



Policy 2: Chevron Island Developer Charges Policy

Chapter 1 Purpose

This **Developer Charges Policy (DCP)** has been developed to ensure that the existing standards of infrastructure services and amenity are maintained for the existing and future population of Chevron Island. A public works program for the expenditure of infrastructure charges monies which satisfies the infrastructure demands generated by new development, is intended to allow expansion of services in the future when necessary.

New infrastructure will be provided in a cost effective manner, having regard to the principles of a user pays approach, and to ensure the requirements of the **Integrated Planning Act 1997** for the recovery of infrastructure costs are met.

This Policy has been updated following the commencement of **Policies 3A, 3B, 16 and 19** on the 2nd of February 2004. Only the relevant sections of the Policy have been omitted and those sections have now been included in the new Policies, costings remain unchanged at this stage. Other relevant infrastructure developer contributions, where not detailed in this Policy, apply to Chevron Island development(s) or redevelopment(s) through **Policies 3A, 3B, 16 and 19**.

Chapter 2 Supporting Information

1.0 Method Used in Calculating Infrastructure Charges

This section details the method of calculating infrastructure charges contained within the Chevron Island DCP. Detailed calculations for all charges are contained in **Schedules 1 and 2**.

Existing Infrastructure

The infrastructure items to be provided and funded by this DCP are new infrastructure items.

New Infrastructure

The capital costs and timing of each item to be funded by this DCP are identified in **Schedule 1** to the DCP. The costs are taken from the **Public Works Costing Report 1997** by Kinhill containing estimates of infrastructure costs. Timing of development has been estimated and these dates may change accordingly.

1.1 Estimate Of Present Value Of New Infrastructure

In order to ensure an equitable charge that takes account of temporal changes that may occur during the life of the DCP, each new item of infrastructure to be provided in the future is adjusted by an appropriate discount rate. The discount rate takes account of:

- the local government's interest earnings from infrastructure charges which have been collected ahead of the need to make the expenditure;
- the local government's borrowing costs in having to provide infrastructure ahead of receipt of infrastructure charges; and
- a risk premium to cover the possibility of major inaccuracies in demand or cost projections.

The discount rate has been set at 6.0%.

Net present value is calculated using the following formula:

$$NPV = \frac{C_y \text{ (Siteworks)}}{(1+r)^{y^1-y^0}} + \frac{C_y \text{ (Preliminaries)}}{(1+r)^{y^1-y^0}}$$

Where:

NPV	=	Net Present Value
C_y	=	Cost of Item
r	=	Discount Rate
y^1	=	Year of Provision



1.2 Defining Service Catchments

Service catchments need to be defined to ensure equitable apportionment of all charges. In the case of Chevron Island, the catchments have been defined (assumed) to be a closed system, ie. the Island accounts for all users and beneficiaries of the infrastructure.

Even though the planned transport infrastructure items are not exclusively used by the residents and commercial operators of the Island, it is appropriate to apportion the full charge, as it is both the residents and commercial operators who gain the major benefits. The charge is applied equally across the Island, calculated on existing and future demand.

1.3 Demand

Demand is translated into 'equivalent units' to allow a common unit of measurement that incorporates population growth and growth in commercial floor area.

The units adopted are:

$$1 \text{ EP} = 1 \text{ person} = 40\text{m}^2 \text{ of commercial gross floor area}$$

When calculating charges, the number of dwellings contained in a development is multiplied by a factor of 1.8. This factor is based on the projected average number of persons (EP) per dwelling. Commercial GFA is divided by a factor of 40 to derive the appropriate number of EPs.

Existing Demand

Existing demand is based on the current population and current commercial floor space on Chevron Island. **Table 1.0** contains the calculations of existing demand.

Table 1.0 Existing Demand

Existing Demand	1996	1999	EPs
Population	2,128	2,550	2,550
Commercial	15,000	16,500/40	413
Total			2,963

In situations where existing demand is to be provided with new infrastructure, the existing demand is taken to be new demand.

Future Demand

Future demand has been identified having regard to the increase in development potential of the majority of land on Chevron Island as a result of the provisions of the Local Area Plan (LAP). Future demand is then allocated to planning years, to enable timing of the provision of new infrastructure. **Table 1.1** contains the projected future demand for Chevron Island.

Table 1.1 Future Demand

Future Demand	Planning Year	Demand (EPs)
Stage 1 Population Growth	2001	1536 persons @ 1 EP per person = 1536 EP
Stage 1 Commercial Growth	2001	3000/40m ² GFA @ 1 EP per 40 m ² GFA = 75 EP
Stage 2 Population Growth	2006	1512 persons @ 1 EP per person = 1512 EP
Stage 2 Commercial Growth	2006	2000/40m ² GFA @ 1 EP per 40 m ² GFA = 50 EP
Stage 3 Population Growth	2011	1478 persons @ 1 EP per person = 1478 EP
Stage 3 Commercial Growth	2011	2000/40m ² GFA @ 1 EP per 40 m ² GFA = 50 EP
TOTAL		Capacity (EPs) = 4701EP



1.4 Expressing Future Demand In Present Value Terms

In order to align the charges and costs to the greatest possible extent it is necessary to express both in the same terms. This is achieved by discounting demand in the same manner and using the same formula as for the cost of new infrastructure items. **Table 1.2** contains the discounted figures.

Table 1.2 NPV of Demand

Area	Year	Demand*			NPV Demand (NPD)		
		Existing ('99)	Future	Total	Existing	Future	Total NPD
Stage 1 Population Growth	2001	850	1536	2386	756	1367	2124
Stage 1 Commercial Growth	2001	138	75	213	123	67	190
Stage 2 Population Growth	2006	850	1512	2362	565	1006	1571
Stage 2 Commercial Growth	2006	138	50	188	92	33	125
Stage 3 Population Growth	2011	850	1478	2328	422	735	1157
Stage 3 Commercial Growth	2011	138	50	188	69	25	93
Total Demand:							
Population Growth	2015	2550	4526	7076	1743	3108	4852
Commercial Growth	2015	414	175	589	284	125	408
Total Demand		2964	4701	7665	2027	3233	5260

Note: Existing population has been discounted to allow for redevelopment of existing lots expressed in EPs.

1.5 Calculate and Apportion Charges

Charges are calculated by:

- estimating the share of each item's capacity to be used by the catchment;
- applying this ratio to the NPV of each item to determine the area's share of costs;
- summing the cost share of each item to establish a charge for the capital costs of the item; and
- dividing the total cost of the infrastructure item by the change in demand expressed in equivalent persons.

All item charges are summed to derive the total charge per equivalent person. Charges are simply calculated by multiplying the relevant charge by the relevant number of equivalent persons.



For example:

An application for a Material Change of Use for a mixed-use development consisting of 350m² of commercial floor space and 45 dwelling units. The land is currently occupied by 150m² of commercial floor space.

$$\Sigma (EP) = (PD \times D) + (PGFA \div C)$$

Where:

EP = Demand Expressed as Equivalent Persons
 PD = Proposed Number of Dwellings
 PGFA = Proposed GFA of Commercial Development
 D = Density Factor
 C = Conversion Factor

1.5-A: Formula to Calculate EP for Transport Infrastructure

$$\Sigma (EP) = (45 \times 1.8) + (350 \div 40) = 89.75 \text{ EP}$$

$$\text{Charge} = \$578.23 \times 89.75 = \$51,896.14$$

$$\text{Total Infrastructure Charges} = \$51,896.14$$

Annually Adjust Charges

Charges may be adjusted annually by using an appropriate index to account for the effects of price movements over time. The index to be used is CPI.

Chapter 3 Relevant Studies

Chevron Island Redevelopment: Impact on Water Supply and Sewerage Infrastructure July 1997, undertaken by Gutteridge Haskins and Davey Pty Ltd, Brisbane.

Chevron Island Traffic Study: Final Report July 1997, prepared by Adam Pekol Consulting.

Public Works Costing: May 1997, prepared by Rider Hunt Pty Ltd.

Chapter 4 Schedule 1: Planned Infrastructure Works

Table 1.3 Transport Infrastructure Items

Pedestrian/ Bicycle Movement Network			
Evandale to Chevron Pedestrian/ Bicycle Bridge		Cost (1999 \$)	Estimated Year of Provision
Siteworks			
▪ Pedestrian/ Cyclist Bridge 90m long		900000	
▪ Landscape Improvements		20000	
Siteworks Total		920000	
Preliminaries	10%	92000	
Builders Margin	5%	46000	
Contingencies	5%	46000	
Professional Fees	10%	92000	
Total Cost		\$1,196,000	2002



Pedestrian Boulevards			
Thomas Drive		Cost (1999 \$)	Estimated Year of Provision
Siteworks			
▪ Remove Existing Footpath	870m ² @\$10	8700	
▪ Excavate for New Footpath	696m ² @\$15	10440	
▪ Adjust Level of Service Pit Covers	77@\$400	30800	
▪ Install Tree Grates to Existing Trees	10@\$1200	12000	
▪ 3m Tree Complete Including Grate, Irrigation, etc.	67@\$2000	134000	
▪ Raised Type 1 Planter Beds	12@\$5000	60000	
▪ Raised Type 2 Planter Beds	13@\$5000	65000	
▪ Raised Type 3 Planter Beds	4@\$5000	20000	
▪ Exposed Aggregate Footpath	3480m ² @\$80	278400	
▪ Site Establishment		1000	
▪ Provision for Traffic		5000	
▪ Minor Service Relocation		20000	
Siteworks Total		645340	
Contingencies		5%	32300
Total Cost		\$677,600	2001

Pedestrian/ Bicycle Bridges		Cost (1999 \$)	Estimated Year of Provision
Chevron to Bundall 2m x 130m			
		300000	
Chevron to Surfers Paradise 2m x 180m			
		450000	
Total Cost		\$750,000	2002

Closure Burra/ Adori Streets		Cost (1999 \$)	Estimated Year of Provision
Siteworks			
▪ Demo Kerb and Channel	80m@\$10	800	
▪ Demo Existing Road Paving	1200m ² @\$10	12000	
▪ New Kerb and Channel	71m@\$35	2485	
▪ Hard/ Soft Landscaping	1200m ² @\$200	240000	
▪ Lighting	1200m ² @\$20	24000	
▪ Alteration to Drainage		10000	
▪ Alterations to Other Existing Services		10000	
Siteworks Total		299285	
Preliminaries		10%	29929
Builders Margin		5%	14964



Closure Burra/ Adori Streets		Cost (1999 \$)	Estimated Year of Provision
Contingencies	5%	14964	
Professional Fees	10%	29929	
Total Cost		\$389,100	2001

Karlool Street Car Park		Cost (1999 \$)	Estimated Year of Provision
Siteworks			
▪ Site Establishment		1000	
▪ Provision for Traffic		2000	
▪ Filling for Landscape Area	2100m ² @\$5	10500	
▪ Pavement Materials		14325	
▪ Asphaltic Concrete	1450m ² @\$12	17400	
▪ Concrete Kerb	300m@\$13	3900	
▪ Scarify Existing Pavement	2500m ² @\$1.5	3750	
▪ Stormwater Drainage		11000	
▪ Retaining Wall 600 mm high	280m@\$60	16800	
▪ Demolish Existing Toilet Block		2000	
▪ Line Marking		1000	
▪ Hard/Soft Landscaping	2100m ² @\$200	420000	
▪ Tree Complete inc. Grate, Irrigation, etc.	25@\$3500	87500	
▪ Planter Complete inc. Irrigation, etc.	6@\$10000	60000	
▪ Work to Existing Services		5000	
Siteworks Total		656175	
Contingencies	5%	32809	
Total Cost		\$689,000	2006



Chapter 5 Schedule 2: Infrastructure Charges

1.0 Rate of Charge

Infrastructure charge rates are as detailed in **Table 1.4** of this schedule. These rates apply to all Development Applications for a Material Change of Use, and/or building work, as provided in the Chevron Island DCP.

Table 1.4 Schedule Of Charges

Item	Description	Planning Year	Capital Cost	Charge/ EP
1	Bridge Evandale to Chevron	2002	\$1,196,000	$1,196,000 / 5260 \times 1.06$ 2002-1999 =\$190.91
2	Thomas Drive Boulevard	2001	\$677,600	$677,600 / 5260 \times 1.06$ 2001-1999 =\$114.65
3	Pedestrian/ Bicycle Bridges	2002	\$750,000	$750,000 / 5260 \times 1.06$ 2002-1999 =\$119.72
4	Closure Burra/ Adori Streets	2001	\$389,100	$389,100 / 5260 \times 1.06$ 2001-1999 =\$65.84
5	Karoo Street Car Park	2006	\$689,000	$689,100 / 5260 \times 1.06$ 2006-1999 =\$87.11
Total Transport Infrastructure (TTI)			\$3,701,700	\$578.23

1.1 Standard Charges

The following infrastructure charges are applicable at the time of development:

- Transport infrastructure charges are applicable and are levied on all development proposed on a site, not just the increase in development.

Table 1.5 sets out the applicable charge based on the charges set out in **Table 1.4**.

Table 1.5 Standard Charges

Charges		
	Urban Water Management (\$)	Transport Infrastructure (\$)
Per proposed dwelling unit, 40m ² (TTI x 1.8)		1,040.81
Per proposed 100m ² commercial GFA (TTI x 2.5)		1,445.58

Set out below are the recommended standard requirements for infrastructure charging to be required from development applicants at or around the time of development approval.

1.1.1 Transport Infrastructure

Pay to Council the cost of new transport infrastructure items at a rate of \$1,040.81 per proposed dwelling unit and \$1,445.58 per proposed 100m² of commercial GFA.

1.2 Method of Annual Adjustments to Developer Charges and Review of Policy

The DCP is to be reviewed annually, and in light of development not contemplated by this DCP or the Chevron Island LAP occurring.

Annual reviews will take into account changes in CPI, with charges being multiplied by the relevant CPI.

Development not contemplated by this DCP will require a review of the projected demand for the planned infrastructure items. Infrastructure charges can then be recalculated to take account of resultant changes in demand.