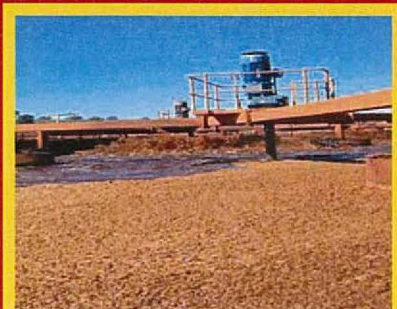
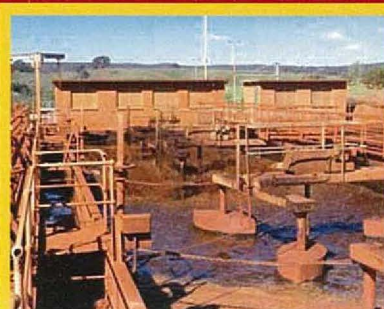


Development Servicing Plan For Greater Queanbeyan City Council Sewerage

**Adopted: 17th November 2004
Effective:**



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GREATER QUEANBEYAN CITY COUNCIL

DEVELOPMENT SERVICING PLAN - SEWERAGE

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DEVELOPMENT SERVICING PLAN - SEWERAGE

Summary

This Development Servicing Plan (DSP) covers sewerage developer charges (DC) for the Greater Queanbeyan City Council.

This DSP has been prepared with consideration to *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (2002). These are the final relevant guidelines, managed by the Department of Energy, Utilities and Sustainability (DEUS).

This DSP aims to:

1. Allow Council to require an equitable monetary contribution for the provision of sewerage infrastructure to meet the loading generated by development.
2. Facilitate the future provision of sewerage services to the Greater Queanbeyan City Council area which meets the required levels of service with regard to pump station capacity, collector main capacity and treated effluent quality.
3. Set out the schedule and programme of proposed works to meet increasing sewerage loads generated by development.
4. Detail the contribution rates and Greater Queanbeyan City Council's payment policies.

To enable this, a future demand estimate of sewerage load for the Council has been undertaken. The demand estimate is the basis used for determining the infrastructure required to meet the need generated by future development.

DC are applicable for existing and proposed works which serve future development. Section 3 details the existing works and proposed works schedule for sewerage infrastructure to meet the expected loading.

The calculated DC, based on full cost recovery, is for South-West \$6,844 per ET; for Googong \$3,612 per ET; and for East and West \$1,082 per ET. This has been arrived at through a process of structured consultation with representatives of stakeholders and the general community.

Developer charges calculations relating to this DSP will be reviewed after a period of five to six years, or when any significant changes occur in proposed works, growth projections or standards.

In the period between any reviews, developer charges will be revised on 1 July each year on the basis of movements in the Consumer Price Index (CPI) for Canberra, in the preceding 12 months to December, excluding the impact of GST.

There are a number of payment methods for DC and works-in-kind contributions are allowable subject to certain conditions.

The developer shall be responsible for the full cost of the design and construction of sewerage reticulation works within subdivisions.

1. Introduction

1.1 Legislation

Section 64 of the *Local Government Act 1993* enables a local government council to levy developer charges for water supply, sewerage and stormwater. This derives from a cross-reference in that Act to Section 306 of the *Water Management Act 2000*.

This DSP has been prepared in accordance with the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (2002), managed by DEUS, pursuant to Section 306 (3) of the *Water Management Act 2000*.

1.2 Purpose of the DSP

The purpose of the DSP is to achieve the following objectives:

1. Allow Greater Queanbeyan City Council to require an equitable monetary contribution for the provision of sewerage infrastructure to meet the loads generated by new development.
2. Facilitate the provision of sewerage services to the Greater Queanbeyan City Council area which meets the required levels of service with regard to pump station capacity, collector main capacity and treated effluent quality.
3. Identify the existing relevant works and set out a schedule and programme of proposed works to meet increasing sewerage loads generated by development.
4. Detail the contribution rates and Greater Queanbeyan City Council's payment policies.

The sewerage system for which Greater Queanbeyan City Council seeks to levy DC includes collector mains, pump stations and a treatment plant. Reticulation is provided by developers as part of the subdivision/development works.

1.3 Land to Which the DSP Applies

This DSP applies to all land in Greater Queanbeyan City Council area which is within the sewerage benefit area (ie generally 75 metres from an existing sewer main) or which is to be connected to the sewerage system as a result of development. Maps of sewerage areas can be found in Appendix 3.

The sewerage Developer Charge zones were defined based on the two trunk mains, West and East, that go to the Sewerage Treatment Plant. The West covers most of the western area of Queanbeyan including the whole of Jerrabomberra. The East covers several catchments in the Central and Eastern part of Queanbeyan. Most of those catchments end at Morisset Pump Station, before pumping to the STP through the eastern trunk main.

1.4 Calculation Guidelines

This DSP has been prepared with consideration given to *Guidelines - Developer Charges for Water Supply, Sewerage and Stormwater*, 2002. These were the latest relevant guidelines from the DEUS, at the time of DC calculation, and are based on recommendations of the Independent Pricing and Regulatory Tribunal (IPART)

1.5 Date From Which This DSP Comes Into Effect

This DSP was adopted by Greater Queanbeyan City Council on 17th November 2004 and came into effect on

Charges will be levied pursuant to this DSP, as a condition of development consent granted on or after the day this DSP came into effect.

1.6 Relationship Between The DSP and other Existing Policies or Plans

A number of environmental planning instruments apply to the development of land to which this DSP relates. They include State Environmental Planning Policies.

A full listing of State Environmental Planning Policies applying to Greater Queanbeyan City Council is attached to this DSP as Appendix No. 1. Various Greater Queanbeyan City Council Development Control Plans are also relevant, as listed in Appendix 2.

This DSP supersedes any other requirements related to sewerage DC for the area covered by this DSP. This DSP takes precedence over any of Greater Queanbeyan City Council's codes or policies where there are any inconsistencies relating to sewerage developer charges. (The term "Developer Contributions" may formerly have been used to refer to Developer Charges.)

1.7 Assets Relevant to the DSP

The purpose of the DSP is that new development should pay for assets from which they benefit. Collection systems and treatment works are provided by Greater Queanbeyan City Council and paid for through developer charges. Reticulation works are provided by the developer. Asset categories are defined as follows:

1.7.1 Collection Systems

For the purposes of this DSP sewage collection systems comprise trunk mains, major pumping stations and rising mains.

1.7.2 Treatment Works

Greater Queanbeyan City Council has one sewerage treatment works.

The capacity of a treatment works can be expressed in terms of equivalent tenements. This assumes a domestic strength sewage with pollutant concentrations similar to that from residential areas.

For developments with domestic strength sewage, the number of additional equivalent tenements is directly related to volume of discharge.

For developments with high strength sewage, the number of additional equivalent tenements is related to the pollutant load.

1.7.2 Reticulation

Reticulation generally consists of all the internal distribution pipes within the subdivision or which specifically serve that subdivision. In some instances, Greater Queanbeyan City Council is the developer.

The developer shall be responsible for the full cost of the design and construction of sewerage reticulation works within subdivisions.

Plans of sewerage infrastructure are in Appendix 3.

2. Methodology

2.1 Calculation Method for Developer Charges

2.1.1 General Methodology

In its most simplistic description, the calculation determines the equivalent cost of one brand new set of assets to serve development as if those assets could be constructed now. Practically, however, sewerage infrastructure consists of an on-going progression of old and new assets with complex interconnection. Sewerage assets may be constructed many years ahead of full capacity to reflect cost effective and practical staging of works.

Only collection system and treatment works have been taken into account in the DC calculation. The construction of any reticulation pipework required will be the responsibility of the developer.

The methodology used was developed with consideration given to the latest (final) guidelines, managed by DEUS, *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (2002). The NPV of Annual Charges Method was used and this is based on the following general equation, as recommended by the Independent Pricing and Regulatory Tribunal (IPART).

Developer charge = Capital charge – Reduction amount.

The **capital charge** is the cost of beneficial assets plus a return on investment, which reflects the cost incurred by Council by providing the assets ahead of development.

The **reduction amount** is the present value of those capital works costs included in the total capital charge which may be deemed to be already included in annual charges.

The calculated DC is based on full cost recovery.

2.1.2 Background Report/ Detailed Methodology

The methodology and calculation is described in more detail in the DSP background document, *Water Supply Developer Charges Calculation*, 2004, prepared by the Department of Commerce. Appendix C of that document describes the methodology in more detail.

2.2 Tenement and Demand Estimates

Most types of development will increase the demand on the sewerage system. Sewerage assets may directly or indirectly benefit a development by allowing increased loading to be serviced. Growth of equivalent tenements (ET) is based on population growth as shown in the table and graph over.

Projected Population (Source: NSW Planning)	Population Number	Change Number	Change Over Period
2001	32,690		
2006	35,300	2,610	8.0%
2011	37,700	2,400	6.8%
2016	39,900	2,200	5.8%
2021	42,000	2,100	5.3%
2026	43,600	1,600	3.8%

Table 1: Greater Queanbeyan City Council Population Growth Projections



Figure 1. Growth Projections for Greater Queanbeyan City Council.

For residential subdivisions, the increased demand is directly related to the number of additional tenements created.

For medium density development each dwelling unit is considered to increase demand by two thirds (2/3) of a tenement. Therefore charges may be multiplied by 0.67 in the case of town houses less than 3 bedrooms, cluster housing, villa units, medium density, dual occupancy and 1 bedroom flats.

The increased demands generated by other types of development (including non-residential) need to be assessed in terms of additional equivalent tenements. The

number of additional equivalent tenements is calculated in accordance with the Public Works Department's *Manual of Practice: Sewer Design* (1984), now managed by DEUS and/or historical data for similar developments respectively.

Projection of Equivalent Tenements (detached residential basis) is tabulated below:

Table 2: Greater Queanbeyan City Council ET Growth Projections

GREATER QUEANBEYAN CITY COUNCIL		
	1996	2026
Population	27,414	43,600
ET	11,807	16,965

Planned development of the sewerage system is based on these long-term growth projections.

DC pay for the provision of system capacity to suit new development. New development may be served by a combination of existing and/or new works.

2.3 Works Covered by This DSP

The existing and proposed works covered by this DSP are itemised in Section 3. All Greater Queanbeyan City Council's collection systems and treatment works, subject to DC Guidelines, are shown on these tables.

2.4 Cost Estimates

"Current replacement" cost estimates of the existing and proposed works are based on unit rates for construction published in the *NSW Reference Rates for Valuation of Existing Water Supply, Sewerage and Stormwater Assets* by NSW Department of Land and Water Conservation, managed by DEUS. These cost estimates are shown in Section 3.

3. Works Included And Cost Estimates

Both existing and proposed works which are relevant for inclusion in this DSP are itemised in Table 3 following. Cost estimates and year of construction information are included.

Note that costs for existing Sewerage Treatment Plant are shared across a number of zones.

Table 3: Greater Queanbeyan City Council Supply Developer Charge
- Infrastructure Included

QUEANBEYAN SEWERAGE – East Zone

Component			
Pre 1996 Works			
Collection/Transport System			
GRAVITY MAINS			
A043	CARINYA ST/MORRISSET ST	600	mm diameter
C1	COLLETT ST/MORRISSET ST	450	mm diameter
C10	CAMPBELL ST	375	mm diameter
C11	CAMPBELL ST/FARRAR PL/	375	mm diameter
C12	CANBERRA AVE/CAMERON RD	375	mm diameter
C13	CANBERRA AVE	300	mm diameter
C14	CANBERRA AVE	300	mm diameter
C15	CANBERRA AVE/BROUGHTON PL	300	mm diameter
C16	CANBERRA AVE	300	mm diameter
C17	CANBERRA AVE	300	mm diameter
C18	CANBERRA AVE/THARWA RD	300	mm diameter
C19	THARWA RD/MCINTOSH ST/1	225	mm diameter
C2	MORRISSET ST	450	mm diameter
C20	THARWA RD	225	mm diameter
C21	THARWA RD	225	mm diameter
C3	MORRISSET ST	450	mm diameter
C30	LOWE ST	300	mm diameter
C31	CAMPBELL ST/LOWE ST/1	300	mm diameter
C32	CAMPBELL ST/ANTILL ST	300	mm diameter
C33	CAMPBELL ST	300	mm diameter
C34	MORTON ST	300	mm diameter
C4	MORRISSET ST	450	mm diameter
C5	QBN PARK	375	mm diameter
C50	BROUGHTON PL	300	mm diameter
C51	BROUGHTON PL	300	mm diameter
C52	GARLAND AVE/BROUGHTON PL	300	mm diameter
C53	BROUGHTON PL	300	mm diameter
C54	BROUGHTON PL	300	mm diameter
C6	QBN PARK	375	mm diameter

C7	QBN PARK	375	mm diameter
C8	QBN PARK	375	mm diameter
C9	CAMPBELL ST	375	mm diameter
D1	CARINYA ST/MORRISSET ST	600	mm diameter
D10T	TRINCULO PL	600	mm diameter
D11T	TRINCULO PL/MOWATT ST	600	mm diameter
D12T	TRINCULO ST	525	mm diameter
D14T	GOLF COURSE	525	mm diameter
D17T	GOLF COURSE	525	mm diameter
D18T	QBN RIVER-SOUTH EAST	525	mm diameter
D19T	QBN RIVER-SOUTH EAST	525	mm diameter
D2	MO LONGLO ST/WANIASSA ST	600	mm diameter
D20T	DODSWORTH ST	525	mm diameter
D21T	QBN RIVER-SOUTH EAST	600	mm diameter
D22T	QBN RIVER-SOUTH EAST	600	mm diameter
D23	QBN RIVER-SOUTH EAST	600	mm diameter
D24	QBN RIVER-SOUTH EAST	600	mm diameter
D27	QBN RIVER-SOUTH EAST	600	mm diameter
D28	QBN RIVER-SOUTH EAST	600	mm diameter
D29	QBN RIVER-SOUTH EAST	600	mm diameter
D3	WANIASSA ST	375	mm diameter
D30	QBN RIVER-SOUTH EAST	600	mm diameter
D31	QBN RIVER-SOUTH EAST	600	mm diameter
D32	QBN RIVER-SOUTH EAST	600	mm diameter
D33	QBN RIVER-SOUTH EAST	600	mm diameter
D34	QBN RIVER-SOUTH EAST	600	mm diameter
D35	QBN RIVER-SOUTH EAST	600	mm diameter
D36	QBN RIVER-SOUTH EAST	600	mm diameter
D37	QBN RIVER-SOUTH EAST	600	mm diameter
D38	QBN RIVER-SOUTH EAST	300	mm diameter
D3T	MO LONGLO ST/WANIASSA ST	600	mm diameter
D4T	MO LONGLO ST	525	mm diameter
D5T	MACQUOID ST	525	mm diameter
D601	BOOTH ST	225	mm diameter
D602	BOOTH ST	225	mm diameter
D603	BOOTH ST	225	mm diameter
D604	BOOTH ST	225	mm diameter
D6T	MACQUOID ST	525	mm diameter
D7T	MACQUOID ST	525	mm diameter
D8T	MACQUOID ST/TRINCULO PL	525	mm diameter
D9T	TRINCULO PL	600	mm diameter
E201	WANIASSA ST	375	mm diameter
E202	WANIASSA ST	225	mm diameter
E202	ATKINSON ST/WANIASSA ST	375	mm diameter
E203	WANIASSA ST	225	mm diameter
E204	YASS RD	225	mm diameter
E205	WANIASSA ST	225	mm diameter

E206	HIGH ST/WANIASSA ST	225	mm diameter
E207	BUNGENDORE ST/ELLERTON DR	225	mm diameter
E208	BUNGENDORE ST	225	mm diameter
E209	BUNGENDORE ST/ELLERTON DR	225	mm diameter
E210	YASS RD	225	mm diameter
E211	YASS RD/MULLOON ST	225	mm diameter
E212	YASS RD	225	mm diameter
E213	YASS RD	225	mm diameter
E214	YASS RD	225	mm diameter
E215	YASS RD	225	mm diameter
E216	YASS RD/THURRALILLY ST	225	mm diameter
E217	YASS RD	225	mm diameter
F51	OAKS ESTATE	750	mm diameter
F52	OAKS ESTATE	750	mm diameter
F53	OAKS ESTATE	750	mm diameter
F54	OAKS ESTATE	750	mm diameter
F55	OAKS ESTATE	750	mm diameter
F56	OAKS ESTATE	750	mm diameter
F57	OAKS ESTATE	750	mm diameter
F58	OAKS ESTATE	750	mm diameter
F59	OAKS ESTATE	750	mm diameter
F60	OAKS ESTATE	750	mm diameter
F61	HENDERSON ST	750	mm diameter
F62	HENDERSON ST	750	mm diameter
F63	HENDERSON ST	750	mm diameter
F64	HENDERSON ST	750	mm diameter
F65	HENDERSON ST	750	mm diameter
F69	HENDERSON ST	750	mm diameter
F70	HENDERSON ST	750	mm diameter
F71	HENDERSON ST	750	mm diameter
F72	HENDERSON ST	750	mm diameter
F73	HENDERSON ST	750	mm diameter
F74	HENDERSON ST	750	mm diameter
F75	0	750	mm diameter
F76	0	750	mm diameter
F77	0	750	mm diameter
F79	CARINYA ST	750	mm diameter
F80	CARINYA ST	750	mm diameter
F81	CARINYA ST	750	mm diameter
F82	CARINYA ST	750	mm diameter
F83	CARINYA ST	750	mm diameter
F831	HENDERSON ST	300	mm diameter
F832	HENDERSON ST	300	mm diameter
F833	HENDERSON ST	300	mm diameter
F834	HENDERSON ST	300	mm diameter
F835	HENDERSON ST	300	mm diameter
F836	HENDERSON ST	300	mm diameter

F837	HENDERSON ST	225	mm diameter
F838	YOUNG ST	225	mm diameter
F839	YOUNG ST	225	mm diameter
F84	CARINYA ST	450	mm diameter
F840	YOUNG ST	225	mm diameter
F841	YOUNG ST	225	mm diameter
F850	MCKEAHNIE ST	225	mm diameter
I1	GOU-BUM RLY	300	mm diameter
I100	GOU-BOUM RLY	225	mm diameter
I101	HIGH ST	225	mm diameter
I11	CHAPMAN ST	225	mm diameter
I12	CHAPMAN ST	225	mm diameter
I13	CHAPMAN ST	225	mm diameter
I14	CHAPMAN ST	225	mm diameter
I15	BARBER ST	225	mm diameter
I16	BARBER ST	200	mm diameter
I3	GOU-BOM RLY	150	mm diameter
I4	GOU-BOM RLY	150	mm diameter
I5	GOU-BOUM RLY	150	mm diameter
I6	GOU-BOUM RLY	150	mm diameter
I7	GOU-BOUM RLY	150	mm diameter
I8	GOU-BOUM RLY	225	mm diameter
I9	CAPITAL TCE	225	mm diameter
Pump2	GOU-BOUM RLY	225	mm diameter
PUMP2	0	225	mm diameter
Pump2	GOU-BUM RLY	300	mm diameter
PUMP4	CAPITAL TCE	225	mm diameter
	YASS RD		mm diameter
S31	QUEENBAR RD	300	mm diameter
S387	KENNETH PL	300	mm diameter
S40	COOMA RD/KENNETH PL	300	mm diameter
S41	KENNETH PL	300	mm diameter
S42	ALANBAR ST	300	mm diameter
S43	ALANBAR ST	300	mm diameter
S43	ALANBAR ST	300	mm diameter
S44	ALANBAR ST	300	mm diameter
S46	QUEENBAR RD	300	mm diameter
s511	SHOWGROUND	225	mm diameter
s60	SHOWGROUND	225	mm diameter
S612	SHOWGROUND	225	mm diameter
s613	SHOWGROUND	225	mm diameter
s614	COOMA ST	225	mm diameter
PUMP STATIONS			

RISING MAINS			
PUMP1		600	mm diameter
S1		600	mm diameter
S2		600	mm diameter
S3		600	mm diameter
Sewage Treatment Works			
1	Trickling Filter 1		
2	Trickling Filter 2		
3	Sed. Tank 1		
4	Sed. Tank 2		
5	Imhoff Tank		
6	Humus Tank 1		
7	Digestion Tank 1		
8	Digestion Tank 2		
9	Sed. Tank 3		
10	Sed. Tank 3		
11	Digestion Tank 3		
12	Storage room (old boiler house)		
13	Trickling Filter 3		
14	Trickling Filter 4		
15	Humus Tank 2		
16	Digestor Pump1		
17	Digestor Pump2		
18	Maturation Pond 1		
19	Maturation Pond 2		
20	Maturation Pond 3		
21	Maturation Pond 4		
22	Humus Tank 3		
23	Dosing Tank 3		
24	Effluent Retic Pump1		
25	Effluent Retic Pump2		
26	WAS Pump 1		
27	WAS Pump 2		
28	WAS Pump 3		
29	WAS Pump 4		
30	Drainage Pump 1		
31	Drainage Pump 2		
32	Sludge Lagoon 1		
33	Sludge Lagoon 2		
34	Aeration Tank 1		
35	Aerator 1		
36	Aerator 2		
37	Aerator 3		
38	Aerator 4		
39	Aerator 5		

40	Aerator 6		
41	Aerator 7		
42	Aerator 8		
43	Aeration Tank 1		
44	Aeration Tank 1		
45	Inlet Works		
46	Flowmeter 1		
47	Flowmeter 2		
48	Flowmeter 3		
49	Hand Raked Screen		
50	Mech Screen 1		
51	Air Blower 1		
52	Air Blower 2		
53	Air Blower 3		
54	Grit Trap 1		
55	Grit Dewatering Screw		
56	Aeration Tank 1		
57	Fencing		
58	Dosing System		
59	Dosing System		
60	Dosing System		
61	Dosing System		
62	Clarifier 1		
63	Clarifier 2		
64	Clarifier 3		
65	Clarifier 1		
66	Clarifier 2		
67	Clarifier 3		
68	Flow distribution structure		
69	RAS PS 1		
70	RAS PS 2		
71	RAS Pump 1		
72	RAS Pump 2		
73	RAS Pump 3		
74	RAS Pump 4		
75	TFE PS		
76	TFE Pump 1		
77	TFE Pump 2		
78	Clarifier Pipework and Pits		
79	Sludge Lagoon 3		
80	Aeration Tank 2		
81	Mixing Tank		
82	Aerator 9		
83	Aerator 10		
84	Aerator 11		
85	Mixer		
86	Clarifiers		

87	Aeration Tank 2		
88	Sludge PS		
89	Sludge Withdrawal Pump 1		
90	Sludge Withdrawal Pump 2		
91	Sludge Withdrawal Pump 3		
92	Sludge Withdrawal Pump 4		
93	Sludge Withdrawal Pump 5		
94	Sludge Withdrawal Pump 6		
95	Sludge Withdrawal Pump 7		
96	Aeration Tank 2		
97	WA Pump		
98	Flowmeter 4		
99	Flowmeter 5		
100	Mech Screen 2		
101	Air Blower 4		
102	Air Blower 5		
103	Grit Trap 2		
104	Aeration Tank 2		
105	Landscaping		
106	Lighting		
107	Retaining walls at trickling filters		
108	Fuel shed		
109	Access Roads		
Building			
110	Sludge pump/Workshop building		
111	Pump shed - at trickling filters		
112	Storage room (old boiler house)		
113	Amenities building		
114	Garage 1		
115	Garage 2		
116	Electrical room 1 - aeration tank 1		
117	Laboratory/Chemicals building		
118	Electrical room 2 - aeration tank 2		
119	Electrical room - at digestion tanks		
120	Pump shed - at pond 3		
121	Garage 2 extension		
122	Fuel shed		
PUMP STATIONS			
1	Morisset St	Pumps & station equip.	Flygt, 145kW
6	Lochiel St	Pumps & station equip.	FlygtCP3151, 13.5kW
7	Kingsway	Pumps & station equip.	

RISING MAINS			
Sewage Treatment Works			
Post 1996 Works			
Collection/Transport System			
GRAVITY MAINS			
Morisset trunk main augmentation			
CBD trunk main augmentation			
PUMP STATIONS			
2	ARC, Hincksman St	Pumps & station equip.	GP3127, 5.9kW
3	Capital Tce	Pumps & station equip.	GP3127, 5.9kW
4	Yass Rd	Pumps & station equip.	GP3127, 5.9kW
5	Barber St	Pumps & station equip.	CP3127, 5.9kW
8	Blundel St	Pumps & station equip.	
Kathleen	Pumps, station equip & main.		
Upgrade Morisset St pump station			
ARC SPS Switch board replacement			
RISING MAINS			
Sewage Treatment Works			
Upgrade Queanbeyan STP			
Upgrade Queanbeyan STP			

QUEANBEYAN SEWERAGE – West Zone

Component			
Pre 1996 Works			
Collection/Transport System			
GRAVITY MAINS			
W19		600	mm diameter
W20		600	mm diameter
W21		600	mm diameter
W22		600	mm diameter
W23		600	mm diameter
W24		600	mm diameter
W25		600	mm diameter
W26		600	mm diameter
W27		600	mm diameter
W43	BAYLDON RD	600	mm diameter
W44	BAYLDON RD	600	mm diameter
W45	BAYLDON RD	600	mm diameter
W46	RACECOURSE	600	mm diameter
W47	RACECOURSE	600	mm diameter
W48	RACECOURSE	600	mm diameter
W49	RACECOURSE	600	mm diameter
W50	RACECOURSE	150	mm diameter
W50	RACECOURSE	600	mm diameter
W500	RACECOURSE	150	mm diameter
W501	RACECOURSE	150	mm diameter
W502	RACECOURSE	150	mm diameter
W503	RACECOURSE	150	mm diameter
W505	RACECOURSE	150	mm diameter
W506	RACE COURSE	225	mm diameter
W507	RACECOURSE	225	mm diameter
W508	RACECOURSE	225	mm diameter
W509	RACECOURSE	225	mm diameter
W51	RACECOURSE	600	mm diameter
W510	FURLONG RD	225	mm diameter
W52	RACECOURSE	600	mm diameter
W53	RACECOURSE	600	mm diameter
W54	RACECOURSE	600	mm diameter
W55	RACECOURSE	600	mm diameter

W56	RACECOURSE	600	mm diameter
W57	HOOVER RD	600	mm diameter
W58	RACECOURSE	600	mm diameter
W59	HOOVER RD	600	mm diameter
W60	HOOVER RD	600	mm diameter
W61	HOOVER RD	600	mm diameter
W62		600	mm diameter
W63		600	mm diameter
W64		600	mm diameter
W65		600	mm diameter
W66		600	mm diameter
W67		600	mm diameter
W68		600	mm diameter
W69		600	mm diameter
W70		600	mm diameter
W71		600	mm diameter
W72		600	mm diameter
W74		600	mm diameter
W75		600	mm diameter
W76		600	mm diameter
W77		600	mm diameter
W78	JERRABOMBERRA PKWY/3	450	mm diameter
PUMP STATIONS			
RIISING MAINS			
W28		600	mm diameter
Sewage Treatment Works			
1	Trickling Filter 1		
2	Trickling Filter 2		
3	Sed. Tank 1		
4	Sed. Tank 2		
5	Imhoff Tank		
6	Humus Tank 1		
7	Digestion Tank 1		
8	Digestion Tank 2		
9	Sed. Tank 3		
10	Sed. Tank 3		
11	Digestion Tank 3		
12	Storage room (old boiler house)		
13	Trickling Filter 3		
14	Trickling Filter 4		
15	Humus Tank 2		
16	Digestor Pump1		
17	Digestor Pump2		
18	Maturation Pond 1		

19	Maturation Pond 2		
20	Maturation Pond 3		
21	Maturation Pond 4		
22	Humus Tank 3		
23	Dosing Tank 3		
24	Effluent Retic Pump1		
25	Effluent Retic Pump2		
26	WAS Pump 1		
27	WAS Pump 2		
28	WAS Pump 3		
29	WAS Pump 4		
30	Drainage Pump 1		
31	Drainage Pump 2		
32	Sludge Lagoon 1		
33	Sludge Lagoon 2		
34	Aeration Tank 1		
35	Aerator 1		
36	Aerator 2		
37	Aerator 3		
38	Aerator 4		
39	Aerator 5		
40	Aerator 6		
41	Aerator 7		
42	Aerator 8		
43	Aeration Tank 1		
44	Aeration Tank 1		
45	Inlet Works		
46	Flowmeter 1		
47	Flowmeter 2		
48	Flowmeter 3		
49	Hand Raked Screen		
50	Mech Screen 1		
51	Air Blower 1		
52	Air Blower 2		
53	Air Blower 3		
54	Grit Trap 1		
55	Grit Dewatering Screw		
56	Aeration Tank 1		
57	Fencing		
58	Dosing System		
59	Dosing System		
60	Dosing System		
61	Dosing System		
62	Clarifier 1		
63	Clarifier 2		
64	Clarifier 3		
65	Clarifier 1		

66	Clarifier 2		
67	Clarifier 3		
68	Flow distribution structure		
69	RAS PS 1		
70	RAS PS 2		
71	RAS Pump 1		
72	RAS Pump 2		
73	RAS Pump 3		
74	RAS Pump 4		
75	TFE PS		
76	TFE Pump 1		
77	TFE Pump 2		
78	Clarifier Pipework and Pits		
79	Sludge Lagoon 3		
80	Aeration Tank 2		
81	Mixing Tank		
82	Aerator 9		
83	Aerator 10		
84	Aerator 11		
85	Mixer		
86	Clarifiers		
87	Aeration Tank 2		
88	Sludge PS		
89	Sludge Withdrawal Pump 1		
90	Sludge Withdrawal Pump 2		
91	Sludge Withdrawal Pump 3		
92	Sludge Withdrawal Pump 4		
93	Sludge Withdrawal Pump 5		
94	Sludge Withdrawal Pump 6		
95	Sludge Withdrawal Pump 7		
96	Aeration Tank 2		
97	WA Pump		
98	Flowmeter 4		
99	Flowmeter 5		
100	Mech Screen 2		
101	Air Blower 4		
102	Air Blower 5		
103	Grit Trap 2		
104	Aeration Tank 2		
105	Landscaping		
106	Lighting		
107	Retaining walls at trickling filters		
108	Fuel shed		
109	Access Roads		
Building			
110	Sludge pump/Workshop building		
111	Pump shed - at trickling filters		

112	Storage room (old boiler house)		
113	Amenities building		
114	Garage 1		
115	Garage 2		
116	Electrical room 1 - aeration tank 1		
117	Laboratory/Chemicals building		
118	Electrical room 2 - aeration tank 2		
119	Electrical room - at digestion tanks		
120	Pump shed - at pond 3		
121	Garage 2 extension		
122	Fuel shed		
Post 1996 Works			
Collection/Transport System			
GRAVITY MAINS			
Bayldon drive trunk sewer augmentation			
PUMP STATIONS			
Bayside Court additional storage well			
RISING MAINS			
Sewage Treatment Works			
Upgrade Queanbeyan STP			
Upgrade Queanbeyan STP			

QUEANBEYAN SEWERAGE – South West Zone

Component	
<i>Pre 1996 Works</i>	
<u>Collection/Transport System</u>	
<i>GRAVITY MAINS</i>	
<i>PUMP STATIONS</i>	
<i>RISING MAINS</i>	
<u>Sewage Treatment Works</u>	
1	Trickling Filter 1
2	Trickling Filter 2
3	Sed. Tank 1
4	Sed. Tank 2
5	Imhoff Tank
6	Humus Tank 1
7	Digestion Tank 1
8	Digestion Tank 2
9	Sed. Tank 3
10	Sed. Tank 3
11	Digestion Tank 3
12	Storage room (old boiler house)
13	Trickling Filter 3
14	Trickling Filter 4
15	Humus Tank 2
16	Digestor Pump1
17	Digestor Pump2
18	Maturation Pond 1
19	Maturation Pond 2
20	Maturation Pond 3
21	Maturation Pond 4
22	Humus Tank 3
23	Dosing Tank 3
24	Effluent Retic Pump1

25	Effluent Retic Pump2
26	WAS Pump 1
27	WAS Pump 2
28	WAS Pump 3
29	WAS Pump 4
30	Drainage Pump 1
31	Drainage Pump 2
32	Sludge Lagoon 1
33	Sludge Lagoon 2
34	Aeration Tank 1
35	Aerator 1
36	Aerator 2
37	Aerator 3
38	Aerator 4
39	Aerator 5
40	Aerator 6
41	Aerator 7
42	Aerator 8
43	Aeration Tank 1
44	Aeration Tank 1
45	Inlet Works
46	Flowmeter 1
47	Flowmeter 2
48	Flowmeter 3
49	Hand Raked Screen
50	Mech Screen 1
51	Air Blower 1
52	Air Blower 2
53	Air Blower 3
54	Grit Trap 1
55	Grit Dewatering Screw
56	Aeration Tank 1
57	Fencing
58	Dosing System
59	Dosing System
60	Dosing System
61	Dosing System
62	Clarifier 1
63	Clarifier 2
64	Clarifier 3
65	Clarifier 1
66	Clarifier 2
67	Clarifier 3
68	Flow distribution structure
69	RAS PS 1
70	RAS PS 2
71	RAS Pump 1

72	RAS Pump 2
73	RAS Pump 3
74	RAS Pump 4
75	TFE PS
76	TFE Pump 1
77	TFE Pump 2
78	Clarifier Pipework and Pits
79	Sludge Lagoon 3
80	Aeration Tank 2
81	Mixing Tank
82	Aerator 9
83	Aerator 10
84	Aerator 11
85	Mixer
86	Clarifiers
87	Aeration Tank 2
88	Sludge PS
89	Sludge Withdrawal Pump 1
90	Sludge Withdrawal Pump 2
91	Sludge Withdrawal Pump 3
92	Sludge Withdrawal Pump 4
93	Sludge Withdrawal Pump 5
94	Sludge Withdrawal Pump 6
95	Sludge Withdrawal Pump 7
96	Aeration Tank 2
97	WA Pump
98	Flowmeter 4
99	Flowmeter 5
100	Mech Screen 2
101	Air Blower 4
102	Air Blower 5
103	Grit Trap 2
104	Aeration Tank 2
105	Landscaping
106	Lighting
107	Retaining walls at trickling filters
108	Fuel shed
109	Access Roads
Building	
110	Sludge pump/Workshop building
111	Pump shed - at trickling filters
112	Storage room (old boiler house)
113	Amenities building
114	Garage 1
115	Garage 2
116	Electrical room 1 - aeration tank 1
117	Laboratory/Chemicals building

118	Electrical room 2 - aeration tank 2
119	Electrical room - at digestion tanks
120	Pump shed - at pond 3
121	Garage 2 extension
122	Fuel shed
Post 1996 Works	
Collection/Transport System	
GRAVITY MAINS	
PUMP STATIONS	
SW Qbn Trunk sewer and Pump Stns	
SW Qbn Trunk sewer and Pump Stns	
SW Qbn Trunk sewer and Pump Stns	
RISING MAINS	
Sewage Treatment Works	
Upgrade Queanbeyan STP	
Upgrade Queanbeyan STP	

QUEANBEYAN SEWERAGE– Googong Zone

Component
<i>Pre 1996 Works</i>
<u>Collection/Transport System</u>
<i>GRAVITY MAINS</i>
<i>PUMP STATIONS</i>
<i>RISING MAINS</i>
<u>Sewage Treatment Works</u>
<i>Post 1996 Works</i>
<u>Collection/Transport System</u>
<i>GRAVITY MAINS</i>
Googong Trunk sewer
<i>PUMP STATIONS</i>
<i>RISING MAINS</i>
<u>Sewage Treatment Works</u>
Googong STP

4. Levels of Service and Design Parameters for Sewerage

4.1 Levels of Service

System design and operation are based on providing the following Levels of Service to Greater Queanbeyan City Council:

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current	Target
Availability of Service Extent of area serviced	serviced area	All areas serviced except for Ridgeway	All areas serviced except for Ridgeway
Frequency of System Failures Category One Failure due to rainfall and deficient capacity	number/year	0	0
Category Two Failures due to pump or other breakdown include power failure	number /year	0	0
Category Three Failures due to blockages	number/year	300	200
Response Times To System Failure (Defined as the maximum time to have staff on site to commence rectification after notification.) Priority One (Major spill, significant environmental or health impact, or affecting large number of consumers ie a major main) Response time during working hours: Response time after hours:	minutes minutes	60 60	60 60
Priority Two (Moderate spill, some environmental or health impact, or affecting small number of consumers ie other mains) Response time during working hours: Response time after hours:	minutes minutes	60 60	60 60

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current	Target
Priority Three (Minor spill, little environmental or health impact, or affecting a couple of consumers) Response time during working hours: Response time after hours:	minutes minutes	60 60	60 60
Response Times to General or Minor Customer Complaints and Inquiries Written complaints Oral complaints <u>Note: times for 95% of complaints</u>	Day Day	5 1	5 1
Odour Complaints Treatment works Odour complaints	No / Year No / Year	0 0	0 0 ¹
Discharge Site 90 Percentile licence limits Biochemical oxygen demand TDS Suspended solids Total nitrogen Ammonium nitrogen Oil and grease Total phosphorus 80 percentile faecal coliforms	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L cfu/100mL	Site 619, Molongolo F 10 650 20 35 Formulae N/A 0.3 1000	Site 619, Molongolo 10 650 20 35 Formulae N/A 0.3 1000

4.2 Design Parameters

Investigation and design of sewerage system components is based on the *Manual of Practice: Sewer Design* (1984) and the *Manual of Practice: Sewerage Pumping Station Design* (1986). These manuals were prepared by NSW Public Works and are now managed by DEUS.

Technical reports relating to the system components in the DSP are included in Section 6, References

¹ Note: Morissett Street "bio box" to be replaced annually

5. Developer Charges

5.1 Reticulation

Greater Queanbeyan City Council does not charge a monetary charge for the construction of reticulation pipework. Developers are responsible for the provision of these works. These may be handed over to Greater Queanbeyan City Council upon completion of the development.

5.2 Collection Systems and Treatment Works

The calculated DC, based on full cost recovery, is for South-West \$6,844 per ET; for Googong \$3,612 per ET; and for East and West \$1,082 per ET. This is based on full cost recovery (refer Appendix 4 for cross-subsidy options). This has been arrived at through a process of structured consultation with representatives of stakeholders and the general community. This covers both collection systems and treatment works.

Details of the derivation of the calculated DC is included in the background document to the DSP, *Sewerage Developer Charges Calculation 2004*, prepared by the Department of Commerce.

5.3 Payment of Developer Charges

5.3.1 Timing of Payments

Subject to clauses 5.3.2 and 5.3.3 the timing for payments of developer charges is as follows:

For <u>complying development</u>	Following the issuing of a complying development certificate and prior to the commencement of work (whether or not the certificate is issued by Council or an accredited certifier).
For <u>other development</u>	Prior to the release of the Construction Certificate or the issuing of a Notice of Commencement of Work should the proposed development not involve construction.
For <u>subdivision</u>	Prior to the release of the Linen Plan.

5.3.2 Method of Payment

Developer charges must be made in the form of monetary payments to Greater Queanbeyan City Council. Development consents requiring the payment of a DC will contain a condition specifying the amount payable in monetary terms at the time the consent is issued. A note will be attached to the consent condition which will advise that the DC will be at the rate which applies at the time of payment. That is the rate may increase, through indexation or replacement of this DSP with a new one, from the time the condition appears on the notice of development consent until the time the DC is actually paid to Council.

The deferral of payment of contributions is only permissible subject to formal resolution by Council prior to this occurring. Any request should provide detailed reasons and should agreement be granted, deferral will be subject to the following requirements:

- The applicant is to arrange for a Bank Guarantee to be prepared to the value of contributions payable as agreed to by Council (this is to include indexation where applicable),
- The Bank Guarantee is to be made in favour of Council,
- Council is to be the custodian of the original Bank Guarantee, and
- The maximum time frame granted for deferment is (6) months. Should the contributions not be paid by this time, Council will exercise its right under the agreement to call in the Bank Guarantee without notice. Should the approved deferment overlap into the following financial year, then the contribution(s) payable will be subject to indexation.

Council does not permit the payment of contributions in instalments, rather opting for the preparation of a Bank Guarantee in lieu of payment of contributions.

5.3.3 Works in Kind Contributions

Upon written request, Council will consider an offer by the applicant to make a contribution by way of "works in kind" provided that:

- (a) The proposed work satisfies the demands for the kind of public amenities and facilities for which the contribution is sought,
- (b) The proposed work will not prejudice the timing or the manner of the provision of the amenity or facility for which the contribution was required,
- (c) The value of the work is at least equal to the value of the contribution assessed in accordance with this plan and that this value is adequately documented,
- (d) Agreement has been reached as to the standard of work to be undertaken, and
- (e) Where the difference of the value of the work in kind is less than the contribution assessed in accordance with this plan, the balance shall be made by way of monetary contribution.

As part of the Council's decision making process, a request would only be considered provided the applicant was agreeable to all of the following stipulations:

- An agreement between the applicant and Council on the cost of the works (and value of the work in kind) which is to be determined by reference to satisfactory plans, breakdown of costs, review of audited statements and accounts or similar submitted by the applicant. There would be no indexing of the value of the work in kind or credits so granted.
- The number of credits for a particular type of contribution will be determined by dividing the agreed value of the proposed work by the rate applying to that contribution at the time of the agreement. The credits so agreed will be progressively reduced as the development proceeds. The agreed works schedule may specify those works that may be considered as works in kind.
- An agreed 12 month Defects Liability Period for the cost of the agreed work.
- An agreed standard of workmanship.

- An agreed timetable for the inspection of the works.
- An agreed program for the completion of works.
- Submission of an itemised statement of costs (including all receipts) of the completed works. Where the final cost of the works is less than the initial agreed cost of works, the balance is to be paid to Council as a monetary contribution. The costs of works are to also include a breakdown of all labour costs.

Please note that Council will not acknowledge any costs incurred associated with the agreement of Works in Kind as part of above itemised statement.

The decision to accept settlement of a contribution by way of a work in kind is at the sole discretion of Council and will require a Council resolution prior to implementation.

It is Council's preference that for broad acre release areas that Council accepts works in kind and that these are to be fully constructed prior to the release of the Linen Plan or at such time as identified in a "written agreement" between Council and the developer.

Should works in kind that have been agreed to by Council be later withdrawn by the applicant for any reason, then the applicant will be liable for the payment of contributions in accordance with the conditions of development consent or complying development certificate plus any indexations that may have occurred since the approval date.

5.4 Staged Subdivision/Development

In the event of a staged subdivision or development, Greater Queanbeyan City Council will accept the staged payment of developer charges as specified above, ie prior to the release of the linen plan for each stage of subdivision and prior to the release of any building approval for a particular stage of a development.

Deferred payment of DC other than in accordance with Greater Queanbeyan City Council's requirements for Staged Subdivision and Development, is not permitted by Greater Queanbeyan City Council.

5.5 DC Waiver

Greater Queanbeyan City Council may waive DC ordinarily attributable to subdivision and development, where the proponent demonstrates to Greater Queanbeyan City Council's satisfaction, that it is a non-profit and charitable organisation, which by virtue of carrying out such development, is considered by the Greater Queanbeyan City Council to be making a significant and positive contribution to the community.

5.6 Reviewing and Revising of Developer Charges

Developer charges calculations relating to this DSP will be reviewed after a period of five to six years, or when any significant changes occur in proposed works, growth projections or standards.

In the period between any reviews, developer charges will be revised on 1 July each year on the basis of movements in the Consumer Price Index (CPI) for Canberra, in the preceding 12 months to December, excluding the impact of GST.

6. References

- (1) NSW Public Works, *Manual of Practice: Sewer Design* (1984).
- (2) NSW Public Works, *Manual of Practice: Sewerage Pumping Station Design* (1986)
- (3) NSW Public Works, *Water Supply and Sewerage Management Guidelines* (1991).
- (4) Montgomery Watson Australia Pty Ltd, *Queanbeyan Water Pollution Control Centre, Future Needs – Final Report* (1995).
- (5) Sinclair Knight Merz, *West Queanbeyan ILAP, Financial Feasibility* (1996).
- (6) GHD Pty Ltd, *Morisset Street Sewerage Pumping Station Augmentation, Preliminary Sketch Plan Report* (2000).
- (7) Ecowise Environmental, *Greater Queanbeyan City Council Sewer Monitoring Inflow and Infiltration Study* (2001).
- (8) Department of Land and Water Conservation, *Guidelines - Developer Charges for Water Supply, Sewerage and Stormwater* (2002)
- (9) GHD Pty Ltd, *Strategic Master Plan for Water Supply for South West Region* (2003).
- (10) Department of Commerce, *Greater Queanbeyan City Council Sewerage Developer Charges Calculation* (2004).

APPENDIX No. 1 - STATE ENVIRONMENTAL PLANNING POLICIES APPLYING TO GREATER QUEANBEYAN CITY COUNCIL SEWERAGE

There are no State Environmental Planning Policies applicable to the Greater Queanbeyan City Council sewerage scheme at the time of preparation of this DSP; if applicable during the life of this DSP, they should be listed in this Appendix.

APPENDIX No. 2 - GREATER QUEANBEYAN CITY COUNCIL - OTHER DSP'S RELEVANT

Developer charges of the other services, including from Section 94 DSPs, are in "Part 6 - Fees & Charges of Council Management Plan 2004/2005" which is in the Council web site under "Publications".

APPENDIX No. 3 - PLANS OF SEWERAGE SCHEME

Figure 1 – Map of Greater Queanbeyan City Council Area

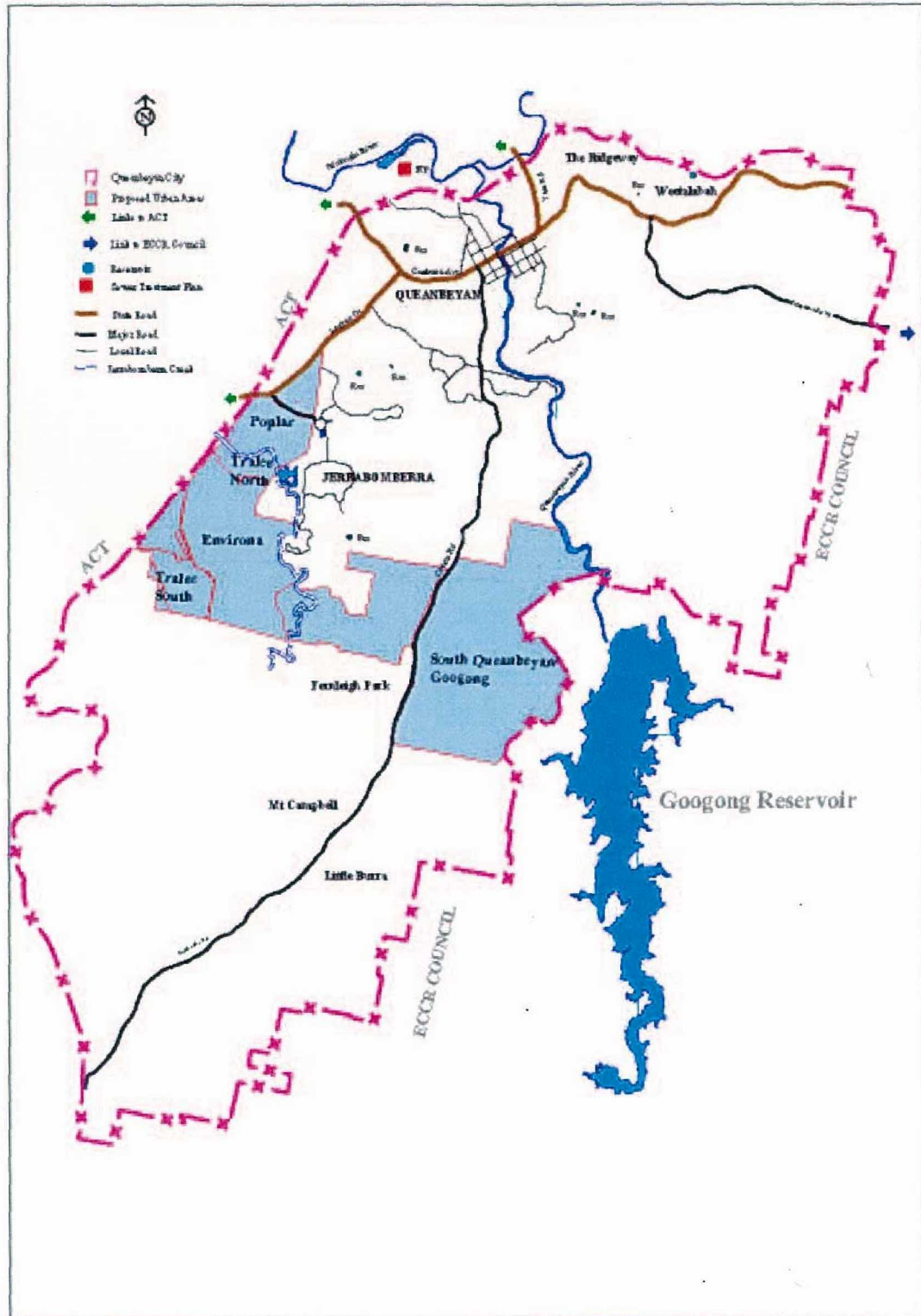


Figure 2 –Greater Queanbeyan City Council Sewerage Service Area

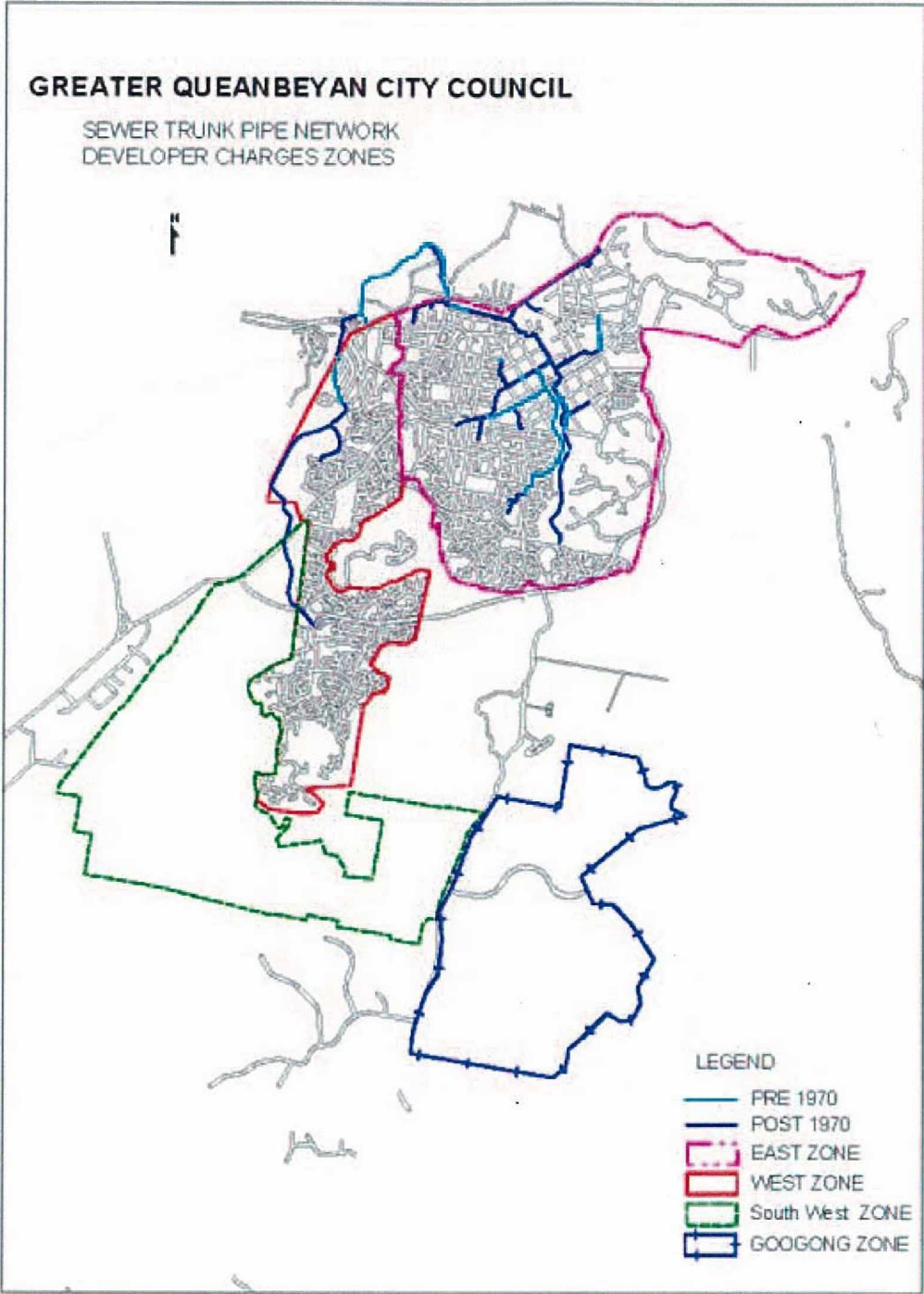


Figure 3 – Greater Queanbeyan City Council Sewerage Service Area – East Developer Charge Zone

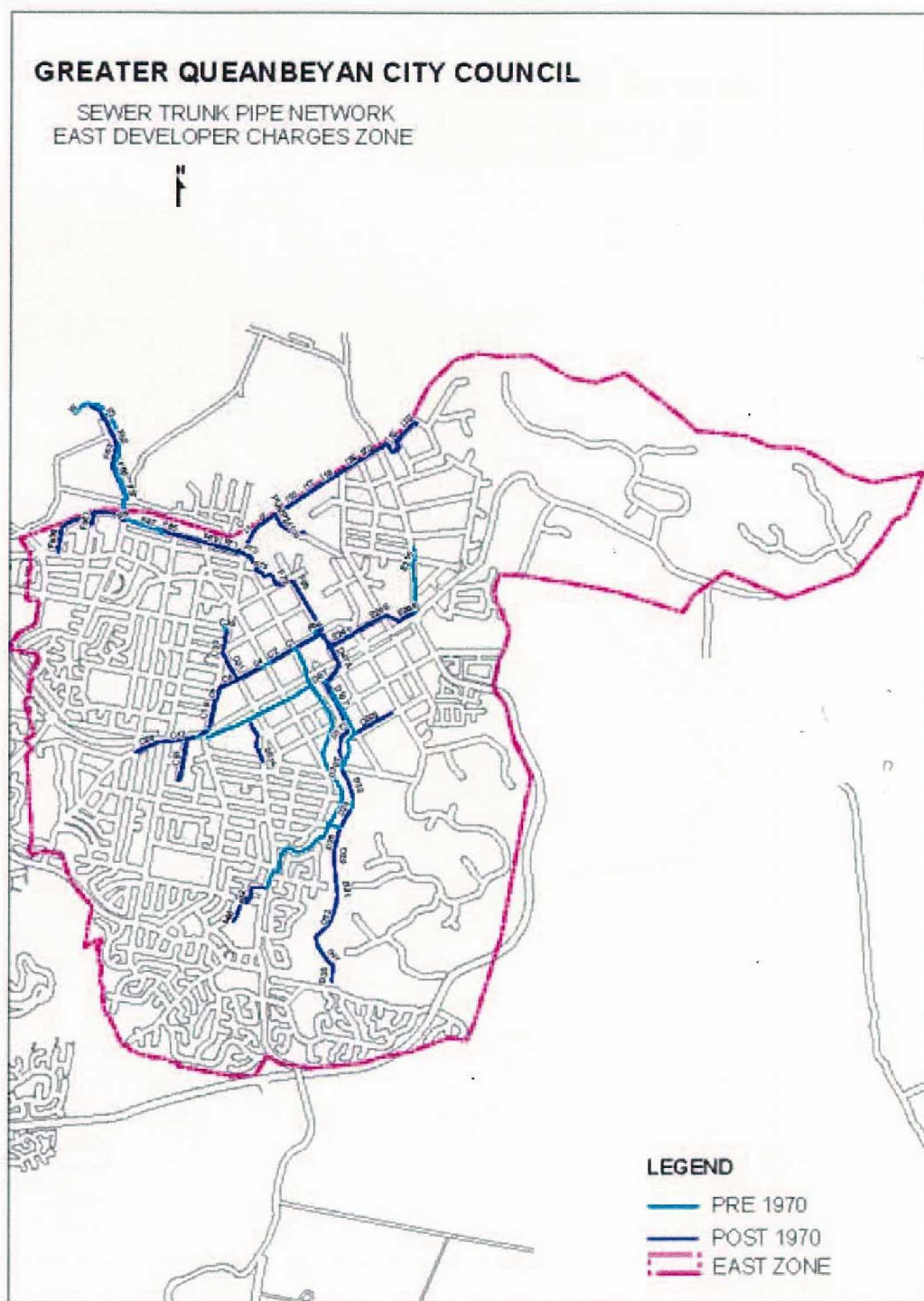
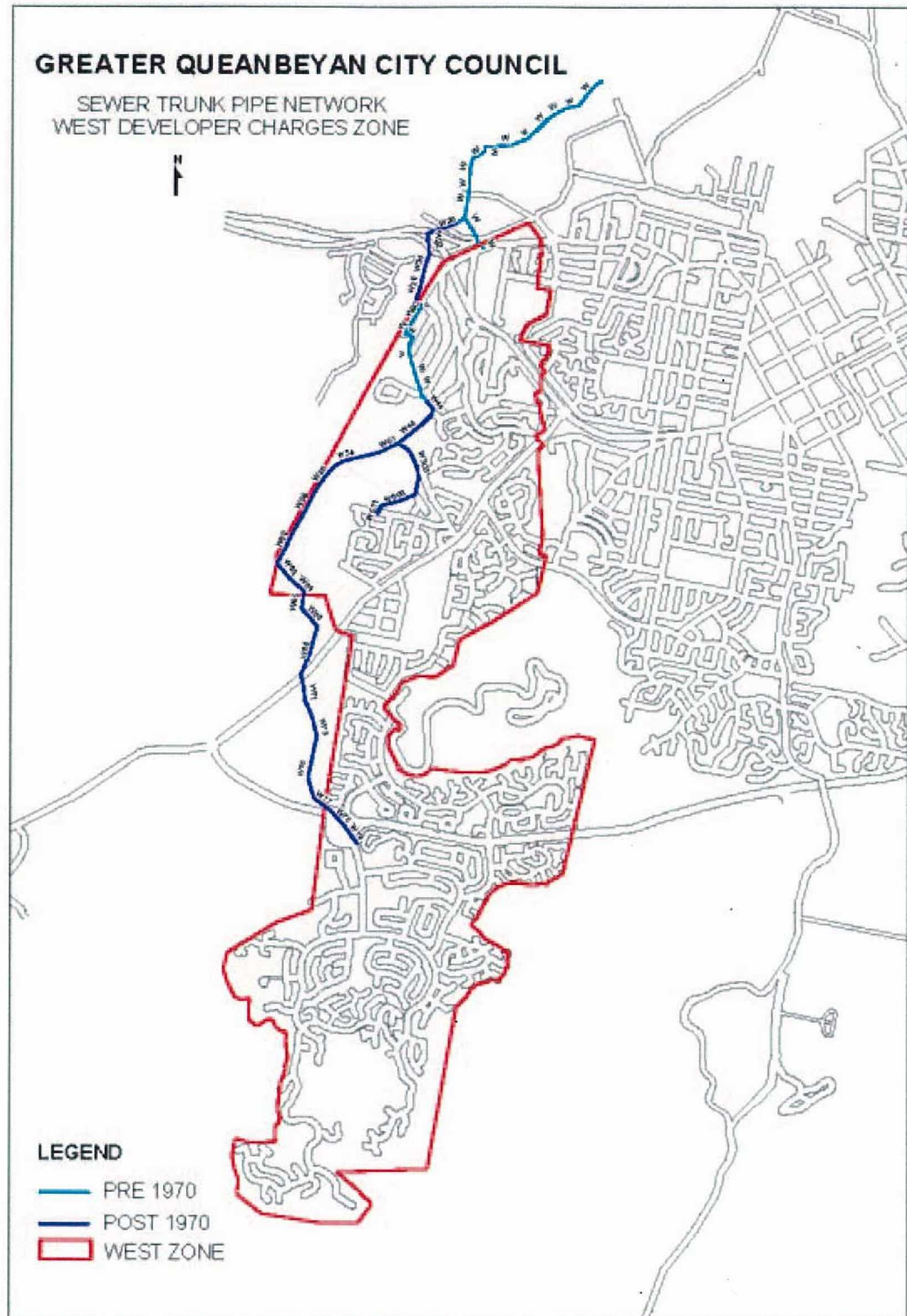


Figure 4 – Greater Queanbeyan City Council Sewerage Service Area – West Developer Charge Zone



APPENDIX No. 4 - CROSS-SUBSIDY COMPARISONS (IF APPLICABLE)