

Indicative standard levies for local development contributions

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

VERSION 2.2

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INTRODUCTION

Urban Enterprise was engaged in February 2012 to review Development Contributions Plan (DCP) data from metropolitan and rural areas of Victoria in order to establish a set of indicative standard levies for development contributions in Victoria.

This report outlines the methodology and findings of this study, in doing so establishing a set of indicative levy amounts for both metropolitan and rural areas for both greenfield and infill development settings using three models identified for examination by DPCD.

1. METHODOLOGY

1.1. DISCLAIMER

The indicative amounts published in this report are the result of pure mathematical analysis of existing Development Contributions Plans (DCPs) published by various Victorian municipalities. The dollar amounts listed reflect previous provision decisions made by individual councils in determining the makeup of infrastructure within DCPs, and as such may not necessarily match desired infrastructure provision decisions moving forwards.

1.2. DCP DATABASE

Urban Enterprise maintains an ongoing database of each Development Contributions Plan (DCP) adopted or in a post panel stage in both metropolitan and rural and regional areas of Victoria going back to the year 1997.

The database includes an itemised breakdown of the apportioned cost for each infrastructure item from which DCP levies have been determined. Using this database Urban Enterprise has sought to categorise each individual infrastructure item into a common category in terms of the basic infrastructure that is common to most DCPs. Attempts have been made to categorise infrastructure into common categories, in case where descriptions do not perfectly match categories a 'best fit' category decision has been made.

In addition to cost data, provision ratios for each type of infrastructure item have been determined by examining the total number of projected dwellings within each DCP as well as the average amount of dwellings per hectare applying to the DCP.

For the purposes of this task it has been determined that DCPs approved prior to 2007 should not be examined due to the significant changes that have become standard in DCPs since this time.

A list of the 24 metropolitan area DCPs examined in this study is shown in Table 1.

A list of the 14 rural and regional area DCPs examined in this study is shown in Table 2.

TABLE 1 METROPOLITAN DCPS EXAMINED

Year	Council	DCP Area
2007	Wyndham	Westmeadows Lane & Marquands Rd
2008	Cardinia	Cardinia Road Precinct (All Areas)
2008	Whittlesea	Epping North East LSP
2008	Wyndham	Tarneit West
2010	Casey	Cranbourne East
2010	Casey	Cranbourne West (All Areas)
2010	Hume	Craigieburn R2 Precinct
2010	Melton	Taylors Hill West

Year	Council	DCP Area
2010	Melton	Melton North
2010	Melton	Toolern (All Areas)
2010	Wyndham	Truganina South
2011	Cardinia	Officer
2011	Casey	Clyde North
2011	Casey	Cranbourne North (Stage 2)
2011	Hume	Greenvale North (R1) (Mt Aitken Neighbourhood)
2011	Hume	Greenvale North (R1) (Mickleham Neighbourhood)
2011	Hume	Greenvale West (R3)
2012*	Casey	Botanic Ridge
2012*	Hume	Merrifield West
2012*	Melton	Diggers Rest
2012*	Melton	Rockbank North
2012*	Mitchell, Whittlesea	Lockerby North
2012*	Multiple	Lockerbie
2012*	Wyndham	Manor Lakes

* DCP at exhibition stage

TABLE 2 RURAL / REGIONAL DCPS EXAMINED

Year	Council	DCP Area
2006	Baw Baw	Baw Baw (Warragul/Drouin)
2006	Mildura	Mildura South
2006	Mildura	Development Contributions Plan No. 2
2007	Mildura	Red Cliffs
2008	Warrnambool	North Dennington
2009	Greater Shepparton	Mooroopna West
2009	Surf Coast	Torquay / Jan Juc
2011	Geelong	Armstrong Creek East
2011	Geelong	Jetty Road
2011	Macedon Ranges	Romsey
2011	Swan Hill	South West Development Precinct
2012	Geelong	Armstrong Creek East
2012	Geelong	Armstrong Creek West
2012	Warrnambool	North of the Merri

Unless otherwise stated the analysis excludes the cost of land, only the cost of works is included. Analysis includes amounts for residential development only, levy amounts for all other development have been excluded. Where applicable equivalence ratios may be used to determine levies for non-residential development.

1.3. **BASE YEAR FOR DOLLAR AMOUNTS**

Development Contribution amounts for each DCP have been indexed to a common base being the year 2010. Therefore all amounts listed should be considered to be in \$2010 dollar amounts which may have been subject to further price inflation in the time since. DCPs approved or awaiting approval since 2010 have been discounted backwards at a rate of 5% per annum to 2010 values.

1.4. **LEVY MODELS**

The project brief provided by DPCD prescribed the following three methods for determining indicative infrastructure levy amounts:

- Model 1: Fixed Infrastructure Levy
- Model 2: Variable Infrastructure Levy
- Model 3: Infrastructure Basket Levy

MODEL 1: FIXED INFRASTRUCTURE LEVY

Model 1 is to be a fixed single charge for the construction of basic and essential community, open space, road and drainage infrastructure. Levy amounts are based upon the cost of construction or total provision of all items across DCPs. The levy does not include land.

MODEL 2: VARIABLE INFRASTRUCTURE LEVY

Model 2 has five infrastructure components:

- A fixed community infrastructure construction levy.
- A fixed open space infrastructure construction levy.
- A variable transport levy.
- A variable drainage levy.
- A variable public land levy. Includes land for local open space, local community facilities and local arterial roads.

Fixed levies are to be based upon the cost of construction of all items across DCPs. For variable items set figures should be determined for some standard road items based upon DCP averages.

MODEL 3: INFRASTRUCTURE BASKET LEVY

Model 3 will provide a menu of infrastructure items with a corresponding set charge per item.

1.5. CALCULATION METHODS

1.5.1. AVERAGE INFRASTRUCTURE COSTS

For each DCP in which an infrastructure item within the defined categories occurs an average per item infrastructure cost has been established. Additionally for each DCP the total number of items is divided by the total projected number of dwellings to determine an average per dwelling provision rate for each infrastructure item.

An average has then been taken across each of these individual DCP amounts to determine a standard mean infrastructure cost amount for each infrastructure category across all DCPs. A measure of the variability of infrastructure costs between DCPs has been determined by calculating the standard deviation between each of these individual DCP amounts.

1.5.2. DETERMINATION OF INDICATIVE STANDARD CHARGE RATES

FIXED INFRASTRUCTURE LEVY AMOUNTS

Indicative fixed infrastructure levy amounts for categories of infrastructure have been determined on a 'per hectare' basis based upon the following method:

$$\text{Levy per Dwelling} = \frac{\text{'Average Cost + 1 Standard Deviation' Amount}}{\text{Average Dwellings per Item Provision Rate/\% of DCPs in which Item is Provided}}$$

Within this method the average provision rate for each item is weighted according to the percentage of DCPs in which the item has been provided. This reflects the fact that some items are not commonly provided for by all councils and an indicative levy should take this into account.

VARIABLE INFRASTRUCTURE LEVY AMOUNTS

Standard per unit costs for variable items have been determined using the 'Average Cost per Unit + 1 Standard Deviation' amount for each infrastructure item. In the case of roads this amount has been divided by the average road length per item to determine a per linear meter amount.

The average Dwellings per DCP applying to each item has been determined using the following formula:

$$\text{Average DCP Dwellings} = \text{Average Dwellings per Item Provision Rate} \times \text{Average Items Provided per DCP}$$

Therefore an indication of the potential average levy amount per unit per dwelling for these variable items has been determined by dividing the 'Average Cost per Unit + 1 Standard Deviation' amount by the average number of DCP dwellings:

$$\text{Average Levy per Unit per Dwelling} = \frac{\text{'Average Cost per Unit + 1 Standard Deviation' Amount}}{\text{Average DCP Dwellings}}$$

It should be noted that these variable amounts are listed on a per unit basis, rather than a total levy basis as per the fixed infrastructure levy amounts. An equivalent average levy amount is included in Appendix B which takes into account the average expected provision of each item.

1.5.3. RATIONALE FOR USE OF 'MEAN PLUS ONE STANDARD DEVIATION' METHOD

In determining standard costs a 'mean plus one standard deviation' method has been applied to ensure that higher end costs are allowed for in standard levies. The 'mean plus one standard deviation' figure takes into account the average cost amount for the infrastructure item plus an

expected upward variation in costs which would allow for the cost of most current existing DCP infrastructure projects to be achieved. This method removes the effect of below average cost outliers. Theoretically the figure should encompass 84.1% of expected cost outcomes for the infrastructure item.

2. FINDINGS

2.1. MODEL 1: FIXED INFRASTRUCTURE LEVY

In determining a standard Fixed Infrastructure Levy the following categories of infrastructure have been assessed across metropolitan and rural/regional DCPs in line with the basic infrastructure list provided by DPCD:

Community infrastructure, including:

- Multi-purpose community centres

Open space facilities, including:

- Local sports facilities
- Pavilions for local sports facilities
- Outdoor hard surface courts for sports

Roads, including:

- Road construction
- Intersections
- Other road items (such as bridges, culverts, bicycle paths, crossings)

Drainage, including:

- All drainage works

A levy for drainage items should only apply to rural and regional DCP areas, in metropolitan areas Melbourne Water's charge scheme for drainage applies to development.

2.1.1. METROPOLITAN AREAS

GREENFIELD DEVELOPMENT

Table 3 summarises provision information for metropolitan greenfield development areas DCPs by infrastructure category. The table calculates a levy per dwelling based upon the average provision rate for each infrastructure item and the average cost plus one standard deviation amount for each item.

The results summarised in Table 3 show that a standard fixed levy amount of \$12,798 per dwelling can be applied to metropolitan greenfield development. When this amount is multiplied by the average dwellings per hectare amount across metropolitan DCP areas of 15.1 dwellings per Hecate, this amount equates to an amount of \$193,482 per hectare. This amount combines elements which are currently divided between community and development infrastructure. This amount excludes any collection for the provision of land.

TABLE 3 MODEL 1: FIXED INFRASTRUCTURE LEVY GREENFIELD METROPOLITAN DEVELOPMENT

	% of DCPs in which item is provided	Average items per DCP	Dwellings per Item provision rate	Mean Item Cost	Mean Item Cost + 1 Standard Deviation	Levy per Dwelling	Levy per Hectare
Community Infrastructure						\$2,267	\$34,276
- Multi Purpose Community Centre	96%	4.0	1,869	\$2,759,922	\$4,236,692	\$2,267	\$34,276
Open Space Facility						\$3,762	\$56,875
- Local Sports Facility	100%	3.4	1,594	\$2,370,633	\$4,142,540	\$2,598	\$39,282
- Local Sports Facility Pavilion	88%	3.4	1,805	\$1,119,376	\$1,783,503	\$988	\$14,935
- Outdoor Hard Surface Courts	42%	1.7	7,351	\$703,808	\$1,292,575	\$176	\$2,658
Roads						\$6,769	\$102,331
- Intersections	88%	8.7	759	\$1,554,721	\$2,506,796	\$3,302	\$49,922
- Road Construction	88%	7.3	1,613	\$1,852,794	\$3,224,962	\$2,000	\$30,234
- Other Roads	50%	7.4	2,187	\$1,307,422	\$3,208,267	\$1,467	\$22,174
Total						\$12,798	\$193,482

INFILL DEVELOPMENT

Based upon the limited metropolitan infill DCPs available for analysis, including the Darebin and Bayside (not adopted) DCPs evidence indicates that infill development in metropolitan settings generates infrastructure costs at approximately 25% of the cost of equivalent greenfield development.

This translates to an equivalent infill development levy of \$3,200 per dwelling for metropolitan areas under Model 1. Equivalent amounts are summarised in Table 5.

2.1.2. REGIONAL & RURAL AREAS

GREENFIELD DEVELOPMENT

Table 4 summarises provision information for regional and rural development area DCPs by infrastructure category. The table calculates a levy per dwelling based upon the average provision rate for each infrastructure item and the average cost plus one standard deviation amount for each item.

The results summarised in Table 4 show that a standard fixed levy amount of \$9,149 per dwelling can be applied to regional and rural greenfield development. When this amount is multiplied by the average dwellings per hectare amount across metropolitan DCP areas of 13 dwellings per Hectate, this amount equates to an amount of \$118,941 per hectare. This amount combines elements which are currently divided between community and development infrastructure. This amount excludes any collection for the provision of land.

TABLE 4 MODEL 1: FIXED INFRASTRUCTURE LEVY GREENFIELD REGIONAL / RURAL DEVELOPMENT

	% of DCPs in which item is provided	Average items per DCP	Dwellings per Item provision rate	Average Item Cost	Average Item Cost + 1 Standard Deviation	Levy per Dwelling	Levy per Hectare
Community Infrastructure						\$1,649	\$21,436
- Multi Purpose Community Centre	64%	2.3	4,281	\$3,750,045	\$7,059,535	\$1,649	\$21,436
Open Space Facility						\$1,262	\$16,406
- Local Sports Facility	57%	2.1	5,744	\$3,245,853	\$5,895,336	\$1,026	\$13,342
- Local Sports Facility Pavilion	43%	2.2	10,653	\$1,630,610	\$2,329,703	\$219	\$2,843
- Outdoor Hard Surface Courts	29%	1.3	22,805	\$238,856	\$387,103	\$17	\$221
Roads						\$3,274	\$42,564
- Intersections	100%	6.6	1,026	\$602,715	\$1,132,905	\$1,104	\$14,351
- Road Construction	79%	10.5	1,265	\$809,199	\$1,441,470	\$1,140	\$14,818
- Other Roads	93%	6.5	2,027	\$939,453	\$2,088,873	\$1,030	\$13,395
Drainage						\$2,964	\$38,535
- Drainage Works	71%	4.4	2,959	\$5,196,906	\$8,770,673	\$2,964	\$38,535
Total						\$9,149	\$118,941

INFILL DEVELOPMENT

A previous study of Regional and Rural DCPs undertaken by Urban Enterprise within the report 'Review of Local Infrastructure Charges for Regional and Rural Councils' identified that infill charge areas provide an average of 40% of the equivalent cost of greenfield development.

This translates to an equivalent infill development levy of \$3,660 per dwelling for regional and rural development under Model 1. Equivalent amounts are summarised in Table 5.

2.1.3. MODEL 1: SUMMARY

Table 5 provides a summary of the calculated fixed levy amounts for each infrastructure category by development type. Greenfield amounts are expressed in terms of a levy per hectare of net developable land, while infill amounts are expressed on a per dwelling basis.

TABLE 5 MODEL 1: SUMMARY OF LEVY AMOUNTS

	Metro		Regional	
	Greenfield (per hectare)	Infill * (per dwelling)	Greenfield (per hectare)	Infill * (per dwelling)
Community Infrastructure	\$34,281	\$567	\$21,436	\$660
- <i>Multi Purpose Community Centre</i>	<i>\$34,281</i>	<i>\$567</i>	<i>\$21,436</i>	<i>\$660</i>
Open Space Facility	\$56,882	\$941	\$16,406	\$505
- <i>Local Sports Facility</i>	<i>\$39,287</i>	<i>\$650</i>	<i>\$13,342</i>	<i>\$411</i>
- <i>Local Sports Facility Pavilion</i>	<i>\$14,937</i>	<i>\$247</i>	<i>\$2,843</i>	<i>\$87</i>
- <i>Outdoor Hard Surface Courts</i>	<i>\$2,659</i>	<i>\$44</i>	<i>\$221</i>	<i>\$7</i>
Roads	\$102,343	\$1,692	\$42,564	\$1,310
- <i>Intersections</i>	<i>\$49,928</i>	<i>\$826</i>	<i>\$14,351</i>	<i>\$442</i>
- <i>Road Construction</i>	<i>\$30,238</i>	<i>\$500</i>	<i>\$14,818</i>	<i>\$456</i>
- <i>Other Roads</i>	<i>\$22,177</i>	<i>\$367</i>	<i>\$13,395</i>	<i>\$412</i>
Drainage	n/a	n/a	\$38,535	\$1,186
Total per Dwelling	\$12,798	\$3,200	\$9,149	\$3,660
Total per Hectare	\$193,506	N/A	\$118,941	N/A

*equivalence ratios can be used to determine levies for commercial development

2.2. MODEL 2: VARIABLE INFRASTRUCTURE LEVY

Model 2 combines elements of the fixed levy amount detailed in Model 1 above with variable cost elements which would be based upon the infrastructure requirements of specific development areas.

It has been determined that the following categories could be provided as a fixed levy amount under this model:

Community infrastructure, including:

- Multi-purpose community centres

Open space facilities, including:

- Local sports facilities
- Pavilions for local sports facilities
- Outdoor hard surface courts for sports

In addition to these fixed items the following items would be provided at variable per unit rates under Model 2, in accordance with the extent to which the development area required these items:

Road Construction, including:

- Arterial Roads
- Connector or Access/Local Roads
- New or Upgraded local roads

Intersections, including

- Signalised intersections
- Roundabouts
- Pedestrian crossings

Other road items, including:

- Road Bridges
- Culverts
- Bicycle Paths
- Pedestrian Bridges
- Rail Crossings
- Pedestrian Underpasses

Drainage, including:

- All drainage works

A levy for drainage items should only apply to rural and regional DCP areas, in metropolitan areas Melbourne Water's charge scheme for drainage applies to development.

2.2.1. METROPOLITAN AREAS

GREENFIELD DEVELOPMENT

Table 6 summarises the standard fixed levy components that have been estimated for metropolitan greenfield development areas within the categories of Community Infrastructure and Open Space Facilities.

The results summarised in Table 6 show that a standard fixed levy amount of \$6,029 per dwelling can be applied to metropolitan greenfield development under Model 2. This amount equates to an amount of \$91,163 per hectare. This amount combines elements which are currently divided between community and development infrastructure. This amount excludes any collection for the provision of land.

Table 7 summarises the per unit rate amounts that would apply under a variable rate component within Model 2 for metropolitan greenfield development areas within the category of road infrastructure. It should be noted that these variable amounts are on a per unit basis, not a total levy basis when comparisons are made with fixed levies used in Models 1 and 2.

Further detail on the amounts used to calculate the 'Average DCP Dwellings' as well as equivalent estimated total average levy amounts are included within Table 19 of Appendix B.

TABLE 6 MODEL 2: FIXED ITEMS METROPOLITAN GREENFIELD DEVELOPMENT

	% of DCPs in which item is provided	Average items per DCP	Dwellings per Item provision rate	Average Item Cost	Average Item Cost + 1 Standard Deviation	Levy per Dwelling	Levy per Hectare
Community Infrastructure						\$2,267	\$34,281
- Multi Purpose Community Centre	96%	4.0	1,869	\$2,759,922	\$4,236,692	\$2,267	\$34,281
Open Space Facility						\$3,762	\$56,882
- Local Sports Facility	100%	3.4	1,594	\$2,370,633	\$4,142,540	\$2,598	\$39,287
- Local Sports Facility Pavilion	88%	3.4	1,805	\$1,119,376	\$1,783,503	\$988	\$14,937
- Outdoor Hard Surface Courts	42%	1.7	7,351	\$703,808	\$1,292,575	\$176	\$2,659
Total						\$6,029	\$91,163

TABLE 7 MODEL 2: VARIABLE ITEMS METROPOLITAN GREENFIELD DEVELOPMENT

		Average Cost per Unit	Average Cost per Unit + 1 Standard Deviation	Average DCP Dwellings	Ave Levy per Unit per Dwelling
Roads					
Arterial Road	(per lin. m)	\$3,387	\$4,148	10,455	\$0.40
Connector Road, Access/Local Roads	(per lin. m)	\$2,927	\$4,139	11,681	\$0.35
Local Road - New or Upgrade	(per lin. m)	\$2,337	\$3,376	6,225	\$0.54
Intersections					
Signalised Intersection	(per item)	\$1,862,561	\$2,877,783	7,513	\$383.06
Roundabout	(per item)	\$1,185,613	\$2,088,237	6,772	\$308.36
Pedestrian Crossing	(per item)	\$280,089	\$381,545	3,983	\$95.78
Other Road Items					
Road Bridges	(per item)	\$2,509,851	\$4,928,287	6,473	\$761.38
Culverts	(per item)	\$241,000	\$241,000	2,431	\$99.15
Bicycle Paths	(per item)	\$266,628	\$475,492	9,553	\$49.78
Pedestrian Bridges	(per item)	\$319,313	\$532,662	8,152	\$65.34
Rail Crossing	(per item)	\$786,523	\$851,190	5,037	\$168.98
Pedestrian Underpass	(per item)	\$868,000	\$868,000	5,951	\$145.87

INFILL DEVELOPMENT

Based upon the limited metropolitan infill DCPs available for analysis, including the Darebin and Bayside (not adopted) DCPs evidence indicates that infill development in metropolitan settings generates infrastructure costs at approximately 25% of the cost of equivalent greenfield development.

This translates to an equivalent infill development levy of \$1,507 per dwelling under Model 2.

Per unit rate amounts under a variable levy for road items are priced at 25% of the equivalent greenfield cost under Model 2. Equivalent amounts are summarised in Table 11.

2.2.2. REGIONAL & RURAL AREAS

GREENFIELD DEVELOPMENT

Table 8 summarises the standard fixed levy components that have been estimated for regional and rural greenfield development areas within the categories of Community Infrastructure and Open Space Facilities.

The results summarised in Table 8 show that a standard fixed levy amount of \$2,911 per dwelling can be applied to regional and rural greenfield development under Model 2. This amount equates to an amount of \$37,842 per hectare. This amount combines elements which are currently divided between community and development infrastructure. This amount excludes any collection for the provision of land.

Table 9 summarises the per unit rate amounts that would apply under a variable rate component within Model 2 for rural and regional greenfield development areas within the categories of road infrastructure and drainage. It should be noted that these variable amounts are on a per unit

basis, not a total levy basis when comparisons are made with fixed levies used in Models 1 and 2.

Further detail on the amounts used to calculate the 'Average DCP Dwellings' as well as equivalent estimated total average levy amounts are included within Table 20 of Appendix B.

TABLE 8 MODEL 2: FIXED ITEMS REGIONAL / RURAL GREENFIELD DEVELOPMENT

	% of DCPs in which item is provided	Average items per DCP	Dwellings per Item provision rate	Average Item Cost	Average Item Cost + 1 Standard Deviation	Levy per Dwelling	Levy per Hectare
Community Infrastructure							
- Multi Purpose Community Centre	64%	2.3	4,281	\$3,750,045	\$7,059,535	\$1,649	\$21,436
Open Space Facility						\$1,262	\$16,406
- Local Sports Facility	57%	2.1	5,744	\$3,245,853	\$5,895,336	\$1,026	\$13,342
- Local Sports Facility Pavilion	43%	2.2	10,653	\$1,630,610	\$2,329,703	\$219	\$2,843
- Outdoor Hard Surface Courts	29%	1.3	22,805	\$238,856	\$387,103	\$17	\$221
Total						\$2,911	\$37,842

TABLE 9 MODEL 2: VARIABLE ITEMS REGIONAL / RURAL GREENFIELD DEVELOPMENT

		Average Cost per Unit	Average Cost per Unit + 1 Standard Deviation	Average DCP Dwellings	Ave Levy per Unit per Dwelling
Roads					
Arterial Road**	(per lin. m)	\$1,694	\$2,074	10455	\$0.20
Connector Road, Access/Local Roads**	(per lin. m)	\$1,463	\$2,070	11681	\$0.18
Local Road - New or Upgrade**	(per lin. m)	\$1,169	\$1,688	6225	\$0.27
Intersections					
Signalised Intersection	(per item)	\$531,328	\$950,025	5012	\$189.53
Roundabout	(per item)	\$375,793	\$677,137	6898	\$98.16
Pedestrian Crossing	(per item)	\$496,699	\$496,699	1615	\$307.55
Other Road Items					
Road Bridges	(per item)	\$1,025,351	\$1,525,568	4941	\$308.76
Culverts	(per item)	\$564,882	\$814,363	9252	\$88.02
Bicycle Paths	(per item)	\$996,093	\$2,236,249	16128	\$138.66
Pedestrian Bridges	(per item)	\$552,943	\$935,886	1884	\$496.66
Rail Crossing	(per item)	\$2,616,096	\$2,616,096	9779	\$267.52
Pedestrian Underpass*	(per item)	\$868,000	\$868,000	5,951	\$145.87
Drainage					
Drainage Works	(per ha of NDA)	\$22,833	\$38,535		

* No per unit evidence available in Regional and Rural DCPs, Metropolitan rates assumed.

**Per linear meter rates not available for Regional and Rural DCPs, metropolitan rates assumed with discount applied for cost difference between metro and regional / rural average road cost differential.

INFILL DEVELOPMENT

A previous study of Regional and Rural DCPs undertaken by Urban Enterprise within the report 'Review of Local Infrastructure Charges for Regional and Rural Councils' identified that infill charge areas provide an average of 40% of the equivalent cost of greenfield development.

This translates to an equivalent fixed infill development levy of \$1,164 per dwelling for regional and rural development under Model 2.

Per unit rate amounts under a variable levy for road and drainage items are priced at 40% of the equivalent greenfield cost under Model 2. Equivalent amounts are summarised in Table 11.

2.2.3. MODEL 2: SUMMARY

Table 10 and Table 11 provide a summary of the calculated fixed levy and per unit variable amounts for each infrastructure category by development type.

Greenfield fixed levy amounts are expressed in terms of a levy per hectare of net developable land, while infill amounts are expressed on a per dwelling basis.

Variable levy amounts are expressed in terms of a cost per unit for each item. An average levy amount per item based upon a standardised rate of provision is provided as Appendix A of this document.

TABLE 10 MODEL 2: FIXED ITEMS SUMMARY

Fixed	Metro		Regional	
	Greenfield (per hectare)	Infill * (per dwelling)	Greenfield (per hectare)	Infill * (per dwelling)
Community Infrastructure	\$34,281	\$567	\$21,436	\$660
Open Space Facility	\$56,882	\$941	\$16,406	\$505
Total per Dwelling	\$6,029	\$1,507	\$2,911	\$1,164
Total per Hectare	\$91,163	N/A	\$37,842	N/A

TABLE 11 MODEL 2: VARIABLE ITEMS SUMMARY

Variable	Cost per Unit				
		Metro		Regional	
		Greenfield (per unit cost)	Infill * (per unit cost)	Greenfield (per unit cost)	Infill * (per unit cost)
Roads					
Arterial Road	(per lin. m)	\$4,148	\$1,037	\$2,074	\$830
Connector Road, Access/Local Roads	(per lin. m)	\$4,139	\$1,035	\$2,070	\$828
Local Road - New or Upgrade	(per lin. m)	\$3,376	\$844	\$1,688	\$675
Intersections					
Signalised Intersection	(per item)	\$2,877,783	\$719,446	\$950,025	\$380,010
Roundabout	(per item)	\$2,088,237	\$522,059	\$677,137	\$270,855
Pedestrian Crossing	(per item)	\$381,545	\$95,386	\$496,699	\$198,680
Other Road Items					
Road Bridges	(per item)	\$4,928,287	\$1,232,072	\$1,525,568	\$610,227
Culverts	(per item)	\$241,000	\$60,250	\$814,363	\$325,745
Bicycle Paths	(per item)	\$475,492	\$118,873	\$2,236,249	\$894,500
Pedestrian Bridges	(per item)	\$532,662	\$133,165	\$935,886	\$374,354
Rail Crossing	(per item)	\$851,190	\$212,798	\$2,616,096	\$1,046,438
Pedestrian Underpass	(per item)	\$868,000	\$217,000	\$868,000	\$347,200
Drainage					
Drainage Works	(per ha of NDA)			\$38,535	\$15,414

*equivalence ratios can be used to determine levies for commercial development

2.2.4. LAND REQUIREMENT

Table 12 lists the average land requirements as a percentage of Net Developable Area calculated for the fixed levy types of Community Infrastructure and Open Space Facilities. Under Model 2 land requirements for additional 'variable levy' infrastructure categories would be determined by the extent of the works required for the individual DCP.

TABLE 12 MODEL 2: LAND REQUIREMENTS

	% of NDA
Community Infrastructure	0.56%
Open Space Facilities	7.69%

2.3. MODEL 3: INFRASTRUCTURE BASKET LEVY

Model 3 uses a variable levy 'infrastructure basket' method which would be customised based upon the infrastructure requirements of specific development areas.

The following items would be provided at per unit rates in accordance with the extent to which the development area required these items:

Community Infrastructure, including:

- Multi purpose community centres

Local Sports Facilities, including:

- 'Multi sport' facilities
- Oval playing fields
- Rectangular playing fields
- Lawn bowls facilities
- Pavilions for local sports facilities

Hard Surface Outdoor Sports Courts, including:

- Netball Courts
- Tennis Courts

Road Construction, including:

- Arterial Roads
- Connector or Access/Local Roads
- New or Upgraded local roads

Intersections, including

- Signalised intersections
- Roundabouts
- Pedestrian crossings

Other road items, including:

- Road Bridges
- Culverts
- Bicycle Paths
- Pedestrian Bridges
- Rail Crossings
- Pedestrian Underpasses

Drainage, including:

- All drainage works

A levy for drainage items should only apply to rural and regional DCP areas, in metropolitan areas Melbourne Water's charge scheme for drainage applies to development.

2.3.1. METROPOLITAN AREAS

GREENFIELD DEVELOPMENT

Table 13 details the per unit variable costs for infrastructure items within metropolitan development areas based upon existing average infrastructure costs and the average number of dwellings per DCP for which the item has been provided. It should be noted that these variable amounts are on a per unit basis, not a total levy basis when comparisons are made with fixed levies used in Models 1 and 2.

Further detail on the amounts used to calculate the 'Average DCP Dwellings' as well as equivalent estimated total average levy amounts are included within Table 19 of Appendix B.

TABLE 13 MODEL 3: BASKET ITEMS METROPOLITAN GREENFIELD DEVELOPMENT

		Average Cost per Unit	Average Cost per Unit + 1 Standard Deviation	Average DCP Dwellings	Ave Levy per Unit per Dwelling
Community Infrastructure Items					
Multi Purpose Community Centre	(per item)	\$2,759,922	\$4,236,692	7,085	\$597.95
Local Sports Facility					
Multi-Sport (combination of ovals, rectangular fields, bowls and hard courts)	(per item)	\$3,373,561	\$5,486,302	8,260	\$664.22
Ovals	(per item)	\$1,935,029	\$3,094,230	6,070	\$509.75
Rectangular	(per item)	\$2,328,073	\$3,636,041	7,477	\$486.31
Bowls	(per item)	\$308,020	\$318,214	3,076	\$103.44
Pavilions					
Local Sports Facility Pavilion	(per item)	\$1,119,376	\$1,783,503	5,416	\$329.29
Outdoor Hard Surface Courts					
Netball	(per item)	\$136,136	\$205,374	6,500	\$31.60
Tennis	(per item)	\$970,984	\$1,493,053	3,908	\$382.09
Roads					
Arterial Road	(per lin. m)	\$3,387	\$4,148	10,455	\$0.40
Connector Road, Access/Local Roads	(per lin. m)	\$2,927	\$4,139	11,681	\$0.35
Local Road - New or Upgrade	(per lin. m)	\$2,337	\$3,376	6,225	\$0.54
Intersections					
Signalised Intersection	(per item)	\$1,862,561	\$2,877,783	7,513	\$383.06
Roundabout	(per item)	\$1,185,613	\$2,088,237	6,772	\$308.36
Pedestrian Crossing	(per item)	\$280,089	\$381,545	3,983	\$95.78
Other Road Items					
Road Bridges	(per item)	\$2,509,851	\$4,928,287	6,473	\$761.38
Culverts	(per item)	\$241,000	\$241,000	2,431	\$99.15
Bicycle Paths	(per item)	\$266,628	\$475,492	9,553	\$49.78
Pedestrian Bridges	(per item)	\$319,313	\$532,662	8,152	\$65.34
Rail Crossing	(per item)	\$786,523	\$851,190	5,037	\$168.98
Pedestrian Underpass	(per item)	\$868,000	\$868,000	5,951	\$145.87

INFILL DEVELOPMENT

Per unit rate amounts under a variable levy for road items are priced at 25% of the equivalent greenfield cost under Model 3. Equivalent amounts are summarised in Table 15.

2.3.2. REGIONAL & RURAL AREAS

GREENFIELD DEVELOPMENT

Table 14 details the per unit variable costs for infrastructure items within regional and rural areas based upon existing average infrastructure costs and the average number of dwellings per DCP for which the item has been provided.

It should be noted that these variable amounts are on a per unit basis, not a total levy basis when comparisons are made with fixed levies used in Models 1 and 2.

Further detail on the amounts used to calculate the 'Average DCP Dwellings' as well as equivalent estimated total average levy amounts are included within Table 20 of Appendix B.

TABLE 14 MODEL 3: BASKET ITEMS REGIONAL & RURAL GREENFIELD DEVELOPMENT

		Average Cost per Unit	Average Cost per Unit + 1 Standard Deviation	Average DCP Dwellings	Ave Levy per Unit per Dwelling
Community Infrastructure Items					
Multi Purpose Community Centre	(per item)	\$3,750,045	\$7,059,535	6,422	\$1,099.31
Local Sports Facility					
Multi-Sport (combination of ovals, rectangular fields, bowls and hard courts)	(per item)	\$3,199,114	\$5,667,899	7,276	\$779.01
Ovals*	(per item)	\$1,935,029	\$3,094,230	6,070	\$510
Rectangular	(per item)	\$1,822,500	\$1,822,500	2,347	\$776.52
Bowls*	(per item)	\$308,020	\$318,214	3,076	\$103
Pavilions					
Local Sports Facility Pavilion	(per item)	\$1,630,610	\$2,329,703	9,892	\$235.50
Outdoor Hard Surface Courts					
Netball	(per item)	\$186,936	\$186,936	9,779	\$19.12
Tennis	(per item)	\$390,854	\$478,000	10,658	\$44.85
Roads					
Arterial Road**	(per lin. m)	\$1,694	\$2,074	10,455	\$0.20
Connector Road, Access/Local Roads**	(per lin. m)	\$1,463	\$2,070	11,681	\$0.18
Local Road - New or Upgrade**	(per lin. m)	\$1,169	\$1,688	6,225	\$0.27
Intersections					
Signalised Intersection	(per item)	\$531,328	\$950,025	5,012	\$189.53
Roundabout	(per item)	\$375,793	\$677,137	6,898	\$98.16
Pedestrian Crossing	(per item)	\$496,699	\$496,699	1,615	\$307.55
Other Road Items					
Road Bridges	(per item)	\$1,025,351	\$1,525,568	4,941	\$308.76
Culverts	(per item)	\$564,882	\$814,363	9,252	\$88.02
Bicycle Paths	(per item)	\$996,093	\$2,236,249	16,128	\$138.66
Pedestrian Bridges	(per item)	\$552,943	\$935,886	1,884	\$496.66
Rail Crossing	(per item)	\$2,616,096	\$2,616,096	9,779	\$267.52
Pedestrian Underpass*	(per item)	\$868,000	\$868,000	5,951	\$145.87
Drainage					
Drainage Works	(per ha of NDA)	\$22,833	\$38,535		

* No per unit evidence available in Regional and Rural DCPs, Metropolitan rates assumed.

**Per linear meter rates not available for Regional and Rural DCPs, metropolitan rates assumed with discount applied for cost difference between metro and regional / rural average road cost differential.

INFILL DEVELOPMENT

Per unit rate amounts under a variable levy for road and drainage items are priced at 40% of the equivalent greenfield cost under Model 2. Equivalent amounts are summarised in Table 15.

2.3.3. MODEL 3: SUMMARY

Table 11 provides a summary of the calculated per unit variable amounts for each infrastructure category by development type. Levy amounts are expressed in terms of a cost per unit for each item. An average levy amount per item based upon a standardised rate of provision is provided as Appendix A of this document.

TABLE 15 MODEL 3: SUMMARY COST PER UNIT

		Cost per Unit			
		Metro		Regional	
		Greenfield	Infill *	Greenfield	Infill *
		(per unit cost)	(per unit cost)	(per unit cost)	(per unit cost)
Community Infrastructure Items					
Multi Purpose Community Centre	(per item)	\$4,236,692	\$1,059,173	\$7,059,535	\$2,823,814
Local Sports Facility					
Multi-Sport (combination of ovals, rectangular fields, bowls and hard courts)	(per item)	\$5,486,302	\$1,371,576	\$5,667,899	\$2,267,160
Ovals	(per item)	\$3,094,230	\$773,558	\$3,094,230	\$1,237,692
Rectangular	(per item)	\$3,636,041	\$909,010	\$1,822,500	\$729,000
Bowls	(per item)	\$318,214	\$79,554	\$318,214	\$127,286
Pavilions					
Local Sports Facility Pavilion	(per item)	\$1,783,503	\$445,876	\$2,329,703	\$931,881
Outdoor Hard Surface Courts					
Netball	(per item)	\$205,374	\$51,344	\$186,936	\$74,774
Tennis	(per item)	\$1,493,053	\$373,263	\$478,000	\$191,200
Roads					
Arterial Road	(per lin. m)	\$4,148	\$1,037	\$2,074	\$830
Connector Road, Access/Local Roads	(per lin. m)	\$4,139	\$1,035	\$2,070	\$828
Local Road - New or Upgrade	(per lin. m)	\$3,376	\$844	\$1,688	\$675
Intersections					
Signalised Intersection	(per item)	\$2,877,783	\$719,446	\$950,025	\$380,010
Roundabout	(per item)	\$2,088,237	\$522,059	\$677,137	\$270,855
Pedestrian Crossing	(per item)	\$381,545	\$95,386	\$496,699	\$198,680
Other Road Items					
Road Bridges	(per item)	\$4,928,287	\$1,232,072	\$1,525,568	\$610,227
Culverts	(per item)	\$241,000	\$60,250	\$814,363	\$325,745
Bicycle Paths	(per item)	\$475,492	\$118,873	\$2,236,249	\$894,500
Pedestrian Bridges	(per item)	\$532,662	\$133,165	\$935,886	\$374,354
Rail Crossing	(per item)	\$851,190	\$212,798	\$2,616,096	\$1,046,438
Pedestrian Underpass	(per item)	\$868,000	\$217,000	\$868,000	\$347,200
Drainage					
Drainage Works	(per ha of NDA)			\$38,535	\$15,414

*equivalence ratios can be used to determine levies for commercial development

2.4. COMPARISON WITH ACTUAL LEVY AMOUNTS

Table 16 and Table 17 list historic development contribution amounts for the DCPs analysed in this report.

TABLE 16 METROPOLITAN AREAS – EXISTING DCP LEVY AMOUNTS (PER HECTARE)

Year	Municipality	DCP	Full DCP Levy Amount (DIL+CIL+Land)	Land Component	DIL Levy Component	CIL Levy Component (Uncapped)	DIL + CIL (Uncapped)
2007	Wyndham	Westmeadows Lane & Marquands Rd	\$89,566	\$5,010	\$72,825	\$11,731	\$84,556
2008	Cardinia	Cardinia Road Precinct Cell 1	\$179,073	\$47,050	\$116,699	\$15,324	\$132,023
2008	Cardinia	Cardinia Road Precinct Cell 2	\$150,824	\$56,810	\$74,118	\$19,896	\$94,015
2008	Cardinia	Cardinia Road Precinct Cell 3	\$178,930	\$42,396	\$115,458	\$21,076	\$136,534
2008	Cardinia	Cardinia Road Precinct Cell 5	\$211,568	\$53,231	\$140,218	\$18,119	\$158,337
2008	Cardinia	Cardinia Road Precinct Cell 6	\$206,459	\$60,079	\$127,263	\$19,116	\$146,379
2008	Whittlesea	Epping North East LSP	\$141,010	\$38,681	\$102,329	\$0	\$102,329
2008	Wyndham	Tarneit West	\$101,758	\$5,400	\$84,628	\$11,731	\$96,358
2010	Casey	Cranbourne West Area 2	\$214,507	\$109,931	\$89,169	\$15,406	\$104,575
2010	Casey	Cranbourne West Area 3	\$202,515	\$108,717	\$78,392	\$15,406	\$93,799
2010	Casey	Cranbourne East	\$177,641	\$49,883	\$116,545	\$11,213	\$127,758
2010	Hume	Craigieburn R2 Precinct	\$123,884	\$40,565	\$73,566	\$9,754	\$83,319
2010	Melton	Taylor's Hill West	\$214,905	\$64,072	\$125,290	\$25,543	\$150,833
2010	Melton	Melton North	\$179,705	\$18,787	\$123,081	\$37,837	\$160,918
2010	Melton	Toolern Area 1	\$162,369	\$37,732	\$109,043	\$15,594	\$124,637
2010	Melton	Toolern Area 2	\$164,695	\$40,601	\$107,977	\$16,116	\$124,093
2010	Melton	Toolern Area 3	\$153,320	\$41,908	\$107,329	\$4,082	\$111,411
2010	Wyndham	Truganina South	\$268,857	\$77,933	\$165,876	\$25,047	\$190,924
2011	Cardina	Officer	\$296,883	\$48,383	\$230,289	\$18,211	\$248,500
2011	Casey	Clyde North	\$267,874	\$121,959	\$124,913	\$21,002	\$145,915
2011	Casey	Cranbourne North (Stage 2)	\$214,494	\$85,577	\$114,153	\$14,764	\$128,917
2011	Hume	Greenvale North (R1) (Mt Aitken Neighbourhood)	\$91,221	\$0	\$62,275	\$28,946	\$91,221
2011	Hume	Greenvale North (R1) (Mickelham Neighbourhood)	\$105,142	\$36,529	\$44,846	\$23,767	\$68,613
2011	Hume	Greenvale West (R3)	\$170,555	\$43,368	\$94,505	\$32,682	\$127,187
2012	Casey	Botanic Ridge	\$227,130	\$75,911	\$120,595	\$30,624	\$151,219
2012	Hume	Merrifield West	\$191,133	\$94,659	\$78,031	\$18,443	\$96,474
2012	Melton	Diggers Rest	\$174,273	\$13,192	\$148,631	\$12,450	\$161,081
2012	Melton Mitchell,	Rockbank North	\$267,710	\$0	\$254,461	\$13,248	\$267,710
2012	Whittlesea	Lockerby North	\$247,286	\$25,932	\$204,303	\$17,052	\$221,355
2012	Multiple	Lockerbie	\$299,055	\$99,497	\$199,558	\$0	\$199,558
2012	Wyndham	Manor Lakes	\$148,003	\$17,057	\$116,358	\$14,588	\$130,946
Average			\$187,818	\$50,350	\$120,088	\$17,380	\$137,468
Average + 1 St Deviation			\$167,528	\$243,940	\$83,250	\$167,528	\$25,766

TABLE 17 REGIONAL / RURAL AREAS – EXISTING DCP LEVY AMOUNTS (PER DWELLING)

Year	Municipality	DCP	Full DCP Levy Amount (DIL+CIL+Land)	Land Component	DIL Levy Component	CIL Levy Component (Uncapped)	DIL + CIL (Uncapped)
2006	Baw Baw	Baw Baw (Warragul/Drouin)	\$3,812	\$236	\$2,418	\$1,159	\$3,576
2006	Mildura	Mildura South Development Contributions Plan	\$5,310	\$0	\$5,310	\$0	\$5,310
2006	Mildura	No. 2	\$2,036	\$0	\$2,036	\$0	\$2,036

2007	Mildura	Red Cliffs	\$22,355	\$4,909	\$17,447	\$0	\$17,447
2008	Warrnambool	North Denington	n/a	n/a	n/a	n/a	n/a
2009	Greater Shepparton	Mooroopna West	\$6,341	\$0	\$6,341	\$0	\$6,341
2009	Surf Coast	Torquay / Jan Juc	\$4,882	\$94	\$4,787	\$0	\$4,787
2011	Geelong	Jetty Road	\$10,068	\$607	\$9,461	\$0	\$9,461
2011	Macedon Ranges	Romsey	\$3,049	\$149	\$2,900	\$0	\$2,900
2011	Swan Hill	South West Development Precinct	\$15,515	\$1,406	\$14,110	\$0	\$14,110
2012	Geelong	Armstrong Creek East	\$14,332	\$0	\$13,418	\$914	\$14,332
2012	Geelong	Armstrong Creek West	\$16,666	\$817	\$14,678	\$1,171	\$15,849
2012	Warrnambool	North of the Merri	\$12,769	\$3,009	\$9,760	\$0	\$9,760
Average			\$9,761	\$936	\$8,555	\$270	\$8,826
Average + 1 St Deviation			\$15,985	\$2,400	\$13,680	\$742	\$14,044

APPENDIX A AVERAGE LEVIES PER ITEM

TABLE 18 SUMMARY OF AVERAGE VARIABLE LEVIES PER ITEM: MODEL 2 & MODEL 3

	Levy per Item				
	Metro		Regional		
	Greenfield	Infill	Greenfield	Infill	
	Levy per dwelling	Levy per dwelling	Levy per dwelling	Levy per dwelling	
Community Infrastructure Items					
Multi Purpose Community Centre	(per item)	\$598	\$149	\$1,099	\$440
Local Sports Facility					
Multi-Sport (combination of ovals, rectangular fields, bowls and hard courts)	(per item)	\$664	\$166	\$779	\$312
Ovals	(per item)	\$510	\$127	\$510	\$204
Rectangular	(per item)	\$486	\$122	\$777	\$311
Bowls	(per item)	\$103	\$26	\$103	\$41
Pavilions					
Local Sports Facility Pavilion	(per item)	\$329	\$82	\$236	\$94
Outdoor Hard Surface Courts					
Netball	(per item)	\$32	\$8	\$19	\$8
Tennis	(per item)	\$382	\$96	\$45	\$18
Roads					
Arterial Road	(per lin. m)	\$0.40 (per lin. m)	\$0.10 (per lin. m)	\$0.20 (per lin. m)	\$0.08 (per lin. m)
Connector Road, Access/Local Roads	(per lin. m)	\$0.35 (per lin. m)	\$0.09 (per lin. m)	\$0.18 (per lin. m)	\$0.07 (per lin. m)
Local Road - New or Upgrade	(per lin. m)	\$0.54 (per lin. m)	\$0.14 (per lin. m)	\$0.27 (per lin. m)	\$0.11 (per lin. m)
Intersections					
Signalised Intersection	(per item)	\$460	\$115	\$190	\$76
Roundabout	(per item)	\$569	\$142	\$98	\$39
Pedestrian Crossing	(per item)	\$287	\$72	\$308	\$123
Other Road Items					
Road Bridges	(per item)	\$2,284	\$571	\$309	\$124
Culverts	(per item)	\$2,380	\$595	\$88	\$35
Bicycle Paths	(per item)	\$171	\$43	\$139	\$55
Pedestrian Bridges	(per item)	\$523	\$131	\$497	\$199
Rail Crossing	(per item)	\$2,028	\$507	\$268	\$107
Pedestrian Underpass	(per item)	\$3,501	\$875	\$3,501	\$1,400
Drainage					
Drainage Works	(per ha of NDA)			\$2,964	\$1,186

APPENDIX B VARIABLE ITEMS – CALCULATION DETAIL

TABLE 19 METROPOLITAN VARIABLE ITEMS – CALCULATION DETAIL

		Average Cost per Unit + 1 Standard Deviation	Provision Rate	Items per DCP	Demand units per item	Road Items - Average Units	Average DCP Dwellings	Ave Levy per Unit per Dwelling	Equivalent Average Total DCP Levy Amount per Dwelling
Community Infrastructure Items									
Multi Purpose									
Community Centre	(per item)	\$4,236,692	96%	4.0	1,791		7,085	\$597.95	\$2,267
Local Sports Facility									
Multi-Sport (combination of ovals, rectangular fields, bowls and hard courts)									
	(per item)	\$5,486,302	54%	2.6	3,158		8,260	\$664.22	\$941
Ovals	(per item)	\$3,094,230	50%	2.2	2,802		6,070	\$509.75	\$552
Rectangular	(per item)	\$3,636,041	38%	1.7	4,486		7,477	\$486.31	\$304
Bowls	(per item)	\$318,214	8%	1.0	3,076		3,076	\$103.44	\$9
Pavilions									
Local Sports Facility Pavilion	(per item)	\$1,783,503	88%	3.4	1,580		5,416	\$329.29	\$988
Outdoor Hard Surface Courts									
Netball	(per item)	\$205,374	17%	2.0	3,250		6,500	\$31.60	\$11
Tennis	(per item)	\$1,493,053	29%	1.3	3,039		3,908	\$382.09	\$143
Roads									
Arterial Road	(per lin. m)	\$4,148	71%	4.0	2,614	1,430	10,455	\$0.40	\$1,608
Connector Road, Access/Local Roads	(per lin. m)	\$4,139	33%	4.5	2,596	1,442	11,681	\$0.35	\$766
Local Road - New or Upgrade	(per lin. m)	\$3,376	29%	2.6	2,421	957	6,225	\$0.54	\$389
Intersections									
Signalised Intersection	(per item)	\$2,877,783	83%	6.4	1,169		7,513	\$383.06	\$2,051
Roundabout	(per item)	\$2,088,237	54%	2.7	2,480		6,772	\$308.36	\$456
Pedestrian Crossing	(per item)	\$381,545	33%	1.0	3,983		3,983	\$95.78	\$32
Other Road Items									
Road Bridges	(per item)	\$4,928,287	33%	2.9	2,251		6,473	\$761.38	\$730
Culverts	(per item)	\$241,000	4%	3.0	810		2,431	\$99.15	\$12
Bicycle Paths	(per item)	\$475,492	29%	6.7	1,423		9,553	\$49.78	\$97
Pedestrian Bridges	(per item)	\$532,662	13%	2.7	3,057		8,152	\$65.34	\$22
Rail Crossing	(per item)	\$851,190	8%	1.5	3,358		5,037	\$168.98	\$21
Pedestrian Underpass	(per item)	\$868,000	4%	5.0	1,190		5,951	\$145.87	\$30

TABLE 20 REGIONAL / RURAL VARIABLE ITEMS – CALCULATION DETAIL

		Average Cost per Unit + 1 Standard Deviation	Provision Rate	Items per DCP	Demand units per item	Road Average Units	Average DCP Dwellings	Ave Levy per Unit per Dwelling	Equivalent Average Total DCP Levy Amount per Dwelling
Community Infrastructure Items									
Multi Purpose Community Centre	(per item)	\$7,059,535	64%	2.3	2,752		6,422	\$1,099.31	\$1,649
Local Sports Facility									
Multi-Sport (combination of ovals, rectangular fields, bowls and hard courts)	(per item)	\$5,667,899	57%	1.5	4,851		7,276	\$779.01	\$668
Ovals*	(per item)	\$3,094,230	n/a	n/a	n/a		6,070	\$509.75	\$552
Rectangular	(per item)	\$1,822,500	7%	1.0	2,347		2,347	\$776.52	\$55
Bowls*	(per item)	\$318,214	n/a	n/a	n/a		3,076	\$103.44	\$9
Pavilions									
Local Sports Facility Pavilion	(per item)	\$2,329,703	43%	2.2	4,566		9,892	\$235.50	\$219
Outdoor Hard Surface Courts									
Netball	(per item)	\$186,936	7%	1.0	9,779		9,779	\$19.12	\$1
Tennis	(per item)	\$478,000	14%	1.0	10,658		10,658	\$44.85	\$6
Roads									
Arterial Road** Connector Road, Access/Local Roads**	(per lin. m)	\$2,074	n/a	n/a	n/a	1,430	10,455	\$0.20	\$1,608
Local Road - New or Upgrade**	(per lin. m)	\$2,070	n/a	n/a	n/a	1,442	11,681	\$0.18	\$766
	(per lin. m)	\$1,688	n/a	n/a	n/a	957	6,225	\$0.27	\$389
Intersections									
Signalised Intersection	(per item)	\$950,025	50%	2.6	1,949		5,012	\$189.53	\$244
Roundabout	(per item)	\$677,137	43%	2.8	2,435		6,898	\$98.16	\$119
Pedestrian Crossing	(per item)	\$496,699	7%	1.0	1,615		1,615	\$307.55	\$22
Other Road Items									
Road Bridges	(per item)	\$1,525,568	14%	3.0	1,647		4,941	\$308.76	\$132
Culverts	(per item)	\$814,363	14%	1.5	6,168		9,252	\$88.02	\$19
Bicycle Paths	(per item)	\$2,235,488	86%	5.8	2,765		16,128	\$138.61	\$693
Pedestrian Bridges	(per item)	\$935,886	14%	2.5	754		1,884	\$496.66	\$177
Rail Crossing	(per item)	\$2,616,096	7%	1.0	9,779		9,779	\$267.52	\$19
Pedestrian Underpass*	(per item)	\$868,000	n/a	n/a	n/a		5,951	\$145.87	\$30
Drainage									
Drainage Works	(per ha of NDA)	\$37,797	71%	4.4	2,113				