATE TYPE : **PRELIMINARY DESIGN** 2 Estimate TypeCONTRACTOR TYPE : **EXTERNAL** 2 Contractor TypePROJECT NUMBER: **P22049**PROJECT : **Yeronga PDA Transport Infrastructure Contributions**LOCATION : **Park Road (25 Park Road to Dublin Street), Yeronga**Client: **EDQ**

NOTE: THIS ESTIMATE IS VALID FOR THE SCOPE OF WORKS PRESENTED ON -

REFERENCE PLANS :

DATE OF ESTIMATE : **22 June 2022**DATE OF CONSTRUCTION : **1 June 2026**

Estimate Version: P8-2021/2022 v1

**CONSTRUCTION ESTIMATE**

<b>SUB TOTAL [Direct Job Cost]</b>	[Total of Civil, S&L, Services]	<b>\$171,360.13</b>
QS / Scope Contingency - (CI)	25.00%	\$42,840.03
<b>SUB TOTAL [D. J. C. + Cont.]</b>	[Sub-Total plus CI Contingency]	<b>\$214,200.16</b>
Site Overheads	8.00%	\$17,136.01

**LIMB 1: REIMBURSABLES**

<b>SUB TOTAL [Direct Job Cost plus OH's]</b>		<b>\$231,336.17</b>
Wet Weather Contingency	1.50%	\$3,470.04
Cost Escalation - at CPI (5.1) for = Year	5.10%	\$37,230.24
<a href="http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0">http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0</a>		
<b>Total Limb 1 - [ Reimbursable Costs ]</b>		<b>\$272,036.45</b>

**LIMB 2: FEE / MARGIN**

Profit Margin	0.00%	\$0.00
<b>Total Limb 2 - [ Contractor's Fee ]</b>		<b>\$0.00</b>

**LIMB 3: PRINCIPAL FEES**

Design Fees	5.00%	\$10,710.01
Project Management Fees	10.00%	\$21,420.02
Principal's Auxiliary Fees	5.00%	\$10,710.01
<b>Total Limb 3 - [ Principal's Fees ]</b>		<b>\$42,840.03</b>

**CONSTRUCTION ESTIMATE****\$314,876.49**

<b>Anticipated Project Duration</b>	
Anticipated Project (Construction Contract) Duration (weeks)	7 w

**SUMMARY OF CONSTRUCTION ESTIMATE**

Civil Works	Amount: \$
1. Preliminary Items	\$28,851.30
2. Drainage	\$0.00
3. Roadworks	\$132,962.82
<b>CIVIL WORKS TOTAL</b>	<b>\$161,814.12</b>

Signs and Pavement Marking	Amount: \$
Signs - Sub Total	\$0
Supervision & Administration 10.0%	\$0
<b>SIGNS TOTAL</b>	<b>\$0</b>
Pavement Marking - Sub Total	\$1,260
Supervision & Administration 10.0%	\$126
<b>PAVEMENT MARKING TOTAL</b>	<b>\$1,386</b>
<b>SIGNS AND PAVEMENT MARKING TOTAL</b>	<b>\$1,386.00</b>

Public Services	Service Authority Quote	M.Fee	Amount: \$
1. QUU : Water Reticulation	\$0		\$0
2. QUU : Sewerage	\$0		\$0
3. Telecommunications	\$0		\$0
4. Gas	\$0		\$0
5. Energex	\$0		\$0
6. Street Lighting [Rate 2 & Rate 3]	\$0	10%	\$0
7. Traffic Signals [excluding Conduiting]	\$0		\$0
8. Traffic Signals [new Signal Controller]	\$0		\$0
9. Landscaping [Built Env. Planting]	\$0	10%	\$0
<b>PUBLIC SERVICES TOTAL</b>			<b>\$0.00</b>



Point8

**CONSTRUCTION ESTIMATE SUMMARY**ESTIMATE TYPE : **PRELIMINARY DESIGN** 2 Estimate TypeCONTRACTOR TYPE : **EXTERNAL** 2 Contractor TypePROJECT NUMBER: **P22049**PROJECT : **Yeronga PDA Transport Infrastructure Contributions**LOCATION : **Christensen Street, Yeronga**Client: **EDQ**

NOTE: THIS ESTIMATE IS VALID FOR THE SCOPE OF WORKS PRESENTED ON -

REFERENCE PLANS :

DATE OF ESTIMATE : **22 June 2022**DATE OF CONSTRUCTION : **1 June 2026**

Estimate Version: P8-2021/2022 v1

**CONSTRUCTION ESTIMATE**

<b>SUB TOTAL [Direct Job Cost]</b>	[Total of Civil, S&L, Services]	<b>\$108,077.41</b>
QS / Scope Contingency - (CI)	25.00%	\$27,019.35
<b>SUB TOTAL [D. J. C. + Cont.]</b>	[Sub-Total plus CI Contingency]	<b>\$135,096.76</b>
Site Overheads	8.00%	\$10,807.74

**LIMB 1: REIMBURSABLES**

<b>SUB TOTAL [Direct Job Cost plus OH's]</b>		<b>\$145,904.51</b>
Wet Weather Contingency	1.50%	\$2,188.57
Cost Escalation - at CPI (5.1) for = Year	5.10%	\$23,481.24
<a href="http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0">http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0</a>		
<b>Total Limb 1 - [ Reimbursable Costs ]</b>		<b>\$171,574.31</b>

**LIMB 2: FEE / MARGIN**

Profit Margin	0.00%	\$0.00
<b>Total Limb 2 - [ Contractor's Fee ]</b>		<b>\$0.00</b>

**LIMB 3: PRINCIPAL FEES**

Design Fees	5.00%	\$6,754.84
Project Management Fees	10.00%	\$13,509.68
Principal's Auxiliary Fees	5.00%	\$6,754.84
<b>Total Limb 3 - [ Principal's Fees ]</b>		<b>\$27,019.35</b>

**CONSTRUCTION ESTIMATE****\$198,593.66**

Anticipated Project Duration	
Anticipated Project (Construction Contract) Duration (weeks)	5 w

**SUMMARY OF CONSTRUCTION ESTIMATE**

Civil Works	Amount: \$
1. Preliminary Items	\$21,546.16
2. Drainage	\$0.00
3. Roadworks	\$78,590.93
<b>CIVIL WORKS TOTAL</b>	<b>\$ 100,137.09</b>

Signs and Pavement Marking	Amount: \$
Signs - Sub Total	\$0
Supervision & Administration 10.0%	\$0
<b>SIGNS TOTAL</b>	<b>\$0</b>
Pavement Marking - Sub Total	\$2,540
Supervision & Administration 10.0%	\$254
<b>PAVEMENT MARKING TOTAL</b>	<b>\$2,794</b>
<b>SIGNS AND PAVEMENT MARKING TOTAL</b>	<b>\$2,793.78</b>

Public Services	Service Authority Quote	M.Fee	Amount: \$
1. QUU : Water Reticulation	\$0		\$0
2. QUU : Sewerage	\$0		\$0
3. Telecommunications	\$0		\$0
4. Gas	\$0		\$0
5. Energex	\$0		\$0
6. Street Lighting [Rate 2 & Rate 3]	\$0	10%	\$0
7. Traffic Signals [excluding Conduiting]	\$0		\$0
8. Traffic Signals [new Signal Controller]	\$0		\$0
9. Landscaping [Built Env. Planting]	\$0	10%	\$0
10. Property Resumptions	(EXCLUDED)		<b>TBC</b>
<b>PUBLIC SERVICES TOTAL</b>			<b>\$0.00</b>

Point8

## CONSTRUCTION ESTIMATE SUMMARY

ESTIMATE TYPE : **PRELIMINARY DESIGN**  Estimate TypeCONTRACTOR TYPE : **EXTERNAL**  Contractor TypePROJECT NUMBER: **P22049**PROJECT : **Yeronga PDA Transport Infrastructure Contributions**LOCATION : **Lake Street, Yeronga**Client: **EDQ**

NOTE: THIS ESTIMATE IS VALID FOR THE SCOPE OF WORKS PRESENTED ON -

REFERENCE PLANS : DATE OF ESTIMATE : **22 June 2022**DATE OF CONSTRUCTION : **1 June 2026**

Estimate Version: P8-2021/2022 v1



## CONSTRUCTION ESTIMATE

<b>SUB TOTAL [Direct Job Cost]</b>	[Total of Civil, S&L, Services]	<b>\$144,001.62</b>
QS / Scope Contingency - (CI)	<b>25.00%</b>	<b>\$36,000.41</b>
<b>SUB TOTAL [D. J. C. + Cont.]</b>	[Sub-Total plus CI Contingency]	<b>\$180,002.03</b>
Site Overheads	<b>8.00%</b>	<b>\$14,400.16</b>

### LIMB 1: REIMBURSABLES

<b>SUB TOTAL [Direct Job Cost plus OH's]</b>		<b>\$194,402.19</b>
Wet Weather Contingency	<b>1.50%</b>	<b>\$2,916.03</b>
Cost Escalation - at CPI (5.1) for = Year	<b>5.10%</b>	<b>\$31,286.24</b>
<small><a href="http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0">http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0</a></small>		
<b>Total Limb 1 - [ Reimbursable Costs ]</b>		<b>\$228,604.47</b>

### LIMB 2: FEE / MARGIN

Profit Margin	<b>0.00%</b>	<b>\$0.00</b>
<b>Total Limb 2 - [ Contractor's Fee ]</b>		<b>\$0.00</b>

### LIMB 3: PRINCIPAL FEES

Design Fees	<b>5.00%</b>	<b>\$9,000.10</b>
Project Management Fees	<b>10.00%</b>	<b>\$18,000.20</b>
Principal's Auxiliary Fees	<b>5.00%</b>	<b>\$9,000.10</b>
<b>Total Limb 3 - [ Principal's Fees ]</b>		<b>\$36,000.41</b>

## CONSTRUCTION ESTIMATE

## \$264,604.87

<b>Anticipated Project Duration</b>	
Anticipated Project (Construction Contract) Duration (weeks)	6 w

**SUMMARY OF CONSTRUCTION ESTIMATE**

Civil Works	Amount: \$
1. Preliminary Items	\$25,860.57
2. Drainage	\$0.00
3. Roadworks	\$109,897.84
<b>CIVIL WORKS TOTAL</b>	<b>\$135,758.40</b>

Signs and Pavement Marking	Amount: \$
Signs - Sub Total	\$0
Supervision & Administration 10.0%	\$0
<b>SIGNS TOTAL</b>	<b>\$0</b>
Pavement Marking - Sub Total	\$1,260
Supervision & Administration 10.0%	\$126
<b>PAVEMENT MARKING TOTAL</b>	<b>\$1,386</b>
<b>SIGNS AND PAVEMENT MARKING TOTAL</b>	<b>\$1,386.00</b>

Public Services	Service Authority Quote	M.Fee	Amount: \$
1. QUU : Water Reticulation	\$0		\$0
2. QUU : Sewerage	\$0		\$0
3. Telecommunications	\$0		\$0
4. Gas	\$0		\$0
5. Energex	\$0		\$0
6. Street Lighting [Rate 2 & Rate 3]	\$0	10%	\$0
7. Traffic Signals [excluding Conduiting]	\$0		\$0
8. Traffic Signals [new Signal Controller]	\$0		\$0
9. Landscaping [Built Env. Planting]	\$0	10%	\$0
<b>PUBLIC SERVICES TOTAL</b>			<b>\$0.00</b>

Point8

**CONSTRUCTION ESTIMATE SUMMARY**ESTIMATE TYPE : **PRELIMINARY DESIGN** 2 Estimate TypeCONTRACTOR TYPE : **EXTERNAL** 2 Contractor TypePROJECT NUMBER: **P22049**PROJECT : **Yeronga PDA Transport Infrastructure Contributions**LOCATION : **Honour Avenue, Yeronga**Client: **EDQ**

NOTE: THIS ESTIMATE IS VALID FOR THE SCOPE OF WORKS PRESENTED ON -

REFERENCE PLANS : DATE OF ESTIMATE : **22 June 2022**DATE OF CONSTRUCTION : **1 June 2026**

Estimate Version: P8-2021/2022 v1

**CONSTRUCTION ESTIMATE**

<b>SUB TOTAL [Direct Job Cost]</b>	[Total of Civil, S&L, Services]	<b>\$176,578.50</b>
QS / Scope Contingency - (CI)	25.00%	\$44,144.62
<b>SUB TOTAL [D. J. C. + Cont.]</b>	[Sub-Total plus CI Contingency]	<b>\$220,723.12</b>
Site Overheads	8.00%	\$17,657.85

**LIMB 1: REIMBURSABLES**

<b>SUB TOTAL [Direct Job Cost plus OH's]</b>		<b>\$238,380.97</b>
Wet Weather Contingency	1.50%	\$3,575.71
Cost Escalation - at CPI (5.1) for = Year	5.10%	\$38,364.00
<a href="http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0">http://www.abs.gov.au/ausstats/abs@.nsf/mf/6401.0</a>		
<b>Total Limb 1 - [ Reimbursable Costs ]</b>		<b>\$280,320.68</b>

**LIMB 2: FEE / MARGIN**

Profit Margin	0.00%	\$0.00
<b>Total Limb 2 - [ Contractor's Fee ]</b>		<b>\$0.00</b>

**LIMB 3: PRINCIPAL FEES**

Design Fees	5.00%	\$11,036.16
Project Management Fees	10.00%	\$22,072.31
Principal's Auxiliary Fees	5.00%	\$11,036.16
<b>Total Limb 3 - [ Principal's Fees ]</b>		<b>\$44,144.62</b>

**CONSTRUCTION ESTIMATE****\$324,465.31**

<b>Anticipated Project Duration</b>	
Anticipated Project (Construction Contract) Duration (weeks)	7 w

**SUMMARY OF CONSTRUCTION ESTIMATE**

Civil Works	Amount: \$
1. Preliminary Items	\$28,964.75
2. Drainage	\$0.00
3. Roadworks	\$133,857.83
<b>CIVIL WORKS TOTAL</b>	<b>\$162,822.57</b>

Signs and Pavement Marking	Amount: \$
Signs - Sub Total	\$0
Supervision & Administration 10.0%	\$0
<b>SIGNS TOTAL</b>	<b>\$0</b>
Pavement Marking - Sub Total	\$4,861
Supervision & Administration 10.0%	\$486
<b>PAVEMENT MARKING TOTAL</b>	<b>\$5,347</b>
<b>SIGNS AND PAVEMENT MARKING TOTAL</b>	<b>\$5,347.43</b>

Public Services	Service Authority Quote	M.Fee	Amount: \$
1. QUU : Water Reticulation	\$0		\$0
2. QUU : Sewerage	\$0		\$0
3. Telecommunications	\$0		\$0
4. Gas	\$0		\$0
5. Energex	\$0		\$0
6. Street Lighting [Rate 2 & Rate 3]	\$0	10%	\$0
7. Traffic Signals [excluding Conduiting]	\$0		\$0
8. Traffic Signals [new Signal Controller]	\$0		\$0
9. Landscaping [Built Env. Planting]	\$0	10%	\$0
<b>PUBLIC SERVICES TOTAL</b>			<b>\$0.00</b>




 **Latest release**

# Yeronga

## 2016 Census All persons QuickStats

Geography type [State Suburbs](#)

Area code SSC33249

	<b>People</b>	<b>6,535</b>
	Male	48.7%
	Female	51.3%
	Median age	36
	<b>Families</b>	<b>1,550</b>
	Average children per family	
	for families with children	1.8
	for all families	0.5
	<b>All private dwellings</b>	<b>3,001</b>
	Average people per household	2.3
	Median weekly household income	\$1,665
	Median monthly mortgage repayments	\$2,123
	Median weekly rent	\$361
	Average motor vehicles per dwelling	1.6

To view Census data for a different area, see [Search Census data](#).





Map data © OpenStreetMap contributors, CC-BY-SA

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Other 2016 Census products available for this area:

- [Community Profiles](#)

## People

demographics & education | cultural & language diversity | employment



### Demographics & education

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People tables are based on a person's place of usual residence on Census night

#### People

<i>Persons count based on place of usual residence on Census night</i>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Male	3,181	48.7	2,321,889	49.4	11,546,638	49.3
Female	3,356	51.3	2,381,308	50.6	11,855,248	50.7
Aboriginal and/or Torres Strait Islander people	67	1.0	186,482	4.0	649,171	2.8

In the 2016 Census, there were 6,535 people in Yeronga. Of these 48.7% were male and 51.3% were female. Aboriginal and/or Torres Strait Islander people made up 1.0% of the population.

[View the data quality statement for Place of Usual Residence \(PURP\).](#)

<b>Age</b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Median age	36	--	37	--	38	--
0-4 years	307	4.7	296,466	6.3	1,464,779	6.3
5-9 years	281	4.3	317,138	6.7	1,502,646	6.4
10-14 years	319	4.9	299,097	6.4	1,397,183	6.0
15-19 years	405	6.2	296,287	6.3	1,421,595	6.1
20-24 years	633	9.7	316,860	6.7	1,566,793	6.7
25-29 years	562	8.6	320,753	6.8	1,664,602	7.1



30-34 years	540	8.3	325,943	6.9	1,703,847	7.3
35-39 years	469	7.2	305,218	6.5	1,561,679	6.7
40-44 years	411	6.3	322,901	6.9	1,583,257	6.8
45-49 years	471	7.2	322,982	6.9	1,581,455	6.8
50-54 years	416	6.4	308,727	6.6	1,523,551	6.5
55-59 years	384	5.9	292,198	6.2	1,454,332	6.2
60-64 years	310	4.7	260,685	5.5	1,299,397	5.6
65-69 years	250	3.8	242,192	5.1	1,188,999	5.1
70-74 years	211	3.2	180,406	3.8	887,716	3.8
75-79 years	172	2.6	126,084	2.7	652,657	2.8
80-84 years	191	2.9	83,731	1.8	460,549	2.0
85 years and over	208	3.2	85,528	1.8	486,842	2.1

The median age of people in Yeronga was 36 years. Children aged 0 - 14 years made up 13.9% of the population and people aged 65 years and over made up 15.8% of the population.

[View the data quality statement for Age \(AGEP\).](#)

### **Registered marital status**

*People aged 15 years and over*

	Yeronga	%	Queensland	%	Australia	%
Married	2,346	41.7	1,775,920	46.9	9,148,218	48.1
Separated	134	2.4	134,953	3.6	608,059	3.2
Divorced	449	8.0	354,382	9.3	1,626,890	8.5
Widowed	317	5.6	184,671	4.9	985,204	5.2
Never married	2,382	42.3	1,340,580	35.4	6,668,910	35.0

Of people in Yeronga aged 15 years and over, 41.7% were married and 10.4% were either divorced or separated.

[View the data quality statement for Registered marital status \(MSTP\).](#)

### **Social marital status**

*People aged 15 years and over*

	Yeronga	%	Queensland	%	Australia	%
Registered marriage	2,041	42.1	1,546,502	46.7	8,001,141	47.7
De facto marriage	510	10.5	394,739	11.9	1,751,731	10.4
Not married	2,302	47.4	1,367,026	41.3	7,024,973	41.9

In Yeronga, of people aged 15 years and over, 42.1% of people were in a registered marriage and 10.5% were in a de facto marriage.

[View the data quality statement for Social marital status \(MDCP\).](#)

### **Education**

	Yeronga	%	Queensland	%	Australia	%
Preschool	51	2.3	56,639	3.9	347,621	4.8
Primary - Government	182	8.3	276,468	19.1	1,314,787	18.2

Primary - Catholic	142	6.5	73,844	5.1	380,604	5.3
Primary - other non Government	50	2.3	50,202	3.5	231,490	3.2
Secondary - Government	101	4.6	176,138	12.2	827,505	11.5
Secondary - Catholic	155	7.0	63,080	4.4	338,384	4.7
Secondary - other non Government	124	5.6	58,927	4.1	280,618	3.9
Technical or further education institution	120	5.5	76,992	5.3	424,869	5.9
University or tertiary institution	727	33.1	213,221	14.8	1,160,626	16.1
Other	37	1.7	37,517	2.6	198,383	2.8
Not stated	510	23.2	360,888	25.0	1,707,023	23.7

In Yeronga 33.7% of people were attending an educational institution. Of these, 16.9% were in primary school, 17.7% in secondary school and 38.7% in a tertiary or technical institution.

[View the data quality statement for Educational Institution Attendee Status \(TYSTAP\).](#)

### **Level of highest educational attainment**

	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
<i>People aged 15 years and over</i>						
Bachelor Degree level and above	2,201	39.1	693,412	18.3	4,181,406	22.0
Advanced Diploma and Diploma level	522	9.3	330,619	8.7	1,687,893	8.9
Certificate level IV	98	1.7	111,975	3.0	551,767	2.9
Certificate level III	406	7.2	576,295	15.2	2,442,203	12.8
Year 12	883	15.7	625,959	16.5	2,994,097	15.7
Year 11	172	3.1	163,394	4.3	941,531	4.9
Year 10	376	6.7	488,554	12.9	2,054,331	10.8
Certificate level II	3	0.1	2,602	0.1	13,454	0.1
Certificate level I	0	0.0	418	0.0	2,176	0.0
Year 9 or below	207	3.7	275,376	7.3	1,529,897	8.0
No educational attainment	24	0.4	15,700	0.4	145,844	0.8
Not stated	633	11.2	409,227	10.8	1,974,794	10.4

Of people aged 15 and over in Yeronga, 15.7% reported having completed Year 12 as their highest level of educational attainment, 8.9% had completed a Certificate III or IV and 9.3% had completed an Advanced Diploma or Diploma.

[View the data quality statement for Level of highest educational attainment \(HEAP\).](#)

### **Cultural & language diversity**

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<b><u>Ancestry, top responses</u></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
English	2,328	25.1	1,794,999	27.5	7,852,224	25.0

Australian	1,934	20.8	1,649,284	25.3	7,298,243	23.3
Irish	1,101	11.9	564,334	8.7	2,388,058	7.6
Scottish	776	8.4	486,648	7.5	2,023,470	6.4
German	407	4.4	296,387	4.5	982,226	3.1

The most common ancestries in Yeronga were English 25.1%, Australian 20.8%, Irish 11.9%, Scottish 8.4% and German 4.4%.

Respondents had the option of reporting up to two ancestries on their Census form, and this is captured by the Ancestry Multi Response (ANCP) variable used in this table. Therefore, the total responses count will not equal the persons count for this area. Calculated percentages represent a proportion of all responses from people in Yeronga (including those who did not state an ancestry).

[View the data quality statement for Ancestry\\_\(ANCP\)](#)

<b>Country of birth</b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Australia	4,487	68.7	3,343,657	71.1	15,614,835	66.7
<i>Other top responses:</i>						
England	217	3.3	180,775	3.8	907,570	3.9
New Zealand	196	3.0	201,206	4.3	518,466	2.2
India	80	1.2	49,145	1.0	455,389	1.9
China (excludes SARs and Taiwan)	58	0.9	47,114	1.0	509,555	2.2
United States of America	47	0.7	17,053	0.4	86,125	0.4

In Yeronga, 68.7% of people were born in Australia. The most common countries of birth were England 3.3%, New Zealand 3.0%, India 1.2%, China (excludes SARs and Taiwan) 0.9% and United States of America 0.7%.

[View the data quality statement for Country of birth \(BPLP\)](#)

<b>Country of birth of father and/or mother, stated responses</b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Both parents born overseas	1,828	28.0	1,225,441	26.1	8,051,196	34.4
Father only born overseas	487	7.4	302,904	6.4	1,488,092	6.4
Mother only born overseas	355	5.4	234,425	5.0	1,094,591	4.7
Both parents born in Australia	3,255	49.8	2,575,201	54.8	11,070,538	47.3

In Yeronga, 49.8% of people had both parents born in Australia and 28.0% of people had both parents born overseas.

[View the data quality statement for Country of birth of father and/or mother \(BPPP\)](#)

<b>Country of birth of father, stated responses</b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Australia	3,616	55.5	2,824,420	60.1	12,231,150	52.3
England	360	5.5	287,091	6.1	1,403,096	6.0
New Zealand	248	3.8	236,403	5.0	617,331	2.6

India	120	1.8	67,903	1.4	616,939	2.6
China (excludes SARs and Taiwan)	89	1.4	64,856	1.4	704,658	3.0

In Yeronga, the most common countries of birth for male parents were Australia 55.5%, England 5.5%, New Zealand 3.8%, India 1.8% and China (excludes SARs and Taiwan) 1.4%.

[View the data quality statement for Country of birth of father \(BPMP\).](#)

<b><u>Country of birth of mother, stated responses</u></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Australia	3,761	58.0	2,897,343	61.6	12,643,365	54.0
England	320	4.9	264,169	5.6	1,302,147	5.6
New Zealand	241	3.7	236,930	5.0	608,329	2.6
India	112	1.7	65,921	1.4	605,777	2.6
China (excludes SARs and Taiwan)	90	1.4	64,863	1.4	699,074	3.0

In Yeronga, the most common countries of birth for female parents were Australia 58.0%, England 4.9%, New Zealand 3.7%, India 1.7% and China (excludes SARs and Taiwan) 1.4%.

[View the data quality statement for Country of birth of mother \(BPFP\).](#)

<b><u>Religious affiliation, top responses</u></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
No Religion, so described	2,108	32.2	1,374,427	29.2	6,933,708	29.6
Catholic	1,575	24.1	1,022,514	21.7	5,291,834	22.6
Anglican	770	11.8	719,718	15.3	3,101,185	13.3
Not stated	731	11.2	468,042	10.0	2,238,735	9.6
Uniting Church	263	4.0	238,313	5.1	870,183	3.7

The most common responses for religion in Yeronga were No Religion, so described 32.2%, Catholic 24.1%, Anglican 11.8%, Not stated 11.2% and Uniting Church 4.0%. In Yeronga, Christianity was the largest religious group reported overall (56.9%) (this figure excludes not stated responses).

[View the data quality statement for Religious affiliation \(RELP\).](#)

<b><u>Language, top responses (other than English)</u></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Mandarin	80	1.2	69,474	1.5	596,711	2.5
Greek	65	1.0	10,538	0.2	237,588	1.0
Spanish	58	0.9	21,006	0.4	140,817	0.6
Arabic	43	0.7	13,644	0.3	321,728	1.4
Cantonese	38	0.6	24,900	0.5	280,943	1.2
English only spoken at home	5,051	77.5	3,820,632	81.2	17,020,417	72.7
Households where a non English language is spoken	518	18.6	242,052	13.5	1,971,011	22.2

In Yeronga 77.5% of people only spoke English at home. Other languages spoken at home included Mandarin 1.2%, Greek 1.0%, Spanish 0.9%, Arabic 0.7% and Cantonese 0.6%.

[View the data quality statement for Language spoken at home \(LANP\).](#)

## Employment

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### Employment

<i>People who reported being in the labour force, aged 15 years and over</i>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Worked full-time	2,095	58.8	1,333,193	57.7	6,623,065	57.7
Worked part-time	1,088	30.6	691,751	29.9	3,491,503	30.4
Away from work	133	3.7	111,509	4.8	569,276	5.0
Unemployed	244	6.9	175,665	7.6	787,452	6.9

There were 3,560 people who reported being in the labour force in the week before Census night in Yeronga. Of these 58.8% were employed full time, 30.6% were employed part-time and 6.9% were unemployed.

The ABS Labour Force Survey provides the official estimates of Australia's unemployment rate. More information about Census and labour force status is provided in [Understanding the Census and Census Data](#).

[View the data quality statement for Labour force status \(LFSP\).](#)

### Employment - hours worked

<i>Employed people aged 15 years and over</i>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
1-15 hours per week	417	12.6	235,001	11.0	1,218,823	11.4
16-24 hours per week	317	9.6	201,035	9.4	1,079,236	10.1
25-34 hours per week	348	10.5	255,714	12.0	1,193,445	11.2
35-39 hours per week	588	17.8	410,236	19.2	2,031,263	19.0
40 hours or more per week	1,507	45.6	922,958	43.2	4,591,801	43.0

Of employed people in Yeronga, 12.6% worked 1 to 15 hours, 9.6% worked 16 to 24 hours and 45.6% worked 40 hours or more.

[View the data quality statement for Hours worked \(HRSP\).](#)

### Occupation

<i>Employed people aged 15 years and over</i>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Professionals	1,290	38.9	423,917	19.8	2,370,966	22.2
Managers	473	14.3	258,509	12.1	1,390,047	13.0
Clerical and Administrative Workers	445	13.4	291,317	13.6	1,449,681	13.6
Community and Personal Service Workers	302	9.1	241,956	11.3	1,157,003	10.8
Sales Workers	255	7.7	207,795	9.7	1,000,955	9.4

Technicians and Trades Workers	252	7.6	305,441	14.3	1,447,414	13.5
Labourers	187	5.6	225,268	10.5	1,011,520	9.5
Machinery Operators and Drivers	90	2.7	147,636	6.9	670,106	6.3

The most common occupations in Yeronga included Professionals 38.9%, Managers 14.3%, Clerical and Administrative Workers 13.4%, Community and Personal Service Workers 9.1%, Sales Workers 7.7%, Technicians and Trades Workers 7.6%, Labourers 5.6% and Machinery Operators and Drivers 2.7%.

[View the data quality statement for Occupation \(OCCP\).](#)

### **Industry of employment, top**

#### **responses**

***Employed people aged 15 years and over***

	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Hospitals (except Psychiatric Hospitals)	229	7.1	91,756	4.3	411,808	3.9
Higher Education	182	5.6	28,546	1.3	155,985	1.5
State Government Administration	116	3.6	36,185	1.7	158,980	1.5
Cafes and Restaurants	94	2.9	49,488	2.3	253,385	2.4
Primary Education	82	2.5	54,394	2.5	231,198	2.2

Of the employed people in Yeronga, the most common responses for industry of employment included Hospitals (except Psychiatric Hospitals) 7.1%, Higher Education 5.6%, State Government Administration 3.6%, Cafes and Restaurants 2.9% and Primary Education 2.5%.

[View the data quality statement for Industry of employment \(INDP\).](#)

### **Median weekly incomes**

***People aged 15 years and over***

	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Personal	846	--	660	--	662	--
Family	2,328	--	1,661	--	1,734	--
Household	1,665	--	1,402	--	1,438	--

The median weekly personal income for people aged 15 years and over in Yeronga was \$846.

View the data quality statements for: [Total personal income \(INCP\)](#), [Total family income \(FINF\)](#), [Total household income \(HIND\)](#).

### **Travel to work, top responses**

***Employed people aged 15 years and over***

	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Car, as driver	1,771	53.7	1,368,965	64.1	6,574,571	61.5
Train	347	10.5	42,306	2.0	488,012	4.6
Car, as passenger	170	5.1	112,508	5.3	489,922	4.6
Worked at home	168	5.1	112,422	5.3	503,582	4.7
Bicycle	137	4.2	21,679	1.0	107,756	1.0
People who travelled to work by	600	18.1	152,230	7.1	1,225,668	11.5

public transport

People who travelled to work by car as driver or passenger	2,025	61.0	1,523,756	71.3	7,305,271	68.4
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In Yeronga, on the day of the Census, the most common methods of travel to work for employed people included Car, as driver 53.7%, Train 10.5%, Car, as passenger 5.1%, Worked at home 5.1% and Bicycle 4.2%. On the day, 18.1% of employed people used public transport (train, bus, ferry, tram/light rail) as at least one of their methods of travel to work and 61.0% used car (either as driver or as passenger).

[View the data quality statement for Method of travel to work \(MTWP\).](#)

### **Unpaid work**

*People aged 15 years and over*

	Yeronga	%	Queensland	%	Australia	%
Did unpaid domestic work (last week)	4,164	74.0	2,671,858	70.5	13,143,914	69.0
Cared for child/children (last two weeks)	1,287	22.9	1,063,450	28.1	5,259,400	27.6
Provided unpaid assistance to a person with a disability (last two weeks)	603	10.7	407,168	10.7	2,145,203	11.3
Did voluntary work through an organisation or group (last 12 months)	1,359	24.2	714,138	18.8	3,620,726	19.0

In Yeronga, of people aged 15 years and over, 74.0% did unpaid domestic work in the week before the Census. During the two weeks before the Census, 22.9% provided care for children and 10.7% assisted family members or others due to a disability, long term illness or problems related to old age. In the year before the Census, 24.2% of people did voluntary work through an organisation or a group.

View the data quality statements for: [Unpaid domestic work \(DOMP\)](#), [Unpaid child care \(CHCAREP\)](#), [Unpaid assistance \(UNCAREP\)](#), [Voluntary work \(VOLWP\)](#).

### **Unpaid domestic work, number of hours**

*People aged 15 years and over*

	Yeronga	%	Queensland	%	Australia	%
Less than 5 hours per week	1,600	28.5	853,120	22.5	4,298,593	22.6
5 to 14 hours per week	1,686	30.0	1,017,232	26.8	4,944,578	26.0
15 to 29 hours per week	539	9.6	448,338	11.8	2,189,776	11.5
30 hours or more per week	329	5.9	353,168	9.3	1,710,970	9.0

Of people who did unpaid domestic work in the week before the Census in Yeronga, 30.0% worked 5 to 14 hours, 9.6% worked 15 to 29 hours and 5.9% worked 30 hours or more.

[View the data quality statement for Unpaid domestic work, number of hours \(DOMP\).](#)

## Families

family composition | employment status of couple families



### Family composition

[family composition](#) | [employment status of couple families](#)

<b><u>Family composition</u></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Couple family without children	671	43.5	481,451	39.4	2,291,987	37.8
Couple family with children	632	40.9	518,494	42.5	2,716,224	44.7
One parent family	185	12.0	201,308	16.5	959,543	15.8
Other family	56	3.6	19,898	1.6	102,559	1.7

Of the families in Yeronga, 40.9% were couple families with children, 43.5% were couple families without children and 12.0% were one parent families.

[View the data quality statement for Family composition \(FMCF\).](#)

### **Single (or lone) parents**

<b><i>Proportion of the total single (or lone) parent population</i></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Male	--	19.5	--	18.5	--	18.2
Female	--	80.5	--	81.5	--	81.8

In Yeronga, 19.5% of single parents were male and 80.5% were female.

[View the data quality statement for Family composition \(FMCF\).](#)

## **Employment status of couple families**

[family composition](#) | [employment status of couple families](#)

<b><u>Employment status of parents in couple families</u></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
<b><i>Labour force, parents or partners aged 15 years and over</i></b>						
Both employed, worked full-time	362	27.7	225,032	22.5	1,084,006	21.6
Both employed, worked part-time	57	4.4	39,193	3.9	203,596	4.1
One employed full-time, one part-time	311	23.8	212,524	21.3	1,086,460	21.7
One employed full-time, other not working	157	12.0	144,839	14.5	749,886	15.0
One employed part-time, other not working	82	6.3	57,595	5.8	302,037	6.0
Both not working	198	15.1	200,661	20.1	1,006,697	20.1
Other (includes away from work)	66	5.0	52,525	5.3	264,145	5.3
Labour force status not stated (by one or both parents in a couple family)	74	5.7	67,574	6.8	311,381	6.2

In Yeronga, of couple families with children, 27.7% had both partners employed full-time, 4.4% had both employed part-time and 23.8% had one employed full-time and the other part-time.

The ABS Labour Force Survey provides the official estimates of Australia's unemployment rate. More information about Census and labour force status is provided in [Understanding the Census and Census](#)



Information about census and labour force status is provided in [Understanding the Census and Census Data](#).

[View the data quality statement for Labour force status of parents / partners in families \(LFSF\)](#).

## Dwellings

[dwelling structure](#) | [household composition](#) | [mortgage & rent](#) | [number of motor vehicles](#) | [internet connection](#)



### Dwelling structure

[dwelling structure](#) | [household composition](#) | [mortgage & rent](#) | [number of motor vehicles](#) | [internet connection](#)

*Dwelling tables exclude visitor only and other non-classifiable households*

<a href="#">Dwelling count</a>	Yeronga	%	Queensland	%	Australia	%
Occupied private dwellings	2,559	91.9	1,656,828	89.4	8,286,073	88.8
Unoccupied private dwellings	225	8.1	195,570	10.6	1,039,874	11.2

In Yeronga, 91.9% of private dwellings were occupied and 8.1% were unoccupied.

View the data quality statements for: [Dwelling type \(DWTD\)](#), [Dwelling Structure \(STRD\)](#).

<a href="#">Dwelling structure</a>	Yeronga	%	Queensland	%	Australia	%
<b><i>Occupied private dwellings</i></b>						
Separate house	1,215	47.5	1,269,653	76.6	6,041,788	72.9
Semi-detached, row or terrace house, townhouse etc	445	17.4	174,984	10.6	1,055,016	12.7
Flat or apartment	892	34.9	186,780	11.3	1,087,434	13.1
Other dwelling	0	0.0	16,809	1.0	64,425	0.8

Of occupied private dwellings in Yeronga, 47.5% were separate houses, 17.4% were semi-detached, row or terrace houses, townhouses etc, 34.9% were flats or apartments and 0.0% were other dwellings.

[View the data quality statement for Dwelling structure \(STRD\)](#).

<a href="#">Number of bedrooms</a>	Yeronga	%	Queensland	%	Australia	%
<b><i>Occupied private dwellings</i></b>						
None (includes bedsitters)	33	1.3	8,306	0.5	39,769	0.5
1 bedroom	235	9.2	70,628	4.3	411,252	5.0
2 bedrooms	741	29.0	275,203	16.6	1,562,759	18.9
3 bedrooms	871	34.0	657,978	39.7	3,403,190	41.1
4 or more bedrooms	626	24.5	604,269	36.5	2,670,758	32.2
Number of bedrooms not stated	53	2.1	40,448	2.4	198,351	2.4
Average number of bedrooms per dwelling	2.8	--	3.2	--	3.1	--
Average number of people per	2.2	--	2.6	--	2.6	--

household

In Yeronga, of occupied private dwellings 9.2% had 1 bedroom, 29.0% had 2 bedrooms and 34.0% had 3 bedrooms. The average number of bedrooms per occupied private dwelling was 2.8. The average household size was 2.3 people.

View the data quality statements for: [Number of bedrooms in a private dwelling\\_\(BEDD\)](#), [Number of persons usually resident in dwelling\\_\(NPRD\)](#).

<b>Tenure</b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
<b>Occupied private dwellings</b>						
Owned outright	667	26.1	471,407	28.5	2,565,695	31.0
Owned with a mortgage	697	27.3	558,439	33.7	2,855,222	34.5
Rented	1,062	41.5	566,478	34.2	2,561,302	30.9
Other tenure type	64	2.5	15,566	0.9	78,994	1.0
Tenure type not stated	67	2.6	44,944	2.7	224,869	2.7

Of occupied private dwellings in Yeronga, 26.1% were owned outright, 27.3% were owned with a mortgage and 41.5% were rented.

[View the data quality statement for Tenure type \(TEND\)](#).

## Household composition

[dwelling structure](#) | [household composition](#) | [mortgage & rent](#) | [number of motor vehicles](#) | [internet connection](#)

<b>Household composition</b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Family households	1,533	59.8	1,189,859	71.8	5,907,625	71.3
Single (or lone) person households	798	31.1	389,076	23.5	2,023,542	24.4
Group households	233	9.1	77,898	4.7	354,917	4.3

In Yeronga, of all households, 59.8% were family households, 31.1% were single person households and 9.1% were group households.

[View the data quality statement for Household composition \(HHCD\)](#).

<b>Household income</b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Less than \$650 gross weekly income	--	18.5	--	19.5	--	20.0
More than \$3,000 gross weekly income	--	24.4	--	14.4	--	16.4

In Yeronga, 18.5% of households had a weekly household income of less than \$650 and 24.4% of households had a weekly income of more than \$3000.

[View the data quality statement for Household income, total weekly \(HIND\)](#).

## Mortgage & rent

[dwelling structure](#) | [household composition](#) | [mortgage & rent](#) | [number of motor vehicles](#) | [internet connection](#)

Proportions are calculated using all tenure types for occupied private dwellings. This excludes visitor only and other non-classifiable households.

and other non-classifiable households.

<b><u>Rent weekly payments</u></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Median rent	361	--	330	--	335	--
Households where rent payments are less than 30% of household income	--	84.8	--	87.2	--	88.5
Households with rent payments greater than or equal to 30% of household income	--	15.2	--	12.8	--	11.5

The number of households where rent payments were 30% or more of an imputed income measure are expressed in this table as a proportion of the total number of households in an area (including those households which were not renting, and excluding the small proportion of visitor only and other non-classifiable households). The nature of the income imputation means that the reported proportion may significantly overstate the true proportion.

[View the data quality statement for Rent weekly payments \(RNTD\).](#)

<b><u>Mortgage monthly repayments</u></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Median mortgage repayments	2,123	--	1,733	--	1,755	--
Households where mortgage repayments are less than 30% of household income	--	95.5	--	93.6	--	92.8
Households with mortgage repayments greater than or equal to 30% of household income	--	4.5	--	6.4	--	7.2

The number of households where mortgage repayments were 30% or more of an imputed income measure are expressed in this table as a proportion of the total number of households in an area (including those households which were renting, and excluding the small proportion of visitor only and other non-classifiable households). The nature of the income imputation means that the reported proportion may significantly overstate the true proportion.

[View the data quality statement for Mortgage monthly repayments \(MRED\).](#)

## Number of motor vehicles

[dwelling structure](#) | [household composition](#) | [mortgage & rent](#) | [number of motor vehicles](#) | [internet connection](#)

<b><u>Number of registered motor vehicles</u></b>	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
None	257	10.0	99,133	6.0	623,829	7.5
1 motor vehicle	1,064	41.4	566,233	34.2	2,881,485	34.8
2 motor vehicles	815	31.7	620,096	37.4	2,999,184	36.2
3 or more vehicles	355	13.8	315,106	19.0	1,496,382	18.1
Number of motor vehicles not	77	3.0	56,263	3.4	285,197	3.4

stated

In Yeronga, 41.4% of occupied private dwellings had one registered motor vehicle garaged or parked at their address, 31.7% had two registered motor vehicles and 13.8% had three or more registered motor vehicles.

[View the data quality statement for Number of registered motor vehicles \(VEHD\).](#)

## Internet connection

[dwelling structure](#) | [household composition](#) | [mortgage & rent](#) | [number of motor vehicles](#) | [internet connection](#)

<a href="#">Dwelling internet connection</a>	Yeronga	%	Queensland	%	Australia	%
Internet not accessed from dwelling	296	11.6	224,855	13.6	1,172,415	14.1
Internet accessed from dwelling	2,202	86.0	1,387,499	83.7	6,892,165	83.2
Not stated	62	2.4	44,482	2.7	221,494	2.7

In Yeronga, 86.0% of households had at least one person access the internet from the dwelling. This could have been through a desktop/laptop computer, mobile or smart phone, tablet, music or video player, gaming console, smart TV or any other device.

[View the data quality statement for Dwelling internet connection \(NEDD\).](#)

## Aboriginal and/or Torres Strait Islander people

selected people & dwelling characteristics 

### People characteristics

[people characteristics](#) | [dwelling characteristics](#)

#### [People characteristics](#)

<i>Count based on place of usual residence on Census night.</i>	Yeronga	%	Queensland	%	Australia	%
Male	33	48.5	92,176	49.4	322,171	49.6
Female	35	51.5	94,311	50.6	326,996	50.4
Median age	25	--	22	--	23	--

In Yeronga, 48.5% of Aboriginal and/or Torres Strait Islander people were male and 51.5% were female. The median age was 25 years.

View the data quality statements for: [Place of Usual Residence \(PURP\)](#), [Indigenous status \(INGP\)](#)

### Dwelling characteristics

[people characteristics](#) | [dwelling characteristics](#)

*Dwelling tables exclude visitor only and other non-classifiable households. These tables represent occupied private dwellings where at least one Aboriginal and/or Torres Strait islander person was present.*

#### [Dwelling characteristics](#)

<i>Occupied private dwellings where at least one person was Aboriginal and/or Torres</i>	Yeronga	%	Queensland	%	Australia	%
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### ***Strait Islander***

Average number of people per household	2	--	3.3	--	3.2	--
Average number of persons per bedroom	0.8	--	1	--	1	--
Median weekly household income	850	--	1,222	--	1,203	--

In Yeronga, for dwellings occupied by Aboriginal and/or Torres Strait Islander people, the average household size was 2 persons, with 0.8 persons per bedroom. The median household income was \$850.

View the data quality statements for: [Number of Bedrooms in Private Dwelling\\_\(BEDD\)](#), [Household composition \(HHCD\)](#), [Indigenous household Indicator \(INGDWTD\)](#).

### **Mortgage and rent**

***Occupied private dwellings where at least one person was Aboriginal and/or Torres Strait Islander***

	<b>Yeronga</b>	<b>%</b>	<b>Queensland</b>	<b>%</b>	<b>Australia</b>	<b>%</b>
Median weekly rent	258	--	270	--	250	--
Median monthly mortgage repayments	2,000	--	1,733	--	1,660	--

In Yeronga, for dwellings occupied by Aboriginal and/or Torres Strait Islander people, the median weekly rent was \$258 and the median monthly mortgage repayment was \$2,000.

View the data quality statements for: [Rent weekly payments \(RNTD\)](#), [Mortgage monthly repayments \(MRED\)](#), [Indigenous household Indicator \(INGDWTD\)](#).

Small random adjustments have been made to all cell values to protect the confidentiality of data. These adjustments may cause the sum of rows or columns to differ by small amounts from the table totals. For further information, go to the [User Guide for QuickStats](#).

Data reported for Australia and Other Territories now includes Norfolk Island, following an amendment to the *Acts Interpretation Act, 1901*. Because Norfolk Island has not previously been included in the Census, any 2011 benchmarks will not include Norfolk Island.

## More information

Further information can be obtained from EDQ via:

- website: [www.edq.qld.gov.au/cip](http://www.edq.qld.gov.au/cip)
- email: [EDQ@dsmip.qld.gov.au](mailto:EDQ@dsmip.qld.gov.au)