

THE MILL MORETON BAY

The Mill at Moreton Bay PDA Infrastructure Plan Background Report

19 October 2017



**Queensland
Government**

THE MILL

MORETON

BAY

© The State of Queensland, 19 October 2017. Published by the Department of Infrastructure, Local Government and Planning, 1 William Street, Brisbane Qld 4000, Australia.

Licence: This work is licensed under the Creative Commons CC BY 4.0 Australia licence. To view a copy of this licence, visit www.creativecommons.org/licenses/by/3.0/au/deed.en. Enquiries about this licence or any copyright issues can be directed to the department by email to info@dilgp.qld.gov.au or in writing to PO Box 15009, City East, Qld 4002. Attribution: The State of Queensland, Department of Infrastructure, Local Government and Planning.

The Queensland Government supports and encourages the dissemination and exchange of information. However, copyright protects this publication. The State of Queensland has no objection to this material being reproduced, made available online or electronically but only if it is recognised as the owner of the copyright and this material remains unaltered.

The Queensland Government is committed to providing accessible services to Queenslanders of all cultural and linguistic backgrounds. If you have difficulty understanding this publication and need a translator, please call the Translating and Interpreting Service (TIS)



Queensland
Government

THE MILL

MORETON

BAY

National) on telephone 131 450 and ask them to telephone Queensland Department of Infrastructure, Local Government, and Planning on 13 QGOV (13 74 68).

Disclaimer: While every care has been taken in preparing this publication, the State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained within. To the best of our knowledge, the content was correct at the time of publishing.

An electronic copy of this report is available on the Department of Infrastructure, Local Government and Planning's website at <https://www.statedevelopment.qld.gov.au/economic-development-qld/priority-development-areas-and-projects/priority-development-areas/the-mill-at-moreton-bay>



Queensland
Government

Contents – IPBR REPORT

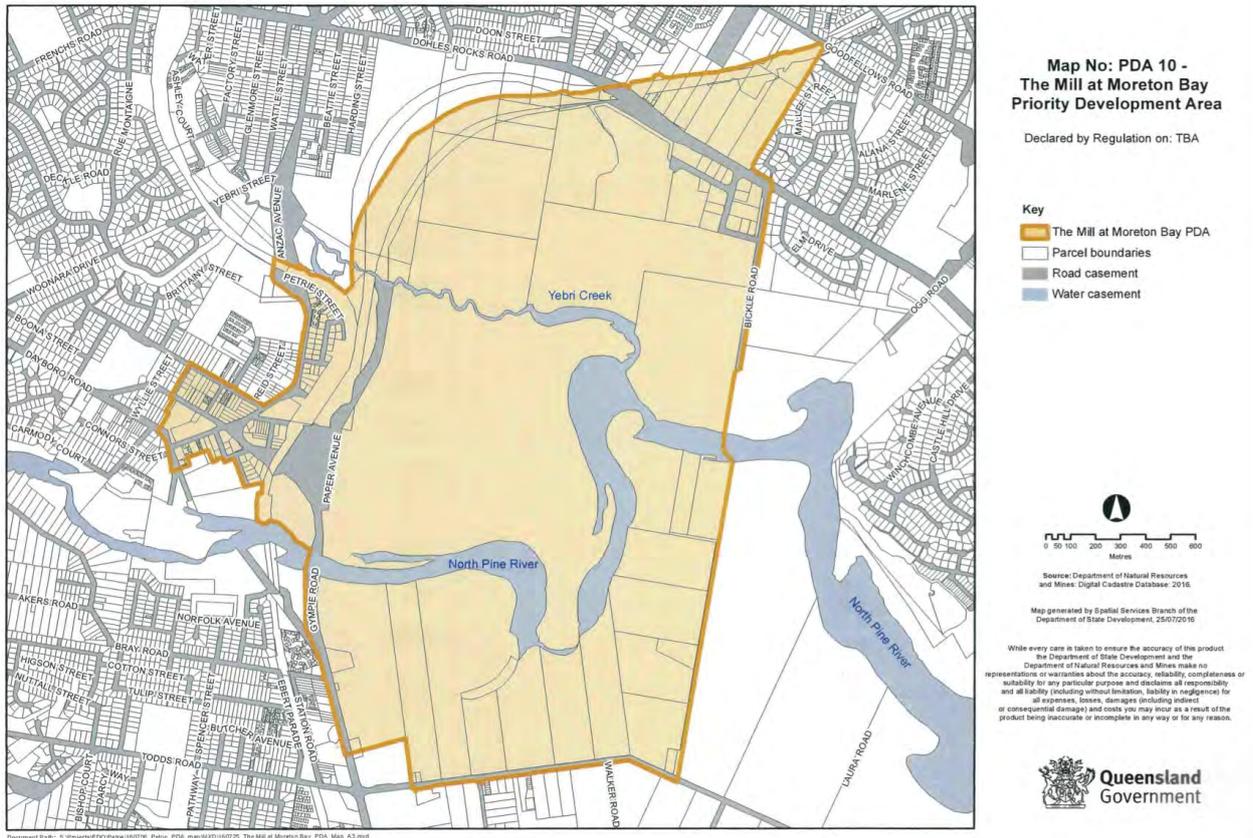
1. Background	1
1.2 Purpose of report	2
2. Growth projections	5
2.1 Introduction	5
2.2 Growth projection years	5
2.3 Planned densities.....	5
2.4 Development constraints.....	6
2.5 Growth rates	7
2.6 Growth projections summary.....	10
3. Demand Generation Rates.....	13
4. Desired standard of service.....	15
4.1 Water supply	15
4.2 Wastewater	15
4.3 Stormwater	15
4.4 Transport	16
4.5 Parks and land for community facilities	18
5. Infrastructure planning.....	20
5.1 Water supply	20
5.2 Sewerage.....	20
5.3 Stormwater	20
5.4 Transport	21
5.5 Parks and land for community facilities	21
6. Infrastructure costs.....	22
6.1 Cost of land.....	22
6.2 Cost of works	22
6.3 On-costs allowance.....	23
6.4 Contingency allowance	23
7. Development Charges & Infrastructure Funding	24
7.1 Development Charges	24
7.2 Funding vs Infrastructure Costs.....	24
7.3 Funding of non-DCOP infrastructure	24
8. Infrastructure schedules of works.....	25
Appendix A – Planned densities	26
Appendix B - Development constraints.....	28
Appendix C – Demand generation rates – Unitywater	31
Appendix D – Schedules of works (detailed)	36
Appendix E – INFRASTRUCTURE MAPS.....	45
Appendix F – THE MILL AT MORETON BAY Boundary Map	50

1. Background

The Mill at Moreton PDA was declared by a regulation on 1 September 2016. The development scheme gained took effect when it was approved under a regulation on 18 August 2017. The DCOP commenced on 19 October 2017.

The PDA covers the areas as noted in the map below.

Figure 1.1 The Mill at Moreton Bay PDA area



The infrastructure networks to be upgraded to support the PDA are provided in the Infrastructure Plan to be contained in the development scheme and generally cover the following:

- Transport including
 - Roads and intersections
 - Cycling awareness infrastructure
 - Pedestrian infrastructure
- Construction of public realm including:
 - Parks
- Stormwater works and treatment
- Sewer trunk works
- Water supply trunk works

1.1 Purpose of report

This report documents supporting information relevant to infrastructure planning and charging in the Mill at Moreton Bay PDA. This report will assist to interpret The Mill at Moreton Bay Development Scheme Infrastructure Plan and Development Charges and Offset Plan (DCOP), and to understand how the planning and costing of DCOP infrastructure was undertaken.

To assist in the interrogation of this report and the assumptions contained within, some of the information presented is split into two distinct areas of the PDA. These areas comprise the development area covered by the Mill Redevelopment Concept Plan and the area that makes up the balance of the PDA. Figure 1.2.1 illustrates the Concept Plan.

Figure 1.2.1 The Mill Concept Plan Area

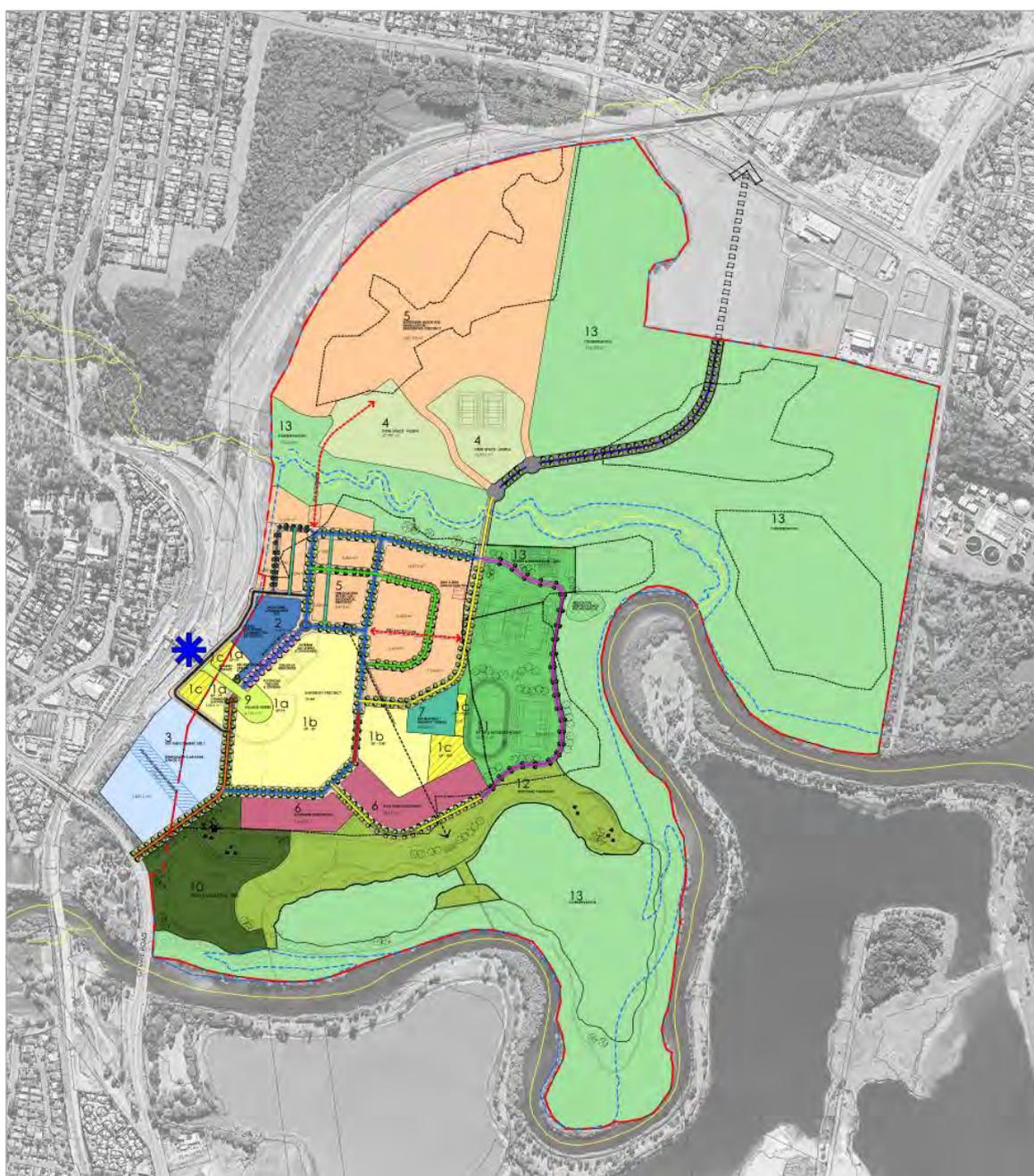
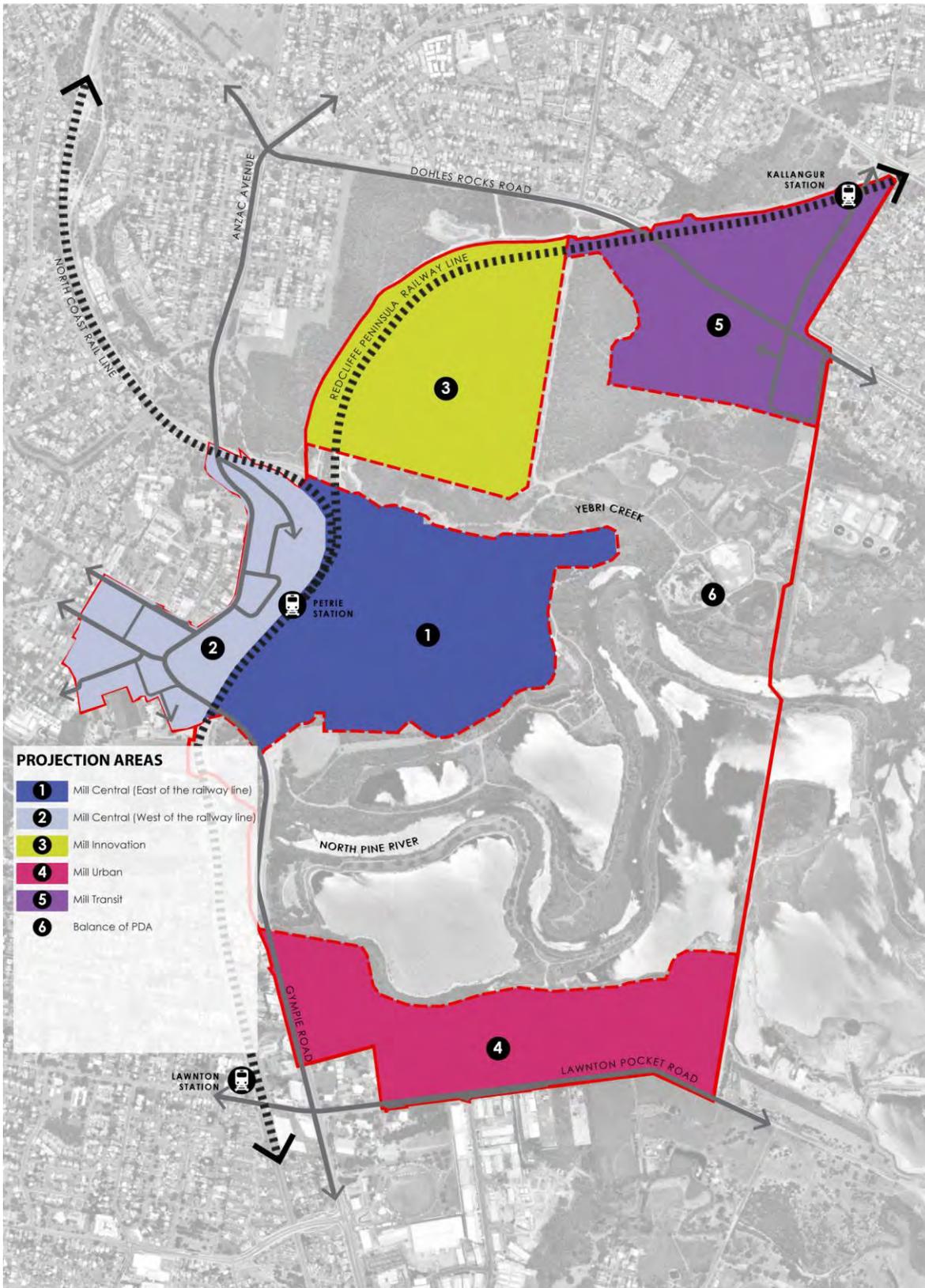


Figure 1.2.2 shows the PDA Precinct Plan. These Precincts are used in this Report and reflect the Precincts used in the Development Scheme.

Figure 1.2.2 PDA Precinct Plan



2. Growth projections

2.1 Introduction

The projections of future residential and non-residential growth provide 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.

2.2 Growth projection years

The PDA is expected to be developed over 25 years between 2017 and 2041. Some development has already occurred in the Mill Urban precinct at the southern end of the PDA in line with existing development approvals. Design of the entry into the Mill Central precinct via Paper Avenue is underway and construction works are due to commence in 2018 with development potentially occurring in 2019/2020.

2.3 Planned densities

The projected growth that may be achieved on premises within the PDA was calculated based on the realistic type and density of development allowable under the PDA development scheme (the planned density) and also that allowed for under the local planning scheme.

The Concept Plan area is located within the area identified as Mill Central East and Mill Innovation Precincts on Figure 1.2.2 above.

For the land outside of the Concept Plan area, the planned densities allowable under the planning scheme were applied to the following precincts identified on the map below:

- Mill Transit;
- Mill Urban; and
- Mill Central West

Appendix A provides more detailed information on the planned densities for the land outside the Concept Plan area and Tables 2.2 to 2.5 provide a summary of the current yields and proposed additional yield in the PDA.

For land within the Concept Plan area, the concept planning aimed to achieve a vibrant destination by providing a range of uses close to the core of the PDA. The concept plan included a commercial review of potential uses and take up rates and allowed for reasonably high densities and yield to maximise the use of existing infrastructure including the strong public transport link.

The table below provides a summary of the projected yields for the PDA.

Table 2.1 – PDA Projected Development Yields

Precinct	Unit Type	Existing Development	Future Non Res Yield (GFA m2)	Total Non Res.	Future Large Dwell. (3+ beds)	Future Small Dwell. (1&2 beds)	Total Res.
Inside the Concept Plan Area							
Mill Central East of Railway line)	Commercial	-	72,565	72,565			
(all other stages)	Mixed Use	-	50,698	50,698			
	Retail	-	14,003	14,003			
	Residential		-		336		336
	Residential					621	621
Mill Innovation	Commercial	-		-			
(stage 2 only)	Mixed Use	-		-			
	Retail	-	245,700	245,700			
	Residential						0
	Residential						0
Outside the Concept Plan Area							
Mill Transit	Commercial	-	240	240			
	Industry	9,155	60,304	69,459			
	Retail		701	701			
	Residential				61		61
	Residential					245	245
Mill Urban	Commercial			0			
	Industry			0			
	Retail	120		120			
	Residential	3			647		650
	Residential					500	500
Mill Central (West of Railway line)	Commercial	10,760	3,728	14,488			
	Industry	4,795	1,030	5,825			
	Retail	12,581	486	13,067			
	Residential	171			3		174
	Residential					256	256
	Total Non Res.	37,411	449,455	486,866			
	Total Res	174			1,047	1,622	2,843

2.4 Development constraints

The projected growth for each area within the PDA has been calculated by applying the planned density to the unconstrained land/developable area under the PDA development scheme. The following constraints have been considered in determining the developable area:

- Medium risk storm tide inundation area

- High risk storm tide inundation area
- High risk flood hazard area
- Erosion prone area (State Planning Policy)
- Wetland
- Riparian and Wetland Setbacks
- Very high Potential Bushfire Intensity
- Neighbourhood hub
- Community activity
- Wastewater treatment site buffer - 400m
- High voltage electricity line buffer
- Landfill site
- Electricity supply substation buffer - 10m
- Overland flow path
- Medium risk flood hazard area
- MLES - Matters of Local Environmental Significance
- MSES - Matters of State Environmental Significance
- Pumping station buffer

The Development constraints were mapped in the local planning scheme and taken into consideration in the preparation of the proposed Development scheme. Appendix B states the status of each of the development constraints.

2.5 Growth rates

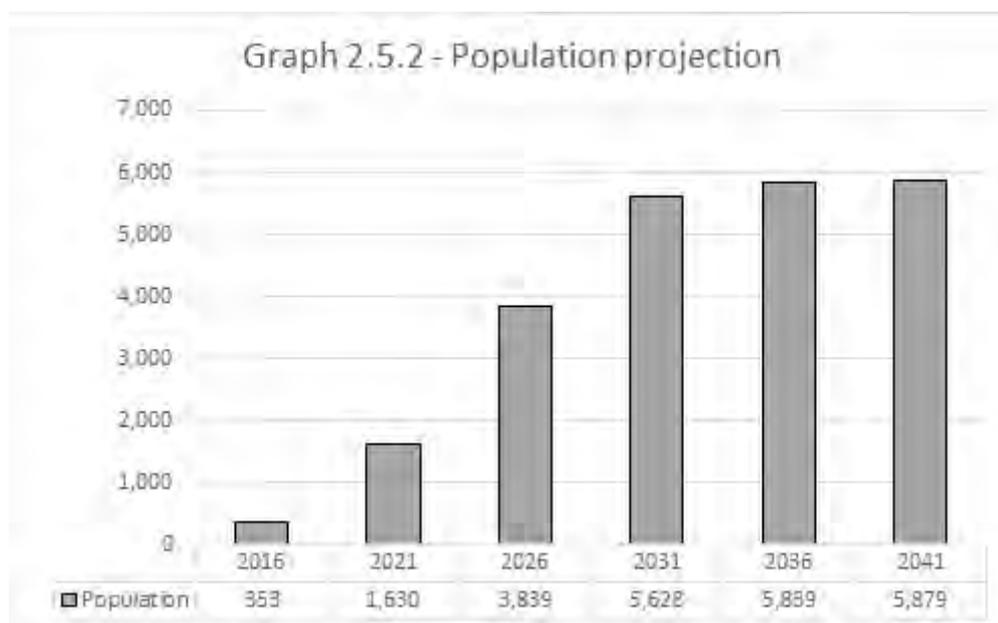
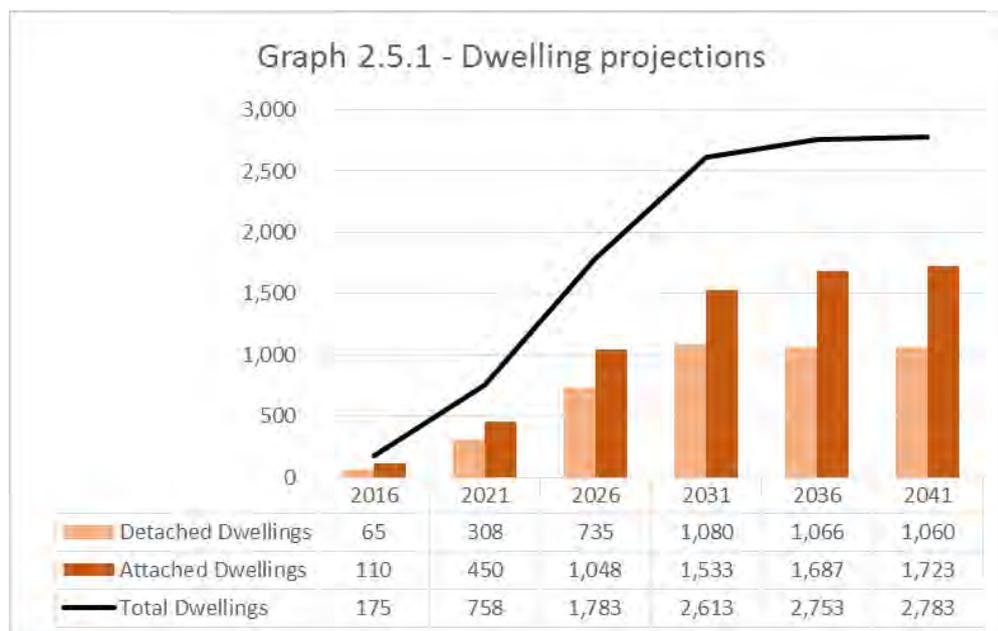
The assumed rate of residential growth was initially based on the Queensland Government 2015 edition population projections released in April 2016. Refer to:

<http://www.qgso.qld.gov.au/subjects/demography/population-projections/reports/qld-govt-pop-proj-lga-sa2/index.php>

<http://www.qgso.qld.gov.au/products/reports/qld-govt-pop-proj-lga-sa2/qld-govt-pop-proj-lga-sa2-2015.pdf>

The 2015 dwelling projections were augmented by detailed lot by lot analysis of existing development, development applications, and development potential based on the local planning scheme provisions, constraints analysis and the Mill PDA planning investigations.

Each lot was determined to either be developed, or subject to development approval, or having future development potential. Where a lot was subject to a development application/development approval the lot yield and timing was based on the development application information. Where there was no development application but the lot was assessed as having development potential the dwelling projections were allocated to lots based on an assessment of the ease of development of the lot taking into consideration whether the lot was vacant, lot size and site cover, type of dwelling on the lot, evidence of recent development activity/building approvals in the area affecting similar lots, and lots held in common ownership. The graph below shows dwelling projections for the PDA. The dwelling projection assumes an 11.7% compound growth rate of new dwellings and 11.9% population growth over the next 25 years.

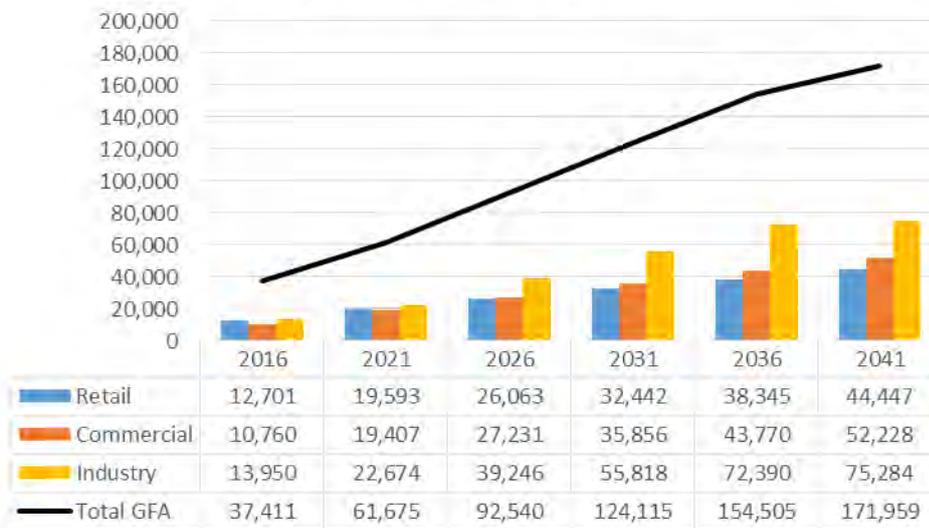


GFA and employment growth projections in the PDA are shown in Graph 2.5.3 and 2.5.4 respectively. Employment projections were initially based on the Queensland Treasury projections in the SEQ Report. These projections were revised based on:

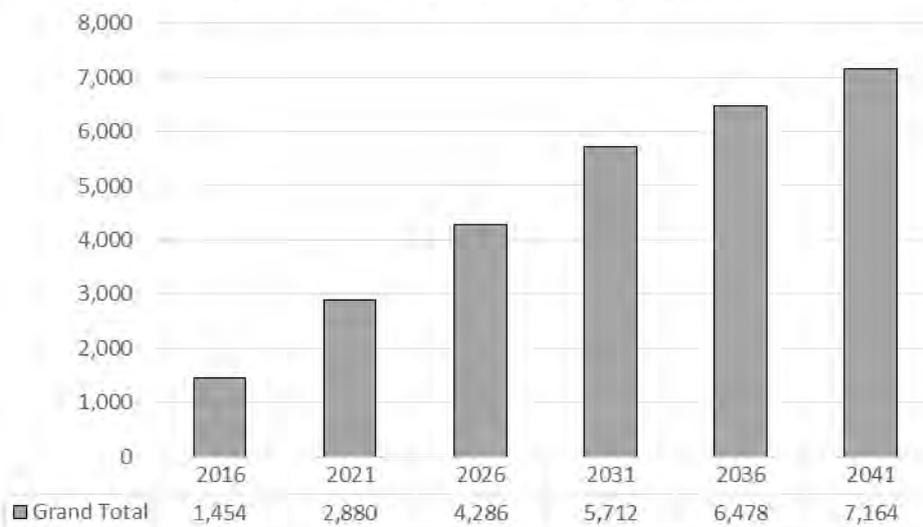
- the Moreton Bay Regional Council Retail and Commercial Centres Strategy Report prepared by Economic Associates - <https://www.moretonbay.qld.gov.au/uploadedFiles/moretonbay/development/planning/mbrc-plan/RetailCommercialSectorsNeedsAssessmentReport.pdf> ; and
- the Future Land Demand Study prepared by the AEC Group - <https://www.moretonbay.qld.gov.au/uploadedFiles/moretonbay/development/planning/Future-Land-Demand.pdf>; and
- the Mill PDA planning investigations.

The Mill PDA employment growth assumption is for 6.6% compound employment growth over the next 25 years (2017 – 2041).

Graph 2.5.3 - GFA projections



Graph 2.5.4 - Employment projections



2.6 Growth projections summary

An assessment has been completed of the potential delivery of the PDA by uses and precincts over the predicted 25-year development life of the PDA. These growth projections are summarised in Tables 2.2-2.4 below.

Table 2.2 Existing and projected population

Precinct	Unit Type	Existing	Persons (3+ bed)	Persons (1 & 2 bed)	Total	Period				
						2021	2026	2031	2036	2041
Inside the Concept Plan Area										
Mill Central East of Railway line)	3+ beds		907	0	907	405	907	907	907	907
(all other stages)	1-2 beds	-	0	1,117	1,117	162	720	1,118	1,118	1,118
Mill Innovation	3+ beds		0	0	0	0	0	0	0	0
(stage 2 only)	1-2 beds	-	0	0	0	0	0	0	0	0
Outside the Concept Plan Area										
Mill Transit	3+ beds		165	0	165	0	165	165	165	165
	1-2 beds	-	0	441	441	126	374	374	441	441
Mill Urban	3+ beds	3	1,747	0	1,747	413	1,566	1,728	1,755	1,755
	1-2 beds		0	900	900	248	812	884	900	900
Mill Central (West of Railway line)	3+ beds	171	8	0	8	462	470	470	470	470
	1-2 beds		0	461	461	32	126	205	403	461
TOTAL	Total Res	174	2,827	2,919	5,746	1,849	5,140	5,851	6,159	6,216

Table 2.3 Existing and projected residential dwellings

Precinct	Unit Type	Existing	Future Large Dwell. (3+ beds)	Future Small Dwell. (1 & 2 beds)	Total	Period				
						2021	2026	2031	2036	2041
Inside the Concept Plan Area										
Mill Central East of Railway line)	3+ beds		336		336	150	336	336	336	336
(all other stages)	1-2 beds	-		621	621	90	400	621	621	621

Precinct	Unit Type	Existing	Future Large Dwell. (3+ beds)	Future Small Dwell. (1 & 2 beds)	Total	Period				
Mill Innovation	3+ beds				0	-	-	-	-	-
(stage 2 only)	1-2 beds	-			0	-	-	-	-	-
Outside the Concept Plan Area										
Mill Transit	3+ beds		61		61	-	61	61	61	61
	1-2 beds	-		245	245	70	208	208	245	245
Mill Urban	3+ beds	3	647		647	153	580	640	650	650
	1-2 beds			500	500	138	451	491	500	500
Mill Central (West of Railway line)	3+ beds	171	3		3	171	174	174	174	174
	1-2 beds			256	256	18	70	114	224	256
TOTAL	Total Res	174	1,047	1,622	2,669	790	2,280	2,645	2,811	2,843

Table 2.4 Existing and projected employees

Precinct	Use	Existing	Employees	Total Employ.	Period					
					2021	2026	2031	2036	2041	
Inside the Concept Plan Area										
Mill Central East of Railway line)	Commercial	0	2,419	2,419	302	1,209	2,419	2,419	2,419	
(all other stages)	Mixed Use	-	1,014	1,014	169	1,014	1,014	1,014	1,014	
	Retail	-	180	180	60	180	180	180	180	
Mill Innovation	Commercial	0	0	0	0	0	0	0	0	
(stage 2 only)	Mixed Use	-	4,914	4,914	2,000	4,914	4,914	4,914	4,914	
	Retail	-	-	-	-	-	-	-	-	
Outside the Concept Plan Area										
Mill Transit	Commercial	0	8	8	0	8	8	8	8	
	Industry	153	1,005	1,158	285	560	835	1,111	1,158	
	Retail	-	9	9	-	9	9	9	9	
Mill Urban	Commercial	0	0	0	0	0	0	0	0	
	Industry	-	-	-	-	-	-	-	-	
	Retail	2	-	2	2	2	2	2	2	
Mill Central (West of Railway line)	Commercial	359	124	483	395	402	439	452	483	
	Industry	80	17	97	92	95	95	96	97	

Precinct	Use	Existing	Employees	Total Employ.	Period				
	Retail	161	6	168	161	168	168	168	168
	Total Employees	754	9,696	10,450	3,466	8,560	10,081	10,370	10,450

Table 2.5 Existing and projected non-residential floor space

Precinct	Use	Existing	Future Non Res Yield (GFA m2)	Total Non Res.	Period				
					2021	2026	2031	2036	2041
Inside the Concept Plan Area									
Mill Central East of Railway line)	Commercial	-	72,565	72,565	9,071	36,282	72,565	72,565	72,565
(all other stages)	Mixed Use	-	50,698	50,698	8,450	50,698	50,698	50,698	50,698
	Retail	-	14,003	14,003	4,668	14,003	14,003	14,003	14,003
Mill Innovation	Commercial	-	-	-	-	-	-	-	-
(stage 2 only)	Mixed Use	-	245,700	245,700	100,000	245,700	245,700	245,700	245,700
	Retail	-	-	-	0	0	0	0	0
Outside the Concept Plan Area									
Mill Transit	Commercial	-	240	240	-	240	240	240	240
	Industry	9,155	60,304	69,459	17,104	33,613	50,122	66,631	69,459
	Retail		701	701	0	701	701	701	701
Mill Urban	Commercial			0	-	-	-	-	-
	Industry			0	0	0	0	0	0
	Retail	120		120	120	120	120	120	120
Mill Central (West of Railway line)	Commercial	10,760	3,728	14,488	11,835	12,055	13,155	13,550	14,488
	Industry	4,795	1,030	5,825	5,546	5,686	5,686	5,755	5,825
	Retail	12,581	486	13,067	12,581	13,067	13,067	13,067	13,067
	Total Non Res.	37,411	449,455	486,866	169,374	412,165	466,057	483,030	486,866

3. Demand Generation Rates

The demand generation rates used in the supporting technical reports for Council trunk infrastructure networks are provided below.

Table 3.1 Demand generation rate for a Council's trunk infrastructure networks

Area Classification		Demand generation rates for a trunk infrastructure network		
Zone	Precinct	Transport network (trips per day /dev ha)	Parks and land for community facilities network (ha/1000 persons)	Stormwater network (imp ha /dev ha)
General residential zone	Coastal Communities Suburban	90	3.3	0.6
	Next generation	120	3.3	0.75
	Urban	155	3.3	0.9
Centre zone	Caboolture Morayfield Strathpine District centre	310	3.3	0.9
Emerging community zone	Interim	5	3.3	0.2
	Transition	120	3.3	0.75
Rural zone	Agricultural Woodforia and Abbey surrounds	1	2.3	0.05
	Hamlets	100	2.3	0.5
	Cedarton Forester's Cooperative	25	2.3	0.2
Rural residential zone		10	2.8	0.2
Township zone	Township residential Township centre	100	3.3	0.5
Industry zone	General industry	50	N/A	0.9
	Marine industry	35	N/A	0.9
	Mixed industry and business	35	N/A	0.9
	Restricted industry	40	N/A	0.9

Area Classification		Demand generation rates for a trunk infrastructure network		
Zone	Precinct	Transport network (trips per day /dev ha)	Parks and land for community facilities network (ha/1000 persons)	Stormwater network (imp ha /dev ha)
	Light industry	35	N/A	0.9
Centres	Caboolture Morayfield Strathpine District centre Local centre Specialised centre	1400	N/A	0.9
Township zone	Township industry Township centre Township convenience	Not stated	N/A	0.9

The demand Generation rates used in the supporting technical report for Unitywater Trunk Networks are provided In Appendix C.

Whilst the demand projections for each network are not provided in this report, they have been addressed in the supporting technical reports.

4. Desired standard of service

The desired standards of service for design and construction of a trunk infrastructure network are as outlined in MBRC'S Priority Infrastructure Plan (PIP)/ Local Government Infrastructure Plan (LGIP) and Unitywater's Netserv Plan.

The following summarises references for the desired standards of service for these networks.

4.1 Water supply

The design and construction of the water supply network is to be in accordance with the desired standards of service stated in Section 2.2 of Appendix B Schedule of Works of the Netserv Plan Part A.

4.2 Wastewater

The design and construction of the wastewater network is to be in accordance with the desired standards of service stated in Section 2.6 of Appendix B Schedule of Works of the Netserv Plan Part A.

4.3 Stormwater

The design and construction of the stormwater network is to be in accordance with the following:

- Integrated Design Planning Scheme Policy - Appendix C;
- Collect and convey stormwater flows for both major and minor flood events from existing and future land use in a manner that protects life and does not cause nuisance or inundation of habitable rooms;
- Design the stormwater network to comply with council's adopted standards identified in the planning scheme, which generally accord with the Queensland Urban Drainage Manual;
- Design road crossing structures to provide an appropriate level of flood immunity for a flood event in accordance with Council's adopted standards identified in the planning scheme;
- Meet water quality objectives for receiving waters at all times;
- Meet the regulatory requirements of the EP Act and EPP Water (and possibly SPP for Healthy Waters) which prescribes the development of a TWCM Plan and to achieve WQOs to protect Environmental Values;
- Meet commitments of the SEQ Healthy Waterways Strategy 2007-2012, which aims to achieve waterways and catchments that are healthy ecosystems supporting the livelihoods and lifestyles of people in SEQ by 2026;

- Meet targets in the SEQ Natural Resources Management Plan that are aligned with Desired Regional Outcomes and policies for Water Management in the SEQ Regional Plan; and
- Implement planning and management of urban stormwater to comply with the design objectives as set out in the SEQ Regional Plan 2009-2031 Implementation Guideline No. 7: Water Sensitive Urban Design. This Guideline is aligned with principles and policies for Total Water Cycle Management and Desired Regional Outcomes for Water Management in the SEQ Regional Plan.

4.4 Transport

The design and construction of the transport network is to be in accordance with the following:

Measure	Planning criteria (qualitative standards)	Design criteria (quantitative standards)
Road network design/ planning standards	<p>The road network provides a functional urban and rural hierarchy that supports settlement patterns, commercial and economic activities, and freight movement. Design of the road system will comply with established codes and standards. In Activity Centres (place type 1) and to other key destinations the urban road network will promote safe, accessible and convenient walking and cycling connections, and effective public transport operations as part of an integrated and cohesive movement network.</p> <p>Commensurate with the highly urbanised environment within Activity Centres, a lower level of service for motor vehicles and freight is considered acceptable to promote an improved walking and cycling environment and the greater use of public passenger and active transport modes. In comparison a higher level of service is considered acceptable in “place type 2 and 3” where the balance of users requires a greater need to ensure movement across the</p>	<ul style="list-style-type: none"> • Integrated Design Planning Scheme Policy - Appendix A; • Interim Guide to Road Planning and Design Practice developed by the Department of Transport and Main Roads • Australian Standards • AUSTRROADS guides • Level of Service for road links and intersections refer to table 4.4.2.2 of the PIP/LGIP. • Desired standard of service for functional local government road elements refer to tables 4.4.2.3, 4.4.2.4, 4.4.2.5 and 4.4.2.6 for speed, access, parking, intersections and turning facilities of the PIP/LGIP.

Measure	Planning criteria (qualitative standards)	Design criteria (quantitative standards)
	network for other traffic including freight.	
Public transport design/ planning standards	<p>New urban development is designed to achieve safe and convenient walking distances to existing or potential bus stops, or existing or proposed demand responsive public transport routes.</p> <p>Promotes the provision of public transport infrastructure consistently across the movement network that is compatible with land uses, demand and is fully accessible.</p>	<ul style="list-style-type: none"> • Integrated Design Planning Scheme Policy - Appendix A; • Design accords with the performance criteria set by Department of Transport and Main Roads • Design accords with the performance criteria and guidance set out in TransLink's Public Transport Infrastructure Manual (PTIM) • AUSTRROADS guides for road-based public transport and high-occupancy vehicles.
Cycleway and pathway design/ planning standards	<p>Cycle ways and pathways provide a safe and convenient network that encourages walking and cycling as acceptable and attractive alternatives.</p> <p>Design of the network will comply with established codes and standards. Promote networks that are functional and connected and that reflect desire lines to key destinations, and meet appropriate standards of convenience, comfort and amenity.</p>	<ul style="list-style-type: none"> • Integrated Design Planning Scheme Policy - Appendix A; • Australian Standards • AUSTRROADS Guide to Road Design – Part 6A: Pedestrian and Cycle Paths. • Complete Streets • Desired Standard of Service for Pathways: refer to table 4.4.2.7 of the PIP/LGIP; • Desired Standard of Service for cycling

Measure	Planning criteria (qualitative standards)	Design criteria (quantitative standards)
		provision: refer to table 4.4.2.8 of the PIP/LGIP; <ul style="list-style-type: none"> • Desired Standard of Service for Pedestrian Crossings: refer to table 4.4.2.9 of the PIP/LGIP;

4.5 Parks and land for community facilities

The design and construction of parks and land for community facilities is to be in accordance with the following:

Measure	Planning criteria (qualitative standards)	Design criteria (quantitative standards)
Accessibility elements	Provide an accessible network of parks, open space, and community infrastructure that meets the needs of residents and visitors in accordance with the standards in Tables 4.4.3.4, accessibility standards in Tables 4.4.3.1 and 4.4.3.5 and rates of provision identified in Tables 4.4.3.2 and 4.4.3.6. The targets identify the expected quantum of land required to meet community demands for sports and recreation parks based on rate of population and are related to the place types: <ul style="list-style-type: none"> (a) AC: Activity Centre (b) UN: Urban Neighbourhood (c) NGN: Next Generation Neighbourhood (d) SN: Suburban Neighbourhood 	<ul style="list-style-type: none"> • Integrated Design Planning Scheme Policy - Appendix B • For open space, accessibility design standards are identified in Table 4.4.3.5 of the PIP/LGIP. • For community facilities, accessibility design standards are identified in Table 4.4.3.1 of the PIP/LGIP.

Measure	Planning criteria (qualitative standards)	Design criteria (quantitative standards)
	(e) RR: Rural Residential (f) RT: Rural Township (g) CT: Coastal Township (h) RA: Rural Area (i) MRFW: Mountain Ranges, Forests and Waterways (j) KER: Key Extractive Resource Areas (k) CR: Coast and Riverlands (l) EEA: Enterprise and Employment Areas (m) SA: Special Areas.	
Functional elements	Land for community facilities is provided to a standard that supports a diverse range of community services - promoting activities to meet community expectations. This includes ensuring land is of an appropriate size, configuration and slope, and has an acceptable level of flood immunity.	<ul style="list-style-type: none"> • Integrated Design Planning Scheme Policy - Appendix B; • For open space, functional design standards are identified in tables 4.4.3.2, 4.4.3.7 of the PIP/LGIP; • For community facilities, functional design standards are identified tables 4.4.3.6 and 4.4.3.7 of the PIP/LGIP; • The minimum flood immunity for land for community facilities is all facilities are to be located above Q100 level.

5. Infrastructure planning

The determination of which infrastructure is generally trunk is in accordance with the infrastructure inclusions in either Unity Water or MBRC's relevant trunk infrastructure policies as applicable (Netserv Plan, PIP/LGIP). Not all the trunk infrastructure required to support the PDA is included in the DCOP as some trunk items of infrastructure and some regional infrastructure will be delivered and funded directly by MBRC and/or the Queensland Government and are therefore not included in the DCOP.

5.1 Water supply

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

- Petrie Mill Redevelopment Project, Site Preparation and Infrastructure Plan, Cardno, July 2016 for work with the Petrie Mill Concept Plan Area.
- Network Planning (Netserv Plans) completed by Unitywater for land outside the Concept Plan Area - <http://www.unitywater.com/netserv>

5.2 Sewerage

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

- Petrie Mill Redevelopment Project, Site Preparation and Infrastructure Plan, Cardno, July 2016 for work with the Petrie Mill Concept Plan Area.
- Network Planning (Netserv Plans) completed by Unitywater for land outside the Concept Plan Area - <http://www.unitywater.com/netserv>

5.3 Stormwater

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

- [Petrie Mill Redevelopment Project, Site Preparation and Infrastructure Plan, Cardno, July 2016 for work with the Petrie Mill Concept Plan Area](#)
- [South Pine River Catchment Management Plan – Volume 1, JWP \(2004\);](#)
- [South Pine River Catchment Management Plan – Volume 2, JWP \(2004\);](#)
- [South Pine River Catchment Management Plan – Volume 3, JWP \(2004\);](#)
- [Petrie \(Young Street Area\) Local Area Drainage Plan, JWP \(2002\);](#)

5.4 Transport

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

- [Petrie Mill Redevelopment Project, Site Preparation and Infrastructure Plan, Cardno, July 2016 for work with the Petrie Mill Concept Plan Area.](#)
- [Transport Networks and Corridors Strategy 2012-2031](#)
- [Transport Networks and Corridors Strategy Appendix B - Infrastructure Requirements](#)

5.5 Parks and land for community facilities

Planning of parks and land for community facilities infrastructure to service development within the PDA is documented in the following reports:

- [Petrie Mill Redevelopment Project, Site Preparation and Infrastructure Plan, Cardno, July 2016 for work with the Petrie Mill Concept Plan Area](#)

6. Infrastructure costs

The cost of infrastructure has been determined as follows.

6.1 Cost of land

Land to be provided for a public purpose within the PDA is broken into 2 types -

1. Land owned by the local government; and
2. Land to be provided by a third party with development.

The land within the former Paper Mill Site and included in the Mill Central East Precinct and the Mill Innovation Precinct is currently owned by Moreton Bay Regional Council. Any public land identified on the Development Scheme and required for the development of the PDA will be excised and maintained in Council's ownership. Therefore there has been no cost attributed to any future public land identified within these Precincts.

Within the Mill Central West Precinct, the Mill Urban and Mill Transit Precincts land requirements identified in the DCOP have been valued consistent with the methodology used in the Local Government Infrastructure Plan.

6.2 Cost of works

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

Unitywater - Outside the Concept Plan Area:

- Water supply – Provided by Unitywater and costs for future assets have been estimated using Unitywater's Capital Works Estimating Tool.
- Sewerage - Provided by Unitywater and costs for future assets have been estimated using Unitywater's Capital Works Estimating Tool.

Unitywater - Inside the Concept Plan Area – Estimated by Cardno based on unit rates.

MBRC Assets

- Stormwater:
 - Calculated by MBRC using first principle estimates consistent with Councils LGIP, or
 - Taken from the Petrie Mill Redevelopment Project, Site Preparation and Infrastructure Plan, produced by Cardno, July 2016 for work with the Petrie Mill Concept Plan Area and calculated using first principle estimates based on recent construction rates.
- Transport:
 - Taken from the Petrie Mill Redevelopment Project, Site Preparation and Infrastructure Plan, produced by Cardno, July 2016 for work with the Petrie Mill Concept Plan Area and calculated using first principle estimates based on recent construction rates.

- Parks and land for community facilities:
 - Taken from the Petrie Mill Redevelopment Project, Site Preparation and Infrastructure Plan, produced by Cardno, July 2016 for work with the Petrie Mill Concept Plan Area and calculated using first principle estimates based on recent construction rates.

Rates were current in July 2016.

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 6.1.

Table 6.1—On-cost allowance

Network	On-costs allowance
Water supply	13%
Sewerage	13%
Stormwater	13%
Transport	13%
Parks & Open Space	13%

6.4 Contingency allowance

All the estimates of costs used in the DCOP are based on Master Planning level of detail only and therefore all costs include this level of contingency only. The level of contingency allowance applied for infrastructure works in each network are stated in Table 6.2.

Table 6.2 - Contingency allowance

Network	Contingency allowance by project phase		
	Master planning	Detailed planning	Detailed design
Water supply	25%	NA	NA
Sewerage	25%	NA	NA
Stormwater	25%	NA	NA
Transport	25%	NA	NA
Parks & Open Space	25%	NA	NA

7. Development Charges & Infrastructure Funding

7.1 Development Charges

The Development Charges for the Mill at Moreton Bay PDA will be equal to MBRC adopted infrastructure charges at the time the development application is decided (Council decision date).

7.2 Funding of DCOP infrastructure

The revenue from development charges will cover the cost of infrastructure identified in the DCOP Schedules. The DCOP Schedules are limited to infrastructure that is considered trunk and has the potential to be provided by a party other than Moreton Bay Regional Council. All Unitywater upgrades will be funded by the development charge.

7.3 Funding of non-DCOP infrastructure

Other Council infrastructure noted in the Infrastructure Plan and not included in the DCOP will be delivered and/or funded by Council from other revenue sources, such as consolidated revenue, excess development charges, land sales and government grants.

For TMR infrastructure:

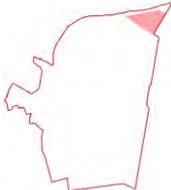
1. Council will fund and the deliver the construction of works directly related to access onto the State Controlled Road network at the intersection of Gympie Road and Paper Mill Drive.
2. The Petrie Mill roundabout is already at capacity and requires an upgrade by State. It is understood that these works will be funded by the State subject to consideration through normal State budgetary processes and will be part of an approved State agency capital works program.

8. Infrastructure schedules of works

Appendix D provides a schedule of future infrastructure for each network servicing the PDA.

Appendix A – Planned densities

Planned density for residential zones for PDA land outside the Concept Plan area:

Column 1 Development scheme zone / area	Column 2 Residential density (dwellings/ dev ha)		
	Attached dwelling	Detached dwelling	Total dwellings
Mill Transit 	45 du/ha	18 du/ha	306 du
Mill Urban 	45 du/ha	22 du/ha	1,150 du
Mill Central West 	60 du/ha	N/A	382 du
Mill Central East 	75 du/ha	N/A	173 du

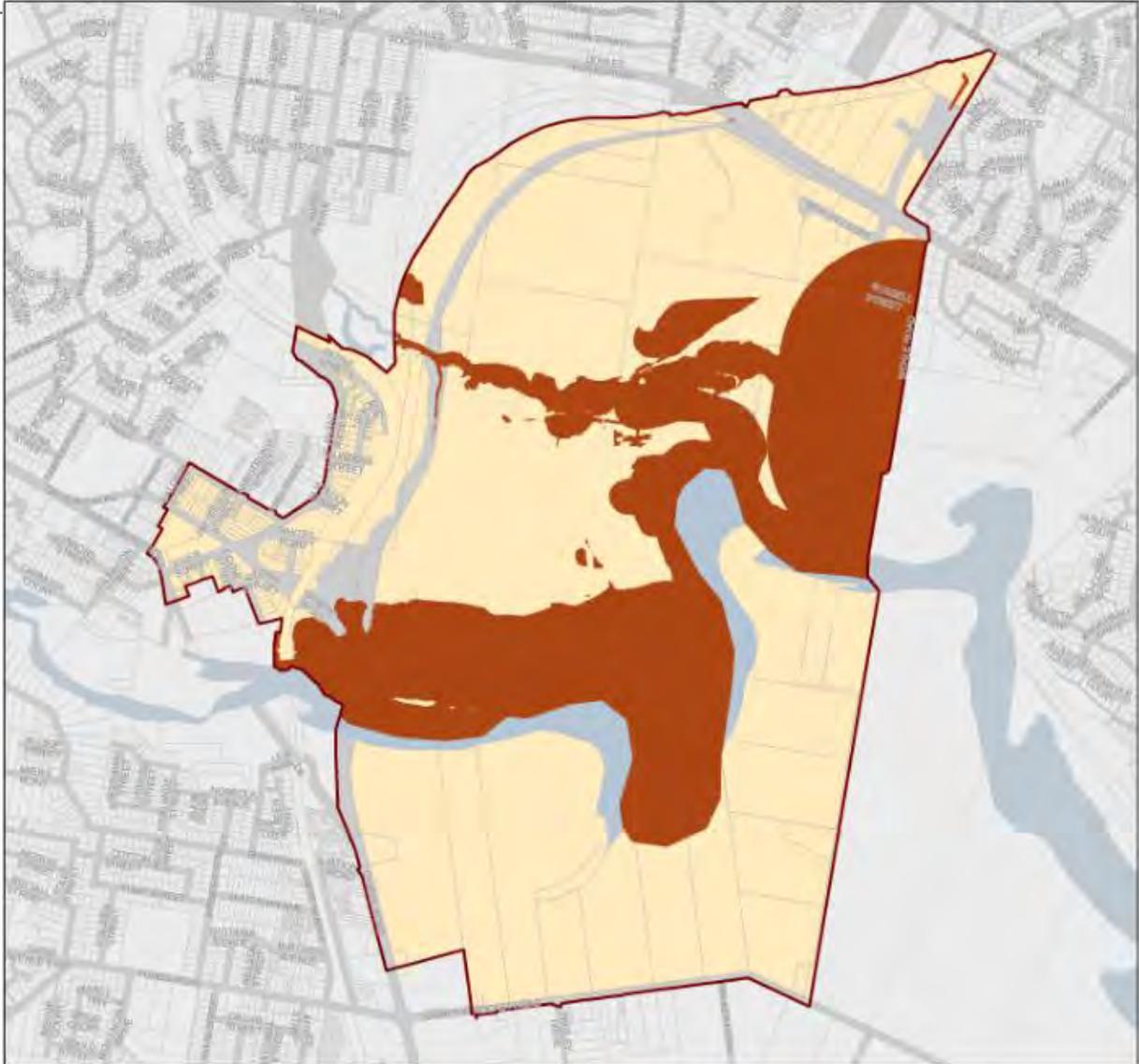
Planned density for non-residential and mixed development zones

Column 1 Development scheme zone /area	Planned density (plot ratio)												
	Attache d dwelling	Visitor accom- modatio n	Retail and service	Show- room	Com- mercial	Light industry	General/ heavy industry	Com- munity	Educati on child care	Educati on other	Outdoor sport and recreati on	Hospital	Total
Mill Transit 	.4		.6	.32	.6	.45	.6	.3	.32	.15	-	.6	
Mill Urban 	.4		N/A	N/A	N/A	N/A	N/A	.3	.3	N/A	-	N/A	
Mill Central West 	.4	-	.6	.32	.6	.45	N/A	.3	.3	N/A	N/A	N/A	
Mill Central East 	Min .7	Min .7	Min .7	N/A	Min .7	N/A	N/A	Min .7	Min .7	Min .7	-	Min .7	

Appendix B - Development constraints

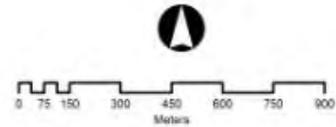
Hard constraints

Planning Scheme Overlay Constraints used in planning assumptions to identify developable area.	Status
Medium risk storm tide inundation area	Hard
High risk storm tide inundation area	Hard
High risk flood hazard area	Hard
Erosion prone area (State Planning Policy)	Hard
Wetland	Hard
Riparian and Wetland Setbacks	Hard
Very high Potential Bushfire Intensity	Hard
Neighbourhood hub	Hard
Community activity	Hard
Wastewater treatment site buffer - 400m	Hard
High voltage electricity line buffer	Hard
Landfill site	Hard
Electricity supply substation buffer - 10m	Hard



**Map No: PDA 2.4.2 -
Development Constraints - Hard**
Declared by Regulation on: TBA

- Key**
-  PDA Boundary
 -  Hard Constraints
 -  Waterways
 -  Parcel Boundaries
 -  Road Reserves
 -  The Mill at Moreton Bay PDA



Source: Department of Natural Resources and Mines: Digital Cadastre Database: 2016.

Map generated by Spatial Services Branch of the Department of State Development, 25/07/2016

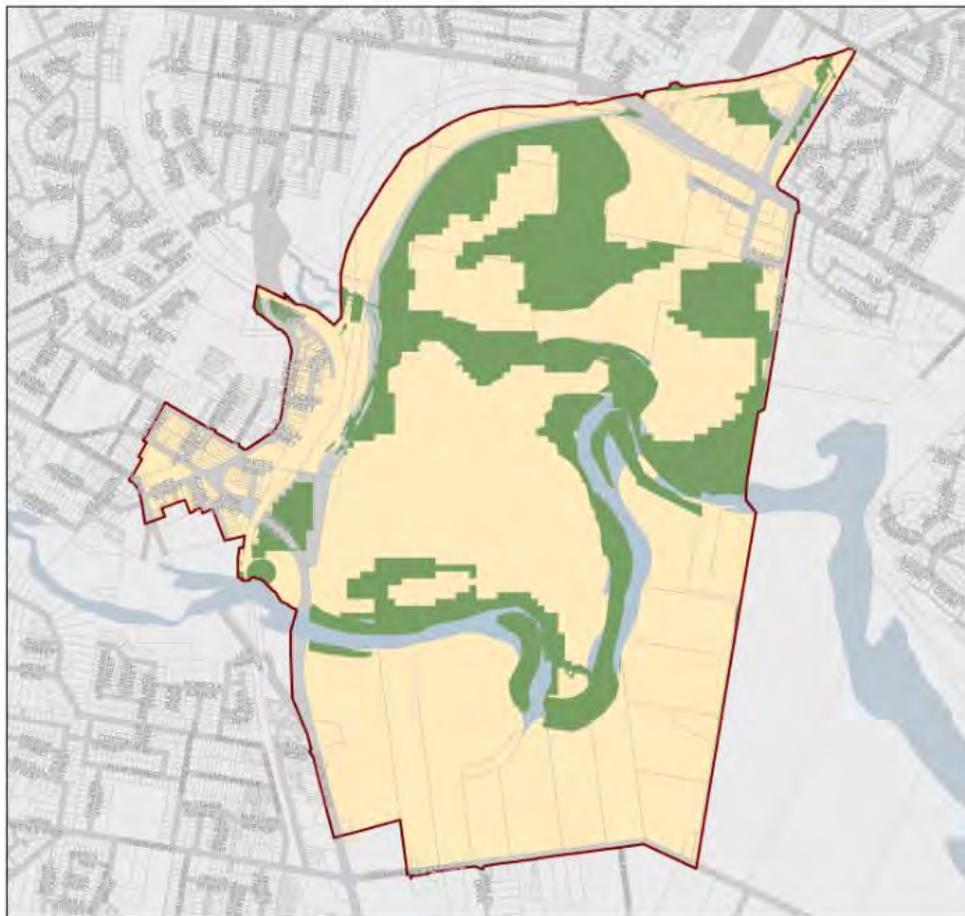
While every care is taken to ensure the accuracy of this product the Department of State Development and the Department of Natural Resources and Mines make no representations or warranties about the accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs you may incur as a result of the product being inaccurate or incomplete in any way or for any reason.



Soft Constraints

- Overland flow path
- Medium risk flood hazard area
- MLES - Matters of Local Environmental Significance
- MSES - Matters of State Environmental Significance
- Pumping station buffer

Soft
Soft
Soft
Soft
Soft

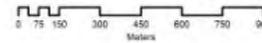


**Map No: PDA 2.4.3 -
Development Constraints - Soft**

Declared by Regulation on: TBA

Key

- PDA Boundary
- Soft Constraints
- Waterways
- Parcel Boundaries
- Road Reserves
- The Mill at Moreton Bay PDA



Source: Department of Natural Resources and Mines: Digital Cadastre Database: 2016.

Map generated by Spatial Services Branch of the Department of State Development, 25/07/2016

While every care is taken to ensure the accuracy of this product the Department of State Development and the Department of Natural Resources and Mines make no representations or warranties about the accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs you may incur as a result of the product being inaccurate or incomplete in any way or for any reason.



Appendix C – Demand generation rates – Unitywater



Version Number 1.0
25 June-2014

Schedule of Works

1.3 Demand Assumptions

1.3.1 Water Supply

Demand projections for the water supply network are expressed in the standard demand units of 'Equivalent Person (Water)' (EPW). One equivalent person (water supply) is equivalent to the service demand from a single occupant of an average occupied detached house, while one equivalent tenement (ET) is equivalent to the service demand from an average occupied detached house.

Sunshine Coast Council and Noosa Shire Council

To convert the demand expressed in EPW into average day demand, the following ratios have been applied:

- Detached residential dwellings: 2.7 EPW / ET
- Attached residential dwellings: 1.8 EPW / ET
- For the areas covered by the Caloundra South and Palmview Infrastructure Agreements, attached dwellings have been loaded with 0.69 ET.

For different residential use types, Average Day Demand (ADD) per Equivalent Tenement have been applied, allowing variation of ADD values over time. Refer Section 2, Desired Standards of Service, below for more detail.

For non-residential uses, the demand assumptions shown in Table 1 below have been used to determine EPWs.

Moreton Bay Regional Council

The ADD for the water supply networks has been set at 230 L/EPW/day, being the demand target under South-East Queensland permanent water conservation measures;

For non-residential uses, the demand assumptions shown in **Table 1** below have been used to determine EPWs.



Version Number 1.0
25 June-2014

Schedule of Works

1.3 Demand Assumptions

1.3.1 Water Supply

Demand projections for the water supply network are expressed in the standard demand units of 'Equivalent Person (Water)' (EPW). One equivalent person (water supply) is equivalent to the service demand from a single occupant of an average occupied detached house, while one equivalent tenement (ET) is equivalent to the service demand from an average occupied detached house.

Sunshine Coast Council and Noosa Shire Council

To convert the demand expressed in EPW into average day demand, the following ratios have been applied:

- Detached residential dwellings: 2.7 EPW / ET
- Attached residential dwellings: 1.8 EPW / ET
- For the areas covered by the Caloundra South and Palmview Infrastructure Agreements, attached dwellings have been loaded with 0.69 ET.

For different residential use types, Average Day Demand (ADD) per Equivalent Tenement have been applied, allowing variation of ADD values over time. Refer Section 2, Desired Standards of Service, below for more detail.

For non-residential uses, the demand assumptions shown in Table 1 below have been used to determine EPWs.

Moreton Bay Regional Council

The ADD for the water supply networks has been set at 230 L/EPW/day, being the demand target under South-East Queensland permanent water conservation measures;

For non-residential uses, the demand assumptions shown in **Table 1** below have been used to determine EPWs.



Version Number 1.0
25 June-2014

Schedule of Works

Table 1 Water Supply Demand Assumptions for Non-Residential Areas

Moreton Bay Region	EPW's/ha Developable Area
Caboolture Shire Plan	
Metropolitan Centre	30
District Centre	30
Local Centre	10
Regional Industry	30
District Industry – Lowland Zone	60
District Industry – Upland Zone	15
Local Industry	15
Special Use	10
Management lot	3.4 EPW / lot
Open Space	0
Pine Rivers Plan	
CENTRAL BUSINESS	30
COMMERCIAL	30
LOCAL BUSINESS	30
NEIGHBOURHOOD FACILITIES	30
URBAN VILLAGE	30
VILLAGE CENTRE	30
HOME INDUSTRY	10
SERVICE INDUSTRY	15
GENERAL INDUSTRY	30
EXTRACTIVE INDUSTRY	15
FUTURE URBAN	30
RURAL ZONE IN COAST AND RIVER LANDS LOCALITY	7.5
RURAL ZONE IN URBAN, MAJOR EMPLOYMENT CENTRE, CATCHMENT, RURAL LIVING, VILLAGE, MT SUMMIT AND FORESTS LOCALITIES	7.5
CONSERVATION ZONE	0
PARK AND OPEN SPACE	5
SPORTS AND RECREATION	15
SPECIAL FACILITIES	15
SPECIAL PURPOSES	15
Redcliffe Planning Scheme	
Core (1-2 storeys)	30
Retail Core (3 storeys)	130
Retail Core (6 storeys)	190
Retail Core (8 storeys)	240
Retail Core (12 storeys)	290
Frame Business (1-2 storeys)	30
Frame Business (3 storeys)	120
Frame Business (6 storeys)	175
Frame Business (8 storeys)	220
Frame Business (12 storeys)	260
Industrial	30
Health services	30
Hospital	75
Parks and irrigation	5
Community Purpose	30
Natural value	0
Sunshine Coast Region	
EPW's/ 100m2 (Gross Floor Area)	
Noosa, Maroochy & Caloundra Planning Schemes	
Centres	1.32
Community	3.13
Industry	1.65
Health	3.56
Open Space	3.13
Education (assumed 14 students per employee)	0.1 EPW per employee and student
Caravan Parks	1.86 / site



Version Number 1.0

25 June-2014

Schedule of Works

1.3.2 Sewerage

The load projections for the sewerage networks are expressed in the standard demand units of 'Equivalent Person (Sewerage)' (EPS). One equivalent person (sewerage) is equivalent to the service demand from a single occupant of an average occupied detached house, while one equivalent tenement is equivalent to the service demand from an average occupied detached house.

Sunshine Coast Council and Noosa Shire Council

To convert the demand expressed in EPS into average day demand, a ratio of 2.7 EPS / ET has been used. For non-residential uses, the Demand Assumptions shown in Table 2 have been used to determine EPSs.

The Average Dry Weather Flow (ADWF) for the sewerage network has been applied at 600 litres / ETS / day.

Moreton Bay Regional Council

For residential uses, the ADWF for the sewerage network has been applied at 185 litres / EPS / day. For non-residential uses, the Demand Assumptions shown in Table 2 have been used to determine EPSs.



Version Number 1.0

25 June-2014

Schedule of Works

Table 2 Sewerage Demand Assumptions for Non-Residential Areas

Moreton Bay Region	Assumed Development Density in EPS's/ha
Caboolture Shire Plan	
Retail	0.9 EPS / 100m2GFA
Office	1.5 EPS / 100m2GFA
Retail Showroom	0.5 EPS / 100m2GFA
Regional Industry	60
District Industry	30
Local Industry	30
Community Purposes	0.25 EPS / employee
Pine Rivers Plan	
SPECIAL RESIDENTIAL	0
PARK RESIDENTIAL	0
RURAL RESIDENTIAL	0
CENTRAL BUSINESS	45
COMMERCIAL	45
LOCAL BUSINESS	45
NEIGHBOURHOOD FACILITIES	45
URBAN VILLAGE	45
VILLAGE CENTRE	45
HOME INDUSTRY	15
SERVICE INDUSTRY	22.5
GENERAL INDUSTRY	45
EXTRACTIVE INDUSTRY	22.5
FUTURE URBAN	30
RURAL ZONE IN COAST AND RIVER LANDS LOCALITY	0
RURAL ZONE IN URBAN, MAJOR EMPLOYMENT CENTRE, CATCHMENT, RURAL LIVING, VILLAGE, MT SUMMIT AND FORESTS LOCALITIES	0
CONSERVATION ZONE	0
PARK AND OPEN SPACE	0
SPORTS AND RECREATION	15
SPECIAL FACILITIES	15
SPECIAL PURPOSES	15
Redcliffe Planning Scheme	
Core (1-2 storeys)	30.26
Retail Core (3 storeys)	131.14
Retail Core (6 storeys)	191.66
Retail Core (8 storeys)	242.1
Retail Core (12 storeys)	292.53
Frame Business (1-2 storeys)	30.26
Frame Business (3 storeys)	121.05
Frame Business (6 storeys)	176.53
Frame Business (8 storeys)	221.92
Frame Business (12 storeys)	262.27
Industrial	30.26
Health services	30.26
Hospital	30.26
Parks and irrigation	5.04
Community Purpose	30.26
Natural values	
Sunshine Coast Region	
EPS's/ 100m2GFA (Gross Floor Area)	
Noosa, Maroochy & Caloundra Planning Schemes	
Centres	1.54
Community	3.13
Industry	1.62
Health	3.56
Open Space	3.13
Education (assumed 14 students per employee)	0.1 EPW per employee and student
Caravan Parks	2.27 / site

Appendix D – Schedules of works (detailed)

Infrastructure Cost Summary

Description	Asset Cost	Project Owners Costs	Contingency	Total Asset Cost
Roads	\$15,717,150	\$2,043,230	\$4,440,095	\$22,200,474
Bridges	\$11,000,000	\$1,430,000	\$3,107,500	\$15,537,500
Intersections	\$3,000,000	\$390,000	\$847,500	\$4,237,500
Stormwater	\$8,430,442	\$1,095,957	\$2,381,600	\$11,907,999
Sewer	\$1,050,700	\$136,591	\$296,823	\$1,484,114
Water Supply	\$2,953,950	\$384,014	\$834,491	\$4,172,454
Parks & Open Space	\$1,497,000	\$194,610	\$422,903	\$2,371,513
Off Road Paths	\$1,565,563	\$203,523	\$442,272	\$2,211,358
Total	\$45,214,805	\$5,877,925	\$12,773,182	\$64,122,912

Local road network schedule of works (roads)

DCOP ID	ASSET DESCRIPTION	ROAD TYPE	ASSET COST	PROJECT OWNERS' COST	CONTINGENCY COST	TOTAL ESTIMATED COST (\$July 2016)
ROADS				13%	25%	
R001	Two Lane Boulevard	2L	\$2,089,750	\$271,668	\$590,354	\$2,951,772
R002A	Northern District Collector	2L	\$5,718,400	\$743,392	\$1,615,448	\$8,077,240
R002B	Northern District Collector	2L	\$5,118,400	\$665,392	\$1,445,948	\$7,229,740
R004	District Collector Road Acquisition	2L	\$1,419,000	\$184,470	\$400,868	\$2,004,338
R005	Lawton Pocket Road	2L	\$1,371,600	\$178,308	\$387,477	\$1,937,385
TOTAL			\$15,717,200	\$2,043,230	\$4,440,095	\$22,200,474

Local road network schedule of works (bridges)

DCOP ID	ASSET DESCRIPTION	ASSET TYPE	ROAD TYPE	COST OF WORKS	PROJECT OWNERS' COST	CONTINGENCY COST	TOTAL ESTIMATED COST (\$July 2016)
ROAD BRIDGES & CULVERTS					13%	25%	
RB001A	Yebri Creek	bridge	2L	\$3,000,000	\$390,000	\$847,500	\$4,237,500
RB001B	Yebri Creek	bridge	2L	\$3,000,000	\$390,000	\$847,500	\$4,237,500
RB002	Koala Bridge	bridge	4L	\$5,000,000	\$650,000	\$1,412,500	\$7,062,500
TOTAL				\$11,000,000	\$1,430,000	\$3,107,500	\$15,537,500

Local road network schedule of works (intersections)

DCOP ID	ASSET DESCRIPTION	ASSET COST	PROJECT OWNERS' COST	CONTINGENCY COST	TOTAL ESTIMATED COST (\$July 2016)
INTERSECTIONS			13%	25%	
RI001	Dohles Rocks Road Intersection	\$3,000,000	\$390,000	\$847,500	\$4,237,500
TOTAL		\$3,000,000	\$390,000	\$847,500	\$4,237,500

Local stormwater network schedule of works

DCOP ID	ASSET DESCRIPTION	SITE WORKS \$/ SITE	PROJECT OWNERS' COST	CONTINGENCY COST	TOTAL ESTIMATED COST (\$July 2016)
STORMWATER			13%	25%	
SW001	Petrie Stormwater Upgrades	\$4,780,442	\$621,457	\$1,350,474.87	\$6,752,374
SW002	Whites Road Drainage	\$2,510,000	\$326,300	\$709,075	\$3,545,375
SW003	Riparian re-vegetation	\$1,140,000	\$148,200	\$322,050	\$1,610,250
TOTAL		\$8,430,442	\$1,095,957	\$2,381,600	\$11,907,999

Local sewerage network schedule of works

DCOP ID	ASSET DESCRIPTION	DIA (MM)	LENGTH (M)	ASSET UNIT VALUE (\$/m)	ASSET COST	PROJECT OWNERS' COST	CONTINGENCY COST	TOTAL ESTIMATED COST (\$July 2016)
PUMP STATIONS						13%	25%	
SP001	Lift Station	n/a	n/a	n/a	\$351,000	\$45,630	\$99,158	\$495,788
Subtotal					\$351,000	\$45,630	\$99,158	\$495,788
SEWER GRAVITY MAINS								
SG001	Sewer gravity main	250	900	\$558	\$502,200	\$65,286	\$141,872	\$709,358
SG002	Sewer gravity main	250	250	\$540	\$197,500	\$25,675	\$55,794	\$278,969
			1,150	Subtotal	\$699,700	\$90,961	\$197,665	\$988,326
TOTAL					\$1,050,700	\$136,591	\$296,823	\$1,484,114

Local water supply network schedule of works

DCOP ID	ASSET DESCRIPTION	DIA (MM)	COST LENGTH (M)	ASSET UNIT VALUE	ASSET COST	PROJECT OWNERS' COST	CONTINGENCY COST	TOTAL ESTIMATED COST (\$July 2016)	
POTABLE SUPPLY MAINS					13%	25%			
WP001	water main - potable	375	2,670	\$596	\$1,591,320	\$206,872	\$449,548	\$2,247,740	
WP002	water main - potable	250	350	\$452	\$158,200	\$20,566	\$44,692	\$223,458	
WP003	water main - potable	250	580	\$378	\$219,240	\$28,501	\$61,935	\$309,677	
WP004	water main - potable	250	2,350	\$242	\$568,700	\$73,931	\$160,658	\$803,289	
WP005	water main - potable	250	350	\$240	\$84,000	\$10,920	\$23,730	\$118,650	
WP006	water main - potable	250	30	\$1,288	\$38,640	\$5,023	\$10,916	\$54,579	
WP007	water main - potable	250	245	\$908	\$222,460	\$28,920	\$62,845	\$314,225	
Misc. 1	water main - potable Initial connection	150	30	\$713	\$21,390	\$2,781	\$6,043	\$30,213	
Misc. 2	water connection allowance	n/a	n/a	n/a	\$50,000	\$6,500	\$14,125	\$70,625	
					6,300	\$2,953,950	\$384,014	\$834,491	\$4,172,454
					TOTAL	\$2,953,950	\$384,014	\$834,491	\$4,172,454

Local parks network schedule of works

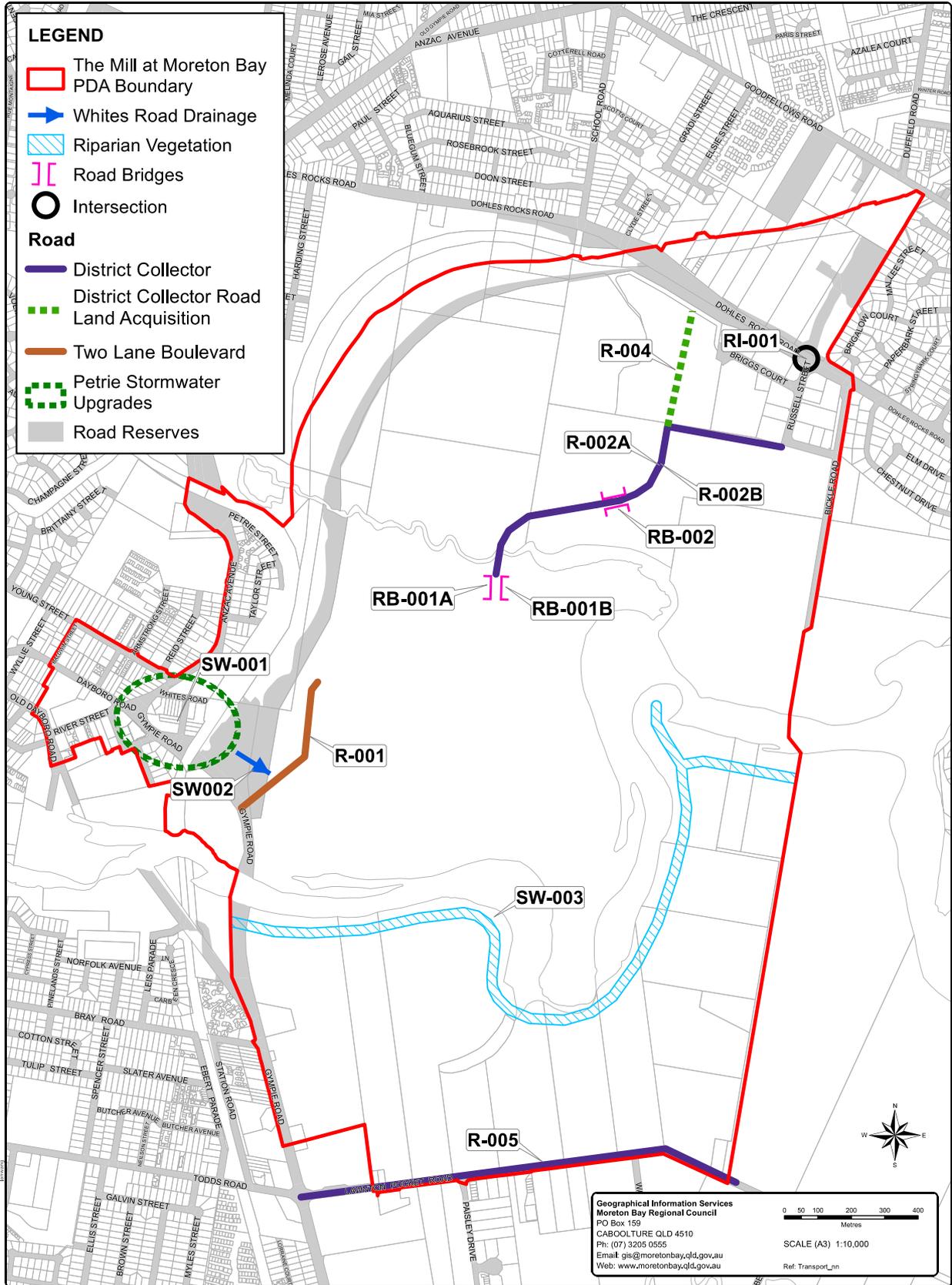
DCOP ID	ASSET DESCRIPTION	AREA (HA)	COST OF ASSET	PROJECT OWNERS' COST	CONTINGENCY COST	TOTAL ESTIMATED COST (\$July 2016)
PARKS				13%	25%	
PO-001	Sports and Rec Park North	12.4	\$1,230,000	\$159,900	\$347,475	\$1,737,375
PO-002	Land for local Park and riparian corridor @ ICR Policy rate	27.38	-	-	-	\$257,000
PO-003	Local Park- Urban Precinct	0.5	\$267,000	\$34,710	\$75,428	\$377,138
TOTAL			\$1,497,000	\$194,610	\$422,903	\$2,371,513

Local regional pathway network schedule of works

DCOP ID	ASSET DESCRIPTION	ASSET COST	PROJECT OWNERS' COST	CONTINGENCY COST	TOTAL ESTIMATED COST (\$July 2016)
OFF-ROAD PATHS			13%	25%	
PB001	Young Street Bicycle Awareness	\$65,563	\$8,523.19	\$18,522	\$92,608
PB002	Pedestrian bridge linking to the Area 2	\$1,500,000	\$195,000	\$423,750	\$2,118,750
TOTAL		\$1,565,563	\$203,523	\$442,272	\$2,211,358

Appendix E – INFRASTRUCTURE MAPS

The identified infrastructure items are considered to be the relevant trunk items for implementation of the DCOP. Other trunk infrastructure is intended to be provided by the local government or State across the PDA, which are not included in this DCOP



LEGEND

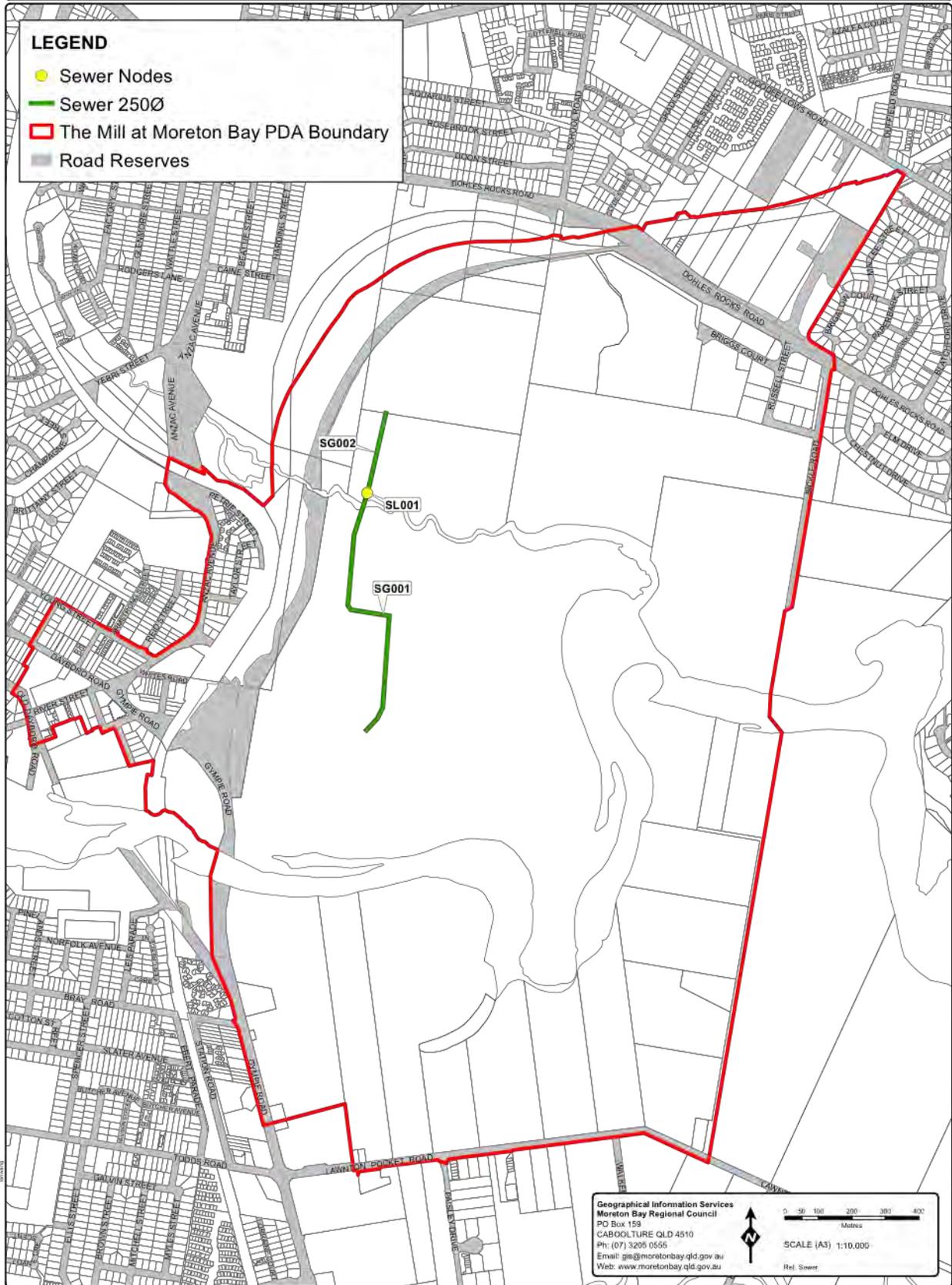
- The Mill at Moreton Bay PDA Boundary
- ➔ Whites Road Drainage
- Riparian Vegetation
- Road Bridges
- Intersection
- Road**
- District Collector
- District Collector Road Land Acquisition
- Two Lane Boulevard
- Petrie Stormwater Upgrades
- Road Reserves

Geographical Information Services
Moreton Bay Regional Council
 PO Box 159
 CABOOLTURE QLD 4510
 Ph: (07) 3205 0555
 Email: gis@moretonbay.qld.gov.au
 Web: www.moretonbay.qld.gov.au

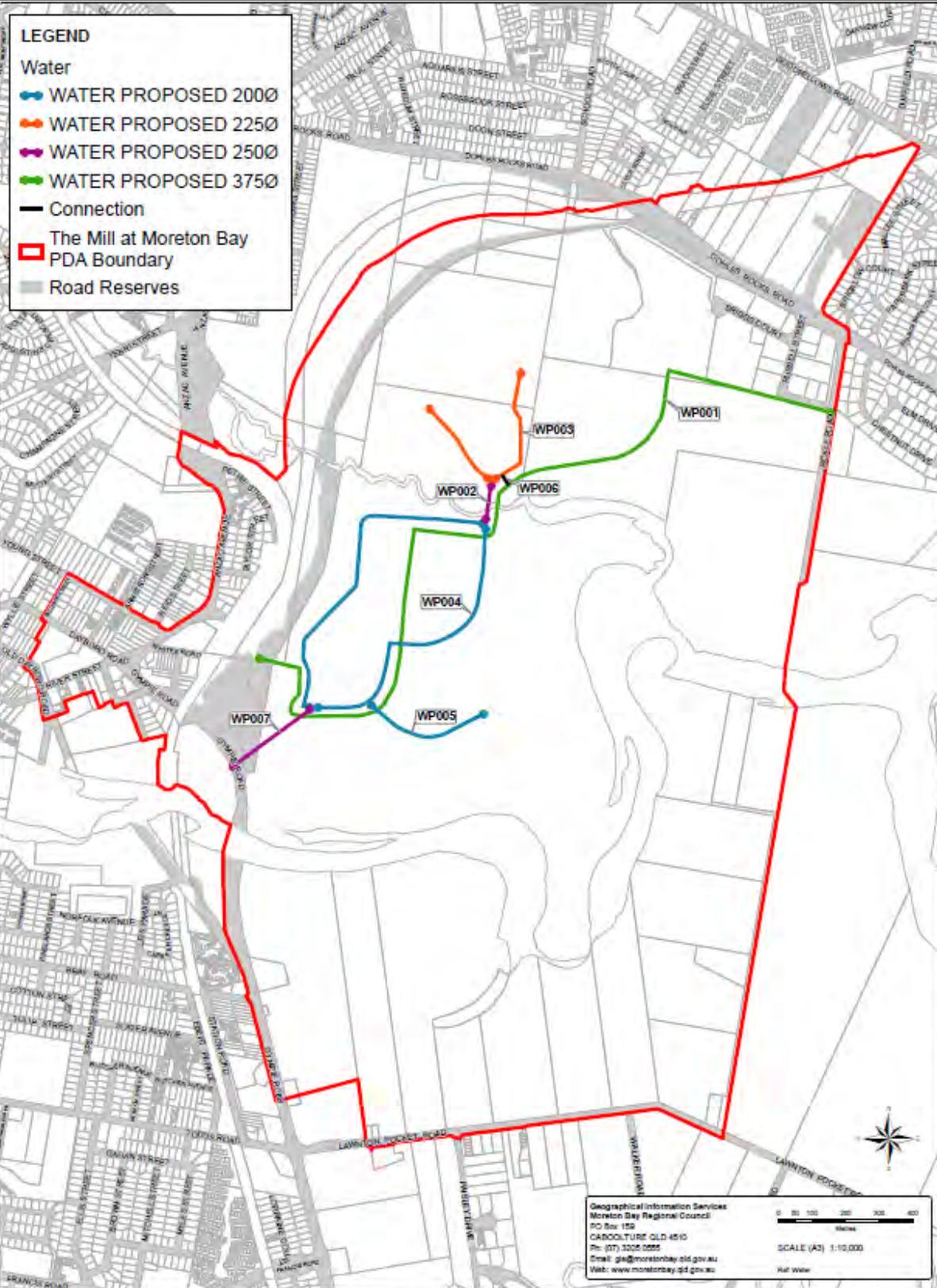
0 50 100 200 300 400
Metres

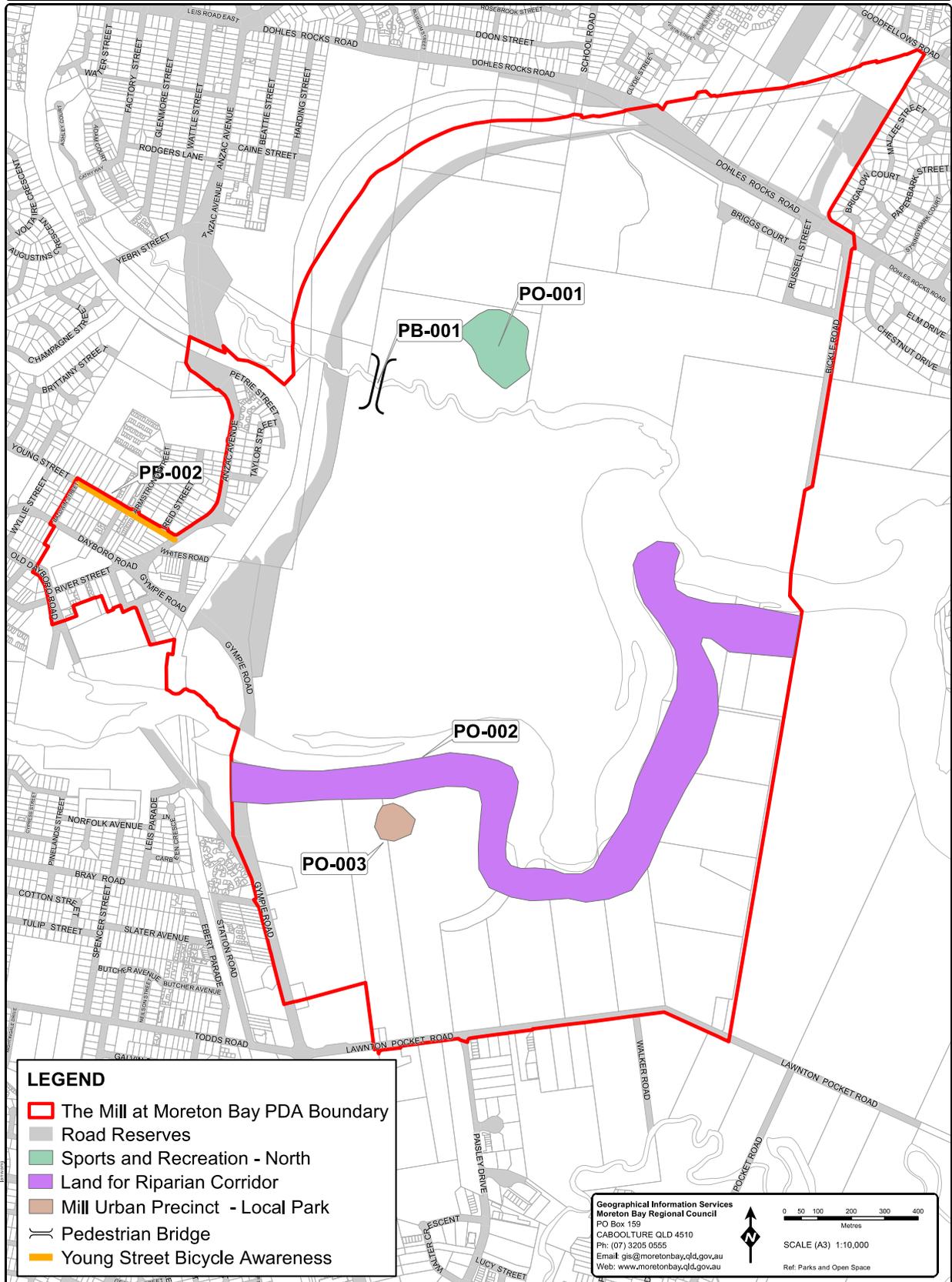
SCALE (A3) 1:10,000
 Ref: Transport_Lin

Copyright Moreton Bay Regional Council and The Queensland Government. Moreton Bay Regional Council accepts this map under the following conditions: Mapping details are suggested from information contained in the Council's records which map has been furnished to the Council by other persons. Moreton Bay Regional Council gives no warranty or guarantee of any kind, expressed, implied or statutory, as to the correctness or accuracy of the map details or the degree of compliance with any Council documents in this matter. Persons making decisions with respect to legal matters should not rely upon the map details shown on this plan for the purpose of determining whether any particular facts or circumstances exist and the Moreton Bay Regional Council does not officers nor agents accept any liability or responsibility for any loss or damage suffered as a result of relying on the map.



Copyright Moreton Bay Regional Council and The Queensland Government. Moreton Bay Regional Council supports this map under the following conditions: Mapping details are supplied from information contained in the Council's records which may have been furnished to the Council by other persons. Moreton Bay Regional Council gives no warranty or guarantee of any kind, expressed, implied, or statutory, to the correctness or accuracy of the map details or the degree of compliance with any Council standards in the matter. Persons making decisions with financial or legal implications must rely upon the map details shown on this page for the purpose of determining whether any particular facts or circumstances exist and the Moreton Bay Regional Council (and its officers and agents) expressly disclaims responsibility for any loss or damage suffered as a result of acting reliance upon this page.





Copyright Moreton Bay Regional Council and the Queensland Government. Moreton Bay Regional Council supplies this map under the following conditions: Mapping details are suggested from information contained in the Council's records which may have been furnished to the Council by other persons. Moreton Bay Regional Council gives no warranty or guarantee of any kind, expressed, implied or otherwise, as to the correctness or accuracy of the map details or the degree of compliance with any Council documents in this matter. Persons making decisions with financial or legal implications must not rely upon the map details shown on this plan for the purpose of determining whether any particular facts or circumstances exist and the Moreton Bay Regional Council does not officers and agents respectively disclaim responsibility for any loss or damage suffered as a result of being relied upon.

Appendix F – THE MILL AT MORETON BAY BAY Boundary Map

