



Part 4: TRC Planning Scheme

Local Government Infrastructure Plan

Commencement date:
2 July 2018



Part 4 Priority Infrastructure Plan

4.1 Preliminary

- (1) This local government infrastructure plan has been prepared in accordance with the requirements of the *Sustainable Planning Act 2009* and the *Planning Act 2016*
- (2) The purpose of the local government infrastructure plan is to:
 - integrate infrastructure planning with the land use planning identified in the planning scheme
 - provide transparency regarding a local government's intentions for the provision of trunk infrastructure
 - enable a local government to estimate the cost of infrastructure provision to assist its long term financial planning
 - ensure that trunk infrastructure is planned and provided in an efficient and orderly manner.
 - provide a basis for the imposition of conditions about infrastructure on development approvals.
- (3) The local government infrastructure plan:
 - (a) states in Section 4.2 (planning assumptions) the assumptions about future growth and urban development including the assumptions of demand for each trunk infrastructure network
 - (b) identifies in Section 4.3 (priority infrastructure area) the prioritised area to accommodate urban growth up to 2036
 - (c) states in Section 4.4 (desired standards of service) for each trunk infrastructure network the desired standard of performance
 - (d) identifies in Section 4.5 (plans for trunk infrastructure) the existing and future trunk infrastructure for the following networks:
 - (i) water supply
 - (ii) sewerage
 - (iii) stormwater
 - (iv) transport
 - (v) parks and land for community facilities
 - (e) provides a list of supporting documents that assist in the interpretation of the local government infrastructure plan in the Editor's note – Extrinsic material at the end of Section 4

4.2 Planning assumptions

- (1) The planning assumptions state the assumptions about:
 - (a) population and employment growth
 - (b) the type, scale, location and timing of development including the demand for each trunk infrastructure network
- (2) The planning assumptions together with the desired standards of service form a basis for the planning of the trunk infrastructure networks and the determination of the priority infrastructure area.
- (3) The planning assumptions have been prepared for:
 - (a) the base date is 2016 and the following projection years are to accord with future Australian Bureau of Statistics census years through to 2036:
 - (i) mid 2016;
 - (ii) mid 2021;
 - (iii) mid 2026;
 - (iv) mid 2031; and
 - (v) mid 2036.
 - (b) the LGIP development types in column 2 that include the uses in column 3 of the projection areas identified on Local Government Infrastructure Plan Map LGIP- Map SC 3.3.1 in Schedule 3— Local government infrastructure plan mapping and tables.

Table 4.1—Relationship between LGIP development categories, LGIP development types and uses

Column 1 LGIP development category	Column 2 LGIP development type	Column 3 Uses
Residential development	Residential (dwelling house)	Community residence Dual Occupancy
	Residential (Secondary)	Dwelling house Dwelling Unit
	Residential (Other)	Multiple Dwelling Party House Rooming Accommodation Residential Care Facility Retirement Facility: Short term accommodation
	Residential (temporary)	Non-Res Workforce Accommodation Relocatable Home Park Rural workers accommodation
Non-residential development	Retail	Mix Use commercial premises
	Residential Business	Home Based Business
	Business	Brothel Car park Car wash Child care centre Club/Hotel Club/Bar/Hotel/Nightclub Food and Drink Outlet Function facility Funeral Parlour Garden Centre Hardware and trade supplies Health Care Services Indoor Sport & Recreation Market Office Office/Shop/Shopping Centre Parking Station Roadside stall Sales Office Service Industry Shop Shopping centre Showroom Theatre Veterinary Services
	Industrial (Low Impact)	Low Impact Industry Outdoor Sales
	Industrial (High impact)	Concrete Batching Plant Extractive Industry High Impact Industry Major Electricity Infrastructure/Utility Installation Marine Industry Special Industry
	Tourist Facility	Home Based Business Nature-Based Tourism Resort Complex Short Term Accommodation Tourist Attraction Tourist Park
	Community Purposes	Cemetery Crematorium Community Activities Community Care Centre Community Use Educational establishment Emergency Services Hospital Place of worship

Column 1 LGIP development category	Column 2 LGIP development type	Column 3 Uses
	Transport and Storage Depot	Port Services Service Station Transport Depot Warehouse
	Agriculture	Cropping Forestry Rural Industry
	Intensive Agriculture	Aquaculture Animal Husbandry
	Other	Advertising device Agriculture Supplies Store Animal Keeping Bulk Landscaping Supplies Caretakers Residence/Accommodation Detention Facility Environmental facility Major Sports, Rec & Entertainment Major Infrastructure Minor Infrastructure Park Research and Technology industry Telecommunications Facilities Utility installation

- (4) Details of the methodology used to prepare the planning assumptions are stated in the extrinsic material.

4.2.1 Population and employment growth

- (1) A summary of the assumptions about population and employment growth for the planning scheme area is stated in Table 4.2—Population and employment assumptions summary.

Table 4.2—Population and employment assumptions summary

Column 1- Description	Column 2 Assumptions						
		Base date 2016	2021	2026	2031	2036	Ultimate
Population	No	24,827	25,935	26,755	27,589	28,389	35,343
	% change		4.5%	3.2%	3.1%	2.9%	
Employment	No	10,958	11,556	12,006	12,469	12,940	17,149
	% Change		5.5%	3.9%	3.9%	3.8%	

- (2) Detailed assumptions about growth for each projection area and LGIP development type category are identified in the following tables in Schedule 3 Local government infrastructure plan mapping and tables:
- for population, Table SC 3.1.1 – Existing and projected population;
 - for employment, Table SC 3.1.2 – Existing and projected employees

4.2.2 Development

- (1) The **developable area** is identified on Local Government Infrastructure Plan Map LGIP-SC 3.3.2 in Schedule 3—Local government infrastructure plan mapping and tables. The developable area is defined under the Planning Scheme as land which is currently available for urban development and not subject to development constraint arising from:
- Biodiversity areas;
 - Bushfire hazard;
 - Extractive resources;
 - Flood hazard;
 - Industrial land and buffers; and
 - Landuse.

- (2) The **planned density for future development** is stated in Table SC 3.1.3 – Planned density and demand generation rate for a trunk infrastructure network in Schedule 3—Local government infrastructure plan mapping and tables.
- (3) A summary of the assumptions about future residential and non-residential development for the planning scheme area is stated in Table 4.3—Residential dwellings and non-residential floor space assumptions summary.

Table 4.3—Residential dwellings and non-residential floor space assumptions summary

Column 1- Description		Column 2 Assumptions					
		Base date 2016	2021	2026	2031	2036	Ultimate
Dwellings	No	11,523	12,089	12,549	13,011	13,400	16,459
	% change		4.9%	3.8%	3.7%	3.0%	
Non Res floor space (m2 GFA)	No	455,370	511,734	535,663	560,609	586,728	837,979
	% Change		12.4%	4.7%	4.7%	4.7%	

- (4) Detailed assumptions about future development for each projection area and LGIP development type are identified in the following tables in Schedule 3 Local government infrastructure plan mapping and tables:
 - (a) for residential development Table SC 3.1.4- Existing and projected residential dwellings;
 - (b) for non-residential development, Table SC 3.1.5 – Existing and projected non-residential floor space

4.2.3 Infrastructure demand

- (1) The demand generation rate for each trunk infrastructure network is stated in Column 4 of Table SC 3.1.3 – Planned density and demand generation rate for a trunk infrastructure network, in Schedule 3 Local government infrastructure plan mapping and tables.
- (2) A summary of the projected infrastructure demand for each service catchment is stated in:
 - (a) for the water supply network, Table 3.1.6 – Existing and projected demand for water supply network
 - (b) for the sewerage network, Table 3.1.7 - Existing and projected demand for the sewerage network
 - (c) for the transport network, Table 3.1.8 - Existing and projected demand for the transport network
 - (d) for the stormwater network, Table 3.1.9 - Existing and projected demand for the stormwater network
 - (e) for the parks and land for community facilities network, Table 3.1.10 - Existing and projected demand for the parks and land for community facilities network

4.3 Priority infrastructure area

- (1) The priority infrastructure area identifies the area prioritised for the provision of trunk infrastructure to service the existing and assumed future urban development up to 2031.
- (2) The **priority infrastructure area** is identified on Local Government Infrastructure Plan Map LGIP SC 3.3.2 – Priority Infrastructure Area and projection areas maps.

4.4 Desired standards of service

- (1) This section states the key standards of performance for a trunk infrastructure network.
- (2) Details of the standard of service for trunk infrastructure networks are identified in the extrinsic material.

4.4.1 Water supply network

- (1) The Planning criteria (Qualitative outcomes) and design criteria (Quantitative standards) for the Water Supply Network are summarised in Table 4.4.1.

Table 4.4.1 Water Supply Network Desired Standards of Service (DSS)

Measure	Planning Criteria (qualitative standards)	Design Criteria (quantitative standards)
Reliability / Continuity of Supply	All development receives a reliable supply of potable water, with minimal interruptions to their service.	<ul style="list-style-type: none"> All sections of the trunk network including storage should comply with the requirements stated in the FNQROC Design Guidelines² and referenced standards, as amended. Compliance with Customer Service Standards Standards in Planning Scheme and its Policies
Adequacy of Supply	All development is provided with a water supply which is adequate for the intended use.	<ul style="list-style-type: none"> As per requirements of the FNQROC Development Manual¹ and referenced standards, as amended. Compliance with Customer Service standards Standards in Planning Scheme and its Policies
Quality of Supply	Provide a uniform water quality in accordance with recognised standards which safeguards community health and is free from objectionable taste and odour.	<ul style="list-style-type: none"> Australian Drinking Water Guidelines - National Health and Medical Research Council Comply with the approved Drinking Water Quality Management Plan Comply with the <i>Water Supply (Safety and Reliability) Act 2008</i> Compliance with Customer Service Standards
Environmental Impacts	The environmental impacts of the water supply network are minimised in accordance with community expectations.	<ul style="list-style-type: none"> Compliance with the <i>Environmental Protection Act 1994</i> and relevant Policies/Regulations. Compliance with any licences and management plans held by Council. Compliance with all relevant legislation and guidelines as required. Wet Tropics Management Plan 1998.
Pressure and Leakage Management	The water supply network is monitored and managed to maintain the reliability and adequacy of supply and to minimise environmental impacts and non-revenue water	<ul style="list-style-type: none"> All sections of the trunk network including storage should comply with the requirements stated in the FNQROC Design Guidelines and referenced standards, as amended.
Infrastructure Design / Planning Standards	Design of the water supply network will comply with established codes and standards	<ul style="list-style-type: none"> FNQROC Development Manual¹ and referenced standards, as amended. Water Services Association of Australia – WSA 04 – 2011 – Water Supply Code of Australia (as amended). Australian Drinking Water Guidelines - National Health and Medical Research Council Standards in Planning Scheme and its Policies

² Design of mains 300mm diameter and greater shall be subject to specific criteria nominated by Council,

4.4.2 Wastewater

- (2) The Planning criteria (Qualitative outcomes) and design criteria (Quantitative standards) for the Wastewater Network are summarised in Table 4.4.2.

Table 4.4.2 Wastewater Supply Network DSS

Measure	Planning Criteria (qualitative standards)	Design Criteria (quantitative standards)
Reliability	All lots have access to a reliable sewerage collection, conveyance, treatment and disposal system.	<ul style="list-style-type: none"> • FNQROC Development Manual³ and referenced standards, as amended. • Water Services Association of Australia – WSA 02 – 2014 – Gravity Sewerage Code of Australia • <i>Water Services Association of Australia – WSA 04 – 2005 – Sewerage Pumping Station Code of Australia</i> • Compliance with Customer Service Standards • Standards in Planning Scheme and its Policies
Quality of Treatment	Ensures the health of the community and the safe and appropriate level of treatment and disposal of treated effluent.	<ul style="list-style-type: none"> • Compliance with all environmental authorities and environmental management plans • Compliance with the Environmental Protection Act 2009 and relevant Policies/Regulations
Environmental Impacts	The environmental impacts of the sewerage network are minimised in accordance with community expectations.	<ul style="list-style-type: none"> • Queensland Water Quality Guidelines 2009 and ANZECC Water Quality Guidelines 2000 (as amended).
Inflow / Infiltration	Ensure infiltration and inflow in the sewerage collection and transportation system remains within industry acceptable limits	<ul style="list-style-type: none"> • FNQROC Development Manual² and referenced standards, as amended. • Compliance with Compliance with the <i>Environmental Protection Act 2009</i> and relevant Policies/Regulations.
Effluent Re-use	Reuse effluent wherever practical	<ul style="list-style-type: none"> • FNQROC Development Manual and referenced standards, as amended. • Compliance with Recycled Water Management Plans and other requirements as per the <i>Water Supply (Safety and Reliability) Act 2008</i> and relevant DEWS regulatory guidelines Water Quality Guidelines for Recycled Water Schemes, November 2008 • Queensland Water Quality Guidelines 2009 and ANZECC Water Quality Guidelines 2000 (as amended).
Infrastructure Design / Planning Standards	Design of the sewerage network will comply with established codes and standards	<ul style="list-style-type: none"> • FNQROC Development Manual², and referenced standards as amended. • Water Services Association of Australia – WSA 02 – 2014 – Gravity Sewerage Code of Australia • Water Services Association of Australia – WSA 04 – 2005 – Sewerage Pumping Station Code of Australia • Standards in Planning Scheme and its Policies.

4.4.3 Stormwater network

- (1) Collect and convey stormwater flows for both major 100 year and low flow flood events from existing and future land use in a manner that protects life and does not cause nuisance or inundation of habitable rooms;
- (2) design the stormwater network to comply with the FNQROC Development Manual as council's adopted standards identified in the planning scheme, which generally accord with the Queensland Urban Drainage Manual;
- (3) design road crossing structures to provide an appropriate level of flood immunity for a 10-year flood event in accordance with Council's adopted standards identified in the planning scheme;
- (4) meet water quality objectives for receiving waters at all times, and comply with environmental permits, licences, management plans and performance standards;

³ Designs for sewer s larger than 225m diameter shall be subject to specific criteria nominated by Council,

4.4.4 Transport network

The desired standard of service for the transport network includes the following:

(1) Roads

- (a) Provide a functional urban hierarchy that supports settlement patterns, commercial and economic activities, and freight movement.
- (b) Design the road network to comply with the following:
 - (i) Council's adopted standards;
 - (ii) AUSTRROADS Guide to Road design set (Dec 2009)
 - (iii) the Department of Transport and Main Roads' Planning and Design Manual and Interim Guide to Road Planning and Design Practice (May 2010); and
 - (iv) design the transport network to comply with the FNQROC Development Manual and referenced standards, as amended.

(2) Footpaths and cycle ways

- (a) Plan cycle ways and footpaths to provide a safe, attractive and convenient network that links residential areas to major activity nodes and public transport interchanges, thereby encouraging walking and cycling as acceptable travel alternatives.
- (b) Design cycle ways (including on-road cycle ways) and footpaths to comply with the FNQROC Development Manual and referenced standards, as amended, and the requirements of the Disability Discrimination Act 1992.

(3) Public transport

- (a) Ensure development accommodates the integration of public transport services.
- (b) Provide bus stops including bus bays, shelters, seating and bus information systems in accordance with Council's adopted standards

4.4.5 Public parks and land for community facilities network

- (1) The Desired Standard of Services for Public Parks and land for community facilities shall be in accordance with Table 4.4.5

Table 4.4.5 – Parks and Land for Community Facilities Desired Standard of Service

	Embellishment type	Recreation Park			Sport parks	
		Local	District	Region	District	Region
General requirements – for new parks						
1	Location criteria ¹ Node: an area within a higher-level park or within other open space (e.g. a waterway corridor) that is developed for play and picnic use.	Park or node ¹ within 500m safe walking distance of 85% of urban residential lots for Tolga, Atherton, Yungaburra, Malanda, Herberton and Ravenshoe. Within 500m of a Centre zone or Community Facilities zone other rural towns.	Park / precinct based on specific attraction, natural feature or location. Ideally located to utilise existing corridors such as riparian corridors or rail trails that provided linkages between towns. Ideally public transport is accessible within 500m at major entry points of the trail. The site should link to other trip generators in urban areas.	Park / precinct based on specific attraction, natural feature or location. Ideally located to utilise existing corridors such as riparian corridors or rail trails that provided linkages between towns. Ideally public transport is accessible within 500m at major entry points of the trail. The site should link to other trip generators in urban areas.	Park within 5-10 km of residential and village areas.	1-3 Parks serves whole of TRC area.
2	Rate of Land Provision	1 Ha / 1000 people or part thereof	1 Ha / 1000 people	0.5 Ha / 1000 people	1 Ha / 1000 people	0.4 Ha / 1000 people
3	Minimum size of park	0.5 Ha (1.0 Ha if a node ¹)	2 Ha useable area	More than 5 Ha with 3ha of useable area.	More than 5 Ha with 3ha of useable area.	5-10 Ha
4	Minimum width For new parks	30m for useable park area	Cleared grassy area minimum of 900m ² with a minimum width of 30m and a slope no greater than 5% suitable for kicking a ball.	30m for useable park area. Linear park: minimum 3m with optimal being 15m.	Land should be of a regular shape (i.e. square or rectangular) to maximise the useable area. Long narrow lots or triangular shaped lots are discouraged for sports grounds.	50m for useable park area
5	Considerations for linear parks (minimum)	–	–	Width 15m Linear Park: minimum length 4km Shared pedestrian / cycle path to FNQROC Standard	–	–
6	Road frontage minimum frontage for new parks FNQROC Standard will determine if footpath required	Min 40% the boundary	Min 40% the boundary	50% the boundary	Min 40% the boundary	50% of the usable area
7	Maximum gradient	1:20 for main use area 1:6 for remainder	1:20 for main use areas variable for remainder	1:20 for use areas variable for remainder	1:50 for field and court areas 1:10 for remainder	1:50 for all playing surfaces
8	Minimum flood immunity	25% of site has >20% AEP 75% of site has >2% AEP	90% of site has >2% AEP 10% of site has >1% AEP	50% of site has >20% AEP 40% of site has >2% AEP 10% of site has >1% AEP	90% of site has >2% AEP 10% of site has >1% AEP	50% of site has >20% AEP 40% of site has >2% AEP 10% of site has >1% AEP

	Embellishment type	Recreation Park			Sport parks	
		Local	District	Region	District	Region
Infrastructure Requirements for all parks						
9	Vehicle parking Minimum	–	6 bitumen sealed vehicle spaces. Provided on or off-street.	20 bitumen sealed vehicle spaces. Provided on or off-street off street Possibly in several locations	Off street parking. Minimum 20 bitumen sealed vehicle spaces. Note: Planning Scheme Part 9.4.3 provides parking numbers based on the types of sport in the park.	Off street parking. Minimum bitumen sealed vehicle spaces. spaces Note: Planning Scheme Part 9.4.3 provides parking numbers based on the types of sport in the park.
10	Bus parking Minimum (Retrofit - where practical or needed)	–	–	1 dedicated coaster bus set down area 1 coaster bus parking space	1 dedicated bus set down area 1 bus parking space	1 dedicated bus set down area 2 bus parking spaces
11	Fencing and Bollards (Retrofit - where practical or needed)	Bollards to allow authorised vehicle access Parks fronting a higher order road require fencing	Bollards to allow authorised vehicle access Parks fronting a higher order road require fencing	Bollards to allow authorised vehicle access Parks fronting a higher order road require fencing	Fencing and bollards to control access. Emergency vehicles to be allowed onsite.	Fencing and bollards to control access Bollards to allow authorised vehicle access.
12	Equitable access	Where achievable depending on location and park features	Where achievable depending on location and park features	Appropriate access for mobility impaired to the Main purpose areas.	Appropriate access for mobility impaired to the Main purpose areas.	Appropriate access for mobility impaired to the Main purpose areas.
13	Toilets	–	2 unisex all access toilets Imperviously sealed internal path from toilet to parking area.	4 unisex all access toilets. Imperviously sealed internal path from toilet to parking area	Provided by clubs as part of club facilities. Minimum: 1 unisex all access toilet 4 cubicles male 2 showers male 4 cubicles female 2 showers male Change rooms for 2 teams Lockable storage area min 4m x 5m.	Provided by clubs as part of club facilities. Minimum: 1 unisex all access toilet 6 cubicles male 4 showers male 6 cubicles female 4 showers female Change rooms for 2 teams Lockable storage area min 4m x 5m.
Fit out requirements for all parks						
14	Lighting	Lighting from on-street lights	Provide for: - Parking area/s - Toilets (inside and out) - BBQ/picnic area	Provide for: - Parking area/s - Toilets (inside and out) - BBQ/picnic area - Active recreation facilities For linear parks lighting along main routes in urban areas.	Responsibility of operator: - Parking area/s - Toilets (inside and out) - BBQ/picnic area - Active recreation facilities - security lighting for buildings. Field lighting is also the responsibility of operator.	Responsibility of operator: - Parking area/s - Toilets (inside and out) - BBQ/picnic area - Active recreation facilities - security lighting for buildings. Field lighting is also the responsibility of operator.

	Embellishment type	Recreation Park			Sport parks	
		Local	District	Region	District	Region
15	Seating	2+ seats sheltered by trees	4+ seats sheltered by trees	1per 500m in urban areas under shade trees	4 perimeter seats Perimeter shade from appropriate tree species.	2 perimeter seats per field 100 seats for spectators with shade Perimeter shade from appropriate tree species.
16	Tables	1-2 tables sheltered by trees	2+ tables sheltered by trees – or – by structures if insufficient natural shade	5+ tables sheltered by structures 4+ tables sheltered by trees	–	–
17	Covered electric BBQs with 1 accessible power point	–	1	Minimum 2	–	–
18	Taps	1-2 taps	2+ taps or for picnic areas Taps near active recreation areas.	1 tap per BBQ facility	1 tap external to each toilet block 1 tap external to each building 1 tap per 2 courts or fields.	1 tap external to each toilet block 1 tap external to each building 1 tap per 2 courts or fields.
19	Irrigation	–	In ground irrigation for landscaped areas.	In ground irrigation for landscaped areas.	In ground irrigation for fields.	In ground irrigation for fields.
20	Landscaping	Shade species. Buffer plantings with other nodes.	Strategic shade and screen plantings.	Strategic shade and screen plantings.	Planted buffer areas adjacent to residential areas. Screening/buffer plantings for recreation nodes.	Planted buffer areas adjacent to residential areas. Screening/buffer plantings for recreation nodes.
Playgrounds, Activity Areas						
21	Play events - Children - Youth (skate, court, pump track etc.) - Dog play - Fitness - Aging	1 shaded play event	3 play events	5 play events as appropriate	Not provided except as part of recreation node.	Not provided except as part of recreation node.

4.5 Plans for trunk infrastructure

- (1) The plans for trunk infrastructure identify the trunk infrastructure networks intended to service the existing and assumed future urban development at the desired standard of service up to 2031

4.5.1 Plans for trunk infrastructure maps

- (1) The existing and future trunk infrastructure networks are shown on the following maps in Schedule 3—Local government infrastructure plan mapping and tables:
- (a) Local Government Infrastructure Plan Map LGIP- SC 3.3.3 - Plan for trunk water supply infrastructure
 - (b) Local Government Infrastructure Plan Map LGIP SC 3.3.4 - Plan for trunk sewerage infrastructure
 - (c) Local Government Infrastructure Plan Map LGIP- SC 3.3.5 —Plan for trunk transport infrastructure
 - (d) Local Government Infrastructure Plan Map LGIP-SC 3.3.6 or relevant map—Plan for trunk stormwater infrastructure
 - (e) Local Government Infrastructure Plan Map LGIP- 3.3.7 Plan for trunk parks and land for community facilities infrastructure
- (2) The State infrastructure forming part of transport trunk infrastructure network has been identified using information provided by the relevant State infrastructure supplier.

4.5.2 Schedules of works

- (1) Details of the existing and future trunk infrastructure networks are identified in the electronic Excel schedule of works model which can be viewed on Council's website.
- (2) The future trunk infrastructure is identified in the following tables in Schedule 3—Local government infrastructure plan mapping and tables:
- (a) for the water supply network, Table 3.2.1
 - (b) for the sewerage network, Table 3.2.2
 - (c) for the transport network, Table 3.2.3
 - (d) for the stormwater network, Table 3.2.4
 - (e) for the parks and land for community facilities network, Table 3.2.5

4.5.3 Extrinsic material

The below table identifies the documents that assist in the interpretation of the local government infrastructure plan and are extrinsic material under the *Statutory Instruments Act 1992*.

List of extrinsic material

Column 1 Title of document	Column 2 Date	Column 3 Author
Local Government Infrastructure Plan (LGIP) Planning Assumptions Report – provides a summary of the rationale underpinning the development of the LGIP	Feb 2018	Strategic AM and Urban Ethos
Atherton Water and Wastewater - Investigation, network modelling and determination of plans for trunk infrastructure	March 2011	SKM
Tolga Water and Wastewater - Investigation, network modelling and determination of plans for trunk infrastructure	March 2011	SKM
Malanda Water - Investigation, network modelling and determination of plans for trunk infrastructure	March 2011	SKM
Yungaburra Water and Wastewater - Investigation, network modelling and determination of plans for trunk infrastructure	March 2011	SKM
External advice from Consultants - for assessment of some recommended upgrades using historical models for Herberon and Ravenshoe	2017 – Using historical hydraulic models	Jacobs
Atherton Shire Retail and Business Strategy	April 2007	SGS Economics and Planning
Far North Queensland & Cairns Region Industrial Land Demand Study.	October 2008	Economic Associates

Schedule 3 Priority Infrastructure Plan Mapping and supporting material

'Editor's note—mapping for the PIP is contained within Schedule 3 of the planning scheme.'

SC3.1 Planning assumption tables

Table SC 3.1.1—Existing and projected population

Projection area	LGIP development Type	Existing and projected population					Ultimate development
		2016	2021	2026	2031	2036	
Inside PIA - Atherton	Single dwelling	6,191	6,920	7,400	7,903	8,434	10,818
	Multiple dwelling	577	645	690	737	786	1,002
	Other dwelling	406	454	485	518	553	695
	Total	7,174	8,019	8,576	9,159	9,773	12,515
Inside PIA - Tolga	Single dwelling	837	871	907	944	982	1,618
	Multiple dwelling	78	80	81	83	85	181
	Other dwelling	55	57	59	62	64	158
	Total	970	1,008	1,047	1,088	1,131	1,957
Inside PIA - Malanda	Single dwelling	1,169	1,192	1,216	1,241	1,266	1,636
	Multiple dwelling	33	34	34	35	36	43
	Other dwelling	45	46	47	48	49	58
	Total	1,247	1,272	1,298	1,324	1,350	1,737
Inside PIA - Yungaburra	Single dwelling	1,080	1,123	1,169	1,217	1,266	1,756
	Multiple dwelling	31	32	33	34	36	42
	Other dwelling	42	43	45	47	49	59
	Total	1,152	1,199	1,247	1,298	1,351	1,857
Inside PIA – Herberton	Single dwelling	1,129	1,152	1,175	1,199	1,223	2,045
	Multiple dwelling	18	18	19	19	19	38
	Other dwelling	74	75	77	78	80	316
	Total	1,221	1,246	1,271	1,296	1,323	2,399
Inside PIA - Ravenshoe	Single dwelling	1,055	1,076	1,098	1,120	1,143	1,739
	Multiple dwelling	17	17	17	18	18	27
	Other dwelling	69	70	72	73	75	108
	Total	1,141	1,164	1,187	1,211	1,235	1,874
Inside PIA	Single dwelling	11,460	11,944	12,567	13,218	13,903	19,750
	Multiple dwelling	754	788	829	872	918	1,312
	Other dwelling	690	721	761	802	845	1,273
	Total	12,904	13,452	14,156	14,893	15,666	22,335
Outside PIA	Single dwelling	10,834	10,925	11,015	11,088	11,097	11,803
	Multiple dwelling	490	496	499	502	503	535
	Other dwelling	599	607	615	622	626	666
	Total	11,923	12,028	12,130	12,213	12,225	13,003
Local Government Area	Single dwelling	22,294	23,261	23,981	24,711	25,410	31,414
	Multiple dwelling	1,243	1,321	1,374	1,429	1,483	1,869
	Other dwelling	1,290	1,353	1,400	1,449	1,496	2,060
	Total	24,827	25,935	26,755	27,589	28,389	35,343

Table SC 3.1.2—Existing and projected employees

Projection area	LGIP development Type	Existing and projected non-residential employment					Ultimate Development
		2016	2021	2026	2031	2036	
Inside PIA - Atherton	Retail	672	751	803	858	915	1,172
	Commercial	1,460	1,632	1,745	1,864	1,989	2,547
	Industrial	490	548	586	626	668	855
	Services (Community/Education/Hospital)	326	364	389	416	444	568
	Other	842	942	1,007	1,075	1,147	1,469
	Total	3,789	4,236	4,530	4,838	5,163	6,611
Inside PIA - Tolga	Retail	91	94	98	102	106	183
	Commercial	197	205	213	221	230	398
	Industrial	66	69	72	74	77	134
	Services (Community/Education/Hospital)	44	46	48	49	51	89
	Other	114	118	123	128	133	230
	Total	512	532	553	575	597	1,034
Inside PIA - Malanda	Retail	96	98	100	102	104	134
	Commercial	475	484	494	504	514	661
	Industrial	243	248	253	258	263	339
	Services (Community/Education/Hospital)	123	125	128	130	133	171
	Other	397	405	413	421	430	553
	Total	1,333	1,360	1,387	1,415	1,444	1,857
Inside PIA - Yungaburra	Retail	89	92	96	100	104	143
	Commercial	439	456	475	494	514	707
	Industrial	224	234	243	253	263	362
	Services (Community/Education/Hospital)	113	118	123	128	133	183
	Other	367	381	397	413	430	591
	Total	1,232	1,282	1,334	1,388	1,444	1,986
Inside PIA - Herberton	Retail	89	91	93	94	96	175
	Commercial	238	243	248	253	258	469
	Industrial	134	137	140	142	145	263
	Services (Community/Education/Hospital)	125	128	131	133	136	246
	Other	276	282	287	293	299	543
	Total	863	880	898	916	935	1,696
Inside PIA - Ravenshoe (L)	Retail	83	85	86	88	90	137
	Commercial	223	227	232	236	241	366
	Industrial	125	128	130	133	136	206
	Services (Community/Education/Hospital)	117	119	122	124	127	192
	Other	258	263	268	274	279	424
	Total	806	822	839	856	873	1,324
Outside PIA	Retail	349	352	355	358	358	381
	Commercial	872	879	887	893	894	951
	Industrial	349	352	355	357	357	380
	Services (Community/Education/Hospital)	237	239	241	243	243	259
	Other	616	621	626	631	631	671
	Total	2,422	2,444	2,464	2,481	2,484	2,642
Local Government Area	Retail	1,468	1,563	1,631	1,701	1,773	2,323
	Commercial	3,904	4,128	4,294	4,466	4,641	6,099
	Industrial	1,632	1,714	1,778	1,843	1,910	2,538
	Services (Community/Education/Hospital)	1,085	1,139	1,181	1,223	1,266	1,708
	Other	2,869	3,012	3,122	3,235	3,350	4,481
	Total	10,958	11,556	12,006	12,469	12,940	17,149

Table SC 3.1.3—Planned density and demand generation rate for a trunk infrastructure network

Column 1 Area classification	Column 2 LGIP development type	Column 3 Planned density			Column 4 Demand generation rate for a trunk infrastructure network					
		Non-residential plot ratio	Residential density (dwellings/ dev ha)	Use intensity	Water supply network (EP)	Sewerage network (EP)	Transport network (vpd)	Parks and land for community facilities network (persons)	Stormwater network (imp fraction)	
Residential development										
Township	Dwelling House		12.5	lot	Atherton - 2.3 EP Tolga - 2.5 EP Herberton - 2.1 EP Ravenshoe – 2.3 EP Yungaburra – 2.4 EP Malanda – 2.3EP Tablelands Region – 2.4 EP					
	Dual Occupancy		12.5	lot						
Character	Dwelling House		16.6	lot						
	Dual Occupancy		16.6	lot						
Emerging Communities	Residential		12.5	lot						
Low Density Residential	Dwelling House		12.5	lot						
	Dual Occupancy		25	lot						
Low-Medium Density Residential	Dwelling House		25	lot						
	Dual Occupancy		33.3	lot						
	Terraced/Row House		41.6	lot						
	Multiple Dwelling		41.6	lot						
Medium Density Residential	Dwelling House		25	lot						
	Dual Occupancy		33.3	lot						
	Terraced/Row House		41.6	lot						
	Multiple Dwelling		194.2	lot						
Mixed Use	Dwelling House		16.6	lot						
	Dual Occupancy		33.3	lot						
	Multiple Dwelling		194.2	100m2 use area	1	1	30	.3	0.9	
Commercial Centre	Commercial Centre (primary frontage building - 8 storey)		278.6	100m2 use area	1	1	7	0.3	0.9	
Limited Development (Constrained Land)	Dwelling House		0.02	lot	As per "Township" above			8.5	2.55	0.5
Rural Dwelling										
Rural Residential	Dwelling House (urban water service)		1.7	lot	As per "Township" above					
	Dwelling House (less than urban water service)		0.7	lot	NA	2.4	8.5	2.55	0.1	
Non-Residential										
Centre zone	Centre zone	0.58m ² GFA/m ² Site Area		100m2 use area	1	1	7	0.3	0.9	
Neighbourhood centre	Neighbourhood Centre	0.48m ² GFA/m ² Site Area		100m2 use area	1	1	7	2.55	0.9	
Specialised centre	Specialised Centre	0.37m ² GFA/m ² Site Area		100m2 use area	1	1	7	2.55	0.9	
Mixed Use	Mixed Use (Primary Frontage Building)	0.72m ² GFA/m ² Site Area		100m2 use area	1	1	30	.3	0.9	
	Mixed Use (Secondary Frontage)	0.48m ² GFA/m ² Site Area		100m2 use area	1	1	30	.3	0.9	

Column 1 Area classification	Column 2 LGIP development type	Column 3 Planned density			Column 4 Demand generation rate for a trunk infrastructure network				
		Non-residential plot ratio	Residential density (dwellings/ dev ha)	Use intensity	Water supply network (EP)	Sewerage network (EP)	Transport network (vpd)	Parks and land for community facilities network (persons)	Stormwater network (imp fraction)
	Building)	Area		area					
Commercial centre	Commercial Centre (Primary Frontage Building)	0.72m ² GFA/m ² Site Area		100m2 use area	1	1	7	0.3	0.9
Community Facilities	Community Facilities	0.21m ² GFA/m ² Site Area		100m2 use area	1	1	7	2.55	0.9
Sport and recreation	Sport and recreation	0.48m ² GFA/m ² Site Area		100m2 use area	1	1	7	2.55	0.9
Open space	Open space	NA			0	0	0	0	0.7
Low impact industry	Low impact industry	28.1ET/ha		100m2 use area	1.2	1.2	3.5	.3	0.9
Medium impact industry	Medium impact industry	28.1ET/ha		100m2 use area	1.2	1.2	3.5	.3	0.9
High impact industry	High impact industry	28.1ET/ha		100m2 use area	1.2	1.2	3.5	.3	0.9
Special industry	Special industry	28.1ET/ha		100m2 use area	1.2	1.2	3.5	.3	0.9

Table SC 3.1.4—Existing and projected residential dwellings

Projection area	LGIP development Type	Existing and projected dwellings					Ultimate development
		2016	2021	2026	2031	2036	
Inside PIA - Atherton	Single dwelling	2,751	3,009	3,218	3,436	3,667	4,703
	Multiple dwelling	288	306	324	344	366	487
	Other dwelling	202	214	228	242	256	336
	Total	3,241	3,529	3,770	4,022	4,289	5,526
Inside PIA - Tolga (L)	Single dwelling	372	348	363	377	393	647
	Multiple dwelling	18	19	20	22	23	41
	Other dwelling	16	17	18	19	20	44
	Total	406	384	401	418	436	732
Inside PIA - Malanda	Single dwelling	578	518	529	539	550	711
	Multiple dwelling	28	29	30	31	32	36
	Other dwelling	25	26	27	28	29	32
	Total	631	573	586	598	611	779
Inside PIA - Yungaburra	Single dwelling	534	468	487	507	528	731
	Multiple dwelling	22	23	24	25	26	31
	Other dwelling	26	27	28	29	30	37
	Total	582	518	539	561	584	799
Inside PIA - Herberton (L)	Single dwelling	570	549	560	571	582	974
	Multiple dwelling	51	52	53	55	56	87
	Other dwelling	16	17	18	19	20	62
	Total	637	618	631	645	658	1,123
Inside PIA - Ravenshoe (L)	Single dwelling	533	468	477	487	497	756
	Multiple dwelling	32	32	33	34	35	41
	Other dwelling	26	26	27	28	29	33
	Total	591	526	537	549	561	830
Inside PIA	Single dwelling	5,788	5,156	5,425	5,706	6,001	8,525
	Multiple dwelling	439	461	484	511	538	723
	Other dwelling	311	327	346	365	384	544
	Total	6,538	5,944	6,255	6,582	6,923	9,792
Outside PIA	Single dwelling	5,198	4,716	4,755	4,786	4,790	5,095
	Multiple dwelling	387	438	489	538	553	553
	Other dwelling	309	349	390	427	439	439
	Total	5,894	5,503	5,634	5,751	5,782	6,087
Local Government Area	Single dwelling	10,077	10,514	10,840	11,170	11,486	14,200
	Multiple dwelling	826	899	973	1,049	1,091	1,276
	Other dwelling	620	676	736	792	823	983
	Total	11,523	12,089	12,549	13,011	13,400	16,459

Table SC 3.1.5—Existing and projected non-residential floor space

Projection area	LGIP development Type	Existing and projected non-residential floor space					Ultimate Development
		2016	2021	2026	2031	2036	
Inside PIA - Atherton	Retail	54,034	60,402	64,592	68,982	73,613	94,263
	Commercial	30,358	33,936	36,290	38,756	41,358	52,960
	Industrial	32,431	36,253	38,768	41,403	44,182	56,576
	Services (Community/Education/Hospital)	37,783	42,236	45,165	48,236	51,473	65,913
	Other	44,273	49,490	52,923	56,521	60,315	77,234
	Total	198,879	222,316	237,738	253,899	270,941	346,945
Inside PIA - Tolga	Retail	5,552	5,769	5,994	6,228	6,471	11,198
	Commercial	3,225	3,351	3,482	3,618	3,759	6,505
	Industrial	67,931	70,580	73,335	76,199	79,177	137,011
	Services (Community/Education/Hospital)	736	765	795	826	858	1,484
	Other	12,951	13,456	13,981	14,527	15,095	26,121
	Total	90,395	93,920	97,586	101,397	105,360	182,320
Inside PIA - Malanda	Retail	8,443	8,613	8,787	8,964	9,145	11,762
	Commercial	6,656	6,790	6,927	7,067	7,209	9,272
	Industrial	22,458	22,911	23,373	23,844	24,325	31,286
	Services (Community/Education/Hospital)	7,080	7,223	7,368	7,517	7,668	9,863
	Other	12,860	13,119	13,384	13,654	13,929	17,915
	Total	57,497	58,656	59,839	61,045	62,276	80,098
Inside PIA - Yungaburra	Retail	7,420	7,722	8,035	8,362	8,702	11,965
	Commercial	2,490	2,591	2,697	2,806	2,920	4,015
	Industrial	0	25,696	26,740	27,827	28,958	39,816
	Services (Community/Education/Hospital)	3,867	4,024	4,188	4,358	4,535	6,235
	Other	3,716	3,867	4,024	4,188	4,358	5,992
	Total	17,493	43,900	45,684	47,541	49,473	68,023
Inside PIA - Herberton	Retail	4,326	4,413	4,502	4,593	4,686	8,501
	Commercial	2,450	2,499	2,550	2,601	2,654	4,814
	Industrial	528	539	550	561	572	1,038
	Services (Community/Education/Hospital)	9,786	9,983	10,185	10,390	10,599	19,230
	Other	16,775	17,113	17,458	17,810	18,169	32,963
	Total	33,865	34,548	35,244	35,955	36,680	66,545
Inside PIA - Ravenshoe	Retail	8,917	9,097	9,280	9,467	9,658	14,651
	Commercial	3,195	3,259	3,325	3,392	3,461	5,249
	Industrial	24,668	25,165	25,673	26,190	26,718	40,530
	Services (Community/Education/Hospital)	2,919	2,978	3,038	3,099	3,162	4,796
	Other	17,542	17,896	18,256	18,625	19,000	28,822
	Total	57,241	58,395	59,572	60,773	61,999	94,048
Local Government Area	Retail	88,692	96,015	101,190	106,596	112,274	152,338
	Commercial	48,374	52,426	55,270	58,240	61,360	82,815
	Industrial	148,016	181,143	188,437	196,023	203,932	306,256
	Services (Community/Education/Hospital)	62,171	67,208	70,738	74,425	78,296	107,521
	Other	108,117	114,942	120,027	125,324	130,866	189,047
	Total	455,370	511,734	535,663	560,609	586,728	837,979

Table SC 3.1.6—Existing and projected demand for the water supply network

Column 1 Service catchment ¹	Column 2 Existing and projected demand (EP)					
	2016	2021	2026	2031	2036	Ultimate development
Atherton	10,165	10,470	10,784	11,108	11,441	15,301
Herberton	1,236	1,273	1,311	1,351	1,391	1,980
Malanda	1,886	1,943	2,001	2,061	2,123	2,552
Ravenshoe	1,223	1,260	1,297	1,336	1,376	1,638
Tolga	1,732	1,784	1,837	1,892	1,949	3,014
Yungaburra	1,570	1,617	1,666	1,716	1,767	2,458
Total (Urban Schemes)	17,812	18,347	18,896	19,464	20,047	26,943

Table SC 3.1.7—Existing and projected demand for the sewerage network

Column 1 Service catchment ²	Column 2 Existing and projected demand (EP)					Ultimate development
	2016	2021	2026	2031	2036	
Atherton	10,165	10,470	10,784	11,108	11,441	15,301
Malanda	1,886	1,943	2,001	2,061	2,123	2,552
Ravenshoe	1,223	1,260	1,297	1,336	1,376	1,638
Tolga	1,732	1,784	1,837	1,892	1,949	3,014
Yungaburra	1,570	1,617	1,666	1,716	1,767	2,458
Total (Urban Schemes)	16,576	17,074	17,585	18,113	18,656	24,962

Table SC 3.1.8—Existing and projected demand for the transport network

Column 1 Service catchment ³	Column 2 Existing and projected demand (vpd)					Ultimate development
	2016	2021	2026	2031	2036	
Report Sector						
Atherton	25,256	26,023	26,813	27,627	28,466	38,069
Herberton	3,718	3,793	3,869	3,963	4,043	5,756
Malanda	4,573	4,684	4,778	4,875	4,973	5,977
Ravenshoe	3,732	3,807	3,884	3,962	4,042	4,812
Tolga	3,613	3,760	3,912	4,072	4,237	6,551
Yungaburra	4,144	4,312	4,488	4,670	4,860	6,762
Total	45,036	46,379	47,744	49,169	50,621	67,127

Note—5. Column 1 The service catchments for the transport network are identified on Local Government Infrastructure Plan Map LGIP (Plan for trunk transport infrastructure) in Volume 2: Schedule 3 (local government infrastructure mapping and tables).

Table SC 3.1.9—Existing and projected demand for the stormwater network

Column 1 Service catchment ⁴	Column 2 Existing and projected demand (imp ha)					
	2016	2021	2026	2031	2036	Ultimate development
Atherton	82	84	87	90	92	123
Herberton	10	10	10	11	11	16
Malanda	16	16	16	17	17	20
Ravenshoe	10	10	10	11	11	13
Tolga	13	13	14	14	15	23
Yungaburra	12	12	13	13	14	19
Total (Urban Schemes)	143	145	150	156	160	215

Footnotes:

Table SC 3.1.10—Existing and projected demand for the parks and land for community facilities network

Service catchment ⁵	Existing and projected demand (ha/1000 persons)					
	2016	2021	2026	2031	2036	Ultimate development
Atherton	6,626	6,827	7,034	7,248	7,468	9,987
Herberton	840	857	874	892	910	1,296
Malanda	1,033	1,054	1,075	1,097	1,119	1,345
Ravenshoe	843	860	877	895	913	1,087
Tolga	918	955	994	1,035	1,077	1,665
Yungaburra	1,053	1,096	1,140	1,187	1,235	1,718
Total	11,313	11,649	11,994	12,354	12,722	17,098

SC3.2 Schedules of works

Table 3.2.1—Water supply network schedule of works

Column 1 Map reference	Column 2 Trunk infrastructure	Column 3 Est timing	Column 4 Est cost ⁶
WATH057	150 mm main (130 m)	2027-31	\$20,594
WATH059	225 mm main (440 m)	2022-26	\$108,869
WATH060	150 mm main (135 m)	2016-21	\$23,763
WATH061	150 mm main (255 m)	2016-21	\$40,397
WATH062	300 mm main (15 m)	2016-21	\$6,425
WATH063	225 mm main (255 m)	2016-21	\$69,404
WATH064	150 mm main (175 m)	2016-21	\$30,495
WATH065	225 mm main (290 m)	2016-21	\$80,291
WATH066	150 mm main (260 m)	2022-26	\$41,189
WATH069	Pump Station and 225mm main from Pump Station to connect with 63.	2022-26	\$36,138
WATH076	225 mm main (845 m)	2022-26	\$147,251
WATH077	150 mm main (395 m)	2022-26	\$62,575
WATH078	225 mm main (15 m)	2016-21	\$3,711
WATH079	150 mm main (75 m)	2016-21	\$11,881
WATH200	300mm Main (2.2km)	2016-21	\$666,912
WATH201	300mm Main (3.3km)	2022-26	\$1,197,411
WATH202	100mm Main (280m)	2022-26	\$37,477
WMAL019	150mm main (50 m)	2016-21	\$27,881
WMAL018(b))	150mm main (280 m)	2027-31	\$264,751
WMAL021	225mm main (1495 m)	2016-21	\$435,478
WMAL022	150 mm main (571 m)	2022-26	\$90,457
WMAL100	150 mm main	2022-26	\$26,931
WMAL102	reservoir upgrade	2027-31	\$1,364,000
WYUN006	225 mm main (745 m)	2016-21	\$202,769
WYUN007	225 mm main (165 m)	2016-21	\$44,908
WYUN008	150 mm main (71 m)	2027-31	\$11,247
WYUN009	150 mm main (185 m)	2027-31	\$29,307
WYUN010	150mm main (120 m)	2027-31	\$19,010
WYUN011	150 mm main (125 m)	2027-31	\$19,082
WYUN100	225mm Barrine Road from 225mm connection points at Eacham Road (Where Job No 6 finishes).	2027-31	\$18,557
WYUN101	Rising Main from Eacham Road to Reservoir - 225mm	2016-21	\$114,313
WYUN102	Reservoir Upgrade to meet demand	2027-31	\$528,000
WTOL52	225 mm main (765 m)	2016-21	\$189,284
WTOL53	225 mm main (230 m)	2016-21	\$56,909
WTOL203	225mm main Main Street (from Highway to Lawson Street) 230m.	2022-26	\$55,818
WTOL204	Reservoir or Upgrade of Trunk Main	2016-21	\$1,000,000
WTOL205	Reservoir Upgrade to meet demand	2016-21	\$1,474,000
WRAV100	Increase capacity of Intake and Main at North Cedar Creek (Raise weir and increase from 200m to 300m diameter).	2016-21	\$2,052,924
WRAV101	Monument Street up to the Future Reservoir Site	2022-26	\$848,200
WRAV103	Reservoir Upgrade to meet demand	2016-21	\$1,958,000
WHER001	200mm from John St down to end (Toft Street)	2016-21	\$424,591
WHER003	100mm Lyall Street to Morris Road (Existing 50mm)	2027-31	\$103,798
WHER004	Mazlin Crescent 100mm (Existing 63mm)	2027-31	\$17,667
TOTAL			\$13,962,664

Note—7. **Error! Reference source not found.** Column 4 The establishment cost is expressed in current cost terms as at the base date.

Table 3.2.2—Sewerage network schedule of works

Column 1 Map reference	Column 2 Trunk infrastructure	Column 3 Est timing	Column 4 Est cost ⁷
WWATH023	150 mm gravity main (200 m) to Pump Station 3	2016-21	\$74,998
WWATH024	300 mm gravity main (55 m) from A2/1 to A1/12	2016-21	\$32,771
WWATH025	300 mm gravity main (150 m) from A1/29 to A1/26	2016-21	\$74,690
WWATH026	525 mm gravity main (1770 m) from A102/2 to A1/13	2016-21	\$1,537,616
WWATH027	600 mm gravity main (540 m) from A1/13	2016-21	\$537,355
WWATH029	Pump Station 2 (BMX Track) Pumps	2016-21	\$54,036
WWATH030	Pump Station 3 (Anthony Drive) Pumps	2016-21	\$40,527
WWATH031	150 mm pressure main (655 m) from Pump Station 3 to Sewerage Treatment Plant	2016-21	\$83,423
WWATH032	225 mm pressure main (1705 m)	2016-21	\$328,026
WWATH034	150 mm pressure main (165 m) from Pump Station 4	2016-21	\$19,104
WWATH037	150 mm pressure main (2295 m) from Pump Station 'A' to A102/2	2016-21	\$265,729
WWATH038	150 mm gravity main (50 m) to A113/4	2016-21	\$24,189
WWATH039	150 mm gravity main (135 m) to C29/9	2016-21	\$52,255
WWATH041	150 mm gravity main (35 m) to C71/3	2016-21	\$20,196
WWATH043	100 mm pressure main (890 m) from Pump Station 'B'	2022-26	\$81,624
WWATH045	150 mm pressure main (1125 m) from Pump Station 'C' to A4/4	2027-31	\$130,258
WWATH046	100 mm pressure main (20 m) from Pump Station 1	2027-31	\$1,834
WWATH048	100 mm pressure main (555 m) from Pump Station 'D' to Line F1	2027—31	\$54,287
WWYUN022	225 mm gravity main (240 m) From LA2/4 to LA/0	2016-21	\$103,091
WWYUN029	Pump Station TA Pumps only	2016-21	\$54,998
WWATH100	STP upgrade	2016-21	\$6,000,000
WWMAL100	Pump Station LC Pumps only	2022-26	\$60,000
WWTOL100	PS/TG1 Upgrade of Pump Station	2027-31	\$60,000
WWTOL101	Tolga Future Trunk Sewerage (Nominal amount of Trunk Main - 1500m)	2027-31	\$410,335
WWRAV100	Rising main pump station	2022-26	\$165,082
		TOTAL	\$10,266,424

Note—7. **Error! Reference source not found.** Column 4 The establishment cost is expressed in current cost terms as at the base date.

Table 3.2.3—Transport network schedule of works

Column 1 Map reference	Column 2 Trunk infrastructure	Column 3 Est timing	Column 4 Est cost ⁸
TATH044_a	Route 44 Footpath - First Avenue from Twelfth to Maunds Road – 450m long	2016-21	\$30,658
TATH113A_a	Route 113A Footpath – Loder Street from Viola street to Jubilee School – 600m long	2016-21	\$33,724
TATH124_a	Route 124 Footpath – Herberton Road from Gibson Street to Loder Street – 130m long	2016-21	\$8,175
TATH113B_a	Route 113B Footpath – Loder Street from Jubilee School to Logan Street – 400m long	2022-27	\$22,483
TMAL001_a	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section Including Intersection Upgrade with Millaa - Malanda Road	2022-27	\$338,231
TYUN001_a	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2022-27	\$130,621
TATH044_b	Route 44 Footpath - First Avenue from Twelfth to Maunds Road – 450m long	2016-21	\$30,658
TATH113A_b	Route 113A Footpath – Loder Street from Viola street to Jubilee School – 600m long	2016-21	\$30,658
TATH124_b	Route 124 Footpath – Herberton Road from Gibson Street to Loder Street – 130m long	2016-21	\$8,175
TATH113B_b	Route 113B Footpath – Loder Street from Jubilee School to Logan Street – 400m long	2022-27	\$30,658
TMAL001_b	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section Including Intersection Upgrade with Millaa Millaa - Malanda Road	2022-27	\$338,231
TYUN001_b	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2022-27	\$130,622
TATH044_c	Route 44 Footpath - First Avenue from Twelfth to Maunds Road – 450m long	2016-21	\$30,658
TATH113A_c	Route 113A Footpath – Loder Street from Viola street to Jubilee School – 600m long	2016-21	\$33,724
TATH124_c	Route 124 Footpath – Herberton Road from Gibson Street to Loder Street – 130m long	2016-21	\$8,175
TATH113B_c	Route 113B Footpath – Loder Street from Jubilee School to Logan Street – 400m long	2022-27	\$30,658
TMAL001_c	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section Including Intersection Upgrade with Millaa Millaa - Malanda Road	2022-27	\$338,231
TYUN001_c	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2022-27	\$130,621
TATH044_d	Route 44 Footpath - First Avenue from Twelfth to Maunds Road – 450m long	2016-21	\$30,658
TATH113A_d	Route 113A Footpath – Loder Street from Viola street to Jubilee School – 600m long	2016-21	\$33,724
TATH124_d	Route 124 Footpath – Herberton Road from Gibson Street to Loder Street – 130m long	2016-21	\$8,175
TATH113B_d	Route 113B Footpath – Loder Street from Jubilee School to Logan Street – 400m long	2022-27	\$30,658
TMAL001_d	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section Including Intersection Upgrade with Millaa Millaa - Malanda Road	2022-27	\$338,231
TYUN001_d	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2022-27	\$130,621
TATH044_e	Route 44 Footpath - First Avenue from Twelfth to Maunds Road – 450m long	2016-21	\$30,658
TATH113A_e	Route 113A Footpath – Loder Street from Viola street to Jubilee School – 600m long	2016-21	\$30,658
TATH124_e	Route 124 Footpath – Herberton Road from Gibson Street to Loder Street – 130m long	2016-21	\$8,175
TATH113B_e	Route 113B Footpath – Loder Street from Jubilee School to Logan Street – 400m long	2022-27	\$22,483
TMAL001_e	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section Including Intersection Upgrade with Millaa Millaa - Malanda Road	2022-27	\$338,231
TYUN001_e	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2022-27	\$130,621
TMAL001_f	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section	2016-21	\$338,231

Note—7. **Error! Reference source not found.** Column 4 The establishment cost is expressed in current cost terms as at the base date.

Column 1 Map reference	Column 2 Trunk infrastructure	Column 3 Est timing	Column 4 Est cost⁸
	Including Intersection Upgrade with Millaa Millaa - Malanda Road		
TYUN001_f	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2016-21	\$130,621
TMAL001_g	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section Including Intersection Upgrade with Millaa Millaa - Malanda Road	2016-21	\$338,231
TYUN001_g	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2016-21	\$130,621
TMAL001_h	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section Including Intersection Upgrade with Millaa Millaa - Malanda Road	2027-31	\$338,231
TYUN001_h	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2027-31	\$130,621
TMAL001_i	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section Including Intersection Upgrade with Millaa Millaa - Malanda Road	2027-31	\$338,231
TYUN001_i	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2027-31	\$130,621
TMAL001_j	Upgrade of Glen Allyn Rd to FNQROC TYPE 6 Cross Section Including Intersection Upgrade with Millaa Millaa - Malanda Road	2027-31	\$338,231
TYUN001_j	Upgrade of Eacham, Barrine Roads & Park Ave to FNQROC TYPE 6 Cross Section	2027-31	\$130,621
TOTAL			\$5,182,111

Table 3.2.4—Stormwater network schedule of works

Column 1 Map reference	Column 2 Trunk infrastructure	Column 3 Est timing	Column 4 Est cost ⁹
SWATH001_a	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2016-21	\$168,797
SWATH002	Concrete Lining of existing drainage channel - South of Kennedy Hwy and to the West of Atherton International Club (400m in Length)	2022-26	\$408,774
SWATH003	Installation of 1050Ø RCP along Jack St Atherton (100m length)	2022-26	\$475,741
SWATH001_b	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2016-21	\$168,797
SWATH001_c	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2022-26	\$168,797
SWATH001_d	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2022-26	\$168,797
SWATH001_e	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2022-26	\$168,797
SWATH001_f	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2022-26	\$168,797
SWATH001_g	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2022-26	\$168,797
SWATH001_h	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2027-31	\$168,797
SWATH001_i	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2027-31	\$168,797
SWATH001_j	Peakes Gully Catchment Upgrade including Detention Basins – Stage 1 (Parts 1, 2 and 3)	2027-31	\$168,797
TOTAL			\$2,572,486

Note—7. **Error! Reference source not found.** Column 4 The establishment cost is expressed in current cost terms as at the base date.

Table 3.2.5— Parks and land for community facilities schedule of works

Column 1 Map ref	Column 2 Trunk infrastructure	Column 3 Est timing	Column 4 Est cost ¹⁰
PATH004	Rita Circuit, Atherton - Lot 98 NR7293 - Marj Hamilton Park	2016-21	\$40,850
PATH002	Solar Crescent, Atherton - Lot 2 A31939 - Solar Crescent Park - 6 carparks, fencing, shades, BBQ, lighting and 2 unisex toilets.	2016-21	\$121,475
PATH006	Centenary Drive, Atherton - Lot 17 RP902189 - Hallorans Hill Park - 2 x shelters	2016-21	\$7,095
PTOL001	Racecourse Road, Tolga - Lot 2 RP720198 - Morrow Park - New district playground	2016-21	\$37,625
PYUN001	Tinaburra Drive, Yungaburra - Lots 2 & 3 RP747291 - Tinaburra Peninsula Masterplan - Stage 1 (Upgrade amenities, Shelters & Stage 1 of Playground)	2016-21	\$251,282
PATH001	Railway Lane, Atherton - Lots 152 & 155 SP120085, Lots 1 & 2 SP268793 - Priors Creek Masterplan - Stage 1 (Plaza/Forecourt)	2022-26	\$391,000
PYUN002	Tinaburra Drive, Yungaburra - Lots 2 & 3 RP747291 - Tinaburra Peninsula Masterplan - Stage 2 (Upgrade amenities, Shelters & Stage 2 of Playground)	2022-26	\$268,814
PATH002	Railway Lane, Atherton - Lots 152 & 155 SP120085, Lots 1 & 2 SP268793 - Priors Creek Masterplan - Stage 2 (Footpaths, hard furnishings, Bollards, etc)	2022-26	\$836,142
PYUN003	Tinaburra Drive, Yungaburra - Lots 2 & 3 RP747291 - Tinaburra Peninsula Masterplan - Stage 3 (Upgrade amenities, Shelters & Stage 3 of Playground)	2027-31	\$280,501
PATH003	Railway Lane, Atherton - Lots 152 & 155 SP120085, Lots 1 & 2 SP268793 - Priors Creek Masterplan - Stage 3 (Regional Playground)	2027-31	\$960,000
PYUN004	Tinaburra Drive, Yungaburra - Lots 2 & 3 RP747291 - Tinnaburra Peninsula Masterplan - Stage 4 (Upgrade amenities, Shelters & Stage 4 of Playground)	>2031	\$280,501
PATH005	Railway Lane, Atherton - Lots 152 & 155 SP120085, Lots 1 & 2 SP268793 - Priors Creek Masterplan - Stage 4 (Shelters, BBQ's, Hard furnishings)	>2031	\$456,240
TOTAL			\$3,931,525

SC3.3 Priority infrastructure plan maps

The table below lists the Priority Infrastructure Area and Plans for Trunk Infrastructure maps applicable to the planning scheme area.

Priority Infrastructure Area Maps

Map 1 of 6	Priority Infrastructure Area Map - Atherton
Map 2 of 6	Priority Infrastructure Area Map - Herberton
Map 3 of 6	Priority Infrastructure Area Map - Malanda
Map 4 of 6	Priority Infrastructure Area Map - Ravenshoe
Map 5 of 6	Priority Infrastructure Area Map - Tolga
Map 6 of 6	Priority Infrastructure Area Map - Yungaburra

Plans For Trunk Infrastructure Maps

Water

Map 1 of 4	Plans for Trunk Infrastructure – Water - Atherton
Map 2 of 4	Plans for Trunk Infrastructure – Water - Malanda
Map 3 of 4	Plans for Trunk Infrastructure – Water - Tolga
Map 4 of 4	Plans for Trunk Infrastructure – Water - Yungaburra

Sewer (Wastewater)

Map 1 of 2	Plans for Trunk Infrastructure – Sewer - Atherton
Map 2 of 2	Plans for Trunk Infrastructure - Sewer - Yungaburra

Stormwater

Map 1 of 1	Plans for Trunk Infrastructure - Stormwater – Atherton
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Transport

Map 1 of 5	Plans for Trunk Infrastructure - Transport - Atherton
Map 2 of 5	Plans for Trunk Infrastructure - Transport - Malanda
Map 3 of 5	Plans for Trunk Infrastructure - Transport - Tolga
Map 4 of 5	Plans for Trunk Infrastructure - Transport - Ravenshoe
Map 5 of 5	Plans for Trunk Infrastructure - Transport - Yungaburra

Parks (Parks and land for community facilities)

Map 1 of 5	Plans for Trunk Infrastructure - Parks - Atherton
Map 2 of 5	Plans for Trunk Infrastructure - Parks - Herberton
Map 3 of 5	Plans for Trunk Infrastructure - Parks - Malanda
Map 4 of 5	Plans for Trunk Infrastructure - Parks - Ravenshoe
Map 5 of 5	Plans for Trunk Infrastructure - Parks - Yungaburra