Economic Development Queensland

Herston Quarter PDA Infrastructure Plan Background Report

December 2017

Queensland Government

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Contents

1. Background

The Herston Quarter Priority Development Area (PDA) was declared on 18 November 2016 under the *Economic Development Act 2012*. The development scheme for the PDA was adopted on 22 December 2017.

The PDA is located within the Brisbane City Council (BCC) local government area. A map showing the extent and boundary of the PDA is shown in appendix E.

The Development Charges and Offsets Plan (DCOP) addresses the delivery of trunk infrastructure for the water supply, sewerage, stormwater, transport, and parks and land for community facilities networks. This ensures alignment with Brisbane City Council's adopted infrastructure charges resolution, which the applicable infrastructure charging instrument for the area surrounding the PDA.

1.1 Purpose of report

This report documents information relevant to infrastructure planning and charging in the Herston Quarter Priority Development Area. The report will assist users of the infrastructure plan and DCOP to understand how the planning was undertaken and how development charges were calculated.

2. Growth projections

2.1 Introduction

The projections of future residential and non-residential growth provides a consistent basis for the planning of infrastructure to service the PDA. The following sections of this report provide a summary of the growth projections prepared for the PDA.

Residential and non-residential growth projections for the PDA have been developed based on the *Herston Quarter Yield Analysis*, prepared by Integran in May 2017. This report assessed the scale of existing development across the PDA against the maximum potential yield based on proposed designs for each development site, or where this was not yet available, the provisions within the development scheme, such as site boundaries, building setback requirements, and building heights.

2.2 Growth projection years

The growth projections were prepared for:

- the base date 2016 and the following projection years:
    - 2021
    - 2026
    - 2031
    - Ultimate development.

2.3 Planned densities

The projected growth that may be achieved on premises within the PDA was calculated based on actual development proposals for particular sites or, where this is not available, the development scheme.

The development scheme provides for planning constraints for each site and the PDA as a whole. These constraints, such as building height, site cover, and setbacks, provide a maximum building envelope inside which development may occur. Where an existing development proposal is in place, this proposal is taken to be the planned density for that site. In all circumstances where this is the case, the proposed density is less than the maximum density in the development scheme.

The planned density is an average density and it recognises that development may occur on individual lots at higher or lower densities. Appendix A states the planned density for each precinct within the PDA.

2.4 Development constraints

Development constraints across the PDA were taken into account in the drafting of the development scheme, which was utilised in the calculation of potential development yield of the PDA. Additional consideration of planning constraints, such as building heights and setbacks, have been taken into account in calculation of the yield.

2.5 Growth rates

Growth of residential and non-residential development was projected in accordance with an indicative staging plan for development across the PDA. This was consolidated into development expected to occur within 5 year cohorts, with existing demand being replaced by completed development, as at each projection year.

2.6 Growth projections summary

The growth projections for the PDA are summarised in table 2.1 and table 2.2.

Table 2.1 — Residential dwellings and non-residential floor space projections

Column 1 Description	Column 2 Projections by year				
	2016 (base date)	2021	2026	2031	Ultimate development
Residential dwellings	198	300	619	619	619
Non-residential floor space (m² GFA)	45,518	68,954	110,920	144,406	144,406

Table 2.2 — Population and employment projections

Column 1 Description	Column 2 Projections by year				
	2016 (base date)	2021	2026	2031	Ultimate development
Population	354	536	1,108	1,108	1,108
Employment	628	946	1,459	1,906	1,906

3. Demand projections

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

For the Water Supply, Sewerage, Transport, and Parks and Land for Community Facilities networks, demand projections were calculated for each development site. Stormwater demands were calculated on a precinct basis, utilising impervious fractions from comparable zones under the Brisbane City Planning Scheme.

Each network expresses 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. m^2)
- for the transport network, trips per day (trips)
- for the parks and land for community facilities network, persons.

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

The demand projections for each network are stated in appendix C.

4. Desired standard of service

The Desired Standards of Service have been adopted to outline the standards to which infrastructure should be delivered within the PDA.

4.1 Water supply

EDQ have adopted Queensland Urban Utilities' desired standards of service for the water supply network contained in the QUU Water Netserv Plan, as may be amended from time to time. The latest Standards can be accessed on the QUU website.

4.2 Sewerage

EDQ have adopted Queensland Urban Utilities' desired standards of service for the sewerage network contained in the QUU Water Netserv Plan, as may be amended from time to time. The latest Standards can be accessed on the QUU website.

4.3 Stormwater

EDQ have adopted Brisbane City Council's desired standards of service for the stormwater network contained in the Brisbane City Plan 2014, as may be amended from time to time. The latest Standards can be accessed on the BCC website.

4.4 Transport

The desired standard of service for the road network is as follows:

(a) design the road network to comply with the following:

  (i) the standard road cross-sections in Brisbane City Council's Infrastructure Design Planning Scheme Policy

  (ii) traffic on a local road does not exceed 5000 vehicles per day

  (iii) transport corridors are planned to cater for 2031 planning horizon.

The desired standard of service for the pathway network is as follows:

(a) provide a safe, attractive and convenient pedestrian and cycle pathway network that connects residential areas to employment areas, major activity nodes, education facilities and public transport interchanges, thereby encouraging walking and cycling as a preferred mode of transport

(b) locate future trunk infrastructure for the pathway network identified in the schedules of works or as part of the assessment of a development application, and

(c) the design of the pedestrian and cycle pathway network and associated infrastructure is to comply with the Department of Transport and Main Roads *Technical Note 128 Selection and Design of Cycle Tracks* and supplemented with Brisbane City Council's Infrastructure Design Planning Scheme Policy.

The desired standard of service for bus stops is as follows:

(a) provide public transport infrastructure to support the future mode share targets stated in Brisbane City Council's Planning Scheme map E3 Transport Network DSS Mode Share Targets, including bus stops and stations, rights of way and transport information;

(b) provide a public transport stop within 400 m of each dwelling in an urban area. The public transport stop, where possible, shall be designed in accordance Translink's Public Transport Infrastructure Manual (PTIM)

(c) ensure full Disability Standards for Accessible Public Transport compliance for public transport infrastructure by December 2022

(d) provide priority and a right of way to public transport in key corridors to achieve the mode share targets stated in Brisbane City Council's Planning Scheme map E3 Transport Network DSS Mode Share Targets

(e) maintain or improve network coverage through provision, upgrading and maintenance of infrastructure, and

(f) locate future trunk infrastructure for the public transport (bus stops) network identified in the Brisbane City Council schedules of works or as part of the assessment of a development application.

4.5 Parks and land for community facilities

The desired standard of service for the parks network is as follows:

(a) provide an accessible network of parks and recreation facilities that meets the needs of the population (residents) and employees in accordance with the following:

  (i) the minimum size standard for the parks network stated in table 4.1, and

  (ii) where the provision of a new or upgraded park within the PDA is possible and appropriate.

(b) locate future trunk infrastructure for the parks network identified in the schedules of works in accordance with the following:

  (i) where a specific site is conceptually identified for a park in the schedules of works, in the specific location identified, and

  (ii) where an indicative location is conceptually identified for a park in the schedules of works for the parks network, in a location to be determined through a local planning process or as part of the assessment of a development application.

(c) embellish the parks network to complement the type and purpose of the park in accordance with the embellishment standard for the public parks network stated in table 4.2.

EDQ have adopted Brisbane City Council's desired standards of service for the land for community facilities network contained in the Brisbane City Plan 2014, as may be amended from time to time. The latest Standards can be accessed on the BCC website.

Table 4.1—Minimum size standard for the public parks network

Parks network	Area (hectares)		
	Area A Centres	Area B General urban	Area C Fringe
Informal use			
Local	0.2–0.5	0.5	N/A
District	5.0	5.0	5.0
Metro	5.0+	5.0+	5.0+
Urban common	0.3	0.2	N/A
Sport			
District	1.0–6.0	8.0	8.0
Metro	14.0	14.0	14.0

Table 4.2—Embellishment standard for the public parks network

Typical embellishments	Informal use park					Corridor link park			Informal recreation node (natural area park)		Sport park	
	Informal recreation park			Urban common	Botanic garden/ arboretum							
	Local	District	Metro	District/ Metro	District/ Metro	Local	District	Metro	District	Metro	District	Metro
Playground/play space	x x	x x	x x	x	x				x	x		
Picnic facilities	x x	x x	x x	x	x				x x	x x		
Kick-around space	x	x x	x x		x				x	x		
Barbecues		x x	x x	x	x				x x	x x		
Public toilets		x x	x x	x x	x x				x x	x x	x x	x x
Shade	x x	x x	x x	x x	x x	x	x x	x x	x x	x x	x x	x x
Taps/bubblers	x	x x	x x	x x	x x	x	x x	x x	x x	x x	x x	x x
Bins	x	x x	x x	x x	x x	x	x x	x x	x x	x x	x x	x x
Seating	x x	x x	x x	x x	x x	x	x x	x x	x x	x x		
Paths (pedestrian/ cycle)		x	x	x	x x	x	x x	x x	x	x		
Bridge					x	x	x	x				
Boardwalk		x	x		x	x	x	x	x	x		
Bike racks		x x	x x	x	x	x	x x	x x	x x	x x	x x	x x
Dog off leash		x	x									

Half court		x	x									
Rebound wall		x	x									
Skate facility		x	x									
Sports field/s											x x	x x
Sports court/s											x x	x x
Spectator seating											x x	x x
Boat ramp/s		x	x				x	x			x	x
Fishing platform/ pontoon		x	x				x	x			x	x
Earthworks, landscaping	x x	x x	x x	x x	x x	x	x x	x x	x	x	x x	x x
Garden beds	x	x x	x x	x x	x x						x	x
Internal roads		x x	x x		x				x x	x x	x x	x x
Internal car parks		x x	x x		x				x x	x x	x x	x x
Fencing	x x	x x	x x	x	x x	x	x x	x x	x x	x x	x x	x x
Lighting	x	x x	x x	x x	x x	x	x x	x x	x x	x x	x x	x x
Signage	x x	x x	x x	x x	x x	x	x x	x x	x x	x x	x x	x x
Fitness equipment	x	x	x	x		x	x	x			x	x
Irrigation					x x						x x	x x

Notes:
For the embellishment standard:

x x – Essential

x – Desirable where appropriate

5. Infrastructure planning

5.1 Water supply

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

- QUU Service Advice Notice, February 2016
- SEQ Water Supply and Sewerage Design & Construction Code, July 2013
- Brisbane City Plan 2014 Priority Infrastructure Plan Extrinsic Material Water Supply and Sewerage Networks, June 2014.

5.2 Sewerage

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

- QUU Service Advice Notice, February 2016
- SEQ Water Supply and Sewerage Design & Construction Code, July 2013, and
- Brisbane City Plan 2014 Priority Infrastructure Plan Extrinsic Material Water Supply and Sewerage Networks, June 2014.

5.3 Stormwater

Given no trunk infrastructure is envisaged as part of the existing development or future development within the Herston Quarter PDA, no detailed infrastructure planning has been undertaken. Each development within the PDA will be required to meet standard 'no net worsening' provisions through the construction of non-trunk infrastructure.

5.4 Transport

Planning of transport infrastructure to service development within the PDA is documented in the following reports:

- Road Network Assessment, Point8
- Brisbane City Plan 2014 Priority Infrastructure Plan Extrinsic Material Transport Network, June 2014.

Trunk infrastructure is represented by roads and intersections of higher-order road hierarchies, including Motorway, Arterial, Suburban, District roads. These road hierarchies are demonstrated in the Road Hierarchy Overlay contained within the Brisbane City Plan 2014. Within the road corridor, trunk infrastructure includes the formation, carriageway, footpaths, street trees and furniture, cycleways, bridges, in-road drainage and intersections with at least three arms of trunk roads.

Where transport upgrades required for the PDA intersect with other planned trunk infrastructure or development infrastructure (as per Brisbane City Council's or Queensland Urban Utilities infrastructure planning policies), the transport upgrade is to provide for or accommodate the efficient delivery of all planned infrastructure. This may include the provision of other planned trunk infrastructure or development infrastructure where the delivery of that additional infrastructure is determined to be the most efficient and cost-effective solution.

5.5 Parks and land for community facilities

Planning of parks and land for community facilities infrastructure to service development within the PDA was informed by the following reports, which were prepared for the neighbouring Bowen Hills PDA:

- Open Space Analysis, Ross Planning, September 2016
- Community Infrastructure Needs Assessment, Buckley Vann, March 2017
- Brisbane City Plan 2014 Priority Infrastructure Plan Extrinsic Material Community Purposes Network, June 2014.

These reports were drafted for the Bowen Hills PDA, however the findings are applicable to the Herston Quarter PDA as these areas are co-located and share the same constraints and opportunities. The reports concluded that given the existing urban development within the area, achievement of standardised provision or accessibility requirements of the DSS is not practicable within the spatial limitations of the PDA. The provision of additional open space or community facility opportunities within the PDA is not considered a feasible directive given the limited land space, combined with the notion that people are prepared to travel further afield than their local surrounds to access quality open space and community facilities. Additionally, there are substantial areas of quality open space and community facilities within the 4 km catchment of the PDA. Therefore, EDQ have adopted a needs-based approach to determine requirements for parks and land for community facilities in the PDA. This approach recognises a change in the open space expectations of residents seeking medium to high-density city living.

6. Infrastructure costs

The cost of infrastructure has been determined as follows.

6.1 Cost of land

No land components are applicable within the asset costings for any infrastructure proposed for any network in relation to the Herston Quarter PDA.

6.2 Cost of works

The cost of future infrastructure (works) was determined for each network as follows:

- **Sewerage** – Cost estimates were calculated using both project costs and unit rates methodologies. Cardno prepared cost estimates for assets S1 and S2 by utilising a unit rates methodology. These rates are detailed in table 6.1.

  Table 6.1—Sewerage network unit rates

Asset Description	Unit Rate Cost (2016 dollars) / Length(m)
Asset S1 - 450mm Gravity Main	$3,893
Asset S2 - 315mm Gravity Main	$4,502

  Asset S3 – RNA Bypass Gravity Sewer – was costed on a project cost basis to a total cost of $19,520,000. The costs allocated to the Herston Quarter PDA for the funding of the RNA Gravity Sewer are based on the proportionate ultimate demand attributable to the PDA on the bypass as detailed in table 6.2.

  Table 6.2—S3 RNA Bypass sewer cost allocation

Cost allocation authority	PDA Ultimate demand (EPs)	Cost apportionment share	Share of S1 – RNA Bypass sewer costs (2016 dollars)
Alternative source		96.66%	$18,868,774
EDQ – Herston Quarter	3,335	3.34%	$651,226

  All costs are provided in base year (2016) dollars.

- **Transport** – Project cost estimates prepared by Point8 in the Road Network Assessment. Costs are provided in base year (2016) dollars.

  Asset RD02 – Herston Road – The costs allocated to the Herston Quarter PDA for the funding of Herston Road are based on the proportionate ultimate demand attributable to the PDA.

- **Parks** – Cost estimates for the P1 Embellishment upgrade was calculated utilising a unit rates methodology, applying a rate of $211.72/m^2. Costs are provided in base year (2016) dollars.

6.3 On-costs allowance

On-costs represent the owner's project costs and may include master planning, survey, geotechnical investigations, design, project management, contract administration and environmental investigations. The on-costs allowances that have been applied to infrastructure costs in the PDA are stated in table 6.3.

Table 6.3 – On-cost allowance

Network	On-costs allowance
Sewerage	15%
Transport	15%
Parks and Land for Community Facilities	15%

6.4 Contingency allowance

A contingency allowance is included in the cost of future infrastructure works to deal with known risks. The contingency allowance typically reduces in accordance with the level of planning undertaken for the infrastructure item. The level of contingency allowance applied for infrastructure works in each network are stated in table 6.4.

Table 6.4 – Contingency allowance

Network	Contingency allowance
Sewerage	15%
Transport	Contingency allowances for the transport network were calculated for each infrastructure item, based on the design development phase and level of uncertainty associated with the project costs. These are as follows: • 20% for R1 - Butterfield Street • 30% for R2 - Herston Road
Parks and land for community facilities	15%

7. Development charges

Development charges are imposed on development in the PDA to fund trunk infrastructure and other services which have been provided or are planned to be provided to service the PDA. The following development charges apply in the PDA.

- General water supply network charge
- General sewerage network charge
- General stormwater network charge
- General transport network charge
- General parks and land for community facilities network charge.

The development charges have been calculated as follows.

7.1 General charges

The general charges fund the provision of trunk water supply, sewerage, stormwater, transport, parks and land for community facilities infrastructure. Charge rates have generally been adopted in accordance with the Brisbane City Council's Adopted Infrastructure Charges Resolution and within the prescribed maximum charges applicable under Schedule 16 of the *Planning Regulation 2017* in force at the time of adoption of the DCOP. This ensures that charges levied within the PDA are consistent with those applied by BCC and QUU within the surrounding area and take into account broader pre-existing network assumptions made by BCC in developing its AICR.

8. Infrastructure schedules of works

Appendix D provides a schedule of future trunk infrastructure for each network servicing the PDA. These schedules present the trunk infrastructure required to be provided in order to meet the future network demands (section 3) being generated within the PDA to the desired standard of service (section 4). These Schedules are to be in conjunction with the Plans for Trunk Infrastructure incorporated within the DCOP.

Appendix A – Planned densities

Planned density for residential uses

Column 1 Development scheme precinct	Column 2 Planned dwellings^	Column 3 Residential density (dwellings/ dev ha*)
Precinct 1 – Health	0	0
Precinct 2 – Residential and mixed use	154	1,313
Precinct 3 – Heritage core	262	1,019
Precinct 4 – Aged care and retirement living	203	1,159

Notes:
* Developable hectares have been based on building footprint
^ Dwellings includes both separate units and rooms.

Planned density for non-residential and mixed development zones

Column 1 Development scheme zone /area	Column 2 Development types	Column 3 Planned density (plot ratio) (GFA / precinct area)
Precinct 1 – Health	Medical services	6.1
Precinct 2 – Residential and mixed use	Commercial/retail	0.5
Precinct 3 – Heritage core	Commercial/retail	0.2
Precinct 4 – Aged care and retirement living	Residential care facility, medical services	2.1

Appendix B – Demand generation rates

Demand generation rates

Column 1 Use / Area	Column 2 Demand generation rate for an infrastructure network				
	Water supply network (EP)	Sewerage network (EP)	Stormwater quantity network (impervious fraction)*	Transport network (trips)	Parks and land for community facilities network (Persons)
Aged Care (per room)	1.79	1.79	–	2.484	0
Residential (per unit)	1.79	1.79	–	4.968	1.79
Medical Services – in-patients (per bed)	1.5	1.5	–	0.36	0
Medical Services – out-patients (per m^2 GFA)	0.015	0.015		0.36	0
Commercial / Retail (per m^2 GFA)	0.005565	0.005565	–	0.3132	0
Non-Residential (Unknown) (per m^2 GFA)	0.005565	0.005565	–	0.4032	0
Car Park (per m^2 GFA)	0	0	–	0	0
Precinct 1 (all uses)*	–	–	0.90	–	–
Precinct 2 (all uses)*	–	–	0.90	–	–
Precinct 3 (all uses)*	–	–	0.85	–	–
Precinct 4 (all uses)*	–	–	0.85	–	–

Notes:
* Stormwater quantity demand generation for all uses to be calculated separately to other networks based on the relevant precinct.

Appendix C – Demand projections

Existing and projected demand for the water supply network

Column 1 Service catchment[1]	Column 2 Existing and projected demand (EP)				
	2016 (base date)	2021	2026	2031	Ultimate development
Precinct 1 – Health	548	938	1,512	1,512	1,512
Precinct 2 – Residential and Mixed Use	0	0	281	281	281
Precinct 3 – Heritage Core	304	483	483	483	483
Precinct 4 – Aged Care and Retirement Living	155	155	557	1,059	1,059
TOTAL	1,007	1,576	2,833	3,335	3,335

Notes:
1 – Refer to Appendix F Service catchment map – Catchment Boundaries

Existing and projected demand for the sewerage network

Column 1 Service catchment[1]	Column 2 Existing and projected demand (EP)				
	2016 (base date)	2021	2026	2031	Ultimate development
Precinct 1 – Health	548	938	1,512	1,512	1,512
Precinct 2 – Residential and Mixed Use	0	0	281	281	281
Precinct 3 – Heritage Core	304	483	483	483	483
Precinct 4 – Aged Care and Retirement Living	155	155	557	1,059	1,059
TOTAL	1,007	1,576	2,833	3,335	3,335

Notes:
1 – Refer to Appendix F Service catchment map – Catchment Boundaries

Existing and projected demand for the stormwater network

Column 1 Service catchment[1]	Column 2 Existing and projected demand (imp m²)				
	2016 (base date)	2021	2026	2031	Ultimate development
Precinct 1 – Health	13,754	14,024	14,293	14,563	14,563
Precinct 2 – Residential and Mixed Use	1,588	1,588	1,588	1,588	1,588
Precinct 3 – Heritage Core	10,203	10,932	11,661	12,390	12,390
Precinct 4 – Aged Care and Retirement Living	8,174	11,239	14,305	17,370	17,370
TOTAL	33,719	37,783	41,846	45,910	45,910

Notes:
1 – Refer to Appendix F Service catchment map – Catchment Boundaries

Existing and projected demand for the transport network

Column 1 Service catchment[1]	Column 2 Existing and projected demand (trips)				
	2016 (base date)	2021	2026	2031	Ultimate development
Precinct 1 – Health	13,140	21,763	35,543	35,543	35,543
Precinct 2 – Residential and Mixed Use	0	0	1,061	1,061	1,061
Precinct 3 – Heritage Core	2,088	2,314	2,314	2,314	2,314
Precinct 4 – Aged Care and Retirement Living	2,280	2,280	1,277	13,332	13,332
TOTAL	17,509	26,358	40,194	52,249	52,249

Notes:
1 – Refer to Appendix F Service catchment map – Catchment Boundaries

Existing and projected demand for the parks and land for community facilities network

Column 1 **Service catchment**[1]	**Column 2** **Existing and projected demand (persons)**				
	2016 (base date)	**2021**	**2026**	**2031**	**Ultimate development**
Precinct 1 – Health	0	0	0	0	0
Precinct 2 – Residential and Mixed Use	0	0	276	276	276
Precinct 3 – Heritage Core	286	468	468	468	468
Precinct 4 – Aged Care and Retirement Living	68	68	363	363	363
TOTAL	354	536	1,108	1,108	1,108

Notes:
1 – Refer to Appendix F Service catchment map – Catchment Boundaries

Appendix D – Schedules of works (detailed)

Schedule of future trunk infrastructure works - Sewerage

DCOP ID	Infrastructure Type	Infrastructure Description	Estimated timing	Land Cost	Works Base Cost	Works On Costs	Works Contingency	Total Works Cost[1]	Establishment Cost[2]
S01	Gravity Main	Butterfield Street	2021	$0	$2,881,065	$432,160	$496,984	$3,810,208	$3,810,208
S02	Gravity Main	Herston Road	2021	$0	$3,151,236	$472,685	$543,588	$4,167,510	$4,167,510
S03	Gravity Main	RNA By-Pass	2019	$0	$19,520,000	$ 0	$ 0	$651,226[3]	$651,226
								TOTAL	**$8,628,944**

Schedule of future trunk infrastructure works - Transport

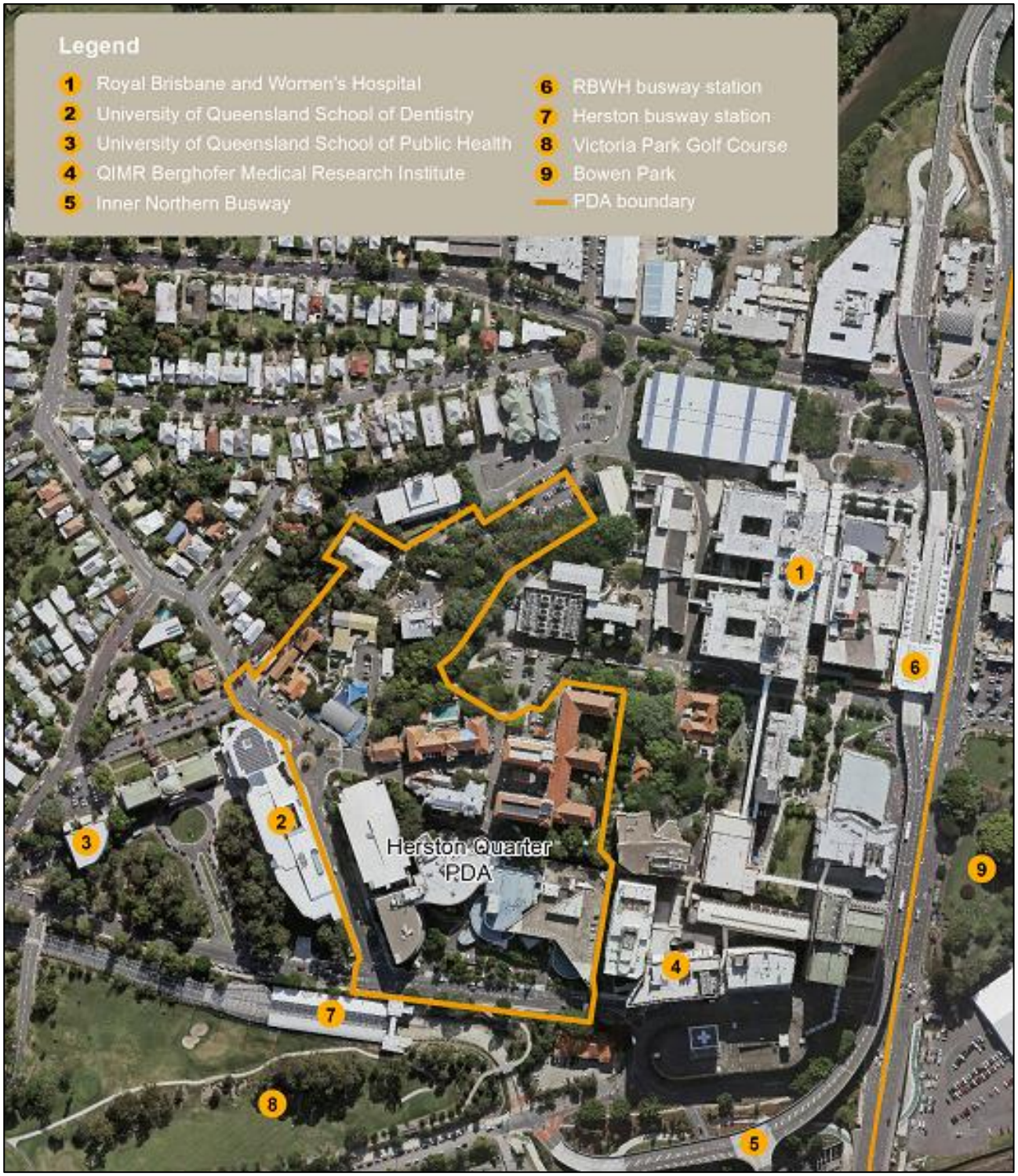
DCOP ID	Infrastructure Type	Infrastructure Description	Estimated timing	Land Cost	Works Base Cost	Works On Costs	Works Contingency	Total Works Cost[1]	Establishment Cost[2]
R01	District Road	Butterfield Street	2031	$0	$548,000	$82,200	$126,040	$756,240	$756,240
R02	Suburban Road	Herston Road	2031	$0	$644,930	$96,740	$222,501	$964,170	$964,170
								TOTAL	**$1,720,410**

Schedule of future trunk infrastructure works – Parks and Land for Community Facilities

DCOP ID	Infrastructure Type	Infrastructure Description	Estimated timing	Land Cost	Works Base Cost	Works On Costs	Works Contingency	Total Works Cost[1]	Establishment Cost[2]
P01	Local Recreation Park	Embellishment upgrade	2021	$0	$783,365	$117,505	$135,130	$1,036,000	$1,036,000
								TOTAL	**$1,036,000**

Notes for all tables above:
1 – The total works cost is the sum of the following: construction cost, construction on costs and construction contingency.
2 – The establishment cost is the sum of the following: land cost and total works cost. This is expressed in current cost terms as at the base date
3 – Asset S3 – RNA Bypass Gravity Sewer –The works cost above is only that proportion of the total cost of the RNA Bypass Gravity Sewer which is to be levied on the Herston Quarter PDA through its DCOP.

Appendix E – Herston Quarter PDA boundary map



Source: Department of Infrastructure, Local Government and Planning, 2016, Herston Quarter PDA Boundary, Map generated by Spatial Services team

Appendix F – Service catchment maps