Economic Development Queensland

Yeronga Priority Development Area Draft Infrastructure Planning Background Report

March 2022

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Queensland Government

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2 Background

The Yeronga Development Area (PDA) was declared on 10 August 2018 under the *Economic Development Act 2012* (the Act)[1]. 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, 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.

2.1 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 4 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.

[1] See section 8 of the ED Act.

3 Growth projections

3.1 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.

3.2 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.

3.3 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.

3.4 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.

3.5 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.

3.6 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	294
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	1029
Employment	217	96	181

4 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 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)**	**Parks and community facilities network (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	*South East Queensland Water Supply and Sewerage Design and Construction Code (SEQ Code)*	*South East Queensland Water Supply and Sewerage Design and Construction Code (SEQ Code)*	*BCC LGIP Schedule 3 – SC3.1.3—Planned density and demand generation rate for a trunk infrastructure network (Principal Centre Zone)*			*Rates reflect typical industry averages*	*Rates calculated using an occupancy rate of 1.79 persons per dwelling*

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 parks and community facilities network

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

5 Desired standard of service

5.1 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.

5.2 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.

5.3 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.

5.4 Transport

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

5.5 Parks and community facilities

The DSS for the 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.

6 Infrastructure planning

6.1 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.

6.2 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

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.

6.3 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 202.

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.

6.4 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

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.

6.5 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 a report titled:

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

It was determined that:

- the existing external network has capacity to service the Yeronga PDA and that no augmentations are required to existing roads infrastructure. Accordingly, no new external roads infrastructure is planned to service the PDA.

- 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.

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

6.6 Parks and 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^2 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 Road and Park Road to a 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
Parks and open space	Land for community centre.	Trunk	Development charges
Electricity and gas	As required	Other	Developer
Telecommunications	As required	Other	Developer

7 Infrastructure costs

The cost of infrastructure has been determined as follows.

7.1 Cost of land

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

7.2 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	No future trunk infrastructure has been identified.
Parks and land for community facilities	Cost estimate for the land required for the community facility was prepared by Economic Development Queensland

7.3 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	No future trunk infrastructure has been identified.
Parks and land for community facilities	0%.

7.4 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	No future trunk infrastructure has been identified.
Parks and land for community facilities	0%

8 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.

8.1 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.

8.2 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[1]	Estimated cost[2]
WAT-01	1	Water Main	Upgrade of existing DN100 water main in Ovendean Street between Fairfield Rd and Park Rd to DN150	2023	$0	$436,909	$103,868	$175,915	$716,692	$716,692

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 2021/22 dollars.

Schedule of future trunk infrastructure works – 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[1]	Estimated cost[2]
PCF-01	1	Community Facility	Yeronga Community Facility	2023	$401,760	$0	$0	$0	$0	$401,760

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 2021/22 dollars.

Appendix A – Yeronga PDA boundary map



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