

Liverpool Contributions Plan 2001

January 2008

Refer to *Liverpool Contributions Plan 2006 (Edmondson Park)*

for Edmondson Park

Refer to *Liverpool Contributions Plan 2007 (Liverpool City Centre)*

for Liverpool City Centre

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1. Introduction

Liverpool continues to experience significant new urban development, which creates a need for additional public amenities and services. In order that existing residents are not burdened with the cost of providing these public services and amenities it is necessary for new urban development to provide these at no cost to existing residents.

Section 94 of the *Environmental Planning and Assessment Act, 1979* enables the Council to require new urban development to provide these public services and amenities at no cost to Council. In particular Section 94 enables the Council to require, as a condition of development consent, that land is dedicated or a cash contribution is made or both, for the provision of public services and amenities. Any such requirement must be in accordance with a contributions plan prepared by the Council.

The *Liverpool Contributions Plan 2001* provides information on the extent of anticipated new development, the extent of new public services and amenities needed to support the new development and the contributions that the new development must make to fund the public services and amenities.

Section 1 provides the monetary contribution rates for development in the various areas of the Liverpool LGA. There is a hierarchy of contributions levied under this plan. That is, a development may be levied for facilities that serve all of Liverpool (City Wide Facilities), a group of suburbs (District Facilities) and a particular suburb or release area (Local Facilities).

Section 2 provides background on S94 of the Act, details on how development will be levied contributions and when the contributions plan was adopted and subsequently amended.

Section 3 outlines how Council's vision for Liverpool, which is contained in its Strategic Plan and its annual Corporate Plans relate to the contributions plan. It provides an outline on how this plan relates to *Liverpool Local Environment Plan 2008*, other planning instruments and *Liverpool Development Control Plan 2008*. It also provides a guide on the scope of public services and amenities that are considered needed for residents in Liverpool. It also provides information on City Wide Development and Demographic Trends.

Sections 4 - 12 provides details on the actual facilities that contributions will fund, the nexus between development and facilities to be funded by contributions, the formulae for determining the contributions and a general comment on the timing of facilities. As the *Liverpool Local Environmental Plan 2008* is amended to allow new urban areas are released additional sections will be added.

The range of public services and amenities that are funded by developer contributions includes:

- § **Community Facilities** - including multi-purpose community centres, libraries and cultural facilities.
- § **Recreation Facilities** - including bushland reserves, outdoor passive facilities, Indoor and outdoor sporting facilities and bike paths.
- § **Transport** - including various pedestrian and traffic facilities, public transport facilities, frontage to public land uses and sub arterial roads.
- § **Drainage** - including natural creek corridors, pipes and basins.

2. Schedule of Contributions

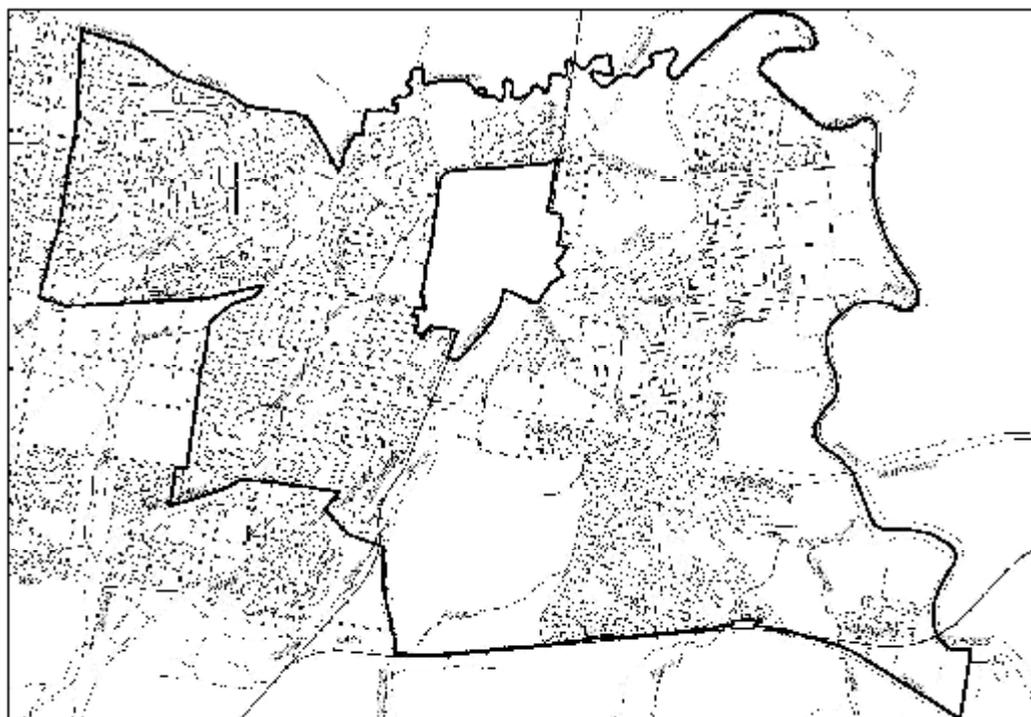
The following tables apply to land, which is the subject of a Development Application.

2.1 Established Areas

Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Community Facilities					
City Wide					
Central Library Extensions	\$153	\$148	\$148	\$110	\$57
Liverpool Museum	\$45	\$44	\$44	\$33	\$17
Powerhouse	\$56	\$55	\$55	\$41	\$21
District	\$133	\$125	\$125	\$93	\$48
Recreation					
City Wide					
Indoor Recreation and Entertainment Complex	\$255	\$247	\$247	\$183	\$95
Whitlam Centre Extensions	\$113	\$109	\$109	\$81	\$42
Georges River Parklands	\$198	\$192	\$192	\$142	\$74
District	\$403	\$379	\$379	\$281	\$147
Local	\$2,017	\$1,895	\$1,895	\$1,406	\$733
Administration	\$40	\$38	\$38	\$23	\$12
Totals	\$3,413	\$3,231	\$3,231	\$2,392	\$1,248

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1.

The Established Areas includes the areas shown on the map below.



2.2 Pleasure Point

Purpose	Dwelling
Community Facilities	
City Wide	
Central Library Extensions	\$153
Liverpool Museum	\$45
Powerhouse	\$56
Recreation	
City Wide	
Indoor Recreation and Entertainment Complex	\$255
Whitlam Centre Extensions	\$113
Georges River Parklands	\$198
Transport (select sub catchment)	
River Heights Road	\$17,145
River View Road	\$2,569
Green Street	\$2,134
Inter-allotment Drainage	\$2,059
Bus Turning Area	\$1,313
Land Acquisition	\$349
Administration	\$50
Professional & Legal Fees	\$179
Plan Establishment Costs	\$308

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1. Pleasure Point includes the areas shown on the map below.



2.3 Hinchinbrook Green Valley

Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Community Facilities					
City Wide					
Central Library Extensions	\$177	\$158	\$158	\$110	\$86
Liverpool Museum	\$52	\$47	\$47	\$33	\$25
Powerhouse	\$65	\$58	\$58	\$41	\$32
Local	\$1,871	\$1,668	\$1,668	\$1,163	\$910
Recreation					
City Wide					
Indoor Recreation and Entertainment Complex	\$294	\$263	\$263	\$183	\$143
Whitlam Centre Extensions	\$131	\$116	\$116	\$81	\$63
Georges River Parklands	\$229	\$204	\$204	\$142	\$111
Local Recreation - Land	\$5,094	\$4,544	\$4,544	\$3,167	\$2,478
Local Recreation - Works	\$739	\$659	\$659	\$459	\$360
Transport	\$1,378	\$1,234	\$1,234	\$823	\$679
Drainage*	\$1,869	\$1,437	\$1,437	\$1,437	\$1,437
Tree Planting	\$110	\$110	\$110	\$110	\$110
Administration	\$142	\$127	\$127	\$88	\$69
Professional and Legal Fees	\$31	\$28	\$28	\$19	\$15
Totals	\$12,182	\$10,653	\$10,653	\$7,856	\$6,520

*Assumes area of 300 sqm per dwelling

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1.

Hinchinbrook Green Valley includes the area shown on the map.



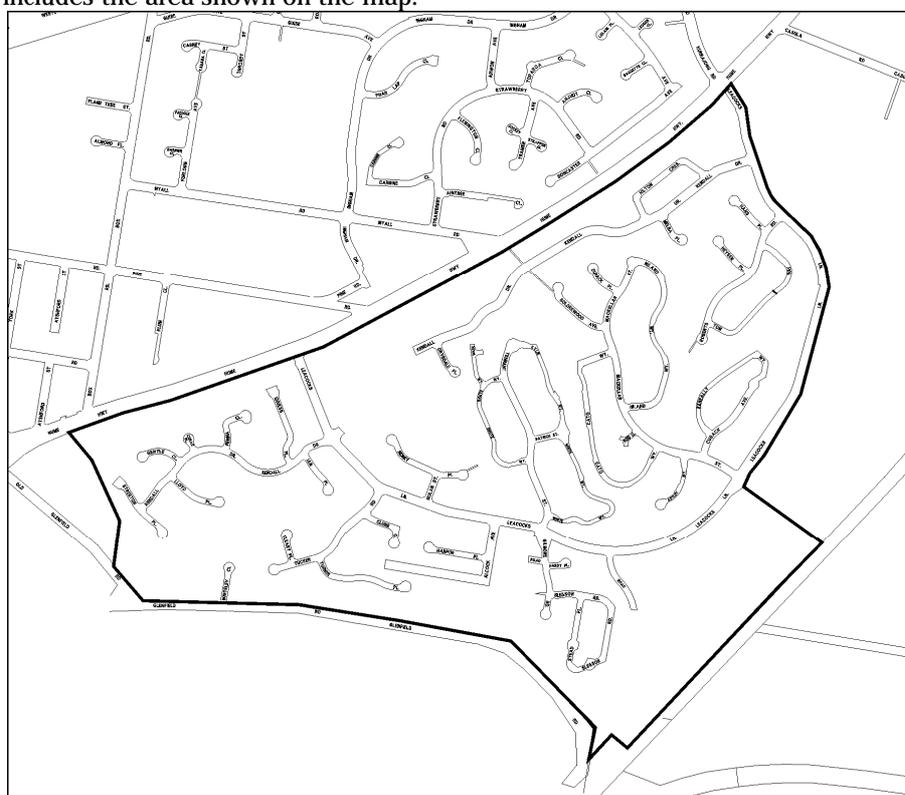
2.4 Casula East

Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Community Facilities					
City Wide					
Central Library Extensions	\$177	\$158	\$158	\$110	\$86
Liverpool Museum	\$52	\$47	\$47	\$33	\$25
Powerhouse	\$65	\$58	\$58	\$41	\$32
Local	\$967	\$862	\$769	\$478	\$233
Recreation					
City Wide					
Indoor Recreation and Entertainment Complex	\$294	\$263	\$263	\$183	\$143
Whitlam Centre Extensions	\$131	\$116	\$116	\$81	\$63
Georges River Parklands	\$229	\$204	\$204	\$142	\$111
Local Recreation - Land	\$2,991	\$2,668	\$2,668	\$1,859	\$1,455
Local Recreation - Works	\$694	\$619	\$619	\$431	\$338
Transport	\$1,567	\$1,403	\$1,403	\$936	\$772
Drainage*	\$1,326	\$1,020	\$1,020	\$1,020	\$1,020
Tree Planting	\$110	\$110	\$110	\$110	\$110
Administration	\$92	\$82	\$82	\$57	\$45
Professional and Legal Fees	\$31	\$28	\$28	\$19	\$15
Totals	\$8,726	\$7,638	\$7,544	\$5,500	\$4,448

*Assumes area of 300 sqm per dwelling

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1.

Casula East includes the area shown on the map.



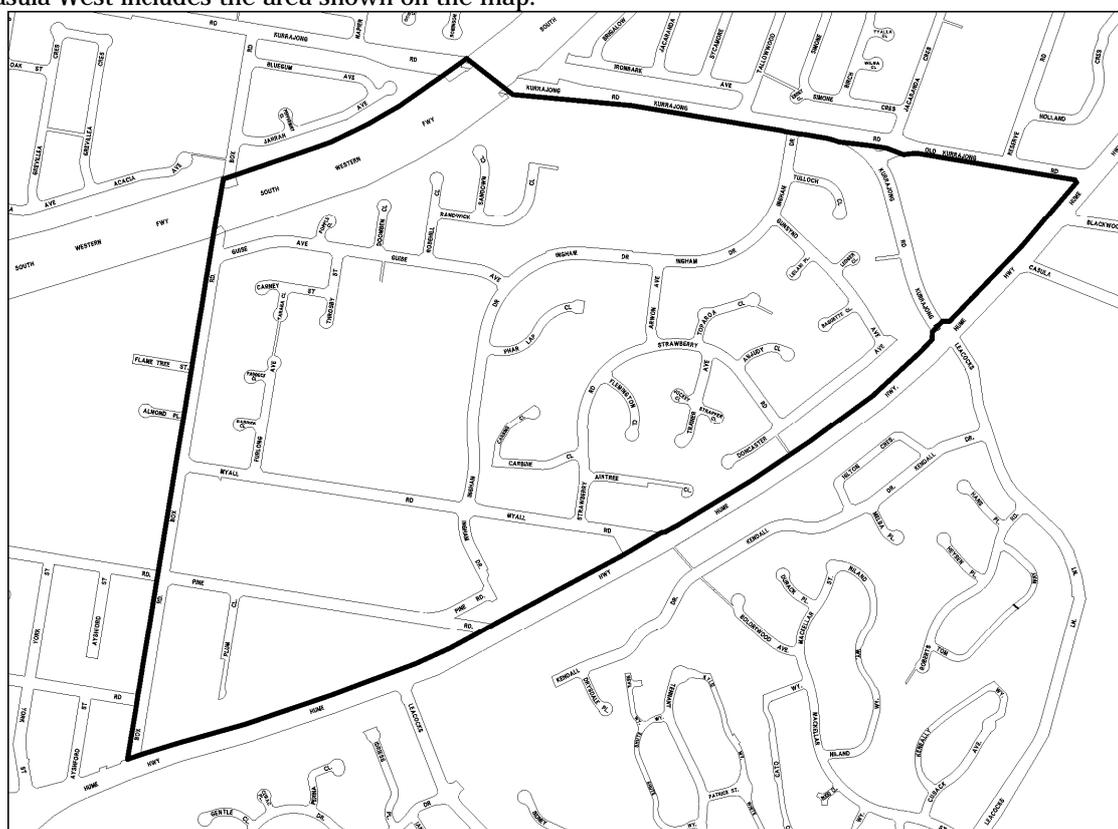
2.5 Casula West

Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Community Facilities					
City Wide					
Central Library Extensions	\$177	\$158	\$158	\$110	\$86
Liverpool Museum	\$52	\$47	\$47	\$33	\$25
Powerhouse	\$65	\$58	\$58	\$41	\$32
Local	\$2,023	\$1,804	\$1,804	\$1,258	\$984
Recreation					
City Wide					
Indoor Recreation and Entertainment Complex	\$294	\$263	\$263	\$183	\$143
Whitlam Centre Extensions	\$131	\$116	\$116	\$81	\$63
Georges River Parklands	\$229	\$204	\$204	\$142	\$111
Local Recreation - Land	\$4,633	\$4,132	\$4,132	\$2,880	\$2,254
Local Recreation - Works	\$477	\$426	\$426	\$297	\$232
Transport	\$1,470	\$1,316	\$1,316	\$878	\$724
Drainage*	\$1,127	\$867	\$867	\$867	\$867
Tree Planting	\$110	\$110	\$110	\$110	\$110
Administration	\$118	\$105	\$105	\$73	\$57
Totals	\$10,906	\$9,606	\$9,606	\$6,952	\$5,690

*Assumes area of 300 sqm per dwelling

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1.

Casula West includes the area shown on the map.



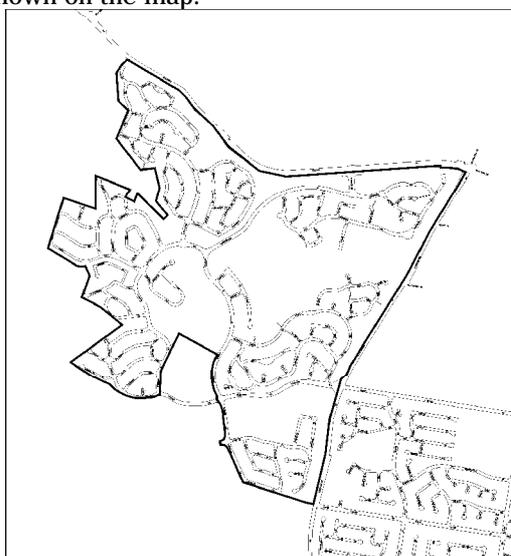
2.6 Cecil Hills

Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Community Facilities					
City Wide					
Central Library Extensions	\$177	\$158	\$158	\$110	\$86
Liverpool Museum	\$52	\$47	\$47	\$33	\$25
Powerhouse	\$65	\$58	\$58	\$41	\$32
District - Land	\$302	\$269	\$269	\$188	\$147
District - Works	\$921	\$821	\$821	\$572	\$448
Local	\$1,175	\$1,048	\$1,048	\$731	\$572
Recreation					
City Wide					
Indoor Recreation and Entertainment Complex	\$294	\$263	\$263	\$183	\$143
Whitlam Centre Extensions	\$131	\$116	\$116	\$81	\$63
Georges River Parklands	\$229	\$204	\$204	\$142	\$111
District Recreation - Land	\$929	\$829	\$829	\$578	\$452
District Recreation - Works	\$392	\$350	\$350	\$244	\$191
Local Recreation - Land	\$4,069	\$3,629	\$3,629	\$2,530	\$1,980
Local Recreation - Works	\$998	\$890	\$890	\$620	\$486
Transport					
District - Land	\$479	\$429	\$429	\$286	\$236
District - Works	\$1,643	\$1,471	\$1,471	\$981	\$809
Local	\$3,152	\$2,822	\$2,822	\$1,882	\$1,552
Drainage*					
District - Land	\$1,201	\$924	\$924	\$924	\$924
District - Works	\$819	\$630	\$630	\$630	\$630
Local	\$2,841	\$2,331	\$2,331	\$2,331	\$2,331
Tree Planting	\$110	\$110	\$110	\$110	\$110
Administration	\$229	\$204	\$204	\$142	\$111
Professional and Legal Fees	\$11	\$10	\$10	\$7	\$6

*Assumes area of 300 sqm per dwelling

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1.

Cecil Hills includes the area shown on the map.



2.7 Hoxton Park, Carnes Hill and Prestons

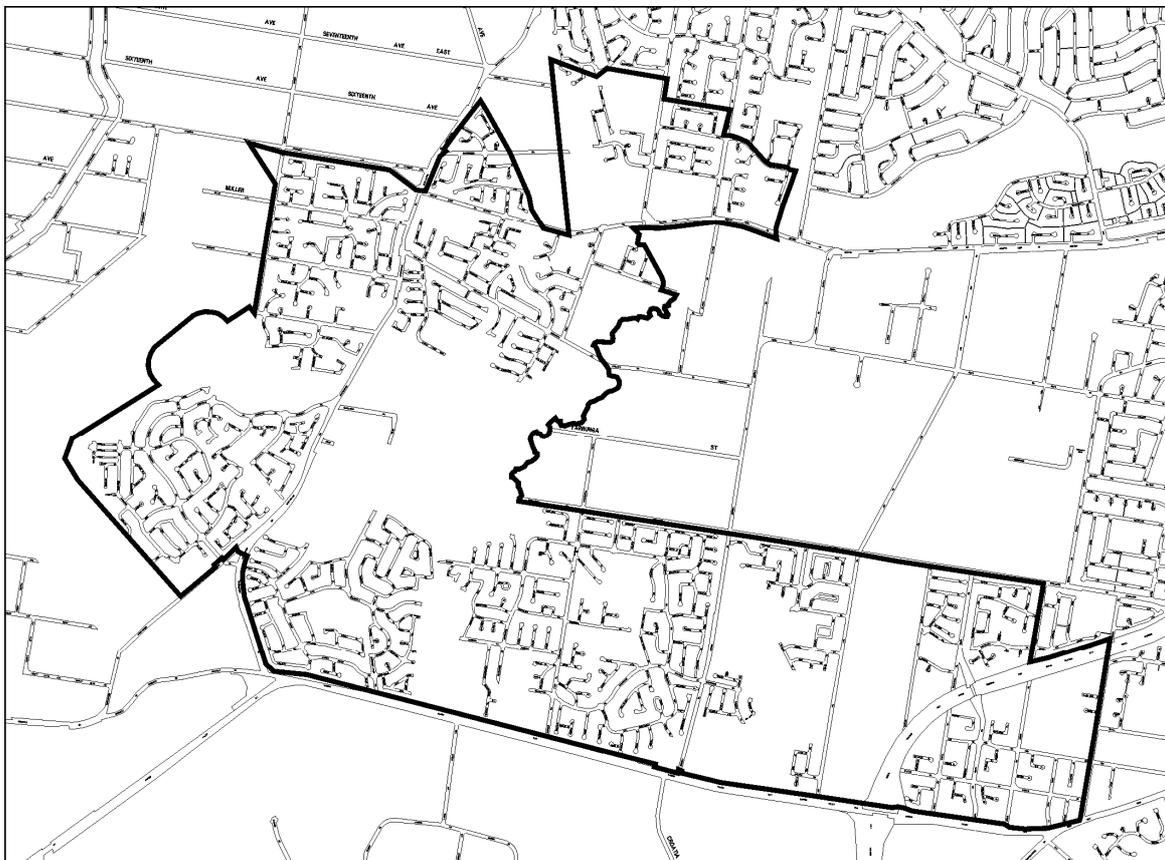
Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Community Facilities					
City Wide					
Central Library Extensions	\$177	\$158	\$158	\$110	\$86
Liverpool Museum	\$52	\$47	\$47	\$33	\$25
Powerhouse	\$65	\$58	\$58	\$41	\$32
District - Land	\$302	\$269	\$269	\$188	\$147
District - Works	\$921	\$821	\$821	\$572	\$448
Local (select sub catchment)					
Hoxton Park - Land	\$675	\$602	\$602	\$419	\$328
Hoxton Park - Works	\$977	\$871	\$871	\$607	\$475
Carnes Hill - Land	\$511	\$456	\$456	\$318	\$249
Carnes Hill - Works	\$713	\$636	\$636	\$443	\$347
Prestons - Land	\$417	\$372	\$372	\$259	\$203
Prestons - Works	\$710	\$633	\$633	\$441	\$345
Recreation					
City Wide					
Indoor Recreation and Entertainment Complex	\$294	\$263	\$263	\$183	\$143
Whitlam Centre Extensions	\$131	\$116	\$116	\$81	\$63
Georges River Parklands	\$229	\$204	\$204	\$142	\$111
District Recreation - Land	\$929	\$829	\$829	\$578	\$452
District Recreation - Embellishment	\$392	\$350	\$350	\$244	\$191
Local Recreation - Land	\$3,959	\$3,531	\$3,531	\$2,461	\$1,926
Local Recreation - Embellishment	\$1,939	\$1,729	\$1,729	\$1,205	\$943
Transport					
District - Land	\$479	\$429	\$429	\$286	\$236
District - Works	\$1,643	\$1,471	\$1,471	\$981	\$809
Local (select sub catchment)					
Cedar Road Catchment - Land	\$736	\$659	\$659	\$440	\$363
Cedar Road Catchment - Works	\$1,424	\$1,275	\$1,275	\$850	\$701
Bernera Road East Catchment - Land	\$736	\$659	\$659	\$440	\$363
Bernera Road East Catchment - Works	\$1,424	\$1,275	\$1,275	\$850	\$701
Bernera Road West Catchment - Land	\$1,045	\$936	\$936	\$624	\$515
Bernera Road West Catchment - Works	\$1,226	\$1,098	\$1,098	\$732	\$604
Cowpasture Road East Catchment - Land	\$1,525	\$1,366	\$1,366	\$911	\$751
Cowpasture Road East Catchment - Works	\$1,559	\$1,397	\$1,397	\$931	\$768
Cowpasture Road West Catchment - Land	\$1,022	\$915	\$915	\$610	\$503
Cowpasture Road West Catchment - Works	\$1,318	\$1,180	\$1,180	\$787	\$649
Nineteenth Avenue Catchment - Land	\$1,138	\$1,019	\$1,019	\$679	\$560
Nineteenth Avenue Catchment - Works	\$1,427	\$1,278	\$1,278	\$852	\$703
Whitford Road South Catchment - Land	\$492	\$441	\$441	\$294	\$242
Whitford Road South Catchment - Works	\$1,970	\$1,764	\$1,764	\$1,176	\$970
Drainage*					
District - Land	\$1,201	\$924	\$924	\$924	\$924
District - Works	\$819	\$630	\$630	\$630	\$630
Local (select sub catchment)					
Catchment 1F - Land	\$549	\$422	\$422	\$422	\$422
Catchment 1F - Works	\$1,805	\$1,388	\$1,388	\$1,388	\$1,388
Precinct 5 Central Catchment - Land	\$367	\$282	\$282	\$282	\$282
Precinct 5 Central Catchment - Works	\$1,474	\$1,134	\$1,134	\$1,134	\$1,134
Precinct 5 West Catchment - Land	\$141	\$108	\$108	\$108	\$108

Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Precinct 5 West Catchment - Works	\$1,310	\$1,008	\$1,008	\$1,008	\$1,008
Cowpasture Road South Catchment - Land	\$225	\$173	\$173	\$173	\$173
Cowpasture Road South Catchment - Works	\$1,248	\$960	\$960	\$960	\$960
Cowpasture Road West Catchment - Land	\$214	\$165	\$165	\$165	\$165
Cowpasture Road West Catchment - Works	\$533	\$410	\$410	\$410	\$410
Nineteenth Avenue East Catchment - Land	\$47	\$36	\$36	\$36	\$36
Nineteenth Avenue East Catchment - Works	\$1,425	\$1,096	\$1,096	\$1,096	\$1,096
Nineteenth Avenue West Catchment - Land	\$514	\$395	\$395	\$395	\$395
Nineteenth Avenue West Catchment - Works	\$1,404	\$1,080	\$1,080	\$1,080	\$1,080
Hoxton Park Road West Catchment - Land	\$255	\$196	\$196	\$196	\$196
Hoxton Park Road West Catchment - Works	\$778	\$598	\$598	\$598	\$598
Twenty First Avenue Catchment - Works	\$1,679	\$1,291	\$1,291	\$1,291	\$1,291
Wilson Road West Catchment - Works	\$554	\$426	\$426	\$426	\$426
Whitford Road South Catchment - Land	\$11	\$9	\$9	\$9	\$9
Whitford Road South Catchment - Works	\$1,151	\$885	\$885	\$885	\$885
Tree Planting	\$110	\$110	\$110	\$110	\$110
Streetscape - Land	\$710	\$633	\$633	\$441	\$345
Streetscape - Embellishment	\$435	\$388	\$388	\$270	\$211
Administration	\$229	\$204	\$204	\$142	\$111
Professional and Legal Fees	\$237	\$212	\$212	\$147	\$115

*Assumes area of 300 sqm per dwelling

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1.

Hoxton Park, Carnes Hill & Prestons include the area shown on the map below.



2.8 Prestons Industrial Area

Subdivision

Table 1 applies to land, which is the subject of a Development Application for the purpose of subdivision where the intention is to prepare the land for subsequent development and/or to on-sell the properties to industrial companies and/or future industrial land developers. This table does not apply to Development Applications which involve the construction of buildings and/or the use of the land for any purpose in cases where the land has not been the subject of a previous approval involving Section 94 Contributions. In such cases, please refer to Table 3.

Table 1

Purpose	Per Ha
Transport - Local (select sub catchment)	
East of M7 - Works	\$8,642
West of M7 - Land	\$12,875
West of M7 - Works	\$6,601
West of M7 & Road A2 East of Bernera Road - Land	\$92,913
West of M7 & Road A2 East of Bernera Road - Works	\$33,091
West of M7 & Road B East of Bernera Road - Land	\$60,580
West of M7 & Road B East of Bernera Road - Land	\$22,390
West of M7 & Road C West of Kookaburra Road - Land	\$978,540
West of M7 & Road C West of Kookaburra Road - Works	\$315,614
West of M7 & Road D East of Kookaburra Road - Land	\$326,191
West of M7 & Road D East of Kookaburra Road - Works	\$114,956
Drainage - Local (select sub catchment)	
Catchment 1D - Land	\$9,597
Catchment 1D - Works	\$58,254
Catchment 1G - Land	\$12,432
Catchment 1G - Works	\$37,486
West of M7 - Land	\$9,714
West of M7 - Works	\$63,339
North of M7 - Land	\$41,965

The above rates for Local Facilities are as at the Mar 2007 Quarter CPI.

The works index is 155.6. The land index is 1.

Buildings (where contribution has been paid for subdivision)

Table 2 are applicable to development applications for the construction of buildings and/or the use of land where Section 94 Contributions in accordance with Table 1 have been paid as a result of subdivision approved after this Plan came into force.

Table 2

Purpose	Per Ha
Transport	
District - Land	\$6,677
District - Works	\$22,923
Drainage	
District - Land	\$20,180
District - Works	\$13,766

The above rates for District Facilities are as at the Sep 2001 Quarter CPI.

The works index is 135.4. The land index is 1.

Purpose	Per Ha
Landscape - Buffer Land (East of M7 only)	\$6,724
Landscape - Buffer Works (East of M7 only)	\$755
Administration	\$1,528
Professional and Legal Fees	\$638
Tree Planting (per 20 m of street frontage)	\$128

The above rates for Local Facilities are as at the Mar 2007 Quarter CPI.

The works index is 155.6. The land index is 1.

Buildings (where contribution for subdivision has not been paid)

Table 3 is applicable to development applications for the construction of buildings and/or the use of land where no previous Section 94 Contributions have been paid.

Table 3

Purpose	Per Ha
Transport	
District - Land	\$6,677
District - Works	\$22,923
Drainage	
District - Land	\$20,180
District - Works	\$13,766

The above rates for District Facilities are as at the Sep 2001 Quarter CPI.

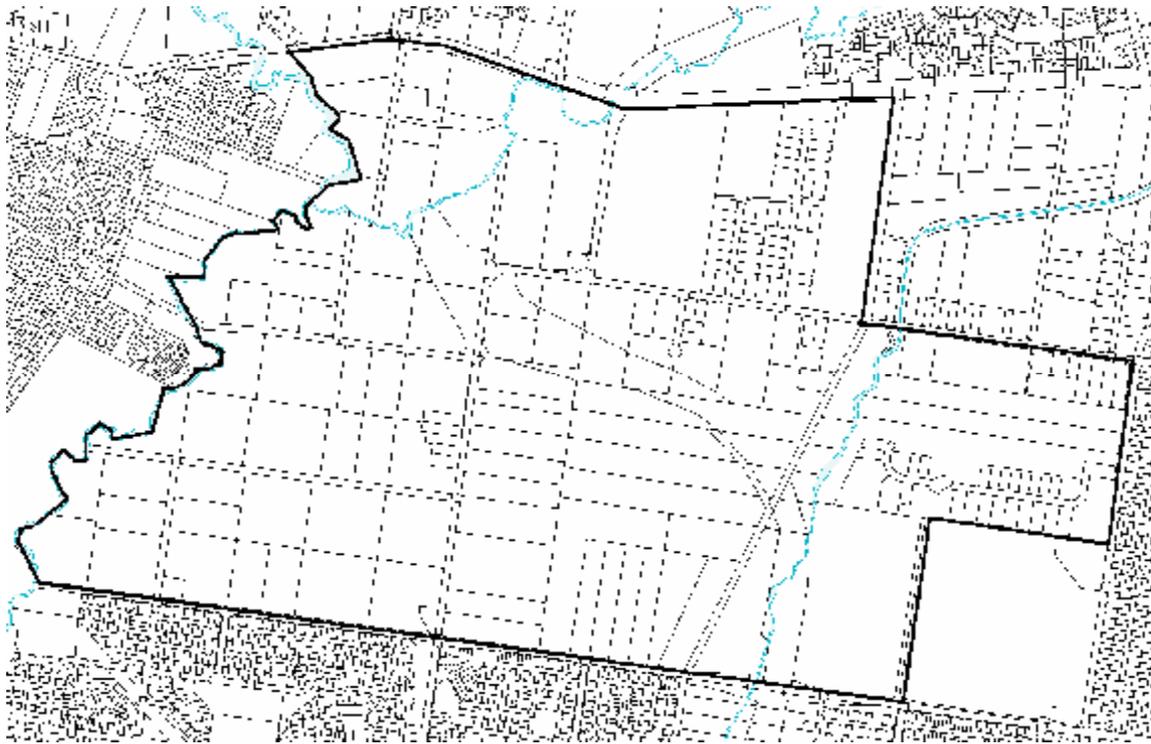
The works index is 135.4. The land index is 1.

Purpose	Per Ha
Transport - Local (select sub catchment)	
East of M7 - Works	\$8,642
West of M7 - Land	\$12,875
West of M7 - Works	\$6,601
West of M7 & Road A2 East of Bernera Road - Land	\$92,913
West of M7 & Road A2 East of Bernera Road - Works	\$33,091
West of M7 & Road B East of Bernera Road - Land	\$60,580
West of M7 & Road B East of Bernera Road - Land	\$22,390
West of M7 & Road C West of Kookaburra Road - Land	\$978,540
West of M7 & Road C West of Kookaburra Road - Works	\$315,614
West of M7 & Road D East of Kookaburra Road - Land	\$326,191
West of M7 & Road D East of Kookaburra Road - Works	\$114,956
Drainage - Local (select sub catchment)	
Catchment 1D - Works	\$59,298
Catchment 1G - Land	\$12,432
Catchment 1G - Works	\$37,927
West of M7 - Land	\$9,714
West of M7 - Works	\$63,339
North of M7 - Land	\$41,965
Landscape - Buffer Land (east of M7 only)	\$6,724
Landscape - Buffer Works (east of M7 only)	\$755
Administration	\$1,528
Professional and Legal Fees	\$638
Tree Planting (per 20 m of street frontage)	\$128

The above rates for Local Facilities are as at the Mar 2007 Quarter CPI.

The works index is 155.6. The land index is 1.

Prestons Industrial Release Area includes the areas shown on the map below.



2.9 Rural Areas

Purpose	Additional lots	Dual Occupancy Dwellings		
		3 Bed +	2 Bed	1 Bed
Recreation				
City Wide				
Indoor Recreation and Entertainment Complex	\$163	\$148	\$125	\$77
Whitlam Centre Extensions	\$48	\$44	\$37	\$23
Georges River links	\$60	\$55	\$46	\$28
Community Facilities				
City Wide				
Central Library Extensions	\$270	\$247	\$207	\$127
Liverpool Museum	\$120	\$109	\$92	\$56
Powerhouse	\$210	\$192	\$161	\$99
Administration	\$10	\$10	\$8	\$5
Totals	\$882	\$804	\$674	\$415

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1.

Rural Areas include the areas shown on the map below.

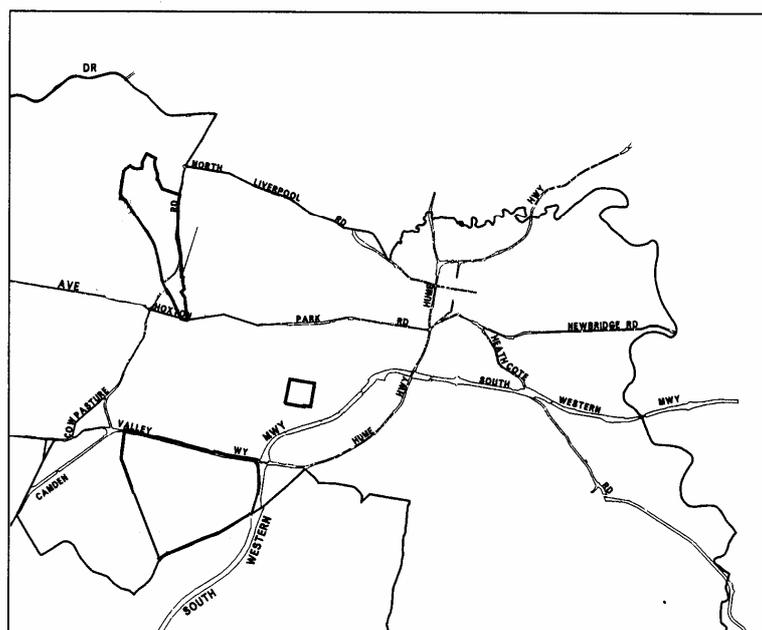


2.10 Rural Future Urban Areas

Purpose	Additional lots	Dual Occupancy Dwellings		
		3 Bed +	2 Bed	1 Bed
Community Facilities				
City Wide				
Central Library Extensions	\$177	\$158	\$110	\$86
Liverpool Museum	\$52	\$47	\$33	\$25
Powerhouse	\$65	\$58	\$41	\$32
District - Land	\$302	\$269	\$188	\$147
District - Works	\$921	\$821	\$572	\$448
Recreation				
City Wide				
Indoor Recreation and Entertainment Complex	\$294	\$263	\$183	\$143
Whitlam Centre Extensions	\$131	\$116	\$81	\$63
Georges River Parklands	\$229	\$204	\$142	\$111
District Recreation - Land	\$929	\$829	\$578	\$452
District Recreation - Works	\$392	\$350	\$244	\$191
Transport				
District - Land	\$479	\$429	\$286	\$236
District - Works	\$1,643	\$1,471	\$981	\$809
Drainage				
District - Land (not applicable in Edmondson Park)	\$1,201	\$924	\$924	\$924
District - Works (not applicable in Edmondson Park)	\$819	\$630	\$630	\$630
Administration	\$94	\$84	\$59	\$46
Professional and Legal Fees	\$237	\$212	\$147	\$115
Totals	\$7,965	\$6,864	\$5,197	\$4,459

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1.

Rural Future Urban Areas include the areas shown on the map below. Note that contributions for Edmondson Park are in *Liverpool Contributions Plan 2006 (Edmondson Park)*.



2.11 Middleton Grange

Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Community Facilities					
City Wide					
Central Library Extensions	\$177	\$158	\$158	\$110	\$86
Liverpool Museum	\$52	\$47	\$47	\$33	\$25
Powerhouse	\$65	\$58	\$58	\$41	\$32
District - Land	\$302	\$269	\$269	\$188	\$147
District - Works	\$921	\$821	\$821	\$572	\$448
Recreation					
City Wide					
Indoor Recreation and Entertainment Complex	\$294	\$263	\$263	\$183	\$143
Whitlam Centre Extensions	\$131	\$116	\$116	\$81	\$63
Georges River Parklands	\$229	\$204	\$204	\$142	\$111
District - Land	\$929	\$836	\$753	\$677	\$610
District - Works	\$392	\$353	\$318	\$286	\$257
Transport					
District - Land	\$479	\$429	\$429	\$286	\$236
District - Works	\$1,643	\$1,471	\$1,471	\$981	\$809
Drainage					
District - Land	\$1,201	\$924	\$924	\$924	\$924
District - Works	\$819	\$630	\$630	\$630	\$630
Administration	\$87	\$87	\$87	\$87	\$87

The above rates for City Wide and District Facilities are as at the Sep 2001 Quarter CPI.

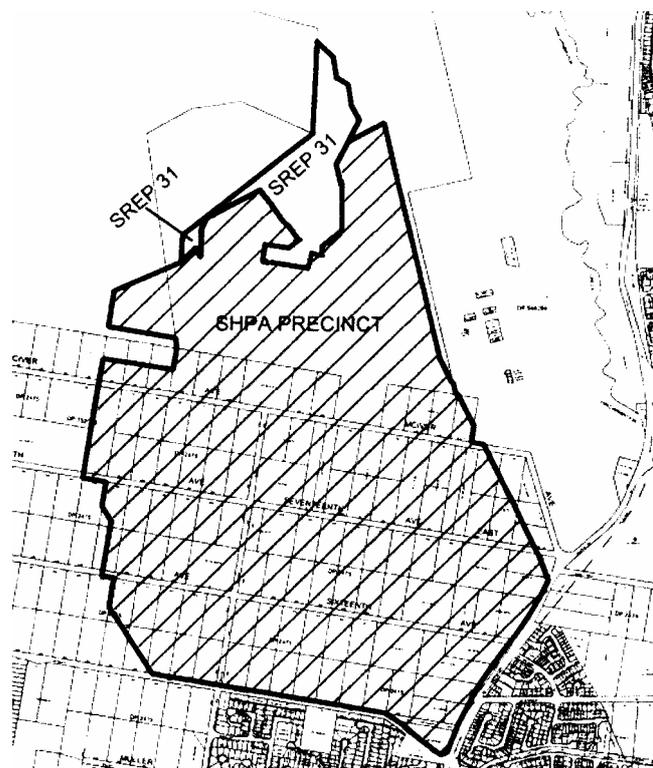
The works index is 135.4. The land index is 1.

Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Community Facilities					
Local - Land					
Local - Land	\$180	\$163	\$163	\$163	\$163
Local - Works					
Local - Works	\$1,448	\$1,310	\$1,310	\$1,310	\$1,310
Recreation					
Local Land - Early acquisition					
Local Land - Early acquisition	\$7,152	\$6,471	\$6,471	\$6,471	\$6,471
Local - Land					
Local - Land	\$2,152	\$1,947	\$1,947	\$1,947	\$1,947
Local - Works					
Local - Works	\$3,783	\$3,423	\$3,423	\$3,423	\$3,423
Transport					
Local - Land					
Local - Land	\$107	\$96	\$96	\$96	\$96
Local - Works					
Local - Works	\$5,400	\$4,885	\$4,885	\$4,885	\$4,885
Drainage					
Local Land - Early acquisition					
Local Land - Early acquisition	\$3,855	\$3,488	\$3,488	\$3,488	\$3,488
Local - Land					
Local - Land	\$3,773	\$3,413	\$3,413	\$3,413	\$3,413
Local - Works					
Local - Works	\$4,484	\$4,057	\$4,057	\$4,057	\$4,057
Administration					
Administration	\$182	\$182	\$182	\$182	\$182
Professional services					
Professional services	\$131	\$131	\$131	\$131	\$131
Implementation					
Implementation	\$6,874	\$6,874	\$6,874	\$6,874	\$6,874

The above rates for Local Facilities are as at the Sep 2003 Quarter CPI.

The works index is 142.4. The land index for Middleton Grange is 1.

Middleton Grange includes the areas shown on the map below.



2.12 Other Areas

Purpose	Lots		Multi Unit Dwellings		
	> 450 sqm	< 450 sqm	3 Bed +	2 Bed	1 Bed
Community Facilities					
City Wide					
Central Library Extensions	\$153	\$148	\$148	\$110	\$57
Liverpool Museum	\$45	\$44	\$44	\$33	\$17
Powerhouse	\$56	\$55	\$55	\$41	\$21
Recreation					
City Wide					
Indoor Recreation and Entertainment Complex	\$255	\$247	\$247	\$183	\$95
Whitlam Centre Extensions	\$113	\$109	\$109	\$81	\$42
Georges River Parklands	\$198	\$192	\$192	\$142	\$74
Administration	\$10	\$10	\$10	\$7	\$4
Totals	\$830	\$804	\$804	\$597	\$311

The above rates are as at the Sep 2001 Quarter CPI. The works index is 135.4. The land index is 1.

Other Areas includes all areas not shown on the maps in Section 1. it does not include Liverpool City Centre or Edmondson Park.

2.13 Contributions to be levied

Contribution rates for development types other than conventional lots are calculated using the formulae contained within this plan. The conventional lot is the basis for most formulae. Contributions for development types other than conventional lots must be calculated individually based on the number of bedrooms, site area, number of residents etc. The actual amounts are not stated in this schedule, as each development is unique in terms of these factors.

Aged and Disabled Persons Housing Development

This plan seeks to levy contributions for Aged and Disabled Housing Development under *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004*. The formulae for such contributions are contained within various sections of the plan.

Section 94 contributions are proposed to be levied for aged and disabled persons housing development on the following grounds:

- § the standard nexus between the new population and the demand for additional services;
- § older and disabled people will be future users of the citywide community and recreation facilities identified in this plan; and
- § residents' requirements for citywide community and recreation facilities cannot be met from services provided on site.

The contribution formula for aged or disabled housing shows that such facilities will be levied relative to the number of persons anticipated for the development.

2.14 Credits for existing development

When calculating Section 94 contributions for a particular development, a contribution credit equivalent of one conventional lot is given for each lot, which exists prior to subdivision or development. The basis of this practice is that each existing lot has an existing dwelling (or the potential to construct it) and no opportunity exists to levy contributions retrospectively. This practice also applies when recently created residential lots are re-subdivided or developed in some other form.

Where an existing dwelling is located over two or more small lots, these will be considered as one conventional lot.

3. Administration

3.1 Introduction

This plan is *Liverpool Contributions Plan 2001* as provided for under Section 94 of the *Environmental Planning and Assessment Act, 1979*. This Plan applies to all land within the City of Liverpool. This plan will be applied to applications for development, which will or are likely to require the provision of or increase the demand for the public amenities and public services, which are specified in this plan.

3.2 Adoption of Contributions Plan

This plan originally came into force on 19 December 2001. This was the September 2001 Quarter. The CPI for this quarter was 135.4. This plan replaced all previous contribution plans applying in Liverpool.

3.3 Amendments to Contributions Plan

Liverpool Contributions Plan 2001 has been amended as follows:

No	Date of adoption	Date of Amendment	Description of Amendment
1	27 May 2002	5 June 2002	Established Areas sub-catchments amended as follows: Voyager Point included in Eastern District Community Facilities and Recreation Facilities sub-catchments Voyager Point included in Holsworthy Local Recreation Facilities sub-catchment
2	24 June 2002	3 July 2002	Middleton Grange Release Area included
3	15 December 2003	24 December 2003	Middleton Grange Release Area amended
4	11 May 2004	19 May 2004	Hoxton Park Stage 2 Release Areas District Transport Facilities
5	24 May 2004	2 June 2004	Prestons Industrial Release Area Local Transport Facilities
6	6 February 2006	15 February 2006	Updating formulae and Land Dedication
7	29 August 2007	12 September 2007	Prestons Industrial Release Area Additional Land
8	12 June 2007	12 December 2007	<i>Liverpool Contributions Plan 2007 (Liverpool City Centre)</i> deleted the following: Liverpool CBD Car Parking Established Areas where it applied to Liverpool City Centre City Wide Facilities where it applied to Liverpool City Centre
9	17 December 2007	9 January 2008	<i>Liverpool Contributions Plan 2008 (Edmondson Park)</i> deleted the following: City Wide Facilities where it applied to Edmondson Park Hoxton Park Stage 2 Release Areas District Facilities where it applied to Edmondson Park

3.4 Previous Contributions Plans

This plan incorporates the following previous contribution plans in force in Liverpool.

- § *Plan 1 Green Valley Hinchinbrook*
- § *Plan 2 Casula West*
- § *Plan 3 Casula East*
- § *Plan 4 Cecil Hills*
- § *Plan 6 Hoxton Park, Carnes Hill & Prestons*
- § *Plan 7 Prestons Industrial*
- § *Plan 10 Established Areas*
- § *Plan 11 City Wide Facilities*
- § *Plan 12 Pleasure Point*

3.5 Section 94 Contributions

Section 94 of the *Environmental Planning and Assessment Act, 1979* gives Council the power to levy contributions from developers for public services and public amenities required as a consequence of their development. Contributions may be in the form of cash payments, transfer or dedication of land to Council or the provision of a material public benefit (generally known as works in kind). For Council to levy contributions there must be a clear nexus between the proposed development and the need for the public service or public amenity for which the levy is being required.

Council may levy contributions for public services or amenities, which are to be provided in the future, and for those which have already been provided in advance of development. Council can not however, levy contributions on new development to make up for any backlogs in existing services or amenities. The *Land and Environment Court* has verified that S.94 is the only source of power for levying contributions under the Act. The Court has also established the following principles on which contributions should be determined:

- § the contribution must be for, or relate to, a planning purpose;
- § the contribution must fairly and reasonably relate to the subject development; and
- § the contribution must be such as a reasonable planning authority, duly appreciating its statutory duties, could have properly imposed.

The contributions specified in this plan are formulated in accordance with the above principles.

3.6 Objectives

The objectives of this plan are as follows:

- § to establish a level and range of public services and public amenities which is appropriate to the needs and expectations of the community;
- § to establish the nexus between proposed development and the need for increased amenities and services;
- § to clearly show the type, location, cost and timing of amenities and services;
- § to ensure that amenities and services are provided as early as is practical;
- § to ensure that the capital costs of providing the amenities and services described in this plan are funded by developer contributions on an equitable basis; and

§ to ensure that contributions are reasonable and affordable.

3.7 Land where this plan applies

The plan applies to all land in Liverpool Local Government Area. The contributions vary depending on the catchment and the type of development.

3.8 Payment of Contributions

Levying of Contributions

Council will require, as a condition of development consent, the payment of a monetary contribution and / or the dedication of land for the provision of facilities specified in this plan from development which it considers will help generate the need for those facilities. This plan applies to development applications determined after the plan came into force. Maps showing catchments in this plan indicate the area from which contributions will be levied in accordance with this plan.

Council requires Section 94 contributions to be satisfied in full as follows:

Development Applications involving subdivision only:

Monetary contributions to be paid prior to release the Subdivision Certificate whether by Council or a private certifier, in the case of strata subdivision. Dedication of land to Council shall be shown on the plan of subdivision.

Development Applications involving building work only:

Monetary contributions to be paid prior to issue of the Construction Certificate, whether by Council or a private certifier. Dedication of land to Council shall be shown on a plan of subdivision to be registered prior issue of an occupation certificate.

Development Applications involving subdivision and building work (e.g., semi-detached dwellings):

Monetary contributions to be paid prior to release of the Construction Certificate or Subdivision Certificate, whichever occurs first, whether by Council or a private certifier. Dedication of land to Council shall be shown on a plan of subdivision to be registered prior issue of an occupation certificate.

Development Applications where no building works are proposed:

Monetary contributions to be paid prior to occupation/commencement of the development. Dedication of land to Council shall be shown on a plan of subdivision to be registered prior issue of an occupation certificate.

Landcom

Landcom is not required to submit final subdivision plans to Council for certification. Rather, subdivision plans are deposited directly with the Land Titles Office. Section 94 contributions (monetary, material public benefits and land transfer) are therefore required to be paid by the Landcom upon registration of subdivision plans. Dedication of land to Council shall be shown on the plan of subdivision.

Deferred Payments

Council will allow payment of contributions to be deferred in the following cases only:

- § where the applicant has the intention and ability to dedicate land or provide a material public benefit in part or full satisfaction of a condition imposed by development consent; or
- § in other circumstances, to be outlined in writing by the applicant and determined formally by Council on the merits of the case.

Deferred payments as outlined above are acceptable only where an unconditional bank guarantee is provided for the amount deferred. Bank guarantees will be accepted on the following conditions:

- § The guarantee must carry specific wording, for example "drainage contributions for Stage 3".
- § The guarantee will be for the contribution amount plus the estimated amount of compound interest foregone by Council for the anticipated period of deferral. (Refer to formula below)
- § Council may call up the guarantee at any time without reference to the applicant, however the guarantee will generally be called up only when cash payment has not been received, land is not dedicated or material public benefit not provided by the end of the period of deferral.
- § The period of deferral must be for a limited time only as agreed where land is to be dedicated or a material public benefit is to be provided. In merit cases, the period of deferral will be as approved by Council. The period of deferral may be extended subject to providing a renewed bank guarantee, which includes anticipated future interest.
- § Council will discharge the bank guarantee when payment is made in full by cash payment, land transfer or by completion of works in kind.

Formula for Bank Guarantee Amounts

The following formula will be applied to all bank guarantees for Section 94 contributions:

GUARANTEE AMOUNT = P + P (C I x Y) where:

P = Section 94 contribution due;

C I = Compound interest rate comprised of Council's estimate over the period plus 3% (allowance for fluctuations); and

Y = Period of deferral (years).

Method of Payment

Section 94 payments may be made in one or a combination of any of the following ways:

Monetary Contribution

This is the most common method of payment of contributions. However, payment can be offset by transferring land to Council or providing works in kind as follows.

Transfer of Land

An applicant may transfer land to Council in part or full satisfaction of a contribution. The land may be for open space, community facilities, drainage or roads and must be land, which is included in a schedule of facilities in this plan. The estimated value at the time of transfer will be offset against the contribution required for the same facility category. Offsets against other facility categories will be by agreement only.

Where land, which is the subject of a development application contains land identified for acquisition under this plan, Council may as a condition of consent require that land to be dedicated free of charge to Council. Monetary contributions will be adjusted accordingly to reflect the dedication of land in lieu of payment of cash.

Works in Kind

Applicants are encouraged to provide works in kind in part or full satisfaction of a contribution. The works must be included in a schedule of facilities in this plan. The value of works will be offset against the contribution required for the same facility category. The value of the offset will be as agreed with Council in accordance with the value of the works identified in the plan.

Land Banking

Council will not approve land banking unless Council believes that the development is exceptional and merits the use of land banking. In these cases land banking will only be considered by Council subject to the following requirements.

- § The rate per square metre to be used must be formally agreed between Council and the developer, and must be consistent with this Plan. The agreed rate shall be held at that rate for the life of the agreement.
- § Development Applications against which the open space land bank will be offset are clearly identified in the agreement between Council and the developer.
- § On entering the agreement between Council and the developer, the parcels of land subject to the land bank are to be clearly identified, and must be consistent with this Plan.
- § Any agreement would be redeemable for cash at the rate listed in the agreement, subject to Council's cash flow capabilities.
- § The full cost of land transfers shall be borne by the applicant.
- § Land bank credits may be transferable to other parties with Council approval.
- § Land bank credits shall not be transferable outside the area of the relevant catchment area identified in the plan.

Credit for Land and Works in Kind

Where an applicant transfers land to Council or provides facilities, which are included in the schedule of facilities in this plan, and is in excess of the contribution required, the excess land or value of facilities will be held by Council as credit for future development. The credit is expressed in terms of "number of lots" and will be offset against contributions for the same facility category in any future development by that applicant in the area to which this plan applies. The offset will generally be made at the contribution rate at the time of the subsequent development.

If no future development is intended, Council will reimburse the application for the excess land or works, subject to agreement by Council as to the value of it. Alternatively, council may offset the excess value against contributions required for other facility categories.

Note:

- § **No credit will be given for land or works, which are not included in this plan.**
- § **Credit will only be given on the value of facilities in this plan for development levied in accordance with this plan.**
- § **Credits for development, which has been levied in accordance with a previous plan for the area will only be expressed in dollar terms and not in terms of number of lots.**

Contribution Rates

The monetary contribution rates shown in Section 1 - Schedule of Contributions, with the exception of those for the Whitlam Centre Extensions, Liverpool Central Library and Local Land - Early acquisition (Middleton Grange) are to be adjusted in accordance with the provisions set out below at the time of imposing a condition on a development consent requiring payment of the monetary contribution and again at the time that the monetary contribution is to be paid pursuant to the condition imposed on the development consent.

Capital Works, Administration, Professional and Legal Fees

The capital works, administration, professional and legal fees components of the monetary contributions rates set out in this plan are adjusted in accordance with the formula below headed "**Contribution at time of development consent**" at the time of imposing a condition on a

development consent requiring payment of the monetary contribution to reflect quarterly variations in the Consumer Price Index (All Groups Index Number for Sydney) since the quarter year period shown for each Area in Section 1 - Schedule of Contributions.

In addition to the above adjustment, the capital works, administration, professional and legal fees components of the monetary contributions set out in this plan are adjusted in accordance with the formula below headed "**Contribution at time of payment**" at the time that the monetary contribution is to be paid pursuant to the condition imposed on the development consent to reflect quarterly variations in the Consumer Price Index (All Groups Index Number for Sydney) since the date that the consent was granted. In that regard a condition imposed upon a development consent requiring payment of a monetary contribution set out in this plan that includes a capital works, administration, professional or legal fees component, shall include a requirement for the amount of the relevant component in the condition to be adjusted at the time that the contribution is to be paid to reflect quarterly variations in the Consumer Price Index (All Groups Index Number for Sydney) since the date that the consent was granted in accordance with the formula below headed "**Contribution at time of payment**".

Contribution at time of development consent

$$C_2 = \frac{C_1 \times C P I_2}{C P I_1}$$

Contribution at time of payment

$$C_3 = \frac{C_2 \times C P I_3}{C P I_2}$$

where: C_1 = Capital works, administration, professional and legal fees components of the contributions as shown in this contributions plan

C_2 = Capital works, administration, professional and legal fees components of the contributions subject of the conditions imposed on the development consent

C_3 = Capital works, administration, professional and legal fees components of the contributions at the time that the contribution is to be paid

$C P I_1$ = Latest "Consumer Price Index: All Groups Index Number" for Sydney available from the Australian Bureau of Statistics shown in *Liverpool Contributions Plan 2001* for the respective area in Section 1

$C P I_2$ = Latest "Consumer Price Index: All Groups Index Number" for Sydney available from the *Australian Bureau of Statistics* as at the time of granting the relevant development consent

$C P I_3$ = Latest "Consumer Price Index: All Groups Index Number" for Sydney available from the *Australian Bureau of Statistics* at time that the contribution is to be paid

Land

The land components of the monetary contributions rates set out in this plan are adjusted in accordance with the formula below headed "**Contribution at time of development consent**" at the time of imposing a condition on a development consent requiring payment of the monetary contribution to reflect quarterly variations in the **Average Estimated Land Acquisition Cost Per Square Metre** since the quarter year period shown for each Area in Section 1 - Schedule of Contributions.

In addition to the above adjustment, the land components of the monetary contributions set out in this plan are adjusted in accordance with the formula below headed "**Contribution at time of payment**" at the time that the monetary contribution is to be paid pursuant to the condition imposed on the development consent to reflect quarterly variations in the **Average Estimated Land Acquisition Cost Per Square Metre** since the date that the consent was granted. In that regard a

condition imposed upon a development consent requiring payment of a monetary contribution set out in this plan that includes a land component, shall include a requirement for the amount of the land component in the condition to be adjusted at the time that the contribution is to be paid to reflect quarterly variations in the **Average Estimated Land Acquisition Cost Per Square Metre** since the date that the consent was granted in accordance with the formula below headed **“Contribution at time of payment”** .

In this clause **“Average Estimated Land Acquisition Cost Per Square Metre”** means the index figure prepared and published by or on behalf of the Council that represents the total costs that would have been incurred by the Council in respect of all prime residential land acquired by Council during the previous quarter year period divided by the number of square metres of such land and the phrase **“prime residential land”** where used herein means land that is in an englobo state being regular in shape, good average level land with an area of 2 ha with services available in the area for connection, subject to the payment of necessary developer contributions rates and not yet developed.

Contribution at time of development consent

$$C_2 = \frac{C_1 \times L_2}{L_1}$$

Contribution at time of payment

$$C_3 = \frac{C_2 \times L_3}{L_2}$$

- where:
- C_1 = Land component of contributions as shown in this contributions plan
 - C_2 = Land component of contributions subject of the conditions imposed on the development consent
 - C_3 = Land component of contributions at the time that the contribution is to be paid
 - L_1 = The latest Average Estimated Land Acquisition Cost Per Square Metre shown in *Liverpool Contributions Plan 2001* for the respective area in Section 1
 - L_2 = The latest Average Estimated Land Acquisition Cost Per Square Metre published by the Council at the time of granting the relevant development consent
 - L_3 = The latest Average Estimated Land Acquisition Cost Per Square Metre published by the Council at time that the contribution is to be paid

3.9 Monitoring and Review

The contribution rates and works schedule for this plan has been formulated using information available at the present time. A number of variables will be monitored to facilitate the review process. Some of these are listed below:

- § density of residential development
- § potential development remaining
- § projected development rate
- § assumed occupancy rates
- § anticipated population
- § construction costs
- § land costs

The contribution rates in this plan will be adjusted in accordance with section 2.8. However, where major shifts are observed in the above variables Council may review this plan at any time.

3.10 Financial Information

Separate accounting records are maintained for each item shown in the Schedule of Fees in Section 1. These show the contributions received and expended, including interest, for each item. The records may be inspected on request, giving reasonable notice. Council will also prepare an annual statement with respect to this plan as soon as practical after the end of each financial year.

A contributions register will be maintained by Council in accordance with the *Environmental Planning and Assessment Act 1979* and *Regulation* and may be inspected on request, giving reasonable notice.

4. City Wide Planning Context, Development Trends and Nexus

4.1 Planning Context

Major Plans of Council

Corporate Plans of Council

Council's long term vision for Liverpool is spelt out in its Strategic Plan and its annual Corporate Plans. Its vision, mission and strategic objectives provide a framework on which it seeks to require developers to contribute to the provision of public infrastructure and facilities to service the needs of residents and businesses in Liverpool. The plan is accordingly based on these.

Council's Vision

Liverpool - A place where people choose Live, Learn, Work and Play.

Council's Mission

To provide good government for Liverpool through leadership and commitment to our community.

Council's Strategic Objectives

1. Valuing the environment

To conserve, link and enhance the City's natural areas to create a functioning environmental system.

2. Maximising social well-being

To support the development of a vital community that has access to opportunities and facilities that improves the quality of life.

3. Building communities

To plan and promote sustainable growth, urban equity, urban renewal and choice.

4. Growing the economy

To generate new investment and employment which is increasingly linked to the knowledge economy.

5. Assisting transport movement

To develop transport networks which improve the quality of life for our community.

6. Developing our regional role

To establish Liverpool as the regional centre of South West Sydney.

7. Providing quality services

To offer an excellent standard of service to our community and the Council.

Liverpool Local Environmental Plan 1997

Liverpool Local Environmental Plan 1997 was gazetted on 29 August 1997. It identifies the various land use zones and in particular the extent of land that is available for medium density and higher density development. This has since been replaced with *Liverpool Local Environmental Plan 2008*.

Liverpool Local Environmental Plan 2008

Liverpool Local Environmental Plan 2008 was gazetted on 29 August 2008. It identifies the various land use zones and in particular the extent of land that is available for medium density and higher density development.

Development Control Plans

Each of the release areas has had a Development Control Plan regulating the subdivision pattern. These form the basis of the costing of facilities relevant to these areas in this plan. The relationship of the relevant Development Control Plans is specified in the next sub-section.

Development prior to the 1980's

Pre 1970's Development

Development in Liverpool during this time took place in the Housing Commission area around Miller and on land at Moorebank. There was also development at Casula and Lurnea.

Sydney Region Outline Plan

The *Sydney Region Outline Plan*, released in 1968 identified areas on the fringe of Sydney for urban development. The bulk of the land to the west of Liverpool identified in the plan now forms Hoxton Park Release Area, Stages 1 & 2. This has subsequently been incorporated in the Urban Development Program of the *Department of Planning*.

1970's Development

The bulk of urban fringe land development took place in Chipping Norton and Moorebank and to a lesser extent at Green Valley and Casula. There was also some urban redevelopment adjacent to Liverpool CBD.

Development in the 1980's

Environmental Planning and Assessment Act, 1979

The *Environmental Planning and Assessment Act, 1979* came into force on 1 September 1980 replacing *Part 12A of the Local Government Act 1919* as the Act which administers land use planning in New South Wales. S94 of the Act providing Council's the power to levy development for contributions toward public facilities. It was not until 1992 that Council's were required to prepare contributions plans in order to levy development for contributions.

Hoxton Park Stage 1 Release Areas

Development in the 1980's commenced in the area known as the Hoxton Park Stage 1 Release Area. These included:

- § Green Valley Hinchinbrook Release Area (former Plan 1)
- § Casula West Release Area (former Plan 2)
- § Casula East Release Area (former Plan 3)

These areas were designated for urban development on 6th April 1982 by the then Minister of Environment and Planning. These areas are included in the Department of Planning's Urban

Development Program for the Sydney Region.

Green Valley Hinchinbrook

- § The area was rezoned under *Liverpool LEP 108* on 24 October 1984 and added to subsequently.
- § The area was subject to *Liverpool DCP No. 2*, which came into force on 9th January 1985.
- § The area is now subject to the *Liverpool DCP 2008*.
- § Plan 1 was approved by Council on 12 October 1992 and came into force on 26 October 1992.
- § Plan 1 was amended Council on 11 April 1994.
- § Plan 1 was amended in August 1997 to exempt granny flats from the requirement to pay contributions.
- § There is still some development to take place.
- § The range of facilities in Plan 1 has been incorporated in this plan.

Casula West

- § The area was rezoned under *Liverpool LEP No. 103* on 10th August 1984.
- § The area was subject to *Liverpool DCP No. 1*, which came into force on 9th January 1985.
- § The area is now subject to *Liverpool DCP 2008*.
- § Plan 2 adopted by Council on 9 November 1992 and came into force on 23 November 1992.
- § Plan 2 was amended in August 1997 to exempt granny flats from the requirement to pay contributions.
- § There is still some development to take place.
- § The range of facilities in Plan 2 has been incorporated in this plan.

Casula East

- § The area was rezoned under *Liverpool LEP No. 80* on 11th March 1983.
- § The area was subject to *Liverpool DCP No. 83/2*, which came into force on 26th January 1984.
- § The area is now subject to *Liverpool DCP 2008*.
- § Plan 3 adopted by Council on 23rd November 1992 and came into force on 7th December 1992.
- § Plan 3 was amended in August 1997 to exempt granny flats from the requirement to pay contributions.
- § There is still some development to take place.
- § The range of facilities in Plan 3 has been incorporated in this plan.

Development in the 1990's

Hoxton Park Stage 2 Release Areas Structure Plan

Council adopted a Structure Plan for the Hoxton Park Stage 2 Release Area in April 1989. The area is included in the Urban Development Program of the Department of Planning for the Sydney Region. The Structure Plan divided the release area into six (6) precincts. These precincts were primarily delineated on the basis of staged availability of utility services. Major roads, creeks and the Noise Exposure Forecasts around Hoxton Park Aerodrome also formed boundaries to the Precincts.

Hoxton Park, Carnes Hill and Prestons Release Areas

- § These release areas form parts of the Hoxton Park Stage 2 Release Areas Structure Plan.

- § Hoxton Park was rezoned under *Liverpool LEP No. 236* (Precinct 1) on 15 May 1992.
- § Prestons was rezoned under *Liverpool LEP 238* (Precinct 5) on 15 May 1992.
- § Carnes Hill was rezoned under *Liverpool LEP No. 237* (Precinct 4) on 10 July 1992.
- § Council approved a development control plan for Precinct 1, 4 and 5 in December 1995 known as *Liverpool DCP No. 31*.
- § The area is now subject to *Liverpool DCP 2008*.
- § Plan 6 was originally approved by Council on 23 November 1992 and came into force on 7 December 1992.
- § Plan 6 was subsequently amended in 1995 and 1997.
- § Plan 6 was amended on in August 1997 to exempt granny flats from the requirement to pay contributions.
- § Plan 6 was subsequently amended by Council on 11 October 1999 and came into force on 20 October 1999.
- § This area contributes to district facilities, which serve the Hoxton Park Stage 2 Release Area and is incorporated in estimates of development potential for such facilities.
- § Development is still occurring.
- § The range of facilities in Plan 6 has been incorporated in this plan.

Cecil Hills Release Area

- § The area forms part of the Hoxton Park Stage 2 Release Areas Structure Plan.
- § The area was rezoned under *Liverpool LEP No. 220*, on 12th April 1991.
- § The area was subject to *Liverpool DCP No. 23*, which came into force on 24th April 1991.
- § The area is now subject to *Liverpool DCP 2008*.
- § Plan 4 adopted by Council on 23rd November 1992 and came into force on 7th December 1992.
- § Plan 4 was amended in August 1997 to exempt granny flats from the requirement to pay contributions.
- § This area contributed to district facilities, which serve the Hoxton Park Stage 2 Release Area and is still incorporated in estimates of development potential for such facilities.
- § Development is nearly complete.
- § The range of facilities in Plan 4 has been incorporated in this plan.

Prestons Industrial Release Area

- § The area forms part of the Hoxton Park Stage 2 Release Areas Structure Plan.
- § The area was rezoned
- § The area was subject to *DCP No.19 Prestons Industrial Release Area, DCP No. 6 Industrial Development 6* and *DCP No.3 Car Parking and Service Provision*.
- § The area is now subject to *Liverpool DCP 2008*.
- § Plan 7 was originally approved by Council on 23 November 1992 and came into force on 7 December 1992.
- § Plan 7 was subsequently updated in 1995 and 1997.
- § Plan 7 was subsequently amended by Council on 11 October 1999 and came into force on 20 October 1999.

- § This area contributes to district facilities involving transport and drainage, which serve the Hoxton Park Stage 2 Release Area and is incorporated in estimates of development potential for such facilities.
- § Development is still occurring.
- § The range of facilities in Plan 7 has been incorporated in this plan.

Wattle Grove Release Area

- § The area was rezoned under *Liverpool LEP No. 221* on 19 April 1991, which added the land to LEP NO. 108.
- § The area was subject to *Liverpool DCP No. 24*, which came into force on 1st May 1991.
- § The area is now subject to *Liverpool DCP 2008*.
- § Prior to the current planning controls, residential development was permitted under the previous Interim Development Order with the concurrence of the Director of Planning.
- § Plan 5 was approved by Council on 23rd November 1992 and came into force on 7th December 1992.
- § Plan 5 was amended in August 1997 to exempt granny flats from the requirement to pay contributions.
- § Development is now complete.
- § The range of facilities in Plan 5 has not been incorporated in this plan, as these are now complete.

Pleasure Point

- § The area was subdivided in the 1920's but not built upon. The lots fronting the riverside reserve were developed with dwelling houses in the 1970's.
- § The zoning of the other 65 lots was amended on 8 July 1994 to permit dwelling houses to be constructed following agreement with Sydney Water to provide water and sewerage services to the land.
- § The area is now subject to *Liverpool DCP 2008*.
- § Plan 12 was adopted by Council on 13 December 1999, and came into force on 23 December 1999.
- § Development is still taking place in the area.
- § The range of facilities in Plan 12 has been incorporated in this plan.

Cross Roads Transport Terminal

- § The area was rezoned under *LEP No. 182* on 4 November 1988.
- § The area was subject to DCP No. 5, which came into force on 9 February 1989 and which aimed to permit the development of an integrated transport terminal on this site.
- § The area is now subject to *Liverpool DCP 2008*.
- § This original proposal did not eventuate. The controls have been amended to allow the subdivision of the land so that the sites may be developed independently.
- § Plan 8 was approved by Council on 19th December 1994 and came into force on 25th January 1995.
- § Development is now complete.
- § The range of facilities in Plan 5 has not been incorporated in this plan, as these are now complete.

Liverpool City Centre

- § This plan was originally approved by Council on 8 August 1994 and came into force on 10 August 1994.
- § The plan was amended by Council on 10 July 2000 and came into force on 19 July 2000.
- § The plan was subsequently incorporated in Plan 10 on 9 May 2001.
- § It has since been replaced by Liverpool City Centre Contributions Plan 2006.

Development in the 2000's

Established Areas

- § Prior to 1992 Council levied contributions on some development in the established areas. While most development in the 1990's was taking place in the release areas it has become apparent that redevelopment will continue to occur in the established areas and generate the need for augmenting facilities.
- § Plan 10 was adopted by Council on 24 April 2001, and came into force on 9 May 2001.
- § Redevelopment is still taking place in the area.
- § The range of facilities in Plan 10 has been incorporated in this plan.

City Wide Facilities

- § It has become apparent that development in both the established areas and release areas will be substantial and generate the need to augment certain major Council facilities that serve all of Liverpool.
- § Plan 11 was adopted by Council on 24 April 2001, and came into force on 9 May 2001.
- § Development is still taking place in the release areas and redevelopment is still taking place in the established areas.
- § The range of facilities in Plan 11 has been incorporated in this plan.

Middleton Grange

- § The area was rezoned under *Liverpool LEP 1997 (Amendment No. 71)* on 18 June 2004.
- § The area was subject to *Liverpool DCP No. 48*, which came into force on 26 June 2002.
- § The area is now subject to *Liverpool DCP 2008*.
- § The inclusion of the area into *Liverpool Contributions Plan 2001* was approved by Council on 11 June 2002 and came into force on 26 June 2002.
- § Development is yet to take place in the area.

Liverpool Structure Plan

In 1999 Council adopted a land use Structure Plan for all of Liverpool identifying the framework for future land use planning decisions. The Structure Plan provides a framework for estimating development potential for the purposes of this plan.

4.2 City Wide Development and Demographic Trends

Allotment/Dwelling Projections

Estimates of the rate of housing development for the coming 5 years in the established areas, rural areas and release areas have been prepared in consultation with the *Department of Planning*, the development industry and the public utilities. This was done through the Metropolitan Urban Development Program and Urban Development Program. An allowance has been made for replacement dwellings based on Council consent records and consultation with Land Availability Data System of *Sydney Water*. Figures beyond the 5 year period have been projected by Council.

The following table summarises the dwelling forecasts for the period from mid 2000 to mid 2021.

Allotment/ Dwelling Projections Mid 2000 - Mid 2021

Area	Estimated Dwellings at Mid 2001	Estimated Dwellings at Mid 2011	Estimated Dwellings at Mid 2021
Established Areas	28,300	31,100	34,700
Release Areas	17,600	33,000	34,200
Rural Areas	3,700	3,900	4,100
Total	49,600	68,000	73,000

Population Projections

The range of community, recreation, transport and streetscape facilities are based on the estimated additional population in Liverpool. The methodology for estimating the additional population that will reside in Liverpool at 2021 is as follows:

- § Estimate existing population of Liverpool;
- § Estimate existing no. of dwellings in Liverpool;
- § Estimate occupancy rate in Liverpool at mid 2021;
- § Estimate dwellings in Liverpool at mid 2021;
- § Deduce population in Liverpool at mid 2021;
- § Estimate increase in population from present to mid 2021.

At the 1996 census there was 40,595 dwellings in Liverpool. Based on additional dwellings and lots approved since this time it is estimated that at mid 2000 there were 47,800 dwellings in Liverpool.

At the 1996 census there was 124,275 people in Liverpool. Based on additional dwellings and lots approved since this time it is estimated that at mid 2000 there were 147,300 people in Liverpool.

Occupancy rates have been estimated for 2021, having regard to occupancy rates in the 1996 Census and the projections of the *Department of Planning*. These have been used in conjunction with estimates of dwellings to estimate the population of Liverpool in 2021.

The estimated population of Liverpool at mid 2021 is as follows.

Population Projections Mid 2000 – Mid 2021

Area	Estimated Population at Mid 2001	Estimated Population at Mid 2011	Estimated Population at Mid 2021
Established Areas	81,900	88,000	98,100
Release Areas	58,700	114,000	121,500
Rural Areas	12,900	13,000	13,400
Total	153,500	215,000	233,000

Occupancy rates

The occupancy rate estimate of 3.7 persons per lot has been adopted in the Hoxton Park Stage 2 release areas. This estimate is derived from the following indicators:

- § Council's study *"Hoxton Park Stage 2 Release Areas Retail Review"* estimated that Stage 2 release areas will resemble closely the Edensor Park area in Fairfield LGA. At 1986 Census, that area had an average of 3.69 persons per household.
- § Council's 1990 Release Area Social Plan estimated Hinchinbrook would have a density of 3.7 persons per lot. Within 5 years of development commencing, the population density in that area was 3.5 persons per lot (1991 Census Preliminary Data). The increase to 3.7 persons per lot was estimated to occur after 5 years and up to 15 years following the commencement of development.
- § For projection purposes and calculating anticipated population, lots of less than 450 sqm are taken as generally indicating most types of medium density housing. As for Hinchinbrook, a density of 3.3 persons per lot can be expected for these types of development overall.

The occupancy rates for established areas and rural areas these rates are based upon analysis of 1996 Census data as these areas are well established.

Occupancy Rates

Dwelling Type	Occupancy Rate		
	Established Areas	Release Areas	Rural Areas
Residential Subdivision			
Lots 450 sqm or larger	3.2	3.7	3.4
Lots smaller than 450 sqm	3.1	3.3	
Semi-detached dwellings, Multi dwelling housing and residential flat buildings (where permitted)			
3 or more bedrooms	3.1	3.3	3.1
2 bedrooms	2.3	2.3	2.6
1 bedroom	1.2	1.8	1.6
Dwelling Type	Occupancy Rate in Edmondson Park		
Rural Residential		3.4	
Detached dwellings on lots > 350sqm		3.4	
Small lot dwellings / semi detached and town houses		2.9	
Residential flat buildings		2.3	

4.3 Nexus

Community Facilities

New development, which leads to an increase in the number of residents, will also increase the demand for community facilities including multi-purpose community centres, libraries and cultural facilities.

Local and district level facilities are levied for the various sub catchments in the established and release areas.

Recreation Facilities

Open space is a source for outdoor recreation opportunities and provides natural and open areas within an urban environment which is experiencing increasing residential growth. The community is demanding that Council provide adequate open space for a variety of reasons. The community needs open space as a buffer against urban developments, a resource for flora and fauna, to link and consolidate diminishing natural areas, as well as a place for sports, recreation, play and outdoor activities.

A Leisure Needs Analysis for the Liverpool Community undertaken for Council revealed the need for the following facilities. To some extent these reflect the needs of the existing residents. Nevertheless they provide some guide to the needs of existing and future residents.

- § Multi screen cinema
- § Swimming pools
- § Libraries
- § Bushland reserves
- § Nature reserves
- § Dancing
- § Gyms and fitness training
- § Martial arts
- § Picnicking

Sporting organisations have expressed the need for the following items:

- § Provision of drinking water
- § Directional signage
- § Provision of seating
- § Provision of change rooms / toilets

In relation to passive recreation facilities residents expressed the need for the following items:

- § Improving lighting in parks
- § Establishing more trees
- § Improving toilet cleanliness and availability, particularly where barbecues and other facilities are provided
- § Increase barbecue facilities and further develop and maintain the parks where this occurs, thus encouraging the use of the areas for other recreational activities
- § Develop and promote the use of available bushland for recreational use
- § Extending bike paths (including through bushland) and explore possibilities of providing bike lanes on suburban streets

- § Maximising the recreational possibilities of all waterways in the Liverpool area, particularly the Georges River

Open space and recreation facilities, which are needed for an area the size of Liverpool, vary from local parks to major sporting and entertainment venues. The local parks are informal play areas within walking distance of where residents live while the major sporting and entertainment venues cater for large numbers of people and have a substantial catchment area.

This suggests a hierarchy of open space and recreation facilities. Accordingly there is a hierarchy of contributions. All new residential development creates the need to augment facilities that serve a city wide population. In the established areas of Liverpool new residential development creates the need to augment existing local and district facilities. In the release areas there is a need to provide all the open space facilities, as there are no existing facilities.

Transport

The cost of provision of streets in conjunction with a subdivision is normally borne by the individual developer. However the cumulative affect of numerous subdivisions requires provision of higher order roads and, various traffic facilities and frontage to public land uses. The cost of this should not fall on developers of individual land uses but rather be shared amongst all developers.

Drainage

Community standards require that stormwater be conveyed through urban areas in a manner that emphasises the cost-effective achievement of safety and, to a lesser extent, amenity.

This requirement leads to a development standard where drainage is managed on a catchment wide basis in a system of pipes, channels, culverts and basins. The responsibility to contribute, or nexus, is a combination of the characteristics of land development that:

- § increase stormwater runoff volumes and flow rates so that a system of pipes and channels and/or stormwater detention basins is required to offset these impacts downstream; and
- § increase population levels in the vicinity of potentially hazardous, uncontrolled rural standard drainage systems so that improvements, particularly large pipes and channel systems, are required to minimise and clearly demark the area of hazard potential.

The development of new release areas generally leads to a significant change in the stormwater runoff characteristics of drainage catchments. This change partially results from an increase in the ratio of runoff volumes to rainfall volumes due to a reduction in previous areas to absorb rainfall into the ground. It also influenced by the reduction in catchment response times, where the impact of piping and channelising more efficiently conveys concentrated runoff to the catchment outlets. It may also be influenced by a reduction in flood plain storage of runoff volumes due to developments that incorporate landfill.

5. City Wide Facilities

5.1 Community Facilities

Nexus

Council has funded major works such as the Casula Powerhouse Arts Centre and Liverpool Central Library in anticipation of population growth within the local government area. These facilities are intended to serve the broader cultural needs of the entire Liverpool community irrespective of geographic location and as such adopt a citywide status.

Accordingly it is reasonable to require a contribution for citywide facilities from all future residential development within the local government area inclusive of release areas, established residential areas and rural areas.

The cost of the city wide facilities is only partially recovered from new development as the demand from existing development and outside users is borne by Council. This is reflected in the contribution formulae.

Liverpool Central Library

Background

Liverpool City Council provides library services to the Liverpool community through its central library in the CBD and branch library network at Miller, Moorebank, Casula and Green Valley.

The central library is the focus of the library service and provides a greater range of services/facilities than the branch libraries. Services provided from the central library not available at branch libraries include major lending collections; extensive reference and specialised information services; specialised programs for elderly, disabled and housebound residents; community language and English as a second language (ESL) materials and activities.

The higher tier services provided at the central library cater for the broader needs of the entire population of the Liverpool Local Government Area and accordingly it is considered a citywide facility. These services cannot be provided at local branch libraries for economic and practical reasons. New development, which leads to an increase in the number of residents, will also increase the demand for central library facilities and services to be levied for under this contribution plan.

The State Library recommended standard for a resident population of 100,000 is that there be a major central library facility. The State Library recommendation for floor space is a minimum of 2,100 sqm of net floor space for a population of 100,000 persons. (*The Planning and Design of Public Library Buildings - Sydney State Library of NSW, 1990*).

The lack of an adequate central library was identified in the study "*Leisure Requirements for the Residents of Liverpool*" - March 1994. Council subsequently undertook to upgrade and extend the central library to cater for the needs of the anticipated total future population. This upgrade altered the status of the library from a "district" to "citywide" facility. This plan seeks to recoup part of the costs to Council of upgrading the central library in anticipation of future population growth.

Cost of Facilities

The cost of the central library upgrade was \$12,985,815 (inclusive of interest), including:

- § increase in floor area from 1,200 sqm to 5,600 sqm
- § introduction of public access to Internet, personal computers and sound equipment
- § enlarged reference area, seating and study areas and workrooms

- § provision of areas for specialised services, e.g. multicultural and Aboriginal resources
- § provision of a lift and disabled access
- § provision of additional public toilets
- § increase in storage area, and shelving to allow for future expansion of collections
- § provision of public art component
- § provision of six community meeting rooms, two with kitchen access

The following table provides a summary of the costs of central library and community meeting room works. The estimated costs of these two components of the facility have been separately identified to allow for the relevant apportionment of the cost of the central library to users from outside the Local Government area. The community meeting rooms are provided for the benefit of existing and proposed residents of the Local Government area, therefore the estimated full cost of this component of the facility is included in the contribution calculation.

Item	Cost
Central library upgrade including consultants fees, building contractors, materials, furniture & fittings, artists fees and interest on loan funds	\$12,174,202
Less 15% for users living outside of Liverpool LGA	-\$1,826,130
Sub Total	\$10,348,072
Community meeting rooms including consultants fees, building contractors, materials, furniture & fittings, artists fees and interest on loan funds	\$811,613
Total	\$11,159,685

Note: Whilst actual figures are not available on the costs of meeting rooms in relation to the library upgrade, a proportional estimate has been made based on the relative floor area of the community rooms to the total area of the library building (350 sqm / 5,600 sqm).

Liverpool Museum

Background

The Liverpool Museum provides cultural, educational and leisure based services to the entire Liverpool region through the Museum building on the Hume Highway and Collingwood Historic House (c.1810).

Liverpool is serviced by only two museums - the Liverpool Museum and the Army Engineer Museum at Moorebank. Compared to other large cities, Liverpool does not have the diverse range of community, specialist and generalist museums one would expect in a city of its size.

Museums have an important role in developing critical minds, self awareness, and sense of citizenship and community identity. They play a significant role in developing civic and community pride and improving the quality of life for residents. Museums are “peoples universities”. They are places where people of diverse cultures, literacy levels, ages and educational backgrounds can explore and enjoy the cultural heritage of the community, outside formal educational institutions.

The Museum currently offers a wide range of services to preserve and promote the cultural heritage of the city and assist the community development process. They include:

- § Permanent exhibitions that showcase the history and progress of Liverpool - its struggles, achievements and developmental processes.
- § Travelling exhibitions from larger museums and cultural organisations with broader educational objectives.
- § Temporary exhibitions about particular local and contemporary topics.

- § The acquisition and preservation of cultural heritage materials of significance to Liverpool.
- § Specialised local history research and information.
- § A range of publications about the history of the area.
- § Public programs that are educational and enjoyable such a children's programs, guest speaker evenings, launches, social events, specialised programs for groups e.g. reminiscence days for seniors.
- § Advocacy for community heritage.
- § Guided tours of exhibitions and Collingwood House.
- § Tourist information.
- § Lifelong educational opportunities.

Population trends and demographics of Liverpool provide many challenges and opportunities for the provision of museum services to the city. Liverpool is characterised by a high level of unemployment, high levels of new migrants, migrants from non-English speaking countries, low literacy / skills levels and low incomes. The new housing release areas such as Wattle Grove, Cecil Hills and Horningsea are also attracting employed, dual - income couples who are starting their families. These factors combined with general societal trends such as the aging population present many challenges and opportunities for the museum in the future, in terms of the provision of diverse cultural activities, lifelong education, community participation and involvement, social and community regeneration, community cultural expression, entertainment and education.

Traditionally, museums stood proudly beside town halls, post offices, libraries and galleries or in heritage buildings. Today museums are housed in, purpose built premises, in highly visible public places while still retaining the symbolic role of the building as an urban focal point. They have become more business and visitor service oriented.

The existing "bicentennial" building was built at a time when museums were changing and many design faults have created functional difficulties. The building is small and does not provide adequate space to serve the diverse needs of the community. There is inadequate space for permanent and temporary exhibitions, inadequate storage facilities, no workshop area to prepare exhibitions, no public space for community activities and public programs, no meeting spaces for friends and volunteers, no lecture space, limited museum shop area and no area for the provision of hospitality services. Toilet facilities are adequate only for staff. The library shares space with a multi-functional work room and community access gallery. The administrative area designed for one or two staff, now houses a staff of four plus up to ten volunteer, contact and work experience staff. Facilities are cramped and there is insufficient space for expanding Liverpool's cultural heritage collections. Three sea containers are currently in-use on the site, and collections are housed in the Liverpool Library and elsewhere in Liverpool.

The Museum needs increased space for exhibitions, public programs and other services provided by modern museums - public activity and meeting space, a museum cafe, shop, theatre and outdoor leisure and performance area.

Cost of Facilities

A master plan is currently in preparation for the existing museum site. Whether the museum expands on this site, or moves, it will need to increase in size to meet the demands of the present and future population. The existing size is 600 sqm - future requirements are estimated to be 1,500 - 1,600 sqm. It is proposed that the existing facility will be enlarged and modified to cater for visitor numbers in the vicinity of 150,000.

The upgrade would include:

- § Increase in floor space from 600 sqm to 1,600 sqm.
- § Enlarged exhibition space to expand the subject's areas covered by the museum.

- § Enlarged public spaces to include a theatre/film room and lecture space.
- § Provision of additional public toilets.
- § Children's discovery space and playground.
- § Provision of areas for specialised services/functions.
- § A range of commercial outlets - cafe and museum shop, bookshop.
- § Increased administrative areas.
- § Increased purpose-built storage facilities to centralise heritage collections.
- § Provision of public art.
- § Extensive landscaping and public sculpture.
- § Outdoor venue and performance space.

Item	Cost
Upgrade of existing building	\$512,103
Extension to building 1,000 sqm @ \$1,600 per sqm	\$1,638,729
Parking (50 additional spaces @ \$1,800 / space)	\$92,179
Consultant and project management fees @ 14%	\$314,021
Exhibitions	\$614,523
Landscaping	\$20,484
Public art and sculpture	\$102,421
Total	\$3,294,460

Casula Powerhouse Arts Centre

Background

The Liverpool community profile is characterised by diversity of cultures with a high proportion of local residents from non-English speaking backgrounds. The 1996 census data indicates that 39% of the population of Liverpool were born outside Australia and 42% of the population speak a language other than English at home.

In 1992 Council committed to the redevelopment of the Casula Powerhouse into an Arts Centre of local and regional significance. The purpose of the redevelopment was to provide a contemporary community-focused cultural and recreational facility. The Casula Powerhouse is available to all residents of the Liverpool LGA having between 75,000 and 100,000 visitors per year. Further improvements to the centre will be required progressively to cater for additional population growth.

A four stage re-development and plan was developed by Tonkin Zulaikha Architects for the Casula Powerhouse Arts Centre:

Stage 1 Construction - completed October 1994

- § Multi-purpose exhibition spaces in Turbine Hall, Boiler house and Foyer.
- § Shell of theatre/function centre.
- § Art studios.
- § Electrical and fire services.

Stage 2 Construction - completed October 1994

Complete work to Boiler house with permanent tenant and retail facilities for:

§ Reverse Garbage (non-profit co-operative, which collects and sells unused industrial off cuts used by many community groups).

§ Dance/Theatre studio.

§ Powerhouse Design Studio.

§ Centre Administration and tenant offices.

Stage 3 Construction - completed May 1997

§ External works including car parks, roadway and landscaping.

§ Signage.

§ Auxiliary works.

Stage 4 Construction - not completed

§ 250 seat theatre for performing arts (less grant funding).

§ Riverbank development involving re-establishing access to the Georges River and developing links to Leacocks Regional Park, the Georges River Cultural Leisure Corridor and Casula Railway Station, including an outdoor amphitheatre.

Cost of Facilities

Analysis of visitor records indicates that 80% of visitors to the Powerhouse are from within the Liverpool Local Government Area and 20% are from outside areas. The contribution calculation addresses the proportional cost of the centre attributable to the LGA population.

The Powerhouse is available to both existing and future residents of Liverpool and Council cannot recover the proportion of costs attributable to the current population of 147,000 persons. Accordingly the contribution has been calculated over the total future population.

Item	Cost
Theatre Space	\$3,175,038
Recreational Landscape Development	\$491,619
Collection Storage Facilities	\$409,682
Education Workshop Areas	\$512,103
Administrative Areas	\$337,988
Lift	\$256,051
Office Space for Cultural Organisations	\$537,708
Gallery Spaces	\$389,198
Production Area	\$409,682
Air Conditioning	\$312,383
Sub Total	\$6,831,452
Less grant funding	(\$1,700,000)
Sub Total	\$5,131,452
20% Discount for proportion of non Liverpool users	(\$1,026,290)
Total	\$4,105,162

Contributing Area: All of Liverpool LGA

5.2 Recreation Facilities

Nexus

New residential development, which leads to an increase in the number of residents, will also increase the demand for citywide public open space and recreation facilities. The existing recreation facilities do not have adequate capacity to accommodate the increased demand, which will arise with the growth of Liverpool.

Council plans to augment existing recreation facilities to more adequately serve the citywide needs. Contributions will be used to provide additional capacity in response to the increase in demand arising from new development. Contributions will not reduce any existing shortfalls in the amount of provision. Shortfalls are to be addressed through other means (e.g. general revenue, grants and so on).

Citywide facilities are major open space and recreational opportunities intended to service the needs of all residents within the Liverpool Local Government Area irrespective of geographic location. Citywide open space/recreational facilities provide a higher tier of recreational opportunity that local or district facilities and include Chipping Norton Lakes and Riverside Park. The works proposed in relation to these parks will provide facilities for the entire population of Liverpool.

Indoor Recreation and Entertainment Complex

Background

Liverpool Council delivers a wide range of sport and recreation services to its residents via a network of regional and local parklands, sportsgrounds and indoor facilities. These include three leisure centres, six tennis centres, a golf course, three skate parks, several art / cultural centres and around 300 parks and open space areas.

Despite the substantial benefits provided by this array of local and district scale facilities, there are currently no venues in Liverpool suitable for staging 'major sporting, cultural and entertainment events'. Liverpool's residents either go without these activities or they must travel substantial distances to access them. In order to implement Council's policy for the provision of additional recreation facilities, a Masterplan for major developments within Woodward Park has recently been completed.

The Indoor Recreation and Entertainment Complex is proposed to be the major sporting venue for residents in Liverpool. Its location being adjacent to the existing Whitlam Centre Complex adds to the attractiveness of the Indoor Recreation and Entertainment Complex. The Indoor Recreation and Entertainment Complex is also located adjacent to Liverpool City Centre. This would make it very accessible to residents as the network of bus routes in Liverpool is generally centred on Liverpool City Centre.

The Indoor Recreation and Entertainment Complex will provide a facility, which is not currently available to residents in Liverpool. It will provide a venue with the capacity to accommodate a diverse range of indoor sporting and entertainment events including:

Indoor sports

- § Basket ball (NBL, WNBL)
- § Netball
- § Volleyball
- § Boxing
- § Ice skating

- § Roller skating
- Entertainment events
- § Popular music and rock concerts
- § Musicals / popular concerts
- § Family shows
- § Functions
- § Conferences
- Exhibitions/product launches
- § Banquets

The Indoor Recreation and Entertainment Complex is to be provided for both the existing population and the anticipated population growth in Liverpool over the coming years. The Indoor Recreation and Entertainment Complex will provide a higher level of recreation facility that is not available in Liverpool or nearby areas at the moment. It will reduce the need for existing and future residents to travel outside Liverpool to attend major sporting and entertainment events.

A study done for Council by *BBC Consulting* showed that there is a need for the facilities that the Indoor Recreation and Entertainment Complex will provide. The demand assessment undertaken as part of this study reviewed characteristics of the population of Liverpool City of importance in identifying the need for major indoor venues in Liverpool. The analysis suggested that the population, due to its growth, younger age profile and family structure, is one that typically generates a high use of indoor leisure centres and arenas/entertainment centres.

This expectation is supported by the high use of the Whitlam Centre and attendance at entertainment events. Additionally, the review identified a range of unsatisfied needs for indoor facilities particularly the following:

- § additional indoor sports courts for several sports;
- § more and better spectator provision;
- § more appealing night time and weekend recreation and entertainment facilities and activities;
- § more local activities (such as entertainment) for young people - especially at night; and
- § a large indoor venue for large regional school based activities.

The forecast growth in the population will underpin the continued high use of indoor facilities in Liverpool and generate considerable demand for additional facilities.

Associated with population growth and sports participation and spectator trends, a growth in grass roots involvement in sport brings with it a demand for locally based elite teams. This would result in an increase in the need for locally based facilities and major arenas to cater for spectator needs and locally based elite teams.

In relation to the supply of indoor facilities the study has found that:

- § There are no major arenas for big entertainment and sports events in South Western Sydney;
- § There are only two indoor sports centres in Liverpool and these are not meeting current demands and experience capacity constraints;
- § There are 26 other sports halls in surrounding municipalities. Some of these, due to the limited capacity of Liverpool's facilities, are attracting users from Liverpool LGA;
- § Many potential participants in indoor sport in Liverpool do not have the resources (time, car and/or money) to travel beyond Liverpool to use facilities;
- § On a national benchmark basis, Liverpool (& Western Sydney) has a very low supply of indoor recreation facilities. While the per capita provision has improved significantly over the past 12

years, the regional supply is still low on a 'comparative' and 'industry benchmark' basis;

- § Many regional centres in Australia have a two to three times greater provision of indoor sports facilities than Western Sydney;
- § The low provision of indoor sports facilities is reflected in the low participation, in Liverpool, in indoor sports - including Basketball.
- § There are currently no ice skating facilities in Liverpool LGA;
- § A previous facility in Liverpool demonstrated a high local demand for ice skating;
- § There are currently only 4 ice rinks in Sydney - and these (according to their operators) are falling far short of meeting demands;
- § There is an ice skating facility supply 'vacuum' in the South West (incl Liverpool) region of Sydney.
- § There are no large performance/entertainment venues in Sydney's West (the largest being the Hills Centre with a 1,500 seat capacity);
- § The nearest purpose built performance facilities are in the City (Sydney Entertainment Centre and Hordern Pavilion), Wollongong and Newcastle;
- § The major facilities at Homebush Bay are not - because of their isolated location, design and presentation - well suited to the hosting of cultural activities;
- § Many regions in Australia with much smaller populations than Western Sydney have major indoor stadiums (suitable for entertainment, sport and community functions) with seating capacity of 5,000+.

Continued growth and diversity of the population of Liverpool creates a need for additional facilities and a need for a broader range of facilities and The City emerges as a major regional centre in South West Sydney. Facilitating the provision of the Indoor Recreation and Entertainment Complex goes towards meeting those needs.

The proposed Indoor Recreation and Entertainment Complex is likely to be located adjacent to the CBD of Liverpool. Its proximity to the arterial network and existing and future public transport facilities gives the Indoor Recreation and Entertainment Complex a high level of accessibility to the residents of the City of Liverpool and surrounding areas.

Cost of Facilities

The original estimated cost of the Indoor Recreation and Entertainment Complex is \$33,000,000. The study projected that 57% of the visits to the Indoor Recreation and Entertainment Complex would be by residents of Liverpool LGA. Due to amendments to the plan the value of works against which Council could charge is 55% of \$33,000,000, which is \$18,534,418, allowing for CPI increase. This figure is then divided by the population of Liverpool at 2021 to arrive at a contribution per person. As population growth from 2000 to 2021 will account for approximately 36.6% of the year 2021 population the plan will recover 36.6% of the \$18,534,418. In this way there is no subsidy of existing residents.

Whitlam Centre Extensions

Background

The Whitlam Centre is a major indoor recreational facility incorporating a heated pool, gymnasium and multi purpose hall. The centre provides a broad range of recreational opportunities specifically incorporating facilities not generally available at, or of a higher standard / capacity than, local and district recreation centres.

In anticipation of future population growth Liverpool City Council undertook major extensions to the Whitlam Centre in 1994 to 1996. The works undertaken sought to increase the capacity of the centre from a district to citywide facility. The diversity and standard of recreational opportunities of

the Whitlam Centre are generally superior to those provided at a local or district level and accordingly the facility services a greater catchment. In effect, the completed extensions to the Whitlam Centre will provide a higher tier of recreation opportunities to all residents of Liverpool (both existing and future).

The cost of works to Council (and therefore the community) to 1996 was spent to cater for the existing population and in anticipation of future development, thereby ensuring that required facilities were "on the ground" to satisfy the requirements of future population growth. The contribution levied under this plan seeks to recoup part of the expenditure of Council making allowance for existing and future population likely to be served by the facility excluding non Liverpool patronage and Stage II release areas.

Cost of Facilities

Item	Cost
1994 - 96 Extensions comprising: 50 m outdoor heated pool, 25 m indoor heated pool, family leisure indoor heated pool, pool plant (heating, circulation, etc), fitness facility, aerobics room, kiosk, office complex, reception area,	
Cost (inclusive of interest)	\$9,700,907
Less grant funding	(\$1,481,942)
Total	\$8,218,965

Georges River Parklands

Background

The Georges River is the only major waterway located close to the urban areas of Liverpool. Liverpool residents would otherwise be required to travel considerable distance to access a comparable recreation environment.

Council's Structure Plan and Management Plan place great emphasis on seeking to maximise recreation on and adjacent to the Georges River. Liverpool residents already heavily use the developed public open space areas along the Georges River.

The Structure Plan and Management Plan also seek the creation of linked open spaces and for foreshore open space along the Georges River. At present there is a substantial amount of the river foreshore which is in public ownership. There are areas of river foreshore at Chipping Norton, Voyager Point and Glenfield, which will also be available for public access at some stage in the future. The provision of a continuous pedestrian and bicycle route along the Georges River would create a very attractive and unique recreation resource for Liverpool residents.

There are several missing links in achieving a connected open space system along the Georges River. The missing links are located on the western side, south of Liverpool Bridge, the eastern side north of Liverpool Bridge and between Davy Robinson Drive and the South Western Freeway. These missing links do not have easy alternate routes for pedestrians and bicyclists. Without the connection of the existing open spaces it would not possible to provide a pedestrian and bicycle link along the Georges River.

Chipping Norton Lakes

Chipping Norton Lakes lies within the city of Liverpool and is approximately 100 hectares in size. The site is situated between Warwick Farm Racecourse and Bankstown Airport and is approximately 3.5 km north east of the Liverpool CBD.

The open space on the south side of Chipping Norton Lakes is a citywide recreational facility providing a broad diversity of water and land based recreational pursuits available to all residents of the Liverpool LGA. The overwhelming majority of users on the land on the south side of the

lakes are from within Liverpool. This land currently is at maximum use on weekends and in summer time. The expected population growth will increase demand for use of the open space.

Chipping Norton Riverside Park

The proposed Chipping Norton Riverside Park is an open space development jointly initiated by the *Department of Planning* and *Liverpool City Council*. It is located on the western bank on the Georges River and consists of 84 ha of primarily undeveloped land.

The open space would be an extension of the existing open space on the south side of Chipping Norton Lakes. Development of the land would help alleviate the user pressure on the existing open space at Chipping Norton already referred to. Environmental Partnership Pty Ltd undertook a Plan of Management for the Park in October 1996.

The Plan of Management seeks to:

- § provide a firm basis and clear guidelines for the improvement, maintenance and use of resources within the Riverside Park
- § optimise the quality and diversity of passive and active recreation opportunities
- § promote community values and incorporate the needs of the community in development and management proposals
- § ensure recreation opportunities are accessible to those in need and those who will benefit most
- § provide opportunities for research into the improvement of stormwater management techniques
- § plan for the progressive improvement of the recreational quality, opportunity and appearance of the park as funds become available
- § recommend appropriate funding sources for improvement works

The Landscape Masterplan developed for the site incorporates the following principles:

- § establish a bushland protection area
- § provide amenities for baseball and rugby league sporting groups in addition to facilities for the Stormwater Industry Association
- § progressively rehabilitate and upgrade the low lying floodway and wetland zone of the site
- § close off through site access and reinforce two major parking areas and site entries
- § develop a Liverpool City "gateway"
- § upgrade the foreshore areas in the south and south west of the site for passive recreational usage

Georges River links

The provision of a continuous pedestrian and bicycle link along the Georges River between Glenfield and Voyager Point would enhance the existing open space areas along the river. It would ultimately connect with other open space and pedestrian and bicycle links in the western areas of Liverpool and in doing so form part of a major recreation resource accessible to the residential areas of Liverpool. It would provide an attractive venue for exercise.

Cost of Facilities**Chipping Norton Lakes**

Item	Cost
Rehabilitation and regeneration of bushland	\$97,300
Provision of shade structures or trees in picnic areas and waters edge	\$184,357
Construction of facilities for disabled users	\$12,290
Install location and interpretive boards	\$14,646
Install additional garbage bins	\$5,223
Sub Total	\$313,817

Chipping Norton Riverside Park

The Plan of Management identifies phasing of works, and preliminary cost estimates. The preliminary cost estimate for Phases 1 & 2 works are \$6,857,000. However, it is not considered appropriate for the whole of these works to be levied for under the plan. The relevant works to meet the city wide recreation needs of the future population are identified below.

Item	Cost
Rugby league field	\$158,752
Design scheme for Phase 2 works Southern Park	\$40,968
Axial planting to Newbridge Road entry	\$97,300
Newbridge Road access and car parking area	\$236,592
Foreshore picnic areas - north	\$67,598
Path link to western foreshores of lake	\$78,864
Project Management 8%	\$54,406
Contingency 10%	\$68,007
Sub Total	\$802,486

Mill and Lighthorse Park

Item	Cost
Construct pedestrian link from Mill Park to Shepherd Street	\$777,741
Lighthorse Park Upgrade car parking area	\$92,179
Sub Total	\$869,919

Georges River links

Item	Cost
Land Acquisition link from Liverpool Bridge to Bridges Road 860 m @ 20 m width (\$65 per sqm)	\$1,145,062
Land Acquisition link from Newbridge Road to Freeway at Moorebank 2,400 m @ 20 m width (\$25 per sqm)	\$1,229,047
Construction of bikeway along Georges River Parklands 20,000 m @ \$138 per m	\$2,816,566
Amount after discount for existing development	\$938,855
Sub Total	\$3,312,964
Total	\$5,299,186

5.3 Contribution Formulae

Residential Development

The following formulae are used to calculate the contribution for the entire City Wide Facilities except the Georges River Parklands.

$$\text{Contribution Rate = } \frac{\mathbf{C \times O R \times N}}{\text{(per dwelling / lot) } \mathbf{233,000}}$$

- where
- C** = Cost of capital works of each facility
 - O R** = Estimated occupancy rate for the development type and location
 - N** = No. of additional lots / dwellings
 - 233,000** = Estimated population of Liverpool LGA at 2021

The following formula is used to calculate the contribution for the Georges River Parklands.

$$\text{Contribution Rate = } \frac{\mathbf{C \times O R \times N}}{\text{(per dwelling / lot) } \mathbf{85,700}}$$

- where
- C** = Cost of capital works
 - N** = No. of dwellings / lots
 - O R** = Estimated occupancy rate for the development type and location
 - 87,500** = Additional population in Liverpool LGA from 2000 to 2021

$$\text{Area of land to be dedicated = } \frac{\mathbf{A}}{\mathbf{N}} \times \frac{\mathbf{O R}}{\mathbf{3.7}}$$

(per dwelling / lot)

- where
- A** = Total area to be acquired in the catchment area
 - N** = No. of equivalent lots / dwellings in the catchment area
 - O R** = Estimated occupancy rate for lot size or dwelling type

Aged or Disabled Persons Housing

Contribution (for total development) = $\frac{\text{Conventional Lot Contribution} \times \mathbf{R}}{\mathbf{O R}}$

where **O R** = Estimated occupancy rate for a conventional lot and location
R = Proposed number of residents for the aged and disabled persons housing development

The following table gives the estimated occupancy rate for the development type and location.

Dwelling Type	Occupancy Rate		
	Established Areas	Release Areas	Rural Areas
Residential Subdivision			
Lots 450 sqm or larger	3.2	3.7	3.4
Lots smaller than 450 sqm	3.1	3.3	
Semi-detached dwellings, Multi dwelling housing and residential flat buildings (where permitted)			
3 or more bedrooms	3.1	3.3	3.1
2 bedrooms	2.3	2.3	2.6
1 bedroom	1.2	1.8	1.6

Dwelling Type	Occupancy Rate in Edmondson Park
Rural Residential	3.4
Detached dwellings on lots > 350sqm	3.4
Small lot dwellings / semi detached and town houses	2.9
Residential flat buildings	2.3

Note: while the contribution formulae include future development City Wide Facilities under this plan are not applied to Liverpool City Centre or Edmondson Park.

5.4 Staging of Facilities

Council will construct Community and Recreation Facilities as the population threshold for their augmentation is reached. These will be provided as funds become available and as land can be acquired.

6. Established Areas

6.1 Development Trends

It is expected that redevelopment will continue to occur in the established residential areas of Liverpool for the foreseeable future. An analysis of the redevelopment potential undertaken by Council indicates that there is scope for redevelopment to continue at a sustainable in the period up to 2021.

Additional Dwellings and Allotments

Estimates of the rate of housing development for the coming 5 years in the established areas have been prepared in consultation with the *Department of Planning* through the Metropolitan Urban Development Program. An allowance has been made for replacement dwellings based on Council consent records and consultation with Land Availability Data System of Sydney Water. Council has also projected figures beyond the five year period of the Metropolitan Urban Development Program.

At mid 2001 it is estimated that there were 28,260 dwellings in the established areas of Liverpool. It is estimated that by 2011 there would be an additional 2,840 dwellings in the established areas of Liverpool, giving a total of 31,100 dwellings. This equates to an additional 250 dwellings per year plus 300 additional dwellings adjacent to Holsworthy Railway Station.

Additional Population

At the 1996 census there were 75,128 people in the established areas of Liverpool. At mid 2001 it is estimated that there were 81,900 people in the established areas of Liverpool. It is estimated that by 2011 there would be an additional 6,900 people in the established areas of Liverpool. This figure takes into account replacement dwellings and changing occupancy rates.

Proportion of separate dwelling/multi unit housing

It is anticipated that the majority of new dwellings within the established areas will be multi unit housing development including dual occupancy, villas and town houses, and residential flat buildings. A review of development consents for the period 1996 - 1998 within the established residential areas indicates that of all additional dwellings (not replacement dwellings) approximately 15% were separate dwellings and 85% were multi unit housing. It is expected that this proportion will continue. Accordingly this plan assumes that 85% of future development in established areas would be in this form.

6.2 Community Facilities

Nexus

Residential redevelopment in the established areas will increase the demand for community facilities. Council has reviewed the capacity of existing facilities to determine if any augmentation of facilities is required to meet the demands of the increase in population as a result of residential redevelopment.

District Community Facilities

Current normative standards for community facilities are 1 centre per 6,500 residents (*Department of Planning*), 1 medium sized centre per 5,000 - 10,000 residents (*Department of Community Services*) and one local facility per 10,000 residents (Liverpool City Council). It is considered that the existing local facilities will provide an adequate level of service for the anticipated population

growth. Accordingly developer contributions for local community facilities will not be levied under this plan.

District Community Centres have the capacity to accommodate a range of community activities across a number of neighbourhood areas. The multi purpose design of these facilities ensures an efficient use of space. The design may include the provision of a large hall, kitchen, library, office space, and meeting rooms, which can be easily re-configured for meetings and activities subject to the requirements of the user.

The multi-purpose layout enables a range of functions to be provided simultaneously. This flexibility ensures that the facility has the capacity to easily respond to changing community needs thus ensuring ongoing viability and utilisation. There is need for such space in established residential areas judging by regular requests from community organisations for permanent and sessional office accommodation with associated meeting spaces.

The *Liverpool City Council* S94 nominative indicator for space per resident is 0.022 sqm for district level community facilities with an average size of 800 sqm. Future residents within the established residential areas will require the provision of appropriate district level community facilities. In order to maximise the use of existing resources it is proposed to upgrade 2 local community centres to a district level.

The modifications, which are required to local level facilities, might include refurbishment, library resources and modification to fittings and floor plan re-configuration (e.g. the installation of openable walls). At this stage the specific local community facilities to be upgraded from local to district status within the established areas of Liverpool LGA has not been finally determined.

Libraries

There are already libraries servicing the established areas at Casula, Green Valley, Miller, Liverpool and Moorebank. However additional residential development in the established areas will increase the demand for lending of books from the library system.

Council levies residential development in its release areas for the provision of library items (items include books, audio-visual, multi-media and periodicals in conjunction with the construction of libraries. Council has been levying at the rate of approximately 1 book per person.

Redevelopment in the established areas will increase the demand for book lending in the library system. Books may take the form of hard copies or digital form. Accordingly new development in the established areas should contribute to the increase in the supply of books in the library system. It is a one-off capital cost. Council will bear the cost of replacement stock.

Cost of Facilities

District Community Facilities

Upgrading of existing community centres/meeting spaces to a district level function is estimated at \$950 per sqm based upon current costing with regard to building re-configuration, materials and fittings. This rate is sourced from a review of S94 construction and refurbishment costs undertaken in May 1998 by Roy Parkinson of *Burgess & Partners*.

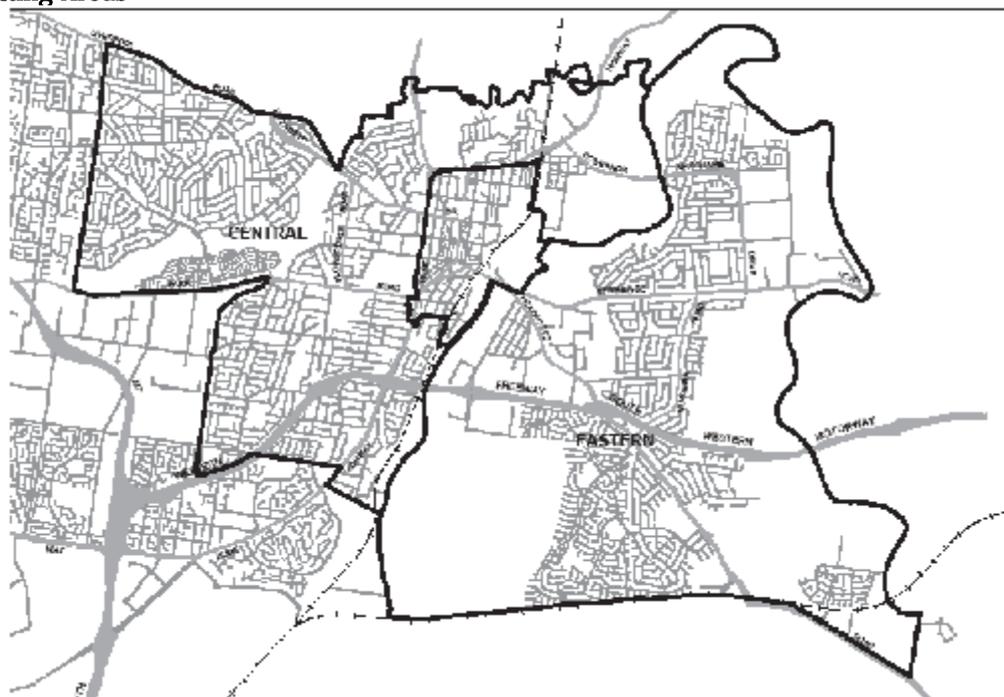
Based on an additional population of 6,100 people in the established areas of Liverpool an additional 134.2 sqm of floor space would be required. At a construction cost of \$970 per sqm the cost of upgrading District Community Facilities would be \$130,190.

Library items

The cost of books is estimated at \$36 per book (or similar items). Based on an additional population of 6,100 people in the established areas of Liverpool the cost of additional Library books would be \$218,022.

No. of Dwellings: 2,800 (to 2011)

Contributing Areas



Map amended, Amendment No.1 (5 June 2002)

6.3 Recreation Facilities

Nexus

New development that leads to an increase in the number of residents will increase the demand for public open space and recreational opportunities. Although there is already open space and recreation facilities within the established of Liverpool infill development will increase the demand on the existing facilities. Council plans to augment existing recreation facilities. Contributions will be used to provide additional capacity in response to the increase in demand arising from redevelopment. Contributions will not reduce any existing shortfalls in the current level of embellishment.

Open Space Land Needs

The established areas of Liverpool currently have about 606 ha of open space. Much of this is along the river corridors and which is flood liable. It is considered that there is generally sufficient local open space land within the established areas.

Council has in recent years commissioned surveys to assess the needs of residents for open space facilities. These form the basis of additional facilities in open space. It must be emphasised that these facilities are not being used to reduce any shortfalls.

Recreation Facilities and Embellishment

The lists of facilities at the beginning of Section 5 may to some extent reflect concerns about existing standards. Accordingly they need to be properly interpreted so that the schedule of works in a contribution plan does not simply make up for existing shortfalls in service provision.

Nevertheless the findings provide a basis for determining needs for the future residents in the established areas. It is proposed that works in the established areas consist of comprehensive projects rather than minor upgrades in order to avoid works that are replacement or maintenance works. It is also proposed that the scope of works be limited to particular types so as to avoid

replacement or maintenance works. These restrictions are considered necessary as the plan provides flexibility on the location and content in the works schedule for the reasons stated in hereunder.

A park embellishment will involve a generic list of facilities that are not considered to be replacement or maintenance works. The list of works proposed for each park will of course vary depending on the circumstances of the locality. Accordingly each park embellishment will not be required to include all of the facilities. The following is the list of facilities for each type of park.

Embellishment of active recreation facilities

The following is a list of facilities that would allow increased use of an active park either by allowing more intensive use or by extending the time period that it can be used.

- § Amenities buildings
- § Seating
- § Mounding
- § Flood lighting

Embellishment of passive recreation facilities

The following is a list of facilities that would allow increased use of an active park either by allowing more intensive use or by extending the time period that it can be used.

- § Additional and widened paths
- § Bicycle paths
- § BBQ facilities
- § Playgrounds
- § Seating, benches and shelters
- § Lighting
- § Fencing
- § Planting to screen, beautify, control circulation paths, and provide shade
- § Earthworks: creating more useable areas by levelling / mounding and associated retaining walls or embankments

Basis of contributions

The basis of contributions is as follows. The provision of local open space is based on the cost of embellishment of a standard open space. The area of the open space is based on the rate of about 2.83 ha of additional population. Based on an additional 6,100 people a total of 17.3 ha of local open space could be embellished. This rate is consistent with the amount of land to be provided in the release areas for local open space. A further contribution is to be provided for district recreation facilities in the same proportion to local recreation as in the release areas.

Location Criteria for Recreation Facilities

The location criteria for augmenting recreation facilities is based on where development is estimated to take place. An estimate has been made as to the amount of development that will take place in various suburbs. This is considered the lowest order of detail that such forecasts can take place.

Unlike the release areas the location of redevelopment in the established areas is not as predictable. Accordingly the plan does not in many cases identify particular sites for recreation facilities. Instead it identifies the number of parks within each suburb based on likely development trends where recreation facilities could be upgraded. The particular parks will be determined as

development takes place. The rate at which the proposed number of parks is embellished will depend on the rate of development. If redevelopment is slower than forecast, the rate of provision of parks will also be slower. Likewise where redevelopment is faster than forecast, the rate of provision of parks will also be faster.

The location of an embellishment work may take place in the adjoining suburb depending on the circumstances. In some situations, particularly in the case of Liverpool CBD, it may be preferable to embellish open space which is located immediately adjoining the Liverpool CBD area rather than buy additional land within the CBD area. In some situations boundary between suburbs is not a barrier between the location of new dwellings and the location of facilities to serve the new dwellings. The intent of the boundaries is to ensure that contributions received from development are spent in a location to adequately serve the occupiers of that development.

District Recreation Facilities

The scope is limited to the following facilities.

Active recreation facilities (including tennis, netball, basketball, pools and sportsfields)

- § Amenities buildings
- § Seating
- § Mounding
- § Flood lighting

Passive recreation facilities

- § District Playgrounds

Cost of Facilities

Locality	Cost
Central District	\$822,371
Eastern District	\$238,753
Total	\$1,061,123

No. of Dwellings: 2,800 (to 2011)

Contributing Areas



Map amended, Amendment No.1 (5 June 2002)

Local Recreation Facilities

The scope of Embellishment is limited to the following facilities.

Active recreation facilities

- § Amenities buildings
- § Seating
- § Mounding
- § Flood lighting

Passive recreation facilities

- § Additional and widened paths
- § Bicycle paths
- § BBQ facilities
- § Playgrounds
- § Seating, benches and shelters
- § Lighting
- § Fencing
- § Planting to screen, beautify, control circulation paths, and provide shade;
- § Earthworks: creating more useable areas by levelling/mounding and associated retaining walls or embankments

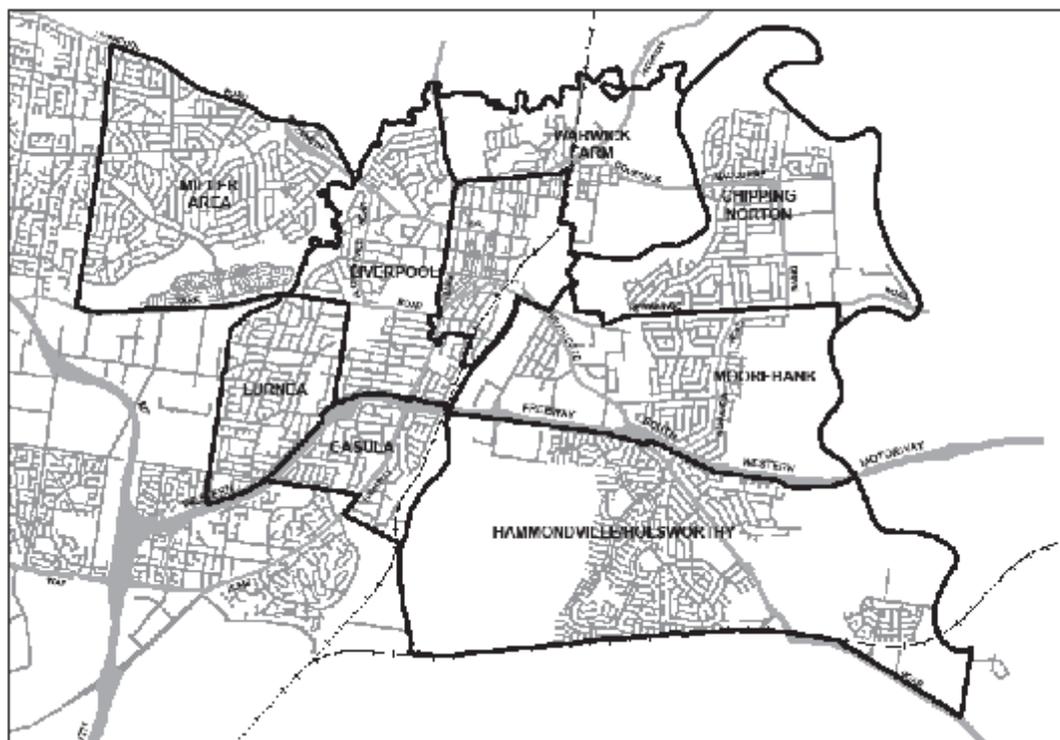
Cost of Facilities

Item	Cost
Play Structure with soft fall including installation	\$20,484
Swing set	\$1,024
Animal Rockers	\$1,639
Drainage allowance	\$1,613
Siteworks	\$16,003
Services (drainage and water)	\$8,464
Lighting to pathways	\$36,871
Landscaping, tree planting & grass seeding	\$100,720
Pathway construction (1.2 m x 300 m)	\$22,123
Fencing / bollards	\$23,147
Signage	\$4,978
Seats, bins, table & seat settings, shade structures & BBQ	\$19,050
Sub Total	\$256,117
Design, documentation and project management allowance 10%	\$25,612
Contingency sum 10% (excluding project management)	\$25,612
Total	\$307,340

The amount of open space that is expected to be embellished in each suburb is as follows.

Locality	Area of embellishment (ha)	Cost
Casula	0.62	\$189,486
Chipping Norton	0.68	\$208,435
Miller area	1.85	\$568,459
Hammondville / Holsworthy	2.59	\$795,843
Moorebank	0.62	\$189,486
Lurnea	0.99	\$303,178
Warwick Farm	2.10	\$644,253
Liverpool	1.97	\$606,356
Liverpool CBD	5.86	\$1,800,120
Total	17.26	\$5,305,617

Sub catchments



Map amended, Amendment No.1 (5 June 2002)

6.4 Administration Costs

Nexus

There are significant costs associated with administering funds of this magnitude. Both the plan preparation/review and implementation aspects of Section 94 contributions are administered staff within Council. A core team of employees are engaged to provide support in co-ordinating such a process, as well as prepare status reports, review and relevant data, liaise with Council staff and external agencies.

In accordance with the directive of the *Department of Planning*, the administration costs are comprised of those expenses relative only to those personnel directly responsible for the formulation and/or administration of a Section 94 Contributions Plan. The cost per lot per year has been averaged across all of the Contribution Plan areas.

6.5 Contribution Formulae

The following formulae are used to calculate contributions community and recreation facilities in Established Areas.

Community and Recreation Facilities

Residential Development

$$\text{Contribution Rate = } \frac{C}{N} \times \frac{OR}{3.1} \text{ (per dwelling / lot)}$$

where C = Cost of capital works identified for the catchment area

N = No. of equivalent lots in the catchment area
OR = Estimated occupancy rate for lot size or dwelling type

Aged and Disabled Persons Housing

Contribution for total Conventional Lot Contribution x R x P
development = 3.1

where 3.1 = Estimated occupancy rate for a small lot

P = the proportion of facilities excluding child care and youth centre

R = Number of residents

The following table gives the estimated occupancy rate for the development type.

Dwelling Type	Occupancy Rate
Residential Subdivision	
Lots 450 sqm or larger	3.2
Lots smaller than 450 sqm	3.1
Semi-detached dwellings, Multi dwelling housing and residential flat buildings (where permitted)	
3 or more bedrooms	3.1
2 bedrooms	2.3
1 bedroom	1.2

Administration

The cost of administering contributions plans over the coming years has been estimated at 1.2% of the value of contributions.

6.6 Staging of Facilities

Council will construct Community and Recreation Facilities as the population threshold for their augmentation is reached unless a developer provides these. These will be provided, as funds become available.

7. Pleasure Point

7.1 Development Trends

There are 65 existing lots, which can be developed. No subdivision potential is expected.

7.2 Transport Facilities

Council appreciates the need to carefully balance the management of traffic in order to achieve a safer local road system with appropriate residential amenity within this rural context and to provide for the efficient transfer of people, goods and services.

In adopting this strategy some cost savings on the construction of the local residential streets is advocated in the plan. These benefits are improved safety and amenity in residential areas as well as savings in local development construction costs.

The existing local street network is built to a rural standard and can accommodate the traffic volumes associated with the existing dwellings situated on the northern side of Riverview Road. The development of the subject 65 allotments will generate traffic volumes beyond the rural road threshold. The development potential necessitates the upgrading of Pleasure Point Road, Riverview Road and Green Street.

Cost of Facilities

Item	Cost
River Heights Road	
Establishment	\$2,728
Driveway Construction	\$117,288
Sub Total	\$120,016
River View Road	
Establishment	\$2,728
Kerb & Pavement	\$66,009
Footway	\$13,475
Sub Total	\$82,211
Green Street Pavement at Intersection	\$19,203
Bus Turning Area	
Splay Corners	\$17,457
Bus Turning Area	\$6,546
Easements	\$736
Sub Total	\$22,675
Bus Turning Area	
Pavement	\$32,077
Drainage	\$53,292
Sub Total	\$85,369

7.3 Drainage

Almost all allotments within the plan area require some form of inter-allotment drainage for the removal of concentrated stormwater from the individual sites. The DCP allows for the creation of easements where necessary but does not specify the location or width of these easements. It will be a condition of consent that such easements are dedicated across the property affected. The actual construction of the inter-allotment drains will be covered by this plan.

The cost of drainage works to service the area is \$133, 823.

7.4 Administration Costs

There are significant costs associated with administering funds of this magnitude. Both the plan preparation / review and implementation aspects of Section 94 contributions are administered staff within Council. A core team of employees are engaged to provide support in co-ordinating such a process, as well as prepare status reports, review and relevant data, liaise with Council staff and external agencies.

In accordance with the directive of the *Department of Planning*, the administration costs are comprised of those expenses relative only to those personnel directly responsible for the formulation and / or administration of a Contributions Plan. The cost per lot per year has been averaged across all of the Contribution Plan areas.

7.5 Professional Fees

The cost of independent land valuations and legal documents are clearly part of the costs of administering this plan. In relation to land acquisition, Council will be required to acquire land for roads and incur the associated conveyancing costs.

It is recognised that the costs associated with land acquisition could be added to the cost of individual facilities; however the cost of professional fees attributable to any one facility is completely unpredictable. It is therefore more appropriate that a pool of contribution funds is available to meet these costs as they arise. The contribution rate will be reviewed in light of income and expenditure when this plan is reviewed in accordance with section 2.8.

The contribution rate is the same regardless of the size of the lot or form of development. In arriving at this rate the following factors were taken into account:

- § The cost of independent valuations is anticipated to vary from \$500 - \$2,000 depending on individual sites and whether the valuation is general or specific;
- § Valuations will be required at least annually for reviewing this contribution plan and more frequently depending on movements in the property market;
- § Stamp duty and estimated costs of vendor's solicitor in land acquisition.

7.6 Plan Establishment

The preparation of a contributions plan requires the development of options for the scope of works and the corresponding contributions. The formulation of the contribution plan has required extensive discussion on a range of facilities from full urban infrastructure to rural standards. Preliminary designs for many of these options and costing have also been required.

This contributions plan and all future plans developed will be required to fund the establishment costs of the plan itself. The costs of establishing each plan will vary dependent upon the magnitude of development potential. The establishment costs of this plan have been estimated at \$20,000 in total a portion of which has already been spent by Council.

7.7 Contribution Formulae

Drainage, Land Acquisition, Professional Fees and Plan Establishment

$$\text{Contribution Rate (per dwelling)} = \frac{C}{65}$$

where C = Cost of fees, capital works or land identified for the catchment area
65 = No. of existing lots

Road works

$$\text{Contribution Rate (per dwelling)} = \frac{C}{N}$$

where C = Cost of capital works or land identified for the particular street
N = No. of existing lots in the street catchment

Administration

The cost of administering contributions plans over the coming years has been estimated at 1.2% of the value of contributions.

7.8 Staging

The works will be provided by Council following the receipt of contributions.

8. Casula East, Casula West and Hinchinbrook/Green Valley Release Areas

8.1 Development Trends

Development in the Green Valley/Hinchinbrook, Casula West and Casual East Release Areas have now reached an advanced stage of development. The following are the development trends for these release areas.

Items	Green Valley / Hinchinbrook	Casula West	Casula East
Estimated no. of standard lots	3,895	570	684
Estimated no. of small lots	974	350	456
Estimated Population	17,431	2,809	3,944

8.2 Community Facilities

Nexus

The 1990 "*Social Plan for Liverpool Stage One Release Areas*" established the relevant standards of facility provision and the nexus between proposed facilities and composition of the incoming population. Development in these release areas is now well advanced. The range of community facilities has not been reviewed as most facilities have already been built.

New development, which leads to an increase in the number of residents, will also increase the demand for community facilities including multi-purpose community centres, libraries and cultural facilities.

It is intended that Section 94 contributions will be levied on aged or disabled housing development (as defined under *State Environmental Planning Policy Housing for Seniors or People with a Disability (2004)*). One of the key criteria, which allow development under *SEPP Housing for Seniors or People with a Disability (2004)*, is the local availability of support services.

Section 94 contributions are levied for aged and disabled housing development on the following grounds:

- § the standard nexus between the new population and the demand for additional services;
- § older and disabled people will be future users of multi-purpose community centres and the branch library;
- § service providers in Liverpool generally will use these facilities to provide local services for the anticipated population;
- § aged or disabled housing will not provide additional facility capability to people other than residents of the development;
- § not all residents' requirements can be met from services provided on site; and
- § the criteria within *SEPP Housing for Seniors or People with a Disability (2004)* for availability of local support services cannot be met without Council facilities in the locality.

Hinchinbrook/Green Valley

Cost of Facilities

<u>Item</u>	<u>Land</u>	<u>Cost</u>	<u>Total cost</u>
Multi purpose community centre & multi purpose child care centre	\$524,992	\$1,166,534	\$1,691,526
Branch library		\$2,030,870	\$2,030,870
District Community Centre		\$1,108,532	\$1,108,532
District Youth Centre		\$713,652	\$713,652
Family and Children's Centre		\$1,000,000	\$1,000,000
Multi-purpose Community Centre		\$2,267,857	\$2,267,857
Total			\$8,812,437

No. of Lots: 4,869

Contributing Area: All of Hinchinbrook / Green Valley Release Area

Casula West

Cost of Facilities

<u>Item</u>	<u>Cost</u>
Multi-purpose community centre	\$1,083,923
Library	\$451,909
Total	\$1,535,832

No. of Lots: 920

Contributing Area: All of Casula West Release Area

Casula East

Cost of Facilities

<u>Item</u>	<u>Land Cost</u>	<u>Capital Cost</u>
Child care centre including general community use	\$215,949	\$814,052

No. of Lots: 1,140

Contributing Area: All of Casula East Release Area

8.3 Recreation Facilities

Nexus

All of the local open space and recreation needs of these areas are provided for by contributions, as there was largely no existing open space in these areas. The provision of local open space and its subsequent embellishment is based on:

- § demographics of projected population;
- § needs of major target groups; and
- § location requirements.

Needs of major target groups

The major target age groups from a recreational viewpoint in new release areas are children 0-14 years and adults 20-34 years.

The recreational activities and open space needs for these specific age groups mainly comprise:

- § small parks within walking distance of all residences with play equipment;
- § formal playing fields;
- § areas for informal sporting facilities;
- § corridors linking open space features; and
- § large natural and parkland areas.

More specific desired recreational activities for these groups are as follows:

0 - 14 years	20 - 34 years
Cricket/football	Cricket/football
Bicycle paths	Tennis
Walking for pleasure	Walking for pleasure
Parks/playgrounds	Picnic/barbeques
Picnic/barbeques	Jogging
Swimming	Swimming
Visiting friends	Squash
Going to movies	Visiting friends
Going to beach	Going to clubs
	Going to movies
	Dancing / disco

Location and Design

The location of open space is important, with the following requirements.

- § all residents are within 500 m of local open space especially children's playgrounds;
- § local sports fields within 1 - 2 km of each residence with at least 2 fields, providing for a variety of sports;
- § open spaces linked by a predominantly off-road access system; and

§ passive precinct parks within 2 - 3 km of each resident, incorporating natural features such as bushland, creeks, high visual points, or historical sites.

The shape and location of open space reserves is dominated by the concept of dual use of open space for drainage functions, with drainage paths forming access linkages and retention basins providing active playing fields. The need for open space and its embellishment also exists for age groups other than those discussed above to provide a total community environment. Local parklands, walking, bicycle paths, tennis courts and hard court areas will provide recreational opportunities.

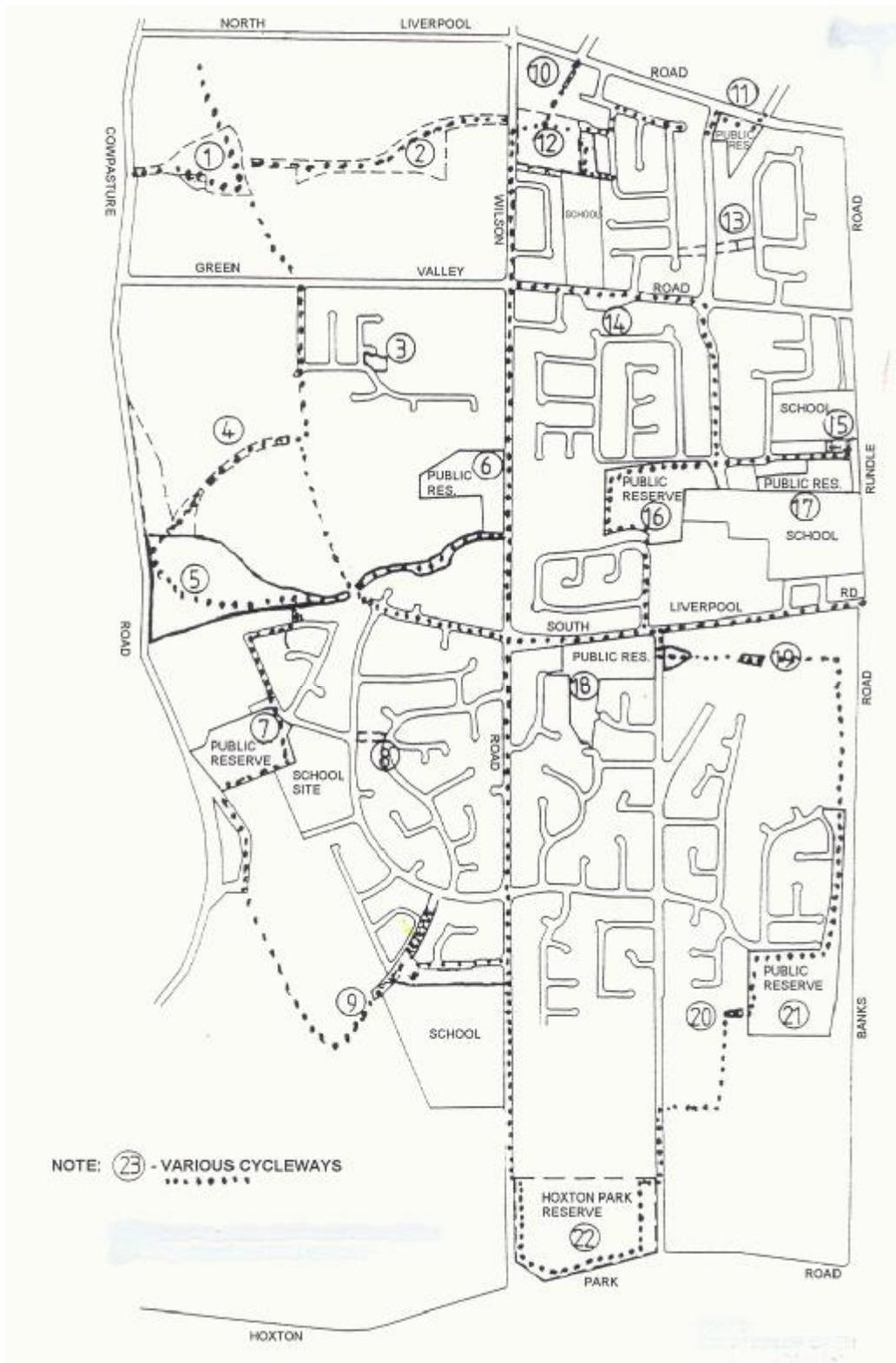
Green Valley/Hinchinbrook

Cost of Facilities

No.	Item	Cost	Land Area (ha)	Land
1	Casual playing field, local playground	\$253,922	4.1843	\$2,092,150
2	Local playground and linkage	\$31,771	2.99	\$1,495,000
3	Local playground	\$10,846	0.2159	\$107,950
4	Linkage	\$6,205	0.52	\$260,000
5	Casual playing fields, local playground	\$420,658	8.86	\$4,430,000
6	Passive recreation area	\$61,060	4.13	\$2,065,000
7	Passive recreation area, casual play area, local playground	\$42,169	3.422	\$1,711,000
8	Linkage and local playground	\$9,286	0.1859	\$92,950
9	Linkage	\$6,205	0.8077	\$403,850
10	Linkage	\$2,482	0.08	\$40,000
11	Local playground passive recreation area	\$27,377	1.0429	\$521,450
12	Casual play area local playground	\$225,205	2.9261	\$1,463,050
13	Linkages	\$485	0.2899	\$144,950
14	Local Playground	\$11,126	Existing	Existing
15	Local Playground	\$18,411	0.2418	\$120,900
16	Sport fields	\$725,939	5.9355	\$2,967,750
17	Linkage casual play area	\$10,504	1.657	\$828,500
18	Passive, recreation area	\$87,598	3.9541	\$1,977,050
19	Linkage	\$6,205	0.1695	\$84,750
20	Linkage	\$6,205	0.1216	\$60,800
21	Casual Playing fields, Local Playground and linkage	\$354,944	6.9634	\$3,481,700
22	Sporting Fields, Passive Recreation Area and Local Playground	\$492,971		
23	Cycleway Routes through Open Space	\$670,174		
Total		\$3,481,750	48.6976	\$24,348,800

No. of lots in catchment: 4,869

Contributing Area



Casula West

Cost of Facilities

No.	Item	Cost of Works	Area ha	Unit Cost	Land Cost
1	Tharawal Park - local park	\$29,132	0.8562	\$47	\$401,253
2	Gandangara Park - local park linkage	\$60,797	1.6373	\$47	\$767,310
3	Daruk Park Sportsfield Local Park	\$215,323	3.961	\$47	\$1,856,297
4	Road Buffer Highway	\$25,332	0.6502	\$47	\$304,712
5	Road Reserve Garden	\$6,333	0.2	\$47	\$93,729
6	Local park*	\$25,332	0.2	\$47	\$93,729
Total		\$362,249			\$3,517,030

No. of Lots in Catchment: 920

Contributing Area: All of Casula West

Casula East

Cost of Facilities

No.	Item	Cost of Works	Area ha	Unit Cost	Cost of Land
1	Dual space Gully playground	\$35,465	3.024	\$6	\$191,511
2	Buffer zone along highway	\$37,998	0.8845	\$38	\$336,093
3	Dual space Gully	\$6,333	0.1325	\$6	\$8,391
4	Dual space Gully	\$41,798	0.5961	\$6	\$37,751
5	Dual space Gully	\$41,798	4.1152	\$6	\$260,617
6	Dual space Gully	\$10,133	2.325	\$6	\$147,243
7	Sportsfields	\$566,172	5.808	\$38	\$2,206,931
Total		\$739,697			\$3,188,537

No. of lots in Catchment: 1,140

Contributing Area: All of Casula East

8.4 Transport

Nexus

Collector Streets

In the Hoxton Park Stage 1 Release Areas, the Local Access Street was adopted as the benchmark to assess developer contributions. Council has adopted the philosophy that within each neighbourhood, all streets of higher standard than local access streets (i.e. collector streets) are necessary to provide access for everyone in that neighbourhood. Accordingly there is a contribution toward the difference in cost between a local access street and each street of higher standard. That applies to additional width, pavement depth, and land value (in excess of 18 m width).

Within the Council's road hierarchy are the following:

- (1) access places and cul-de-sac - cater for up to 300 vpd and not more than 100 m long;

- (2) local access streets - cater for up to 1000 vpd with provision for up to 2000 vpd with wider pavements.
- (3) collector streets - cater for up to 3000 vpd;
- (4) trunk collector streets - cater for up to 6000 vpd and usually provide a link between the internal collector road system of a residential precinct and the major road system.
- (5) Sub Arterial Roads - cater for up to 15,000 vpd and are the principal traffic carriers within an urban neighbourhood.

Streets adjacent to public reserves

The cost of half-width of streets adjacent to public reserves is also collected by way of S94 contributions, including the land component, since public reserves are community property.

Upgrading existing public roads

Where an existing road is identified within the contributions plan as requiring an upgrade, Council has made an assessment of the remaining life of the pavement and deducted this from the cost of construction of a new pavement. Where the road is identified as access denied on the relevant DCP, the work is costed for the construction of full width pavement. If future residential lots have access directly to the road, the contributions plan funds central pavement only.

Roundabouts

Roundabouts serve the whole street system within each neighbourhood and consequently serve each property. The cost is determined by the difference in cost between an intersection with a roundabout and a normal intersection.

Green Valley/Hinchinbrook

Cost of Facilities

No.	Item	Length	Unit Cost	Cost of Works	Width	Unit Cost	Area	Land Cost
1	Sub Arterial Road with median			\$249,634				\$86,100
2	Collector Streets							
	Wilson Road			\$168,127				
	Green Valley Road			\$276,794				
	Lord Howe Drive (South of GV)	550	\$143	\$78,497	2	\$35	1100	\$38,500
	Lord Howe Drive (North of GV)	720	\$143	\$102,760	2	\$35	1440	\$50,400
3	Half streets adjacent to open space							
	South East Sector							
	(1/2 x 12m wide)	140	\$205	\$28,669	4.5	\$35	630	\$22,050
	(1/2 x 18m wide)	40	\$263	\$10,524				
	South West Sector							
	(1/2 x 18 wide)	140	\$263	\$36,835	9	\$35	1260	\$44,100
	Mid East Sector							
	(1/2 x 18m wide)	170	\$263	\$44,728	9	\$35	1530	\$53,550
	Mid Western Sector							
	(1/2 x 18m wide)	80	\$263	\$21,048	9	\$35	720	\$25,200
	(1/2 x 12m wide)	550	\$205	\$112,626	4.5	\$35	2475	\$86,625

No.	Item	Length	Unit Cost	Cost of Works	Width	Unit Cost	Area	Land Cost
	North East Sector							
	(1/2 x 18m wide)	320	\$263	\$84,194				
	North West Sector							
	(1/2 x 15m wide)	710	\$263	\$186,805	9	\$35	6390	\$223,650
	(1/2 x 15m wide)	700	\$263	\$184,174	6	\$35	4200	\$147,000
	(1/2 x 12m wide)	490	\$205	\$100,340	4.5	\$35	2205	\$77,175
	Fencing	3340	\$43	\$145,080				
4	North Liverpool Road Sub Arterial			\$279,425				
5	South Liverpool Road (Shoulders)	350	\$37	\$13,031				\$71,660
6	Traffic Facilities							
	Roundabouts, including landscaping and lighting			\$186,159				
	Traffic Signals, corner Whitford and North Liverpool Roads			\$223,391				
	Sign Posting of cycleways			\$88,115				
	Bus Shelters			\$62,053				
7	Entry Statements							
	Whitford Road at North Liverpool Road (east side)			\$6,826				
	Wilson Road at North Liverpool Road (both sides)			\$13,652				
	New collector street at North Liverpool Road (both sides)			\$13,652				
Sub Totals				\$2,717,140				\$926,010
Total								\$3,643,150

No. of Lots: 4,869

Contributing Area: All of Hinchinbrook/Green Valley

Casula West**Cost of Facilities**

No.	Item	Length	Width	Unit Cost	Capital Cost	Land Area	Land Cost
1 Pine Road							
	Central Pavement	580	6	\$9	\$30,854		
	Extra depth in shoulders	460	3	\$10	\$13,284		
	Extra depth in Pine Road Deviation	80	6	\$10	\$4,621		
	Land acquisition	80	2	\$47		160	\$7,476
	Adjustment to services				\$189,991		
	Legal costs of closure				\$6,333		
					\$22,900		
2 Kurrajong Road							
					\$42,558		
3 Myall Road and Ingham Drive							
					\$31,060		
					\$31,766		
	Land cost	300	2	\$47		600	\$28,036
	Deep lift pavement (20m)				\$31,665		
	Access to existing shops						
	Pavement, K & G	56		\$263	\$14,734		
	Land cost	56	9	\$47		504	\$23,550
					\$145,659		
Sub Totals					\$565,426		\$59,062
Total							\$624,662

The previous contribution rate prior to 1992 was \$1,051 per lot. On the basis of the development potential of 120 lots (at 1992), the anticipated income from the contribution rate (at 1992) would be $120 \times \$1,051 = \$126,120$.

Allowing for \$250,000 in future contributions from the Prestons Release Area and funds in hand, there was a shortfall of approx \$112,000. When the shortfall was divided equally by the total number of potential lots, an appropriate increase in contribution rate for remaining development was calculated (approx \$162). Allowing for increases in CPI this provides a contribution of \$1,532.

Casula East

Cost of Facilities

Item No.	Item	Length	Cost	Capital Cost	Land (sqm)	Land
1	Alcock/Leacock Ave Route			\$636,849	4,215	\$160,162
2	Eastern Collector			\$286,111		
3	Western Collector (part - 11 m Full Construction)	427	\$229	\$97,892		
4	Glenfield Road (Shoulder and Pavement to Collector Street standard)	1,539	\$115	\$176,412		
5	Traffic Facilities					
	2 Roundabouts			\$126,660		
	Traffic Signals					
	Proposed "Alcock" Collector and Hume Highway	50%	\$291,319	\$145,659		
	Leacocks Lane and Hume Highway	14%	\$291,319	\$40,785		
Sub Totals				\$1,510,368		\$160,162
Total						\$1,670,530

No. of Lots: 1,140

Contributing Area: All of Casula East

8.5 Drainage

Nexus

An overall strategy has been established for each release area and catchment utilising detention basins, swales, treatment ponds, gross pollution traps, etc. to ensure that at the outlets from these areas, the peak flow and water quality in the post-development situation are no worse than in the pre-development situation.

That strategy has necessitated an approach utilising basins and other control devices on a total catchment basis. To subdivide the major catchment into sub-catchments for the purpose of contributions would obviously penalise properties in those sub-catchments, which have basins and other high-cost elements in them to the advantage of those, which did not. These controls are essential because the runoff from the new release areas passes through the existing urban area of Liverpool.

Another aspect of the strategy is to require individual developers to directly bear the cost of all pipelines up to 825mm diameter within their own land, but to charge the difference in cost between any large size and an 825 mm diameter pipe to contributions.

As background to that, it was seen in theoretical terms that each property, which has drainage passing through it in the pre-development state, had an obligation to provide proportionally for pre-development runoff. Additionally, all upstream properties, which developed had an obligation to contribute to the cost of downstream drainage in proportion to the increase in runoff produced by their development. While this arrangement was the most equitable which could be derived, it was in practice too complicated to put into effect. It was found, however, that in overall terms, the

arrangement where all properties drained contributed to the cost of any pipe in excess of 825mm diameter produced a broadly equivalent result to the theoretically desirable one.

It should be noted that in the above context, CR is a coefficient used in the Rational Formula for calculation of runoff. In reality, the Rational Formula is not widely used today, having been replaced by a variety of much more sophisticated computer-based methods. Because it is not possible to establish any broad-scale relationship between the rates for different types of development runoff using those approaches, the more basic Rational Formula relationships above have been adopted.

Hinchinbrook/Green Valley

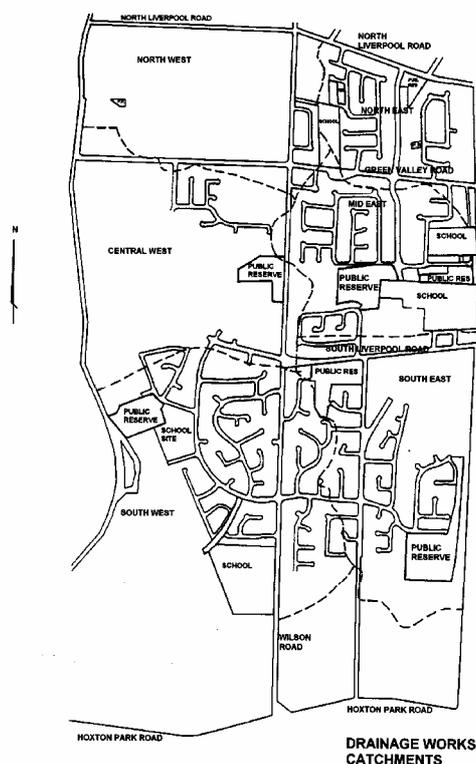
The following table summarises the future capital costs for drainage works, which are to be funded from S94 contributions from future development. All drainage land is dual use open space. Therefore the land component for drainage costs is included in the costing for open space.

Cost of Facilities

Item	Cost
South East Drainage	\$891,563
Mid East Drainage	\$746,418
South West	\$580,356
Central West	\$967,570
North West	\$1,309,432
Miscellaneous	\$65,702
Total	\$3,669,479

No. of Lots: 4,869

Contributing Area



Casula West

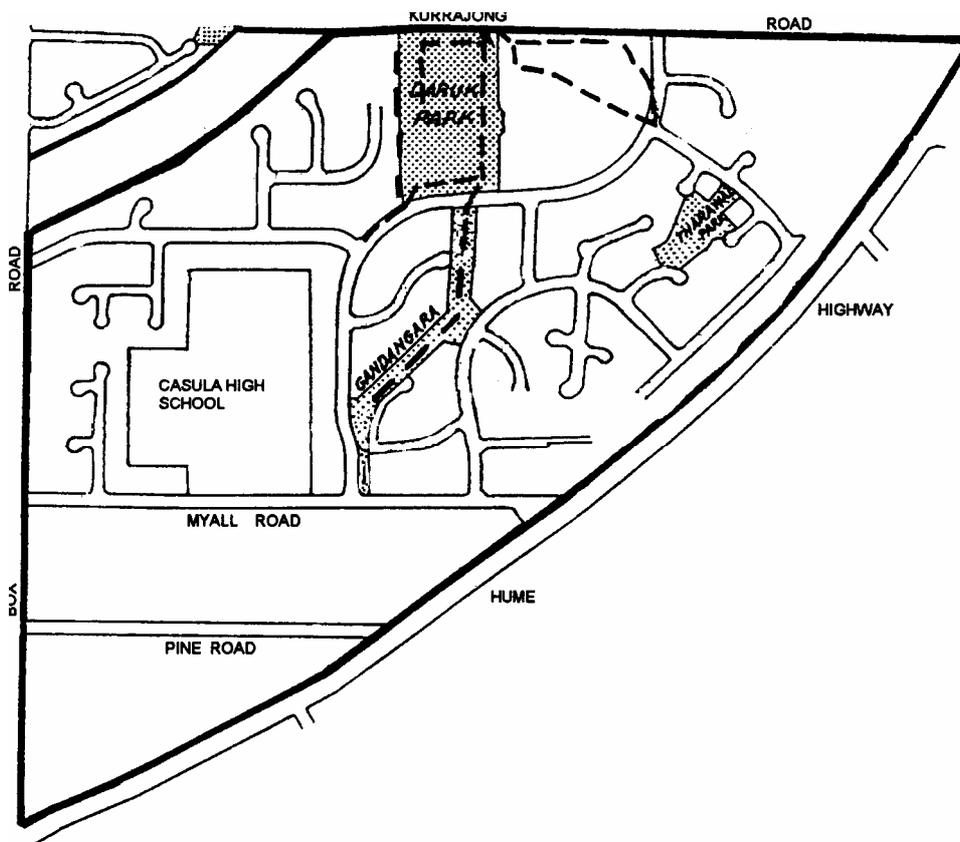
Cost of Facilities

Trunk drainage downstream from Myall Road was completed prior to 1990 at a cost of \$496,754. At that time, the cost of the work exceeded funds collected by \$203,273. That deferred debt was reduced by further contributions to \$87,081 in 1992.

With the estimated number of remaining lots (at 1992) and the drainage contribution of \$890 per lot was applied, the income in 1992 was \$ 106,800 (120 x \$890, leaving a shortfall of \$ 15,445.

For the sake of equity, the contribution rate has been increased only by CPI, being \$1,124.

Contributing Area



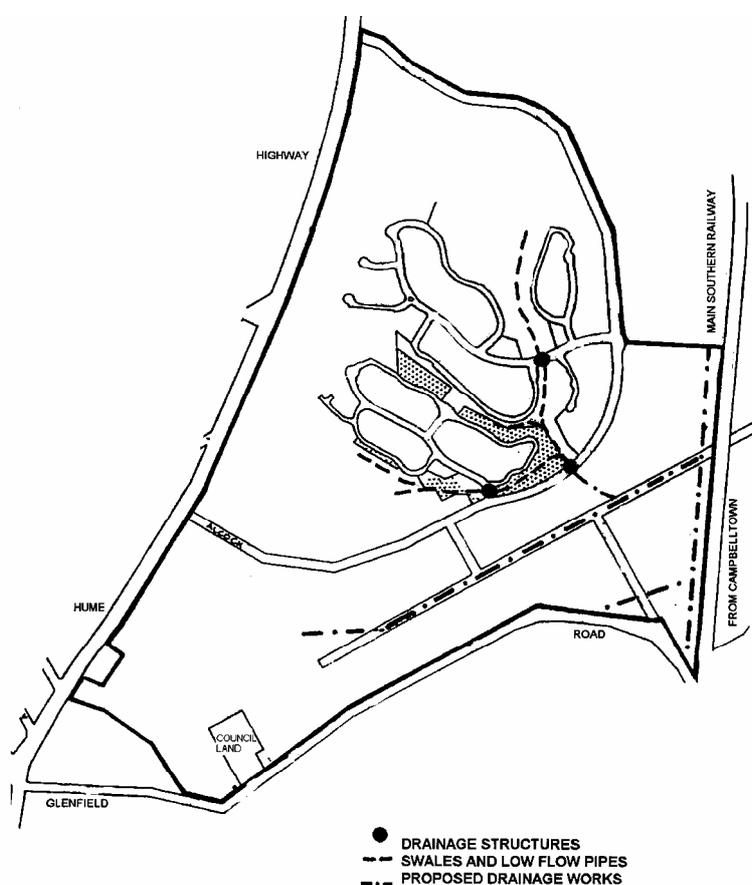
Casula East

Cost of Facilities

Item	No.	Unit Cost	Cost
Works above Leacocks Lane			\$557,700
Works below Leacocks Lane			
Swale	11,200	\$15	\$170,232
Low Flow Pipes			
750mm dia	1,050	\$269	\$281,946
Scour Protection			\$50,664
Trim and Consolidate			\$81,063
Basin			\$189,991
Connect to Creek			\$3,800
Sub Total			\$777,695
Design and Supervision 10%			\$77,770
Sub Total			\$855,465
Total			\$1,413,165

No. of Lots: 1,140

Contributing Area



8.6 Street Tree Planting

Nexus

For many years, a requirement of subdivision has been the planting of an advanced tree on the public footpath in front of each residential allotment and three trees on corner lots. Experience has shown this to be impractical, as the newly planted tree rarely survives the period from subdivision through to dwelling occupancy. This is due to a number of factors including service connections, delivery of building materials and lack of watering.

In recent years Council has collected a monetary contribution with which it has planted and maintained trees on behalf of the developer. In practice, the trees are planted by Council in front of occupied dwellings only, to ensure a higher survival rate.

It is clear that the community is demanding a better quality of tree planting provision and consequently it is proposed to plant super-advanced trees (2 - 3 m high) to provide a more immediate impact within residential areas.

Given Council's commitment to this strategy and the community expectations, which flow from this, it is both appropriate and reasonable for new development to achieve the same level of tree planting. This is best achieved via Section 94 contributions, as Council controls quality, species and maintenance.

Cost of Facilities

The contribution rate has been set after taking into account the above factors and operational experience. The contribution represents the purchase cost and labour costs involved in planting each tree or shrub and water maintenance to establishment.

8.7 Administration Costs

Nexus

There are significant costs associated with administering funds of this magnitude. Both the plan preparation/review and implementation aspects of Section 94 contributions are administered staff within Council. A core team of employees are engaged to provide support in co-ordinating such a process, as well as prepare status reports, review and relevant data, liaise with Council staff and external agencies.

In accordance with the directive of the *Department of Planning*, the administration costs are comprised of those expenses relative only to those personnel directly responsible for the formulation and / or administration of a Section 94 Contributions Plan. The cost per lot per year has been averaged across all of the Contribution Plan areas and is calculated as follows.

8.8 Professional Fees

Nexus

The cost of independent land valuations and legal documents are clearly part of the costs of administering this plan. In relation to land acquisition, Council will be required to acquire land for car parking and roads and incur the associated conveyancing costs.

It is recognised that the costs associated with land acquisition could be added to the cost of individual facilities, however the cost of professional fees attributable to any one facility is completely unpredictable. It is therefore more appropriate that a pool of contribution funds is available to meet these costs as they arise.

The contribution rate is based on the following costs.

- § the cost of independent valuations is anticipated to vary from \$500 - \$2,000 depending on individual sites and whether the valuation is general or specific;
- § valuations will be required at least annually for reviewing this contribution plan, and more frequently depending on movements in the property market;
- § stamp duty and estimated costs of vendor's solicitor in land acquisition.

8.9 Contribution Formulae

Community and Recreation Facilities

Conventional Lot Residential Subdivision, Small Lot Subdivision, Semi-detached dwellings, Multi dwelling housing and Residential Flat Buildings

$$\text{Contribution Rate = } \frac{\text{C}}{\text{N}} \times \frac{\text{O R}}{3.7}$$

(per dwelling / lot)

- where C = Cost of capital works or land identified for the catchment area
 N = No. of equivalent lots / dwellings in the catchment area
 O R = Estimated occupancy rate for lot size or dwelling type

$$\text{Area of land to be dedicated = } \frac{\text{A}}{\text{N}} \times \frac{\text{O R}}{3.7}$$

(per dwelling / lot)

- where A = Total area to be acquired in the catchment area
 N = No. of equivalent lots / dwellings in the catchment area
 O R = Estimated occupancy rate for lot size or dwelling type

Dwelling Type	Occupancy Rate per lot or dwelling
Residential Subdivision	
Lots 450 sqm or larger	3.7
Lots smaller than 450 sqm	3.3
Semi-detached dwellings, Multi dwelling housing and residential flat buildings (where permitted)	
3 or more bedrooms	3.3
2 bedrooms	2.3
1 bedroom	1.8

Aged and Disabled Persons Housing

$$\text{Contribution for total development = } \frac{\text{Conventional Lot Contribution} \times \text{R}}{3.7}$$

- where 3.7 = Estimated occupancy rate for a conventional lot
 R = Number of residents

Transport facilities

Residential Development and Non Residential Development

$$\text{Contribution Rate (per dwelling/lot/non residential development)} = \frac{C}{N} \times \frac{V}{6.7}$$

where C = Cost of capital works and land identified for the catchment area

N = No. of equivalent lots in the catchment area

V = Vehicle trips per day for lot size or dwelling type

Vehicle trips per day for non residential development. Refer to Roads & Traffic Authority Guidelines for vehicle trip generation.

Variation of this may be considered for non residential development, which is of a minor local nature.

$$\text{Area of land to be dedicated (per dwelling/lot/non residential development)} = \frac{A}{N} \times \frac{V}{6.7}$$

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots in the catchment area

V = Vehicle trips per day for lot size or dwelling type

Vehicle trips per day for non residential development. Refer to Roads & Traffic Authority Guidelines for vehicle trip generation.

Variation of this may be considered for non residential development, which is of a minor local nature.

Dwelling or Lot Size	Vehicle Trips per day
Residential Subdivision	
Lots 450 sqm or larger	6.7
Lots smaller than 450 sqm	6.0
Semi-detached dwellings, Multi dwelling housing and residential flat buildings (where permitted)	
3 or more bedrooms	6.0
2 bedrooms	4.0
1 bedroom	3.3
Aged and Disabled Persons Housing (total development)	Total vehicle trips per day

Drainage Facilities

Conventional Lot Residential Subdivision

$$\text{Contribution Rate (per conventional lot)} = \frac{C}{N}$$

where C = Cost of capital works or land identified for the catchment area

N = No. of equivalent lots / dwellings in the catchment area

$$\text{Area of land to be dedicated (per conventional lot)} = \frac{A}{N}$$

where A = Total area to be acquired

N = No. of equivalent lots / dwellings in the catchment area

Small Lot Subdivision, Semi-detached dwellings, Multi dwelling housing, Residential Flat Buildings, Aged and Disabled Persons Housing and Non Residential Development

$$\text{Contribution = (total development)} = \frac{\text{Conventional Lot Contribution}}{0.65} \times \text{C R} \times \frac{\text{Site Area}}{450}$$

Where C R = runoff coefficient for the specific development type as specified in the following table

$$\text{Area of land to be dedicated = (total development)} = \frac{A}{N} \times \frac{\text{C R}}{0.65} \times \frac{\text{Site Area}}{450}$$

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots / dwellings in the catchment area

C R = runoff coefficient for the specific development type as specified in the following table

The relative impacts of different types of land development on any drainage system can be estimated by comparing the peak discharge rates of runoff that the different types of development would produce. The rational formula estimates the peak discharge rates by use of runoff coefficients that are directly related to the proportion of a site that is impervious to rainfall infiltration.

The following table gives the relative impacts of alternate types of land development on runoff generation.

Land use	Co efficient of Runoff
Conventional residential lot	0.65
School	0.65
Shopping Centre & other non-residential	0.95
Town houses	0.80
Semi-detached dwellings, villa houses, small lot subdivision and Aged and Disabled Persons Housing	0.75

Street Trees

Contribution per dwelling = \$115

Professional Fees (Hinchinbrook/Green Valley and Casula West)

Residential Development

$$\text{Contribution Rate} = \frac{\text{PF}}{\text{N}}$$

(per dwelling / lot)

Where PF = total estimated cost of professional fees

N = No. of equivalent lots / dwellings in the catchment area

All other development

$$\text{Contribution Rate} = \frac{\text{Residential Contribution} \times \text{A}}{450}$$

Where A = Site area

450 = area of conventional lot

Administration Fees

All Development

The cost of administering contributions plans over the coming years has been estimated at 1.2% of the value of contributions.

8.10 Staging of Facilities

Most Community Facilities will be built by Council as the population threshold for their construction is usually much larger than individual developments. These will be provided as funds become available and as land can be acquired from existing owners.

Some small parks and recreation facilities are likely to be provided as works in kind by developers and as such are provided at the beginning of a development. Larger recreation facilities such as playing fields will be built by Council as the population threshold for their construction is usually much larger than individual developments. These will be provided as funds become available and as land is able to be acquired from existing owners.

9. Hoxton Park Stage 2 Release Areas District Facilities

(Includes Cecil Hills, Hoxton Park, Carnes Hill, Prestons, Middleton Grange, Edmondson Park and Prestons Industrial)

9.1 Background

Facilities in the Hoxton Park Stage 2 Residential Release Area are provided on a district wide basis and local basis. This is because they involve facilities, which by their nature have a larger catchment and are provided more efficiently on a district scale.

9.2 Community Facilities

Nexus

The Liverpool Stage 2 Release Area Human Services Strategy Study provides the basis for the nexus for the community facilities. The Study was completed in November 1992, and endorsed by Council in December 1992 as the strategy for human services planning in Stage 2 release areas. This Study is the primary technical tool, which underpins the provision of community facilities.

Since 1992 Council has annually held a number of community consultations under the *Western Sydney Area Assistance Scheme* (WSAAS). These consultations have reinforced the issues highlighted in the original study with regard to community needs in new release areas. The ranges of facilities for which S94 contributions are levied include the following.

District community centres

District community centres are important as they provide a base for a number of needed community services. These include community development, neighbourhood centres, family support agencies, outreach programs, geriatric services, etc.

District centres can accommodate larger meetings and functions, as well as an additional range of activities. District centres act as important civic buildings, helping to define a sense of community and a sense of social space in an emerging urban area. The district centres also have larger spaces, which can generate a substantial hire income to subsidise the centre's ongoing costs or the costs of smaller community facilities.

Branch libraries

The State Library of NSW publication "*The planning and design of public library buildings*" (1990) provides guidelines for calculating branch library floor space. The plan adopts the guideline of 42 m² per 1000 residents. Two large branch libraries are proposed for Stage 2 release areas. Large branches are preferable, as more resources are concentrated in one location, with lower recurrent costs.

District community cultural centres

In its anticipated usage, a multi-purpose district community cultural centre sits in between a district community centre and indoor recreation centre. It provides large floor surfaces, storage, appropriate flooring and seating arrangements for activities such as dancing, aerobics, performances, plays, seminars, concerts, rehearsals and theatre. The need for such a facility is based on identified usage patterns and needs evident in the existing stock of community facilities in Liverpool.

Youth centres

Youth centres provide a focal point for young people. Youth-specific facilities offer the opportunity of a "social refuge" and provide the location for community based projects and programs designed to meet young people's needs. Youth centres are also used to provide training and skilling courses to young people, and assist in gaining employment skills. As young people age, their needs change. Youth centres require flexible spaces to accommodate changes in youth needs from active sporting or recreational interests to socialising activities, development of friendship networks and more passive activities.

Changes in provision of Community Facilities

Occasional Care

Through changes in Government policy, the private sector is now active in the provision of long day childcare especially for 3 - 6 year olds. In 1999 Council deleted occasional care from the services (at district level) because long day care centres now offer an occasional care service to families.

Rationalised centres

Following a review of the experience of release development in past years, Council will build fewer but larger community facilities. A floor-space ratio for community facilities in this Plan, instead of specifying the exact size and nature of the facilities to be built. The rationale used in determining the floor-space ratio is based on the Liverpool Stage 2 Release Area Human Services Strategy Study (1992). The floor space provision is generally based on the standards in this Study.

Establishment Costs

The costs associated with establishing a new community group or service and / or expanding the delivery of an existing service is often unachievable due to financial constraints. A small proportion of the S94 contributions will be used to fund an annual grants program for community groups who are users of facilities, which are funded under this plan. The funds will assist with the costs of establishment in the community facilities located in new release areas.

Mobile services

Mobile services have been used as a flexible approach to service provision. However, there is little funding now available for mobile services. Instead, the purchase of a community access bus will assist residents and community groups access services in areas outside the new release areas and establish temporary services while an area is being developed.

Planning studies

In 1992 Council commissioned a comprehensive *Liverpool Stage 2 Release Areas Human Services Strategy Study*. Council endorsed the human services strategy proposed in the study in December 1992. The Study's results and recommendations have been used to develop and review the community facilities component of contribution plans.

Unit Costs

District Community Centre

Item	Length or area	Unit Cost	Cost
Construction	800	\$1,354	\$1,083,200
Site works		\$45,596	\$45,596
Parking	35	\$2,076	\$72,665
Landscaping	800	\$51	\$40,510
Fencing	60	\$108	\$6,473
Consultancy and project management fees			\$174,782
Contingency sum			\$62,422
Fit out	800	\$92	\$73,975
Public art			\$15,596
Security		\$7,199	\$7,199
Community consultation		\$5,399	\$5,399
Sub Total			\$1,587,817

Branch Library

Item	Length or area	Unit Cost	Cost
Construction	1,400	\$1,620	\$2,268,555
Site works		\$45,596	\$45,596
Parking	20	\$2,076	\$41,523
Landscaping	1,400	\$51	\$70,892
Fencing			
Consultancy and project management fees			\$339,719
Contingency sum			\$121,328
Fit out	1,400	\$378	\$528,610
Public art			\$34,162
Security		\$7,199	\$7,199
Community consultation		\$5,399	\$5,399
Start-up book stock (or similar items)	30,000	\$32	\$957,707
Sub Total			\$4,420,692

District Community Cultural Centre

Item	Length or area	Unit Cost	Cost
Construction	1,200	\$1,743	\$2,091,104
Site works		\$45,596	\$45,596
Parking	58	\$2,076	\$120,416
Landscaping	1,200	\$51	\$60,765
Fencing	60	\$108	\$6,473
Consultancy and project management fees			\$325,409
Contingency sum			\$116,218
Fit out	1,200	\$114	\$137,381
Public art			\$29,034
Security		\$7,199	\$7,199
Community consultation		\$5,399	\$5,399
Sub Total			\$2,944,995

District Youth Centre

Item	Length or area	Unit Cost	Cost
Construction	400	\$1,354	\$541,600
Site works		\$45,596	\$45,596
Parking	6	\$2,076	\$12,457
Landscaping	400	\$51	\$20,255
Fencing	60	\$108	\$6,473
Consultancy and project management fees			\$87,693
Contingency sum			\$31,319
Fit out	400	\$92	\$36,987
Public art			\$7,824
Security		\$7,199	\$7,199
Community consultation		\$5,399	\$5,399
Sub Total			\$802,802

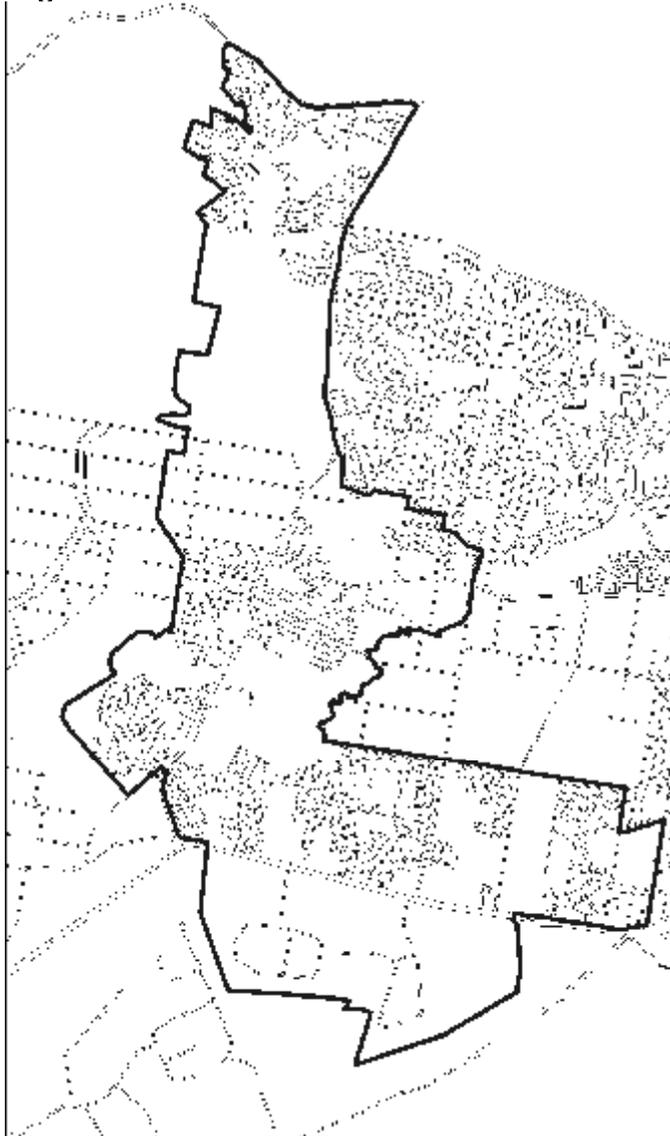
Cost of Facilities

Item	Unit Rate	Area	Land Cost	Capital Cost	Total cost
Community centre	\$375	2,000	\$750,000	\$1,587,817	\$2,337,817
Community centre	\$300	2,000	\$600,000	\$1,587,817	\$2,187,817
Branch library	\$375	2,400	\$900,000	\$4,420,692	\$5,320,692
Branch library	\$300	2,400	\$720,000	\$4,420,692	\$5,140,692
Community Cultural Centre	\$375	2,400	\$900,000	\$2,944,995	\$3,844,995
Youth Centre	\$375	1,800	\$675,000	\$802,802	\$1,477,802

Youth Centre	\$340	1,800	\$612,000	\$802,802	\$1,414,802
Youth Centre	\$340	1,800	\$612,000	\$802,802	\$1,414,802
1 Community bus				\$70,000	\$70,000
Human Services Study				\$38,528	\$38,528
Community Grants Assistance Program				\$110,081	\$110,081
Total			\$5,769,000	\$17,589,030	\$23,358,030

Lots in Catchment: 19,105

Contributing Area



9.3 Recreation Facility

Nexus

As part of its planning for the Hoxton Park Stage 2 Release Areas, Council commissioned an Open Space Strategy Report by *Manidis Roberts Pty Ltd*, in 1990. *Frank Small & Associates* also undertook market research into the Leisure Requirements for the Residents of Liverpool, a Leisure Needs Analysis for the Liverpool Community and a report on Sporting Organisations in 1994. The contents of these reports and their recommendations also form the basis for open space provision.

The 1990 report identifies the following specific District Recreation Facilities for the Hoxton Park Stage 2 Release Areas:

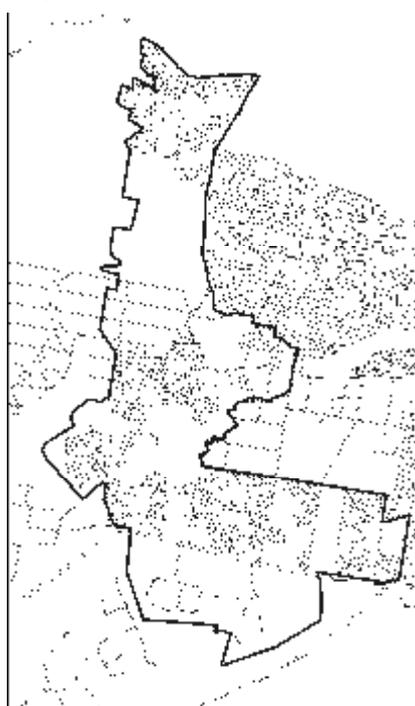
- § District swimming pool/indoor leisure complex of 8 ha.
- § District sporting area of 10 ha, with a minimum of 4 quality fields.
- § District Netball Complex of 4 ha, located within a larger recreation area.
- § District children playground of 2 ha, located within a larger recreation area.
- § Cycleways providing links throughout the release areas (provided under local facilities)

Cost of Facilities

Item	Unit Cost	Cost
Works		\$7,497,358
Land 20.888 ha	\$85	\$17,754,800
Total		\$25,252,158

No. of Lots in Catchment: 19,105 (All of Hoxton Park Stage 2 Release Areas)

Contributing Area



9.4 Transport Facilities

Nexus

Council appreciates the need to carefully balance the management of traffic in order to achieve a safer local street system with appropriate residential amenity and to provide the efficient transfer of people, goods and services in a wider urban structure. In recognition of these objectives the road network in the Cecil Hills, Hoxton Park, Carnes Hill and Prestons areas are designed according to the principles of the *Australian Model Code for Residential Development 1990*. The Code develops a concept of "residential streets" and "transport roads". The characteristics of the "residential streets" effectively discourage major traffic intrusion into residential areas. "Transport roads" facilitate traffic efficiency and direct movement.

In adopting this strategy some cost savings on the construction of the local residential "streets" is advocated in the Code. The trade off to these benefits, that is improved safety and amenity in residential areas as well as savings in local development construction costs, is that an appropriate level of monetary contribution to the development of roads dedicated to transport is deemed appropriate.

Consequently, S94 Contributions for Transport Facilities are divided into two categories:

§ District Transport Facilities

§ Local Transport Facilities (schemes as identified by local catchments)

The area, which contributes or will contribute to the District Transport Facilities, is shown on the following map. This area incorporates a total development potential of 19,105 conventional residential lots and 388 ha of industrial and future industrial development area.

Hoxton Park Stage 2 Release Areas Traffic Study

Council undertook a detailed study of the future road requirements to service the area, assuming the Hoxton Park Stage 2 Release Areas and the Prestons Industrial area have been developed by the year 2011. This study has developed a detailed computer model (T Model II software) of the land use and transport system at the present and in the future.

It is important to recognise that the future road network will be significantly congested and it has been necessary to accept a level of service of E for the design network performance. This level of service is characterised by unstable traffic flow, congestion and intolerable delays. In some instances, especially regarding access to Liverpool CBD areas east of the Hume Highway, it has not been practical to achieve this and peak hour forced flow appear to be unavoidable.

The cost of the future road network has been estimated for the sub arterial and arterial roads in the area and proportional funding allocation has been developed based on the relative influences of various sources of traffic generation.

The Traffic Study (October 1992) developed a hypothetical apportionment on the basis of the levels of traffic, from different areas of traffic generation, which are identified as occurring on various road links or at various intersections. This apportionment took into account the local arterial and sub arterial road costs (but not including the Cumberland Highway or South Western Freeway corridors). The total cost of these works (not including land acquisition) was in the order of \$99,000,000, at 1992 costs.

This would be apportioned as follows:

Prestons Industrial Area	11%
Stage 2 Residential Release Areas	46%
Roads and Traffic Authority Through Traffic	37%
Council Existing Traffic	6%

After excluding the amount for the Roads and Traffic Authority, the proportions would be as follows:

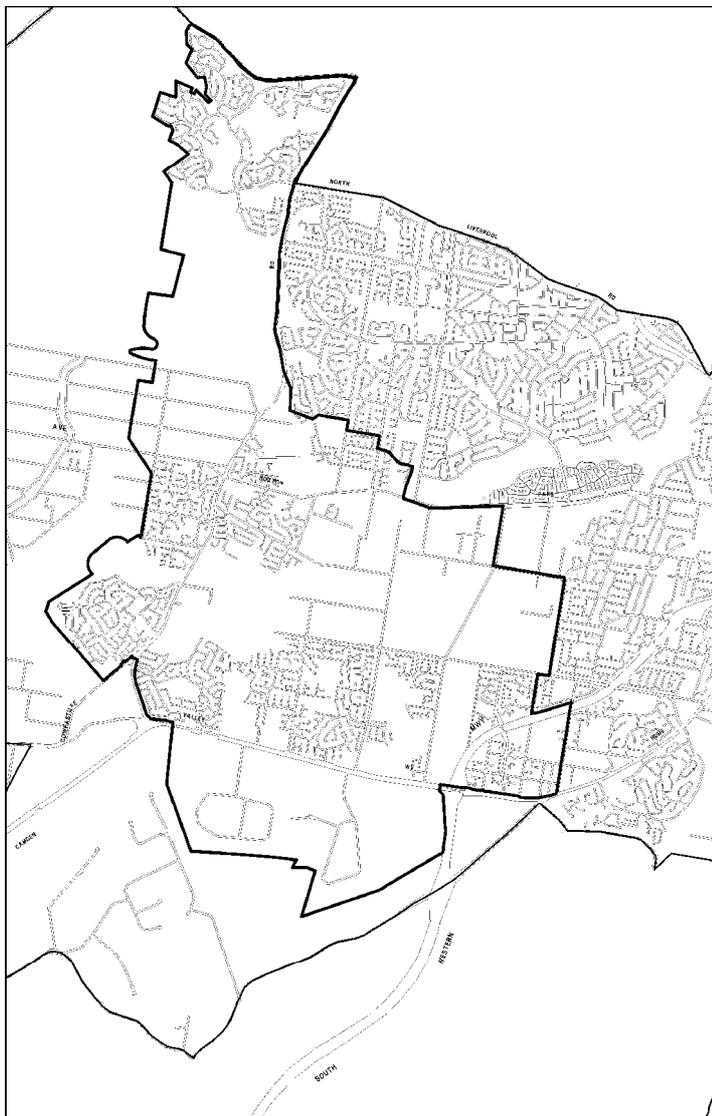
Prestons Industrial Area	18%
Stage 2 Residential Release Areas	72%
Council Existing Traffic	10%

The emphasis in devising the works schedule has been to:

- § maintain opportunity for long term expansion of transport corridors; and
- § provide a safer road system by ensuring major roads are flood free and major intersections are appropriately controlled (signals, seagulls or roundabouts).

No. of Lots: 19,105

Catchment Area



Cost of Facilities

Corridors

Item	Unit cost	Length	Width m	Area sqm	Cost of Land	Cost of Works
1. Beech Road Deviation						
Road reserve	\$75	930	24	22,320	\$1,674,000	
2 lane undivided carriageway	\$619	930				\$575,351
2. Beech Road Widening						
Road reserve	\$85	470	4	1,880	\$159,800	
Structural Overlay existing central pavement	\$41	420	5.1	2,142		\$17,107
Widen existing pavement to form 4 lane undivided urban road	\$138	420	1.9	798		\$109,806
3. Lyn Parade Extension						
Road reserve over special use land	\$85	560	12	6,720	\$571,200	
Road reserve over industrial land	\$85	690	2	1,380	\$117,300	
Pavement over special use land	\$1,540	560				\$862,400
Pavement over industrial land	\$50	690				\$34,500
Re-instate fence along frontage to Transmission Tower	\$105	560				\$58,563
4. Kurrajong Road Extension and Widening						
Road reserve: Cabramatta Creek to Cowpasture Road	\$85	1,200	24	28,800	\$2,448,000	
4 lane urban road with median	\$1,892	1,200				\$2,270,757
Bridge over Creek						
Twin bridges with 2 x 14m spans x 9.5 wide	\$2,642			532		\$1,405,518
Re-instate fence along frontage to Transmission Tower	\$105	560				\$58,563
15% Contingency for Civil Works						\$551,441
Road reserve: Upgrading from Cabramatta Creek to Ingham Drive, including widening from Bernera Road to Wonga Rd	\$85	1,950	10	19,500	\$1,657,500	
4 lane urban road upgrade	\$1,345	4,400				\$5,918,851

Item	Unit cost	Length	Width m	Area sqm	Cost of Land	Cost of Works
Structural Overlay existing central pavement	\$39	4,400	7	30,800		\$1,186,676
Bridge duplication over M5						
Total span of 90m x 9.5m width	\$2,642			855		\$2,258,868
15% Contingency for Civil Works						\$1,404,659
5. Cowpasture Road Deviation						
Road Reserve	\$85			13,700	\$1,164,500	
Two lane undivided carriageway with unsealed shoulders and table drains	\$619	800				\$494,926
6. Realignment of Croatia Avenue to Bernera Road						
Road Reserve	\$85	250	24	6,000	\$510,000	
Two lane undivided carriageway with unsealed shoulders and table drains	\$619	250				\$154,664
7. Extension of Croatia Avenue to Campbelltown Road						
Road Reserve	\$85	700	24	16,800	\$1,428,000	
Two lane undivided carriageway with unsealed shoulders and table drains	\$619	700				\$433,060
Bridge						
2 x 14m spans x 9.5 wide	\$2,761			266		\$734,383
8. Widening of Croatia Avenue						
Road Reserve	\$75	900	4	3,600	\$270,000	
9. Provision for bus priority facilities						
5 at \$50,000						\$287,638
1 bridge over Cabramatta Ck at Bumberra St						
2 x 14m spans x 5m wide						\$228,969
10. Bernera Road						
Road reserve: Banks Road (behind sub station) to Hoxton Park Road	\$75	250	30	7,500	\$562,500	
Road reserve: Hoxton Park Road to Jedda Road	\$10	560	30	16,800	\$168,000	
Road reserve: Jedda Road to Camden Valley Way	\$85	2,560	10	25,600	\$2,176,000	
Banks Road to Hoxton Park Road	\$1,892	250				\$473,074

Item	Unit cost	Length	Width m	Area sqm	Cost of Land	Cost of Works
Hoxton Park Road to Jedda Road	\$1,892	560				\$1,059,687
Jedda Road to Camden Valley Way	\$1,345	2,560				\$3,443,695
Structural Overlay existing central pavement	\$39	2,560	7	17,920		\$690,430
Two 3 x 14m span x 9.5m wide twin Bridges at Cabramatta Creek	\$2,642			1,596		\$4,216,554
15% Contingency for Civil Works						\$1,482,516
Sub Totals					\$12,906,800	\$30,412,658

Hoxton Road Flood Mitigation

Item	Unit cost	Area sqm	Cost of Land	Cost of Works
1. Land acquisition for channel area	\$10	128,500	\$1,285,000	
2. Grass lined channel construction, stockpile topsoil and re-spread and spray grass to establishment	\$3.68	128,500		\$472,458
Bulk earthworks with local disposal to nearby open space areas	\$4.83	257,000		\$1,241,970
Trim	\$1.84	\$236,229		\$235,531
15% Contingency for Civil Works		\$292,599		\$291,734
add \$42,000 for survey & design		\$50,218		\$50,070
3. Two lane bridge over Hinchinbrook Creek				
2 x 14m spans x 9.5m wide	13,634	\$579,181		\$579,181
4. Two lane bridge over Cabramatta Creek				
2 x 14m spans x 9.5m wide	13,634	\$579,181		\$579,181
5. Major pipelines along Hoxton Park Road				
From 50.01 to 1.05 pipe 0.686		\$11,827		\$11,792
From 1.05 to 1.04 pipe 1.219		\$20,123		\$20,063
From 1.04 to 1.03 pipe 1.219		\$60,277		\$60,099
From 1.03 to 1.02 pipe 1.372		\$103,331		\$103,026
From 1.02 to 1.01 pipe 1.524		\$33,458		\$33,359
From 1.01 to HPR RCBC 3.6 x 1.2				\$66,904
From HPR to CREEK swale		\$64,511		\$64,320
Sub Totals			\$1,285,000	\$3,812,267

Cowpasture Road Flood Mitigation

Item	Unit cost	Area sqm	Cost of Land	Cost of Works
1. Land acquisition for channel area	\$10	20,000	\$200,000	
2. Grass lined channel construction, stockpile topsoil and re-spread and spray grass to establishment	\$3.68			\$69,420
Bulk earthworks with local disposal to nearby open space areas	\$4.83			\$182,486
Trim	\$1.84			\$34,710
15% Contingency for Civil Works				\$42,992
add survey & design				\$25,237
3. Upgrade inadequate rural standard culverts along Cowpasture Road				\$76,569
4. Upgrade culvert at intersection of Cowpasture and Hoxton Park Roads				\$1,380,662
Sub Totals			\$200,000	\$1,875,028

Intersections

Item	Cost of Works
1. Signalised intersection Camden Valley Way and Beech Road Deviation	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
2. Signalised intersection Camden Valley Way and Ash Road	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
3. Signalised intersection Camden Valley Way and Bernera Road	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road X intersection	\$239,315
4. Signalised intersection Camden Valley Way and Kookaburra Road	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
5. Signalised intersection Camden Valley Way and Ryman Avenue	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
6. Signalised intersection Camden Valley Way and Horningsea Park Drive	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
7. Signalised intersection Camden Valley Way and Cowpasture Road Deviation	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
8. Seagull intersection Cowpasture Road and un-named road	\$137,658

Item	Cost of Works
9. Signalised intersection Cowpasture Road and Joshua Moore Drive	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
10. Signalised intersection Cowpasture Road and un-named road	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
11. Signalised intersection four way at intersection of Cowpasture Road and Kurrajong Road extension	
Signals Cost (incl all RTA Fees)	\$172,582
Turn / Slip lane, State Road X intersection	\$413,623
12. Signalised intersection at Cowpasture Road and Twelfth Avenue	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
13. Seagull intersection at Kurrajong Road deviation	\$138,066
14. Seagull intersection at Kurrajong Road deviation and un-made road	\$138,066
15. Roundabout at intersection Kurrajong Road deviation and un-made road	\$138,066
16. Roundabout at intersection Kurrajong Road and Yarrunga Street	\$138,066
17. Signalised intersection at Bernera and Kurrajong Roads	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, Sub Arterial X intersection	\$239,315
18. Roundabout at intersection Kurrajong and San Marino Drive	\$138,066
19. Signalised intersection Bernera Road, Wroxham Street and Bomaderry Drive	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, Sub Arterial X intersection	\$239,315
20. Roundabout at intersection Kurrajong and Beech Roads	\$138,066
21. Roundabout at intersection of Kurrajong and Cedar Roads	\$138,066
22. Roundabout at intersection of Kurrajong and Wonga Roads	\$138,066
23. Roundabout OR Seagull intersection at Kurrajong and Napier Roads	\$59,829
24. Roundabout OR Seagull at Beech Road and un-named Road	\$138,066
25. Roundabout OR Seagull at Beech Road deviation and Pine Road extension	\$138,066
26. Signalised intersection at Hoxton Park Road and either Webster or Calabro Roads	
Signals Cost (incl all RTA Fees)	\$239,315
27. Signalised intersection at Cartwright Avenue and Hoxton Park Road	
Signals Cost (incl all RTA Fees)	\$239,315
28. Signalised intersection at Hoxton Park Road and Lyn Parade	
Signals Cost (incl all RTA Fees)	\$239,315
29. Signalised intersection at Lyn Parade and Jedda Road	
Signals Cost (incl all RTA Fees)	\$239,315

Item	Cost of Works
30. Signalised intersection at Hoxton Park Road and Ash Road	
Signals Cost (incl all RTA Fees)	\$239,315
Turn / Slip lane, Sub Arterial T intersection	
31. Signalised intersection at Ash Road and Jedda Road	
Signals Cost (incl all RTA Fees)	\$239,315
32. Signalised intersection at Hoxton Park and Banks Road	
Signals Cost (incl all RTA Fees)	\$239,315
33. Signalised intersection at Banks Road and Cabramatta Avenue	
Signals Cost (incl all RTA Fees)	\$138,066
34. Large roundabout at Bernera and Jedda Roads	\$239,315
35. Signalised intersection at Hoxton Park, Whitford and Illaroo Roads	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, Sub Arterial X intersection	\$239,315
36. Signalised intersection at Hoxton Park Road and First Avenue	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, Sub Arterial T intersection	\$239,315
37. Signalised intersection at Hoxton Park Road and un-named road	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, Sub Arterial T intersection	\$239,315
38. Signalised intersection at Hoxton Park and Cowpasture Road	
Signals Cost (incl all RTA Fees)	\$239,315
39. Signalised intersection at Cowpasture Road and Mallow Road	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road X intersection	\$239,315
40. Seagull intersection at Fifteenth Avenue and un-named road	\$138,066
41. Roundabout at intersection of Fifteenth Avenue and un-named road	\$138,066
42. Seagull at intersection of Fifteenth Avenue and un-named road	\$138,066
43. Seagull at intersection of Fifteenth Avenue and un-named road	\$138,066
44. Signalised intersection at Cowpasture Road and Sixteenth Avenue	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road X intersection	\$239,315
45. Signalised intersection at Cowpasture Road and Seventeenth Avenue	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
46. Signalised intersection at Cowpasture Road and Green Valley Road	
Signals Cost (incl all RTA Fees)	\$138,066
Turn / Slip lane, State Road T intersection	\$239,315
47. Signalised intersection at Cowpasture Road and North Liverpool Road	

Item	Cost of Works	
Signals Cost (incl all RTA Fees)		\$138,066
Turn / Slip lane, State Road X intersection		\$239,315
48. Signalised intersection at Elizabeth Drive and Windsor Road		
Signals Cost (incl all RTA Fees)		\$138,066
Turn / Slip lane, State Road T intersection		\$239,315
49. Signalised intersection at North Liverpool and Rundle Road		
Signals Cost (incl all RTA Fees)		\$138,066
Turn / Slip lane, Sub Arterial T intersection		
50. Signalised intersection at North Liverpool and Elizabeth Drive		
Signals Cost (incl all RTA Fees)		\$239,315
Sub Total		\$13,311,299
	\$14,391,800	\$49,411,253
Total		\$63,803,053
Total equivalent lots in Stage 2 Release Area		21,654
Proportion for Residential Release Areas	72%	\$45,938,198
Proportion for Prestons Industrial Release Area	18%	\$11,484,550
Proportion for Council	10%	\$6,380,305

Scope of Lyn Parade works amended, Amendment No.4 (19 May 2004)

9.5 Drainage Facilities

Nexus

The development of new areas may cause or exacerbate flooding problems in areas remote from the development areas themselves. Council has identified a strategic trunk drainage scheme to offset the impacts of the development in the Hoxton Park Stage 2 Release Areas and taking into account development in the Hoxton Park Stage 1 Release Areas. This scheme, known as Option A3 in the Trunk Drainage Study carried out on Council's behalf by *Kinhill Engineers*, involves a system of wet and dry detention basins. The scheme relies on the principle of controlling differential catchment response rates to optimise the required basin storage capacities. This is a cost effective solution and in practice means that some tributary creeks are retarded with extra basin storage compared to other tributary creeks. This is reflected in the placement of more basins on Hinchinbrook Creek.

The scheme is an effective, integrated strategy to offset the impacts of development on stormwater runoff both on the major creek tributaries within the release areas and downstream of the release areas. Consequently, the entire release area contributes as a collective whole to the implementation of the Option A3. Council has now reviewed option A3. The review requires Basin 18 to be extended to Jemma Road. The revised Basin 18 will compensate for flood storage loss as a result of a landfill strategy in Prestons Industrial Area and parts of the basin will form wetlands to treat the stormwater from the industrial area.

The extension of Basin 18 will replace the original grass lined channel between the original Basin 18 and Jemma Road. Catchment 1A, which contributed to the grass lined channel, will contribute to a percentage cost of revised Basin 18. The percentage is worked out on the basis of original percentage costs of Basin 18 and the grass lined channel.

The drainage systems identified for Section 94 purposes in the Hoxton Park Stage 2 Release Areas falls into two basic categories:

- § The Major Trunk Drainage System of detention basins and water quality ponds system as identified in the selected Option A3 in the Kinhill's Report.
- § Various local catchment pipe and channel systems as identified in the local catchment schedules by Council.

Contributions are levied on all development for both of these categories. The contribution for major drainage basins is constant throughout the whole stormwater catchment, while that for local trunk drainage varies according to the appropriate local catchment. Within the various local drainage catchments, individual developers are required to directly bear the cost of all pipelines up to 825 mm diameter within or past their own land. The cost difference between any larger pipe size or drainage swale/channel is funded by Section 94 contributions.

Cost of Facilities

Capital costs for basins are based on the Kinhill Study. (Excluding 22.65% of Basin 18 construction cost which is included in Local Drainage Catchment Area 1A) The land acquisition cost involves all of the basins, including those that were previously part of the Open Space Strategy.

The *NSW Dams Safety Committee* (DSC) has a statutory role to oversee dam owners where public safety, property and the environment could be at risk. As part of this role, the Committee prescribes (i.e. legally registers) those basins, which pose a potential threat to downstream communities with a view to ensuring the basins meet adequate safety standards. This means that these basins are treated as prescribed dams and must meet the standards set by the committee at all stages of the development and operation of the basins, including regular surveillance inspections to ensure their continuing safety.

In particular the Committee requires that these basins are designed such that during extreme floods, rather than the design flood (Probable Maximum Flood etc) the basins will behave in a manner such as not to threaten lives or cause major property/environmental damage downstream. That is, the basins are "fail safe" or designed to fail at an acceptable level and rate.

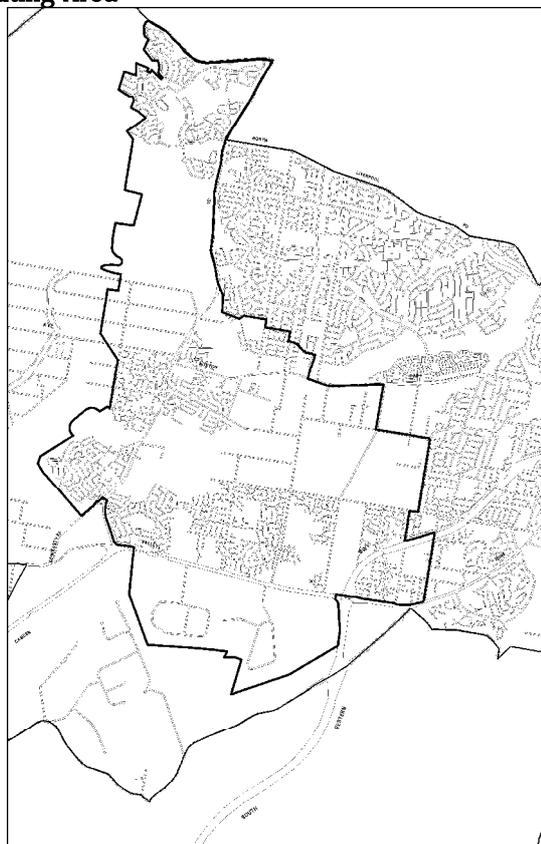
In NSW, prescribed basins owned by local government authorities also come under the oversight of the NSW Public Works under the requirements of the Local Government Act 1993.

The 1992 *Hoxton Park Stage 2 Release Area Total Catchment Management Study* - Kinhill only considered 1:100 year flood for basins and did not consider floods larger than 1:100 year. Hence no cost was allowed for in design or construction requirements of extreme floods.

Basin No.	Cost of Works	Land sqm	Unit rate \$/sqm	Cost of Land
Basin 12	\$2,126,577	110,000	\$25	\$2,750,000
Basin 3A	\$1,529,223	30,380		Existing
Basin 3B	\$633,194	70,000		Within Corridor
Basin 4	\$4,038,106	100,000		Existing
Basin 6	\$3,954,476	110,000	\$75	\$8,250,000
Basin 14	\$430,094	70,000	\$25	\$1,750,000
Basin 18	\$4,412,148	217,250	\$25	\$5,431,250
Basin 10	\$3,703,588	133,100	\$55	\$7,320,500
Basin 11	\$585,406	89,280	\$63	\$5,624,640
Basin 22	\$274,783	10,000	\$10	\$100,000
Channel Works		56,610	\$10	\$566,100
Sub Totals	\$21,687,595	996,620		\$53,480,085
Less 22.65% of Basin 18 Cost to be Allowed for in Catchment 1A				\$1,291,956
Total				\$52,188,129

No. of equivalent lots: 25,840. This area incorporates a development potential of 19,105 conventional residential lots, 388 ha of industrial and future industrial land and 12.7 ha of commercial sites.

Contributing Area



9.6 Contribution Formulae

Community and Recreation Facilities

Conventional Lot Residential Subdivision, Small Lot Subdivision, Semi-detached dwellings, Multi dwelling housing and Residential Flat Buildings

$$\text{Contribution Rate} = \frac{\text{C}}{\text{N}} \times \frac{\text{O R}}{3.7}$$

(per dwelling / lot)

where C = Cost of capital works or land identified for the catchment area

N = No. of equivalent lots / dwellings in the catchment area

O R = Estimated occupancy rate for lot size or dwelling type

$$\text{Area of land to be dedicated} = \frac{\text{A}}{\text{N}} \times \frac{\text{O R}}{3.7}$$

(per dwelling / lot)

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots / dwellings in the catchment area

O R = Estimated occupancy rate for lot size or dwelling type

Dwelling Type	Occupancy Rate
Residential Subdivision (Cecil Hills, Hoxton Park, Carnes Hill, Prestons, Middleton Grange)	
Lots 450 sqm or larger	3.7
Lots smaller than 450 sqm	3.3
Semi-detached dwellings, Multi dwelling housing and residential flat buildings (where permitted) (Cecil Hills, Hoxton Park, Carnes Hill, Prestons, Middleton Grange)	
3 or more bedrooms	3.3
2 bedrooms	2.3
1 bedroom	1.8
Residential Development (Edmondson Park)	
Rural Residential	3.4
Detached dwellings on lots > 350sqm	3.4
Small lot dwellings / semi-detached dwellings and town houses	2.9
Residential flat buildings	2.3

Aged and Disabled Persons Housing

$$\text{Contribution for total development} = \frac{\text{Conventional Lot Contribution} \times \text{R}}{3.7}$$

where 3.7 = Estimated occupancy rate for a conventional lot

R = Number of residents

Transport facilities

Residential and Non Residential Development

$$\text{Contribution Rate (per dwelling/lot/non residential development)} = \frac{C}{N} \times \frac{V}{6.7}$$

where C = Cost of capital works and land identified for the catchment area

N = No. of equivalent lots in the catchment area

V = Vehicle trips per day for lot size or dwelling type

Vehicle trips per day for non residential development. Refer to Roads & Traffic Authority Guidelines for vehicle trip generation.

Variation of this may be considered for non residential development, which is of a minor local nature.

$$\text{Area of land to be dedicated (per dwelling/lot/non residential development)} = \frac{A}{N} \times \frac{V}{6.7}$$

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots in the catchment area

V = Vehicle trips per day for lot size or dwelling type

Vehicle trips per day for non residential development. Refer to Roads & Traffic Authority Guidelines for vehicle trip generation.

Variation of this may be considered for non residential development, which is of a minor local nature.

Dwelling or Lot Size	Vehicle Trips per day
Residential Subdivision (Cecil Hills, Hoxton Park, Carnes Hill, Prestons, Middleton Grange)	
Lots 450 sqm or larger	6.7
Lots smaller than 450 sqm	6.0
Semi-detached dwellings, Multi dwelling housing and residential flat buildings (where permitted) (Cecil Hills, Hoxton Park, Carnes Hill, Prestons, Middleton Grange)	
3 or more bedrooms	6.0
2 bedrooms	4.0
1 bedroom	3.3
Edmondson Park	
Rural Residential	6.2
Detached dwellings on lots > 350sqm	6.2
Small lot dwellings / semi detached and town houses	5.3
Residential flat buildings	4.0
Aged and Disabled Persons Housing (total development)	Total vehicle trips per day

Drainage Facilities

Conventional Lot Residential Subdivision

$$\text{Contribution Rate (per conventional lot)} = \frac{C}{N}$$

where C = Cost of capital works or land identified for the catchment area

N = No. of equivalent lots / dwellings in the catchment area

$$\text{Area of land to be dedicated (per conventional lot)} = \frac{A}{N}$$

where A = Total area to be acquired

N = No. of equivalent lots / dwellings in the catchment area

Small Lot Subdivision, Semi-detached dwellings, Multi dwelling housing, Residential Flat Buildings, Aged and Disabled Persons Housing and Non Residential Development

$$\text{Contribution (total development)} = \frac{\text{Conventional Lot Contribution}}{0.65} \times C R \times \frac{\text{Site Area}}{450}$$

Where C R = runoff coefficient for the specific development type as specified in the following table

$$\text{Area of land to be dedicated (total development)} = \frac{A}{N} \times \frac{C R}{0.65} \times \frac{\text{Site Area}}{450}$$

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots / dwellings in the catchment area

C R = runoff coefficient for the specific development type as specified in the following table

The relative impacts of different types of land development on any drainage system can be estimated by comparing the peak discharge rates of runoff that the different types of development would produce. The rational formula estimates the peak discharge rates by use of runoff coefficients that are directly related to the proportion of a site that is impervious to rainfall infiltration.

The following table gives the relative impacts of alternate types of land development on runoff generation.

Land use	Co efficient of Runoff
Conventional residential lot	0.65
School	0.65
Shopping Centre & other non-residential	0.95
Town houses	0.80
Semi-detached dwellings, villa houses, small lot subdivision and integrated housing and Aged and Disabled Persons Housing	0.75

Note: while the contribution formulae include future development Hoxton Park Stage 2 District under this plan are not applied to Edmondson Park.

9.7 Staging of Facilities

Most facilities will be built by Council as the population threshold for their construction is usually much larger than individual developments. These will be provided as funds become available and as land can be acquired.

10. Cecil Hills, Hoxton Park, Carnes Hill and Prestons Release Areas

10.1 Development Trends

Development in the Cecil Hills, Hoxton Park, Carnes Hill and Prestons Residential Release Areas has now reached an advanced stage of development. The following are the development trends for these release areas.

Cecil Hills

Item	Cecil Hills	Hoxton Park, Carnes Hill and Prestons
Estimated no. of standard lots	1,270	8,728
Estimated no. of small lots	330	2,182
Estimated Population	5,722	39,050

10.2 Community Facilities

New development, which leads to an increase in the number of residents, will also increase the demand for community facilities including multi-purpose community centres, libraries and cultural facilities.

It is intended that Section 94 contributions will be levied on aged or disabled housing development (as defined under *State Environmental Planning Policy Housing for Seniors or People with a Disability (2004)*). One of the key criteria, which allow development under *SEPP Housing for Seniors or People with a Disability (2004)*, is the local availability of support services.

Section 94 contributions are levied for aged and disabled housing development on the following grounds:

- § the standard nexus between the new population and the demand for additional services;
- § older and disabled people will be future users of multi-purpose community centres and the branch library;
- § service providers in Liverpool generally will use these facilities to provide local services for the anticipated population;
- § aged or disabled housing will not provide additional facility capability to people other than residents of the development;
- § not all residents' requirements can be met from services provided on site; and
- § the criteria within *SEPP Housing for Seniors or People with a Disability (2004)* for availability of local support services cannot be met without Council facilities in the locality.

Nexus

Local baseline services

Local level facilities provided by Council and relevant for S.94 assessment are local community centres and childcare centres. The neighbourhood level (up to 10,000 population) facilities and services are those which cannot be provided from outside the neighbourhood. They need to be

provided at the time of resident occupation or as early in the development of a new area as practicable.

Multi-purpose community centre

Local level multi-purpose community centres provide a locally based facility. Poor public transport, inadequate human services infrastructure, distance and therefore poor access to centrally located services are key obstacles facing new residents. As a focal point for residents, community centres provide flexible space for a broad range of community activities. Some of the functions and activities that can occur in these centres include:

- § meeting space for community groups and organisations;
- § an informal meeting place and information centre;
- § multi-purpose working space for a range of activities such as play groups, educational classes, cultural and leisure activities (arts and crafts classes, cultural projects, workshops, etc);
- § sessional space for visiting and specialist services such as community nurses, health services, family support services, etc;
- § office accommodation, interview rooms and generally an administrative base for community workers and local Neighbourhood Centre services; and
- § spaces for private functions such as weddings, celebrations, formal meetings, cultural events, etc.

Such centres are usually managed by elected committees comprising local residents and users.

Council proposes a standard for such facilities, a 400 sqm building for a population of approximately 8,000 - 10,000 residents. This standard is proposed based on experience of facilities in other Liverpool release areas. In areas with a projected population over 10,000 but less than 20,000, it is proposed to build centres that are proportionately based on this standard. This will be incorporated into the floor-space ratio adopted in this Plan for community facilities.

Multi-purpose children's services

It was noted at the start of this section that Council now proposed a standard of 1 place per 20 children aged 0 - 4 years. This is in recognition of the increasing role of the private sector in childcare, promoted by changes in Government policy since 1992. However, Council is also of the view that provision for children's services should be more encompassing than care for children aged 0 - 4 years of working parents. In addition to this group, provision should be made for out of school hours care, and more flexible care for children.

In determining the level and cost of provision, the population base of 0 - 4 years continues to be useful as a guide, because it indicates the level of child care need immediately, as well as showing the potential demand for out of school hour services in coming years.

Experience to date has shown that the private sector is far less represented in provision of care for children aged 0 - 2 years, so this indicates an area of unsatisfied need in the community. Experience has also shown that high proportions of families have two parents working. Based on the standard of 1 place per 20 children, a floor-space ratio has been developed. This is included with the overall floor-space ratio per resident.

Cecil Hills**Cost of Facilities**

Item	Land Cost	Capital Cost	Total cost
Multi-purpose community centre (350 sqm)	\$227,315	\$666,614	\$894,603
Child Care Centre	\$227,315	\$694,826	\$922,815
Total			\$1,817,418

No. of Lots in catchment: 1,600

Contributing Area: All of Cecil Hills Release Area

Unit Costs for Hoxton Park, Carnes Hill and Prestons**Multi-Purpose Community Centre (400 sqm)**

Item	Length or area	Unit Cost	Cost
Construction	400	\$1,354	\$541,600
Site works	Standard	\$52,463	\$52,463
Car parking	14	\$2,076	\$29,066
Landscaping	400	\$51	\$20,255
Fencing	25	\$108	\$2,697
Consultancy and project management fees			\$90,451
Contingency sum			\$32,304
Fit out	400	\$92	\$36,987
Public art			\$8,058
Security			\$7,199
Community consultation			\$5,399
Total			\$826,480

Multi-Purpose Community Centre (500 sqm)

Item	Length or area	Unit Cost	Cost
Construction	500	\$1,354	\$677,000
Site works			\$41,420
Parking	14	\$2,076	\$29,066
Landscaping	500	\$51	\$25,319
Fencing	25	\$108	\$2,697
Consultancy and project management fees			\$108,570
Contingency sum			\$38,775
Fit out	500	\$92	\$46,234
Public art			\$9,691
Security			\$7,199
Community consultation			\$5,399
Total			\$991,371

Multi-Purpose Community Centre (600 sqm)

Item	Length or area	Unit Cost	Cost
Construction	600	\$1,354	\$812,400
Site works			\$41,420
Parking	14	\$2,076	\$29,066
Landscaping	600	\$51	\$30,382
Fencing	25	\$108	\$2,697
Consultancy and project management fees			\$128,235
Contingency sum			\$45,798
Fit out	600	\$92	\$55,481
Public art			\$11,455
Security			\$7,199
Community consultation			\$5,399
Sub Total			\$1,169,533

Multi-purpose Family and Children's Centre

Item	Length or area	Unit Cost	Cost
Construction	350	\$1,464	\$512,428
Site works			\$41,420
Parking	12	\$2,076	\$24,914
Landscaping	350	\$51	\$17,723
Fencing	65	\$132	\$8,586
Consultancy and project management fees			\$84,710
Contingency sum			\$30,254
Fit out	40	\$1,409	\$56,362
Public art			\$7,764
Security			\$7,199
Community consultation			\$5,399
Sub Total			\$796,759

60 Place Multipurpose Children's Centre

Item	Length or area	Unit Cost	Cost
Construction	460	\$1,464	\$673,477
Site works			\$41,420
Parking	15	\$2,075	\$31,125
Landscaping	460	\$51	\$23,293
Fencing	80	\$132	\$10,568
Consultancy and project management fees			\$109,184
Contingency sum			\$38,994
Fit out	60	\$1,409	\$84,542
Public art			\$10,126
Security			\$7,199
Community consultation			\$5,399
Sub Total			\$1,035,329

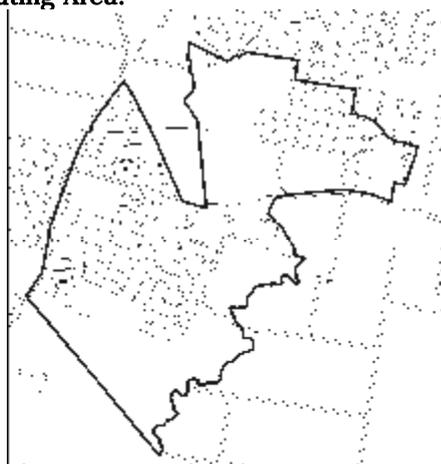
Hoxton Park

Cost of Facilities

Item	Works	Land
Multi purpose community centre (400 sqm)	\$826,480	\$612,000
60 place multi purpose children's centre	\$1,035,329	\$612,000
Multi-purpose Family and Children's Centre	\$796,759	\$612,000
Total	\$2,658,569	\$1,836,000

No. of Lots in catchment: 2,721

Contributing Area:



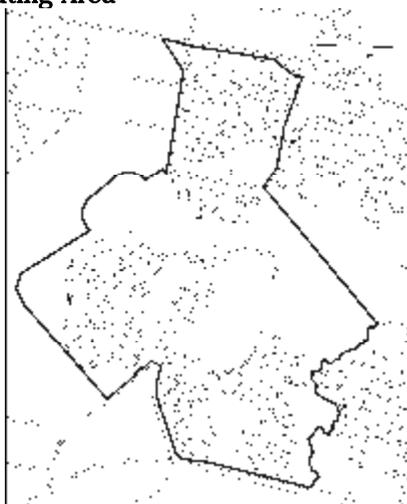
Carnes Hill

Cost of Facilities

Item	Works	Land
Multi purpose community centre (500 sqm)	\$991,371	\$675,000
Multi-purpose Family and Children's Centre	\$796,759	\$675,000
60 place multi purpose children's centre	\$1,035,329	\$675,000
Total	\$2,823,459	\$2,025,000

No. of Lots in catchment: 3,959

Contributing Area



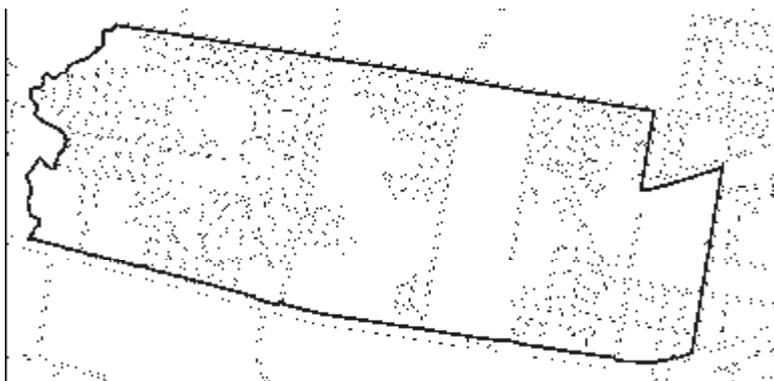
Prestons

Cost of Facilities

Item	Works	Land
Multi purpose community centre (600 sqm)	\$1,169,533	\$612,000
Multi-purpose Family and Children's Centre	\$796,759	\$612,000
60 place multi purpose children's centre	\$1,035,329	\$540,000
Total	\$3,001,622	\$1,764,000

No. of Lots in catchment: 4,230

Contributing Area



10.3 Recreation Facilities

Nexus

The link between residential development, the recreational needs of the incoming population and the provision and subsequent embellishment of open space is based upon:

- § demographics of projected incoming population
- § needs of major target groups
- § market research
- § location/design constraints and requirements

As part of its planning for the Hoxton Park Stage 2 Release Areas, Council commissioned an Open Space Strategy Report by Manidis Roberts Pty Ltd, in 1990. Frank Small & Associates also undertook market research into the Leisure Requirements for the Residents of Liverpool, a Leisure Needs Analysis for the Liverpool Community and a report on Sporting Organisations in 1994. The contents of these reports and their recommendations also form the basis for open space provision.

Needs of Major Target Groups

The major target age groups from a recreational viewpoint in new release areas are children 0-14 years and adults 20-34 years. The recreational activities and open space needs for these specific age groups mainly comprise:

- § Small parks within walking distance of all residences with play equipment
- § Formal playing fields
- § Areas for informal sporting facilities
- § Corridors linking open space features
- § Large natural and parkland areas

More specific desired recreational activities for these groups are.

0 - 14 years	20 - 34 years
Cricket/football	Cricket/football
Bicycle paths	Tennis
Walking for pleasure	Walking for pleasure
Parks/playgrounds	Picnic/barbeques
Picnic/barbeques	Jogging
Swimming	Swimming
Visiting friends	Squash
Going to movies	Visiting friends
Going to beach	Going to clubs
	Going to movies
	Dancing / disco

The need for open space and its embellishment also exists for age groups other than those

discussed above to provide a total community environment. Local parklands, walking, bicycle paths, tennis courts and hard court areas will provide such recreational opportunities.

Location and Design

The market research stresses easy access to all facilities, which emphasises the need for good transport facilities and increased community awareness of recreational opportunities. The final location and design of facilities is however influenced by a number of factors including population thresholds, existing site conditions, transport networks, easements, and open space policy objectives.

The distribution and use of Open Space is based on the hierarchy of open space as outlined in the Open Space Strategy Report (1990) and as modified by:

- § A minimum size (where possible) of 0.5ha for open space in new release areas
- § Incorporation of a District Netball Complex in lieu of a BMX Skateboard track to meet the anticipated district requirements for this high participant sport

The following tables outline the proposed hierarchy of open space provision within the broader Hoxton Park Stage 2 Release Area and the *Department of Planning* recommended quality goals for open space.

Open Space Quality Goals

Goal	Rationale
Minimum open space size of 0.5ha for new release areas.	Increased maintenance cost and reduced useability for areas smaller than this. The pocket park concept has been shown to be largely a failure and many councils are attempting to dispose of many of these sites.
Each area of greater than 10ha be linked to at least one other area.	To encourage linkages between open spaces. Footpaths and street narrowing can be used in some circumstances.
Each household should be within 500 m of open space of at least 0.5ha.	Equity of distribution and to reduce car dependence.
Diversity of settings is encouraged.	Diversity of settings will more likely cater for a greater range of recreation need. In new release areas this can be facilitated through flexible design modules.
Sports fields should primarily be playable.	Sports fields should be designed to ensure that playing surfaces are in use for the maximum period possible, particularly if designed within detention basins.
Terrain should provide an alternative to that prevailing in the area.	More appeal and interest will be generated with mounding, creek lines and ridge tops.
Linear open space should have capacity for good pedestrian and bicycle movements and have houses 'facing' and side-on.	Increase useability and decreased vandalism.

Source: NSW Dept of Planning - Outdoor Recreation & Open Space (1992)

Cecil Hills

Cost of Facilities

No.	Item	Cost of Works	Land Area (ha)	Cost of Land
1	Sportsfield	\$321,717	2.65	\$1,057,298
2	Local Park	\$65,863	0.44	\$175,551
3	Linkage	\$31,665	0.736	\$293,650
4	Local Park	\$44,331	0.4525	\$180,539
5	Precinct Park	\$189,991	3.038	\$1,212,102
6	Linkage	\$147,876	3.225	\$1,286,712
7	Regional Open Space			
8	Local Park	\$65,863	1.24	\$494,736
9	Local Park	\$56,997	1.16	\$462,817
10	Sportsfield	\$321,717	2.8312	\$1,129,593
11	Hardcourt areas	\$139,326		
12	Cycleways	\$158,326		
Totals		\$1,543,674	15.773	\$6,292,998

Contributing Area: All of Cecil Hills

Hoxton Park, Carnes Hill and Prestons

Background to Open Space Design and Location

A number of constraints have influenced where and how the above mentioned open space requirements have been allocated within the precinct areas.

- § Flooding/Drainage - the concept of dual use of open space for drainage functions includes the retention of natural creek lines to control flooding and the use of dry basins as sporting fields.
- § Electricity Easements - the presence of large easements, some of which have been, incorporated within larger open space areas.
- § Existing Dwellings - where possible locating major open spaces & collector streets away from existing development so as not to impede initial development. Due to the rate of development a number of smaller pocket parks have already been provided prior to the review of this plan.
- § Street Network - where major impact on access to recreational facilities occurs, open space provisions may be either under or over desired levels.
- § Landform & Vegetation - where open space has been allocated to retain natural features or where natural barriers such as creeks occur, some areas may contain smaller open space areas in close proximity.

The final layout of open space areas has also been influenced by the following open space objectives.

- § District facilities are centrally located adjacent to the District Retail Centre and are easily accessible by public and private transport.

§ Provision of open space links radiating from the District Retail / Recreational Centre to the surrounding precincts, to the Special Uses Corridor in the west, and along the Hinchinbrook, Cabramatta and Cowpasture creek lines.

§ Retention of local features such as bushland, creek lines, natural high points and vistas.

The report identifies the following specific recreation facilities for the Hoxton Park, Carnes Hill and Prestons areas:

§ District park/bushland of which a minimum 10 ha is to be provided along Hinchinbrook & Cabramatta Creeks and 10 ha to be provided along Hinchinbrook Ck within Precinct 3.

§ Cycleways providing links throughout

§ Local Sports fields - total 20 playing fields with this number inclusive of the 4 quality fields allocated for the district sporting area.

§ Precinct Park - total 8.

§ Children's playgrounds - total of 10 ha.

The required open space provision, is 114.24 ha of which 104.497 ha local open space plus a proportion of district open space of 11.36ha.

Summary of Treatment Costs

Item	Cost
Treatment A. Children's Play Area	\$28,841
Treatment B. Bushland / Natural Areas	\$70,963
Treatment C. Linear Passive area	\$109,150
Treatment D. Consolidated Passive Area	\$140,725
Treatment E. Sportsfield - Dry Site	\$1,247,749
Treatment F. Sportsfield Dual Use Site	\$1,904,824
Treatment H. Cycleways	\$1,170,057

Treatment H. Cycleways

Item	Cost
The total length of cycleways is 25,380 m. of which 3,980 lineal m. is on road facilities, to be costed as part of the Transport contribution. The remaining 21,400 m. is off road facilities through open space areas, which are costed as part of this program. The cost of a conventional 1.2 wide pathway is incorporated as part of the embellishment costs for individual parks. The rate for cycleways is based on the cost of an upgrade from a conventional 1.2m width path to a 2.5m cycle way. (2.5 - 1.2m) x 21,400 lineal m. x \$30.77/ m	\$984,896
Project management 8%	\$78,792
Contingency sum 10% (excluding project management)	\$106,369
Total	\$1,170,057

Major Parks

No.	Item	Area ha	Land / sqm	Cost of Land	Treatment	Cost of Works
1	Cedar Road	6	\$75	\$4,500,000	A	\$28,841
					E	\$1,247,749
2	Maxwell's Creek	11.568	\$25	\$2,892,000	A	\$28,841
					F x 1.5	\$2,857,236
3	Kookaburra Road	13.482	\$75	\$10,111,500	A	\$28,841
					E x 1.5	\$1,871,624
4	Basin 11	8.928			A x 2	\$57,683
					F	\$1,904,824
5	District Sportsfield					
6	Basin 10	13.31			A	\$28,841
					F x 2	\$3,809,647
7	First Avenue	9.447	\$50	\$4,723,500	A	\$28,841
					F x 1.5	\$2,857,236
8	Cabramatta Creek Corridor	7.804	\$10	\$780,400	B x 7.804	\$553,798
9	Hinchinbrook Creek Corridor	4.6	\$10	\$460,000	B x 4.6	\$326,431
10	Cowpasture Creek Corridor	2.922	\$10	\$292,200	B x 2.922	\$207,355
11	Bushland (Adjacent Maxwell's Creek)	2.144	\$10	\$214,400	B x 2.144	\$152,145
12	Precinct Park (north of Hoxton Park Road)	0.688	\$85	\$584,800	A	\$28,841
					D x 0.688	\$96,819
13	Knoll (12th and Mannow Ave)	0.8	\$95	\$760,000	A	\$28,841
					D x 0.8	\$112,580
14	Link (Cowpasture / Muller / 2nd Ave)	3.767	\$85	\$3,201,950	C x 3.767	\$411,168
15	Link (Basin 11 - Special Uses Corridor)	1.224	\$10	\$122,400	C x 1.224	\$133,600
16	Knoll (west Cowpasture Road)	1.424	\$95	\$1,352,800	A	\$28,841
					D x 1.424	\$200,392
17	Precinct Park (adjacent Horningsea Park)	0.416	\$95	\$395,200	A	\$28,841
					D x 0.416	\$58,542
18	Precinct Park (within District Retail Centre)	0.19	\$75	\$142,500	A	\$28,841
					D x 0.19	\$26,738
19	Precinct Park (Bumbera Road)	1.35	\$85	\$1,147,500	B x 1.35	\$95,800
20	Link (across Kookaburra Road)	1.724	\$85	\$1,465,400	C x 1.724	\$188,175
21	Precinct Pk (adj. Retail Centre, Bernera)	0.487	\$85	\$413,950	A	\$28,841

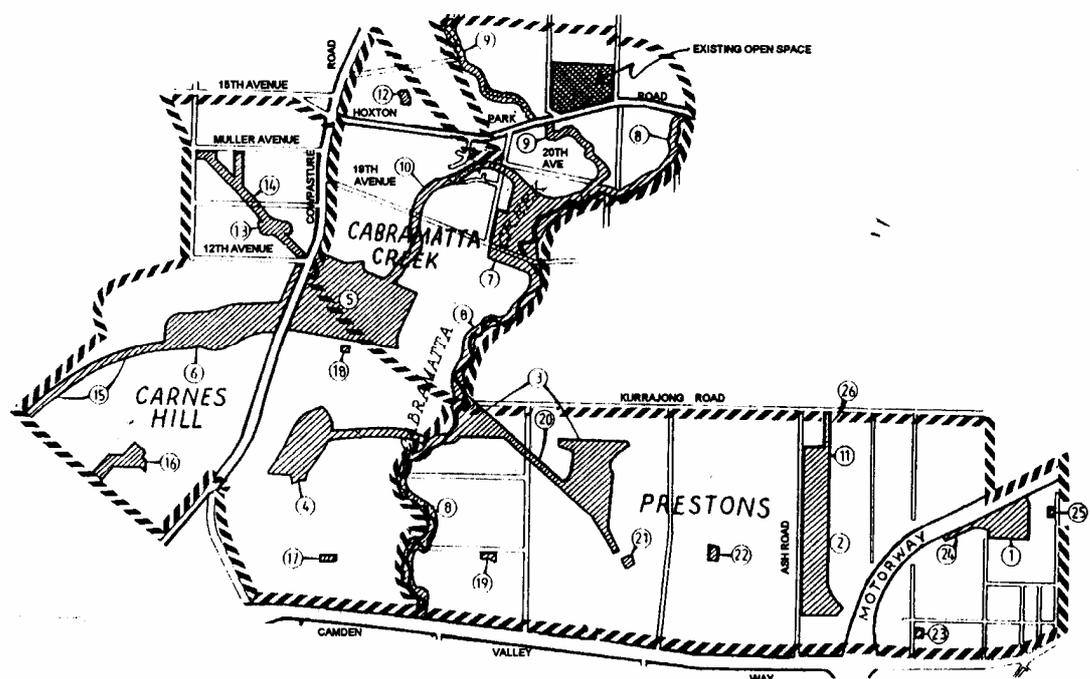
No.	Item	Area ha	Land / sqm	Cost of Land	Treatment	Cost of Works
					D x 0.487	\$68,533
22	Precinct Park (east of Bernera Road)	0.528	\$85	\$448,800	A	\$28,841
					D x 0.528	\$74,303
23	Precinct Park (Beech Road)	0.49	\$85	\$416,500	A	\$28,841
					D x 0.49	\$68,955
24	Link (across Cedar Road)	1.2	\$85	\$1,020,000	C x 1.2	\$130,980
25	Knoll (Box Road)	0.204	\$95	\$193,800	D x 0.204	\$28,708
26	Link (north playing fields - Kurrajong Rd)	0.2	\$85	\$170,000	C x 0.2	\$21,830
Totals		94.897		\$35,809,600		\$17,937,788

Playground Parks

	Area ha	Land / sqm	Cost of Land	Treatment	Cost of Works
Cabramatta Creek	1.6	Various	\$980,000	A x 6	\$173,049
				D x 1.6	\$225,160
Carnes Hill (west of Cowpasture)	2.8	Various	\$2,580,000	A x 10	\$288,415
				D x 4	\$562,899
Carnes Hill (east of Cowpasture)	1.2	Various	\$420,000		
Prestons	4	Various	\$3,400,000	A x 8	\$230,732
				D x 4	\$562,899
Sub Totals	9.6		\$7,380,000		\$2,043,153
Cycleways through open space linkages and along creeks				H	\$1,170,057
Total	104.497		\$43,189,600		\$21,150,997

No. of Lots in Catchment: 10,910

Contributing Area



10.4 Transport Facilities

Nexus

Collector Streets

In some areas of the Hoxton Park Stage 2 Release Areas, the Local Access Street was adopted as the benchmark to assess developer contributions. Council has adopted the philosophy that within each neighbourhood, all streets of higher standard than local access streets (i.e. collector streets) are necessary to provide access for everyone in that neighbourhood. Accordingly there is a contribution toward the difference in cost between a local access street and each street of higher standard. That applies to additional width, pavement depth, and land value (in excess of 18 m width).

Within the Council's road hierarchy are the following:

- (1) Access places and cul-de-sac - cater for up to 300 vpd and not more than 100 m long;
- (2) Local access streets - cater for up to 1000 vpd with provision for up to 2000 vpd with wider pavements.
- (3) Collector streets - cater for up to 3000 vpd;
- (4) Trunk collector streets - cater for up to 6000 vpd and usually provide a link between the internal collector road system of a residential precinct and the major road system.
- (5) Sub arterial roads - cater for up to 15,000 vpd and are the principal traffic carriers within an urban neighbourhood.

Streets adjacent to public reserves or schools

Streets which front public facilities such as schools and open space are not directly the responsibility of any one developer and are, therefore, levied for under this Plan. For any street which a developer has one frontage to and the other side of the road is fronted by a public facility such as open space or a public school, the developer is required to provide the following:

- § 9 m street reserve or half street reserve, whichever is greater
- § the cost of constructing half of a street with a minimum 5.5 m street pavement width, or half the designated street width, whichever is greater

The remainder of the full width street dedication and construction is funded by S94 Contributions.

Upgrading existing public roads

Where an existing road is identified within the contributions plan as requiring an upgrade, Council has made an assessment of the remaining life of the pavement and deducted this from the cost of construction of a new pavement. Where the road is identified as access denied in *Liverpool DCP 2008*, the work is costed for the construction of full width pavement. If future residential lots have access directly to the road, the contributions plan funds central pavement only.

Roundabouts

Roundabouts serve the whole street system within each neighbourhood and consequently serve each property. The cost is determined by the difference in cost between an intersection with a roundabout and a normal intersection.

Other Traffic Facilities

The other facilities include:

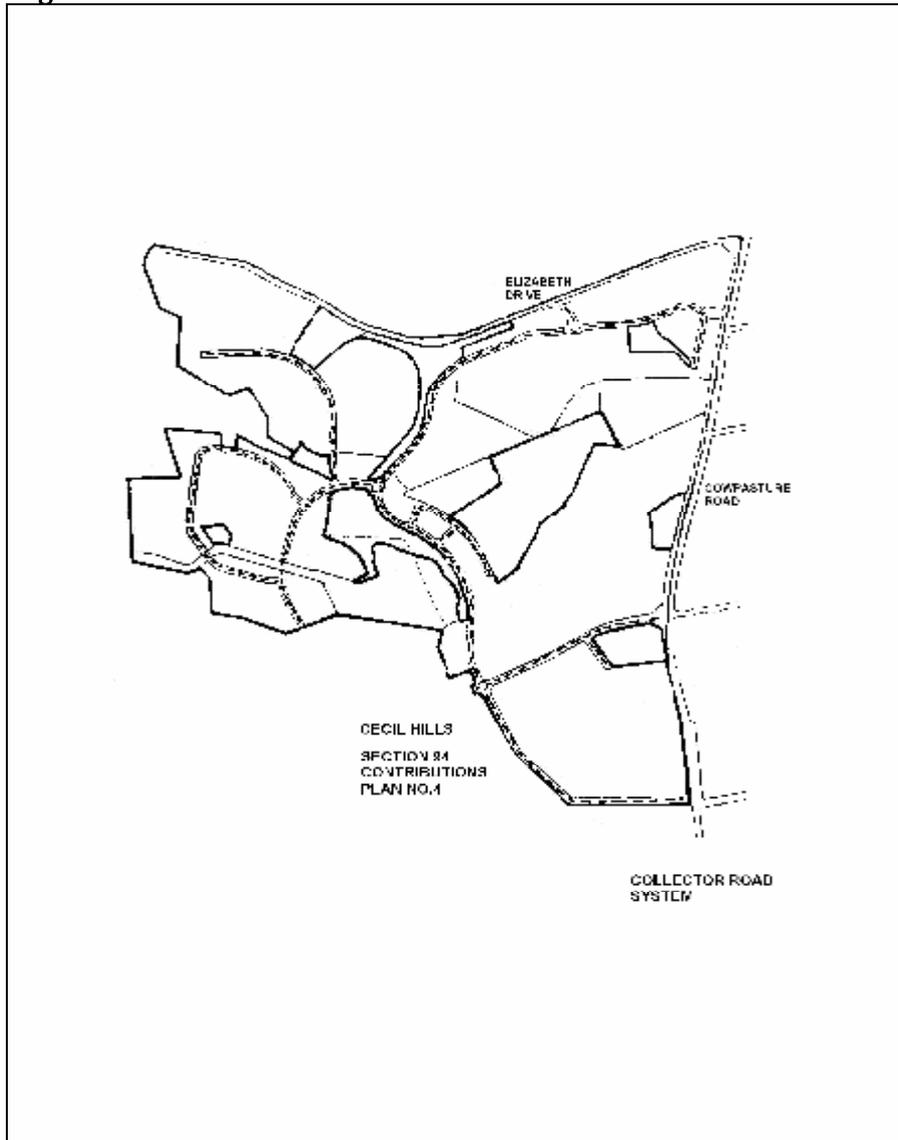
- § Trunk Collector Streets
- § Local Streets fronting open space, drainage, schools etc and within heritage precinct
- § Roundabouts
- § School Bus Bays
- § Structural upgrading and overlay of pavements on existing streets
- § Bus shelters
- § Wombat crossings
- § Closure of some existing streets
- § Miscellaneous works

Contributions for Local Transport Facilities will be levied on the basis of a number of local catchments. The local catchments are listed as follows.

Cecil Hills**Cost of Facilities**

No.	Item	Length	Width	Unit Cost	Cost of Works	Area	Land Cost
1	Collector street with median with open space on one side.	805		\$440	\$353,807		
		705	10			7,050	\$280,450
2	Collector street without median with open space on side.	390	10	\$247	\$96,325	3,900	\$155,143
3	Collector street with median, open space on both sides.	560	20	\$879	\$492,253	11,200	\$445,538
4	Collector street without median, open space on both sides.	150	20	\$494	\$74,096	3,000	\$119,341
5	Collector street with median, development on one side. (Cost difference between collector street and local access street for half road)	895	1	\$224	\$200,128	895	\$35,603
6	Collector street with median - development on both sides. (Difference between collector and local access)	1,420	2	\$474	\$672,416	2,840	\$112,976
7	Collector street without median - development on both sides.	2,895	2	\$147	\$424,618	5,790	\$230,327
8	Trunk collector street	340	30	\$901	\$306,404	10,200	\$405,758
9	Roundabouts						
	2 on arterial roads				\$253,321		
	3 on collector streets				\$189,991		
10	North Liverpool Road	220		\$65	\$14,250		
11	Bus Shelters	220		\$65	\$14,250		
Totals					\$3,091,860		\$1,790,424

No. of lots: 1,600
Contributing Area

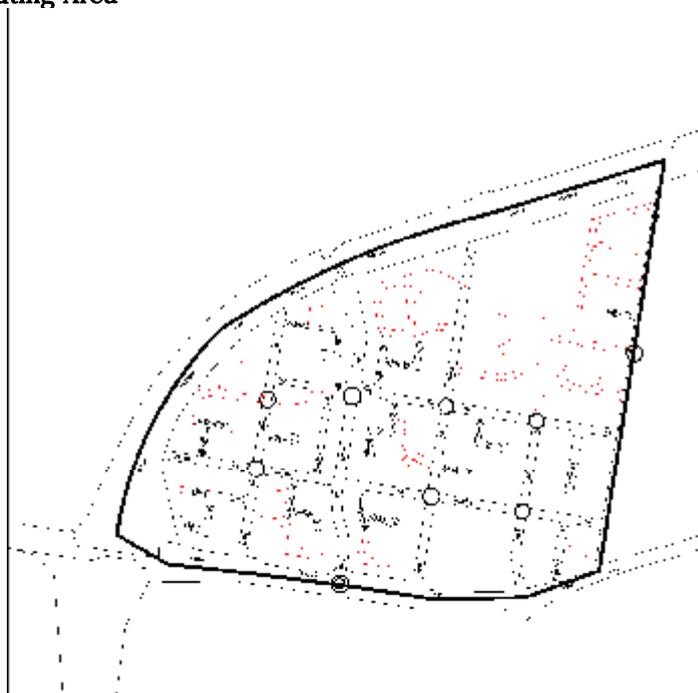


Cedar Road Catchment

Cost of Facilities

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
1	Minor Roundabout (includes \$10,000 for landscaping)	\$34,517			7	\$241,616	
2	Local Street Fronting Open Space or Drainage Res						
	Land Existing			495			
	Land Required; (14.5 - 9) = 5.5m		5.5	220	1,210		\$181,225
	Pavement; (6.5 - 5.5) = 1.0m	\$208		715		\$148,899	
4	Wombat Crossings	\$9,204			1	\$9,204	
5	Bus Shelters	\$6,605			2	\$13,210	
6	Road Closures						
	Beech	\$11,008			1	\$11,008	
	Cedar	\$11,008			1	\$11,008	
Sub Total						\$434,945	
15% Contingency for Civil Works						\$65,242	
Totals						\$500,187	\$181,225

Contributing Area



Berneria Road East Catchment

Cost of Facilities

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
1	Minor Roundabout (includes \$10,000 for landscaping)	\$34,517			14	\$483,232	
2	Collector Street Frontage to School site						
	Land Required; (18 - 9) = 9.0m	\$85	9	225	2,025		\$172,125
	Pavement; (7.5 - 5.5) = 2.0m	\$292		225		\$65,636	
3	Local Street Frontage to School site						
	Land Required; (14.5 - 9) = 5.5m	\$85	5.5	30	165		\$14,025
	Pavement; (6.5 - 5.5) = 1.0m	\$208		30		\$6,247	
4	School Bus Bay	\$40,269			1	\$40,269	
5	Trunk Collector Street						
	Land Existing			120			
	Land Required; 20m	Various	20	370	7,400		\$739,500
	Pavement; 10m	\$1,285		490		\$629,478	
6	Local Street Fronting Open Space or Drainage Res						
	Land Existing			935			
	Land Required; (14.5 - 9) = 5.5m	Various	5.5	2625	14,438		\$702,738
	Pavement; (6.5 - 5.5) = 1.0m	\$208		3560		\$741,369	
7	Collector Street Fronting Open Space or Drainage Res						
	Land Required; (18 - 9) = 9.0m	Various	9	320	2,880		\$243,900
	Pavement; (7.5 - 5.5) = 2.0m	\$292		320		\$93,349	
8	Trunk Collector Street Fronting Open Space or Drainage Res						
	Land Existing						
	Land Required; (20 - 10) = 10.0m	\$85	10	190	1,900		\$161,500
	Pavement; (one side only) = 5.0m	\$585		190		\$111,061	
9	Collector Street Through Open Space or Drainage Res						
	Land Required; 18m	Various	18	295	5,310		\$167,400
	Pavement; 7.5m	\$807		295		\$238,034	
	Culverts	\$806	7.5	180	1,350	\$1,087,823	
10	Local Street Fronting Motorway						
	Land Required; (14.5 - 9) = 5.5m		5.5	60	330		\$0
	Pavement; (6.5 - 5.5) = 1.0m	\$208		60		\$0	
11	Collector Street Fronting Motorway						

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
	Land Existing						
	Land Required; (18 - 9) = 9.0m		9	140	1,260		\$0
	Pavement; (7.5 - 5.5) = 2.0m	\$292		140		\$0	
	13 Car parking to open space, drainage						
	90 degree parking	\$499		680		\$0	
	15 Wombat Crossings	\$9,204			1	\$9,204	
	16 Bus Shelters	\$6,605			10	\$66,049	
	Sub Total					\$3,571,752	
	15% Contingency for Civil Works					\$535,763	
	Totals					\$4,107,515	\$2,201,188

No. of Lots: 2,502 (Cedar Road and Bernera Road East Catchments)

Contributing Area



Bernera Road West Catchment

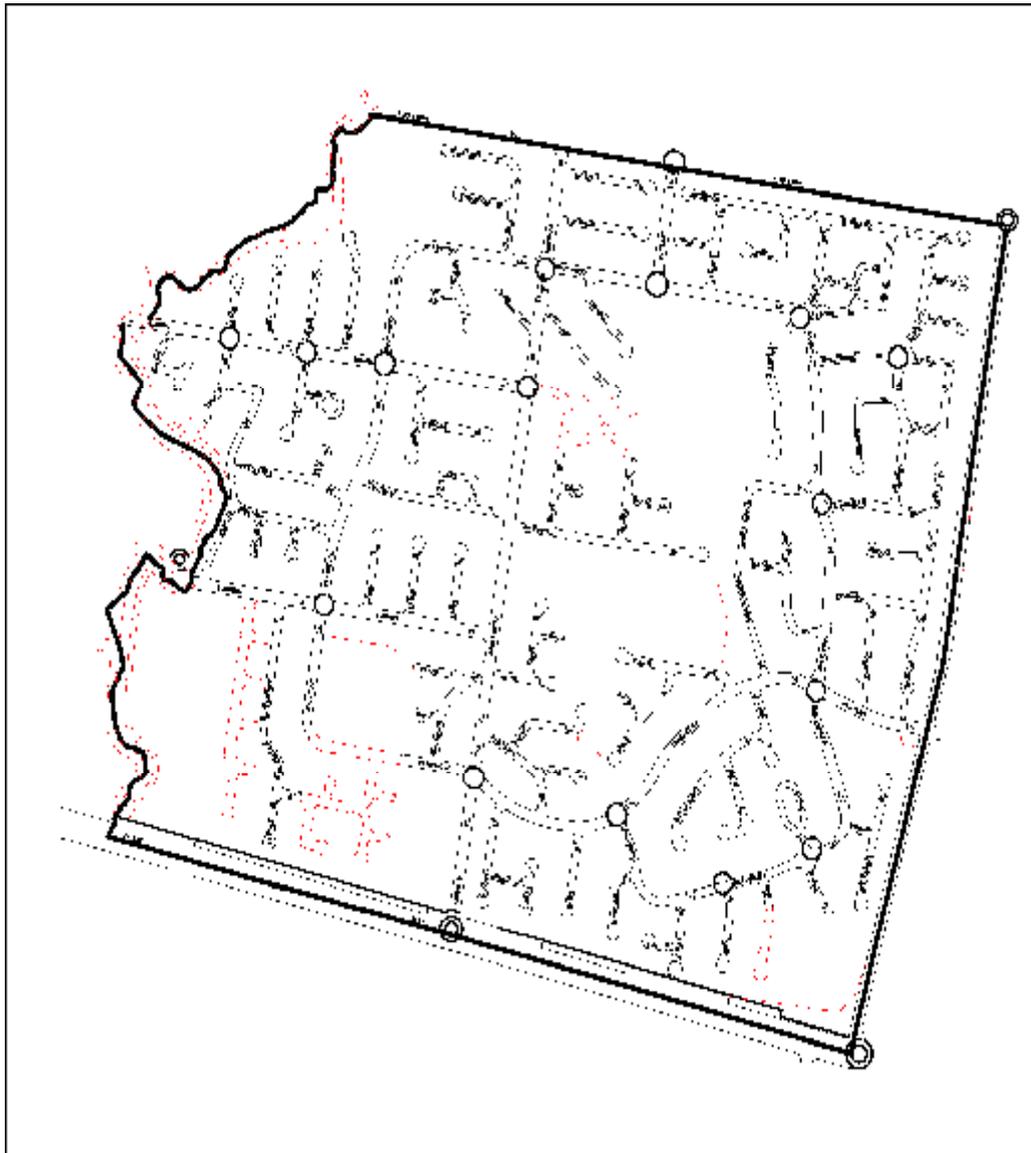
Cost of Facilities

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
1	Minor Roundabout (includes \$10,000 for landscaping)	\$34,517			13	\$448,715	
2	Collector Street Frontage to School site						
	Land Required; (18 - 9) = 9.0m	\$85	9	360	3,240		\$275,400
	Pavement; (7.5 - 5.5) = 2.0m	\$292		360		\$105,018	
3	School Bus Bay	\$40,269			1	\$40,269	
4	Trunk Collector Street						
	Land Existing			220			
	Land Required; 20m	Various	20	400	8,000		\$680,000
	Pavement; 10m	\$1,285		620		\$796,482	
5	Local Street Fronting Open Space or Drainage Res						
	Land Existing			345			
	Land Required; (14.5 - 9) = 5.5m	Various	5.5	1275	7,013		\$444,400
	Pavement; (6.5 - 5.5) = 1.0m	\$208		1620		\$337,365	
6	Collector Street Fronting Open Space or Drainage Res						
	Land Existing						
	Land Required; (18 - 9) = 9.0m	Various	9	765	6,885		\$585,225
	Pavement; (7.5 - 5.5) = 2.0m	\$292		765		\$223,162	
7	Collector Street Through Open Space or Drainage Res						
	Land Existing						
	Land Required; 18m	\$75	18	50	900		\$67,500
	Pavement; 7.5m	\$807		50		\$40,345	
8	Local Street Fronting Cabramatta Creek / Drain						
	Land Existing						
	Land Required; (10.5 - 9) = 1.5m	Various	1.5	1000	1,500		\$120,450
	Pavement; (6.5 - 5.5) = 1.0m	\$208		1000		\$208,250	
10	Overlay existing Central Pavement (sqm)						
	Bumberra Road (future school and open space frontage 560m x 6.3m (exist width))	\$55		1008			\$55,317
11	Wombat Crossings	\$9,204			1	\$9,204	

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
	12 Bus Shelters	\$6,605		10		\$66,049	
Sub Total						\$2,274,858	
15% Contingency for Civil Works						\$341,229	
Totals						\$2,616,087	\$2,228,292

No. of Lots: 2,133

Contributing Area



Cowpasture Road East Catchment

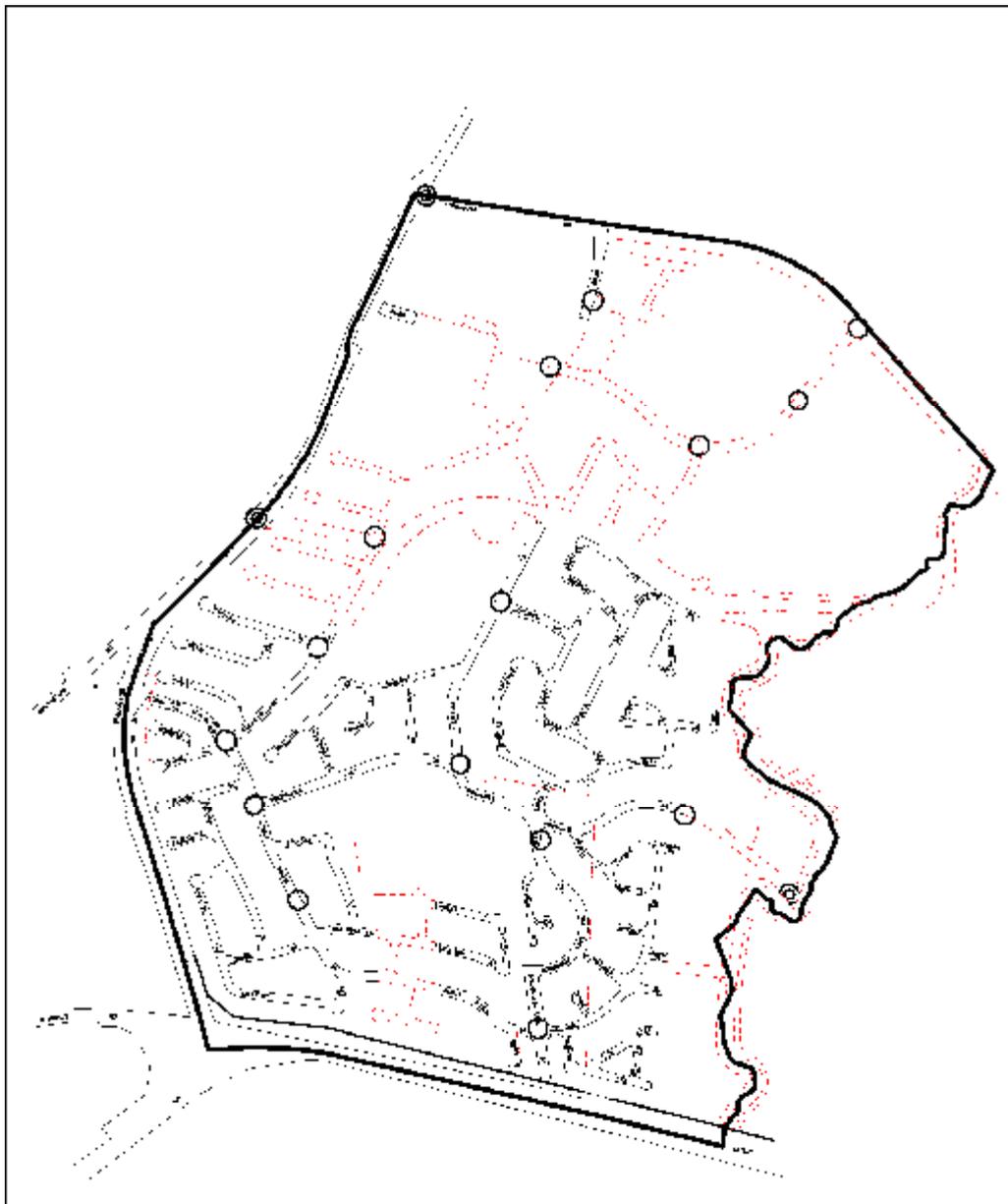
Cost of Facilities

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
1	Minor Roundabout (includes \$10,000 for landscaping)	\$34,517			15	\$517,748	
2	Collector Street Frontage to School site						
	Land Required; (18 - 9) = 9.0m	\$85	9	350	3,150		\$267,750
	Pavement; (7.5 - 5.5) = 2.0m	\$292		350		\$102,100	
3	Local Street Frontage to School site						
	Land Required; (14.5 - 9) = 5.5m	\$95	5.5	105	578		\$54,863
	Pavement; (6.5 - 5.5) = 1.0m	\$208		105		\$21,866	
4	School Bus Bay	\$40,269			1	\$40,269	
5	Trunk Collector Street						
	Land Required; 20m	Various	20	910	18,200		\$1,547,000
	Pavement; 10m	\$1,285		910		\$1,169,030	
6	Collector Street Access Denied						
	Land Required; 18m	\$85	18	160	2,880		\$244,800
	Pavement; 7.5m	\$772		160		\$123,467	
7	Local Street fronting open space or Drainage Res						
	Land Required; (14.5 - 9) = 5.5m	Various	5.5	685	3,768		\$208,038
	Pavement; (6.5 - 5.5) = 1.0m	\$208		685		\$142,651	
8	Collector Street Fronting Open Space or Drainage Res						
	Land Required; (18 - 9) = 9.0m		9	1340	12,060		\$1,063,350
	Pavement; (7.5 - 5.5) = 2.0m	\$292		1340		\$390,899	
9	Collector Street Through Open Space or Drainage Res						
	Land Required; 18m		18	80	1,440		\$0
	Pavement; 7.5m	\$807		80		\$64,552	
	Culverts	\$806	7.5	60	450	\$362,608	\$0
10	Local Street Fronting Heritage Area						
	Land Required; (14.5 - 9) = 5.5m		5.5	630	3,465		
	Pavement; (6.5 - 5.5) = 1.0m	\$208		630			
11	Collector Street Fronting Heritage Area						
	Land Required; (18 - 9) = 9.0m		9	480	4,320		
	Pavement; (7.5 - 5.5) = 2.0m	\$292		480			

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
14	Wombat Crossings	\$9,204			1	\$9,204	
15	Bus Shelters	\$6,605			10	\$66,049	
Sub Total						\$3,010,444	
15% Contingency for Civil Works						\$451,567	
Totals						\$3,462,010	\$3,385,800

No. of Lots: 2,220

Contributing Area



Cowpasture Road West Catchment

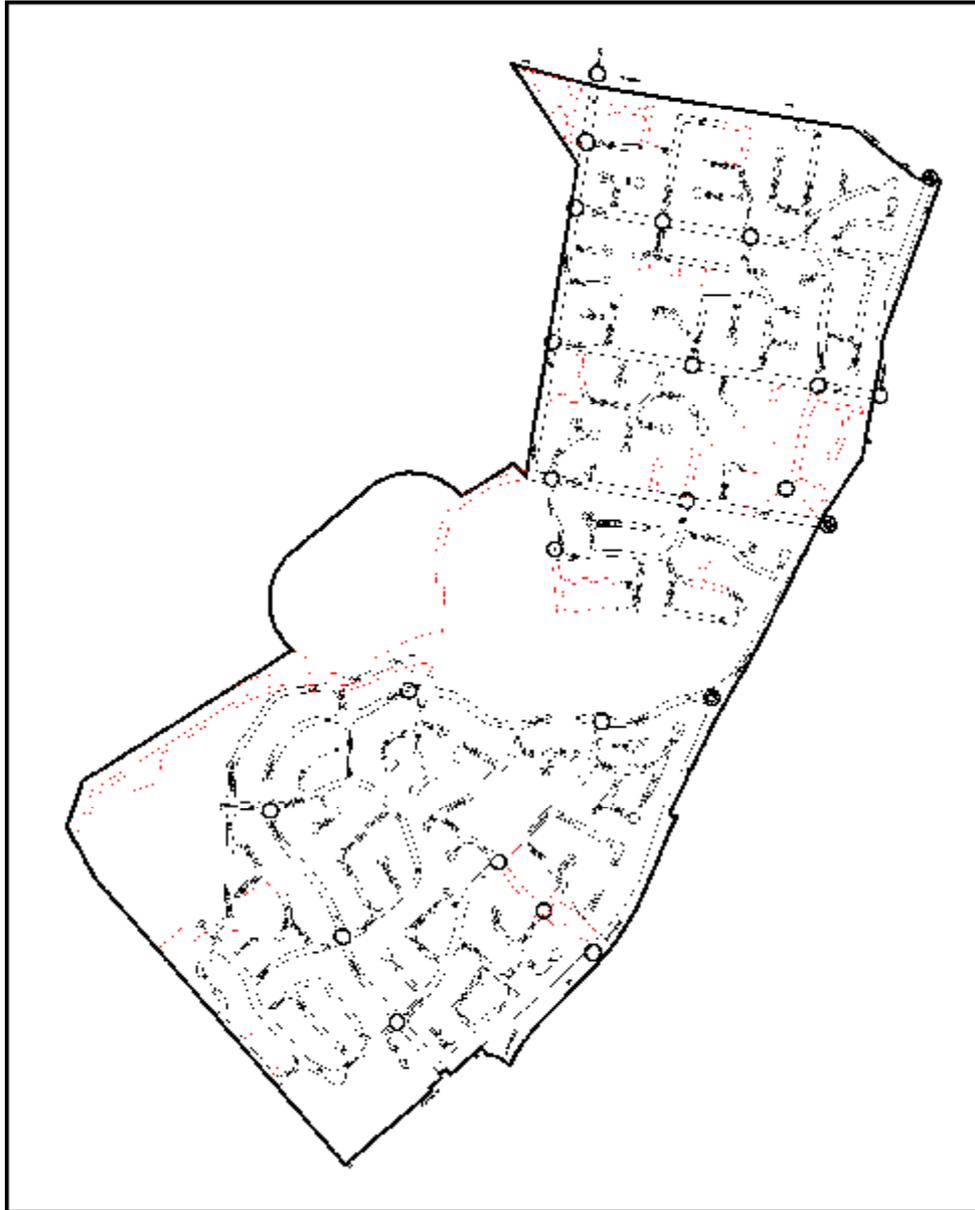
Cost of Facilities

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
1	Minor Roundabout (includes \$10,000 for landscaping)	\$34,517			18	\$621,298	
2	Collector Street Frontage to School site						
	Land Required; (18 - 9) = 9.0m	\$85	9	200	1,800		\$153,000
	Pavement; (7.5 - 5.5) = 2.0m	\$292		200		\$58,343	
3	School Bus Bay	\$40,269		1	1	\$40,269	
4	Trunk Collector Street						
	Land Existing			420			
	Land Required; 20m	Various	20	655	13,100		\$1,265,500
	Pavement; 10m	\$1,285		1075		\$1,380,997	
5	Local Street fronting open space or drainage Res						
	Land Existing	Various		320			
	Land Required; (14.5 - 9) = 5.5m		5.5	2245	12,348		\$1,142,213
	Pavement; (6.5 - 5.5) = 1.0m	\$208		2565		\$534,161	
6	Collector Street Fronting Open Space or Drainage Res						
	Land Existing			460			
	Land Required; (18 - 9) = 9.0m	Various	9	540	4,860		\$316,800
	Pavement; (7.5 - 5.5) = 2.0m	\$292		1000		\$291,715	
7	Local Street Through Open Space or Drainage Res						
	Land Required; 14.5m	\$95	14.5	20	290		\$27,550
	Pavement; 6.5m	\$602		20		\$12,043	
	Culverts	\$806	6.5	20	130	\$104,753	
8	Collector Street Through Open Space or Drainage Res						
	Land Required; 18m	\$85	18	25	450		\$38,250
	Pavement; 7.5m	\$807		25		\$20,172	
	Culverts	\$806	7.5	25	188	\$151,087	
11	Wombat Crossings	\$9,204			1	\$9,204	
12	Bus Shelters	\$6,605			10	\$66,049	
13	Road Closures						
	Second Ave	\$11,008			1	\$11,008	

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
Sub Total						\$3,301,100	
15% Contingency for Civil Works						\$495,165	
Totals						\$3,796,265	\$2,943,313

No. of Lots: 2,880

Contributing Area



Nineteenth Avenue Catchment

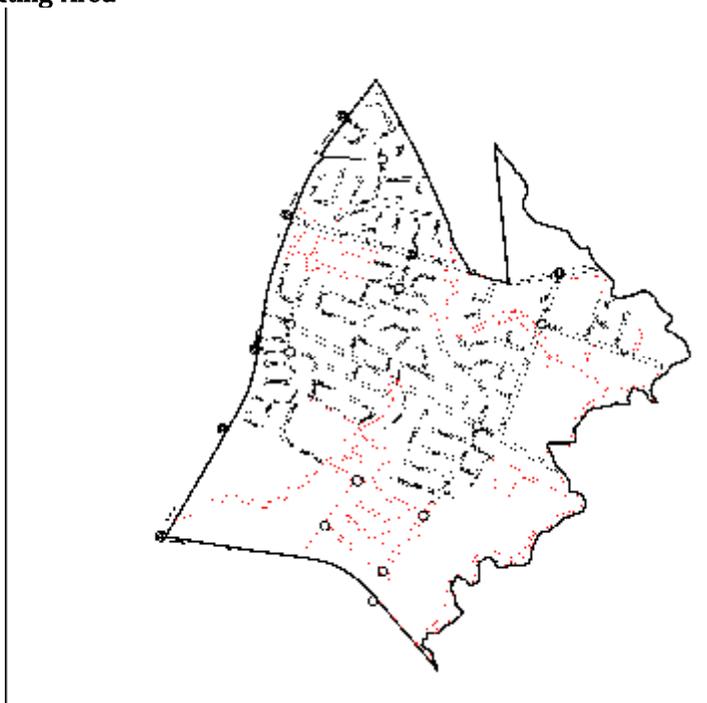
Cost of Facilities

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
1	Minor Roundabout (includes \$10,000 for landscaping)	\$34,517			10	\$345,165	
2	Collector Street Frontage to School site						
	Land Required; (18 - 9) = 9.0m	\$85	9	120	1,080		\$91,800
	Pavement; (7.5 - 5.5) = 2.0m	\$292		120		\$35,006	
3	Local Street Frontage to School site						
	Land Required; (14.5 - 9) = 5.5m	\$75	5.5	400	2,200		\$165,000
	Pavement; (6.5 - 5.5) = 1.0m	\$208		400		\$83,300	
4	School Bus Bay	\$40,269			1	\$40,269	
5	Trunk Collector Street						
	Land Required; 20m	Various	20	200	4,000		\$300,000
	Pavement; 10m	\$1,285		200		\$256,930	
6	Collector Street Access Denied						
	Land Required; 18m	\$75	18	240	4,320		\$324,000
	Pavement; 7.5m	\$807		240		\$193,655	
7	Local Street fronting open space or drainage Res						
	Land Existing			170			
	Land Required; (14.5 - 9) = 5.5m	Various	5.5	1950	10,725		\$701,250
	Pavement; (6.5 - 5.5) = 1.0m	\$208		2120		\$441,490	
8	Collector Street Fronting Open Space or Drainage Res						
	Land Required; (18 - 9) = 9.0m	Various	9	195	1,755		\$354,375
	Pavement; (7.5 - 5.5) = 2.0m	\$292		195		\$56,885	
9	Collector Street Through Open Space or Drainage Res						
	Land Required; 18m		18	40	720		\$0
	Pavement; 7.5m	\$807		40		\$32,276	
	Culverts	\$806	7.5	40	300	\$241,739	
10	Local Street Fronting Cabramatta Creek / Drain						
	Land Required; (10.5 - 9) = 1.5m	\$25	1.5	975	1,463		\$36,563

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
	Pavement; (6.5 - 5.5) = 1.0m	\$208		975		\$203,044	
12	Overlay existing Central Pavement (sqm)						
	Nineteenth Ave (open space frontage)						
	570m x 5.3m (exist width)	\$41		212		\$8,635	
	First Avenue (open space frontage)						
	460m x 4.7m (exist width)	\$41		188		\$7,657	
13	Wombat Crossings	\$9,204			1	\$9,204	
14	Bus Shelters	\$6,605			8	\$52,839	
15	Road Closures						
	Nineteenth Ave at Cowpasture Creek and restore	\$110,081			1	\$110,081	
	Nineteenth Ave at Cowpasture Road	\$11,008			1	\$11,008	
16	Culvert Upgrading for pedestrian facility in First Ave	\$22,016			1	\$22,016	
Sub Total						\$2,151,198	
15% Contingency for Civil Works						\$322,680	
Totals						\$2,473,878	\$1,972,988

No. of Lots: 1,734

Contributing Area



Whitford Road South Catchment

Cost of Facilities

Item No.	Description	Unit Cost	Width	Length	Area or No.	Cost of Works	Cost of Land
1	Collector Road fronting open space						
	Land required	\$35	5.5	375	2,063		\$72,188
	Pavement	\$291		375		\$109,146	
2	90 degree parking bay						
	Pavement	\$227		200		\$45,400	
3	Four Major Roundabouts	\$35,000			4	\$140,000	
	(costs include \$10,000 for landscaping)						
4	Minor road frontage to open space						
	Land	\$40	4.5	40	180		\$7,200
	Pavement	\$208		40		\$8,322	
5	Minor road frontage to floodplain Hinchinbrook Creek						
	Land	\$35	2.0	700	1,400		\$49,000
	Pavement	\$208		700		\$145,638	
6	Minor Road frontage to open space						
	Land	\$35	2.0	350	700		\$24,500
	Pavement	\$208		350		\$72,819	
7	Minor Road frontage to High School						
	Land	\$35	9.0	150	1,350		\$47,250
	Pavement	\$458		350		\$160,300	
8	Sub-arterial with Median						
	Land	\$35	4.0	500	2,000		\$70,000
	Pavement	\$452		500		\$225,942	
9	Half Road adjacent to open space	\$165		200		\$33,000	
Sub Total						\$940,566	
+ 15% contingencies						\$141,085	
Totals						\$1,081,651	\$270,138

10.5 Drainage

Cecil Hills

Cost of Facilities	
Item	Cost
Channel 1	\$303,985
Channels 2 & 3	\$1,298,269
Channel 4	\$718,165
Channel 5	\$635,835
Channel 6	\$787,828
Basin 200	\$649,768
Total	\$4,393,850

No. of Lots: 1,600

Contributing Area: Cecil Hills

Hoxton Park, Carnes Hill and Prestons

Drainage Easements

In order to achieve an economical local drainage system it was required to drain stormwater runoff through the lowest possible path. This path was in some cases required to traverse privately owned properties which creates the need for drainage easements or drainage reserve.

A drainage easement is known as the area of land dedicated to construct and maintain an enclosed drainage conduit (usually a pipe or box culvert).

The drainage easement can serve a number of privately owned properties in which case it is described to be an "inter-allotment drainage easement". The width of an inter-allotment drainage easement will be indicated by the formula given below. This will be not less than 1.2m for residential lots or 2.5m for industrial lots.

$$\text{Easement Width} = (1.5 \times \text{depth of trench}) + \text{Pipe Diameter (or Culvert Width)}$$

The area of land required for inter-allotment drainage easement shall be dedicated for that purpose and shall belong to those properties benefiting from the drainage system within the easement. The owners the properties will be responsible for the maintenance and functioning of the drainage system.

Drainage Reserves

A drainage reserve is known as the area of land dedicated to construct and maintain an open drainage conduit (usually a formed earth or concrete channel).

The drainage reserve can serve a number of privately owned properties, public land (such as road drainage, parks, etc.) or a combination of these. The width of a drainage reserve is determined by the table as shown below.

Earth formed channels: Base + (12 x Depth)

Concrete lined channels:

Rectangular Base + (1.5 x Depth)

Trapezium (slopes >45°) Width at top of bank + (2 x Depth)

The area of land required for drainage reserve shall be dedicated to Council for that purpose and Council shall be responsible for the maintenance and functioning of the drainage system. The area of land dedicated to drainage reserve has been included in the contribution rate as “cost of land acquisition” for each local drainage catchment.

Minimum size pipes

The Local Trunk Drainage is costed on the basis of drainage infrastructure requirements of the local catchment. Each of the local catchments is costed down to 900mm dia pipe only. The individual developers are required to directly bear the cost of all pipelines up to 825mm diameter within or past their own land. The cost difference between any larger pipe size or drainage swale / channel is funded by Section 94 contributions.

Where it is anticipated that the developer will carry out the works as part of a development, the cost of supply, lay and backfilling of 825 mm diameter is deducted from the cost of works to get the contribution. These works, when carried out by the developer, means that the developer will receive the credits of the difference between the total cost of works and the cost of 825mm diameter pipe (to be borne by the developer). Should the developer default from undertaking the works identified in this plan as the developer’s responsibility, then the developer shall pay for the cost of 825mm diameter pipe for the reach of drainage works for which they are responsible to provide as part of their development.

Where the work is costed in full without deducting the cost of 825 mm diameter, it is anticipated that Council will undertake these works from contributions. Where a developer undertakes these works as part of their development, they shall receive full credits for the work as shown in this plan.

Gross pollutant traps

Gross pollutant traps have also been costed as source control for litter at the end of each network.

Sub Catchments

As part of the *Hoxton Park Stage 2 Release Area Total Catchment Management Study* carried out by Kinhill Engineers Pty Ltd on Council's behalf, a number of local drainage catchment areas were identified, some of which overlap. A single development may be affected by up to three (3) Catchment Areas depending on the size and location of the site. Catchment Area 1A, for example, covers most of the zoned industrial area; others are more site specific.

Within the Hoxton Park, Carnes Hill and Prestons area contributions for local trunk drainage will be levied on the basis of a number of local sub catchments. The local catchments are as shown on the following sections.

Catchment Area Precinct 5 Central

Cost of Facilities

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
109.04	109.03	900	35	\$457		\$15,989	\$12,250	\$3,739
109.02	109.01	1,050	120	\$567		\$68,030	\$42,000	\$26,030
109.01	101.10	1,200	44	\$648		\$28,529	\$15,400	\$13,129
103.04	103.03	900	20	\$457		\$9,137	\$7,000	\$2,137
103.03	103.02	1,050	90	\$567		\$51,023	\$31,500	\$19,523
103.02	103.01	1,200	175	\$648		\$113,466	\$61,250	\$52,216
103.01	102.03	1,200	125	\$648		\$81,047	\$43,750	\$37,297
102.03	102.02	1,500	125	\$980		\$122,465	\$43,750	\$78,715
102.02	102.01	1,500	85	\$980		\$83,277	\$29,750	\$53,527
102.01	101.04	1,650	115	\$1,134		\$130,391	\$40,250	\$90,141
101.10	101.09		90		Swale	\$107,770	\$31,500	\$76,270
101.09	101.08		100		Swale	\$111,270	\$35,000	\$76,270
101.08	101.07		70		Swale	\$100,770	\$24,500	\$76,270
101.07	116.01	RCBC by RTA under F5 Freeway				\$0		\$0
116.01	73.00				Swale	\$158,365		\$76,270
101.04	101.03		100		Swale	\$111,270	\$35,000	\$76,270
101.03	101.02		85		Swale	\$106,020	\$29,750	\$76,270
101.02	101.01		80		Swale	\$104,270	\$28,000	\$76,270
101.01	95.02		30		Swale	\$86,770	\$10,500	\$76,270
95.05	95.04	900	110	\$457		\$50,252	\$38,500	\$11,752
95.04	95.03	1,050	90	\$567		\$51,023	\$31,500	\$19,523
95.03	95.02	1,350	220	\$826		\$181,634	\$77,000	\$104,634
95.02	95.01	RCBC by RTA under F5 Freeway				\$0		\$0
77.01	73.06	900	20	\$457		\$9,137	\$7,000	\$2,137
75.02	75.01	1,050	100	\$567		\$56,692	\$35,000	\$21,692
75.01	73.04	1,200	60	\$648		\$38,903	\$21,000	\$17,903
73.07	73.06	900	70	\$457		\$31,979	\$24,500	\$7,479
73.06	73.00	1,500	50	\$980		\$48,986	\$17,500	\$31,486
73.00	73.05		170		Swale	\$135,770	\$59,500	\$76,270
73.05	73.04		125		Swale	\$120,020	\$43,750	\$76,270
73.04	73.03		140		Swale	\$125,270	\$49,000	\$76,270
73.03	73.02		85		Swale	\$106,020	\$29,750	\$76,270
73.02	73.01		20		Swale	\$83,270	\$7,000	\$76,270

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
68.01	63.07	1,050	130	\$567		\$73,699	\$45,500	\$28,199
67.02	67.01	900	115	\$457		\$52,536	\$40,250	\$12,286
67.01	66.01	1,050	125	\$567		\$70,865	\$43,750	\$27,115
66.01	63.06	1,200	15	\$648		\$9,726	\$5,250	\$4,476
65.01	63.04	1,050	110	\$567		\$62,361	\$38,500	\$23,861
63.15	63.14	1,050	60	\$567		\$34,015		\$34,015
63.14	63.13	1,200	20	\$648		\$12,968		\$12,968
63.13	63.12	1,200	70	\$648		\$45,387		\$45,387
63.12	63.11	1,350	60	\$826		\$49,537		\$49,537
63.11	63.10	1,500	100	\$980		\$97,972		\$97,972
63.10	63.09	1,500	100	\$980		\$97,972		\$97,972
63.09	63.08	1,500	100	\$980		\$97,972		\$97,972
63.08	63.07	1,650	120	\$1,134		\$136,060		\$136,060
63.07	63.06				Swale	\$16,187		\$16,187
63.06	63.05				Swale	\$53,958		\$53,958
63.05	63.04				Swale	\$64,750		\$64,750
63.04	63.03				Swale	\$70,146		\$70,146
63.03	63.02				Swale	\$32,375		\$32,375
63.02	63.01				Swale	\$10,792		\$10,792
47.02	47.01	1,050	205	\$567		\$116,218	\$71,750	\$44,468
47.01	23.02	1,200	25	\$648		\$16,209	\$8,750	\$7,459
37.03	37.02	1,200	150	\$648		\$97,257	\$52,500	\$44,757
37.02	37.01	1,200	80	\$648		\$51,870	\$28,000	\$23,870
37.01	19.14	1,200	80	\$648		\$51,870	\$28,000	\$23,870
31.03	31.02	900	120	\$457		\$54,820	\$42,000	\$12,820
31.02	31.01	1,050	140	\$567		\$79,369	\$49,000	\$30,369
31.01	19.09	1,050	20	\$567		\$11,338	\$7,000	\$4,338
23.09	23.08		295		Swale	\$179,520	\$103,250	\$76,270
23.08	23.07		50		Swale	\$93,770	\$17,500	\$76,270
23.07	23.06		150		Swale	\$128,770	\$52,500	\$76,270
23.06	23.05		80		Swale	\$104,270	\$28,000	\$76,270
23.05	23.04		155		Swale	\$130,520	\$54,250	\$76,270
23.04	23.03		135		Swale	\$123,520	\$47,250	\$76,270
23.03	23.02		105		Swale	\$113,020	\$36,750	\$76,270
23.02	23.01		55		Swale	\$95,520	\$19,250	\$76,270
23.01	19.03		70		Swale	\$100,770	\$24,500	\$76,270
21.01	19.03	1,050	90	\$567		\$51,023	\$31,500	\$19,523

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
19.18	19.17	900	70	\$457		\$31,979	\$24,500	\$7,479
19.17	19.16	1,050	30	\$567		\$17,008	\$10,500	\$6,508
19.16	19.15	1,350	120	\$826		\$99,073	\$42,000	\$57,073
19.15	19.14	1,500	45	\$980		\$44,088	\$15,750	\$28,338
19.14	19.13		60		Swale	\$97,270	\$21,000	\$76,270
19.13	19.12		25		Swale	\$85,020	\$8,750	\$76,270
19.12	19.11		65		Swale	\$99,020	\$22,750	\$76,270
19.11	19.10		60		Swale	\$97,270	\$21,000	\$76,270
19.10	19.09		95		Swale	\$109,520	\$33,250	\$76,270
19.09	19.08		30		Swale	\$86,770	\$10,500	\$76,270
19.08	19.07		100		Swale	\$111,270	\$35,000	\$76,270
19.07	19.06		80		Swale	\$104,270	\$28,000	\$76,270
19.06	19.05		125		Swale	\$120,020	\$43,750	\$76,270
19.05	19.04		85		Swale	\$106,020	\$29,750	\$76,270
19.04	19.03		190		Swale	\$142,770	\$66,500	\$76,270
19.03	19.02		40		Swale	\$90,270	\$14,000	\$76,270
19.02	19.01		50		Swale	\$93,770	\$17,500	\$76,270
13.02	13.01	1,050	150	\$567		\$85,038	\$52,500	\$32,538
13.01	12.03	1,200	20	\$648		\$12,968	\$7,000	\$5,968
12.04	12.03	1,050	75	\$567		\$42,519	\$26,250	\$16,269
12.03	12.02	1,500	130	\$980		\$127,364	\$45,500	\$81,864
12.02	12.01	1,500	25	\$1,222		\$30,548	\$8,750	\$21,798
4.12	4.11	1,050	30	\$567		\$17,008	\$10,500	\$6,508
4.11	4.10	1,050	60	\$567		\$34,015	\$21,000	\$13,015
4.10	4.09	1,050	120	\$567		\$68,030	\$42,000	\$26,030
4.09	4.08	1,200	50	\$648		\$32,419	\$17,500	\$14,919
4.08	4.07	1,200	120	\$648		\$77,805	\$42,000	\$35,805
4.07	4.06	1,350	120	\$826		\$99,073	\$42,000	\$57,073
4.06	4.05	1,650	70	\$1,134		\$79,369	\$24,500	\$54,869
4.05	4.04	1,650	25	\$1,134		\$28,346	\$8,750	\$19,596
4.04	4.03	1,650	90	\$1,134		\$102,045	\$31,500	\$70,545
4.03	4.02	1,650	40	\$1,134		\$45,353	\$14,000	\$31,353
4.02	4.01	1,650	25	\$1,134		\$28,346	\$8,750	\$19,596
3.02	3.01	900	45	\$457		\$20,558	\$15,750	\$4,808
3.01	1.04	900	20	\$457		\$9,137	\$7,000	\$2,137
1.04	1.03	1,350	85	\$826		\$70,177	\$29,750	\$40,427
1.03	1.02	1,350	83	\$826		\$68,526	\$29,050	\$39,476

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
1.02	1.01	1,350	25	\$826		\$20,640	\$8,750	\$11,890
Sub Total						\$7,952,433		\$5,095,888
Add 15% Contingencies								\$764,383
Sub Total								\$5,860,271

Land Acquisition

Item	Area sqm	Unit cost	Cost
Maxwells Creek - (Kurrajong Road to Camden Valley Way)	48,320	\$10	\$483,200
Swale (Maxwells Creek to Beech Road)	15,875	\$25	\$396,875
Swale (Maxwells Creek to South Western Freeway)	12,100	\$10	\$121,000
Swale (Maxwells Creek to Bernera Road)	18,080	\$10	\$180,800
Swale (Maxwells Creek to Camden Valley Way)	27,625	\$10	\$276,250
Sub Total	122,000		\$1,458,125
Total			\$7,318,396

No. of lots: 3,975

Contributing Area



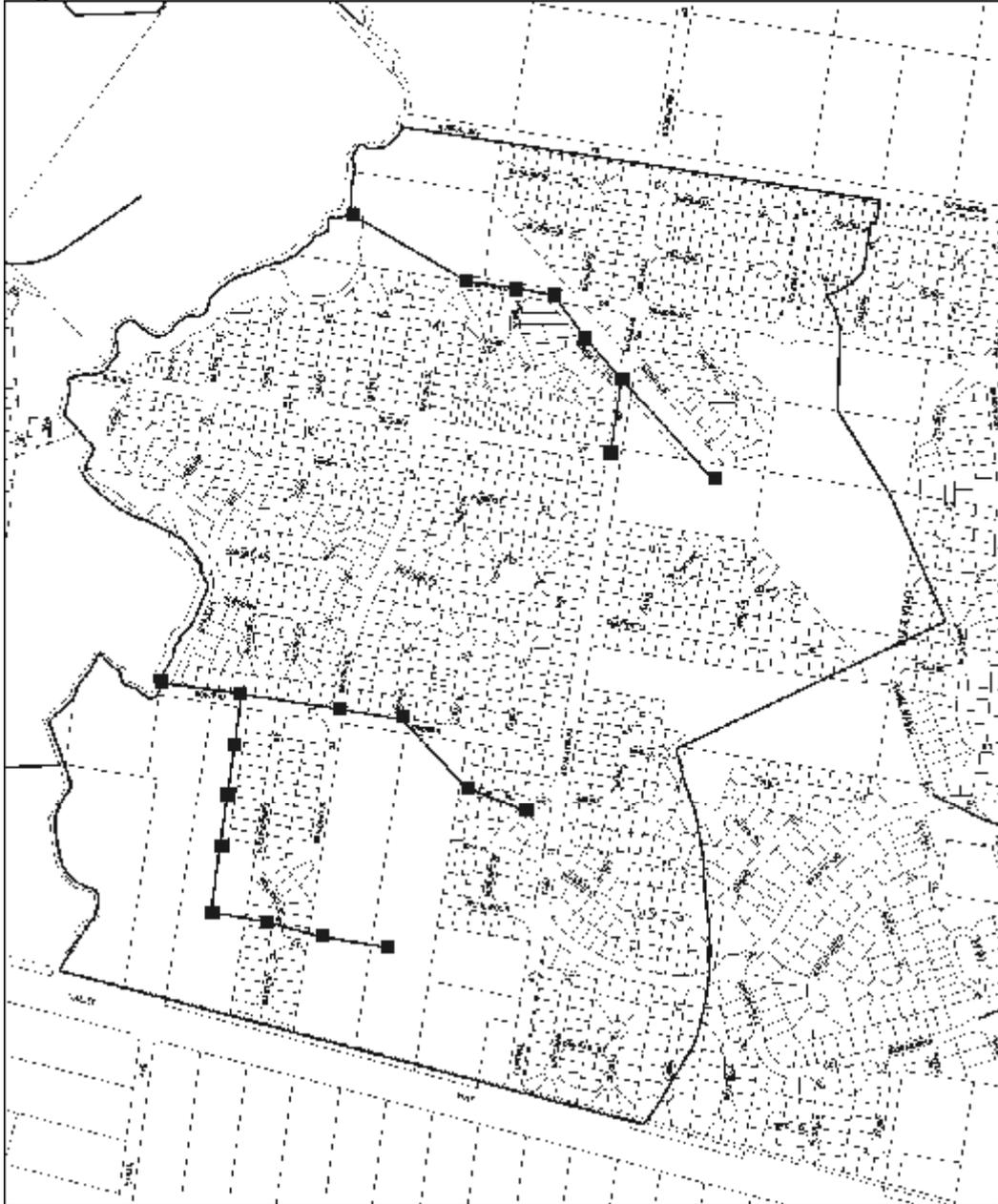
Catchment Area Precinct 5 West

Cost of Facilities Works

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
M5	M4	1,200	90	\$648		\$58,354	\$31,500	\$26,854
M4	M3	1,200	130	\$648		\$84,289	\$45,500	\$38,789
M3	M2	1,650	65	\$1,134		\$73,699	\$22,750	\$50,949
M2	M1	2X1200	150	\$1,276		\$191,376	\$52,500	\$138,876
M1.7	M1.6	900	90	\$457		\$41,115	\$31,500	\$9,615
M1.6	M1.5	1,050	90	\$567		\$51,023	\$31,500	\$19,523
M1.5	M1.4	1,050	70	\$567		\$39,684	\$24,500	\$15,184
M1.4	M1.3	1,050	70	\$567		\$39,684	\$24,500	\$15,184
M1.3	M1.2	1,200	80	\$648		\$51,870	\$28,000	\$23,870
M1.2	M1.1	1,200	70	\$648		\$45,387	\$24,500	\$20,887
M1.1	M1	1,200	80	\$648		\$51,870	\$28,000	\$23,870
M1	M0	2X1650	110	\$2,191		\$240,968	\$38,500	\$202,468
N6	N5	1,050	110	\$567		\$62,361	\$38,500	\$23,861
N5.11	N5	1,050	230	\$567		\$130,391	\$80,500	\$49,891
N5	N4	1,500	90	\$980		\$88,175	\$31,500	\$56,675
N4	N3	1,500	70	\$980		\$68,581	\$24,500	\$44,081
N3	N2	1,800	50	\$1,332		\$66,599	\$17,500	\$49,099
N2	N1	2X1500	80	\$1,816		\$145,307	\$28,000	\$117,307
N1	N0	2 x 1.8 x 0.9 BC	160	\$2,382		\$381,101		\$381,101
Structures						\$66,049		\$66,049
Sub Total						\$1,977,886		\$1,374,136
Add 15% Contingencies								\$206,120
Sub Total								\$1,580,256
Land Acquisition								
Item						Area sqm	Unit cost	Cost
Cabramatta Creek (from Kurrajong Road to Camden Valley Way)						\$17,000	\$10	\$170,000
Total								\$1,750,256

No. of Lots: 1,206

Contributing Area



Catchment Area Cowpasture Road South

Cost of Facilities

Works

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
F6	F5	1,050	100	\$567		\$56,692	\$35,000	\$21,692
F5	F4	1,050	110	\$567		\$62,361	\$38,500	\$23,861
F4	F3	1,050	40	\$567		\$22,677	\$14,000	\$8,677
F3.1	F3	900	130	\$457		\$59,389	\$45,500	\$13,889
F3	F2	1,650	30	\$1,134		\$34,015	\$10,500	\$23,515
F2	F1	1,650	60	\$1,134		\$68,030	\$21,000	\$47,030
F1	F0	1,800	190	\$1,304		\$247,848	\$66,500	\$181,348
Structures						\$17,613		\$17,613
K10	K9	1,200	140	\$648		\$90,773	\$49,000	\$41,773
K9	K8	1,350	50	\$826		\$41,280	\$17,500	\$23,780
K8	K7	1,650	100	\$1,134		\$113,384	\$35,000	\$78,384
K7	K6	1,800	60	\$1,304		\$78,268	\$21,000	\$57,268
K6	K5	1,800	80	\$1,304		\$104,357	\$28,000	\$76,357
K5	K4	1,800	50	\$1,304		\$65,223	\$17,500	\$47,723
K4	K3	2X1350	135	\$1,596		\$215,484	\$47,250	\$168,234
K3	K2	2X1350	60	\$1,596		\$95,771	\$21,000	\$74,771
K2	K1	2X1350	60	\$1,596		\$95,771	\$21,000	\$74,771
K1	K0	2X1350	130	\$1,596		\$207,503	\$45,500	\$162,003
Structures						\$55,041		\$55,041
Flood Channel								
Excavation						\$210,255		\$210,255
Surface Treatment						\$110,081		\$110,081
Low Flow Pipe (incl. pits)						\$265,296		\$265,296
Culverts						\$308,228		\$308,228
H4	H3	900	200	\$457		\$91,367	\$70,000	\$21,367
H3	H2	1,200	170	\$648		\$110,224	\$59,500	\$50,724
H2	H1	1,500	260	\$980		\$254,728	\$91,000	\$163,728
H1	H0		130		Swale	\$105,128	\$45,500	\$59,628
Structures						\$7,706		\$7,706
J7	J6	900	80	\$457		\$36,547	\$28,000	\$8,547
J6	J5	1,050	140	\$567		\$79,369	\$49,000	\$30,369
J5	J4	1,050	60	\$567		\$34,015	\$21,000	\$13,015
J4	J3	1,200	100	\$648		\$64,838	\$35,000	\$29,838

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
J3	J2	1,350	70	\$826		\$57,793	\$24,500	\$33,293
J2	J1	1,500	70	\$980		\$68,581	\$24,500	\$44,081
J1	J0	1,500	60	\$980		\$58,783	\$21,000	\$37,783
Structures						\$13,210		\$13,210
Sub Totals						\$3,607,628		\$2,604,878
Add 15% Contingencies								\$390,732
Sub Total								\$2,995,610

Land Acquisition

Item	Area sqm	Unit cost	Cost
Cabramatta Creek (Kiora Ct to Camden Valley Way)	14,000	\$10	\$140,000
Swale (Cabramatta Creek to Cowpasture Rd)	36,768	\$10	\$367,680
Swale (Cabramatta Creek to Horningsea Pk)	3,200	\$10	\$32,000
Sub Total	53,968		\$539,680

No. of Lots in Catchment: 2,400

Contributing Area



Catchment Area Cowpasture Road West

Cost of Facilities Works

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/Credits
CW 1.1	CW 1.0	900	60	\$457		\$27,410	\$21,000	\$6,410
CW 1.2	CW 1.1	900	60	\$457		\$27,410	\$21,000	\$6,410
Structures						\$4,000		\$4,000
CW 2.1	CW 2.0	1,050	100	\$567		\$56,692	\$35,000	\$21,692
Structures						\$4,000		\$4,000
CW 3.1	CW 3.0	1,050	70	\$567		\$39,684	\$24,500	\$15,184
CW 3.2	CW 3.1	900	70	\$457		\$31,979	\$24,500	\$7,479
Structures						\$5,504		\$5,504
Main Channel								
Excavation						\$217,961		\$217,961
Surface Treatment						\$110,081		\$110,081
Low Flow Pipes						\$192,642		\$192,642
Secondary (Northern) Channel								
Excavation						\$28,621		\$28,621
Surface Treatment						\$23,117		\$23,117
Low Flow Pipes						\$82,561		\$82,561
Sub Totals						\$851,663		\$725,663
All 15% Contingencies								\$127,749
Total								\$853,413
Land Acquisition								
Item						Area sqm	Unit cost	Cost
Swale (Basin 10 to Open Space Corridor)						34,282	\$10	\$342,820

No. of Lots in Catchment: 1,600

Contributing Area



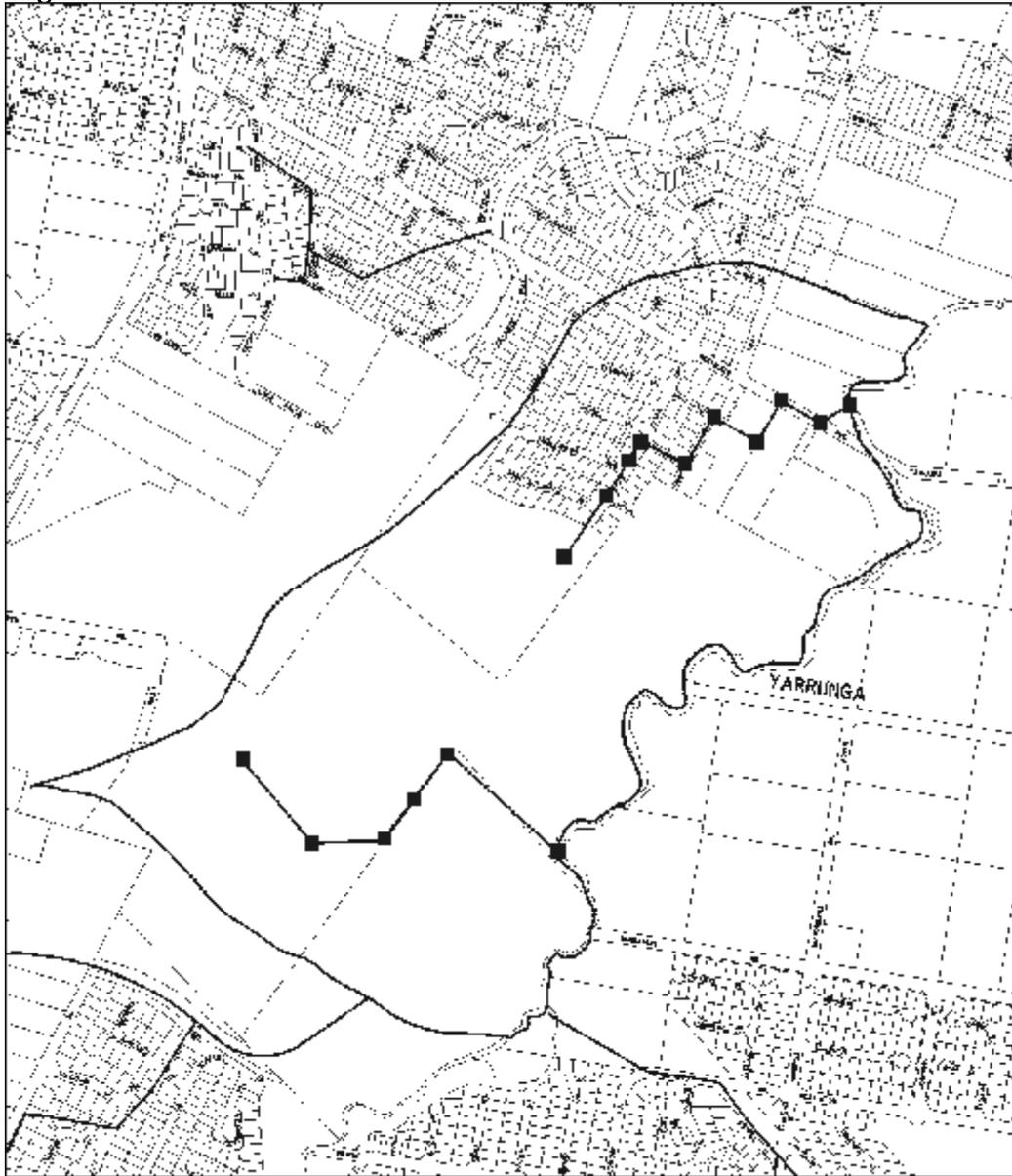
Catchment Area Nineteenth Avenue East

Cost of Facilities Works

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
G9	G8	900	110	\$457		\$50,252	\$38,500	\$11,752
G8	G7	1,050	80	\$567		\$45,353	\$28,000	\$17,353
G7	G6	1,050	40	\$567		\$22,677	\$14,000	\$8,677
G6	G5	1,200	60	\$648		\$38,903	\$21,000	\$17,903
G5	G4	2x900	90	\$892		\$80,249	\$31,500	\$48,749
G4	G3	2x1050	80	\$1,112		\$88,946	\$28,000	\$60,946
G3	G2	2.4x0.9 RCBC	70	\$1,593		\$111,540	\$24,500	\$87,040
G2	G1	3.3x0.9 RCBC	90	\$2,023		\$182,047		\$182,047
G1	G0	3.3x0.9 RCBC	55	\$2,023		\$111,251		\$111,251
Pits and Headwalls						\$27,520		\$27,520
L6	L5	900	170	\$457		\$77,662	\$59,500	\$18,162
L5	L4	1,050	150	\$567		\$85,038	\$52,500	\$32,538
L4	L3	1,200	80	\$648		\$51,870	\$28,000	\$23,870
L3	L2	1,500	80	\$980		\$78,378	\$28,000	\$50,378
L2	L0	1,650	290	\$1,134		\$328,813	\$101,500	\$227,313
Pits and Headwalls						\$22,016		\$22,016
Minor GPT						\$111,733		\$111,733
Sub Totals						\$1,514,248		\$1,059,248
Add 15% Contingencies								\$158,887
Sub Total						\$1,218,135		\$1,212,991
Land Acquisition								
Item						Area sqm	Unit cost	Cost
Cabramatta Creek (Kiora Ct to Lot 53 DP 2475)						4,000	\$10	\$40,000

No. of Lots in Catchment: 855

Contributing Area



Catchment Area Nineteenth Avenue West

Cost of Facilities

Works

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
E6	E5	1,050	120	\$567		\$68,030	\$42,000	\$26,030
E5	E4	1,050	60	\$567		\$34,015	\$21,000	\$13,015
E4.2	E4.1	900	80	\$457		\$36,547	\$28,000	\$8,547
E4.1	E4	1,050	100	\$567		\$56,692	\$35,000	\$21,692
E4	E3	2X1200	90	\$1,276		\$114,826	\$31,500	\$83,326
E3	E2	2X1200	100	\$1,276		\$127,584	\$35,000	\$92,584
E2	E1	3X1050	80	\$1,651		\$132,098	\$28,000	\$104,098
E1	E0	3X1050	30	\$1,651		\$49,537	\$10,500	\$39,037
Pits & Headwall						\$28,621		\$28,621
8 Minor Gross Pollutant Traps						\$89,386		\$89,386
2 Bridges / Culverts 14m long 18m wide						\$603,356		\$603,356
Sub Totals						\$1,340,691		\$1,109,691
All 15% Contingencies								\$166,454
Total								\$1,276,145

Land Acquisition

Item	Area sqm	Unit cost	Cost
Swale (Cowpasture Road to Cabramatta Creek)	42,680	\$10	\$426,800
Cabramatta Creek (Lot 35 DP 2475 to Twentieth Ave)	4,000	\$10	\$40,000
Total	46,680		\$466,800

No. of Lots in Catchment: 909

Contributing Area



Catchment Area Hoxton Park Road West

Cost of Facilities Works

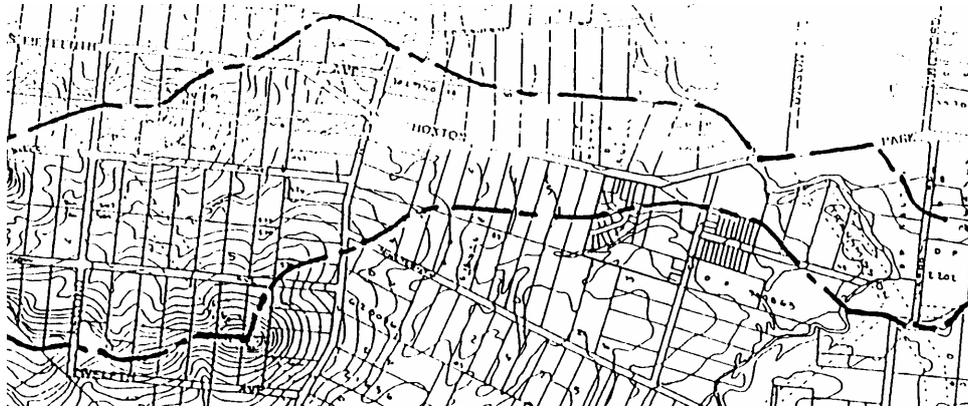
From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
A1	A0	900	70	\$457		\$29,050	\$24,500	\$4,550
Channel-Second Ave and Cowpasture Road								
Channel						\$262,170		\$262,170
Low flow pipe						\$173,185		\$173,185
Culvert at 2nd Ave						\$69,274		\$69,274
Culvert at Muller Ave						\$78,213		\$78,213
Culvert under access road in deferred area						\$134,079		\$134,079
Channel - D/S from Cowpasture Road						\$240,225		\$240,225
Low flow pipe						\$147,487		\$147,487
Sub Totals						\$1,130,420		\$1,109,183
Add 15 % Contingencies								\$166,377
Total								\$1,275,560

Land Acquisition

Item	Area sqm	Unit cost	Cost
Swale (Second Ave to Cowpasture Road)	18,100	\$10	\$181,000
Swale (Cowpasture Road to Hoxton Park Road)	1,714	\$10	\$17,140
Swale (Hoxton Park Road to Hinchinbrook Creek)	19,600	\$10	\$196,000
Hinchinbrook Creek (Lot 17 DP 2473 to Hoxton Park Road)	2,400	\$10	\$24,000
Total	41,814		\$418,140

No. of Lots in Catchment: 1,640

Contributing Area

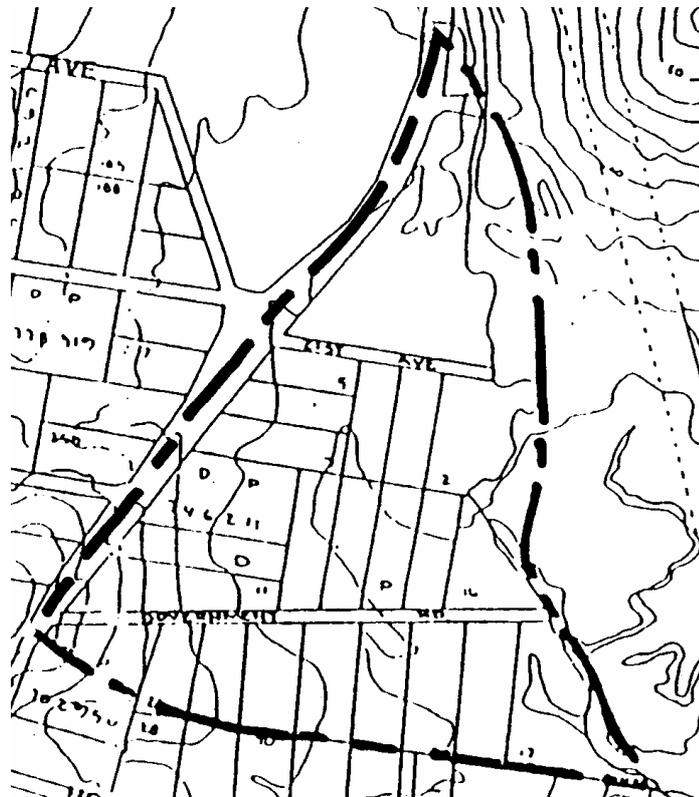


Catchment Area Twenty First Avenue

Contribution Rate

By comparison with other parts of Council's Release Area, a preliminary estimate of the Local Drainage Catchment Area contribution rate is \$1,679 per lot. When detailed drainage plans are prepared for this area, Council will review this contribution rate.

Contributing Area



Wilson Road West Catchment

Cost of Facilities

The estimated cost of land and capital works is \$106,024 (three minor gross pollution traps at pipe inlets to Hinchinbrook Creek invert plus 275 m of drainage swale from transmission line to Hinchinbrook Creek).

This area forms the lower portion of a larger local catchment, which has previously been developed. The upper portion of the catchment was included in the Drainage Works Contribution Catchment for Hinchinbrook / Green Valley (South West) in the Hoxton Park Stage 1 Release Areas. That contribution catchment included the larger pipes and swales up to the contribution area limit as well as detention basin works. The lower portion of the catchment was not included in the contributions to those works.

Due to the two stage development (and contribution collection and expenditure process) of this local catchment it is inappropriate to now retrospectively charge the lower portion of the catchments for the works in the Stage 1 Release Areas. This effectively means that a substantially reduced section 94 contribution for the local catchment will be collected within this contribution area.

It should be noted that most of this local catchment is flood affected. The precise determination of this flood limit would be subject to detailed ground survey and hydraulic evaluation (of the natural ground surface).

Hoxton Park Road and Cowpasture Road have been included in the contribution scheme for District Transport Facilities. These works include some new bridge works and lead in and lead out channel sections only.

In recognition that this contribution area:

- § did not contribute to the large pipe/swale and basin works in the upper local catchment area it forms part of;
- § is affected by a substantially reduced Q100 flow in Hinchinbrook Creek due to the presence of major basins in Precinct 2 of the Hoxton Park Stage 2 Release Area; and
- § is only marginally affected by through drainage from the Stage 1 Release Area development.

It is proposed that this area fully bare the cost of any flood mitigation works required to:

- § clearly demarcate and reduce the area of potential flood hazard adjacent to its development;
- § release flood prone land from the flood extents for development.

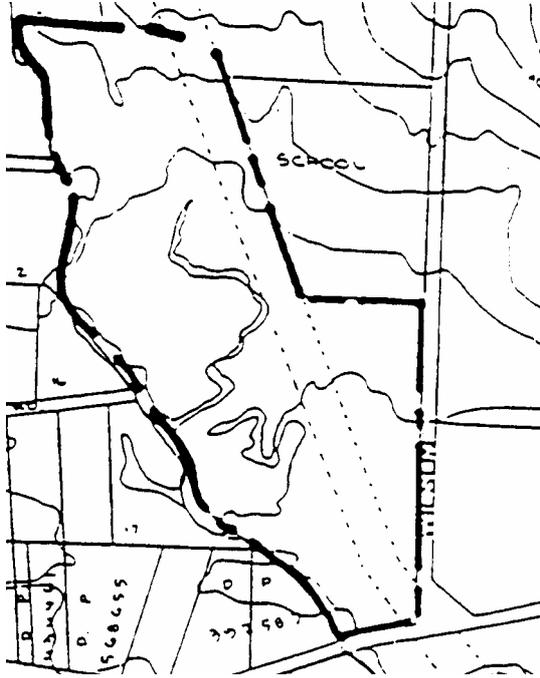
To develop this area will likely require a scheme of channelisation/land fill which will reduce the extent of flooding. Such a scheme must be sure to not adversely affect any other properties not incorporated in the scheme, by exacerbating the flood affectation of those properties.

It is anticipated that an auxiliary swale capacity (formed by excavation, adjacent filling or a combination of both) would need to be provided in parallel to the existing natural Hinchinbrook Creek line to provide a total flow capacity of Q100 AEP.

The decision to implement such a scheme remains with the flood affected landowners. The decision would likely be dominated by the evaluation of costs to benefits for the landowners.

No. of Lots: 192

Contributing Area



Catchment Area Whitford Road South

Cost of Facilities Works

From	To	Pipe Diameter	Length (m)	Rate (\$/m)	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
1.07	1.08	1,050	70	\$567		\$39,684	\$24,500	\$15,184
1.15	1.14	1,200	30	\$648		\$19,451	\$10,500	\$8,951
1.14	1.13	1,200	90	\$648		\$58,354	\$31,500	\$26,854
1.13	1.12	1,350	35	\$826		\$28,896	\$12,250	\$16,646
1.12	1.11	1,500	45	\$980		\$44,088	\$15,750	\$28,338
1.11	1.1	1,650	35	\$1,134		\$39,684	\$12,250	\$27,434
1.1	1.09	1,650	80	\$1,134		\$90,707	\$28,000	\$62,707
1.09	1.08	1,650	115	\$1,134		\$130,391	\$40,250	\$90,141
1.08	W. RD				Swale	\$41,666		\$41,666
W.RD	UNDER 2.7x1.2 RCBC					\$28,360		\$28,360
W.RD	H.CK				Swale	\$11,008		\$11,008
Sub Total						\$532,290		\$357,290
Add 15% Contingencies								\$53,593
Sub Total								\$410,883

Land Acquisition

Item	Area sqm	Unit cost	Cost
Wilson Road to Hinchinbrook Creek	400	\$10	\$4,000

No. of Lots in Catchment: 357

Contributing Area



Catchment 1F

Cost of Facilities

As the contribution for the Major Drainage Basins has been apportioned over both the Stage 2 Residential Release Areas and the Prestons Industrial Release Area it has been necessary to convert the residential component to equivalent industrial hectares. Refer to Drainage in Section 11. Prestons Industrial Area for details on costs.

Area of catchment equals 108.9 hectares including 86.5 hectares of industrial area and 22.4 net residential hectares.

Convert residential area to equivalent industrial:

22.40 ha of residential area by

(.65/.95)relative run off coefficients yields

15.33 ha of equivalent industrial area

Total equivalent industrial hectares:

86.50 ha of industrial area (86%) plus

15.33 ha of equivalent industrial area (14%) equals

101.83 ha total equivalent industrial area

Total		\$4,236,844
Catchment 1F: Residential Component	14%	\$608,028
Catchment 1F: Industrial Component	86%	\$3,628,816

10.6 Streetscape

Street Tree Planting

Nexus

For many years, a requirement of subdivision has been the planting of an advanced tree on the public footpath in front of each residential allotment and three trees on corner lots. Experience has shown this to be impractical, as the newly planted tree rarely survives the period from subdivision through to dwelling occupancy. This is due to a number of factors including service connections, delivery of building materials and lack of watering.

In recent years Council has collected a monetary contribution with which it has planted and maintained trees on behalf of the developer. In practice, the trees are planted by Council in front of occupied dwellings only, to ensure a higher survival rate.

It is clear that the community is demanding a better quality of tree planting provision and consequently it is proposed to plant super-advanced trees (2 - 3 m high) to provide a more immediate impact within residential areas.

Given Council's commitment to this strategy and the community expectations, which flow from this, it is both appropriate and reasonable for new development to achieve the same level of tree planting. This is best achieved via Section 94 contributions, as Council controls quality, species and maintenance.

Cost of Facilities

The contribution rate has been set after taking into account the above factors and operational

experience. The contribution represents the purchase cost and labour costs involved in planting each tree or shrub and water maintenance to establishment.

Cost per tree = \$110

Streetscape in Hoxton Park, Carnes Hill and Prestons

Nexus

Council is committed to ensuring that the urban release areas are developed to the best standard possible. Part of this involves ensuring an attractive landscape setting.

This involves not only the establishment of parkland but also development of the Streetscape. The major roads around and within residential areas are the most visually prominent in that most residents and visitors travel them each day either as drivers, passengers or pedestrians.

Landscaping will be carried out adjacent to the arterial roads on land to be dedicated to Council for landscaping, not on the public road but as part of the visual road reserve. The responsibility for the construction of arterial roads rests with the *Roads and Traffic Authority*.

Landscaping will similarly be carried out on along sub-arterial roads controlled by the Council. Landscaping on other streets will be carried out in conjunction with the construction of the streets. Much of the landscaping will be carried out in conjunction with traffic facilities within the roadway designed to regulate traffic speed.

Cost of Facilities

Arterial / Sub-Arterial Roads

Item	Length m	Width m	Area sqm	Cost / sqm	Land cost / sqm	Cost of Land	Cost of Works
Hoxton Park Road	1,290	4.8	6,192	\$33	\$85	\$526,320	\$204,487
Cowpasture Road (eastern)	1,670	4.8	8,016	\$33	\$85	\$681,360	\$264,724
Cowpasture Road (western)	845	6	5,070	\$33	\$95	\$481,650	\$167,434
Cowpasture Road (western)	1,295	4.8	6,216	\$33	\$95	\$590,520	\$205,280
Kurrajong Road Extension	1,200	3	3,600	\$33	\$75	\$270,000	\$118,888
Fifteenth Avenue	880	4.8	4,224	\$33	\$95	\$401,280	\$139,495
Camden Valley Way	220	6	1,320	\$33	\$85	\$112,200	\$43,592
Camden Valley Way	620	4.8	2,976	\$33	\$85	\$252,960	\$98,281
Camden Valley Way	305	4.8	1,464	\$33	\$85	\$124,440	\$48,348
Camden Valley Way	2,655	4.8	12,744	\$33	\$85	\$1,083,240	\$420,863
Benera Road	2,720	3	8,160	\$33	\$85	\$693,600	\$269,479
Beech Road	2,520	3	7,560	\$33	\$85	\$642,600	\$249,664
Kurrajong Road	2,160	3	6,480	\$33	\$75	\$486,000	\$213,998
Sub Totals			74,022			\$6,346,170	\$2,444,531
Plus 5% contingency sum							\$122,227
Sub Total							\$2,566,758

Trunk Collector Streets

Item	Length m	Width m	Area sqm	Cost / sqm	Land cost / sqm	Cost of Land	Cost of Works
Hoxton Park							
Mulched Garden Beds	120	3	360	\$39	Various	\$30,600	\$13,870
Signage x 4							\$22,016
Carnes Hill							
Mulched Garden Beds	3,020	3	9,060	\$39	Various	\$804,900	\$349,068
Signage x 16							\$88,065
Prestons							
Mulched Garden Beds	2,000	3	6,000	\$39	Various	\$561,000	\$231,171
Signage x 22							\$121,089
Sub Totals						\$1,396,500	\$825,280
Plus 5% contingency sum							\$41,264
Sub Total							\$866,543

Collector Streets

Item	Cost of Item	No of items	Cost of Works
Hoxton Park			
Tree Islands	\$462	29	\$13,408
Centre Islands	\$1,651	17	\$28,071
Carnes Hill			
Tree Islands	\$462	66	\$30,515
Centre Islands	\$1,651	35	\$57,793
Prestons			
Tree Islands	\$462	59	\$27,278
Centre Islands	\$1,651	33	\$54,490
Sub Total			\$211,554
Plus 5% contingency sum			\$10,578
Sub Total			\$222,132

Additional Works

Item	Cost of Item	No of items	Cost of Works
Hoxton Park			
100 L street trees along sub-arterial roads	\$330	100	\$33,024
100 L street trees along trunk collectors	\$330	100	\$33,024
Artwork on roundabouts	\$11,008	2	\$22,016
Carnes Hill			
100 L street trees along sub-arterial roads	\$330	400	\$132,098
100 L street trees along trunk collectors	\$330	700	\$231,171
Artwork on roundabouts	\$11,008	11	\$121,089
Prestons			
100 L street trees along sub-arterial roads			
100 L street trees along trunk collectors	\$330	1,100	\$363,268
Artwork on roundabouts	\$11,008	9	\$99,073
Sub Total			\$1,034,764
Plus 5% contingency sum			\$51,738
Sub Total			\$1,086,502
		Total Land	Total Works
		\$7,742,670	\$4,741,936

No. of Lots: 10,910

Contributing Area: All of Hoxton Park, Carnes Hill and Prestons

10.7 Professional Fees

Nexus

The cost of independent land valuations and legal documents are clearly part of the costs of administering this plan. In relation to land acquisition, Council will be required to acquire land for car parking and roads and incur the associated conveyancing costs.

It is recognised that the costs associated with land acquisition could be added to the cost of individual facilities; however the cost of professional fees attributable to any one facility is completely unpredictable. It is therefore more appropriate that a pool of contribution funds is available to meet these costs as they arise.

The contribution rate is based on the following costs.

- § the cost of independent valuations is anticipated to vary from \$500 - \$2,000 depending on individual sites and whether the valuation is general or specific;
- § valuations will be required at least annually for reviewing this contribution plan, and more frequently depending on movements in the property market;
- § stamp duty and estimated costs of vendor's solicitor in land acquisition.

10.8 Administration Costs

Nexus

There are significant costs associated with administering funds of this magnitude. Both the plan preparation/review and implementation aspects of Section 94 contributions are administered staff within Council. A core team of employees are engaged to provide support in co-ordinating such a process, as well as prepare status reports, review and relevant data, liaise with Council staff and external agencies.

In accordance with the directive of the *Department of Planning*, the administration costs are comprised of those expenses relative only to those personnel directly responsible for the formulation and/or administration of a Section 94 Contributions Plan. The cost per lot per year has been averaged across all of the Contribution Plan areas.

10.9 Contribution Formulae

Community and Recreation Facilities

Conventional Lot Residential Subdivision, Small Lot Subdivision, Semi-detached dwellings, Multi dwelling housing and Residential Flat Buildings

$$\text{Contribution Rate = } \frac{\text{C}}{\text{N}} \times \frac{\text{O R}}{3.7}$$

(per dwelling / lot)

where C = Cost of capital works or land identified for the catchment area

N = No. of equivalent lots / dwellings in the catchment area

O R = Estimated occupancy rate for lot size or dwelling type

$$\text{Area of land to be dedicated = } \frac{\text{A}}{\text{N}} \times \frac{\text{O R}}{3.7}$$

(per dwelling / lot)

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots / dwellings in the catchment area

O R = Estimated occupancy rate for lot size or dwelling type

Dwelling Type	Occupancy Rate per lot or dwelling
Residential Subdivision	
Lots 450 sqm or larger	3.7
Lots smaller than 450 sqm	3.3
Semi-detached dwellings, Multi dwelling housing and residential flat buildings (where permitted)	
3 or more bedrooms	3.3
2 bedrooms	2.3
1 bedroom	1.8

Aged and Disabled Persons Housing

$$\text{Contribution for total development} = \frac{\text{Conventional Lot Contribution} \times R}{3.7}$$

where 3.7 = Estimated occupancy rate for a conventional lot

R = Number of residents

Transport facilities

Residential Development and Non Residential Development

$$\text{Contribution Rate (per dwelling/lot/non residential development)} = \frac{C}{N} \times \frac{V}{6.7}$$

where C = Cost of capital works and land identified for the catchment area

N = No. of equivalent lots in the catchment area

V = Vehicle trips per day for lot size or dwelling type

Vehicle trips per day for non residential development. Refer to Roads & Traffic Authority Guidelines for vehicle trip generation.

Variation of this may be considered for non residential development, which is of a minor local nature.

$$\text{Area of land to be dedicated (per dwelling/lot/non residential development)} = \frac{A}{N} \times \frac{V}{6.7}$$

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots in the catchment area

V = Vehicle trips per day for lot size or dwelling type

Vehicle trips per day for non residential development. Refer to Roads & Traffic Authority Guidelines for vehicle trip generation.

Variation of this may be considered for non residential development, which is of a minor local nature.

Dwelling or Lot Size	Vehicle Trips per day
Residential Subdivision	
Lots 450 sqm or larger	6.7
Lots smaller than 450 sqm	6.0
Semi-detached dwellings, Multi dwelling housing and residential flat buildings (where permitted)	
3 or more bedrooms	6.0
2 bedrooms	4.0
1 bedroom	3.3
Aged and Disabled Persons Housing (total development)	Total vehicle trips per day

Drainage Facilities

Conventional Lot Residential Subdivision

$$\text{Contribution Rate (per conventional lot)} = \frac{C}{N}$$

where C = Cost of capital works or land identified for the catchment area

N = No. of equivalent lots / dwellings in the catchment area

$$\text{Area of land to be dedicated (per conventional lot)} = \frac{A}{N}$$

where A = Total area to be acquired

N = No. of equivalent lots / dwellings in the catchment area

Small Lot Subdivision, Semi-detached dwellings, Multi dwelling housing, Residential Flat Buildings, Aged and Disabled Persons Housing and Non Residential Development

$$\text{Contribution (total development)} = \frac{\text{Conventional Lot Contribution}}{0.65} \times C R \times \frac{\text{Site Area}}{450}$$

Where C R = runoff coefficient for the specific development type as specified in the following table

$$\text{Area of land to be dedicated (total development)} = \frac{A}{N} \times \frac{C R}{0.65} \times \frac{\text{Site Area}}{450}$$

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots / dwellings in the catchment area

C R = runoff coefficient for the specific development type as specified in the following table

The relative impacts of different types of land development on any drainage system can be estimated by comparing the peak discharge rates of runoff that the different types of development would produce. The rational formula estimates the peak discharge rates by use of runoff coefficients that are directly related to the proportion of a site that is impervious to rainfall infiltration.

The following table gives the relative impacts of alternate types of land development on runoff generation.

Land use	Co efficient of Runoff
Conventional residential lot	0.65
School	0.65
Shopping Centre & other non-residential	0.95
Town houses	0.80
Semi-detached dwellings, villa houses, small lot subdivision and Aged and Disabled Persons Housing	0.75

Street Tree Planting

Contribution rate = \$110 per lot and/or dwelling in residential areas

Streetscape

The following formulae are use to calculate contributions.

Residential Development

$$\text{Contribution Rate = } \frac{\text{C}}{\text{N}} \times \frac{\text{O R}}{3.7}$$

(per dwelling / lot)

where C = Cost of capital works and / or land identified for the catchment area

N = No. of equivalent lots / dwellings in the catchment area

O R = Estimated occupancy rate for lot size or dwelling type

Lot Size or Dwelling Type	Occupancy Rate
Residential Subdivision	
Lots 450 sqm or larger	3.7
Lots smaller than 450 sqm	3.3
Semi-detached dwellings, Multi dwelling housing and Residential flat buildings (where permitted)	
3 or more bedrooms	3.3
2 bedrooms	2.3
1 bedroom	1.8

Aged and Disabled Persons Housing

$$\text{Contribution (for total development) = } \frac{\text{Conventional Lot Contribution} \times \text{R}}{3.7}$$

where 3.7 = assumed occupancy rate for a conventional lot

R = Number of residents

Other Development

$$\text{Contribution (Land or Embellishment) for total development = } \frac{\text{Conventional Lot Contribution} \times \text{C}}{450}$$

where C = Area of site area of development

450 = Minimum area of standard lot

$$\text{Area of land to be dedicated = } \frac{\text{A}}{\text{N}} \times \frac{\text{O R}}{3.7}$$

(per dwelling / lot)

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots / dwellings in the catchment area

O R = Estimated occupancy rate for lot size or dwelling type

Professional Fees

Residential Development

$$\text{Contribution Rate} = \frac{\text{PF}}{\text{N}}$$

(per dwelling/ lot)

Where PF = total estimated cost of professional fees

N = No. of equivalent lots / dwellings in the catchment area

All other development

$$\text{Contribution Rate} = \frac{\text{Residential Contribution} \times \text{A}}{450}$$

Where A = Site area

450 = area of conventional lot

Administration Fees

All Development

The cost of administering contributions plans over the coming years has been estimated at 1.2% of the value of contributions.

10.10 Staging of Facilities

Most Community Facilities will be built by Council as the population threshold for their construction is usually much larger than individual developments. These will be provided as funds become available and as land can be acquired from existing owners.

Some small parks and recreation facilities are likely to be provided as works in kind by developers and as such are provided at the beginning of a development. Larger recreation facilities such as playing fields will be built by Council as the population threshold for their construction is usually much larger than individual developments. These will be provided as funds become available and as land is able to be acquired from existing owners.

11. Prestons Industrial Release Area

(Yarrunga Release Area Amendment No 7.)

11.1 Development Trends

A substantial part of the Prestons Industrial Area was rezoned in the early 1990's. Development has subsequently taken place over a substantial portion of this area. Since this time the Western Sydney Orbital Freeway (M7) has been constructed which cut through this area resulting in some changes to the drainage and road network. Hoxton Park Road was also upgraded by the Roads and Traffic Authority with the provision of a service road along the southern side of Hoxton Park Road. This included drainage works in conjunction with road works.

Subsequently the area west of the Prestons Industrial Area was rezoned for industrial development. This took place after the M7 was constructed. This has necessitated changes to the range of infrastructure in the portion of the Prestons Industrial Area rezoned in the early 1990's. The planning of infrastructure in the area to the west of the M7 has taken into account the presence of the M7 and the works carried out in its construction.

11.2 Transport

Nexus

The development of the Prestons area for industrial purposes will generate a significant volume of heavy traffic. The impact of this traffic generation may be considered in terms of road network traffic capacity and road pavement bearing capacity. With regard to the first consideration, the required contribution towards the District Transport Facilities provides for the appropriate contribution from a traffic management point of view.

There are, however, a number of existing local roads that will be subjected to heavy traffic loading that they were never designed to bear. The central pavement of these roads will require reconstruction to a standard suitable to accommodate the increased volume of heavy vehicular traffic. Consequently a contribution for the upgrade of the central pavement of these existing sub-standard pavements is considered appropriate.

It may not always be appropriate for Council to require the developer to wholly reconstruct the central pavement of the roads adjoining the subject property at the time of development. It is a component only, representing the difference between a normal standard road and the upgrading required for industrial usage, for which Council levies Section 94 Contributions.

Council considers that the most efficient and equitable way of providing for Local Transport Facilities in an area characterised by fragmented ownership is via Section 94 contributions. This approach does not preclude Council considering a proposal for works-in-kind by a group of developers or owners.

The areas west of the M7 were rural roads prior to any industrial development taking place. Any new development of land in this area will be required as a condition of consent to reconstruct the half of the road that immediately fronts the land. This work will not be funded by Section 94 Contributions.

To allow several sites to be developed in the Yarrunga Release Area, several new roads will be constructed.

To adequately handle the increased traffic on the site the intersection of Bernera Road / Yarrunga Street will be upgraded. This upgrade will include the installation of traffic signals. The cost of these works will be proportioned across the West of M7 Catchment.

East of M7 Catchment Area

This is largely the area that was rezoned in the early 1990's. The scope of facilities and the developable area has changed following the construction of the M7.

Cost of Facilities

Item No.	Description	Unit Cost	Length	Works
1	Ash Road - half central pavement 3m width	\$363	700	\$253,792
2	Jedda Road - half central pavement 3m (from Ash Road to Wonga Road)	\$363	800	\$290,049
3	Jedda Road - central pavement 6m width (from Bernera Road to Ash Road)	\$641	810	\$519,104
Total				\$1,062,945

Area in ha: 123

Contributing Area



West of M7 Catchment Area

New industrial development in this area will generate the need for the provision of traffic signals at Yarrunga Street and Bernera Road.

Some of the area east of Bernera Road was rezoned along with the area east of the M7 in the early 1990's. It would have had frontage to Ash Road and have been required to reconstruct the half road frontage to Ash Road as well as contribute to local transport facilities. This area was

cut off from Ash Road when the M7 was constructed. It was left land locked with no viable alternate road access. There is a need to provide access to Bernera Road by acquiring private land and constructing a road.

Some lots which have frontage to Kurrajong Road are required under the provisions of *Liverpool DCP 2008* to provide access other than to Kurrajong Road for industrial traffic. This is provided by new road construction off Bernera and Kookaburra Roads. There is also a need to provide pedestrian links across Cabramatta Creek to Hoxton Park.

Cost of Facilities

Item No.	Unit Cost	Length	Width	Area	Land	Works
Road A1 (off Bernera Road)	\$300	295	20	5,900	\$1,770,000	\$530,000
Pedestrian paths to creek crossings	\$100	350	2.5	875		\$87,500
Traffic Signals at Bernera Road and Yarrunga Street						\$200,000
Pedestrian crossing of Cabramatta Creek at Yarrowa Road						\$30,000
Pedestrian crossing of Cabramatta Creek at Illaroo Road						\$30,000
Pedestrian crossing of Hinchinbrook Creek at Twentieth Ave						\$30,000
Totals					\$1,770,000	\$907,500

Area in ha: 137.5 ha

Contributing Area



Road A2 East of Bernera Road Catchment Area (additional to West of M7)

This area was rezoned along with the area east of the M7 in the early 1990's. It would have had frontage to Ash Road and have been required to reconstruct the half road frontage to Ash Road as well as contribute to local transport facilities. This area was cut off from Ash Road when the M7 was constructed. It was left land locked with no viable alternate road access. There is a need to provide access to Bernera Road by acquiring private land and constructing a road. The cost of Road A1 is fully attributable to the catchment.

This area also contributes to the other facilities in the "West of M7" catchment.

Cost of Facilities

Item No.	Unit Cost	Length	Width	Area	Land	Works
Road A2 (north from Road A1)	\$300	141	20	2,820	\$846,000	\$280,000
Totals					\$846,000	\$280,000

Area in ha: 10.57 ha

Contributing Area



Road B East of Bernera Road Catchment Area (additional to West of M7)

This area having frontage to Kurrajong Road is required under the provisions of *Liverpool DCP 2008* to provide access other than to Kurrajong Road for industrial traffic. This is provided by Road B. There is a need to provide access to Bernera Road by acquiring private land and constructing a road. The cost of Road B is fully attributable to the catchment.

This area also contributes to the other facilities in the "West of M7" catchment.

Cost of Facilities

Item No.	Unit Cost	Length	Width	Area	Land	Works
Road B (east from Road A1)	\$300	375	20	7,500	\$2,250,000	\$720,000
Totals					\$2,250,000	\$720,000

Area in ha: 17.73 ha

Contributing Area



Road C West of Kookaburra Road Catchment Area (additional to West of M7)

This area having frontage to Kurrajong Road is required under the provisions of *Liverpool DCP 2008* to provide access other than to Kurrajong Road for industrial traffic. This is provided by Road C. There is a need to provide access to Kookaburra Road by acquiring private land and constructing a road. The cost of Road C is fully attributable to the catchment.

This area also contributes to the other facilities in the “West of M7” catchment.

If alternate road access is provided in a form acceptable to Council this contribution will not levied.

Cost of Facilities

Item No.	Unit Cost	Length	Width	Area	Land	Works
Road C (west from Kookaburra Road)	\$300	200	20	4,000	\$1,200,000	\$415,000
Totals					\$1,200,000	\$415,000

Area in ha: 2.33 ha

Contributing Area



Road D East of Kookaburra Road Catchment Area (additional to West of M7)

This area having frontage to Kurrajong Road is required under the provisions of *Liverpool DCP 2008* to provide access other than to Kurrajong Road for industrial traffic. This is provided by Road D. There is a need to provide access to Kookaburra Road by acquiring private land and constructing a road. The cost of Road D is fully attributable to the catchment.

This area also contributes to the other facilities in the “West of M7” catchment.

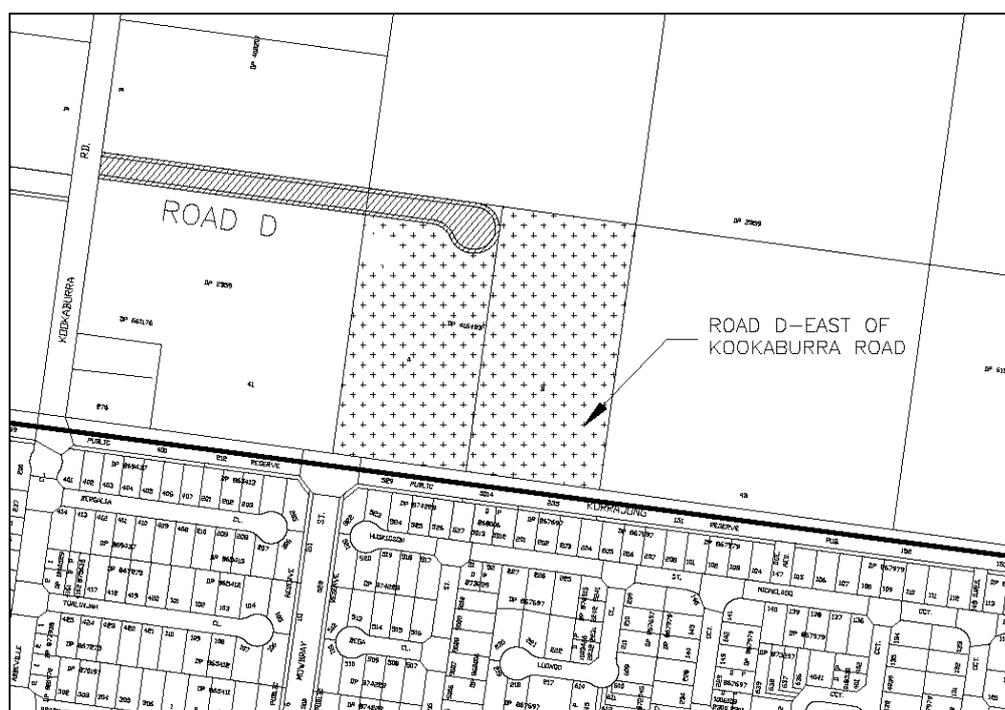
If alternate road access is provided in a form acceptable to Council this contribution will not levied.

Cost of Facilities

Item No.	Unit Cost	Length	Width	Area	Land	Works
Road D (east from Kookaburra Road)	\$300	320	20	6,400	\$1,920,000	\$545,000
Totals					\$1,920,000	\$545,000

Area in ha: 3.83 ha

Contributing Area



11.3 Drainage

Nexus

Drainage Easements

In order to achieve an economical local drainage system it is necessary to drain stormwater runoff through the lowest possible path. This path was in some cases required to traverse privately owned properties which creates the need for drainage easements or drainage reserve.

A drainage easement is known as the area of land dedicated to construct and maintain an enclosed drainage conduit (usually a pipe or box culvert). The drainage easement can serve a number of privately owned properties in which case it is described to be an “inter-allotment drainage easement”. The area of land required for inter-allotment drainage easement would be dedicated for that purpose and would belong to those properties benefiting from the drainage system within the easement. The owners the properties will be responsible for the maintenance and functioning of the drainage system.

In some cases it is proposed to have an easement in favour of Council to drain water from properties and streets. This is where a drainage reserve is not considered to be practical. The cost of the construction of the drainage works will be funded by contributions. Affected lands will be required as a condition of consent to dedicate an easement in favour of Council to drain upstream land.

Drainage Reserves

A drainage reserve is the area of land dedicated to construct and maintain an open drainage conduit (usually a formed earth or concrete channel). The drainage reserve can serve a number of privately owned properties, public land (such as road drainage, parks, etc.) or a combination of these.

The area of land required for drainage reserve will be required to be dedicated to Council for that purpose and Council will be responsible for the maintenance and functioning of the drainage system. The area of land dedicated to drainage reserve has been included in the contribution rate as “cost of land acquisition” for each local drainage catchment.

Minimum size pipes

The Local Trunk Drainage is costed on the basis of drainage infrastructure requirements of the local catchment. Each of the local catchments is costed down to 900 mm dia pipe only. The individual developers are required to directly bear the cost of all pipelines up to 825 mm diameter within or past their own land. The cost difference between any larger pipe size or drainage swale/channel is funded by Section 94 contributions.

Where it is anticipated that the developer will carry out the works as part of a development, the cost of supply, lay and backfilling of 825 mm diameter is deducted from the cost of works to get the contribution. These works, when carried out by the developer, means that the developer will receive the credits of the difference between the total cost of works and the cost of 825 mm diameter pipe (to be borne by the developer). Should the developer default from undertaking the works identified in this plan as the developer's responsibility, then the developer shall pay for the cost of 825 mm diameter pipe for the reach of drainage works for which they are responsible to provide as part of their development.

Where the work is costed in full without deducting the cost of 825 mm diameter, it is anticipated that Council will undertake these works from contributions. Where a developer undertakes these works as part of their development, they shall receive full credits for the work as shown in this plan.

Gross pollutant traps

Gross pollutant traps have also been costed as source control for litter at the end of each network.

Sub Catchments

Within the Prestons Industrial Area contributions for local trunk drainage will be levied on the basis of a number of local sub catchments. There have been changes to the sub catchments as a result of the M7 as it cut across some sub catchments in the original drainage plan for Prestons Industrial Area.

The local catchments are as shown on the following sections.

Catchment 1D**Cost of Facilities
Works**

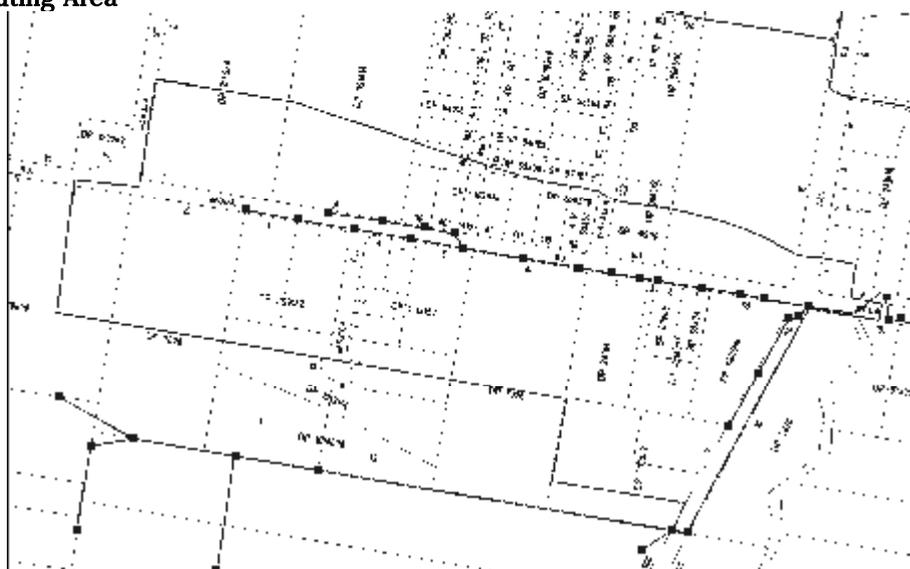
From	To	Pipe Diameter	Length (m)	Unit Cost	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/ Credits
1.18	1.17	900	70	\$525		\$36,749	\$24,500	\$12,249
1.17	1.16	1,050	70	\$651		\$45,605	\$24,500	\$21,105
1.16	1.14	1,200	142	\$745		\$105,805	\$49,700	\$56,105
1.14	1.13	1.5x1.2 RCBC	78	\$1,290		\$100,647	\$27,300	\$73,347
1.13	1.10	1.8x1.2 RCBC	140	\$1,509		\$211,199	\$49,000	\$162,199
1.10	1.7	2.1x1.2 RCBC	118	\$1,603		\$189,206		\$189,206
1.7	1.6	3.0x1.2 RCBC	30	\$2,334		\$70,020		\$70,020
1.6	1.5	3.6x1.2 RCBC	42	\$3,065		\$128,712		\$128,712
1.5	1.1	4.2x1.2 RCBC	74	\$3,197		\$236,607		\$236,607
13.4	13.1	1,050	168	\$651		\$109,451	\$58,800	\$50,651
13.1	1.14	1,200	15	\$745		\$11,177	\$5,250	\$5,927
3.4	3.3	900	78	\$525		\$40,949	\$27,300	\$13,649
3.3	1.5	1,050	110	\$651		\$71,665	\$38,500	\$33,165
Structures						\$44,000		\$44,000
Jedda Road Culverts				\$1,012,192	19%	of catchment		\$189,331
Sub Total								\$1,286,272
Add 15% Contingencies								\$192,941
Total								\$1,479,213

Land

Item	Total Area	Proportion	Area sqm	Unit cost	Cost
Maxwells Creek	23,000	19%	of catchment 4,302	\$58	\$249,525
Total					\$249,525

Area in ha: 26 ha

Contributing Area



Catchment 1G

Cost of Facilities
Works

From	To	Pipe Diameter	Length	Unit Cost	Other	Cost of Works	Cost of 825 dia Pipe	Contribtn/Credits
14.13	14.11	1,050	110	\$659		\$72,494	\$38,500	\$33,994
14.11	14.9	1,200	128	\$754		\$96,477	\$44,800	\$51,677
14.9	14.8	1.2x1.2 RCBC	66	\$1,200		\$79,180	\$23,100	\$56,080
14.8	14.5	1.5x1.2 RCBC	140	\$1,305		\$182,738	\$49,000	\$133,738
14.5	14.1	1.8x1.2 RCBC	30	\$1,526		\$45,780	\$10,500	\$35,280
14.12	14.11	1,050	30	\$659		\$19,771	\$10,500	\$9,271
15.01	11.09	900	30	\$531		\$15,932	\$10,500	\$5,432
11.09	11.08	1,050	160	\$659		\$105,445	\$56,000	\$49,445
11.08	11.07	1,200	20	\$754		\$15,075	\$7,000	\$8,075
11.07	11.06	1,500	240	\$1,139		\$273,339	\$84,000	\$189,339
11.06	11.05	1,650	40	\$1,318		\$52,723	\$14,000	\$38,723
11.05	11.01		315		Channel	\$407,704		\$407,704
	11.01				Energy Dissipater	\$70,382		\$70,382
13.05	13.04	1,500	70	\$1,139		\$79,724	\$24,500	\$55,224
13.04	13.03	1,650	60	\$1,318		\$79,084	\$21,000	\$58,084
13.03	13.01	1,800	150	\$1,548		\$232,261	\$52,500	\$179,761
21.01	11.05	900	35	\$531		\$18,587	\$12,250	\$6,337
22.01	13.05	1,050	100	\$659		\$65,903	\$35,000	\$30,903

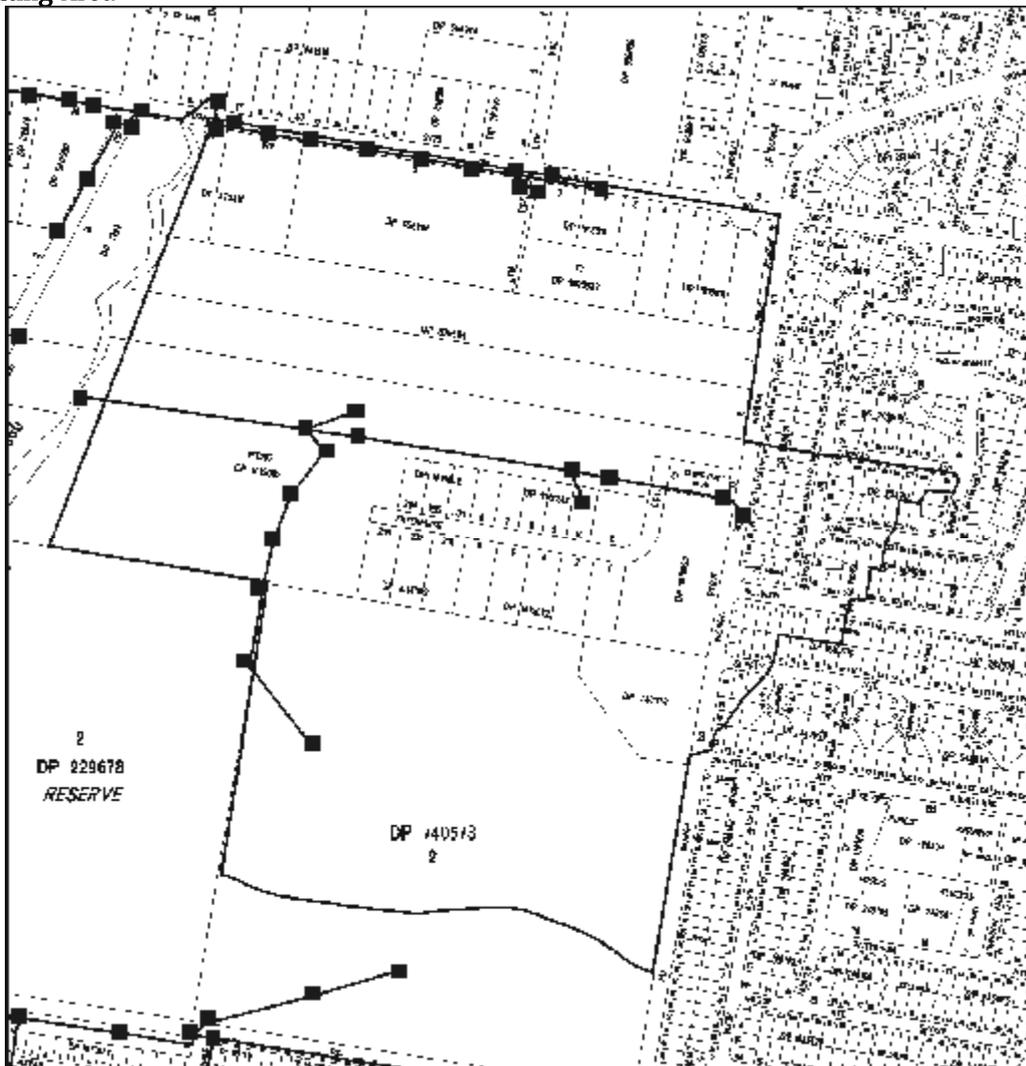
Structures			\$46,000		\$46,000
Jedda Road Culverts	\$1,012,192	41%	of catchment		\$415,072
Sub Total					\$1,880,520
Add 15% Contingencies					\$278,797
Total					\$2,162,598

Land

Item	Total Area	Proportion	Area sqm	Unit cost	Cost	
Channel 11.05 - 11.01			2,790	\$58	\$161,820	
Maxwells Creek	23,000	41%	of catchment	9,432	\$58	\$547,036
Total					\$708,856	

Area in ha: 57 ha

Contributing Area



West of M7 Catchment Area

Cost of Facilities
Works

Item	From	To	Conduit Size (mm)	Conduit Length (m)	Rate \$/m	Cost of Works	Rate of 825mm Dia Conduit	Cost of 825 Dia Conduit	Contributio n Credits
	(1)	(2)	(3)	(4)	(5)	(6)=(4)x(5)	(7)	(8)=(3)x(9)	(9)=(6)-(8)
Catchment A									
Pits						\$11,655	\$1,217	\$0	\$11,655
Headwalls						\$4,450	\$1,217	\$0	\$4,450
GPT						\$34,500	\$1,217	\$0	\$34,500
Outlet Treatment						\$44,000	\$1,217	\$0	\$44,000
Catchment B									
Box Section	B0	B2	-	190	\$2,966	\$563,540	\$1,217	\$231,230	\$332,310
Pipe	B2	B3	1350	130	\$1,911	\$248,393	\$1,217	\$158,210	\$90,183
	B8	B2	1050	40	\$1,911	\$248,393	\$1,217	\$48,680	\$199,713
Pipe	B3	B4	900	100	\$1,408	\$140,846	\$1,217	\$121,700	\$19,146
Pits						\$41,625	\$1,217	\$0	\$41,625
Headwalls						\$4,450	\$1,217	\$0	\$4,450
GPT						\$34,500	\$1,217	\$0	\$34,500
Outlet Treatment						\$70,000	\$1,217	\$0	\$70,000
Catchment C									
Pipe	C0	C1	1050	65	\$1,911	\$124,196	\$1,217	\$79,105	\$45,091
Pits						\$9,990	\$1,217	\$0	\$9,990
Headwalls						\$4,450	\$1,217	\$0	\$4,450
GPT						\$34,500	\$1,217	\$0	\$34,500
Outlet Treatment						\$50,000	\$1,217	\$0	\$50,000
Catchment D									
Pipe	D0	D1	1050	30	\$1,911	\$57,321	\$1,217	\$36,510	\$20,811
Pipe	D1	D2	900	152	\$1,408	\$214,085	\$1,217	\$184,984	\$29,101
Pits						\$11,655	\$1,217	\$0	\$11,655
Headwalls						\$4,450	\$1,217	\$0	\$4,450
GPT						\$0	\$1,217	\$0	\$0
Outlet Treatment						\$59,000	\$1,217	\$0	\$59,000
Catchment E									
Pipe	E0	E1	1200	99	\$2,018	\$199,744	\$1,217	\$120,483	\$79,261
Pipe	E1	E2	1050	200	\$1,911	\$382,143	\$1,217	\$243,400	\$138,743
Pits						\$24,975	\$1,217	\$0	\$24,975
Headwalls						\$4,450	\$1,217	\$0	\$4,450
GPT						\$34,500	\$1,217	\$0	\$34,500
Outlet Treatment						\$0	\$1,217	\$0	\$0
Catchment F									

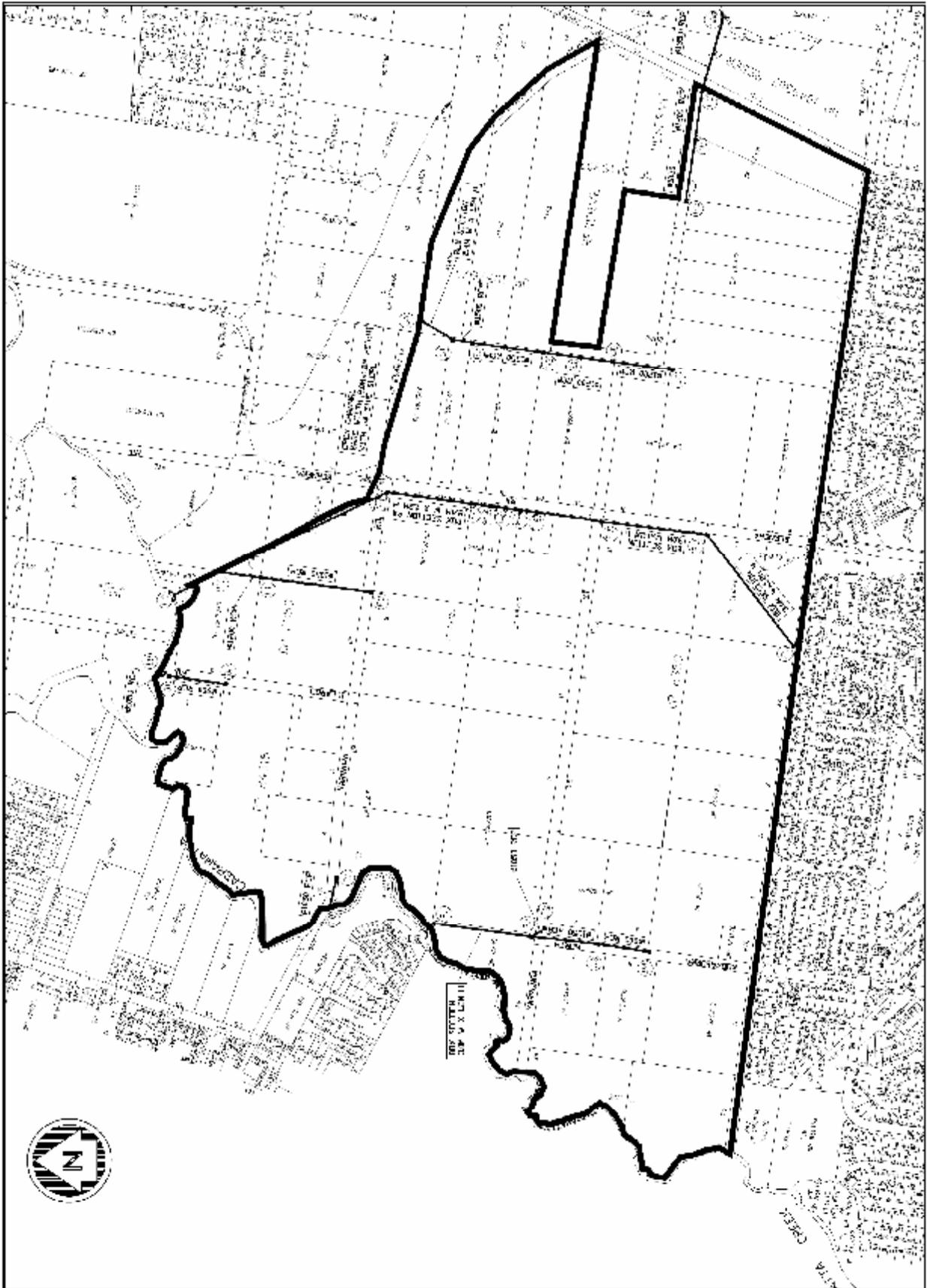
Item	From	To	Conduit Size (mm)	Conduit Length (m)	Rate \$/m	Cost of Works	Rate of 825mm Dia Conduit	Cost of 825 Dia Conduit	Contribution Credits
	(1)	(2)	(3)	(4)	(5)	(6)=(4)x(5)	(7)	(8)=(3)x(9)	(9)=(6)-(8)
Open Channel	F0	F1		475	\$1,548	\$735,356	\$1,217	\$578,075	\$157,281
Box Section	F1	F7	2.4x1.2 (2Nos)	425	\$4,084	\$1,735,765	\$1,217	\$517,225	\$1,218,540
Box Section	F7	F9	3.0x1.2	475	\$2,966	\$1,408,691	\$1,217	\$578,075	\$830,616
Pits						\$41,625	\$1,217	\$0	\$41,625
Headwalls						\$4,450	\$1,217	\$0	\$4,450
GPT						\$69,000	\$1,217	\$0	\$69,000
Outlet Treatment						\$75,000	\$1,217	\$0	\$75,000
Catchment G									
Open Channel	G00	G0		408	\$0	\$631,632	\$1,217	\$496,536	\$135,096
Box Section	G0	G1	2.4x1.5	30	\$2,600	\$1,245,579	\$1,217	\$36,510	\$1,209,069
	G1	G2	1500	70	\$2,720	\$726,340	\$1,217	\$85,190	\$641,150
Pipe	G2	G3	1350	150	\$2,380	\$726,340	\$1,217	\$182,550	\$543,790
Pipe	G3	G5	1200	200	\$2,018	\$726,340	\$1,217	\$243,400	\$482,940
Pits						\$39,960	\$1,217	\$0	\$39,960
Headwalls						\$4,450	\$1,217	\$0	\$4,450
GPT						\$34,500	\$1,217	\$0	\$34,500
Outlet Treatment						\$75,000	\$1,217	\$0	\$75,000
Catchment H									
Pipe	H00	H0	1200	176	\$2,018	\$355,100	\$1,217	\$214,192	\$140,908
Pipe	H00	H1	1050	95	\$1,911	\$181,518	\$1,217	\$115,615	\$65,903
Pipe	H1	H2	900	195	\$1,408	\$274,649	\$1,217	\$237,315	\$37,334
Pits						\$24,975	\$1,217	\$0	\$24,975
Headwalls						\$4,450	\$1,217	\$0	\$4,450
GPT						\$34,500	\$1,217	\$0	\$34,500
Outlet Treatment						\$59,000	\$1,217	\$0	\$59,000
Jedda Road Culverts						\$1,012,192	40% of catchment		\$407,790
Sub Total									\$7,774,836
Contingencies plus contract administration					8%				\$621,987
Design					4%				\$310,993
Total									\$8,707,816

Land

Item	From	To	Length	Width	Area sqm	Unit Cost	Cost
Cabramatta Creek	Kurrajong Road	Hinchinbrook Ck	2,230	10	22,300	\$23	\$512,900
Cabramatta Creek	Hinchinbrook Ck	M7	340	10	3,400	\$23	\$78,200
Cabramatta Creek	M7	Lot 2 DP 1051510	380	10	3,800	\$23	\$87,400
Cabramatta Creek	Lot 2 DP 1051510	Hoxton Park Rd	520	10	5,200	\$23	\$119,600
	Area	%					
Maxwells Creek Channel	23,000	40%			9,266	\$58	\$537,439
Total							\$1,335,539

Area in ha: 137.5 ha

Contributing Area



North of M7

Cost of Facilities

Item	From	To	Length	Width	Area	Unit Cost	Cost
Cabramatta Creek	Hinchinbrook Ck	Hoxton Park Rd	520	10	5,200	\$23	\$119,600
Total							\$119,600

Area in ha: 2.85 ha

Land in Contributing Area

Land north of Cabramatta Creek and west of Banks Road

11.4 Landscaped Buffer Areas

Wonga Road Frontage

The development of the Prestons Industrial Area has the potential for conflict with the adjoining residential area over noise generation, air pollution, security lighting, operational hours and traffic generation. Accordingly a 10 m wide landscaped buffer is to be provided along the frontage to Wonga Road.

The buffer area is essential between any industrial area and an adjoining residential area to protect the amenity of the residential area without resorting to unreasonable restrictions on business hours of operation, noise and lighting in the industrial area.

Cost of Facilities

Item	Length m	Area sqm	Cost / m	Land cost / sqm	Cost of Land	Cost of Works
Wonga Road Frontage						
Landscaping		5,600		\$220	\$827,023	
Landscaping	560		\$228			\$92,810
Totals					\$827,023	\$92,810

Area in ha: 123 ha

Contributing Area

The contributing area is the area east of the M7 with an area of 123 ha. This is on the basis that the works border this release area where it adjoins the residential areas. It does not include the former Liverpool Showground, as this will provide its own buffer to the adjoining residential area to the south.



11.5 Professional Fees

Nexus

The cost of independent land valuations and legal documents are clearly part of the costs of administering this plan. In relation to land acquisition, Council will be required to acquire land for car parking and roads and incur the associated conveyancing costs.

It is recognised that the costs associated with land acquisition could be added to the cost of individual facilities. However the cost of professional fees attributable to any one facility is completely unpredictable. It is therefore more appropriate that a pool of contribution funds is available to meet these costs as they arise.

The contribution rate is based on the following costs.

- § the cost of independent valuations is anticipated to vary from \$500 - \$2,000 depending on individual sites and whether the valuation is general or specific;
- § valuations will be required at least annually for reviewing this contribution plan, and more frequently depending on movements in the property market;
- § stamp duty and estimated costs of vendor's solicitor in land acquisition.

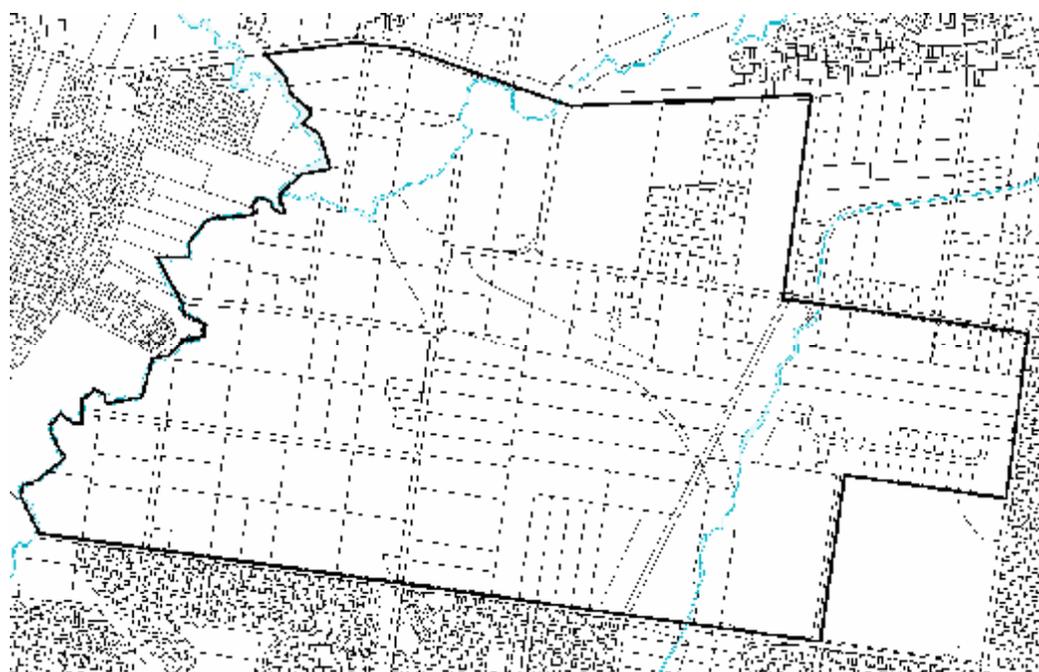
11.6 Administration Costs

Nexus

There are significant costs associated with administering funds of this magnitude. Both the plan preparation/review and implementation aspects of Section 94 contributions are administered staff within Council. A core team of employees are engaged to provide support in co-ordinating such a process, as well as prepare status reports, review and relevant data, liaise with Council staff and external agencies.

In accordance with the directive of the Department of Planning, the administration costs are comprised of those expenses relative only to those personnel directly responsible for the formulation and / or administration of a Section 94 Contributions Plan. The cost per lot per year has been averaged across all of the Contribution Plan areas and is calculated as follows.

Contributing Area



11.7 Contribution Formulae

Transport and Drainage Facilities

$$\text{Contribution} = \frac{C}{N}$$

(per ha)

where C = Cost of capital works and land identified for the catchment area

N = Area of land in the catchment area

$$\text{Area of land to be dedicated} = \frac{A}{N}$$

(per ha)

where A = Total area to be acquired

N = Area of land in the catchment area

Street Tree Planting

Cost per tree = \$115 per 20 m of street frontage

Landscaped Buffer Areas

$$\text{Contribution = } \frac{C}{N}$$

(per ha)

where C = Cost of capital works and land identified for the catchment area

N = Area of land in the catchment area

$$\text{Area of land to be dedicated = } \frac{A}{N}$$

(per ha)

where A = Total area to be acquired

N = Area of land in the catchment area

Professional Fees

$$\text{Contribution Rate = } \frac{\text{Residential Contribution* x A}}{450}$$

Where * Residential Contribution in Hoxton Park, Carnes Hill and Prestons

A = Site area

450 = area of conventional lot

Administration Fees

All Development

The cost of administering contributions plans over the coming years has been estimated at 1.2% of the value of contributions.

11.8 Staging of Facilities

The timing of construction of specific facilities depends largely on where and when development occurs. It is the intention of Council to provide facilities at the earliest opportunity. This intention is constrained by the funding limitations, which occur due to cash flows directly linked to the rate of development. Council must accumulate sufficient contributions to meet the funding commitment to any particular facility, which is required. In this regard, facilities will be constructed as funds received allow and in response to the priority needs of the developing community.

12. Middleton Grange Release Area

*Southern Hoxton Park Aerodrome Release Area, Amendment No.3 (24 December 2003)
Amendment No. 3 replaces previous Section 12, which was Amendment No.2.*

12.1 Background

Liverpool City Council adopted on 24 June 2002 a Master Plan for the future development of Middleton Grange Release Area. The Master Plan makes provision for 152 hectares of mostly residential development and forecasts the creation of 2,330 residential dwellings and 30 non residential allotments. This will result, over an eight year period, in a resident population of approximately 8,155 in the area. Due to this anticipated development, the current absence of public amenities and services available in the area, and the expected characteristics of the new population, it will be necessary to undertake works detailed in this Contributions Plan.

This Plan levies all development in Middleton Grange and has been formulated on the basis of the forecast growth and development of the area and population over the eight year period, from 2004 to 2012. The Plan will be reviewed and updated as required to ensure that the contribution rates truly reflect the cost associated with the implementation of this Plan and the Middleton Grange Release Area.

Relationship to other plans

The Master Plan is supported by a set of technical Background Reports and by further background information in the draft Master Plan - December 2001. The *Liverpool LEP 2008* identifies the extent of land available for development and establishes permissible uses and densities within the identified sectors. *Liverpool DCP 2008* applies to development in this area. These two plans and the Background Reports set the context for this section of the contributions plan.

Staging of all facilities and services

The timing of construction and provision of all facilities and services will depend largely on where and when development occurs. It is the intention of Council to provide facilities, services and infrastructure at the earliest opportunity in order to provide for the access, amenity and livability of the residents of Middleton Grange. This intention will be constrained by the funding limitations of cash flows directly linked to the pace of development and by Council's ability to acquire land from existing owners.

Council must accumulate adequate funds through contributions to meet the costs of any facility. Therefore construction will occur as funds allow and in response to the priority needs of the developing community. It is intended, however that, water management facilities will be constructed for each section or water catchment of Middleton Grange as it develops. In terms of the joint community/school multi-purpose community centre, development will be dependent on demand for school facilities and the construction schedule of the *NSW Department of Education and Training* (DET).

Land values

The cost of land acquisition is a substantial proportion of the cost of providing facilities and services identified in this contributions plan. The State Valuation Office has indicated that a value of \$190 per square metre is the current rate for unimpeded developable land. Impediments such as flooding, significant vegetation and contamination etc will have an impact on the value of the land. Based on current flooding levels and background investigations, 23 percent of land required to be purchased by Council for open space, recreation and water management has impediments or constraints to development that will significantly impact on the value of the

land. The mean value is estimated at \$135 per square metre.

Smart Growth

Council has adopted for its new release areas the approach of sustainable development through the principles of Smart-Growth - Creating Communities. These principles, enunciated in *Liverpool LEP 2008* and *Liverpool DCP 2008*, build on the following four key visionary elements of Smart-Growth:

- **Accessibility** - A community that ensures the safe, convenient and appropriate movement of people and goods.
- **Social benefits** - A balanced community that provides a full and diverse range of social, community and recreational resources.
- **Environmental benefits** - A community with quality urban design and high environmental standards that values and enhances its natural and built environment.
- **Economic benefits** - A community that provides a full range of employment and training opportunities for its inhabitants.

The contributions levied by this Plan for infrastructure, facilities and services will be directed at achieving outcomes in line with these visionary elements.

Middleton Grange currently consists of 1.2 hectare rural-residential lots - the majority in separate ownership and some with dwellings; a grid of streets consisting of one north-south road and three east west roads; a private school; a church and a small club. The area to the north of the central environmental corridor along McIver Avenue is used for low intensity grazing of cattle. Three small waterways traverse the area. Given its history as a rural residential area, MIDDLETON GRANGE has no facilities for recreation, community services and water cycle management or a road network to support a new resident population.

Liverpool LEP 2008 sets the vision for residential uses, with higher density opportunities concentrated around transport nodes, parks and the neighbourhood centre. The area is envisioned to have a high quality public domain of parks, playing fields, streets, footpaths, cycle ways and open space. A network of connected roads will traverse the area and encourage walking and cycling, while transport nodes will provide access and links to public transport - both locally and regionally. The neighbourhood centre will be the focus of the new area and include a community centre.

Water quality, run-off and drainage will be incorporated into the existing watercourses and have high aesthetic appeal. The principles of ecologically sustainable development will govern the provision of all facilities.

In order to accommodate new development and a new resident population, it will be necessary to undertake certain works, which will be funded by developer contributions. This Contributions Plan sets the framework for the derivation of funds to enable the acquisition, development and embellishment of the public domain, access structure, water cycle management and social infrastructure.

This Contributions Plan levies developers for the public amenities and services that will be required as a direct result of their development. The influx of a new resident population in the area is the prime causal nexus for the provision of new public facilities located within Middleton Grange. In addition, it is anticipated that facilities elsewhere in Liverpool will be likely to experience increased demand as a result of development in the Middleton Grange.

The proximity of the facilities to be provided or upgraded provides the physical nexus of this Plan. They will be provided in anticipation of future development, or will be provided within the life of the Middleton Grange Release Area. This establishes the temporal nexus of the Plan.

While residential development is to be the main form of development in the Middleton Grange Release Area, there will also be some development for commercial uses as well as for church and private education purposes. These developments and uses will place demands on the road

and water management system. Accordingly, they will be levied for these two forms of infrastructure for the equivalent additional road use and water run-off they generate.

Demographic and development trends

The *Liverpool LEP 2008* has set a development area of approximately 152 hectares. It assumes density will be at **least 15.3 dwellings per hectare**, with an **average** lot size of approximately 400 sqm. The number of lots is therefore forecast to be 2,330. For the purposes of this plan, dwelling occupancy rates per lot are those adopted for the new release areas, i.e.:

- lots 450 sqm or larger = 3.7 persons per dwelling
- lots smaller than 450 sqm = 3.3 persons per dwelling.

Assuming an **average of 3.5 persons** per dwelling, the future resident population of Middleton Grange at the full extent of development is estimated to be approximately **8,155 persons**.

12.2 Community Facilities

Background

The provision of appropriate and useable community facilities is a key requirement for developing socially sustainable communities. In new development areas, residents will demand and require community facilities such as multi-purpose community centres, children's facilities, libraries and cultural facilities to meet their needs.

Middleton Grange is expected to accommodate an estimated 8,155 residents based on the development of 2330 residential dwellings. As the release area will allow for both multi unit housing and separate detached dwellings, anticipated occupancy rates are likely to range from 3.3 persons per dwelling to 3.7 persons per dwelling based rates adopted for other release areas in Liverpool.

Analysis of the demographic profile of other recent release areas in Liverpool suggests that Middleton Grange may have the following characteristics:

- Large number of children aged 0-4 years
- Large number of children aged under 15 years
- Increasing number of youth aged 10-19 years living in the release area particularly as the development matures
- High proportion of adults of child bearing age groups, i.e. 20-34 years old
- Low proportion of older residents compared to the Liverpool LGA
- High level of cultural diversity with a significant number of residents likely to be from non-English speaking background.

These characteristics together with the lack of existing community infrastructure within the immediate area require that a range of appropriate community facilities be provided to meet the need of new residents.

Nexus

As outlined in the Background Reports to the DCP and LEP, this release area has no existing local neighbourhood facilities except for a non-government school and private church/club facilities. Council community facilities in the surrounding suburbs are at full capacity with direct access to these facilities difficult.

Therefore given the socio-demographic profile of new residents outlined earlier, local facilities required by new residents in this community are a local multipurpose community centre and

facilities for families and children. Neighbourhood level facilities and services are those, which can be accessed within the immediate area and are typically provided for communities of 8,000-10,000 residents.

Facilities

Joint community/school multi-purpose community centre

As a focal point for residents, the provision of a multi-purpose community centre is essential to provide for activities such as community meetings, office space for government agencies/community groups, information services and activity space for arts/crafts, cultural projects and youth groups. Consistent with Smart-Growth principles, a joint community/school multipurpose community centre is proposed on the intended public school site located near the neighbourhood centre. This will facilitate efficient and effective use of community resources while ensuring that the facility is well-located for all users.

The 400 sqm facility will be a jointly funded development between the *NSW Department of Education and Training* (DET) and *Liverpool City Council* providing appropriate spaces for both the school community and all local residents. At this stage, it is anticipated that the facility will include a DET standard hall, stage and storeroom totalling 190 sqm funded by the DET, together with a large community meeting room, small community meeting room, three office spaces, kitchen, toilets, storage and foyer. The total floor space of 210 sqm being funded by Council through the contributions from this plan.

This is consistent with Council's standard local community centre of a 400 sqm building for a population of approximately 8,000 - 10,000 residents. A joint management agreement between Council, the DET and local residents/users will be developed to operate and maintain the facility.

Multi-purpose family and children's centre

To address the needs of the large anticipated number of children and families in Middleton Grange, this plan provides for a multipurpose family and children's centre of 500 sqm on a 2,100 sqm site. This facility will be provided on a separate but highly accessible site close to the proposed public primary school and neighbourhood centre/ shopping area.

This new service model has recently been developed by Council and will provide for family-related services and activities for children aged 0-13 years in a one-stop centre. It will provide sessional office and activity space for government funded programs together with space for services such as outside school hours services, playgroups and family day-care groups. The facility should include a multipurpose playroom/outside school hours room; four office spaces; one small meeting room; one playgroup/child minding room; covered verandah; outdoor storage; several fenced play areas off rooms; kitchen/kitchenette; several storage rooms; toilets; foyer; parking on-site.

All facilities providing for government funded children's services for children less than 5 years old draft need to meet the requirements of the NSW Centre Based and Mobile Regulations. Together with community input, key requirements of children's facilities are: the provision of recommended indoor and outdoor space per child; children's toilets; playgrounds; children's furniture; and separate large storage areas.

Council's standard of 1 place per 20 children aged 0-4 years has been used to determine the demand for children's services. As shown in the Background Reports to the DCP and LEP, the release will generate the demand for an estimated 60 childcare places together with some 1,200 children aged 5 to 12 years who may require outside school hours care. These standards recognise the increased role that the private sector will take in the provision of centre-based childcare services in the release while also ensuring that the continued high demand for a range of flexible care and parenting services in local communities is met.

Costs

The following table provides estimated costs for each facility based on the detailed costs located in Appendix A. Building costs obtained from the NSW DET were combined with costs of works recently undertaken by Council and verified by Council officers. These are consistent with industry standards. The costs are based on generic site plans for these types of facilities; detailed plans will be prepared and costed based on actual site conditions. Land acquisition costs are based on a purchase price of \$190/sqm.

Multipurpose Community Centre 400 sqm on site shared with DET (School to provide 190 sqm and Section 94 to provide 210 sqm)

Item	Cost
Building @ \$4,500 per sqm including all requirements outlined below and consistent with DET costings (i.e. car and bicycle parking, landscaping, fencing, security, design / project management and contingency)	\$945,000
Fit out @ 15% building cost	\$141,750
Public Art @ 1% of construction cost	\$9,450
Community consultation	\$5,000
Total	\$1,101,200

Multipurpose Family and Children's Centre

Item	Cost
Site works - varies with each site	\$70,000
Building 500 sqm @ \$2,500 per sqm	\$1,250,000
Car Parking (15 spaces), including bicycle parking	\$40,000
Landscaping	\$80,000
Fencing	\$19,360
Design/Project Management @ 20%	\$291,872
Contingency 10%	\$145,936
Sub Total	\$1,897,168
Fit out @ 15% building cost	\$187,500
Public Art @ 1% of construction cost	\$12,500
Security	\$10,000
Community consultation	\$5,000
Total	\$2,112,168

Facility	Works	Land	Total cost
Joint community/school multipurpose community centre (total 400 sqm)	As per DET standards	Joint agreement with DET	
DET 190 sqm			\$1,101,200
LCC 210 sqm	\$1,101,200		
Multi-purpose Family and Children's Centre (500sqm on 2,100 sqm site)	\$2,112,168	\$399,000	\$2,511,168
Total	\$3,213,368	\$399,000	\$3,612,368

12.3 Recreation Facilities

Background

A sustainable community requires access to quality open space and recreation facilities. As a result of new development, natural areas also need to be maintained and enhanced to preserve the environmental quality and bio-diversity of the area. Open spaces provide increased residential amenity; a resource for flora and fauna; consolidation of diminishing natural areas; as well as a place for sports, recreation, play and outdoor activities.

This plan and the Background Reports to the DCP and LEP provide a detailed assessment of the size and demographic characteristics of the expected population of Middleton Grange Release Area. They highlight the need for open space and recreation facilities, which meet the needs of new residents while also recognising the existing significant environmental features of the release.

Nexus

As presented in the Background Reports to the DCP and LEP, Middleton Grange has some strong natural features such as existing creek lines, remnant bushland and scenic views. Consistent with Smart-Growth principles, this plan uses these environmental qualities to develop useable, high quality open space areas with specific recreational facilities to meet the needs of residents. The Middleton Grange DCP and LEP strongly enunciate the goal of providing opportunities for higher residential density development at places of greatest amenity. Accordingly, open space and parks will be surrounded by higher density development and need to have high levels of amenity. The population characteristics outlined in this Plan have strongly influenced the type of facilities to be provided together with information on community demands in adjoining release areas (see Background Reports to the DCP and LEP). Many of the open spaces are also part of the water cycle management system (see Section 12.5) and will be jointly developed for both purposes.

All residential development will contribute for the following facilities.

Facilities

Based on this information, the following open space and recreation areas are required:

Small parks

Small parks increase residential amenity by providing a focus for local residents and encouraging a "sense of place". Embellishments such as children's playgrounds, seating, lighting, planting, fencing, footpaths and shade are key requirements in this type of park.

Large neighbourhood parks

Large neighbourhood parks are larger multipurpose open spaces providing for a range of activities and age groups. As Middleton Grange will house primarily families, these parks will provide space where all age groups can recreate together. Embellishments such as children's playgrounds, seating, BBQs, shade pavilion, plantings, pathways, bicycle parking, irrigation and public art are key requirements of this type of park. Given the large number of youth aged 10-19 years expected to be living in this release, neighbourhood parks will also provide recreational facilities appropriate for youth such as a skateboard ramp, hard courts or multipurpose cycle/rollerblade paths. Only large parks of suitable size can accommodate this diversity of activities.

Bushland parks

Bushland parks are open spaces with identified high environmental values such as existing large tree stands and creeks. Where the parks are primarily bushland/environmental protection, embellishment will include bush regeneration works, soil stabilisation, fencing, site furniture, environmentally sensitive pathways and interpretative shelters.

Sportsgrounds

Sportsgrounds are active recreation areas, which provide local residents with opportunities to participate in organised and unorganised sports such as soccer, cricket, football etc. Consistent with Smart Growth principles, this open space will be of high quality and multipurpose with the minimum configuration of a sportsground being one oval comprising of two playing fields. Embellishments will include major site works, automatic irrigation, turfing and top soil, amenities block, cricket wicket/nets, goal posts, car parking, spectator seating, shade pavilion, basic lighting planting and playground facilities for children/youth.

The Middleton Grange LEP amendment has a total provision of 17.7 hectares of recreation and open space excluding those areas set-aside specifically for water cycle management and environmental protection. Based on this provision, MIDDLETON GRANGE has 2.1 hectares of open space per 1000 residents based on an anticipated population of approximately 8,155. This is less than the Department of Planning standard of 2.3 hectares per 1,000 residents and other comparable new release areas (see Background Reports to the DCP and LEP).

The approach used, however, focuses on ensuring high quality open space, recreation facilities and bushland with careful attention to developing sites which have appropriate levels of embellishment to meet community needs. Residents will also have the benefits of the adjoining proposed Western Sydney Regional Parklands and land primarily set aside for water cycle management.

Costs

The following table provides estimated costs for each facility. Average costs of works recently undertaken by Council have been used; these are consistent with industry standards. The costs are based on generic site plans for these types of facilities; detailed plans will be prepared and costed based on actual site conditions. An open space plan and land acquisition costs are shown as follows. The State Valuation Office provided Land valuations to Liverpool City Council.

Sportsground - 3.5 ha consisting of 2 playing fields, car park & amenities

Item	Cost
Site works (re-contouring, levelling & sub grade preparation)	\$122,500
Drainage (including sub-soil drainage)	\$60,000
Water supply and bubblers	\$8,000
Irrigation (automatic) x 2 fields	\$100,000
Lighting (flood & pole tops)	\$180,000
Turfing, top soil, tree planting, garden beds	\$350,000
Protective fencing	\$51,750
Cricket wicket, nets & goal posts	\$25,000
Amenities block (acquisition and refurbishment)	\$300,000
Signage, furniture, bicycle parking	\$25,000
Car park and access road (100 spaces x 100m roadway)	\$384,000
Footpaths (1.2m x 1km)	\$48,000
Spectator seating	\$31,500
Pavilion/Gazebo	\$20,800
Children's playground (including surfacing)	\$50,000
Sub Total	\$1,756,550
Project management/Design fees 20%	\$351,310
Contingency 10%	\$175,655
Total	\$2,283,515

Environment Protection/Bushland for sites around 2ha

Item	Cost
Services (water, drainage, lighting to entry)	\$10,000
Site works (as appropriate)	\$25,000
Soil stabilisation, bush regeneration works @ \$15/ sqm	\$300,000
Fencing	\$20,000
Interpretative shelter & site furniture	\$45,000
Pathways through site (may be decomposed granite, boardwalks etc 1.2m x 1km)	\$42,000
Sub Total	\$442,000
Project management/Design fees 20%	\$88,400
Contingency 10%	\$44,200
Total	\$574,600

Large Parks with Youth Specific Facilities around 0.5ha

Item	Cost
Site works (re-contouring, sub grade prep, retaining walls)	\$27,500
Drainage (including sub-soil drainage)	\$25,000
Water supply and bubblers	\$5,000
Irrigation (automatic)	\$25,000
Lighting	\$30,000
Top soil, tree planting, garden beds	\$62,500
Fencing	\$10,800
Signage, furniture, bicycle parking	\$10,000
Footpaths	\$9,000
Pavilion/shade	\$30,000
Children's playground (including surfacing)	\$50,000
Youth Facility (may be skateboard ramp, hard court or other facility)	\$150,000
Sub Total	\$434,800
Project management/Design fees 20%	\$86,960
Contingency 10%	\$43,480
Total	\$565,240

Small Parks with children's playground around 0.3 ha

Item	Cost
Site works (re-contouring, sub grade prep, retaining walls)	\$25,500
Drainage (including sub-soil drainage)	\$15,000
Water supply and bubblers	\$5,000
Lighting	\$18,000
Top soil, tree planting, garden beds	\$45,000
Fencing	\$10,400
Signage and furniture including bicycle parking	\$4,000
Footpaths	\$7,800
Pavilion/Shade	\$30,000
Children's playground (including surfacing)	\$50,000
Sub Total	\$210,700
Project management/Design fees 20%	\$42,140
Contingency 10%	\$21,070
Total	\$273,910

No.	Item	Area sqm	Water Cycle Area (m2)	Park Area (m2)	Park Type	Unit Cost \$ / sqm	Works
OS01	Southern Oval	28,649	0	28,649	Sportsfield	\$65	\$1,869,155
OS02	Northern Oval	41,205	0	41,205	Sportsfield	\$65	\$2,688,350
OS03	Village Park	2,109	500	1,609	Small Park	\$91	\$82,719
OS04	Southern Woodland Area	8,411	0	8,411	Env. Protection	\$29	\$243,919
OS06	Park on 16th Ave	2,702	790	1,912	Small Park	\$91	\$91,182
OS07	Park west of 2nd Ave, south of 16th Ave.	5,351	500	4,851	Small Park	\$91	\$304,941
OS08	Park on Southern Creek	3,795	1,425	2,370	Small Park	\$91	\$0
OS09	Park on Collector Street 3	4,181	0	4,181	Small Park	\$91	\$380,471
OS10	Park at Intersection of McIver Ave and 2nd Ave	3,670	1,850	1,820	Small Park	\$91	\$165,620
OS11	Park west of 2nd Ave, south of McIver Ave	5,791	2,150	3,641	Small Park	\$91	\$331,331
OS12	Park in northern area - eastern side	3,438	0	3,438	Small Park	\$91	\$312,858
OS13	Park in northern area - western side	7,298	0	7,298	Large Park	\$113	\$690,052
OS14	Park at Intersection of McIver and Collector Street	982	982	0	Env. Protection	\$29	\$0
OS15	Works Deleted	N/A	N/A	N/A	N/A	N/A	N/A
WM01	Entry Park & Wetlands	28,441	22,500	5,941	Large Park	\$113	\$540,631
WM02	Park and Wetlands	9,425	8,400	1,025	Small Park	\$91	\$93,275
WM13	Wetland on Northern Creek next to woodlands	11,009	1,240	9,769	Water Cycle Zone	\$29	\$200,000
Sub Total							\$7,994,504
Plus 5% Contingency							\$399,725
Total Works							\$8,394,229
Land Early Acquisition							\$15,115,718
Plus 5% Contingency							\$755,786
Total Land Early Acquisition							\$15,871,504
Land							\$4,547,253
Plus 5% Contingency							\$227,363
Total Land							\$4,774,616

Map of Open Space and Recreation Facilities



12.4 Access and Transport Facilities

Background

The cost of provision of streets, access and transport facilities in conjunction with a subdivision will be borne by individual developers. However, various traffic facilities and frontages to public land uses such as parks will be funded through S94 contributions. As these are used by all residents, schools, churches and commercial activities their cost should not fall on developers of individual land uses but rather should be shared across the whole precinct. The LEP and DCP for Middleton Grange illustrate the road layout and hierarchy.

Nexus

The existing street network in Middleton Grange consists of a grid of one north-south road and three east-west roads, and connections to Fifteenth Avenue and Cowpasture Road. These are adequate for the existing population and land uses, but overall are not in good condition. The street network is not appropriate for, nor has the capacity to service, a new incoming resident population and a public transport system.

The DCP and LEP for Middleton Grange provide a new street layout in line with Smart Growth principles and the objective of creating a highly accessible suburb. The network is designed to enhance the internal accessibility of the area and provide external access to arterial roads and the proposed Western Sydney Orbital. In particular it facilitates bus circulation and the use of public transport.

The design utilises existing roads in the new layout, which will need to be upgraded. In addition it provides for new collector streets, frontages to public open space, intersections with Cowpasture Road and Fifteenth Avenue and various road treatments. Pedestrian safety and cyclist amenity is accommodated. Existing roads will be upgraded during the development of MIDDLETON GRANGE and new facilities and infrastructure built.

While timing and staging will be dependent on available funding as a result of this plan and the location of new development, it is the intention of Council and accordingly this Contributions Plan, that access is provided to new residents as they take up residence. Staging will also accord with the provision of other infrastructure that would be built in conjunction with streets.

All residents, commercial/retail businesses, private schools, churches and other developments, will use and benefit from the new access and transport facilities.

Facilities

Collector streets

In previous release areas within the Hoxton Park Stage 2 Area, the local access street was adopted as the benchmark to assess developer contributions. Council has adopted the philosophy that within each neighbourhood, all streets of higher standard than local access streets (i.e. collector streets) are necessary to provide access for everyone in that neighbourhood. Accordingly there is a contribution toward the difference in cost between a local access street and a collector street. This applies to additional width, pavement depth and land value and is normally funded by the developer of land having frontage to the collector street.

Within the Council's road hierarchy are the following:

- § access streets and rear service lanes - which cater for up to 300 vehicles per day (vpd) and are not more than 100 m long;
- § local access streets - which cater for up to 1,000 vpd with provision for up to 2,000 vpd with wider pavements;
- § neighbourhood collector streets - which cater for up to 6,000 vpd and usually provide a link between the internal collector street system of a residential precinct and the major road system;
- § sub-arterial roads - which cater for up to 15,000 vpd and are the principal traffic carriers within an urban neighbourhood.

For Middleton Grange, as shown in the DCP and illustrated in following map, additional collector streets have been added to the existing street structure to enhance accessibility of the precinct and handle the predicted traffic demand created by the new land release. The new streets are diagonal to the existing rectilinear street layout and focus on the neighbourhood centre while linking the southern and northern sections. A bridge will be built over the environment protection zone and central creek and connect the two parts of the precinct.

Streets adjacent to public reserves or public schools

Provision of street works adjacent to public reserves or public schools will be the direct responsibility of the developer except where identified in the contributions plan.

Upgrading existing public roads

Where an existing road is identified within the Contributions Plan as requiring an upgrade, Council has made an assessment of the remaining life of the pavement and deducted this from the cost of construction of a new pavement. If future residential lots have access directly to the road, the Contributions Plan funds the central pavement only. A specific allowance has been included for the pavement upgrade to Second Avenue.

Traffic lights

New traffic lights have been included at the junction of 15th and 2nd Avenues, 16th and 2nd Avenues and 16th Avenue and Cowpasture Road.

Roundabouts

Roundabouts serve the whole street system within each neighbourhood and consequently serve each property. The cost is determined by the difference in cost between an intersection with a roundabout and a normal intersection.

Other traffic facilities

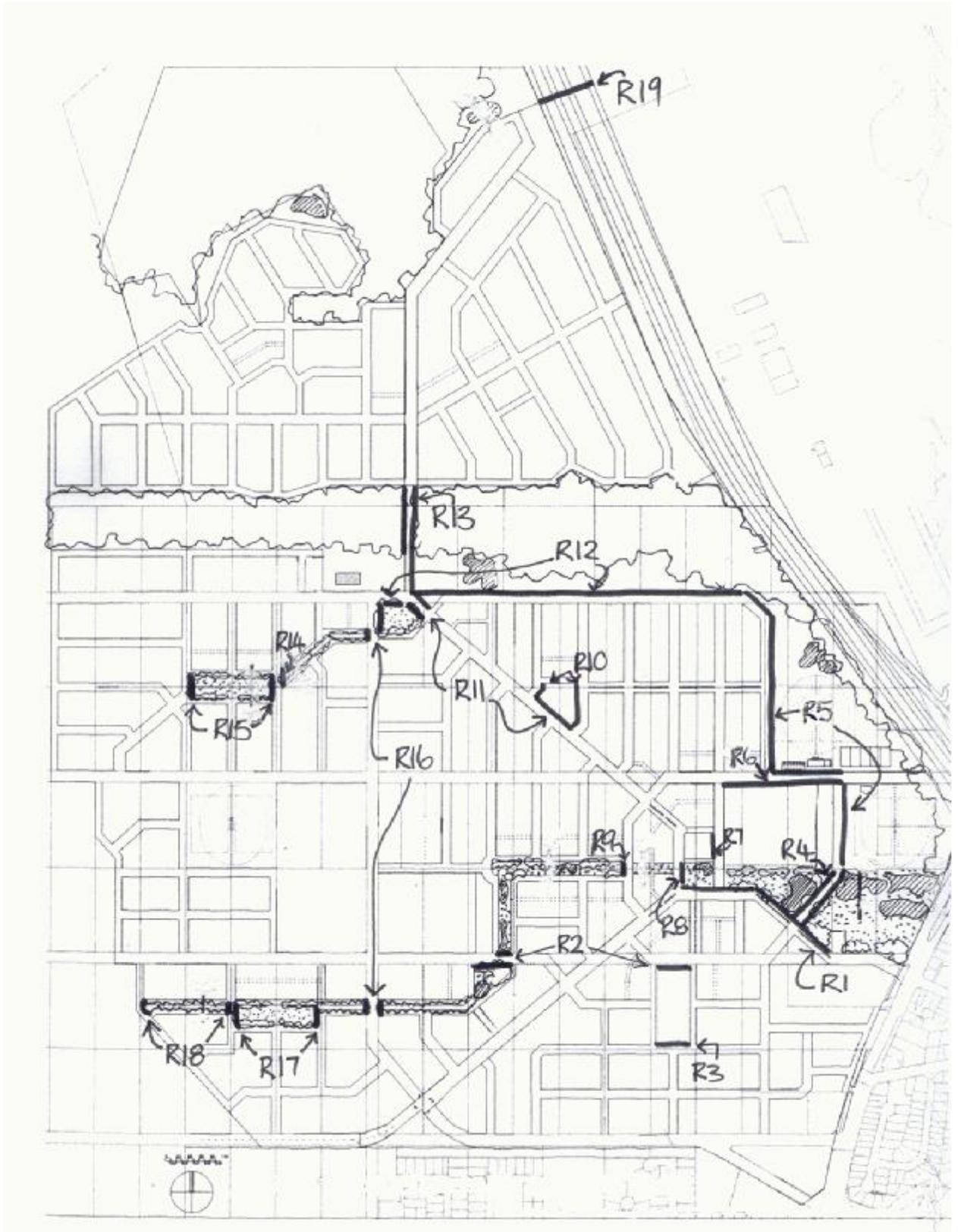
The other access and traffic facilities are detailed and summarised in the following tables. These include the provision of bridges/culverts over the water cycle management channels, additional landscaping to the collector roads, share ways, bus shelters and associated works. The costs included in this Contributions Plan have been determined by the difference in cost of a local access street and the extra cost of the additional access or traffic facilities required by the DCP 48.

The following table provides estimated costs for road works for access and traffic facilities based on the detailed estimates. Average costs of works recently undertaken by Council under similar conditions have been used. These are consistent with industry standards.

	Item	Works
R1	Collector Works between 16th Ave and Neighbourhood Centre	\$418,836
R2	16 th Avenue Works	\$709,492
R3	Parkside - OS04	\$22,410
R4	Parkside - Southern Oval between WM01 and WM02	\$246,288
R5	Parkside - OS02 and WM11	\$403,488
R6	17 th Avenue East Works	\$820,456
R7	Road works adjacent to Community Facility	\$36,680
R8	Parkside - OS03	\$36,300
R9	Parkside - WM05	\$6,788
R10	Parkside - OS09	\$32,087
R11	Collector Road Works - Northern Diagonal	\$216,444
R12	McIver Avenue Works	\$465,000
R13	Northern Collector Road Works	\$368,136
R14	Parkside - WM10	\$2,715
R15	Parkside - OS11	\$23,336
R16	Second Avenue Works	\$832,552
R17	Parkside - OS07	\$17,502
R18	Parkside - WM09	\$5,430
R19	Northern Access Across M7	\$1,000,000
C1	Culvert - North eastern end of OS10	\$150,480
C2	Culvert - Eastern end of WM10	\$150,480
C3	Culvert - Southern end of WM06	\$150,480
C4	Culvert - Between WM04 and WM03	\$209,000
C5	Culvert - Eastern end of WM05	\$176,000
C6	Culvert - Western end of OS07	\$126,720
C7	Culvert - Western end of Southern Creek	\$126,720
B1	Bridge - Neighbourhood Centre Collector Road	\$525,000
B2	Bridge - Environmental Corridor	\$1,800,000
B3	Bridge - 2nd Avenue Creek Crossing south of 16th Avenue	\$285,000
B4	Bridge - Creek Crossing between water management facilities	\$456,000
B5	Bridge - Neighbourhood Centre south of school and community facilities	\$456,000
	Traffic Lights - 15th & 2nd Ave's	\$150,000
	Traffic Lights - 16th & 2nd Ave's	\$300,000

Item	Works
Intersection Upgrade - 15th Ave & 2nd Ave.	\$400,000
Roundabouts	\$120,000
Traffic Calming Measure and Pedestrian Crossing Points	\$200,000
Bus Shelters	\$112,500
Sub Total	\$11,558,320
Plus 5% Contingency	\$577,916
Total Works	\$12,136,236
Land Acquisition	\$228,000
Plus 5% Contingency	\$11,400
Total Land	\$239,400

Access and Transport Facilities



Bridges and Culverts



12.5 Water Cycle Management

Background

Community standards require that stormwater be conveyed through urban areas in a manner that emphasises the cost-effective achievement of safety and amenity. This requirement leads to a development standard where drainage is managed on a catchment wide basis in a system of pipes, channels, culverts and basins. The responsibility to contribute, or nexus, is a combination of the characteristics of land development that:

- increases stormwater runoff volumes and flow rates so that a system of pipes and channels and/or stormwater detention basins is required to offset these impacts downstream; and
- increases population levels in the vicinity of potentially hazardous, uncontrolled rural standard drainage systems so that improvements, particularly large pipes and channel systems, are required to minimise and clearly demark the area of hazard potential.

The development of new release areas generally leads to a significant change in the stormwater runoff characteristics of drainage catchments. This change partially results from an increase in the ratio of runoff volumes to rainfall volumes due to a reduction in previous areas to absorb rainfall into the ground. It is also influenced by the reduction in catchment response times, where the impact of piping and channelising more efficiently conveys concentrated runoff to the catchment outlets. It may also be influenced by a reduction in flood plain storage of runoff volumes due to developments that incorporate landfill.

Nexus

An overall Water Cycle Management strategy has been established for the Middleton Grange area and is detailed in the Background Reports to the DCP and LEP. The strategy and the Middleton Grange DCP support the objectives of Smart-Growth, in that:

- management of drainage and the flood plain contribute positively to the area
- water quality and pollution management is to be of a high standard
- quality of the natural environment is to be maintained and enhanced

The water cycle management strategy utilises detention basins, wetlands, natural channels, swales, gross pollution traps and other facilities to ensure that the outflow from the precinct after its development is no worse than in the pre-development situation. At the same time it returns the creeks and waterways to a more natural state. The creeks and associated riparian zone have been enhanced to provide flood mitigation and water quality improvement as well as public open space amenity. This plan has allocated the costs for management of the water cycle and for open space areas across both sets of facilities as equitably as possible. All land uses are beneficiaries of the system and the enhanced amenity of the area.

Developers will be responsible for the costs of transporting stormwater from their land to the trunk drainage system. However, the cost of the trunk drainage system will be shared over the whole precinct. As background, it is seen by Council that every property that has stormwater drainage passing through it in a pre-development state has an obligation to provide proportionally for the runoff. In addition, all upstream properties will have an obligation to contribute to the cost of downstream drainage in proportion to the increase in runoff produced by their development.

In order to achieve an economical local drainage system that is in line with Smart-Growth principles, it is required to drain stormwater runoff through the southern most water channel. This channel in some cases traverses privately owned land. This land is generally already flood prone (i.e. pre-development) and will be acquired and developed in line with the LEP and DCP 2008. The cost of the land acquisition has been included in this Contributions Plan.

The area of land acquired as drainage reserves shall be dedicated to the Council for that purpose and the Council will be responsible for the maintenance and functioning of the trunk drainage system.

Facilities

The Water Cycle Management infrastructure includes the following:

- § detention basins
- § water treatment zones and wetlands
- § aquatic and riparian vegetation rehabilitation
- § drainage channels
- § swales
- § pools and riffles
- § drainage culverts
- § gross pollutant traps.

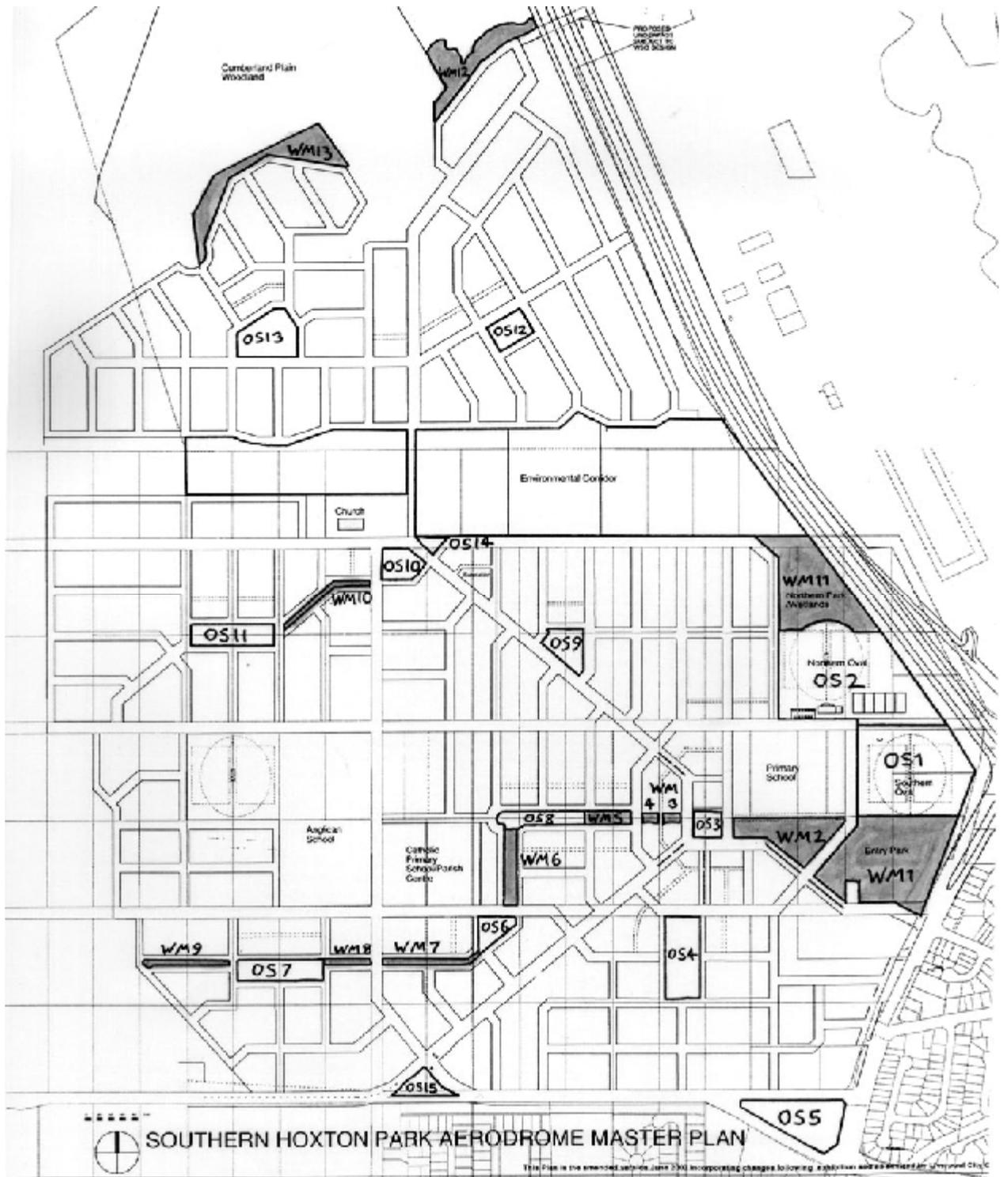
Section 94 credits for works in kind will not be accepted for temporary work required to fulfil developments on individual sites. All stormwater works are to be in accordance with Council requirements.

Costing

The following table provides estimated costs for each facility based on the estimates, land acquisition costs and plan. A detailed description of the water cycle management facilities and cost assumptions is provided in the Water Cycle Management Report located in the Background Papers to the DCP and LEP.

No.	Item	Works
OS03	Village Park	\$113,760
OS06	Neighbourhood park on 16th Ave	\$114,240
OS07	Neighbourhood park west of 2nd Ave, south of 16th Ave.	\$134,400
OS08	Neighbourhood park on Southern Creek	\$261,972
OS10	Neighbourhood park at intersection of McIver & 2nd Ave.	\$124,320
OS11	Neighbourhood park west of 2nd Ave, south of McIver Ave.	\$144,480
OS14	Water cycle area east of 2nd and McIver Ave Intersection	
	(Costs of Works included in Central Creek Works)	\$0
WM11	Wetland south of McIver Ave next to WSO	\$1,154,472
WM01	Entry Park & wetlands	\$1,504,980
WM02	Park and wetlands	\$551,376
WM03	Water cycle area in neighbourhood centre	\$138,600
WM04	Water cycle area west of neighbourhood centre	\$138,600
WM05	Water cycle & open space on southern creek next to OS8	\$134,746
WM06	Water cycle area on southern creek north of 16th Ave.	\$208,992
WM07	Creek channel east of 2nd Ave.	\$114,240
WM08	Creek channel west of 2nd Ave up to the neighbourhood park.	\$63,840
WM09	Creek Channel west of 2nd Ave and west of the neighbourhood park.	\$100,129
WM10	Creek channel between neighbourhood park, OS10 & OS11	\$128,352
WM13	Wetland on northern creek	\$399,520
WM12	Wetland on northern creek in north-east corner	\$310,700
	Central creek water cycle management works	\$3,755,760
Sub Total		\$9,597,479
	Plus 5% Contingency	\$479,874
Total Works		\$10,077,353
Land Early Acquisition		\$8,251,209
	Plus 5% Contingency	\$412,560
Total Land Early Acquisition		\$8,663,769
Land Acquisition		\$8,075,633
	Plus 5% Contingency	\$403,782
Total Land		\$8,479,415

Water Cycle Management



12.6 Administration, Professional Services and Implementation

Nexus

Implementation of this plan will require ongoing administration. A contribution is required for the costs associated with administration, professional services and implementation such as:

- preparing this Plan;
- ongoing monitoring, review and administration of the Plan;
- independent reviews for the purposes of adjusting contribution rates;
- executing legal documents for works-in-kind agreements;
- land valuations and acquisition;
- ongoing land valuations, to review this contribution plan, at least annually and more frequently depending on movements in the property market;
- specialist technical studies;
- research and investigation to amend or modify parts of this Plan; and
- the up front implementation of the Plan.

Administration

The administration of contributions funds carries significant associated costs. Professional officers within Council are required to prepare, review and implement the Plan throughout its life. They are assisted by a team which provides support in coordinating the process, preparing status reports, reviewing relevant data, and liaising with other Council staff, external consultants and other external authorities.

In accordance with the requirements of the *Department of Planning*, the administration costs contributed under this Plan consist only of the expenses for personnel directly involved in the preparation and administration of this Plan. It is considered appropriate that a pool of funds be available to meet these costs.

Professional services

There are a number of costs associated with professional services for implementing the MIDDLETON GRANGE release – such as studies in relation to Aboriginal archaeology and contamination of land identified for public open space. In addition, there are also costs for independent land valuations, legal assistance and management of the land acquisition process. In relation to land acquisition, Council will be required to acquire land for roads, public open space, community facilities and water cycle management and incur the associated conveyancing costs.

It is recognised that the costs associated with land acquisition could be added to the cost of individual facilities. However, because it is difficult to predict the cost of professional fees attributable to any one facility, it is considered more appropriate that a pool of funds be available to meet these costs as they arise.

Implementation

It is an objective of the MIDDLETON GRANGE release that certain infrastructure and facilities will be in place when residents first move into the area, requiring that key roads and water management infrastructure be provided early in the development process. This crucial

investment has been called Smart-Growth Infrastructure. As a result in the early years of the development expenditure will exceed income from contributions.

Because of the fragmented ownership situation in Middleton Grange, it will be necessary for Council to borrow funds to front fund land acquisition and construction of these road and water management facilities, and then to recoup the cost through contributions. The cost of borrowing funds to permit front funding of these facilities is estimated at \$10,115,489.

The plan also makes provision for costs associated with front funding the purchase of land. In acquiring parts of certain parcels there are likely to be additional costs for existing dwellings, disturbance and severance that would not be incurred if the land were to be provided as works in kind in lieu payment of contributions. It will also be necessary for Council to recover this cost in the contribution rate. The cost of acquiring land up front for essential facilities is estimated at \$1,644,000.

Costing

The estimated costs associated with administering and implementing this contributions plan and for professional service fees over the next ten years are shown in the following tables. These will be reviewed and adjusted on an annual basis.

Given that **administration costs and professional service fees** for the Plan are likely to be the same for all residential lots, all will be levied equally regardless of sizes. However, in relation to **implementation** - where costs are linked to the value and size of land to be acquired - the contribution will be levied differentially. All residential lots will be levied equally, but non-residential uses, including housing for aged and disabled people, will be levied on the basis of an equivalent 450 sqm lot. Therefore, for example, a development of 4,500 sqm will contribute 10 times the standard contribution rate.

Costs

Administration	Comments	Cost
Preparation, review and monitoring of MIDDLETON GRANGE component of Contributions Plan	Includes costs of studies to update the Plan at least four times over its life	\$160,000
Project management and administration	3 staff x 0.1 FTE @ \$90,000 x 10 years	\$270,000
Total		\$430,000
Professional services	Comments	Cost
Contamination study	For future public open space in accordance with DCP 2008	\$35,000
Aboriginal archaeology	For future public open space in accordance with DCP 2008	\$50,000
Land valuations and reviews	Includes: independent valuations for acquisition purposes @ average \$12,000 pa x 8 years; annual review of land values @ \$5,000 pa x 8 years	\$136,000
Project management of land acquisition	Based on an estimate of \$3,500 per successful negotiation and acquisition	\$87,500
Total		\$308,500
Implementation costs	Comments	Cost
Up front land acquisition costs	For dwellings, disturbance and severance	\$1,644,000
Borrowing costs for up front	Interest on borrowing for essential	\$10,115,489

implementation	roads and water management facilities	
Valuation fees		\$140,000
Legal fees		\$56,000
Transfer costs		\$56,000
Court costs		\$350,000
Advertising/issues of acquisition notices		\$70,000
Studies for flooding, environment		\$70,000
Relocation and disturbance		\$280,000
Special acquisition costs and site rehabilitation works		\$3,000,000
Stamp duty		\$440,000
Total		\$16,958,989

12.7 Contribution Formulae

Community Facilities

The cost per lot has been averaged across all of the Contribution Plan area. However, because dwellings on lots smaller than 450sqm will, on average, have fewer residents, and dwellings on larger lots will have greater number of residents a factor of 0.95 and 1.05 will apply respectively.

$$CR = \frac{CF}{N} = \frac{\$3,612,368}{2,330}$$

Where:

- § CR = the standard contribution rate for community facilities per lot
- § CF = the total cost of community facilities, \$3,612,368
- § N = the estimated total number of additional lots at the full extent of development in MIDDLETON GRANGE, i.e. 2,330

The Contribution Rates equate to:

- § For lots greater or equal to 450 sqm \$1,628
- § For lots smaller than 450 sqm \$1,473

$$\text{Contribution Rate (per dwelling/lot)} = \frac{C}{N} \times \frac{OR}{3.7}$$

- where C = Cost of capital works or land identified for the catchment area
- N = No. of equivalent lots / dwellings in the catchment area
- OR = Estimated occupancy rate for lot size or dwelling type

$$\text{Area of land to be dedicated (per dwelling/lot)} = \frac{A}{N} \times \frac{OR}{3.7}$$

- where A = Total area to be acquired in the catchment area
- N = No. of equivalent lots / dwellings in the catchment area
- OR = Estimated occupancy rate for lot size or dwelling type

Recreation Facilities

The cost per lot has been averaged across all of the Middleton Grange area. However, because dwellings on lots smaller than 450sqm will, on average, have fewer residents, and dwellings on larger lots will have greater number of residents a factor of 0.95 and 1.05 will apply respectively.

$$CR = \frac{OS\&R}{N} = \frac{\$29,040,349}{2,330}$$

Where:

§ CR = the standard contribution for open space and recreation facilities rate per lot

§ OS&R = the total cost of community facilities, i.e. \$29,040,349

§ N = the estimated total number of additional lots at the full extent of development in Middleton Grange, i.e. 2,330

The Contribution Rates equate to:

§ For lots greater or equal to 450 sqm \$13,087

§ For lots smaller than 450 sqm \$11,840

$$\text{Area of land to be dedicated} = \frac{A}{N} \times \frac{OR}{3.7}$$

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots / dwellings in the catchment area

OR = Estimated occupancy rate for lot size or dwelling type

Transport Facilities

Residential development

The cost per residential lot has been averaged across all of the Contribution Plan area. However, because dwellings on lots smaller than 450sqm will, on average, have fewer residents, and dwellings on larger lots will have greater number of residents a factor of 0.95 and 1.05 will apply respectively.

$$CR = \frac{A\&TF}{N} = \frac{\$12,375,636}{2,360}$$

Where:

§ CR = the standard contribution rate for access and transport facilities per lot

§ A&TF = the total cost of access and transport facilities, i.e. \$12,375,636

§ N = the estimated total number of additional lots at the full extent of development in Middleton Grange, i.e. 2,360

The Contribution Rates equate to:

§ For residential lots greater or equal to 450 sqm \$5,506

§ For residential lots smaller than 450 sqm \$4,982

Non-residential development

Non residential development should also pay for a contribution for the demand placed on the transport system. The contribution shall be based on the following formula.

CR (Non Residential) = $\frac{\text{Standard Lot Contribution} \times \text{Area of Site}}{450}$

$$\text{Area of land to be dedicated} = \frac{A}{N} \times \frac{V}{6.7}$$

where A = Total area to be acquired in the catchment area

N = No. of equivalent lots in the catchment area

V = Vehicle trips per day for lot size or dwelling type

Vehicle trips per day for non residential development. Refer to Roads & Traffic Authority Guidelines for vehicle trip generation.

Variation of this may be considered for non residential development, which is of a minor local nature.

Water Cycle Management

Residential development

The cost per residential lot has been averaged across all of the Contribution Plan area. However, dwellings on lots smaller than 450 sqm will, on average, have a larger paved or roof area in relation to their lot size, than dwellings on larger lots. Accordingly, while these lots will contribute a lesser amount it will be in a greater proportion to the site area. A factor of 0.95 will be applied to contributions for smaller lots. This has been calculated as the average difference between the coefficient of run-off for a conventional dwelling and the co-efficient of runoff for higher density development such as for town houses, courtyard and small lot houses, terraces, etc.

$$CR = \frac{WCM}{N} = \frac{\$27,220,538}{2,360}$$

Where:

§ CR = the standard contribution rate for water cycle facilities per lot

§ WCM = the total cost of water cycle management facilities, i.e. \$27,220,538

§ N = the estimated total number of additional lots at the full extent of development in Middleton Grange, i.e. 2,360

The Contribution Rates equate to:

§ For residential lots greater or equal to 450 sqm \$12,111

§ For residential lots smaller than 450 sqm \$10,957

$$\text{Area of land to be dedicated} = \frac{A}{N}$$

where A = Total area to be acquired

N = No. of equivalent lots / dwellings in the catchment area

Non residential development

The contribution for non-residential development will be based on the relative impacts of land development on run-off generation. The relative impact of different types of land use on any drainage system is directly related to the proportion of the site that is impervious to rainfall infiltration. Accordingly, an adjustment factor will be applied to these developments calculated

as the average difference between the coefficient of run-off for a conventional 450 sqm dwelling and the co-efficient of runoff for the non-residential land use. The following adjustment factors will apply to the formula given below:

§ Educational facilities (including child care)	1
§ Commercial, retail and other non-residential	1.45
§ Aged and disabled persons housing	1.15
CR (non residential) = standard 450 sqm residential lot contribution x AF x $\frac{\text{site area}}{450 \text{ sqm}}$	

Where:

- § CR = the contribution rate for water cycle facilities for non-residential development
- § standard 450 sqm residential lot contribution = \$12,111
- § AF = adjustment factor for land-use
- § site area = area of the development site

$$\text{Area of land to be dedicated} = \frac{A}{N} \times \frac{CR}{0.65} \times \frac{\text{Site Area}}{450}$$

- where A = Total area to be acquired in the catchment area
- N = No. of equivalent lots / dwellings in the catchment area
- CR = runoff coefficient for the specific development type as specified in the following table

Administration

The cost per lot per year has been averaged across all of the sub catchment and is calculated as follows:

$$CR = \frac{A}{N} = \frac{\$430,000}{2,360}$$

Where:

- § CR = the contribution rate for administration per lot
- § A = the total cost of administration, i.e. \$430,000
- § N = the total estimated number of additional lots at the full extent of development in Middleton Grange, i.e. 2,360

The administration cost for the District and City Wide component is estimated as \$87 per lot.

This gives a total contribution rate of \$271 per lot.

Professional services

The cost per lot per year has been averaged across all of the Contribution Plan area and is calculated as follows:

$$CR = \frac{PS}{N} = \frac{\$308,500}{2,360}$$

Where:

- § CR = the contribution rate for professional services per lot
- § PS = the total cost of professional services, i.e. \$308,500
- § N = the total estimated number of additional lots at the full extent of development in Middleton Grange, i.e. 2,360

The Contribution Rate equates to \$131 per lot.

Implementation

The cost per **residential** lot per year has been averaged across all of the Contribution Plan area and is calculated as follows:

$$\text{CR} = \frac{\text{I}}{\text{N}} = \frac{\$16,221,489}{2,360}$$

Where:

§ CR = the contribution rate for implementation per residential lot

§ I = the total cost of implementation, i.e. \$16,221,489

§ N = the total estimated number of additional lots at the full extent of development in Middleton Grange, i.e. 2,360

The Contribution Rate equates to \$6,874 per residential lot.

The Contribution Rate for non-residential lots/uses will be based on the following formula:

$$\text{CR (non-residential)} = \text{CR for residential lot} \times \frac{\text{area of non-residential development}}{450}$$

12.8 Staging of Facilities

While timing and staging will be dependent on available funding as a result of this plan and the location of new development, it is the intention of Council and accordingly this Contributions Plan, that necessary infrastructure is in place as soon as possible. Staging will also accord with the provision of other infrastructure that would be built in conjunction with the water management facilities, such as parks and roads.