



# **LGIP Planning Assumptions – Extrinsic material report**

Cassowary Coast  
Regional Council

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**PIE Solutions**

Jason Miller

jason@piesolutions.com.au

Ph: 3177 3310

Mob: 0413 0199 56

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## 1.0 Background

Cassowary Coast Regional Council (Council) has prepared a Local Government Infrastructure Plan (LGIP) in accordance with the *Planning Act 2016* and associated Minister's Guidelines and Rules. The LGIP identifies the type, scale, location and timing of development within the local government area for the period 2016-2031 as well as the realistic extent of development anticipated to be achieved when the area is fully developed (*ultimate development*). It also identifies trunk infrastructure to service growth to 2031 at the desired standard of service.

The following trunk infrastructure networks are included in the LGIP:

- (a) Water supply network
- (b) Sewerage network
- (c) Transport network
- (d) Stormwater network
- (e) Parks and land for community facilities network.

Council's LGIP is Part 4 and Schedule 3 of the Cassowary Coast Regional Council Planning Scheme (commenced 3 July 2015).

### 1.1 Purpose of report

This extrinsic material report has been prepared to assist in the interpretation of Council's LGIP. The report summarises the methodology used to prepare the planning assumptions component of the LGIP and references all background studies and reports relevant to its preparation.

### 1.2 LGIP studies and reports

Background studies and reports referred to in this extrinsic material report are as follows:

- Queensland Government Statistician – Medium series population and dwelling projections – 2013 edition
- Australian Bureau of Statistics (ABS) 2011 Census
- Cassowary Coast Regional Council Planning Assumptions Report July 2016 – prepared by PIE Solutions Pty Ltd

## 2.0 Purpose of Planning Assumptions

The planning assumptions state the assumptions about:

- population and employment growth; and
- the type, scale, location and timing of development including the demand for each trunk infrastructure network.

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.

### 3.0 Planning Assumption Parameters

The planning assumptions have been prepared for:

- the base date 2016 and the following projection years to accord with future Australian Bureau of Statistics (ABS) census years:
  - 2021
  - 2026
  - 2031
- Ultimate development. Ultimate development is the realistic extent of development anticipated to be achieved when a site (or projection area or infrastructure service catchment) is fully developed.

The projections of growth and development are summarised for the projection areas, which are the ABS Statistical Area 2 (SA2) areas of Babinda, Innisfail, Johnstone, and Tully using the LGIP development types listed in column 1 of Table 1. The LGIP development types include the planning scheme land uses detailed in column 2 of Table 1.

Table 1 - Relationship between development types and uses

Column 1 LGIP development type	Column 2 Uses
Attached Dwelling (and Other Dwelling)	Caretaker's accommodation (attached), Community residence, Dual occupancy, Dwelling unit, Multiple dwelling, Non-resident workforce accommodation, Residential care facility, Relocatable home park, Retirement facility (attached), Rooming accommodation
Detached Dwelling	Caretaker's accommodation (detached), Community residence (detached), Dwelling house, Retirement facility (detached)
Commercial	Bar, Brothel, Function facility, Home based business, Hotel (non-residential component), Office, Parking station, Resort complex, Sales office, Short-term accommodation, Theatre, Tourist attraction, Tourist park, Veterinary services
Community Purpose	Cemetery, Club, Child care centre, Community care centre, Community use, Crematorium, Detention facility, Educational establishment, Emergency services, Funeral parlour, Hospital, Major sport recreation and entertainment facility, Outdoor sport and recreation, Park, Place of worship

Column 1 LGIP development type	Column 2 Uses
Industry	High impact industry, Low impact industry, Marine industry, Medium impact industry, Renewable energy facility, Research and technology industry, Special industry, Transport depot, Warehouse
Retail (and Service)	Adult store, Agricultural supplies store, Bulk landscape supplies, Food and drink outlet, Garden centre, Hardware and trade supplies, Health care services, Indoor sport and recreation, Market, Nightclub entertainment facility, Outdoor sales, Service industry, Service station, Shop, Shopping centre, Showroom
Other	Air services, Animal husbandry, Animal keeping, Aquaculture, Car wash, Cropping, Environment facility, Extractive industry, Intensive animal industry, Intensive horticulture, Landing, Major electricity infrastructure, Motor sport facility, Nature based tourism, Outstation, Permanent plantation, Port services, Roadside stall, Rural industry, Rural workers accommodation, Substation, Telecommunication facility, Utility installation, Wholesale nursery, Winery

## 4.0 Growth and development projections methodology

### 4.1 Residential development projections

Future population targets were calculated by applying the Queensland Government Statistician's Office (QGSO) 2013 edition medium series average growth rates to the base year population. The base year population was calculated by converting residential development into population using average occupancy rates. The existing and projected residential occupancy rates are shown in Table 1.

Table 1 – Summary of existing and projected residential occupancy rates

Occupancy rate	2011	2016	2021	2026	2031
<b>Average Annual Change</b>		-0.21%	-0.17%	-0.15%	-0.15%
Detached dwellings	2.40756	2.3877	2.3621	2.3448	2.3278
Attached and Other dwellings	1.72293	1.7087	1.6904	1.6780	1.6659
<b>All Dwellings</b>	<b>2.32202</b>	<b>2.3029</b>	<b>2.2782</b>	<b>2.2615</b>	<b>2.2451</b>

The resultant population targets at SA2 level were then compared with the medium series 2013 edition projected population projections obtained from the QGSO.

The calculated targets were found to be different to the QGSO targets, revealing that the QGSO projections may not accurately reflect development growth trends at the SA2 level.

As a consequence, the LGA wide dwelling projections were allocated to the SA2 projection areas using the relative proportion of their projected population. Total LGA population projections (for private dwellings) were distributed into the Detached dwellings and Attached and Other dwellings target groups based on the current distribution of 88.2% living in Detached dwellings, to 11.8% living in Attached and Other dwellings

Growth in the number of dwellings and total population within the CCRC Local Government Area (LGA) is shown in Table 2.

**Table 2 – Growth in population by dwelling type – CCRC LGA**

Population	2016	2021	2026	2031
<b>Detached dwellings</b>	25,818	26,497	26,798	27,472
<b>Attached and Other dwellings</b>	3,448	3,589	3,664	3,816
<b>Total population (private dwellings)</b>	29,266	30,086	30,462	31,288

#### 4.2 Non-residential development projections

As no studies had been undertaken to forecast future employment in the CCRC LGA, a “status-quo” method was used to calculate future employment targets. This method assumes:

1. The current ratio of local jobs to population will continue into the future. Total numbers of jobs calculated using this method are shown in Table 3.
2. The current distribution of jobs by industry will continue into the future. The distribution of jobs growth by industry is shown in Table 4.

**Table 3 – Projected total job numbers for Cassowary Coast LGA**

Year	Population targets	Jobs to population ratio	Job targets (excl. rural and other jobs)	Total job targets incl. Rural and other jobs
<b>2016</b>	29,265	31.04%	9,085	12,903
<b>2021</b>	29,831	31.04%	9,260	13,153
<b>2026</b>	30,270	31.04%	9,396	13,422
<b>2031</b>	31,000	31.04%	9,623	13,888

Table 3 – Future employment targets

Industry	2021 Jobs	2026 Jobs	2031 Jobs
Community and Service	1,679	1,703	1,744
Retail and Showroom	2,988	3,032	3,105
Professional	835	848	868
Industry	2,096	2,127	2,178
Education	912	926	948
Rural and Other	4,642	4,787	5,044
<b>TOTAL</b>	<b>13,153</b>	<b>13,422</b>	<b>13,888</b>
<b>% Growth in local jobs</b>	<b>0.32%</b>	<b>0.29%</b>	<b>0.48%</b>

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### 4.3 Calculating ultimate development

The ultimate development for a parcel is the realistic extent of development anticipated to be achieved when it is fully developed. For land parcels not having a development application or approval, the ultimate level of development is determined by applying the planned density to the developable area of the parcel. Council has adopted the following approach for determining the 'realistic extent' of development that is likely to be achieved under its current planning scheme:

1. Calculating the ultimate development potential for each lot by applying its *planned density* (see Section 4.3.2) to the *developable area* (see Section 4.3.1).
2. If the ultimate development is less than the existing development, assume the existing development will remain on the site.
3. If the ultimate development is more than the existing development, make an assessment of whether each site is likely to develop / redevelop based on its existing level of development and its ultimate development potential
  - For residential development, determine the population at ultimate development using the 2036 projected average occupancy rate stated in [Table 2](#),
  - for non-residential development,
    - allocate the total non-residential floorspace potential at ultimate development to the LGIP development types based on the proportional distribution of GFA at 2036; and
    - determine the number of employees accommodated by the ultimate non-residential floorspace using GFA to employee conversion rates.

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#### 4.3.1 Land available for development

To estimate the ultimate development potential of each parcel in the city, it was necessary to calculate the developable area of the parcel. Developable area was calculated by subtracting the area subject to development constraints from the total area of the parcel.



These development constraints are summarised in [Table 4](#).

**Table 4- Development constraints**

Impact on development	Constraint area
<b>Absolute constraint (100% reduced yield)</b>	Extreme Hazard Flood
	Airport Environs Overlay (Already protected by planned density)
	Environmental Areas of High Environmental Significance
	Erosion Prone Area
	Medium, High and Very High Potential Bushfire Overlay
	Wetland of High Environmental Significance
	Waterway Envelope area
<b>Significant impact on development (75% reduced yield)</b>	Agricultural Land Classification Class A and B
	Landslide Hazard area
<b>Moderate impact on development (50% reduced yield)</b>	Vulnerable Area (Coastal Protection)
	Storm tide hazard area (High and Medium)
	High Hazard Flood
	High Probability of Acid Sulfate Soils
<b>Low impact on development (25% reduced yield)</b>	Low Flood Hazard
	Low Probability of Acid Sulfate Soils

#### 4.3.2 Planned density

The planned density represents the likely level of development expected to be achieved in a particular land use area under the planning scheme and is expressed as number of dwellings per net developable hectare in residential zones / precincts and as a plot ratio in non-residential zones / precincts.

Planned densities for each zone or precinct within the CCRC planning scheme were determined having regard to the provisions of the scheme. In residential zones, the minimum lot size provisions are a

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primary input for determining the number of dwellings per net developable hectare. In non-residential zones, building heights and site coverage provisions are the primary inputs for calculating the plot ratio.

In all cases, it was still necessary to determine whether the allowable densities under the scheme were realistic. Determining the realistic planned density involved consideration of existing levels of development in the relevant area, current development proposals and industry trends. For example, the planning scheme might allow for five storey developments in an area, however two storey developments might be more realistic in light of current industry trends.

It is important to note that planned densities are an average density. Planned densities accept that development or redevelopment will occur on lots at higher or lower densities than the planned density, however the overall density of new development in an area is assumed to average out at the planned density.

Planned densities for each planning scheme zone are detailed within Appendix E of this report.

## 5.0 Growth and development projections summary

Detailed projections of population, dwellings, employees and GFA are included in Appendices A-D of this report.

## 6.0 Infrastructure demand projections

The planning assumptions provide a consistent basis for the planning of the trunk infrastructure networks. For this reason, the projections of development and growth must be converted into projections of demand for each network.

Each network expresses demand using different demand units. The demand units adopted by Council are as follows:

- For the water supply network, Equivalent persons, EP;
- For the sewerage network, Equivalent persons, EP;
- For the stormwater network, hectare of impervious area, imp ha;
- For the transport network, vehicle trip ends per day, vpd; and
- For the parks network, Equivalent Persons, EP.

To determine the geographical distribution of future demand for each network, the planned density for each zone and precinct was converted into an equivalent amount of demand called the demand generation rate using network specific conversion rates. The demand generation rates were then used to prepare the projections of existing and future demand for the various planning catchments (service catchments) for each network.

The demand generation rates used by each network and a summary of the projected demand for each network is detailed within each network's extrinsic material report.

Appendix A  
Existing and projected population

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## Existing and projected population

Column 1 Projection area	Column 2 LGIP development type	Column 3				
		Existing and projected population				
		2016	2021	2026	2031	Ultimate development
Cardwell (inside PIA)	Attached	181	179	178	177	909
	Detached	1,156	1,143	1,189	1,180	1,478
	Other	0	0	0	0	0
	<b>Total</b>	<b>1,337</b>	<b>1,322</b>	<b>1,367</b>	<b>1,357</b>	<b>2,387</b>
Innisfail (inside PIA)	Attached	1,420	1,417	1,406	<del>1,476</del>	<del>4,027</del>
	Detached	6,404	<del>7,030</del>	<del>7,203</del>	<del>7,461</del>	<del>8,173</del>
	Other	62	61	60	60	60
	<b>Total</b>	<b>7,886</b>	<b><del>8,507</del></b>	<b><del>8,669</del></b>	<b><del>8,997</del></b>	<b><del>12,260</del></b>
North Mission Beach (inside PIA)	Attached	101	117	168	167	659
	Detached	740	730	725	719	1,531
	Other	2	2	2	2	2
	<b>Total</b>	<b>843</b>	<b>849</b>	<b>895</b>	<b>888</b>	<b>2192</b>
Tully (inside PIA)	Attached	285	289	287	285	1,357
	Detached	1,776	1,757	1,745	1,732	2,214
	Other	0	0	0	0	0
	<b>Total</b>	<b>2,061</b>	<b>2,046</b>	<b>2,032</b>	<b>2,017</b>	<b>3,571</b>
Wongaling and South Mission Beach (inside PIA)	Attached	586	587	601	596	1,594
	Detached	2,125	2,131	2,181	2,200	3,483
	Other	0	0	0	0	60
	<b>Total</b>	<b>2,711</b>	<b>2,718</b>	<b>2,782</b>	<b>2,796</b>	<b>5,137</b>
Inside priority infrastructure area (total)	Attached	2,573	2,589	2,640	<del>2,701</del>	<del>8,546</del>
	Detached	12,201	<del>12,791</del>	<del>13,043</del>	<del>13,292</del>	<del>16,879</del>
	Other	64	63	62	62	122
	<b>Total</b>	<b>14,838</b>	<b><del>15,442</del></b>	<b><del>15,745</del></b>	<b><del>16,055</del></b>	<b><del>25,547</del></b>

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Outside priority infrastructure area (total)	Attached	512	639	666	<del>759</del>	<del>1,351</del>
	Detached	13,617	<del>13,706</del>	<del>13,754</del>	<del>14,180</del>	<del>19,600</del>
	Other	299	298	296	294	290
	<b>Total</b>	<b>14,428</b>	<del><b>14,643</b></del>	<del><b>14,716</b></del>	<del><b>15,233</b></del>	<del><b>21,241</b></del>
Cassowary Coast Region (total)	Attached	3,085	3,228	3,306	3,460	9,896
	Detached	25,818	26,497	26,798	27,472	36,480
	Other	363	361	358	356	412
	<b>Total</b>	<b>29,266</b>	<b>30,086</b>	<b>30,461</b>	<b>31,288</b>	<b>46,788</b>

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Appendix B  
Existing and projected residential dwellings

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# Existing and projected residential dwellings

Column 1 Projection area	Column 2 LGIP development type	Column 3 Existing and projected dwellings				
		2016	2021	2026	2031	Ultimate development
Cardwell (inside PIA)	Attached	106	106	106	106	549
	Detached	484	484	507	507	639
	Other	0	0	0	0	0
	<b>Total</b>	<b>590</b>	<b>590</b>	<b>613</b>	<b>613</b>	<b>1,188</b>
Innisfail (inside PIA)	Attached	831	838	838	<del>886</del>	<del>2,433</del>
	Detached	2,682	<del>2,976</del>	<del>3,072</del>	<del>3,205</del>	<del>3,534</del>
	Other	36	36	36	36	36
	<b>Total</b>	<b>3,549</b>	<b><del>3,850</del></b>	<b><del>3,946</del></b>	<b><del>4,127</del></b>	<b><del>6,003</del></b>
North Mission Beach (inside PIA)	Attached	59	69	100	100	398
	Detached	310	309	309	309	662
	Other	1	1	1	1	1
	<b>Total</b>	<b>370</b>	<b>379</b>	<b>410</b>	<b>410</b>	<b>1061</b>
Tully (inside PIA)	Attached	167	171	171	171	820
	Detached	744	744	744	744	957
	Other	0	0	0	0	0
	<b>Total</b>	<b>911</b>	<b>915</b>	<b>915</b>	<b>915</b>	<b>1777</b>
Wongaling Beach and South Mission Beach (inside PIA)	Attached	343	347	358	358	963
	Detached	890	902	930	945	1,506
	Other	0	0	0	0	36
	<b>Total</b>	<b>1233</b>	<b>1249</b>	<b>1288</b>	<b>1303</b>	<b>2505</b>
Inside priority infrastructure area (total)	Attached	1,506	1,531	1,573	<del>1,621</del>	<del>5,163</del>
	Detached	5,110	<del>5,415</del>	<del>5,562</del>	<del>5,710</del>	<del>7,298</del>
	Other	37	37	37	37	73
	<b>Total</b>	<b>6,653</b>	<b><del>6,983</del></b>	<b><del>7,172</del></b>	<b><del>7,368</del></b>	<b><del>12,534</del></b>

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Outside priority infrastructure area (total)	Attached	299	378	397	<del>455</del>	<del>816</del>
	Detached	5,703	<del>5,803</del>	<del>5,866</del>	<del>6,092</del>	<del>8,475</del>
	Other	175	176	176	176	175
	<b>Total</b>	<b>6,177</b>	<b><del>6,357</del></b>	<b><del>6,439</del></b>	<b><del>6,723</del></b>	<b><del>9,466</del></b>
Cassowary Coast Region (total)	Attached	1805	1909	1970	2076	5979
	Detached	10813	11218	11428	11802	15773
	Other	212	213	213	213	248
	<b>Total</b>	<b>12830</b>	<b>13340</b>	<b>13611</b>	<b>14091</b>	<b>22000</b>

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Appendix C  
Existing and projected employees

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Existing and projected employees

Column 1 Projection area	Column 2 LGIP development type	Column 3 Existing and projected employees				
		2016	2021	2026	2031	Ultimate development
Innisfail (inside PIA)	Commercial	625	625	629	638	1,138
	Community	260	270	273	280	318
	Education	296	314	316	323	347
	Industry	555	555	566	588	675
	Other	0	0	0	0	0
	Retail	1,411	1,411	1,414	1,419	1,856
	<b>Total</b>	<b>3,147</b>	<b>3,175</b>	<b>3,198</b>	<b>3,248</b>	<b>4,334</b>
Cardwell (inside PIA)	Commercial	8	8	8	8	149
	Community	146	164	165	167	211
	Education	17	17	17	17	62
	Industry	40	40	40	40	124
	Other	0	0	0	0	0
	Retail	154	154	154	154	331
	<b>Total</b>	<b>365</b>	<b>383</b>	<b>384</b>	<b>386</b>	<b>877</b>
North Mission Beach (inside PIA)	Commercial	14	14	14	14	205
	Community	21	21	21	22	105
	Education	6	6	6	6	73
	Industry	34	34	34	34	95
	Other	0	0	0	0	0
	Retail	156	165	165	165	517
	<b>Total</b>	<b>231</b>	<b>240</b>	<b>240</b>	<b>241</b>	<b>995</b>
Tully (inside PIA)	Commercial	118	118	118	118	508
	Community	321	321	327	334	369
	Education	75	75	76	78	92
	Industry	375	378	378	378	567
	Other	0	0	0	0	0
	Retail	565	565	565	565	809
	<b>Total</b>	<b>1,454</b>	<b>1,457</b>	<b>1,464</b>	<b>1,473</b>	<b>2,345</b>
	Commercial	12	12	12	39	324

# Existing and projected employees

Column 1 Projection area	Column 2 LGIP development type	Column 3 Existing and projected employees				
		2016	2021	2026	2031	Ultimate development
Wongaling Beach and South Mission Beach (inside PIA)	Community	29	29	30	35	86
	Education	31	31	32	33	73
	Industry	1	1	1	1	35
	Other	0	0	0	0	0
	Retail	189	194	192	202	550
	<b>Total</b>	<b>262</b>	<b>267</b>	<b>267</b>	<b>310</b>	<b>1,068</b>
Inside priority infrastructure area (total)	Commercial	777	777	781	817	2,324
	Community	777	805	816	838	1,089
	Education	425	443	447	457	647
	Industry	1,005	1,008	1,019	1,041	1,496
	Other	0	0	0	0	0
	Retail	2,475	2,489	2,490	2,505	4,063
	<b>Total</b>	<b>777</b>	<b>777</b>	<b>781</b>	<b>817</b>	<b>2,324</b>
Outside priority infrastructure area (total)	Commercial	43	59	68	83	1,011
	Community	871	876	891	914	1,003
	Education	470	473	478	492	667
	Industry	1,051	1,093	1,093	1,093	2,635
	Other	4,554	4,641	4,786	5,043	4,846
	Retail	455	491	531	569	1,482
	<b>Total</b>	<b>7,444</b>	<b>7,633</b>	<b>7,847</b>	<b>8,194</b>	<b>11,644</b>
Cassowary Coast Region (total)	Commercial	820	836	849	900	3,335
	Community	1,648	1,681	1,707	1,752	2,092
	Education	895	916	925	949	1,314
	Industry	2,056	2,101	2,112	2,134	4,131
	Other	4,554	4,641	4,786	5,043	4,846
	Retail	2,930	2,980	3,021	3,074	5,545
	<b>Total</b>	<b>12,903</b>	<b>13,155</b>	<b>13,400</b>	<b>13,852</b>	<b>21,263</b>

Appendix D  
Existing and projected non-residential floorspace

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Existing and projected non-residential floor space

Column 1 Projection area	Column 2 LGIP development type	Column 3 Existing and projected non-residential floor space (m² GFA)				
		2016	2021	2026	2031	Ultimate development
Cardwell (inside PIA)	Commercial	325	325	325	325	5,973
	Community	12,284	13,856	13,968	14,139	17,668
	Education	1,010	1,010	1,022	1,049	3,569
	Industry	4,331	4,331	4,331	4,331	13,692
	Other	0	0	0	0	0
	Retail	12,818	12,818	12,818	12,818	30,407
	<b>Total</b>	<b>30,768</b>	<b>32,340</b>	<b>32,464</b>	<b>32,662</b>	<b>71,309</b>
Innisfail town (inside PIA)	Commercial	21,886	21,886	22,032	22,327	39,823
	Community	21,278	22,050	22,375	22,876	25,968
	Education	21,316	22,644	22,823	23,235	24,674
	Industry	61,087	61,087	62,257	64,618	74,232
	Other	0	0	0	0	0
	Retail	103,708	103,708	103,854	104,149	134,360
	<b>Total</b>	<b>229,275</b>	<b>231,375</b>	<b>233,341</b>	<b>237,205</b>	<b>299,057</b>
North Mission Beach (inside PIA)	Commercial	565	565	565	565	8,211
	Community	1,688	1,689	1,716	1,758	8,404
	Education	283	283	286	294	3,641
	Industry	3,691	3,691	3,691	3,691	10,439
	Other	0	0	0	0	0
	Retail	16,532	17,024	17,024	17,024	54,560
	<b>Total</b>	<b>22,759</b>	<b>23,252</b>	<b>23,282</b>	<b>23,332</b>	<b>85,255</b>
Tully town (inside PIA)	Commercial	4,721	4,721	4,721	4,721	20,339
	Community purpose	24,357	24,379	24,766	25,360	28,027
	Education	4,950	4,950	5,008	5,142	6,050
	Industry	41,298	41,620	41,620	41,620	62,375
	Other	0	0	0	0	0
	Retail	43,748	43,814	43,814	43,814	60,637
	<b>Total</b>	<b>119,074</b>	<b>119,484</b>	<b>119,929</b>	<b>120,657</b>	<b>177,428</b>
Wongaling & South Mission Beach (inside PIA)	Commercial	487	487	487	1,577	12,973
	Community purpose	2,425	2,427	2,465	2,885	6,893

# Existing and projected non-residential floor space

Column 1 Projection area	Column 2 LGIP development type	Column 3 Existing and projected non-residential floor space (m² GFA)				
		2016	2021	2026	2031	Ultimate development
	Education	2,150	2,150	2,176	2,233	4,264
	Industry	69	69	69	69	3,839
	Other	0	0	0	0	0
	Retail	22,920	23,127	23,127	23,707	50,761
	<b>Total</b>	<b>28,051</b>	<b>28,260</b>	<b>28,324</b>	<b>30,471</b>	<b>78,730</b>
Inside priority infrastructure area (total)	Commercial	27,984	27,984	28,130	29,515	87,319
	Community purpose	62,032	64,401	65,290	67,018	86,960
	Education	29,709	31,037	31,315	31,953	42,198
	Industry	110,476	110,798	111,968	114,329	164,577
	Other	0	0	0	0	0
	Retail	199,726	200,491	200,637	201,512	330,725
	<b>Total</b>	<b>27,984</b>	<b>27,984</b>	<b>28,130</b>	<b>29,515</b>	<b>87,319</b>
Outside priority infrastructure area (total)	Commercial	1,607	2,229	2,559	3,184	38,158
	Community purpose	64,160	64,530	65,651	67,415	74,439
	Education	34,308	34,604	35,005	35,930	48,580
	Industry	165,699	170,935	170,935	170,935	370,973
	Other	80,927	113,289	113,289	113,289	113,046
	Retail	43,121	45,816	48,456	51,801	128,172
	<b>Total</b>	<b>1,607</b>	<b>2,229</b>	<b>2,559</b>	<b>3,184</b>	<b>38,158</b>
Cassowary Coast Region (total)	Commercial	29,591	30,213	30,689	32,699	125,477
	Community purpose	126,192	128,931	130,941	134,433	161,399
	Education	64,017	65,641	66,320	67,883	90,778
	Industry	276,175	281,733	282,903	285,264	535,550
	Other	80,927	113,289	113,289	113,289	113,046
	Retail	242,847	246,307	249,093	253,313	458,897
	<b>Total</b>	<b>819,749</b>	<b>866,114</b>	<b>873,235</b>	<b>886,881</b>	<b>1,485,147</b>

Appendix E  
Planned density

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**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)	Water supply network (EP/dev ha)	Sewerage network (EP/dev ha)	Transport network (vpd/dev ha)	Parks and land for community facilities network (EP)	Stormwater network (imp ha/dev ha)
Residential development								
Township – Residential Choice	Attached dwelling, detached dwelling	0	18	40	40	108	40	0.75
Township - Residential	Attached dwelling, detached dwelling	0	18	40	40	108	40	0.75
Township - Village Residential	Attached dwelling, detached dwelling	0	12	24	24	65	24	0.6
Township – Port Hinchinbrook	Detached dwelling	0	10	24	24	65	24	0.6
Rural Residential	Detached dwelling	0	2	5	5	13	5	0.05
Emerging Community	Attached dwelling, detached dwelling	0	18	40	40	108	40	0.7
Non-residential development and mixed development <sup>1</sup>								
Township - Business Fringe	Retail, Commercial, Industry, Education, Community	0.4	0	36	36	810	0	0.9
Township - Business	Retail, Commercial, Industry, Education, Community	0.4	0	39	39	1,016	0	0.9
Township - Central Business	Retail, Commercial, Community	1.0	0	103	103	2,503	0	1



**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)	Water supply network (EP/dev ha)	Sewerage network (EP/dev ha)	Transport network (vpd/dev ha)	Parks and land for community facilities network (EP)	Stormwater network (imp ha/dev ha)
Township - Cardwell Community Purpose	Community, Education	0.25	0	13	13	475	0	0.5
Township -Community Purpose	Community, Education	0.1	0	5	5	190	0	0.5
Township - Industry	Retail, Commercial, Industry	0.4	0	29	29	600	0	0.7
Township - Local Business	Retail, Commercial, Community	0.4	0	45	45	1,384	0	0.9
Township - Recreation	Other	0	0	0	0	0	0	0.1
Township - Tourism	Retail, Commercial, Community, Education	0.425	5	65	65	858	9	0.9
Township - Village Industry	Retail, Commercial, Industry	0.3	0	22	22	450	0	0.7
Environmental Management and Conservation -	Other	0	0	0	0	0	0	0
Major Tourism	Retail, Commercial	As per plan of development						
Rural	Other	0	0	0	0	0	0	0
Special Purpose	Other	As per plan of development						