

BRISBANE CITY PLAN 2000

**INFILL COMMUNITY PURPOSE
INFRASTRUCTURE CONTRIBUTIONS
PLANNING SCHEME POLICY**

July 2009



Dedicated to a better Brisbane

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ACRONYMS

ATS	Australia Trade Coast South PSP
BCC	Brisbane City Council
BUL	Bulimba Industrial Area PSP
CAL	Calamvale PSP
CBD	Central Business District
DOL	Doolandella PSP
DSS	Desired Standard of Service
EP	Equivalent Person
ET	Equivalent Tenement
FTP	Fig Tree Pocket PSP
GFA	Gross Floor Area
GIS	Geographical Information System
Ha	Hectare measure of land
ICU	Infrastructure Contribution Unit
INE	Inner North Eastern Suburbs PSP
IPA	Integrated Planning Act 1997
IPOCAA	Integrated Planning and Other Legislation Amendment Act
LOCP	Land for Other Community Purposes
LP	Local Plan
NPV	Net Present Value
PRL	Public Recreation Land
PSP	Planning Scheme Policy
RIC	Richlands Area PSP
SEQ	South East Queensland
SLA	Statistical Local Area
WAK	Wakerley PSP
WYW	Wynnum-West PSP

1 INTRODUCTION

The Infill Community Purposes Infrastructure Contributions Planning Scheme Policy (Community Purposes PSP) outlines the general approach to infrastructure planning and contributions for the infill community purposes network for Brisbane. This Community Purposes PSP is to be read in conjunction with:

- (a) IPA Section 6.1.20 (Planning Scheme Policies for Infrastructure).
- (b) IPA Section 6.1.31 (Conditions about Infrastructure for Applications).
- (c) Brisbane City Plan 2000.
- (d) All adopted Infill and High Growth PSPs.

1.1 PURPOSE

The *Integrated Planning Act 1997* requires integration of land use and infrastructure planning that allows infrastructure to be supplied in a coordinated, efficient and orderly manner. Infrastructure coordination encourages development in areas where infrastructure already exists or can be efficiently provided and has a major influence on achieving sustainable development.

Infrastructure contributions in general urban areas of the City will usually be addressed by way of the low growth PSPs which are also referred to as Infill PSPs. Development in these areas is, by its nature, fragmented. In consequence, the definition of the networks, and forecasting of variations in network capacity and usage will necessarily be less accurate than would be the case in more consolidated growth locations.

1.2 AUTHORISING LEGISLATION

This PSP is made pursuant to IPA Section 6.1.20.

IPA allows for the imposition of conditions on development approvals requiring contribution of land, works or money towards the cost of supplying infrastructure in accordance with planning scheme policies, until 30 June 2009 or if the Minister, by gazette notice, nominates a later day for the planning scheme—the later day. Infill and High Growth Infrastructure Contributions Planning Scheme Policies 1 to 14 identify the infrastructure contribution mechanisms for transport, community purposes, water supply, sewerage and waterways for High Growth and Infill Areas throughout the City.

Pursuant to Section 6.1.20 (2) this policy states each of the following –

Table 1.1 - Compliance to Section 6.1.20 of the Integrated Planning Act

Requirement	Reference
A contribution for each development infrastructure network identified in the policy	Table 2.1 Table 2.2
The estimated proportion of the establishment cost of each network to be funded by the contribution	Section 7
When it is estimated the infrastructure forming part of the network will be provided	Map 4.1-.4.18 Appendix I
The estimated establishment cost of the infrastructure	Appendix K Appendix L
Each area in which the contribution applies	Map 8 Table 2.1
Each type of lot or use for which the contribution applies	Table 2.2
How the contribution must be calculated for each area in which the contribution applies and each type of lot or use for which the contribution applies	Section 2

1.3 DEFINITION OF TRUNK INFRASTRUCTURE

IPA differentiates between trunk and non trunk infrastructure. Trunk infrastructure is the infrastructure for which Council will levy infrastructure contributions under this PSP.

1.3.1 The Definition of Non Trunk Infrastructure

Non trunk infrastructure is development infrastructure that is not trunk infrastructure.

1.3.2 The Definition of Trunk Infrastructure

Trunk infrastructure is higher order development infrastructure supplied by the local government or State infrastructure provider and primarily intended to provide network distribution and collection functions or provide services shared by a number of developments.

The Community Purposes PSP sets contributions for the trunk community purposes network. The community purposes network includes the following systems and infrastructure items.

Table 1.2 - Community Purposes Trunk Infrastructure Networks, Systems and Items

Community Purposes Network	Infrastructure Items
Public Recreation Land System	land and basic works to bring land to a standard appropriate to its desired use
Improvements to the Public Recreation Land System	earthworks and irrigation, lighting, picnic shelters, seating, shade shelters, playground and sports equipment, tree planting, access ways and toilets
Land for Other Community Purposes System	land and basic works to bring land to developable standard

1.3.3 Items Excluded from Infrastructure Planning Scheme Policies

In addition to paying an infrastructure contribution, developers must also demonstrate that all infrastructure requirements have been satisfied.

In general, there will be elements of local infrastructure required to connect a site or development area to the trunk infrastructure networks. This work is attributable to the development and is over and above the infrastructure contribution defined through a PSP. It is also the responsibility of the developer to provide services to the property boundary of land for community purposes near any planned buildings or facilities.

In certain circumstances, a development may need special types of infrastructure, which were not considered in the PSP. For example, industrial development may require grease traps to prevent pollutants from escaping into local waterways.

A development may also require temporary work if the regional infrastructure has not yet been constructed. This is most likely to occur when the proposed development is outside the assumed sequence of development. Many of these items can be removed once the regional infrastructure has been provided. For example, a local detention pond may be required where a regional corridor has not yet been acquired. The site of the local detention basin could be developed for other purposes once the corridor has been acquired and associated work undertaken.

The cost of these types of infrastructure will not be offset against the contributions set in the PSP.

1.4 SCOPE OF COMMUNITY PURPOSE INFRASTRUCTURE IN BRISBANE

The study area for the Community Purposes PSP is shown on **Map 8** and generally covers the BCC local government area. The following areas have not been taken into account in this PSP:

- Local and district public recreation land totally attributed to High Growth PSP areas.
- Land included in the green space system or investigation area in the *City Plan*.
- The statistical local area of Karana Downs – Lake Manchester.

IPA includes infrastructure for local community purposes as part of the basic and essential infrastructure that can be levied through an PSP. Infrastructure for local community purposes is comprised of two components: public recreation land and land for other local community purposes.

1.4.1 Public Recreation Land

Public recreation land (PRL) comprises the basic and essential network of infrastructure required to ensure new and developing communities have ready access to land for public recreation purposes, such as playgrounds and sports fields.

The *Integrated Planning and Other Legislation Amendment Act 2003* (IPOLAA) allows for monies to be used for local public parks infrastructure. This infrastructure, also referred to as improvements or embellishments, includes: playground equipment, playing fields, courts and picnic facilities. This PSP includes PRL improvements.

PRL is deemed to include:

- Council parks greater than 1000m² with one or more of the following infrastructure items, for example: children's play equipment, picnic shelters, seating, half courts, rebound walls, skate facilities, dog off-leash areas and shade shelters.
- Council parks greater than 1000m² in the inner city that may not have any of the informal recreation infrastructure items listed above but still perform an important recreation role for residents and employees. For example, Anzac Square where public access is permitted.
- Council parks greater than 1000m² with sporting infrastructure that includes outdoor sports fields and/or outdoor sports courts (excluding lawn bowling greens).
- Developed recreation nodes within Council natural areas (i.e. parks developed and managed primarily for conservation purposes) greater than 50ha that contain public recreation infrastructure (equal to or greater than 10% of the total park area). A list of the large Council natural areas that were deemed to include PRL is contained in **Appendix E**.

It is important to recognise that not all Council parks represent PRL. There are many parks that have been developed primarily for drainage purposes, conservation purposes or scenic amenity purposes (**Map 3**).

PRL was classified according to the current primary use of the land and to the anticipated level of use or service catchment of the infrastructure. Based on this, the types of PRL in Brisbane that are PSP recoverable are identified in Table 1.3. Metropolitan and district parks both also provide lower park function, for example, a district park can serve a dual district park and local park function.

The two main park types are informal recreation parks and sports parks. Informal recreation parks are public open space areas that are used for social, cultural and informal/unstructured recreational activities that people undertake in their leisure time and typically include:

- open space;
- park furniture such as picnic tables;

- play facilities; and
- activity spaces (e.g. dog off-leash areas, playgrounds, skate facilities, path/trail system).

These areas also provide opportunities to protect and enhance the visual and scenic amenity and identity of the community and have varied landform.

Sports parks provide opportunities for a variety of community sport and recreation activities, and allow free and generally unrestricted access to open space (**Map 2**). Temporary restrictions to public access may occur during organised fixtures.

Table 1.3 – PSP Infrastructure Contribution - PRL Types

Park Type	Primary Function	
Local	Local informal recreation park	These parks serve the immediate neighbourhood within approximately a 500m radius and have the capacity for short stays by small groups and individuals. These small parks (approx. 1Ha) provide a limited range of informal recreation or sporting opportunities within easy walking distance from residential, commercial and industrial development.
	Local sports park*	
	Access Improvements	These park connections provide important links to existing or proposed green space, often across physical barriers, to achieve the desired standards of service.
District	District informal recreation park	These parks serve development within approximately a 2-5km radius and have a capacity for sustained visitation for small groups, travelling on foot, by bicycle and car. These mid-sized parks (approx. 10ha) provide a range of facilities and activity space for informal use and or sport. These areas cater for large groups and are appealing to a range of users. They service several communities/suburbs and are a fairly well known destination for those people living within their catchment.
	District sports park (includes sub-district sports park)*	
Metropolitan	Metropolitan informal recreation park	These parks serve all residents of Brisbane and have the capacity for sustained visitation for a large number of recreational users likely to stay over three hours and who have travelled by car. These informal use or sport parks offers a wide variety of opportunities to a broad cross section of the community. Large in size (approx. 25ha) these are high use, well known parks that are major destinations in Brisbane.
	Metropolitan sports park	
	Metropolitan outdoor recreation park	These parks serve all residents of Brisbane and have the capacity for sustained visitation for a large number of recreational users likely to stay over three hours and who have travelled by car. These parks provide for a range of outdoor recreational activities e.g. mountain biking and horse riding. Large in size (approx. 85 ha) and containing inherent characteristics suitable to support a range of outdoor activities.
	Corridor Link Park (includes RiverWalk Pocket Parks)	These parks, like the other metropolitan parks, are high use well known parks that are major destinations in Brisbane. However, these parks provide recreational space along Brisbane's waterways and include Greenways, continuous open space corridors for recreational activity, non-vehicular people and wildlife movement along Brisbane River tributaries, and RiverWalk Pocket Parks, a connected system of small parks along the Brisbane River in the inner city.

Few local sporting parks exist and are not desired in the future system. Some district sporting parks function more as sub-district sporting parks because they accommodate a limited number of facilities or only one type of sport. The criteria used to determine sporting park catchments is contained in **Appendix F.*

1.4.2 Land for other Local Community Purposes

Land for other local community purposes (LOCP) comprises the basic and essential system of infrastructure required to ensure new and developing communities have ready access to land only for indoor community facilities (other community purposes) such as community halls and centres, public recreation centres and public libraries.

BCC recognises that PRL and LOCP are only two aspects of a much broader green space and open space/community infrastructure system. However, only PRL and LOCP can be funded through infrastructure contributions. Thus, in accordance with IPOLAA and relevant guidelines, this PSP does not include areas, for example, where the primary function is conservation and environmental protection or community facility buildings that can be constructed on LOCP.

1.5 FORECASTS OF DEVELOPMENT & COST IMPACT ASSESSMENT

The time horizon for the PSPs extend to 2016. Infrastructure required beyond this horizon may also be included in the plans for infrastructure, particularly for major infrastructure items if development occurring now will use, or benefit, from such infrastructure, in the future. The forecasts of development are detailed in Section 4.

Assumptions have been made about the likely sequence of development and the staging of infrastructure. Contributions are based upon these assumptions. Development that is inconsistent with the type, scale, location and timing of development as set out in the City Plan is considered to be inconsistent with the planning assumptions underlying the infrastructure contributions and will be subject to cost impact assessments. If development does not achieve the planned densities as set out in the City Plan, the infrastructure contributions will still be assessed in accordance with planned densities.

Some sites are not included in network contribution areas. These sites will be subject to cost impact assessment.

1.6 DESIRED STANDARDS OF SERVICE

The desired standards of service (DSS) is detailed within Section 5. The DSS sets a benchmark for the standard of performance or service to be provided. The DSS are characterised by two types of criteria:

- Planning criteria which define the form or shape of the network; and
- Design criteria which define the nature, scale or size of items in the network.

Planning criteria determine the preferred form and function of the network in question. Design criteria are used to define the detailed specification of individual items in a network. They are usually drawn from State or Commonwealth legislation, technical guidelines/standards and Council policy.

Important considerations to note in the development of DSS for each individual infrastructure network include:

- A network designed to the DSS may not necessarily be the lowest cost solution;
- The DSS might not be attained throughout the development period. In most cases they represent the long-term, rather than minimum, design requirement; and
- Current standards are greater than when many existing urban areas were established. In these circumstances, it should not be implied that Council will seek to achieve the DSS for each network.

The DSS for the Infill Area of Brisbane additionally provides the minimum standards for the High Growth Areas of the City. In some High Growth Areas the DSS is further detailed in the PSP as these areas have been subjected to more detailed planning and would normally have

infrastructure items planned that contribute to the DSS. Some High Growth Areas located in historically older suburbs are unable to achieve the DSS due to factors such as the constraints of topography or a lack of space. In this case an alternative standard will be developed.

1.7 INFRASTRUCTURE CONTRIBUTION TRIGGERS

Infrastructure contributions for trunk infrastructure arising from:

- Reconfiguring a Lot,
- A Material Change of Use,
- A combined reconfiguring and material change of use,
- A building application,
- Any other assessable development that increases the demand for trunk infrastructure.
- Preliminary approval to which IPA Section 3.1.6 (Preliminary Approval may Override Local Planning Instrument) applies; where the development which is the subject of the preliminary approval is stated to be self assessable development.

1.8 OVERVIEW OF CALCULATING INFRASTRUCTURE CONTRIBUTIONS

The total infrastructure contribution for the community purposes infrastructure network is expressed in infrastructure contribution units (ICUs). Summary contribution tables and calculation formulae are contained in Section 2.

1.8.1 Measures of Development and Demand for Network Capacity

Land use is defined in terms of development units. In established areas, these units are dwellings in the case of residential development and gross floor area in the case of non-residential development. In greenfield areas development units are developable hectares for both residential and non-residential development. Development units are converted into units of demand for specific infrastructure networks by using a land use and network specific conversion rate.

By expressing demand in relative terms across land uses, a range of different uses can have their demand defined through a single index, the Unit of Demand. In established areas, this relative unit of demand is the Equivalent Tenement or ET, and is the consumption of capacity of a network by one low-density dwelling. In greenfield areas Equivalent Hectare or EH, and is the consumption of the capacity of a network by one developable hectare of low-density residential development. The relationship is expressed in the following equation:

$$\text{Units of Demand (ETs or EHs)} = (\text{conversion rate}) \times \text{No. of Development Units.}$$

The demand measure relevant to this PSP is stipulated in parts of the document.

1.8.2 Infrastructure Credits

An infrastructure credit represents the value of infrastructure contributions or payments imputed to have previously been made over the site by:

- Any existing lawful use(s) that exists or existed on the land which is the subject of an infrastructure contribution assessment, at the time the assessment (or the application being lodged with Council) is made, where a contribution has been made which accords with the requirement for the relevant network.
- A self assessable residential use on that land permitted at the time of the assessment.

Existing lawful development will be credited at infrastructure credit rates specified and expressed as ICUs.

1.8.3 Infrastructure Offsets

An offset may be allowed where a developer will undertake trunk infrastructure works that are part of the PSP. The amount of this offset is to be determined by Council, deducted from the calculated infrastructure contributions and expressed as ICUs.

A development may be conditioned or agreement reached (via an Infrastructure Agreement) to supply certain items of trunk infrastructure as part of a development. In such instances, the value of that infrastructure identified in the relevant PSP will be offset against the contribution for the relevant network. For example, where Council has approved the construction of works or dedication of land in fee simple, the value of these works or land will be offset against the assessed infrastructure contribution where an agreement is reached with Council to do this.

1.9 CONDITIONING OF INFRASTRUCTURE CONTRIBUTIONS

IPA allows for the imposition of conditions on development approvals requiring contribution of land, works or money towards the cost of supplying infrastructure in accordance with IPA Section 6.1.31(c).

1.10 PAYMENT OF INFRASTRUCTURE CONTRIBUTIONS

1.10.1 Timing of Payment

The infrastructure contributions must be paid as follows:

- a. Reconfiguration of a lot – before Council approves the plan of subdivision.
- b. Building application – before the certification of classification for the building work is issued.
- c. Material change of use – before the change happens.

If a), b) and c) do not apply – as stated in the development approval.

1.10.2 Methods of Payment

Monetary payment can be paid by cash, credit card, EFTPOS or cheque at Council Customer Service Centres.

1.10.3 Infrastructure Agreements

Infrastructure Agreements (IAs) is an agreement about payment for, or supply of, infrastructure. Council may consider entering into an IA in certain situations, for example to:

- a) Vary the amount, the timing or the form of payment of an infrastructure contribution (e.g. to allow the applicant to supply works or land in lieu of part or all of the contribution).
- b) Provide the terms on which a refund would be provided.

IAs may be used in High Growth or Infill Areas when future growth is associated with a single or limited number of developers and the planning for infrastructure, costing and cost apportionment can be clearly associated with the development in question.

1.11 FINANCIAL IMPACT OF INFRASTRUCTURE CONTRIBUTIONS

Council is currently largely supplying the type of infrastructure identified in the PSPs across the city. At the present time developer contributions may not reflect the true cost of this infrastructure and in some cases contributions are limited only to water, sewer and parkland. The introduction of a city wide charging scheme will apply contributions for the five infrastructure networks to all development across the city ensuring that appropriate contributions are made toward trunk infrastructure provision. Adoption of infrastructure

contributions for infill areas will help to alleviate Council's financial burden of providing service infrastructure.

2 SUMMARY OF INFRASTRUCTURE CONTRIBUTIONS

2.1 KEY INFRASTRUCTURE CONTRIBUTION PRINCIPLES

Calculation of community purposes infrastructure contributions with applicable credits and offsets are to be calculated in accordance with Section 2.2 – 2.6 inclusive.

Map 8 identifies the community purpose precincts across Brisbane. Table 2.2 identifies the infrastructure contribution rate categories that apply to each precinct. Those precincts that are not identified in Table 2.2 are either precincts where *High Growth PSPs* already exist or precincts where no population growth is anticipated and where the full cost impact of development is to be born by the developers (metropolitan infrastructure contributions will always apply).

Precincts 80 and 150B differ to other infrastructure contribution areas. All three components of the community purposes infrastructure contribution (PSP preparation; city-wide; local and district park infrastructure contribution) apply to precinct 80 even though no new parks are planned because the existing parkland has spare capacity for the anticipated new population. The same scenario, at a greater scale, applies to precinct 150B. An average infrastructure contribution was developed for the precincts so that new development was not inequitably contributed a high rate that also would have affected other infrastructure contribution rates. The average infrastructure contribution was considered in isolation and was within the desired 20% infrastructure contribution range.

2.2 VALUE OF AN ICU

The value of an ICU will be indexed on an annual basis applying increases for the prior calendar year to the Australian Bureau of Statistics 6427.0 Producer Price Indexes, Australia, Index Number 4121, Road & Bridge Construction Queensland. The value of an ICU for the 2009/2010 financial year is \$1.84.

2.3 APPLICATION OF PLANNED MINIMUM DENSITY

Planned minimum density will be used to calculate the minimum contributions payable in certain circumstances. The contribution is based on the proposed development density or planned minimum density, which ever is the greater. The relevant circumstances are outlined in Table 2.1 below.

Table 2.1 – Planned Minimum Density Application Matrix

	RoL	MCU
Residential Development	Yes	Yes
Non-Residential Development	Yes	Yes
Non-Residential Development - Extension to an Existing Building	N/A	No

2.4 CALCULATION OF CONTRIBUTIONS

2.4.1 Reconfiguration of a Lot – Residential Development

1. Identify the number of proposed lots (Assumed 1ET per lot for all residential).
2. Using Table 2.5 calculate the planned minimum lot density (Assumed PMD x Developable Area in Ha).
3. Adopt the higher number of lots from steps 1 and 2.
4. Using Maps 4.1 to 4.18 identify the community purposes precinct in which the site is located.
5. Using Table 2.2 identify the precinct and the corresponding infrastructure contribution area category (A to G).
6. Using Table 2.3 identify the infrastructure contribution rate per infrastructure contribution area category (A to G).
7. Identify the number of existing lots for credit purposes and the corresponding infrastructure credit rate using Table 2.7.
8. Calculate the infrastructure contribution using the following formula.
9. Deduct any applicable infrastructure credits (see Section 2.6).

Infrastructure Contribution	=	No. of Lots* (Step 3)	x	Assumed 1ET Conversion Rate	x	Infrastructure Contribution Rate	x	Value of an ICU
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**Planned minimum lot densities as outlined in Table 2.4 must be used to calculate a minimum contribution. Proposed or actual density and PMD will be compared and the higher value will be used for the purposes of the calculation. Assumes 1 ET of demand per lot and that subsequent material changes of use will be subject to additional charges where this demand is exceeded.*

2.4.2 Reconfiguration of a Lot – Non-Residential Development

1. Identify the Infrastructure Contribution Precinct Area within which the site falls using Maps 4.1 - 4.18.
2. Using Table 2.2 identify the precinct and the corresponding infrastructure contribution area category (A to G).
3. Using Table 2.3 identify the infrastructure contribution rate per infrastructure contribution area category (A to G).
4. Identify the development type, developable area (m²) of site, planned minimum plot ratio (Table 2.6) and ET conversion rate (Table 2.4).
5. Calculate the infrastructure contribution using the following formula.
6. Deduct any applicable infrastructure credits (see Section 2.6).

$$\text{Infrastructure Contribution} = \frac{\text{Developable Area (m}^2\text{)}}{\text{Planned Minimum Plot Ratio}} \times \text{ET Conversion Rate} \times \text{Infrastructure Contribution Rate} \times \text{Value of an ICU}$$

**Planned minimum gross floor area yields as outlined in Table 7.4 must be used to calculate a minimum contribution. Where a higher ratio of gross floor area is proposed the higher number will be used for the purposes of calculation. The contribution is to be taken into account for subsequent material change of use applications which will only be subject to additional charges where this demand is exceeded.*

2.4.3 Material Change of Use – Residential Development

1. Identify the number of proposed ETs (no. dwellings x ET conversion rate in Table 2.4).
2. Using Table 2.5 calculate the planned minimum density ET (Assumed PMD x Developable Area in Ha).
3. Adopt the higher number of ETs from steps 1 and 2.
4. Using Maps 4.1 to 4.18 identify the community purposes precinct in which the site is located.
5. Identify the Infrastructure Contribution Precinct Area within which the site falls using Maps 4.1 - 4.18.
6. Using Table 2.2 identify the precinct and the corresponding infrastructure contribution area category (A to G).
7. Using Table 2.3 identify the infrastructure contribution rate per infrastructure contribution area category (A to G).
8. Calculate the infrastructure contribution using the following formulas.
9. Deduct any applicable infrastructure credits (see Section 2.6).

Infrastructure Contribution	=	No. of ETs* (Step 3)	x	Infrastructure Contribution Rate	x	Value of an ICU
<i>*Planned minimum densities as outlined in Table 2.4 must be used to calculate a minimum contribution. The proposed or actual density and PMD will be compared and the higher value will be used for the purposes of calculation.</i>						

2.4.4 Material Change of Use – Non-Residential Development

1. Identify the number of proposed ETs (m² of new GFA x ET conversion rate in Table 2.4).
2. Using Table 2.6 calculate the planned minimum density ET [Assumed plot ratio (Table 2.6) x Developable Area (m²) x ET Conversion Rate (Table 2.4)].
3. Adopt the higher number of ETs from steps 1 and 2.
4. Using Maps 4.1 to 4.18 identify the community purposes precinct in which the site is located.
5. Using Table 2.2 identify the precinct and the corresponding infrastructure contribution area category (A to G).
6. Using Table 2.3 identify the infrastructure contribution rate per infrastructure contribution area category (A to G).
7. Calculate the infrastructure contribution using the following formula.
8. Deduct any applicable infrastructure credits (see Section 2.6).

Infrastructure Contribution	=	No. of ETs* (Step 3)	x	Infrastructure Contribution Rate	x	Value of an ICU
<i>*Planned minimum density as outlined in Table 2.6 must be used to calculate a minimum contribution. The proposed or actual density and PMD will be compared and the higher value will be used for the purposes of calculation.</i>						

2.5 CALCULATIONS TABLES

Table 2.2 – Community Purpose Precincts, Contribution Areas and Contribution Rates

Precincts	Infrastructure Contribution Area	Infrastructure Contribution Rate	Precincts	Infrastructure Contribution Area	Infrastructure Contribution Rate	Precincts	Infrastructure Contribution Area	Infrastructure Contribution Rate
1	F	6,890	43	B	2,370	100	E	4,910
2	G	9,050	45	D	3,620	101	E	4,910
4	C	3,060	46	B	2,370	102	D	3,620
5	C	3,060	47	B	2,370	103	C	3,060
7	D	3,620	49	C	3,060	104	C	3,060
8	E	4,910	51	G	9,050	105	A	1,460
9	D	3,620	52A	F	6,890	106A	B	2,370
11A	G	9,050	61	F	6,890	106B	B	2,370
11B	F	6,890	62A	D	3,620	107	A	1,460
12	B	2,370	62B	D	3,620	108	E	4,910
13	D	3,620	63	D	3,620	113	G	9,050
14	C	3,060	64	G	9,050	114	E	4,910
15	B	2,370	65A	D	3,620	115	D	3,620
16	B	2,370	68	B	2,370	116	A	1,460
17	D	3,620	69	D	3,620	117	C	3,060
18	G	9,050	71	D	3,620	118	B	2,370
19	F	6,890	72	F	6,890	119	C	3,060
20	E	4,910	73	E	4,910	120A	B	2,370
21	D	3,620	74	G	9,050	120B	B	2,370
22A	B	2,370	75A	D	3,620	121A	A	1,460
22B	B	2,370	75B	C	3,060	121B	D	3,620
22C	G	9,050	76B	G	9,050	121C	D	3,620
23	A	1,460	77	F	4,910	122	A	1,460
24	A	1,460	78	F	6,890	124	A	1,460
27	E	4,910	80	B	2,370	128	A	1,460
28	B	2,370	81	B	2,370	130	A	1,460
29	A	1,460	83	F	7,100	131	A	1,460
30	F	6,890	84	G	9,050	134	E	4,910
31	D	3,620	85	G	9,050	135	B	2,370
32	G	9,050	86	C	3,060	137	B	2,370
33	E	4,910	87	B	2,370	138	A	1,460
34	D	3,620	88	C	3,060	139	A	1,460
35	F	6,890	89	B	2,370	140	C	3,060
36A	E	4,910	91	E	4,910	142	D	3,620
36B	F	6,890	94	C	3,060	143	E	4,910
37	D	3,620	95	E	4,910	144	E	4,910
38	C	3,060	96	E	4,910	145	A	1,460
39	B	2,370	97	C	3,060	148	D	3,620
40	A	1,460	98	D	3,620	149	B	2,370
42	C	3,060	99	C	3,060	150A	G	9,050
						150B	E	4,910

Table 2.3 – Community Purposes Contribution Per Equivalent Tenement (ET)

Infrastructure Contribution Area	Park Contribution (ICUs/ET)
A	1,460
B	2,370
C	3,060
D	3,620
E	4,910
F	6,890
G	9,050

* The contribution should be multiplied by the appropriate conversion rate from Table 2.4.

Table 2.4 – ET Conversion Rate for Residential and Non Residential Development

Development Type / Land Use	Conversion Rate	Unit of Measure
Detached dwelling (Lot size over 400m ²)	1	Dwelling
Single Unit dwelling (Lot size equal to or less than 400m ²)	1	Dwelling
Multi-unit dwelling (Lot size/GFA equal to or less than 125m ²)	1	Dwelling
Commercial	0.0003	m ² GFA
Retail	0.0007	m ² GFA
Industrial	0.0007	m ² GFA

Table 2.5 – Planned Minimum Density for Residential Development

City Plan Area Classification	City Plan Code	Assumed Development Type	Assumed Planned Minimum Density (per Ha)	Assumed Planned Minimum Density (ETs per Ha)
Emerging Community Area	EC	Detached dwelling	14 Lots / dwellings	14 ETs
Low Density Residential Area	LR	Detached dwelling	14 Lots / dwellings	14 ETs
Character Residential Area	CR	Detached dwelling	14 Lots / dwellings	14 ETs
Low-Medium Density Residential Area	LMR	Single unit dwelling	30 dwellings	40 ETs
Medium Density Residential Area	MR	Multi-unit dwelling	60 dwellings	80 ETs
High Density Residential Area	HR	Multi-unit dwelling	80 dwellings	80 ETs

Table 2.6 – Planned Minimum Density for Non-Residential Development

Development Type / Land Use	Development Type for Local Community Purposes Charges Calculation	Planned Minimum Plot Ratio (GFA/ developable site area)
Cafe	Retail	0.5
Car wash	Retail	0.5
Caravan Park	Commercial	1.25
Child care facility	Commercial	1.25
Education - High School	Commercial	1.25
Education - Junior/Community College	Commercial	1.25
Education - Middle School	Commercial	1.25
Education - Primary School	Commercial	1.25
Education - University/College	Commercial	1.25
Entertainment, Sport and Recreation		
Clubhouse	Retail	0.5
Golf Course	Retail	0.5
Golf Course Clubhouse	Retail	0.5
Golf Driving Range	Retail	0.5
Gym / Fitness Centres	Retail	0.5
Lawn Bowls	Retail	0.5
Skating Rinks	Retail	0.5
Sport Field	Retail	0.5
Swimming Pools (Indoor or outdoor)	Retail	0.5
Tennis, Squash or other Court	Retail	0.5
Theatre / Cinema	Retail	0.5

Development Type / Land Use	Development Type for Local Community Purposes Charges Calculation	Planned Minimum Plot Ratio (GFA/ developable site area)
Factories	Industrial	0.5
Fast Food Premises	Retail	0.5
Future Industry	Industrial	0.5
General Industry	Industrial	0.5
Heavy Industry	Industrial	0.5
Hotel	Retail	0.5
Landscape Supply, Plant Nursery	Retail	0.5
Light Industry	Industrial	0.5
Medical Centres	Commercial	1.25
Motel / Short term Accommodations	Retail	0.5
Night Club	Retail	0.5
Office	Commercial	1.25
Real Estate Sales Office	Commercial	1.25
Restaurant	Retail	0.5
Retail – Bulky Goods and show rooms	Retail	0.5
Retail – Centre activities and other	Retail	0.5
Retirement / Ages Facility (Hostel)	Retail	0.5
Retirement / Ages Facility (Nursing Home Beds)	Retail	0.5
Retirement / Ages Facility (self contained)	Retail	0.5
Salvage Yard	Retail	0.5
Service Station - Fuel Pumps	Retail	0.5
Service Station - Service Bays	Retail	0.5
Service Station - Shop/Restaurant	Retail	0.5
Tavern - Liquor Retail Sales Areas	Retail	0.5
Tavern - Lounge, Bar, etc.	Retail	0.5
Vehicle Hire Premises	Retail	0.5
Vehicle Sales Premises - Display Areas	Retail	0.5
Vehicle Sales Premises - Office Areas	Retail	0.5
Warehouse	Retail	0.5
Veterinary Clinic/Hospital	Commercial	1.25
Other Land Uses	As agreed by Council	As agreed by Council

2.6 INFRASTRUCTURE CREDITS AND OFFSETS

2.6.1 Infrastructure Credits

Infrastructure credits apply where:

- there is an existing lawful use;
- a previous payment was made under the planning scheme policy; and/or
- an applicant can prove previous contributions have been paid.

The amount of the credit will not exceed the amount of the contributions payable. Infrastructure credits are contained Table 2.7. No refunds are available in respect of credit.

1. Identify the number of existing ETs;
2. Identify the credit rate for the relevant contribution area;
3. Identify the value of an ICU;
4. Calculate the credit using the following formula.

<i>Credit (\$)</i>	=	<i>No of ETs</i>	X	<i>Credit per Contribution Area (Table 2.7)</i>	X	<i>Value of an ICU</i>
<i>No of ETs</i>	=	<i>No of existing development units</i>	x	<i>ET conversion rate for type of development (Table 2.4)</i>		

Table 2.7 – Community Purposes Credits Per Equivalent Tenement (ET)

Infrastructure Contribution Area	Detached Dwelling ICU/ET
A	1,460
B	2,370
C	3,060
D	3,620
E	4,910
F	6,890
G	9,050

* The credit should be multiplied by the appropriate conversion rate from Table 2.4.

2.6.2 Infrastructure Offsets

An offset may be allowed where a developer will undertake trunk infrastructure works that are part of the PSP. The amount of this offset is to be determined by Council, deducted from the calculated infrastructure contributions and expressed as ICUs.

3 METHODOLOGY

This section outlines the methodology used to prepare the PSP for community purposes infrastructure in the infill areas of Brisbane.

3.1 PSP PREPARATION

The Community Purposes PSP was derived from a metropolitan planning study that identified existing provision and likely future need for community purposes infrastructure, including PRL and LOCP, in infill areas across the city. The planning process focuses on the geographical coverage and the physical accessibility of community purposes infrastructure across Brisbane. This approach was preferred over the traditional open space “standards” approach, which seeks to achieve a nominal quantum of open space per head of population. A spatial assessment was chosen to achieve more accurate and achievable result for the infill areas.

The study was scoped to cover the city as a whole to ensure consistency in assessment and preparation of infrastructure proposals, as well as to meet given timeframes. Although the study adopted a strategic approach, a level of detail was achieved through the implementation of a precinct by precinct analysis. Specific planning precincts were identified and assessed in terms of existing provision and likely future need for PRL and LOCP. This enabled the establishment of more accurate and achievable desired standards of services that reflect different population densities and urban form across the city.

The need for SEQ regional level community purposes infrastructure was not considered as part of this study. A number of informed assumptions were made within the strategic planning study to enable an efficient analysis based on available data. These are detailed throughout the report and in **Appendix A1**.

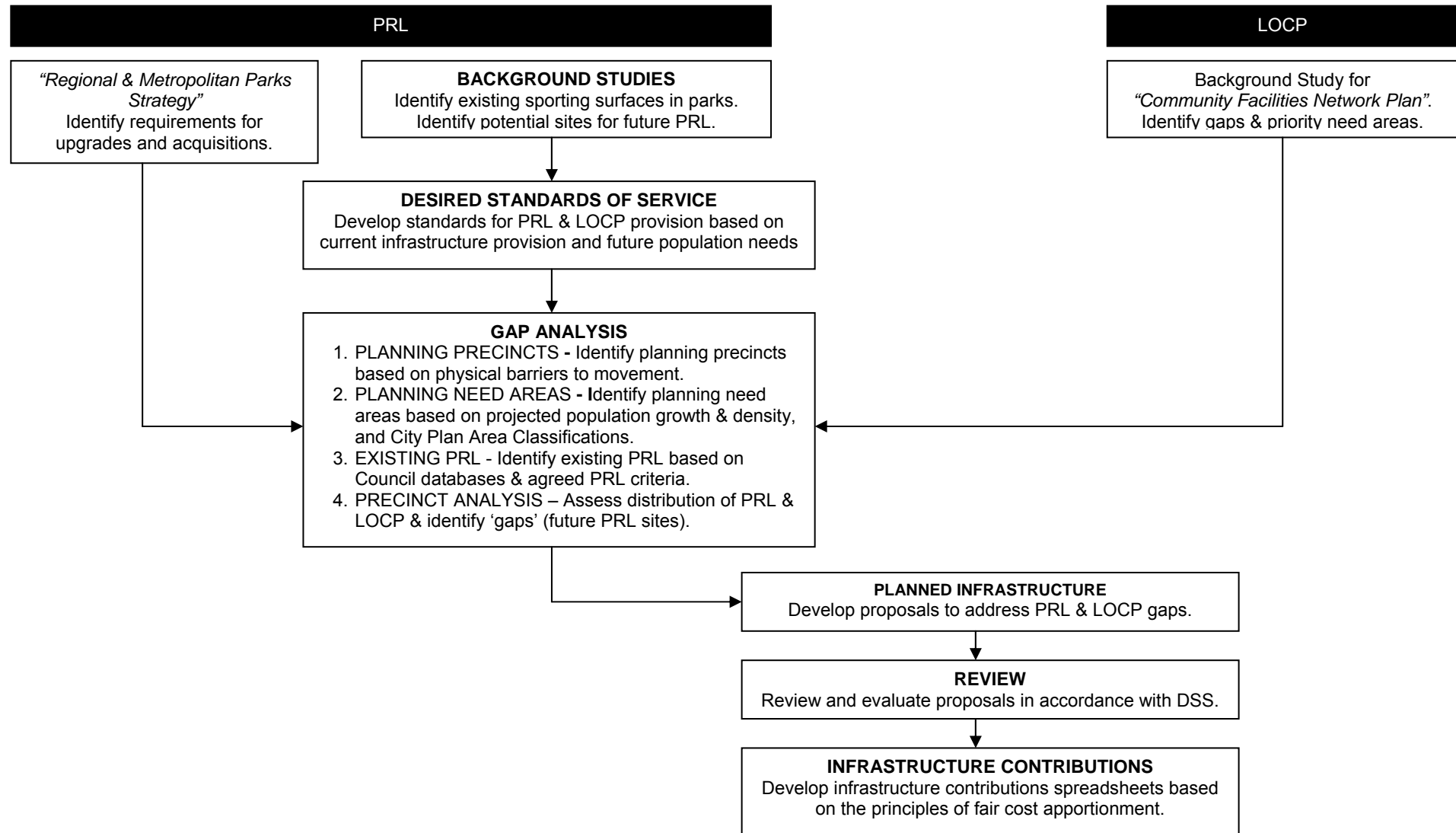
3.2 KEY STEPS

The methodology used to prepare the Community Purposes PSP is summarised in Figure 2.1. Although the PSP covers both PRL and LOCP, the base information for each of these infrastructure networks was derived from different sources, as different sections of Council are responsible for their planning and delivery. The information on PRL was in part derived from a metropolitan park mapping exercise undertaken by the Environment & Parks Branch and described in detail in **Appendix A1**. The LOCP data was derived from a similar, albeit broader, metropolitan community facilities mapping project undertaken by the Community & Economic Development Branch in the development of the *Community Facilities Network Plan*.

Key steps included:

- **Background studies** – preparation and/or review of relevant supporting studies.
- **Gap analysis** – assessment of existing provision of PRL (An assessment of the existing provision of LOCP was undertaken as part of a background study.)
- **Infrastructure proposals** – development of proposals to address identified gaps in the provision of PRL and LOCP.
- **Desired standards of service** – development of the desired standards of service.
- **Infrastructure contributions** – identification of contributions to cover the cost of existing and recommended infrastructure.
- **Infrastructure Planning Scheme Policy** – preparation of the *Infill Community Purposes Infrastructure Contributions PSP*.

Figure 2.1: Planning Study Components for Preparing Infill PSP for Community Purposes Infrastructure



4 FORECAST DEVELOPMENT IN BRISBANE TO 2016

4.1 INTRODUCTION

4.1.1 Context

Relationship to SEQ Regional Plan and Local Growth Management Strategy

The projections put forward in this document do not accord with the SEQ Regional Plan (SEQRP) which has set higher growth targets than previously envisaged by Brisbane City Council.

The projections in this document were prepared prior to the SEQRP being completed and were subsequently used to undertake detailed infrastructure planning which was largely completed prior to the SEQRP being finalised. Because of the detailed technical analysis and processes required to develop infrastructure plans the timeframes for the completion of projections through to finalisation of infrastructure contributions has taken a number of years.

In response to the SEQRP Council has been required to prepare a Local Growth Management Strategy which addresses the requirements of the regional plan including accommodation of additional growth. Because the LGMS will require the accommodation of additional growth, both population and employment, the demands on infrastructure will be increased.

Following the approval of the LGMS by Council and State Government a revised set of development projections will be able to be prepared and revised infrastructure planning undertaken. At that time this policy will be revised to reflect the revised figures.

4.1.2 Purpose

This section explains the forecasts of future population and non-residential floor space used in the preparation of the Infill PSPs. To ensure consistency and compatibility between all infill network PSPs, a single set of development forecasts has been used. The forecasts have supported the planning and design of infrastructure networks and the calculation of infrastructure contributions. Council does not support use of the forecasts for any other purpose.

4.1.3 Development Forecast Data Allocation to Park Catchments

The forecasts have been completed for the whole of Brisbane City Local Government Area (LGA), except for the Statistical Local Area (SLA) of Karana Downs-Lake Manchester (see Figure 4.4).

The forecasts include equivalent persons (EP) data at the level of the *City Plan* polygons which were calibrated and presented at the statistical local area (SLA) level. The residential EPs by City Plan polygon were aggregated to the park planning precincts and then converted to dwellings via assumed occupancy rates for each precinct. The non-residential EPs by City Plan polygon were aggregated to the park precincts and converted to gross floor area (GFA).

4.1.4 Overview of Forecasts

Providing the foundation for all forecasts were the equivalent person (EP) estimates and forecasts. These are explained in Section 4.2. Created initially by Brisbane Water for the purpose of water supply and sewerage master planning, the EP forecasts provided a consistent basis for planning all infrastructure networks. The base spatial unit used for the EP forecasts was City Plan polygons, which are generally a single City block, i.e. an area of developed or developable land bounded by streets. This base unit enabled aggregation of the forecasts as required to suit the various catchments of the different infrastructure networks.

The EP forecasts were calibrated against population projections by SLA prepared by the Department of Local Government and Planning (DLGP). Those projections are explained in Section 4.3.

The EP forecasts also provided the starting point for estimates of non-residential gross floor area (GFA) and associated employment, which are calibrated against other GFA and employment estimates. The methods used to generate the estimates of GFA and associated employment are explained in Section 4.4.

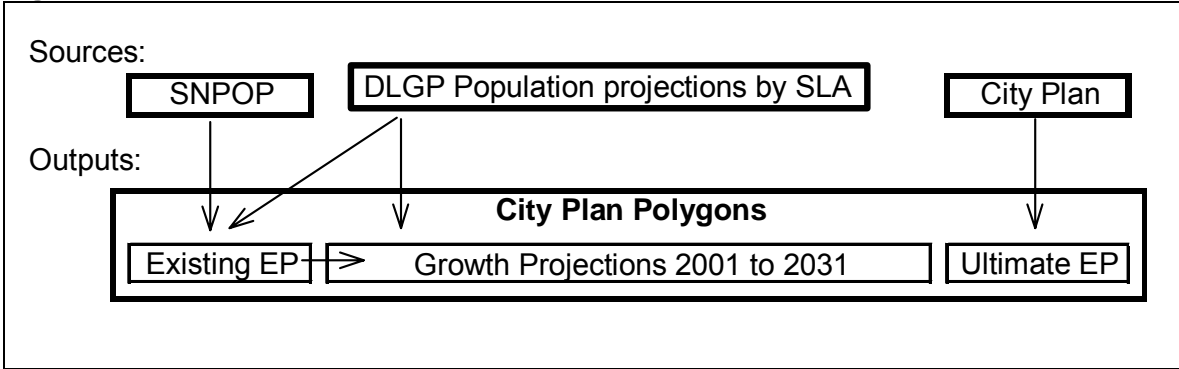
Section 4.5 includes a summary of the forecasts and projections by SLA. Individual Infill PSPs related to each infrastructure network explain how the forecasts have subsequently been used in that context.

4.2 EQUIVALENT PERSON FORECASTS

4.2.1 Overview of Method

Figure 4.1 provides a graphical overview of the derivation of the equivalent person (EP) forecasts.

Figure 4.1 - Structure of EP Forecasts



The following broad steps were taken in deriving the EP forecasts, which relate to the City Plan Polygons as they existed in 2001:

- Brisbane Water’s SNPOP (Sewerage Catchment Areas Estimation Program or Sewerage Network Population Program) was used to estimate the existing (2001) EP, split into residential and non-residential.
- The assumed ultimate EPs by polygon were estimated having regard to the relevant provisions of the City Plan as at 2001 and emerging policy changes at that time.
- The existing and ultimate residential EPs by polygon were calibrated against the DLGP population estimates and projections by SLA (see Section 4.5) and adjustments made to bring the EPs and DLGP estimates/projections into alignment.
- The growth pattern from the existing EPs to 2031 was determined, based primarily on the DLGP projections.

These broad steps are explained in more detail in the following respective Sections. A summary by SLA of the resulting EP forecasts is included in Table 4.1.

4.2.2 Estimates of Existing EPs using SNPOP

SNPOP extracted data from various BCC databases and manipulated it to calculate EPs for each property in Brisbane at the time the program was run. This data was aggregated to the City Plan polygon level and classified into residential and non-residential according to land use and City Plan area classification.

The residential EPs were derived using average occupancy rates in the relevant Collection District (CD) as at the 1996 Census. Separate rates were used for detached and attached dwellings.

The non-residential EPs were calculated as a fraction of average water usage, depending on land use, with the domestic or pedestal allowance assigned separately to the trade waste EPs.

4.2.3 Estimates of Ultimate EPs based on City Plan

The estimates of ultimate EPs had regard to the theoretical development potential under the City Plan, [including area classifications and Local Plans (LPs)], and policy changes emerging in 2001. However, the ultimate EPs did not generally assume the maximum theoretical potential density. They took account of the prospects of reaching that density across all properties given the density of existing uses and historical patterns of development. This was supported by an analysis of achieved densities by City Plan area classification. For some polygons the existing EPs were assumed to be carried forward as the ultimate EPs, because they exceeded expected future densities based on this analysis.

4.2.4 Calibration of Estimates using DLGP Projections

The existing residential EPs, aggregated to the SLA level, were calibrated against the DLGP estimates, by SLA, of the existing (2001) population. The existing residential EPs at the polygon level were adjusted to match the DLGP population estimates in the following ways:

- Where the total EP by SLA was less than the DLGP estimate, the difference was assumed to be existing rural residential uses, i.e. areas without sewerage. The difference was therefore apportioned by land area to all City Plan polygons, within the SLA, with the following area classifications: Rural, Emerging Communities or Environmental Protection
- Where the total EP by SLA was greater than the DLGP estimate, for all polygons in the SLA the EPs were reduced proportionally to match the DLGP totals by SLA.

Where the ultimate residential EPs, aggregated to the SLA level, were lower than the DLGP projections to 2031, the ultimate EPs and DLGP projections were generally brought into alignment. However, in most SLAs the ultimate EPs exceeded the projections.

4.2.5 Determination of Growth Pattern 2001-2031

The growth pattern over time of the residential EPs, by polygon, was derived from the DLGP projections for the relevant SLA. The EP growth from 2001 to 2031 was allocated evenly until the ultimate EP of each polygon was reached.

For the non-residential EPs, a growth pattern similar to nearby residential was assumed. Overall there is projected to be a declining growth rate over time.

4.3 POPULATION PROJECTIONS

In July 2001 DLGP prepared population estimates for 2001 and projections to 2031, at five-yearly intervals, by SLA in Brisbane City.

The projections to 2021 were undertaken using the Queensland Small Area Projection Model (QSAM). This is the standard method used in Queensland for the preparation of projections for components of LGAs. In broad terms, QSAM allocates LGA-wide projections to SLAs based on past trends, land availability and identified major redevelopment projects. QSAM projects the number of dwellings, split into detached and attached, and converts those to population using assumed occupancy rates.

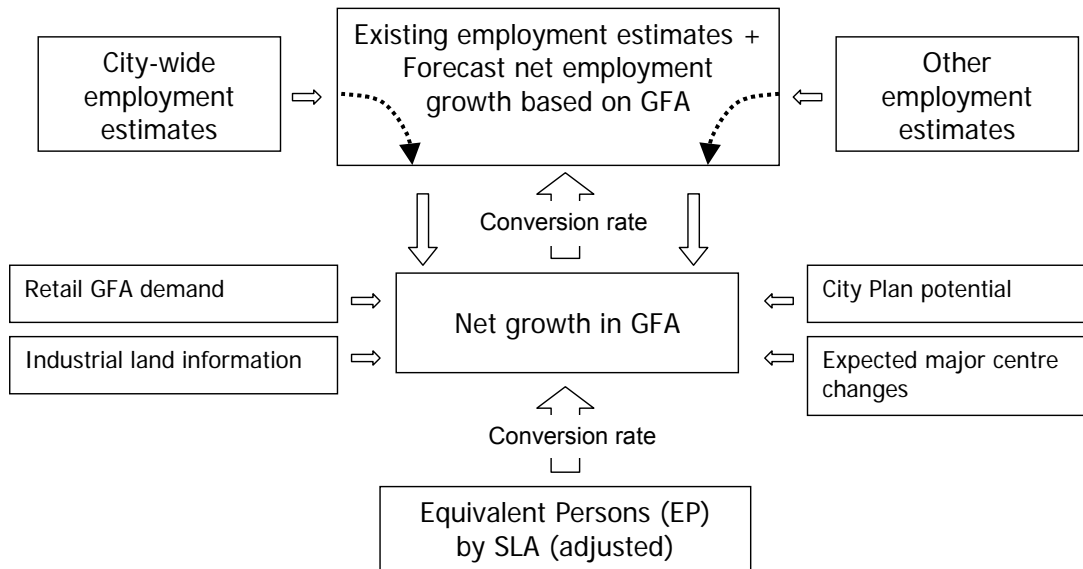
The projections for 2026 and 2031 were largely trend projections based on the rate of growth up to 2021.

4.4 NON-RESIDENTIAL FORECASTS

4.4.1 Overview of Method

Figure 4.2 illustrates the method used to derive and calibrate the projections of GFA and associated employment that were prepared to support infrastructure planning and contributions associated with the Infill PSPs.

Figure 4.2 - Summary of Determination of Non-Residential GFA and Employment



The following broad steps were taken in deriving the GFA and employment estimates and forecasts, from the EP forecasts, and calibrating them against other available estimates and projections:

- The non-residential EP forecasts were adjusted by removing large trade waste components and to reflect actual development patterns rather than estimates based on high sewerage generating activities.
- The non-residential EP forecasts were allocated to different development categories, i.e. industrial, retail, commercial and miscellaneous, and converted to GFA based on determined conversion rates.
- The GFA estimates derived from the EP forecasts were compared to other estimates of potential future GFA and some adjustments made.
- An estimate was made of existing (2001) employment by SLA based on a combination of sources, including conversion of existing GFA estimates to employment, the Workplace Health and Safety Register, the 1996 and 2001 Censuses and BCC's transport model (1999).
- Net employment growth was calculated from the GFA estimates, using the determined conversion rates, and then added to the estimate of existing (2001) employment to generate forecasts for employment by SLA to 2021.
- The employment forecasts by SLA were compared to an alternative estimate of potential employment City-wide to 2021, and other available projections by SLA, and also considered in the context of broader employment projections and trends and investment targets, resulting in some adjustments to the forecasts by SLA.

These steps are explained in more detail in the following respective Sections. A summary by SLA of the resulting GFA and employment forecasts is included in Table 4.2. Limitations of the forecasts include:

- They assume constant rates over time for GFA per employee and vacancy.
- They do not recognise the effect of any home business growth.

4.4.2 Adjustment of Non-Residential EP Forecasts

The non-residential EP forecasts were reduced by removing large trade waste components not reflected in existing GFA. Otherwise the GFA estimates (see Section 4.4.3) would have been distorted.

The EP forecasts for industrial areas were also reduced to better reflect actual development patterns rather than service standards that assumed high sewerage generating activities. This adjustment was informed by the rate used for conversion of EPs to GFA (see Section 4.4.3) versus the EP generation rate assumed by Brisbane Water.

4.4.3 Conversion of EP forecasts to GFA by SLA

To enable conversion of the EP forecasts to GFA the non-residential EPs were first allocated to different development categories, i.e. industrial, retail, commercial and miscellaneous. This allocation was based on City Plan area classifications.

The conversion rates from EPs to GFA were determined based on analyses of the infrastructure demand generated from different land uses, having regard to the EP forecasts, SNPOP and other sources (including Queensland Department of Business, Industry and Regional Development, 1992; Property Council of Australia, 2000a; Street Ryan, 1999). Each City Plan polygon was allocated a conversion category, but the conversions to GFA used a single conversion category for each development category in each SLA, based on the categories of all component polygons. The conversion category for each polygon was based on the City Plan area classification, the proportion of industrial land identified as available, whether located in the Australia Trade Coast and the existing (2001) EP density.

The conversion rates from EPs to GFA were only finalised after completion of the employment estimates explained in Sections 4.4.5 and 4.4.6 and adjustments to the GFA and employment estimates arising from the calibrations explained in Sections 4.4.4 and 4.4.7.

4.4.4 Calibration of GFA Estimates

The GFA estimates based on conversion of EPs were compared to other estimates of GFA, for particular development categories, and some adjustments made. Those other estimates of GFA included the following:

- Potential industrial GFA growth based on an assessment of the potential under City Plan given assumptions about the existing scale of development derived primarily from BCC's industrial land survey database (BCC, 2001).
- Retail GFA growth estimated based on the expected growth in household expenditure, as informed by various consultant's reports (Winter Consulting, 2001; Core Economics, 2001; John Larcombe and Associates, 2000). This was calculated using the DLGP dwelling projections by SLA (see Section 4.3) and identified retail expenditure per household. That expenditure was converted into an increase in GFA that was assumed required to service the increased expenditure. The estimated GFA increases were allocated to relevant centres at each level in the hierarchy.
- Future growth of commercial and retail GFA within the City Centre and major centres determined based on the advice of local planning officers with specific knowledge of individual centres and additional site specific information sourced from various reports (including CB Richard Ellis, 2002a, 2002b; PRD Nationwide Research 2002a, 2002b; Property Council of Australia, 2000b, 2001; Jone Lang LeSalle, 2002).

Revisions of the GFA estimates for the miscellaneous development category were informed by the employment forecasts and adjustments made to those forecasts (see Section 4.4.7).

4.4.5 Estimate of Existing Employment by SLA

Two initial estimates were made of existing (2001) employment by SLA, as follows:

- Estimates of existing (2001) GFA, as derived from the EP forecasts, were converted to employees based on assumed conversion rates of GFA per employee, those rates being different for different floor space types.
- Existing employment was derived through adjustment of the Department of Employment, Workplace Relations and Small Business' Workplace Health and Safety Register (March 2001). Adjustments were made based on the Working Population data from the 1996 Census and employment inputs to BCC's transport model (1999).

The final estimates of existing employment by SLA were determined from the above two estimates, and preliminary working population estimates from the 2001 Census, in the following way:

- If the two estimates yielded similar figures the higher figure was used.
- Where the two methods yielded significantly different figures the 2001 Census figures were used to select the most appropriate figure.
- Where the two estimates could not be reconciled with the 2001 Census estimate the Census estimate itself was used.

4.4.6 Calculation of Employment by SLA

Net employment growth by SLA was calculated by converting the GFA estimates (see Section 4.4.3) using assumed conversion rates of GFA per employee, as for the existing employment (see Section 4.4.5). This net employment growth was then added to the existing employment to create employment forecasts by SLA to 2021 (at five-yearly intervals).

4.4.7 Calibration of Employment Forecasts

The employment forecasts by SLA were calibrated and reviewed in the following ways:

- An estimate was made of City-wide employment to 2021 (at five-yearly intervals) based on the DLGP population forecasts and ABS labour market statistics and unemployment rates. The working age population (15-65) was determined at each forecast date and that population multiplied by a participation rate to determine the number of people in the workforce. From this workforce the assumed unemployed population was removed, leaving the number of persons employed. Constant rates were assumed over the projection period for the rate of import/export of workers to and from Brisbane City and the Brisbane Statistical Division. The resulting estimates consistently exceeded, by about 5% or less, the City-wide totals reported in Table 4.2.
- The forecasts were compared to the following alternative projections by SLA:
 - ~ Projections completed as part of the Brisbane 2011 plan (BCC, 1996).
 - ~ Inputs to the Brisbane transport model (1999).
 Comparisons were made in terms of the projected employment as well as the employment growth and proportion of growth. These projections were used as a guide to highlight possible errors. They were particularly useful to check the employment growth related to the miscellaneous development category (see Section 4.4.3).
- Forecasts of employment growth across the south-east Queensland region have been prepared by DLGP as part of regional planning work. At the time of preparation of the employment forecasts those regional forecasts were not available by SLA, but by industrial classification across the region. BCC worked closely with DLGP to align the employment forecasts with those regional forecasts. As a result, the estimated employment growth relating to industrial areas in the outer sector was reduced.
- A review was made of recent employment trends using Census information, to ensure general economic changes were reflected in the employment forecasts.
- The forecasts were guided by and reviewed against the Investment Targets of the Economic Development Strategy (BCC, 1999).

4.5 SUMMARY OF TABLES OF FORECASTS

Tables 4.1 and 4.2, respectively, include:

- Summaries by SLA of the residential and non-residential EP forecasts - 2001, 2006, 2011, 2016, 2021, 2026, 2031 and ultimate EPs
- Summaries by SLA of non-residential GFA and associated employment forecasts - 2001, 2006, 2011, 2016 and 2021.

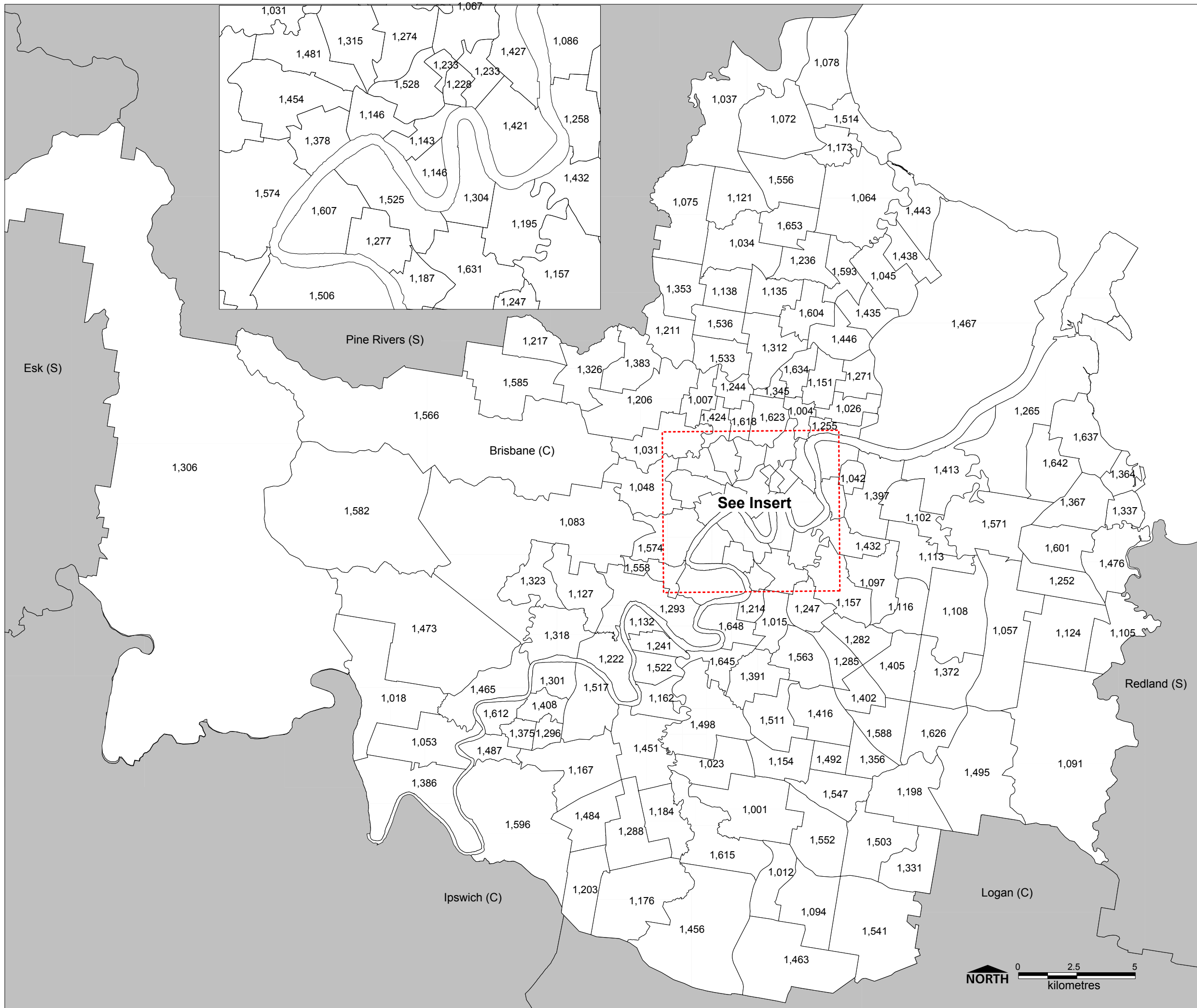
Table 4.1 Summary of EP forecasts by SLA, 2001-2031 and Ultimate

SLA Name	SLA Code	2000 ERP	Residential EPs								Non-residential EPs							
			2001	2006	2011	2016	2021	2026	2031	Ultimate	2001	2006	2011	2016	2021	2026	2031	Ultimate
Acacia Ridge	1001	6674	6,832	7,091	7,352	7,585	7,584	7,632	7,659	7,704	4,573	6,782	8,563	9,721	10,416	10,833	11,093	11,811
Albion	1004	2337	2,378	2,382	2,394	2,393	2,412	2,491	2,537	2,619	1,479	1,566	1,626	1,660	1,682	1,697	1,709	1,756
Alderley	1007	4921	4,949	5,024	5,112	5,190	5,275	5,275	5,275	5,287	319	402	451	477	492	500	505	518
Algester	1012	7412	7,486	8,143	8,487	8,991	10,125	10,125	10,125	11,135	265	284	302	312	321	330	340	407
Annerley	1015	8859	8,906	9,008	9,102	9,175	9,259	9,831	10,173	10,252	659	710	742	763	776	784	791	816
Anstead	1018	1080	1,093	1,171	1,244	1,302	1,348	1,385	1,406	1,406	0	2	3	6	9	12	14	26
Archerfield	1023	609	612	623	626	635	649	649	649	732	2,962	3,722	4,323	4,761	5,063	5,263	5,393	5,740
Ascot	1026	4885	4,909	4,925	4,937	4,931	4,950	4,950	4,950	5,065	756	815	866	884	892	897	899	904
Ashgrove	1031	11466	11,507	11,559	11,558	11,472	11,401	11,401	11,401	11,930	1,128	1,170	1,195	1,215	1,232	1,249	1,264	1,344
Aspley	1034	11386	11,455	11,776	12,020	12,186	12,506	13,025	13,329	14,140	1,648	1,873	2,019	2,118	2,190	2,248	2,297	2,722
Bald Hills	1037	6124	6,204	7,067	7,876	8,627	9,158	9,766	10,131	10,639	476	572	688	836	1,001	1,163	1,308	2,002
Balmoral	1042	3577	3,610	3,645	3,706	3,784	3,906	3,963	3,996	4,080	91	93	94	95	95	95	95	95
Banyo	1045	4935	4,941	4,929	4,913	4,882	4,868	4,884	4,893	5,178	1,477	2,179	2,856	3,293	3,500	3,626	3,707	4,985
Bardon	1048	8749	8,819	8,886	8,892	8,858	8,913	9,158	9,300	9,300	592	654	693	729	767	807	846	1,053
Bellbowrie	1053	4418	4,639	5,884	6,626	7,341	7,674	8,141	8,420	8,579	90	133	185	234	270	294	309	353
Belmont-Mackenzie	1057	4120	4,211	4,562	5,066	5,557	6,073	6,073	6,073	6,073	0	49	61	71	85	103	122	270
Boondall	1064	7821	7,948	8,331	8,812	9,163	9,209	9,927	10,363	10,363	544	667	793	965	1,176	1,398	1,604	2,528
Bowen Hills	1067	958	1,146	1,302	1,753	1,753	1,753	1,759	1,766	1,970	3,400	3,522	3,673	3,770	3,828	3,862	3,882	3,930
Bracken Ridge	1072	14149	14,368	15,217	15,964	16,599	17,850	17,850	17,850	18,909	968	1,182	1,340	1,456	1,539	1,595	1,632	1,722
Bridgeman Downs	1075	5674	5,954	6,848	7,477	8,095	8,404	10,533	12,054	11,945	24	47	52	58	65	72	78	104
Brighton	1078	8816	8,849	8,958	8,925	8,852	8,833	8,895	8,930	9,122	739	885	969	1,020	1,050	1,068	1,078	1,102
Brookfield (incl. Mnt Ctha)	1083	3497	3,587	3,659	3,712	3,724	3,735	3,815	3,861	3,861	86	105	124	154	194	239	284	530
Bulimba	1086	4063	4,107	4,533	4,771	4,751	4,745	4,745	4,745	5,275	1,307	598	607	612	614	615	615	617
Burbank	1091	1189	1,188	1,181	1,170	1,147	1,127	1,127	1,127	1,127	18	203	391	662	997	1,350	1,674	3,093
Calamvale	1094	8747	8,869	10,425	13,338	16,296	16,927	16,927	16,927	19,200	317	395	491	580	649	697	731	860
Camp Hill	1097	9270	9,316	9,334	9,311	9,228	9,163	9,689	10,002	10,232	407	473	495	510	523	535	546	600
Cannon Hill	1102	3949	4,021	4,245	4,347	4,415	4,497	4,582	4,630	4,629	894	1,206	1,413	1,554	1,668	1,769	1,859	2,306
Capalaba West	1105	374	374	381	376	368	365	365	365	365	18	38	83	126	181	244	310	756
Carina	1113	9169	9,268	10,384	10,317	10,163	10,037	10,100	10,135	10,750	397	450	480	511	546	584	622	846
Carina Heights	1116	5846	5,885	6,076	6,140	6,175	6,217	6,217	6,217	6,601	219	307	365	396	412	420	425	434
Carindale	1108	12676	12,975	13,785	14,683	15,258	15,265	15,265	15,265	16,924	2,127	2,165	2,153	2,134	2,113	2,090	2,066	2,212
Carseldine	1121	6316	6,348	6,942	8,246	9,545	10,143	10,538	10,769	11,356	828	985	1,109	1,209	1,282	1,337	1,379	1,552
Chandler	1124	973	982	1,021	1,056	1,079	1,098	1,098	1,098	1,098	124	147	173	211	262	318	372	747
Chapel Hill	1127	10400	10,533	10,971	11,082	11,283	11,852	11,852	11,852	12,614	325	394	421	433	439	441	442	445
Chelmer	1132	2663	2,686	2,692	2,687	2,657	2,653	2,683	2,700	2,700	261	272	284	292	298	301	303	307
Chermside	1135	6156	6,188	6,228	6,254	6,242	6,244	7,041	7,549	7,584	4,777	5,051	5,253	5,392	5,480	5,533	5,565	5,637
Chermside West	1138	5985	6,016	6,067	6,138	6,191	6,204	6,204	6,204	6,727	281	303	315	324	332	340	346	379
City-Inner	1143	633	1,000	2,738	3,913	5,020	6,101	6,685	7,047	7,047	29,500	29,524	29,540	29,554	29,568	29,583	29,597	29,666
City-Remainder	1146	1549	1,653	1,914	2,192	2,460	2,730	2,878	2,966	3,087	10,243	10,307	10,351	10,382	10,405	10,425	10,441	10,528
Clayfield	1151	9472	9,525	9,640	9,713	9,755	9,810	10,066	10,213	10,545	784	815	825	829	831	832	833	834
Coopers Plains	1154	4371	4,416	4,656	4,726	4,821	4,934	4,934	4,934	4,934	2,400	3,272	3,913	4,345	4,632	4,830	4,973	5,497
Coorparoo	1157	13292	13,427	13,782	13,948	13,978	14,048	14,048	14,048	14,447	2,061	2,183	2,260	2,306	2,333	2,350	2,361	2,403
Corinda	1162	4304	4,334	4,425	4,521	4,611	4,703	4,884	4,989	4,989	608	743	853	928	972	997	1,011	1,049
Darra-Sumner	1167	3803	3,860	4,317	4,615	4,728	4,864	5,095	5,231	5,806	2,683	3,750	4,597	5,245	5,775	6,239	6,648	8,797
Deagon	1173	3263	3,274	3,276	3,254	3,210	3,178	3,319	3,401	3,481	355	439	487	511	524	531	534	544
Doolandella-Forest Lake	1176	13231	13,887	15,927	18,001	18,959	21,019	23,223	24,598	24,598	174	261	356	475	603	719	812	1,118
Durack	1184	6143	6,177	6,364	6,918	7,462	7,729	7,729	7,729	7,729	345	402	458	514	570	628	684	1,020
Dutton Park	1187	1279	1,282	1,486	1,551	1,637	1,678	1,678	1,678	1,735	144	149	153	160	169	180	192	263
East Brisbane	1195	4941	4,962	5,010	5,086	5,182	5,323	5,379	5,411	5,470	1,055	1,025	998	973	950	928	906	1,014
Eight Mile Plains	1198	10791	10,935	11,665	13,451	15,310	15,758	15,758	15,758	15,757	432	559	658	716	759	795	828	1,049
Ellen Grove	1203	3161	3,453	5,313	6,298	7,945	11,193	11,335	11,416	13,366	2	5	8	12	16	20	25	53
Enoggera	1206	6723	6,339	6,543	6,478	6,357	6,940	6,969	6,986	6,437	1,054	1,162	1,234	1,278	1,305	1,322	1,334	1,453
Everton Park	1211	8076	8,097	8,199	8,336	8,509	8,940	9,152	9,273	10,049	532	668	762	818	852	876	893	958
Fairfield	1214	2221	2,227	2,223	2,227	2,216	2,214	2,344	2,422	2,422	130	224	278	308	323	331	335	347

Ferny Grove	1217	5665	5,728	5,910	6,146	6,607	7,599	7,599	7,599	7,975	641	716	749	769	783	793	801	830
Fig Tree Pocket	1222	2856	2,920	3,272	3,709	4,490	6,026	6,250	6,381	6,992	362	412	426	435	441	446	451	488
Fortitude Valley-Inner	1228	1466	1,427	1,729	2,111	2,155	2,333	2,884	3,236	3,236	3,310	3,332	3,349	3,363	3,375	3,386	3,395	3,444
Fortitude Valley-Remainder	1233	1851	1,939	2,005	2,188	2,407	2,722	3,078	3,321	3,399	1,590	1,805	1,957	2,057	2,118	2,154	2,176	2,229
Geebung	1236	4221	4,231	4,248	4,253	4,242	4,272	4,272	4,272	4,380	2,980	3,576	4,016	4,296	4,471	4,580	4,651	4,841
Graceville	1241	3946	3,974	3,993	4,014	4,020	4,025	4,025	4,025	4,025	480	516	535	544	548	551	552	559
Grange	1244	3815	3,825	3,832	3,834	3,828	3,826	3,826	3,826	3,826	257	279	288	293	295	296	297	298
Greenslopes	1247	7439	7,464	7,502	7,509	7,465	7,447	7,898	8,167	8,434	2,155	2,236	2,272	2,291	2,301	2,307	2,311	2,321
Gumdale	1252	1004	1,024	1,139	1,236	1,340	1,480	1,480	1,480	1,480	0	6	12	22	34	48	63	139
Hamilton	1255	4069	4,120	4,127	4,117	4,072	4,040	4,215	4,317	5,099	717	770	806	824	833	838	841	887
Hawthorne	1258	4021	4,051	4,084	4,099	4,113	4,127	4,267	4,348	4,348	136	144	145	145	145	145	145	145
Hemmant-Lytton	1265	2141	2,212	2,362	2,535	2,555	2,597	2,627	2,643	2,643	3,055	4,249	5,600	12,633	15,279	18,165	21,019	45,403
Hendra	1271	3600	3,634	3,706	3,828	3,968	4,162	4,162	4,162	4,162	778	1,039	1,232	1,370	1,475	1,556	1,616	1,800
Herston	1274	1782	1,810	1,919	2,103	2,333	2,558	2,558	2,558	2,558	601	659	710	779	865	964	1,064	1,722
Highgate Hill	1277	5316	5,346	5,433	5,515	5,630	5,754	5,754	5,754	5,830	33	37	39	43	47	53	59	99
Holland Park	1282	7383	7,401	7,427	7,419	7,374	7,377	7,424	7,450	7,698	400	464	499	518	529	537	542	563
Holland Park West	1285	5441	5,474	5,560	5,572	5,547	5,558	5,691	5,768	6,097	354	372	388	403	418	434	450	543
Inala	1288	13683	13,810	13,796	13,772	13,746	13,741	13,741	13,741	14,386	766	1,011	1,222	1,377	1,502	1,604	1,689	2,139
Indooroopilly	1293	10597	10,683	10,880	10,960	11,020	11,235	11,882	12,268	12,268	3,862	3,960	4,047	4,095	4,104	4,086	4,052	4,108
Jamboree Heights	1296	3345	3,348	3,400	3,541	3,678	3,735	3,735	3,735	3,904	246	260	272	288	308	332	356	502
Jindalee	1301	5373	5,377	5,374	5,352	5,310	5,311	5,311	5,311	5,563	427	454	475	489	499	504	507	515
Kangaroo Point	1304	5141	5,364	5,413	5,517	5,574	5,603	6,228	6,620	6,921	1,658	1,924	2,154	2,326	2,447	2,532	2,592	2,810
Kedron	1312	11313	11,352	11,445	11,471	11,405	11,354	12,373	12,999	13,036	976	1,101	1,218	1,298	1,346	1,373	1,388	1,461
Kelvin Grove	1315	4107	4,117	4,324	5,748	5,787	5,851	5,851	5,851	5,965	1,066	1,092	1,108	1,137	1,176	1,218	1,255	1,522
Kenmore	1318	8469	8,520	8,854	9,497	10,150	10,456	10,616	10,707	11,148	793	864	908	931	943	949	952	959
Kenmore Hills	1323	2571	2,610	2,734	2,711	2,663	2,619	2,679	2,713	2,713	543	748	864	923	956	977	992	1,045
Keperra	1326	7566	7,594	7,566	7,539	7,477	7,434	7,434	7,434	7,946	440	528	588	640	688	736	781	1,042
Kuraby	1331	3770	4,226	5,918	7,173	8,404	8,636	9,016	9,239	10,672	45	93	131	174	213	242	262	310
Lota	1337	2647	2,657	2,657	2,696	2,764	2,949	2,949	2,949	3,423	64	112	182	262	337	396	438	562
Lutwyche	1345	2587	2,596	2,632	2,645	2,663	2,705	2,785	2,831	3,116	334	363	385	400	412	420	427	459
MacGregor	1356	5631	5,644	5,659	5,630	5,621	5,635	5,680	5,705	5,706	1,306	1,605	1,809	1,939	2,014	2,056	2,079	2,124
Manly	1364	3676	3,711	3,734	3,713	3,683	3,697	3,697	3,697	3,767	594	612	620	625	628	630	632	642
Manly West	1367	9392	9,450	9,897	10,279	10,907	12,294	12,294	12,294	13,140	477	520	561	591	612	628	639	694
Mansfield	1372	9387	9,513	9,773	9,998	10,078	9,970	9,970	9,970	11,614	1,082	1,325	1,468	1,554	1,613	1,656	1,690	1,833
McDowall	1353	6515	6,653	6,970	7,414	8,031	9,311	9,311	9,311	9,951	296	307	318	335	356	379	403	530
Middle Park	1375	4470	4,478	4,474	4,447	4,388	4,346	4,346	4,346	4,416	312	348	373	387	395	399	401	406
Milton	1378	1682	1,846	2,557	3,175	3,453	3,628	3,628	3,628	3,843	9,427	9,421	9,321	9,213	9,100	8,984	8,868	8,872
Mitchelton	1383	6072	6,125	6,741	6,919	7,024	7,035	7,693	8,098	8,600	1,649	1,861	1,975	2,032	2,060	2,075	2,084	2,104
Moggill	1386	975	1,030	1,518	2,470	4,150	7,381	8,127	8,591	10,208	95	106	110	111	112	112	112	113
Moorooka	1391	8582	8,607	8,641	8,624	8,550	8,517	8,938	9,186	9,696	1,054	1,231	1,341	1,399	1,428	1,444	1,453	1,474
Moreton Island	1394	181	190	224	232	248	282	327	357	2,424	0	57	116	207	323	451	573	1,177
Morningside	1397	7802	7,844	7,969	8,017	8,028	8,032	8,629	8,991	8,986	3,055	3,816	4,196	4,386	4,495	4,568	4,623	4,882
Mount Gravatt	1402	3193	3,194	3,193	3,191	3,186	3,184	3,402	3,532	3,915	866	1,210	1,515	1,718	1,835	1,901	1,938	2,016
Mount Gravatt East	1405	9507	9,568	9,883	10,036	10,105	10,108	10,413	10,590	11,110	940	1,129	1,261	1,346	1,399	1,431	1,450	1,494
Mount Ommaney	1408	2287	2,365	2,620	2,611	2,598	2,609	2,866	3,025	3,025	750	1,022	1,168	1,236	1,268	1,284	1,293	1,314
Murarrie	1413	2499	2,972	5,459	5,978	5,878	5,809	5,809	5,809	5,851	22,130	23,148	24,171	25,099	25,877	26,519	27,045	29,377
Nathan	1416	1590	1,590	1,590	1,590	1,590	1,589	1,589	1,589	1,661	2,477	2,512	2,553	2,591	2,618	2,637	2,650	2,679
New Farm	1421	10136	11,095	11,491	12,135	12,635	12,696	12,882	13,182	13,182	320	321	320	319	318	317	316	316
Newmarket	1424	3837	3,890	4,019	4,165	4,349	4,531	5,405	5,997	5,997	188	236	273	301	320	333	340	363
Newstead	1427	2214	3,395	4,844	6,615	6,729	6,743	6,727	6,711	7,060	839	183	269	360	438	496	535	634
Norman Park	1432	6341	6,386	6,450	6,448	6,421	6,409	6,598	6,708	6,864	87	91	96	101	107	114	121	167
Northgate	1435	3817	3,849	3,957	3,945	3,915	3,898	4,017	4,087	4,084	12,229	12,634	12,969	13,204	13,351	13,440	13,497	13,639
Nudgee	1438	1934	1,947	2,533	2,694	2,767	2,974	2,974	2,974	3,527	10	102	158	235	324	414	496	838
Nudgee Beach	1443	335	340	376	405	465	574	601	617	637	96	259	477	738	998	1,232	1,428	2,277
Nundah	1446	8097	8,118	8,171	8,204	8,213	8,288	9,049	9,517	9,775	1,493	1,665	1,775	1,848	1,897	1,931	1,956	2,072
Oxley	1451	5913	6,067	6,811	7,338	7,843	8,163	8,385	8,513	9,116	794	1,249	1,648	1,954	2,194	2,395	2,567	3,464
Paddington	1454	7395	7,435	7,473	7,535	7,591	7,658	7,658	7,658	7,799	1,313	1,425	1,508	1,556	1,582	1,596	1,604	1,620
Pallara-Heathwood-Larapinta	1456	758	758	1,336	2,978	4,707	5,062	5,418	5,633	5,633	142	607	1,265	2,145	3,190	4,270	5,277	10,504

Parkinson-Drewvale	1463	5210	5,940	10,347	14,617	18,629	19,323	19,323	19,323	22,447	0	117	244	448	728	1,064	1,420	3,901
Pinjarra Hills	1465	481	484	495	505	510	515	781	1,013	1,013	581	1,240	2,138	3,043	3,757	4,241	4,548	5,227
Pinkenba-Eagle Farm	1467	501	482	494	509	551	625	749	833	833	14,669	17,112	20,062	22,627	25,376	28,163	30,788	61,521
Pullenvale	1473	2091	2,120	2,282	2,417	2,529	2,619	3,053	3,340	3,340	30	61	130	231	361	505	642	1,325
Ransome	1476	456	456	452	447	438	430	430	430	430	0	0	0	0	0	0	0	0
Red Hill	1481	5016	5,042	5,090	5,145	5,220	5,309	5,309	5,309	5,309	533	478	495	508	519	529	538	580
Richlands	1484	907	913	1,120	1,701	2,710	4,627	4,680	4,709	5,557	3,346	3,899	4,378	4,861	5,350	5,822	6,248	8,357
Riverhills	1487	3756	3,825	4,048	4,104	4,078	4,057	4,057	4,057	4,837	19	21	24	26	29	31	33	41
Robertson	1492	4403	4,469	4,684	4,857	5,021	5,106	5,106	5,106	5,333	935	970	996	1,010	1,018	1,022	1,024	1,028
Rochedale	1495	1351	1,354	1,362	1,395	1,436	1,505	1,751	1,913	1,913	65	136	228	326	418	496	558	777
Rocklea	1498	1484	1,522	1,592	1,610	1,639	1,687	1,781	1,836	1,836	6,554	8,209	9,581	10,577	11,265	11,756	12,118	13,523
Runcorn	1503	11667	11,853	12,505	13,525	14,552	14,794	14,794	14,794	15,079	552	727	869	978	1,052	1,098	1,128	1,206
Salisbury	1511	5405	5,431	5,468	5,484	5,467	5,468	5,584	5,651	5,712	2,966	3,496	3,864	4,097	4,237	4,323	4,376	4,509
Sandgate	1514	6325	6,337	6,332	6,303	6,237	6,186	6,186	6,186	6,209	488	656	761	842	909	968	1,019	1,250
Seventeen Mile Rocks	1517	6394	6,979	9,867	12,086	11,902	11,709	11,709	11,709	11,707	1,616	1,325	1,510	1,609	1,663	1,695	1,716	1,774
Sherwood	1522	4611	4,640	4,691	4,712	4,710	4,710	4,710	4,710	4,946	420	541	628	679	706	720	728	745
South Brisbane	1525	2748	2,760	3,259	5,083	6,388	6,379	6,379	6,379	6,379	11,291	11,163	11,226	11,156	11,028	10,874	10,708	10,786
Spring Hill	1528	3226	3,238	3,272	3,320	3,389	3,454	3,716	3,876	4,448	10,893	11,002	11,076	11,095	11,093	11,080	11,061	11,115
St. Lucia	1506	10633	10,710	10,805	10,877	10,880	10,900	10,900	10,900	11,037	4,684	4,711	4,733	4,755	4,780	4,808	4,838	5,041
Stafford	1533	5558	5,573	5,571	5,576	5,555	5,567	5,693	5,766	6,091	1,543	1,696	1,778	1,830	1,867	1,898	1,925	2,065
Stafford Heights	1536	7324	7,345	7,392	7,335	7,258	7,191	7,191	7,191	7,673	135	235	328	418	509	599	682	1,081
Stretton-Karawatha	1541	3238	3,317	3,721	4,487	5,278	5,763	6,014	6,161	7,613	0	11	23	41	64	89	114	247
Sunnybank	1547	7904	7,951	8,142	8,169	8,119	8,120	8,182	8,217	8,266	1,941	1,980	1,998	2,007	2,012	2,014	2,016	2,020
Sunnybank Hills	1552	16189	16,417	17,323	17,729	18,000	18,127	18,127	18,127	18,797	464	521	557	585	613	642	671	848
Taigum-Fitzgibbon	1556	6324	6,564	8,366	10,450	12,482	13,408	14,337	14,896	16,801	444	826	1,160	1,396	1,536	1,615	1,660	1,761
Taringa	1558	6636	6,677	6,858	6,889	6,872	6,870	6,870	6,870	7,785	755	773	786	798	810	822	833	893
Tarragindi	1563	9285	9,313	9,337	9,367	9,336	9,304	9,304	9,304	9,751	127	148	167	181	196	211	225	327
The Gap	1566	16045	16,195	16,468	16,605	16,824	17,541	17,541	17,541	18,684	479	580	661	720	761	791	814	916
Tingalpa	1571	9054	9,224	9,341	9,731	10,112	10,761	10,761	10,761	11,086	3,440	3,638	3,762	3,896	4,022	4,131	4,221	4,685
Toowong	1574	13354	13,714	14,086	14,274	14,337	14,436	14,436	14,436	15,167	5,802	5,837	5,871	5,901	5,924	5,939	5,947	6,138
Upper Brookfield	1582	546	546	541	536	526	536	571	591	591	0	1	2	3	5	7	9	22
Upper Kedron	1585	1186	1,306	2,429	4,278	5,973	6,444	6,792	6,999	7,946	0	7	15	27	42	58	74	151
Upper Mount Gravatt	1588	7488	7,513	7,609	7,760	7,873	7,933	8,749	9,258	9,840	1,855	2,431	2,866	3,125	3,267	3,347	3,393	3,532
Virginia	1593	1845	1,852	1,855	1,854	1,846	1,845	1,845	1,845	1,874	2,405	2,995	3,417	3,689	3,870	3,999	4,099	4,522
Wacol	1596	5636	6,401	6,529	6,794	7,067	7,402	7,402	7,402	7,909	5,960	7,390	8,928	10,339	11,550	12,554	13,367	16,778
Wakerley	1601	1188	1,743	3,343	5,168	7,489	8,728	8,794	8,547	11,582	64	134	251	399	560	716	854	1,464
Wavell Heights	1604	8516	8,536	8,526	8,477	8,369	8,282	8,317	8,336	9,069	169	233	280	308	322	330	334	342
West End	1607	5875	6,212	10,551	10,718	10,653	10,574	10,574	10,574	10,595	1,385	1,532	1,614	1,657	1,679	1,691	1,697	1,711
Westlake	1612	4077	4,236	4,608	4,682	4,740	4,688	4,688	4,688	4,775	17	20	23	27	33	39	45	74
Willawong	1615	245	245	387	792	1,223	1,308	1,656	1,907	1,907	0	65	115	190	287	393	494	991
Wilston	1618	3375	3,397	3,422	3,451	3,473	3,530	3,530	3,530	3,671	180	134	134	134	134	134	134	134
Windsor	1623	5812	5,836	5,902	5,902	5,867	5,858	6,013	6,103	6,612	689	828	907	956	987	1,009	1,026	1,102
Wishart	1626	9488	9,606	9,975	10,433	10,852	10,902	10,902	10,902	11,723	344	414	463	493	510	520	526	539
Woolloongabba	1631	3857	3,872	4,108	5,972	6,849	6,810	6,810	6,810	6,887	5,988	6,342	6,203	6,043	5,864	5,671	5,470	5,502
Woollowin	1634	5494	5,534	5,619	5,598	5,545	5,515	5,515	5,515	5,806	815	822	826	828	829	829	829	830
Wynnum	1637	11194	11,286	11,436	11,408	11,303	11,231	11,491	11,640	12,175	1,243	1,460	1,610	1,707	1,771	1,816	1,849	1,966
Wynnum West	1642	9938	10,183	10,360	10,701	11,249	12,439	12,573	12,649	12,649	1,374	1,580	1,673	1,715	1,736	1,747	1,753	1,767
Yeerongpilly	1645	2246	2,272	2,313	2,315	2,313	2,330	2,495	2,595	2,616	2,260	2,543	2,725	2,844	2,930	3,000	3,058	3,348
Yeronga	1648	4954	4,995	5,082	5,100	5,097	5,141	5,603	5,887	6,190	507	665	775	858	916	955	980	1,048
Zillmere	1653	7681	7,721	7,690	7,676	7,619	7,641	8,004	8,217	8,265	613	938	1,254	1,483	1,621	1,699	1,744	1,830
Total Brisbane City (excl. Karana Downs - Lake Manchester)		877,116	893,038	951,389	1,006,216	1,050,375	1,087,168	1,116,258	1,134,190	1,192,959	280,809	310,658	337,709	365,017	384,278	401,072	415,445	514,815

Figure 4.3 Statistical Local Areas

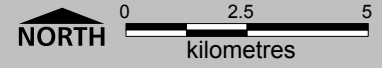


Statistical Local Area boundaries
 Surrounding LGA areas

Considerable care has been taken to avoid errors and omissions. The latest information has been sought out and included. The Brisbane City Council does not accept any responsibility for any errors, omissions or inaccuracies for information in the map.

Printed on: 21/03/2003

Source: ABS, (2001) Australian Standard Geographical Classification (ASGC) 2001, Catalogue No. 1216.0



5 DESIRED STANDARDS OF SERVICE

The desired standards of service (DSS) for PRL and LOCP are outlined in the tables below. DSS prescribe the preferred or desired future level of provision of PRL and LOCP across the city. The DSS for each precinct may vary in accordance with the following factors:

- Current level of provision of PRL and LOCP (i.e. distribution, coverage and gaps in need areas);
- Extent of need areas; and
- Availability of land for future PRL and LOCP.

A number of current Council park and community facility planning documents were referenced in developing the DSS for the Community Purposes PSP including:

- Existing *High Growth PSP* documents;
- *Draft Park Network Planning Guidelines and Public Recreation Land in Infrastructure Contributions Plans* (2001);
- *Regional and Metropolitan Parks PSP Strategy* (2002);
- *Background study for the Community Facilities Network Plan* (2002);
- *Brisbane Sport and Recreation Strategy 2002-2005*

Within Brisbane there are two different DSS for PRL relating to particular locations in the city, mainly differentiated by the amount of development and population growth.

5.1 PUBLIC RECREATION LAND

Infill areas are subject to the DSS outlined in Table 5.1a. Infill areas refer to the urban, largely developed areas of the city that fall outside identified high growth areas.

Areas indicated as high growth planning areas (Fitzgibbon and Upper Kedron) or as areas covered by *High Growth PSPs* (**Map 5**) are subject to different DSS than those for infill areas. Upper Kedron and Fitzgibbon are included within this Community Purposes PSP as emerging community areas where the population is substantially increasing and where greenfield sites exist. High growth areas have been subjected to more detailed planning and would normally have planned infrastructure items included in separate *High Growth PSPs*. The DSS rate of provision (i.e. 4ha/1000 persons) is also varied for *High Growth PSPs* and inner city and renewal areas such as the Inner North Eastern Suburbs, Riverside South, Woolloongabba Central and Bulimba Industrial Area. High growth planning areas and *High Growth PSPs* are subject to the DSS outlined in Table 5.1b.

Table 5.1c applies to all parks where embellishment is required. The table of embellishments by park type is not a definitive list but outlines the basic PSP recoverable embellishments from which infrastructure contributions have been developed.

Table 5.1a – Desired Standard of Service for Infill PSP Areas

	Planning Criteria	User Benefit	Environmental Effect
All Park Types	<p>Provide an accessible system of metropolitan, district, local and linear parks (linking components of the system) that enables a diverse range of active and passive recreational experiences where parkland is above:</p> <ul style="list-style-type: none"> • Q5 flood level for sport and recreational parks; and • Q100 flood level where LOCP and buildings are proposed. 	<ul style="list-style-type: none"> • Enables the community to participate in recreational pursuits from both home and work locations. • Encourages community health. • Enhances visual qualities. • Promotes recreational and tourist routes. • Minimises the cost of accessing public recreational land. 	<ul style="list-style-type: none"> • Reduces levels of greenhouse gas emissions. • Maximises efficient utilisation of natural resources. • Protects cultural, environmental and heritage values. • Encourages walking and cyclist trips.
	Design Criteria	User Benefit	Environmental Effect
All Park Types	<p>Provide park in accordance with the following sizes:</p> <ul style="list-style-type: none"> • Metropolitan sporting and informal recreational parks of 25 hectares. • Metropolitan outdoor recreation parks of 85 hectares. • District sporting parks with a preferred minimum area of 10 hectares that includes 2 or 3 fields, a clubhouse, open space and car-parking. • District informal parks with a minimum area of 5 hectares. • Local parks with a minimum area of 1 hectare. <p>Provide facilities and treatments in parkland to enable desired function in accordance with Table 4.1c.</p>	<ul style="list-style-type: none"> • Ensures an appropriate scale and type of parkland is available. • Seeks to ensure that residents are within 15-20 minutes walk of local parks, 5 minutes drive of district parks, and within 30 minutes drive of metropolitan parks. • Protects visual amenity. • Promotes community health and well-being. 	<ul style="list-style-type: none"> • Improves opportunities for protecting ecological and environmental values. • Promotes efficient use of natural resources. • Enhances water quality and infiltration of urban run-off.
Local	All residential areas, emerging communities, industry areas and multi-purpose centres to be within 500 metres to 1.5 kilometres of publicly accessible local informal recreational or sporting infrastructure.		
District (incl. Sub-district)	All residential areas, emerging communities, industry areas and multi-purpose centres to be within 2-6.5 kilometres of publicly accessible sub-district/district informal recreational or sporting infrastructure.		
Metro	All residential areas, emerging communities and multi-purpose centres to be within 6.5 kilometres of publicly accessible metropolitan parks.		

For full cost impact areas, park is to be provided at 4ha/1000 people. The DSS rate for park provision varies for inner city areas (nominally a 3km radius from the CBD), such as the Inner North Eastern Suburbs and West End. It is not appropriate to always acquire additional park in these areas in accordance with greenfield DSS, because of the high land costs, growth rate, concentration of other significant open spaces such as South Bank, Roma Street Parklands and New Farm Park, and the developed nature of these suburbs. Where these constraints preclude adoption of the preferred rate of 4ha/1000 persons, potential park sites in these areas are to be considered on a precinct basis using a minimum rate of 2ha/1000 persons. This will allow for additional parklands including the creation of urban commons that are subject to a higher level of embellishment.

Table 5.1b – Desired Standard of Service for High Growth Planning & High Growth PSP Areas

	Planning Criteria	User Benefit	Environmental Effect
All Park Types	<ul style="list-style-type: none"> • Provide an accessible system of metropolitan, regional, district, local and linear parks (linking components of the system) that enable a diverse range of active and passive recreational experiences integrated with other community systems. • Ensure that 75% of parkland is located above the level of a Q100 flood event and is located as centrally as possible to the catchment it serves. 	<ul style="list-style-type: none"> • Enables the community to participate in recreational pursuits from both home and work locations. • Encourages community health. • Enhances visual appeal. • Promotes recreational and tourist routes. • Minimises the cost of accessing public recreation land. 	<ul style="list-style-type: none"> • Reduces levels of greenhouse gas emissions. • Promotes retention of natural habitat and bushland values. • Fosters development of wildlife corridors. • Maximises efficient utilisation of natural resources. • Protects cultural and heritage values.
	Design Criteria	User Benefit	Environmental Effect
All Park Types	<p>Provide parks in growth areas at the rate of 4 hectares for every 1,000 residents, including:</p> <ul style="list-style-type: none"> • 2 hectares of sporting parkland for every 1,000 persons. • District sporting parks with a preferred minimum area of 10 hectares that includes 2 or 3 fields, a clubhouse, open space and car-parking. • District parks with a minimum area of 5 hectares within 2 kilometres of 95% of residents. • Local parks with a minimum area of 1 hectare within 500 metres of 95% of residents. <p>Provide parks in growth areas at the rate of 1 hectare for every 1,000 employees. These parks should be centrally located to the catchment and co-located with other worker facilities such as snack bars, kiosks and toilets.</p> <p>Provide facilities and treatments in parkland to enable desired function in accordance with Table 4.1c.</p>	<ul style="list-style-type: none"> • Ensures an appropriate scale and type of parkland is available. • Seeks to ensure that residents are within 5 minutes drive of district parks and within 15-20 minutes walk of local parks. • Protects visual amenity. • Promotes community health and well being. 	<ul style="list-style-type: none"> • Improves opportunities for protecting ecological and environmental values. • Promotes efficient use of natural resources. • Enhances water quality and infiltration of urban run-off.

Table 5.1c - Assumed Standard Embellishments by Park Type*

Park Type	Local		District		Metropolitan	
	Informal	Informal	Sports	Informal	Sports	Corridor & RiverWalk Pocket Pk
Park Access Infrastructure						
Vehicular Access	N	N	Y	Y	Y	N
Car Parks	N	Y	Y	Y	Y	N
Barriers/bollards/fencing	Y	Y	Y	Y	Y	Y
Bicycle/walking paths	Y	Y	Y	Y	Y	Y
Facilities to create outdoor sport & recreation activity spaces						
Play Equipment	Y	Y (1)	N	Y (1)	N	Y (1)
Dog Off-leash Area	N	Y (1)	N	Y (1)	N	Y (1)
Ovals	N	N	Y (1)	N	Y (1)	N
Skate Facility	N	Y (1)	N	N	N	N
Rebound Wall	N	Y (1)	N	Y (1)	N	Y (1)
Park Furniture						
Seating	Y (3)	Y (8)	Y	Y (10)	Y	Y
Shade Structures	N	Y	Y	Y	Y	Y
Barbecues	N	Y (4)	N	Y (4)	N	N
Picnic Tables	N	Y (4)	N	Y (6)	N	Y
Signage						
Name/Information	N	Y (1)	Y (1)	Y (1)	Y (1)	N
Landscaping						
Turfing/Planting/Paving	Y	Y	Y	Y	Y	Y
Utility connection & ancillary infrastructure to enable outdoor sport & recreation activity						
Toilets	N	Y	Y	Y	Y	N
Taps	Y (1)	N	Y (1)	Y (2)	Y (2)	Y (1)
Drinking Fountain	Y (1)	Y (4)	Y (5)	Y (6)	Y (7)	Y (1)
Lighting/Electricity	N	Y	Y	Y	Y	Y
Irrigation	N	Y	Y	Y	Y	N
Rubbish Bin	N	Y (2)	Y (4)	Y (4)	Y (6)	N
Drainage	N	Y	Y	Y	Y	N

(No.) Number in brackets denotes average quantity

* These standard embellishments are the basis for the Appendix G costs. Improvements may slightly vary within park types but remain within the assumed total PSP embellishment costs.

5.2 LAND FOR OTHER COMMUNITY PURPOSES

A single DSS has been derived across both high growth and infill areas for LOCP. This standard is intended to only secure land to accommodate a range of community activities. The DSS for LOCP is detailed in Table 5.2 below.

Table 5.2 – Desired Standards of Service for LOCP

Planning Criteria		
All residential areas and emerging communities are to be within 5 kilometres of other publicly accessible LOCP e.g. library.		
Planning Criteria	User Benefit	Environmental Effect
<ul style="list-style-type: none"> Provide land for a range of appropriate and necessary community facilities in each community above the Q100 flood level. 	<ul style="list-style-type: none"> Accommodates existing and future community needs. Provides opportunities for community gathering and community network development. 	<ul style="list-style-type: none"> Builds strong and cohesive communities. Contributes to community identity. Assists the development of community networks and social capital.
<ul style="list-style-type: none"> Provide land for community facilities that are accessible to and able to be used by all members of the community. 	<ul style="list-style-type: none"> Responds to social disadvantage. Responds to the needs of all members of the community. 	<ul style="list-style-type: none"> Develops an inclusive community. Contributes to a sense of community and the development of community networks.
<ul style="list-style-type: none"> Provide land that can accommodate multi-purpose and multi-functional community facilities, which will serve a broad range of uses. 	<ul style="list-style-type: none"> Community facilities can be adapted to respond effectively and efficiently to changing community requirements and issues. Future facilities can accommodate a range of activities and meet a range of community needs. 	<ul style="list-style-type: none"> Develops self-contained communities by responding to local issues and needs. Reduces travel to other areas to access community facilities and services.
<ul style="list-style-type: none"> Retain and consolidate existing community facilities wherever necessary. 	<ul style="list-style-type: none"> Maintains existing community uses and access. 	<ul style="list-style-type: none"> Consolidates existing land uses and facilities. Fosters community awareness and civic pride.
<ul style="list-style-type: none"> Co-locate land for multi-purpose community purposes with complimentary uses such as PRL and centres. 2000m² of LOCP is to be provided when LOCP is co-located with a district park. 5000m² of LOCP is to be provided when LOCP is co-located with a metropolitan park. 	<ul style="list-style-type: none"> Efficiently provides a range of appropriate and necessary facilities in one area. Compliments and consolidates existing community uses, developing community hubs or key community focal points. Enhances links between community facilities and public transport. 	<ul style="list-style-type: none"> Reduces multiple car trips and maximises use of path systems. Contributes to a sense of community and the development of community networks. Minimises potential impacts on surrounding amenity. Enables sustainable and efficient management and maintenance of community facilities.
<ul style="list-style-type: none"> Ensure land for community purposes is accessible to intended users through roads, public transport and path connections. 	<ul style="list-style-type: none"> Provides key community focal points for activity. Provides opportunities for community gathering. 	<ul style="list-style-type: none"> Builds strong and cohesive communities. Assists the development of community networks and social capital.

6 EXISTING AND FUTURE INFRASTRUCTURE

6.1 PUBLIC RECREATION LAND

6.1.1 PRL Existing Infrastructure

Database

A database was developed for all existing and planned new PRL across Brisbane. A range of information sources were used for this purpose, including:

- Council's GIS and other park and community facilities information systems, such as Open Space Manager and Community Facilities Database;
- The map of "sporting surfaces in Council parks" prepared as part of the background studies (background studies detailed in **Appendix A1**);
- Current local plans, *High Growth PSPs* and park planning documents (see **Appendix A1**).

A total of 1253 PRL sites were identified across Brisbane for the purposes of this PSP, comprising:

- 1017 parks with informal recreation infrastructure only;
- 35 parks with sporting infrastructure only;
- 201 parks with both informal recreation and sporting infrastructure.

Of these parks, 1160 were existing parks.

A database of existing and planned new non-Council sporting infrastructure including outdoor sports fields and or outdoor sports courts (excluding lawn bowling greens) was also developed to assist in the analysis of PRL coverage and gaps in the precinct analysis. Lawn bowling greens are for specific users and not accessible to the general public, which is why these areas were excluded from the assessment of sporting infrastructure. A total of 75 non-Council sporting sites were identified across Brisbane, comprising a total of 73 existing sites.

Mapping

Using the database described above, all the identified PRL sites were located on maps to clearly illustrate the existing distribution of PRL across Brisbane. Two maps were produced. **Map 1** illustrates parks with informal recreation infrastructure and **Map 2** illustrates parks with sporting infrastructure. Those parks with both informal recreation infrastructure and sporting infrastructure appeared on both maps.

The map of parks with sporting infrastructure (**Map 2**) also included the location of all non-Council sporting infrastructure identified in the database of existing and planned new non-Council sporting infrastructure described above. The purpose of including the non-Council sporting facilities on the map was to note their existence when considering PRL coverage and gaps in the precinct analysis. All existing parks were identified by user catchments. Proposed parks were located on maps with a minimum catchment size of 250m.

In order to establish coverage as well as distribution each PRL site was mapped with a "service catchment ring" according to its identified level of use or service catchment. For the purposes of this study: a local catchment was equivalent to a 500m radius; a district catchment (and sub-district in the case of sporting parks) was equivalent to a 2km radius; and a metropolitan catchment was equivalent to the whole of Brisbane. These service catchments were developed based on the review of parks classification study as well as a thorough understanding of the way in which Council's assets were currently functioning.

Service catchments for local parks were also modified when physical features were considered. Where topographical constraints were found to exist, improvements to pedestrian access or another park has been planned in accordance with the DSS. Physical

barriers to catchments were not considered for district parks as it has been assumed that vehicular traffic would be the dominant transport mode to these parks.

Planning Assumptions:

A number of assumptions had to be made at this stage to ensure a viable and consistent analysis based on available data.

- Each PRL site adequately services the needs of people within its catchment. For example, it is assumed that a local informal recreation park is of an appropriate capacity and condition to meet the local informal recreation needs of most households within 500m of its boundaries.
- District level PRL sites meet district and local needs.
- Metropolitan level PRL sites meet metropolitan, district and local needs.

6.1.2 RPL Required Infrastructure

To meet the DSS for PRL, four broad planned infrastructure types are to be implemented and partly funded through infrastructure contributions. These broad types are:

1. Improvements in access to existing community and recreation facilities or planned community purpose infrastructure by acquiring access routes or embellishment to improve pedestrian or vehicular movement to the infrastructure.
2. Upgrading of infrastructure (through embellishment) in an existing partly embellished park to increase their capacity, where acquisition to fill a gap was considered inappropriate due to cost or other constraints.
3. Embellishment of existing unembellished parks to increase their capacity, where acquisition to fill a gap was considered inappropriate due to cost or other constraints.
4. Acquisition and embellishment of land for community purpose infrastructure (including PRL and LOCP).

Because the first three broad planned infrastructure types may relate to local, district or metropolitan service catchments, there is a need to further split infrastructure proposal types to respond to particular land and infrastructure requirements. **Appendix G Schedule of Standard Planned Infrastructure Types and Costs** details 20 infrastructure types and their corresponding typical embellishment costs and land area requirements. The planned infrastructure maps (**Map 4.1-4.18**) and precinct analysis sheets identify the location of all unique infrastructure proposals. The rules used for determining the planned infrastructure priorities are in **Appendix A1**.

The infrastructure items identified in **Appendix L** are also reflected in **Map 4.1-4.18**. Each planned local, district and metropolitan community purpose infrastructure item has an ID which consists of the precinct number and park type number, as per the park type details legend and **Appendix G**. The estimated infrastructure costs and the estimated park usage by precinct has also be identified in **Appendix L**. **Appendix M** provides more detail on the location of planned park acquisitions and improvements.

Local Informal Recreation Infrastructure

The main gaps in the provision for local informal recreation infrastructure were identified in the outer areas of the city, particularly where undeveloped emerging community and industrial land remains. Gaps in provision were also identified for some relatively isolated pockets of emerging community land in middle ring suburbs. In the northern area of the city (e.g. Fitzgibbon, Taigum, Bracken Ridge, Bridgeman Downs and Bald Hills) provision of local informal recreation infrastructure is recommended in many existing local parks where previous park dedication have resulted in adequate land provision but with limited park embellishment. Similarly, this area is a focus for new park acquisition and embellishment for local recreational purposes. Other areas recommended for new informal recreation local

parks for residents include Wynnum West, Ferny Grove, Upper Kedron, Eight Miles Plains, Runcorn, Carina, Drewvale, Parkinson, Heathwood and McDowall.

Acquisition and embellishment for local informal recreation purposes is planned for workers in developing industrial areas of the city at Heathwood/Larapinta/Parkinson. Provision of local informal recreation infrastructure in existing parks for workers is recommended at two existing parks in industrial locations at Acacia Ridge and Sumner.

Further detail about the priority and location of planned infrastructure is on **Map 4.1-4.18**. Planned infrastructure relating to local informal recreation infrastructure and provision are listed as:

- **C1** – Provide local informal recreation infrastructure for residents.
- **C2** – Provide local informal recreation infrastructure for workers.
- **D1** – Acquire and embellish land for local informal recreation purposes for residents.
- **D2** – Acquire and embellish land for local informal recreation purposes for workers.

District Informal Recreation Infrastructure and Sporting Infrastructure

A key focus of district level proposals is increasing the coverage of district facilities through local park upgrades and the provision of additional infrastructure in existing district parks.

In many instances land is not available in inner and middle suburbs of the city to achieve the DSS for district informal recreation and sporting infrastructure. In these localities upgrades are recommended to current parks, for example, upgrading of the Neal Macrossan playground and local parkland in Greenslopes is recommended as high priorities for district informal recreation. Provision of informal recreation infrastructure is also recommended for two bushland reserves at Seven Hills and Anstead. District parks, like the latter, can also cater to local needs.

The upgrade and provision of district sporting infrastructure is a key focus of the *Community Facilities Network Plan*. Several parks on the north side at Zillmere, Bridgeman Downs, Chermside West and Sandgate are recommended for upgrading to provide for district level sporting requirements. Two key high priority sites for district level sporting infrastructure and LOCP are Wally Tate Park and Dickson St Park, Bald Hills. These sites will include a multi-purpose community facility co-located with sporting infrastructure.

New acquisition and embellishment for both informal recreation and district sporting infrastructure is recommended at Larapinta/Parkinson and Bellbowrie/Moggill, incorporating LOCP. This proposal reflects the desired direction for district informal and sporting infrastructure to be co-located with multi-purpose community facilities. The provision of district level sporting infrastructure at Illaweenah St Park is also a high priority and is important in satisfying a key deficiency gap in this part of the city for district sports infrastructure.

Further detail about the priority and location of planned infrastructure is provided on **Map 4.1-4.18**. Proposals relating to district informal recreation and/or sporting infrastructure are listed as:

- **B1** – Upgrade local informal recreation infrastructure to district standard.
- **B2** – Upgrade local sporting infrastructure to sub-district standard.
- **B3** – Upgrade sub-district sporting infrastructure to district standard.
- **C3** – Provide district informal recreation infrastructure.
- **C4** – Provide sub-district sporting infrastructure.
- **C5** – Provide district sporting infrastructure.
- **D3** – Acquire and embellish land with district informal and sporting infrastructure.

Metropolitan Informal Recreation Infrastructure & Metropolitan Sporting Infrastructure

At the metropolitan level, key sites need to be acquired and/or embellished to provide a satisfactory level of provision. Deficiencies at the metropolitan level can be attributed to past

development under previous planning legislation whereby park dedication resulting from new development usually accounted for 10% of land parcels. Whilst this approach has generally ensured adequate provision of land for local and many cases district purposes, the provision of metropolitan parkland requires a pro-active approach to secure larger land parcels suitable for the range of metropolitan informal and sporting needs. Often metropolitan parks have a district and local function, they are larger in size than other park types and the majority of waterfront parks have a metropolitan function.

Upgrades of district parks to metropolitan standard for informal recreation are recommended for the foreshore areas of Wynnum/Manly and Sandgate/Brighton, as well as the Gap Creek Reserve, Chermside Parklands and Kalinga Green Space. The Willawong remediation site and the Rocks Riverside Park are sites identified for provision of metropolitan informal recreation and sporting infrastructure.

New metropolitan parks catering for both informal and sporting recreation are recommended for Rochedale and Upper Kedron. Further detail about the priority and location of planned infrastructure is provided on **Map 4.1-4.18**. Proposals relating to metropolitan informal recreation and or sporting infrastructure are listed as:

- **M1** - Upgrade district informal recreation infrastructure to metropolitan standard.
- **M2** - Upgrade district sporting infrastructure to metropolitan standard.
- **M3** - Provide metropolitan informal recreation infrastructure.
- **M4** - Provide metropolitan sporting infrastructure
- **M5** - Acquire and embellish land with metropolitan informal and sporting infrastructure

Corridor Link Park

City Plan classifies land along some waterways as parkland area with the intention that this land is ultimately held within public ownership. Infrastructure proposal "D4" aims to facilitate missing links and continuous public ownership along waterways where this is intended and appropriate and form part of future "Greenways." These links will provide continuous public open space corridors for recreation. Proposals are made to acquire and embellish land predominantly along the Brisbane River at Anstead, Moggill, Bellbowrie, Pinjarra Hills, Bulimba Creek, Kedron Brook and Enoggera Creek for Corridor Link parks.

Further detail about the priority and location of planned infrastructure is provided on **Map 4.1-4.18**. Proposals relating to metropolitan corridors are listed as "D4 - Acquire and embellish land to provide corridor link park".

RiverWalk Pocket Parks

RiverWalk will create a pedestrian and cyclist system along and near the Brisbane River, connecting central employment, educational and residential precincts and public transport facilities. This pedestrian and cyclist system has been addressed through the *Infill Transport Infrastructure Contributions PSP* and factored into the existing high growth PSP areas of Inner North Eastern Suburbs and Bulimba Industrial Area.

RiverWalk extends from St Lucia to Breakfast Creek on the north bank and from Dutton Park to Bulimba on the south and is considered a metropolitan asset of citywide importance. Riverside pocket parks and water access points, for enjoying the River and route, are linked to the RiverWalk system. These parks are often created in disused road ends. Roads will be closed and the land embellished with park infrastructure.

RiverWalk pocket parks are divided into the following types:

- Pocket parks;
- Pocket parks with water access facility/ viewing deck;
- Rehabilitated riparian park; and
- Rehabilitated riparian park with viewing deck.

Further detail about the priority and location of planned infrastructure is provided on **Map 4.1-4.18**. Proposals relating to RiverWalk infrastructure are listed as “R1 – Embellish land with RiverWalk infrastructure”.

Access Improvements

Improvements to the accessibility of parks are also recommended. Such improvements are recommended at various sites, generally within older suburbs of the city such as Woolloongabba, Stafford, Clayfield and Ascot.

Further detail about the priority and location of these proposals are on **Map 4.1-4.18**. Proposals relating to metropolitan park access infrastructure are listed as “A1 - Improve and provide safe pedestrian and cyclist access to Council infrastructure”.

6.1.3 PRL Planned Infrastructure

Once coverage and extent of any gaps in PRL were established for each precinct, community purpose infrastructure was planned, as required, to address any gaps in coverage and to improve the provision of PRL across the city where possible. At the same time, DSS were established to provide the parameters for new infrastructure requirements and ensuring that all proposals were realistic and achievable in the context of the desired standard of service that was being set for each precinct. More detail regarding DSS was provided in the previous section 4.

Infrastructure strategies were limited to:

- Improving access to existing sport and recreation infrastructure in existing PRL;
- Upgrading existing sport and recreation infrastructure in existing PRL;
- Providing new sport and recreation infrastructure in existing PRL;
- Acquiring and embellishing new PRL.

Non-Council community facility providers, such as schools, will not be levied a community purposes infrastructure contribution where sufficient on site facilities provided.

Land acquisition was only considered as a means to rectify an identified gap in areas where there were known sources of potential PRL. The map of “potential PRL” (**Map 1**), prepared as part of the background studies, was used for this purpose.

The following factors were considered in proposing improvements in the provision of PRL across the city:

- Some developed areas, such as Clayfield and Woolloongabba, have noticeable gaps in provision of PRL due to past development patterns and park acquisition policies. In many of these instances there is rarely “vacant” land available and it is generally not cost effective to acquire “developed” land for PRL. Also, the cost recovery for acquiring PRL in these areas would be low because the recoverable new population would be small and the parkland acquired would largely serve the existing population.
- Areas with development potential, such as emerging community areas, are generally able to accommodate new PRL and a reasonable proportion of the cost of acquisition, land preparation and embellishment would be recoverable through infrastructure contributions.
- Improving or providing new infrastructure in existing parks to increase their carrying capacity would help offset any gaps in provision of PRL.
- Existing non-Council recreation infrastructure, such as bowls clubs, helps offset any gaps in provision of PRL at present. However, as these facilities are not in Council ownership, Council can not guarantee that they will exist into the future.

Recommendations for metropolitan PRL identified in the *Regional and Metropolitan Parks PSP Strategy (Appendix A)* were considered during this stage and incorporated in the Infill PSPs where appropriate.

6.2 LAND FOR OTHER COMMUNITY PURPOSES

6.2.1 Existing Land

Existing community facilities on property that complies with the LOCP definition of section 1.4.2 were identified. In the past community facilities have been provided through a variety of means, for example, Council creating a library on public land; facilities being developed by community groups or developers on private land (e.g. child care centres); and sporting clubs developing a club house on public parkland.

The city has inherited a broad range of facilities. While much of this stock remains viable today, some are becoming obsolete for the purpose for which it was originally built or because these facilities are no longer accessible to the community (i.e. as a result of changing shopping, visitation, recreational and other patterns). For example, Council has recently shifted away from providing libraries on free-standing blocks on the fringes of commercial centres, to providing libraries in the heart of shopping areas.

6.2.2 Required Land

It is anticipated that traditional methods of supplying community facilities will continue in the future i.e. a mix of public and private sector provision. In many established parts of the city, few opportunities are available for Council to acquire additional LOCP because of the high cost of this land. The major opportunities to provide such facilities are often negotiated with property developers via the development approval process.

The real opportunity for Council to secure LOCP is in Brisbane's greenfield areas, where property values are more affordable. Wherever Council acquires land, this land will be secured for multiple community use activities and will be co-located with commercial areas, other district or metropolitan sporting recreational facilities or informal recreation parks.

The following options represent opportunities for ensuring LOCP is obtained in the future for Brisbane. However, this PSP does not provide the mechanism to implement these options. These options show that LOCP DSS can also be achieved through alternative means.

1. The private or community sector continuing to provide community facilities, such as childcare centres, cultural and recreational facilities.
2. Private or community sector owned land with facilities on it being retained as a community use. This could include an alternate community use being found for the site, the current owners selling the facility to another community organisation etc.
3. State and commonwealth governments continuing to offer Council, or a community organisation, land that is surplus to their requirements at little or no cost to the city.
4. The identification of community facility needs by other levels of government, in addition to land that Council requires for community facilities.
5. Council recycling its existing community facilities for other community purposes, or selling the land etc and utilising revenue to acquire land elsewhere for the provision of community facilities.
6. Council securing floor space within predominantly commercial developments for community facilities.
7. Council acquiring land for community purposes through the Development Assessment process in accordance with PSP predetermined locations.

Acquisition and embellishment for both informal recreation and district sporting infrastructure is recommended at Larapinta/Parkinson and Bellbowrie, incorporating LOCP. Provision and upgrading for district sporting infrastructure at Wally Tate Park, Dickson St/Telegraph Ave Park incorporates LOCP.

Proposals relating to (LOCP) are indicated in bold on **Map 4.1-4.18**. Proposals for LOCP are made for the following sites/areas:

- Wally Tate Park, Kuraby/Runcorn
- Dickson St Park, Bald Hills
- Larapinta/ Parkinson
- Fitzgibbon

This PSP only addresses Brisbane City Council land requirements.

6.2.3 Planned Land

LOCP identified in the background study for the *Community Facilities Network Plan (Appendix C)* was considered at this planning stage and incorporated in the Community Purposes PSP where appropriate. Specific proposals for inclusion of LOCP have been included in bold outline on **Map 4.1-4.18** and documented in the precinct analysis sheets.

The following factors were considered in proposing LOCP:

- Opportunities in locating community facilities, such as libraries in major multipurpose centres. In these cases LOCP would not be required to accommodate the community facility and no infrastructure contribution would need to be levied.
- Opportunities and advantages in locating LOCP within or immediately adjacent to PRL. In these cases the area of land required as LOCP would be included in the allocation for PRL. Situations where PRL includes LOCP were noted in the precinct analysis sheets.
- Opportunities and advantages in “recycling” land and buildings for community infrastructure.
- Opportunities and advantages in locating community infrastructure within multi-purpose sites, including schools and other non-Council infrastructure where appropriate.

Existing non-Council community infrastructure helps offset any gaps in provision of LOCP at present. However, as these facilities are not in Council ownership, Council can not guarantee that they will exist into the future. Therefore, although non-Council community infrastructure has been considered, these facilities have been excluded when determining future LOCP ‘needs’.

7 COMMUNITY PURPOSES COST APPORTIONMENT

7.1 BACKGROUND

The Community Purposes PSP contribution has been developed by calculating the likely demand by new development against the cost of providing or using, where there existing infrastructure has spare capacity, LOCP and or metropolitan, local and district PRL and facilities in accordance with the DSS. The PSP preparation component represents the costs incurred by Council in the development of the Community Purposes PSP.

Methods applied to value existing and planned items were explained in **Appendix A1**. It should be noted that the methods used to value existing infrastructure are conservative. Specifically:

- The value of existing improvements to parks has not been included.
- The calculated value of existing parks is considerably less than their market value, especially in inner city locations.

Table 7.0 - Cost and Valuation of Community Purposes Infrastructure

The present value of current Community Purposes Infrastructure	239,867,700 ICUs
The present value of proposed Community Purposes Infrastructure	177,003,500 ICUs
Existing ETs used for calculating Infrastructure Contributions	369,448 ETs
Ultimate ETs used for calculating Infrastructure Contributions	458,046 ETs

Infrastructure contributions were developed, in accordance with the principles of fair apportionment based on the type, cost and timing of infrastructure within a specific area.

Contribution and credit rates were calculated for a range of residential and non-residential development types. **Appendix L** details the park acquisition, preparation and improvement costs, infrastructure timing and the value and estimated catchment apportionment of existing and planned parks.

The following formula shows the different costs components of community purposes infrastructure:

$$\text{Total Cost} = \text{Value of land} + \text{Land preparation} + \text{Embellishments} + \text{Contingency}$$

7.2 LAND PREPARATION

Land preparation is the basic and essential earth operations to bring PRL land to a standard appropriate for embellishment. This work is included in the PSP contribution and involves the following:

- Planning and design work – landscape, concept or master plan preparation
- Earth works – site clearing, weed removal, dead and dangerous tree treatment, earthworks and drainage, topsoil and turf and erosion mitigation.

7.3 PARK EMBELLISHMENTS

In determining the future cost of PRL infrastructure to establish a PSP contribution for new development, the cost of embellishing a park was determined. Embellishments are the basic improvements to parks, recoverable through a PSP to enable desired PRL functionality. The standard park embellishment rates in **Appendix G** have been based on the desired standard of embellishment for parks as outlined in Section 5. This is not definitive list of embellishment types, rather it is indicative of the minimum type of park improvements to achieve the park intended activities.

7.3.1 Standardised Infrastructure Proposals and Costings

For ease of recording and costing, a set of standard infrastructure proposal types (e.g. land acquisition, land preparation and embellishment, access improvements) was developed as well as standard costs for some proposals. Refer to **Appendix G** for these standard planned infrastructure types and costs. For example, the cost of embellishing a local park is \$145 000 plus preparation costs. A standardised approach ensures that basic infrastructure items can be provided but also adjusted to reflect the specific needs of future communities.

Standardised embellishment costs were derived from:

- Standardised costs used in *High Growth PSPs* and set out in the *Park Network Planning Guidelines* (BCC, 2001);
- Scan of existing average asset costs generated from the Open Space Manager database; and
- Schedules of rates used by Council's Local Asset Services Branch.

Although actual costs will depend on a range of conditions, including ultimate park size, existing level of vegetation and topography, it is expected that these costs will average out across the city.

Similarly, the planned size of various park types has been standardised. These standards were derived from the *Park Network Planning Guidelines* (2001) used for *High Growth PSPs*. For example, a local park planned in the Community Purposes PSP is generally recorded as one hectare but the ultimate size of a park will depend on a range of conditions. In turn, the ultimate park size will influence the actual cost of acquisition. Land acquisition costs will vary across the city based on land values.

7.4 DEMAND FOR PARKS

The demand for parks infrastructure varies depending upon the type of development within the surrounding area. However, in order to calculate contributions, it is necessary to convert these demands into a standard measure. A series of conversion rates were defined for this purpose.

The basic measure of demand that was used for the calculation and application of community facilities contributions in the PSP was an Equivalent Tenement (ET). An ET represents the demand for parks infrastructure equivalent to that of a typical detached dwelling. In turn, the conversion rates for other types of development represent the demand they generate as a proportion of a detached house. Thus:

$$\text{ET conversion rate} = \frac{\text{Desirable rate of parks provision for a unit of a type of development}}{\text{Desirable rate of parks provision for a detached dwelling}}$$

Table 4 in Appendix I illustrates how the conversion rates were calculated. Table 6.1 lists the conversion rates. Existing and forecast demand for parks across the city and within each park planning precinct was converted into ETs. This was calculated by multiplying the amount of forecast development by the relevant rate. The detached dwelling rate was applied to all residential development types on an equity basis.

Table 7.1 - Community Purposes ET Conversion Rates

Type of Development	ET Conversion Rate (ET/Development Unit)
Detached dwelling	1.0000
Single-Unit dwelling	1.0000
Multi-Unit dwelling	1.0000
Industry (ET/m ² GFA)	0.0007
Commercial (ET/m ² GFA)	0.0003
Retail (ET/m ² GFA)	0.0007

7.5 DISTRIBUTION OF COSTS TO PLANNING PRECINCTS

All planned infrastructure was recorded by planning precinct (see Map 8), costed and scheduled in a database through the following tasks:

- Determining standard planned infrastructure types, including standard costs for embellishment and standard land area requirements for park types;
- Mapping all planned infrastructure and planning precincts, including their priority and type.
- Integrating planned infrastructure for high growth planning areas;
- Identifying which precincts would benefit from each district infrastructure proposal;
- Preparing schedule/database recording each existing Council park (equivalent to PRL) including the service catchment type, location, land cost and precinct or precincts to benefit.

7.6 COST APPORTIONMENT

The methods for calculating three components of the contribution by planning precinct are explained below. Unless otherwise specified, the timeframe for all infrastructure plans is the year 2016.

7.6.1 Determining Which Planning Precincts Will Benefit

To ensure nexus between contributions and use, there is a need to determine which planning precincts will benefit from existing Council parks (equivalent to PRL) and planned infrastructure.

Each existing park or future infrastructure type is expected to serve a particular service catchment size. Service catchments are broken into local, district and metropolitan catchments. Infrastructure contributions need to reflect these service catchments to ensure only those residents or employees expected to use infrastructure items are contributed for them.

Where a planning precinct included an existing local park (equivalent to PRL) or future infrastructure, that entire precinct is taken to benefit from the item. Existing parks or future infrastructure with a district level service catchment, benefit the planning precinct in which they occur and surrounding precincts that are wholly or partly within a 2 kilometre radius. The degree to which a precinct benefits from such items is measured as a percentage and depends on how much of the 2 kilometre radius a precinct occupies and the proportion of "need" areas within each precinct. This percentage was adjusted to ensure district parks are not apportioned to Green Space (**Appendix K**).

Metropolitan level parks are expected to be used by all residents within the city and are therefore taken to benefit all precincts. Acquisition and embellishment of parkland area parcels currently in private ownership, are also expected to benefit all precincts.

Some *High Growth PSP* proposals are expected to benefit precincts within the Community Purposes PSP area. These H1 parks have been identified on **Map 4.1-4.18** and in the **Appendix L** spreadsheets. The spreadsheets identify the percentage of each infrastructure item cost that has been attributed to the relevant planning precincts. It has also been assumed that park use from people outside of Brisbane and vice versa results in no net change to the apportionment.

7.6.2 Apportioned Cost of Existing and Planned Infrastructure across Existing and New Development

The value of existing Council parks (equivalent to PRL) and the estimated cost of future infrastructure have been apportioned across existing and new development to determine contributions to be levied on development.

7.6.3 Calculating Area and Values of Existing Council Park (Equivalent to PRL)

Only Council parks compliant with PRL criteria were included in calculations. Existing large natural area parks were taken to have “diminished” PRL value, because nature conservation is their primary management focus and recreation is constrained. Therefore, only 10% of the land area of these parks was included when calculating the costs of existing Council parks to be included in contributions.

The value of existing and planned parks was determined in two ways. First, specific valuations were prepared for sites identified for acquisition. Second, indicative standard rates for existing parks and other planned parks across the city were proposed. A detailed summary of the basis of land valuation is detailed in **Appendix H**.

7.7 CONTINGENCIES

Contingency funds have been factored in to the land acquisition costs and preparation and improvement costs. The general contingency costs outlined in **Appendix I** cover miscellaneous unanticipated price changes. The other contingency fees for land acquisition and park preparation and improvements include contingency costs for changes to the mandatory fees associated with delivering these stages of development. The contingencies for this Community Purposes PSP are shown as a percentage of the project cost with rates varying depending on the project size, thus, the higher the project cost, the smaller the contingency percentage.

Table 7.2 - Contingency Rates

Stages	Item	Rate
Land Acquisition	Legal and management fees (e.g. Financial services)	15% for projects \$1M or less 12% for projects >\$1M
	General contingency	10%
Preparation and Improvement	Planning and design fees (e.g. Architectural, Structural, Services, Landscaping, Project Management, & Overheads)	30% for projects \$1M or less 25% for projects >\$1M
	General contingency	12%

7.8 METROPOLITAN PARK INFRASTRUCTURE CONTRIBUTION COMPONENT

The same contribution for metropolitan community facilities will apply across Brisbane as all residents will benefit from these assets of city wide importance. In order to calculate these contribution rates, the total cost of existing and planned infrastructure, measured as ICUs, was apportioned across the combined amount of existing and forecast development, measured as ETs, thus:

$$\text{Infrastructure Contribution (ICUs/ET)} = \frac{\text{Existing Community Purpose Infrastructure} + \text{Planned infrastructure (ICUs)}}{\text{Existing development} + \text{Forecast development (ETs)}}$$

$$\text{Infrastructure Contribution (ICUs/ET)} = \frac{239,867,700 + 177,003,500}{369,448 + 88,598}$$

The resulting *metropolitan infrastructure contribution* is **910 ICUs/ET**.

Council refers to this method of calculation as “average cost apportionment”. Because this contribution will apply across the city, existing and forecast development in the high growth areas were included in the calculation.

7.9 LOCAL AND DISTRICT PARK INFRASTRUCTURE CONTRIBUTION COMPONENT

Infrastructure contributions for local and district facilities vary across the city depending upon the cost of parks and embellishments required in each planning precinct. This component of the infrastructure contribution was calculated as outlined below.

Step 1: Calculation of Precinct Specific Infrastructure Contributions

The value of existing and planned parks that are expected to be used by existing and forecast development was calculated in the manner outlined in **Appendix A1**. This information was used to calculate the infrastructure contribution for local and district facilities in each planning precinct. Planning precincts are shown in **Maps 4.1 to 4.18**. The formula that was used for this purpose was the same as that used for calculating the metropolitan component, namely:

$$\text{Infrastructure Contribution (ICUs/ET)} = \frac{\text{Existing Community Purpose Infrastructure} + \text{Planned infrastructure (ICUs)}}{\text{Existing development} + \text{Forecast development (ETs)}}$$

Only the amount of existing and forecast development within each planning precinct was taken into account in these calculations. The local and district park infrastructure contributions apply only to those contribution areas where infrastructure is planned or there is spare capacity in existing parks. Full cost impact areas and the *High Growth PSPs* were excluded from the local and district park ET calculations.

Step 2: Standardisation of Precinct Specific Infrastructure Contributions

A weighted averaging method, based on projected ETs, was used to standardise the precinct specific infrastructure contributions. “Like” precincts were grouped together using spatial data and on the basis of infrastructure contribution rate similarities. A total of 20 standard infrastructure contribution rates were established at this step.

To further simplify the application and interpretation of infrastructure contributions, 20 standard infrastructure contribution rates were reduced to seven bands of infrastructure contributions (A to G). The number of infrastructure contribution bands was reduced by determining if there was a positive or negative infrastructure contribution variance of 20

percent and if there was a revenue variance of 100,000 ICUs. Where the variance was not in accordance with these “rules”, the precinct details were transferred to the next most appropriate infrastructure contribution band where possible. Analysis of the infrastructure contributions indicates a distribution that is in accordance with the future population distribution. An infrastructure contribution rate was calculated for each band. This contribution was calculated as the weighted average of the expected return from infrastructure contributions if the precinct specific infrastructure contributions were applied **(Appendix J)**.

7.10 COMMUNITY PURPOSES INFRASTRUCTURE NETWORK COMPONENTS

The summary of the components for the community purposes infrastructure network are show in the formula below:

Community Purposes Infrastructure Network Contribution	=	PSP preparation infrastructure contribution component (6 ICU Preparation Charge)	+	Local and District PRL infrastructure contribution component (Precinct specific rate)	+	Metropolitan PRL infrastructure contribution component (Citywide rate = 910)
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GLOSSARY

City Plan Polygons - individual regions of the same Brisbane City Plan Area Classification that are often but not necessarily bounded on all sides by roads.

Community Facilities – Community purposes infrastructure constructed on land for other community purposes.

Community Purposes Infrastructure – Infrastructure contribution through an Infrastructure Contributions Planning Scheme Policy that comprises two components: public recreation land and land for other community purposes.

Community Facility Network Plan – A plan that assesses and makes recommendations relating to the provision of multi purpose community facilities across the City.

Embellishments – basic improvements to parks, contribution through an PSP, to enable desired functionality. This infrastructure, also referred to as improvements, includes park access infrastructure, signage, facilities to create outdoor sport and recreation activity spaces, park furniture, landscaping and utility connection, and ancillary infrastructure to support/enable outdoor sport and recreation activity.

Equivalent Tenement (ET) – the consumption capacity of a network by one low density detached dwelling. Units of demand are standardised through this single index.

Fair Value – the value at which a parcel of land would exchange hands between a willing vendor and willing purchaser under normal market conditions. This is an accounting standard for Council assets.

Flood Regulation Line (FRL) – lines used by council to indicate floodplain areas reserved for flood water storage and flow, where development may be restricted.

Land for Other Community Purposes (LOCP) – land only for indoor community facilities (other community purposes), such as community halls and centres, public recreation centres and public libraries.

Planning Precinct – service catchment areas that reflect local recreation activity, distances that residents are likely to travel for local recreation purposes, High Growth PSP boundaries and physical barriers such as major roads, railway lines and major waterways.

Public Recreation Land (PRL) – comprises the basic and essential network of infrastructure required to ensure new and developing communities have ready access to land for public recreation purposes, such as playgrounds and sports fields. PRL forms part of a broader public open space system.

MAP 1 – PARKS WITH INFORMAL RECREATION FACILITIES IN BRISBANE