



Planning Assumptions Extrinsic Material for LGIP

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Planning Assumptions

Purpose

Under the *Planning Act 2016*, Councils are required to prepare and adopt Local Government Infrastructure Plan (LGIP). LGIP is an infrastructure plan derived to accommodate projected growth through planning assumptions.

The LGIP must state assumptions about: -

- population and employment growth; and
- type, scale, location and timing of development.

These assumptions are collectively known as the planning assumptions. The planning assumptions are a critical element underpinning the LGIP. Together with the Desired Standard of Services (DSS) they provide a logical and consistent basis for trunk infrastructure planning and the determination of the Priority Infrastructure Area (PIA).

The planning assumptions about the type and scale of development also provide an important consideration for a local government when determining whether to impose a condition for the payment of additional trunk infrastructure costs under section 130 of the Planning Act. The planning assumptions section of the LGIP clearly identifies a summary of the existing and future projected urban residential and non-residential development by development type for a projection area in terms of:

- dwellings;
- population;
- non-residential gross floor area (GFA); and
- employment.

The key assumptions used to prepare the projections (planned densities and demand generation rates) are also summarised in this report. The purpose of this report is to support the infrastructure planning and LGIP. Also note that the planning assumptions and the PIA detailed in this report have been prepared in accordance with the *Minister's Guidelines and Rules* July 2017.

Population and Dwelling Projections

Population and dwelling projections are based on the author's published chapter *Demographic Forecasting for Local Governments in Queensland, Australia - Difficult but Effective* in the book *The Frontiers of Applied Demography*, published by Springer in 2017.

Dwelling data from the Scenic Rim's population and development model was used in Queensland Government Statistician's Office's (QGSO) publication *Queensland Government Population Projections* 2015 edition.

Overview

The development projections are prepared using a top down, bottom up approach. The top down approach involves the forward projection of historical growth data to estimate future growth. The bottom up approach involves limiting growth projections to the physical capacity available to accommodate growth in a locality. That is, development at a local level is projected to occur for each projection year until it reaches the adopted population and employment capacity (ultimate development) for a locality.



Top down approach

For top down approach, population projections from QGSO publication *Projected population, by local government area, Queensland, 2011 to 2036, 2015* edition are used as control totals. These projections are based on the Australian Bureau of Statistics, Regional population growth, Australia 2013-14 (Cat no. 3218).

Period	Low series:	Medium series:	High series:
2011	37,437	37,437	37,437
2016	40,865	41,014	41,161
2021	44,616	45,813	47,033
2026	48,743	51,205	53,751
2031	53,590	57,662	61,916
2036	57,838	63,396	69,239

Table 1 Scenic Rim Regional Council Projected Population

Bottom up approach:

In this approach, physical constraints are applied to the lot which excludes the undevelopable area. The remaining developable area is assigned respective land use information to generate ultimate development.

Forecasts include the intensity and timing of development. This forecast is assigned to a 5 yearly cohort for the next 15 years and ultimate growth. Grouped forecast will be in benchmark of the control totals from the top-down approach. Hence, it is a check on the bottom-up forecast process.

Digital Cadastral Database (DCDB)

The growth forecasting exercise commenced in December 2014, hence version of DCDB for December 2014 is locked for this exercise; all other data will be surrounding this period. This exercise is executed in GIS ESRI and MS Excel programs to make the Scenic Rim's population and development model.

Constraints

Constraint analysis is undertaken for the draft Scenic Rim planning scheme in June 2014. The same information is used to build up the constraint layer for demographic projections as in December 2014 this constraint information is still relevant at the time of modelling.

The following list provides the constraints used in determining developable areas:

- 1. Mining Development Licence & Lease
- 2. Key Resource Area (KRA) resource process & separation areas, haul & transport route & transport route separation
- 3. Matters of State Environmental Significance (MSES) regulated vegetation & protected areas
- 4. MSES Wild Rivers, High ecological value waters, Wetlands & Wildlife habitat
- 5. Matters of National Environmental Significance (MNES) wetlands, world heritage
- 6. Declared catchment area (Dam)
- 7. Military base
- 8. Ipswich difficult topography (slope greater than 25%)

- 9. Ipswich slope 15%-25%
- 10. Beaudesert Landslide Hazard (slope greater than 25%)
- 11. Beaudesert slope 15%-25% or high/med landslide hazard
- 12. Combined flood layer (Queensland Reconstruction Authority and Council studies)
- 13. Commonwealth, Queensland & Local Heritage Register of Scenic Rim
- 14. State Development Area
- 15. Bushfire hazard area (medium to very high)

On cadastre, all constraints are applied and developable area is calculated by removing area of constraints from the lot area. Output is the Developable Area (DA) for every lot. After removing constraints and calculating developable area, next step is to apply land development types and land uses feasible for every lot.

The relationship between development categories, development types and planning scheme land uses

The demographic forecast is prepared for a limited number of development types. Uses under the planning scheme, which are guided by *Planning Regulation 2017*, are grouped into broader types of development that adequately reflect differences in infrastructure demand for various infrastructure networks.

Development categories are mainly Residential and Non-residential. These categories are further distributed as per *Minister's Guidelines and Rules* to sub-categories such as:

- detached dwellings;
- attached dwellings;
- other dwellings (tourist accommodation)
- retail;
- commercial;
- industrial; and
- community purposes.

The category, "Rural development type" is added to cater for the regional characteristics of the Scenic Rim. Below table shows the relationship between development categories, development types and planning scheme land uses.



Table 2 Relationship betw	een development catego	ories, development ty	pes and uses
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Development category	Development type	Uses [#]
Residential development	Attached dwelling	Caretaker's accommodation Community residence Dual occupancy Dwelling unit Home based business Multiple dwelling Nature-based tourism Non-resident workforce accommodation Relocatable home park Resort complex Retirement facility Rooming accommodation Rural workers' accommodation Short-term accommodation
	Detached dwelling	Tourist park Dwelling house Sales office
Non-residential development	Commercial	Garden centre Hardware and trade supplies Outdoor sales Showroom
	Community purpose	Cemetery Club Community care centre Community use Crematorium Detention facility Emergency services Funeral parlour Hospital Outstation Place of worship Residential care facility
	Industry	Brothel Bulk landscape supplies Extractive industry Low impact industry High impact industry Medium impact industry Research and technology industry Special industry Transport Depot Warehouse

Development category	Development type	Uses#			
	Retail	Bar Car wash Child care centre Educational establishment Food and drink outlet Function facility Health care services Hotel Indoor sport and recreation Major sport, recreation and entertainmer facility Market Motor sport facility Nightclub entertainment facility Office Outdoor sport and recreation Parking station Service industry Service station Shop Shopping centre Theatre			
	Rural	Tourist attraction Veterinary services Agricultural supplies store			
	Kulai	Animal husbandry Animal keeping Aquaculture Cropping Intensive animal industry Intensive horticulture Permanent plantation Roadside stall Rural industry Wholesale nursery Winery			
	Other	Air services Environment facility Landing Major electricity infrastructure Park Renewable energy facility Substation Telecommunication facility Utility installation			



[#] to assist in interpretation, refer to document "Equivalent land uses, zones and precincts in the Beaudesert, Boonah & Ipswich Planning Schemes for the LGIP"

Existing Land Use Classification & Existing Dwelling Forecast

Based on the categories as shown in above table, all lots are classified using their existing land use. Three individual datasets from Council's rates database are used to determine existing land use as follows:

- 1. Primary Use Land Use Codes Description;
- 2. Emergency services land use codes; and
- 3. Improvements values

All three datasets were analysed and for inconsistence, validation is done via ground truth exercise, using Council's development assessment database and satellite imagery. The Output is the number of existing dwellings, its type - attached or detached, occupied by resident or tourist.

Tourist Accommodation

Tourist accommodation is determined using the comparisons of Primary Land Use Description, Emergency service category and Improvements values from rates database. Due to the limited number of tourist accommodation dwellings in the region, a separate exercise is undertaken to research number of accommodation units/ rooms and to know caretaker's residential status. It is found that at majority of places, caretakers are residing on the property. This exercise gave accurate numbers of dwellings and resident population in them. Tourist accommodation dwellings are categorised as other dwellings and has different resident population rate compared to town dwellings. The tourist population is ignored for this exercise as the demand generation due to tourism is not significant compared to the total population of Scenic Rim. As well as complexities of vacancy rates and market conditions are required to be addressed to get tourist population number. Hence to avoid further complications, tourist population is unaccounted.

Ultimate Dwellings forecast

Planned Density

Existing dwellings, types of dwellings and their occupancy are determined through existing dwelling forecast process. To project the ultimate dwellings, the assumed type and scale of development for a particular location is determined by applying a planned density to the developable area of the site. Considerations as per the *Minister's Guidelines and Rules* for this include:

- the South East Queensland Regional Plan framework for infrastructure planning;
- the strategic framework within the local government's planning scheme;
- zoning and development provisions within the planning scheme;
- other planning instruments such as State Development Area development schemes;
- approved plans for development; and
- current development trends in the area (or similar areas).

The planned densities, used to prepare the demographic projections, are identified in terms of dwellings per developable hectare for residential development. While defining planned densities for each precinct/ zone of the planning scheme, a broad assumption of 30% land removal for infrastructure purposes is made.

Planning Scheme Zone	Planning Scheme Precinct	Residential Density dw/ha
Community Facilities		0.1
Conservation		0
District Centre		4
Industry		0.5
Limited Development	Flood Land	0
Limited Development	Historical Subdivision	0
Local Centre		2
Leve Deneite Decidential	Mountain Residential	0
Low Density Residential	Where no precinct applies	10
Low-Medium Density Residential		13.5
Major Centre		4
Major Tourism		0
Minor Tourism		0
Mixed Llee	CI - Commercial / Industry	0
Mixed Use	Where no precinct applies	4
Neighbourhood Centre		0
Recreation and Open Space		0
	Tamborine Mountain Rural	0.01667
Rural	Where no precinct applies	0.01667
	RE - Rural Escarpment	0.01667
Dural Decidential	Where no precinct applies	3.33
Rurai Residentiai	RRESA - Rural Residential A - 1 ha lots	1
	Bromelton State Development Area - Where no precinct applies	0.01667
	Bromelton State Development Area - Rail Dependent Industry precinct	0
Special Purpose	Bromelton State Development Area - Medium-High Industry precinct	0
	Bromelton State Development Area - Special Industry Precinct	0

Table 3 Planned Density



Planning Scheme Zone	Planning Scheme Precinct	Residential Density dw/ha
	0	
	Where no precinct applies	0
		3.33
Township		10
	Where no precinct applies	4

This growth forecast is the ideal situation, hence overwrites are applied to make forecast realistic and achievable. This exercise has filtered data for any unrealistic growth and helps the local government to adequately supply infrastructure over the life of planning scheme. Further this growth needs to be distributed for each Census cohort (every 5 years).

Urban Footprint and Priority Infrastructure Area

Both the "Urban Footprint" and the "Priority Infrastructure Area" (PIA) are used to determine the timing of the growth & development. Urban footprint as per South East Queensland Regional Plan 2009-2031 (2014) was used for this exercise as it was the available information.

The PIA is an area used, or approved for use, for urban development; and serviced, or intended to be serviced, with development infrastructure networks; and that will accommodate at least 10 (but no more than 15) years of growth for urban development as defined in the *Minister's Guidelines and Rules*. It is very important to determine PIA accurately as it influences infrastructure requirements, timing of growth and financial sustainability of a local government. For this exercise, in addition to above criteria for PIA, following additional criteria are considered.

- 1. availability of existing water and sewer infrastructure network (as shown in Table 4); and
- 2. the local government must be able to fund and supply adequate trunk infrastructure to service the assumed urban development inside the PIA.

Томп	Population		Availability of Infrastructure	
	2011	2016	Water	Sewer
Aratula	516	535	Yes	Yes
Beaudesert including Gleneagle	6778	7328	Yes	Yes
Boonah	2528	2693	Yes	Yes
Canungra	770	804	Yes	Yes
Harrisville	437	431	Yes	No
Kalbar	741	812	Yes	Yes
Kooralbyn	1406	1711	Yes	Yes

Table 4 Infrastructure availability to finalise Priority Infrastructure Area

Peak Crossing	407	478	Yes	No
Tamborine Mt	7025	7545	No	No

Considering the preceding criteria, the following urban centres are identified to accommodate growth for 10 to 15 years:

- 1. Beaudesert;
- 2. Boonah;
- 3. Canungra;
- 4. Kalbar; and
- 5. Kooralbyn.

Aratula is the only town where key infrastructure for water and sewer are available still it is not included as Priority Infrastructure Area. Aratula has a base population of 535 people and it is growing at 0.7% annually. In recent couple of years, there is a decline in population which further justifies its exclusion from priority infrastructure area.

The future timing of the assumed type and scale of development for a particular location is based on the population projections for that location. This involves making an assumption concerning the timing of development in a particular location; for example, inside PIA development occurs by 15 years while outside PIA development occurs after 15 years and before ultimate capacity of the planning scheme. Outside urban footprint, rural subdivision occurs generally for the rural purposes and hence not much growth anticipated. For this exercise, priority in given to lots inside PIA, where development is serviced by basic infrastructure, and hence growth is financially sustainable for local government.

The identified PIAs have capacity to accommodate growth for at the least 15 years, some of the PIAs do not develop to full potential by year 2031 and still have ability to further grow. This is reflected in the below table where growth in dwellings is projected for ultimate development, which is beyond 15 years. Below table also represents that for the next 15 years, 85 % of growth occurs inside the PIA while 15% growth is expected outside PIA, as Scenic Rim is a regional area and changing the trend from rural to town living.

Projection area	Existing and projected residential dwellings						
	Dec 2014	2016	2021	2026	2031	development	
Beaudesert PIA	3065	3181	4530	6361	7965	8880	
Kooralbyn PIA	394	406	436	546	592	592	
Canungra PIA	318	374	520	690	932	1080	
Kalbar PIA	275	294	389	421	445	445	
Boonah PIA	1090	1096	1253	1441	1561	1730	
Inside priority infrastructure area (total)	5142	5351	7128	9459	11495	12727	

Table 5—Existing and projected residential dwellings



Projection area	Existing and projected residential dwellings					
						Ultimate
	Dec 2014	2016	2021	2026	2031	development
Outside priority infrastructure area (total)	11577	11577	11770	12109	12671	20711
Scenic Rim Regional Council	16719	16928	18898	21568	24166	33438

Occupancy Rates

In Table 17.6, Occupancy rate for Scenic Rim Local Government Area, the 2011 figure is an estimate based on estimated resident population (ERP) from 2011 Census. 2011 ERPs for the local government area have been derived using published Statistical Area Level 2 and local government area ERP data. The projected occupancy rate at local government level is an average of occupancy rates for SA2 geographical area and different type of dwellings.

Table 6 Occupancy rate for Scenic Rim Local Government Area

Local government area	2016	2021	2026	2031	2036	Ultimate
Scenic Rim (R)	2.40	2.40	2.41	2.41	2.40	2.39

Over the years, occupancy rate trend is portrayed from Census data where lifestyle choices influence the household size. Considering these variations, Table 17.7 represents various occupancy rates for year 2011 as used in this exercise. Tourist accommodation is standardised to account for caretaker population.

Table 7 Year 2011 Occupancy rates at SA2 level

	Type of dwelling					
Location	Detached dwelling	Attached dwelling	Tourist accommodation			
Beaudesert	2.60	1.34	1			
Boonah	2.46	1.24	1			
Tamborine - Canungra	2.55	1.29	1			

The Ultimate and Existing population forecast

Forecasting population is relatively simple though highly dependent on dwelling forecast. Population is derived by multiplying number of dwellings with occupancy rates for individual SA2. These data is available at lot level, so it can be aggregated to any geographical boundary.

Population is generated using the occupancy rates previously described. The output is the existing population grouped for three SA2 making up local government area. The same logic applies for future population projections at 5 yearly cohorts. These population totals are compared with the

control totals from the top-down methodology, where bottom-up methodology refines the control totals using the available information. For Scenic Rim, population projections under bottom up and top down strategies are very similar; differences are maximum up to 2% of projections.

The Forecasted population for the nearest future cohort i.e. year 2016, for this exercise is required to be analysed thoroughly. Queensland Government Statistician's Office publishes estimated resident population at SA2 and local government area level intermittently using above mentioned datasets and ABS catalogue 3218.0, Regional Population Growth, Australia. The existing and forecasted population numbers are revised with Census information every 5 years and hence the model can be re-based.



Employment projections

Various data sources were investigated to create employment projections for the LGIP including National Institute of Economic and Industry Research (NIEIR), Scenic Rim Planning Scheme activity centre strategy and Queensland Treasury's Regional employment projections. Below describes various options and how LGIP's employment projections were derived.

NIEIR projections

NIEIR released a Summary Report for Scenic Rim Regional Council in February 2015 under SEQ Employment and Economic Activity Forecasting Project for the SEQ Council of Mayors.

These report produced number of jobs - existing and projection for future under three scenarios. Scenario 2 was considered most suitable for the local government, as it acknowledge the population forecast prepared by Queensland Treasury and Trade (QTT) in 2013 as unrealistic and redistributed population based on lower growth rate of 2.7% average between 2011 and 2041. Scenario 2 provides small area projections based on the capacity of areas to grow both population and employment, subject to a travel time constraint that links population growth in each specific area to places where suitable employment can be assessed.

Under Scenario 2, population forecasted by NIEIR for 2041 is 83,137 which is in the proximity of the population forecast undertaken for LGIP land use development model. The employment forecasted based on Place of Work categorisation is very low and hardly any growth is forecasted in 30 years. This proves the data irrelevant comparing to the local growth envisaged particularly at Bromelton state development area. Hence NIEIR projections were investigated but not used for LGIP employment forecast.

Activity Centre Strategy

Scenic Rim planning scheme review team undertook a ground truth study in 2013 to evaluate existing retail and commercial gross floor area and corresponding land area. These data was used in the Scenic Rim Region Activity Centre Strategy to ultimately inform, the draft Scenic Rim Planning Scheme, the requirement of retail and commercial land uses.

Activity Centre Strategy yields the gross floor area required and an audit of the supply of floor space for commercial and retail land uses. This study was limited to certain land uses and hence was not able to inform LGIP employment forecast.

Queensland Treasury's Regional employment projections

Regional employment projections 2010-11 to 2040-41 was published by Queensland Treasury (QT) in 2016 based on QT's 2015 population projections. Scenic Rim's land use development model was used to inform these population projections, hence it becomes more relevant to use regional employment projections compared to any other dataset.

From regional employment projections, control total for jobs at each of the ANZSIC divisions for projection year 2011 to 2041 were derived and categorised by LGIP employment type at LGA level.

Table 8 - Regional Employment Projections - 2010-11 to 2040-41

ANZSIC Divisions	2011	2016	2021	2026	2031	2036	2041
Retail Trade	1,435	1,496	1,523	1,555	1,600	1,629	1,655

ANZSIC Divisions	2011	2016	2021	2026	2031	2036	2041
Other Services	553	591	634	679	734	785	838
Health Care and Social Assistance	1,515	1,764	2,007	2,311	2,666	3,014	3,367
Arts and Recreation Services	252	253	266	285	306	330	356
Public Administration and Safety	1,025	1,075	1,146	1,249	1,360	1,477	1,598
Mining (WC + storage)	94	85	99	132	179	236	297
Manufacturing	860	893	940	990	1,058	1,131	1,210
Construction (WC + storage)	1,365	1,216	1,608	1,818	1,965	2,078	2,173
Wholesale Trade	370	334	347	358	370	383	396
Transport, Postal and Warehousing	480	442	466	498	535	568	604
Electricity, Gas, Water and Waste Services	160	149	191	320	533	716	842
Accommodation and Food Services	1,336	1,570	1,630	1,737	1,851	1,972	2,097
Financial and Insurance Services	145	194	186	175	172	183	200
Rental, Hiring and Real Estate Services	201	173	208	247	290	333	383
Professional, Scientific and Technical Services	543	577	669	776	894	1,015	1,163
Administrative and Support Services	324	294	326	384	451	520	601
Education and Training	1,276	1,379	1,534	1,739	1,972	2,206	2,446
Information Media and Telecommunications	148	140	141	147	155	162	170
Agriculture. Forestry and Fishing	1.742	1.550	1,480	1.446	1,418	1.397	1.385
Total persons employed	13,824	14,171	15,402	16,844	18,510	20,136	21,780

Further, jobs data was sourced from the Department of Transport and Main Roads via data sharing agreement at the Statistical Area 1 (SA1) geographical boundary and ANZSIC employment categories.

These data was categorised at SA2 level and were reported for each LGIP employment type at projection years till ultimate development.

These employment projections were further converted to Gross Floor Area (GFA) projections, for nonresidential development, using the industry conversion rates of floor space required per employee. Data was then categorised into LGIP non-residential categories by grouping various ANZSIC subcategories.

GFA for manufacturing was measured manually in 2016 for each of the properties listed as having Manufacturing businesses in Australian Business Register (ABR). ABR has data on all businesses in



the Scenic Rim with their operating address and is updated every year and is classified with ANZSIC categories. This research formulates GFA for manufacturing under Industry for year 2016.

From these data, conversion rate is standardised for future (2021, 2026.....ultimate) & past (2014 & 2011) years. GFA for these years are extrapolated using the conversion rate only for manufacturing industry. The deviation from the normal process is undertaken as the gross floor area conversion rate for various manufacturing types varies from 30 to 200 sqm per employee.

Table below represents the conversion rates assumed for each category of employment by ANZSIC divisions and LGIP projection types to the required gross floor area for work:

LGIP projection type	ANZSIC Divisions	Floor space (Sqm)
Commercial/ Retail	Retail Trade - retail	29
Commercial/ Retail	Retail Trade - commercial	45
Community Purpose/ Other/ Retail	Other Services	29
Community Purposes	Health Care and Social Assistance	35
Community Purposes	Arts and Recreation Services	35
Community Purposes	Public Administration and Safety	35
Industry	Mining (WC + storage)	55
Industry	Manufacturing	Based on survey data
Industry	Construction (WC + storage)	55
Industry	Wholesale Trade	220
Industry	Transport, Postal and Warehousing	220
Industry	Electricity, Gas, Water and Waste Services	120
Retail	Accommodation and Food Services	29
Retail	Financial and Insurance Services	25
Retail	Rental, Hiring and Real Estate Services	25
Retail	Professional, Scientific and Technical Services	25
Retail	Administrative and Support Services	25
Retail	Education and Training	35
Retail/ Industry	Information Media and Telecommunications	120
Rural	Agriculture, Forestry and Fishing	0

Table 9 Gross floor space for each employment category

The outcome of this analysis is listed in tables 4.6 and 4.9 of the LGIP as existing and projected employees and the existing and projected non-residential floor space.

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 are as follows:

- for the stormwater quantity network, hectare of impervious area, or imp ha.
- for the transport network, vehicle trip ends per day, or vpd.
- for the parks network, Equivalent Persons, or EP.

Following Table 10 reflects the planned density and relevant demand generation rate for each trunk infrastructure network for residential and non-residential LGIP development types.

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Table 10 Planned density and demand generation rate for a trunk infrastructure network

Column 1 Planning scheme zones [#]	Column 2 Planning scheme precincts [#]	Column 3 Planned density		Column 4 Demand generation rate for a trunk infrastructure network				
		Non-residential plot ratio (floor space in m2/ employee)	Residential density (dwellings/ dev ha)	Transport network (vpd/dev ha)	Parks and land for community facilities network (ha/1000 persons)	Stormwater network (imp ha/dev ha)		
	F	Residential develop	oment type					
Low Donsity	(Where no precinct applies)	0	10	60	4.4	0.6		
Residential	Mountain Residential	0	0	0	4.4	0		
Low-Medium Density Residential		0	13.5	81	4.4	0.6		
Rural	(Where no precinct applies)	0	0.01667	8	4.4	**		
	Tamborine Mountain Rural	0	0.01667	8	4.4	**		
	Rural Escarpment	0	0.01667	8	4.4	**		
	(Where no precinct applies)	0	3.33	27	4.4	0.1		
Rural Residential	Rural Residential A	0	1	8	4.4	0.1		
	(Where no precinct applies)	0	4	32	4.4	0.1		
Township	Township Residential	0	3.33	27	4.4	0.1		
Non-residential or mixed use development type								
Facilities		35	0.1	*	0	0.1		
Conservation		0	0	0	0	0		
District Centre		25 - 45	4	*	4.4	0.6		
Industry		55 - 220	0.5	*	0	0.9		
Limited	Flood Land	0	0	0	0	0		

Column 1 Planning scheme zones [#]	Column 2 Planning scheme precincts [#]	Column 3 Planned density		Column 4 Demand generation rate for a trunk infrastructure network		
		Non-residential plot ratio (floor space in m2/ employee)	Residential density (dwellings/ dev ha)	Transport network (vpd/dev ha)	Parks and land for community facilities network (ha/1000 persons)	Stormwater network (imp ha/dev ha)
Development	Historical Subdivision	0	0	0	0	0
Local Centre		25 - 45	2	*	4.4	0.6
Major Centre		25 - 120	4	*	4.4	0.9
Major Tourism		*	0	*	0	0.6
Minor Tourism		*	0	*	0	0.6
	(Where no precinct applies)	25 - 120	4	*	4.4	0.9
Mixed Use	Commercial Industrial	45 - 120	0	*	0	0.9
Neighbourhood Centre		25	0	*	0	0.6
Recreation and Open Space		0	0	0	0	0
	(Where no precinct applies)	0	0	8	4.4	0.6
	Bulk Water Storage	0	0	*	0	0
Special Purpose	Bromelton State Development Area	55 - 220	0.01667	*	4.4	0.9

 * assessed by Council on a case by case basis
 ** an assumption of 500 sqm of impervious area per dwelling is used.
 # to assist in interpretation, refer to document "Equivalent land uses, zones and precincts in the Beaudesert, Boonah & Ipswich Planning Schemes for the LGIP"