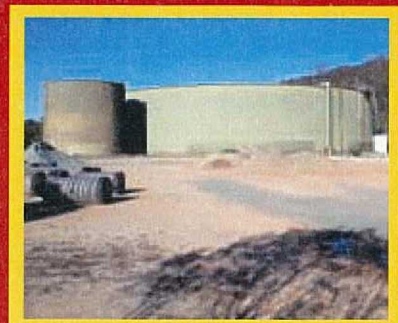
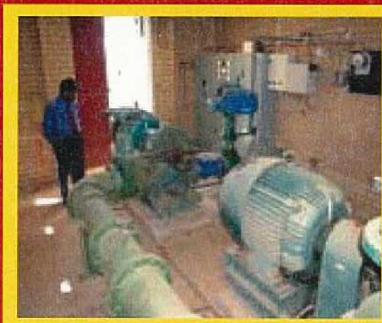
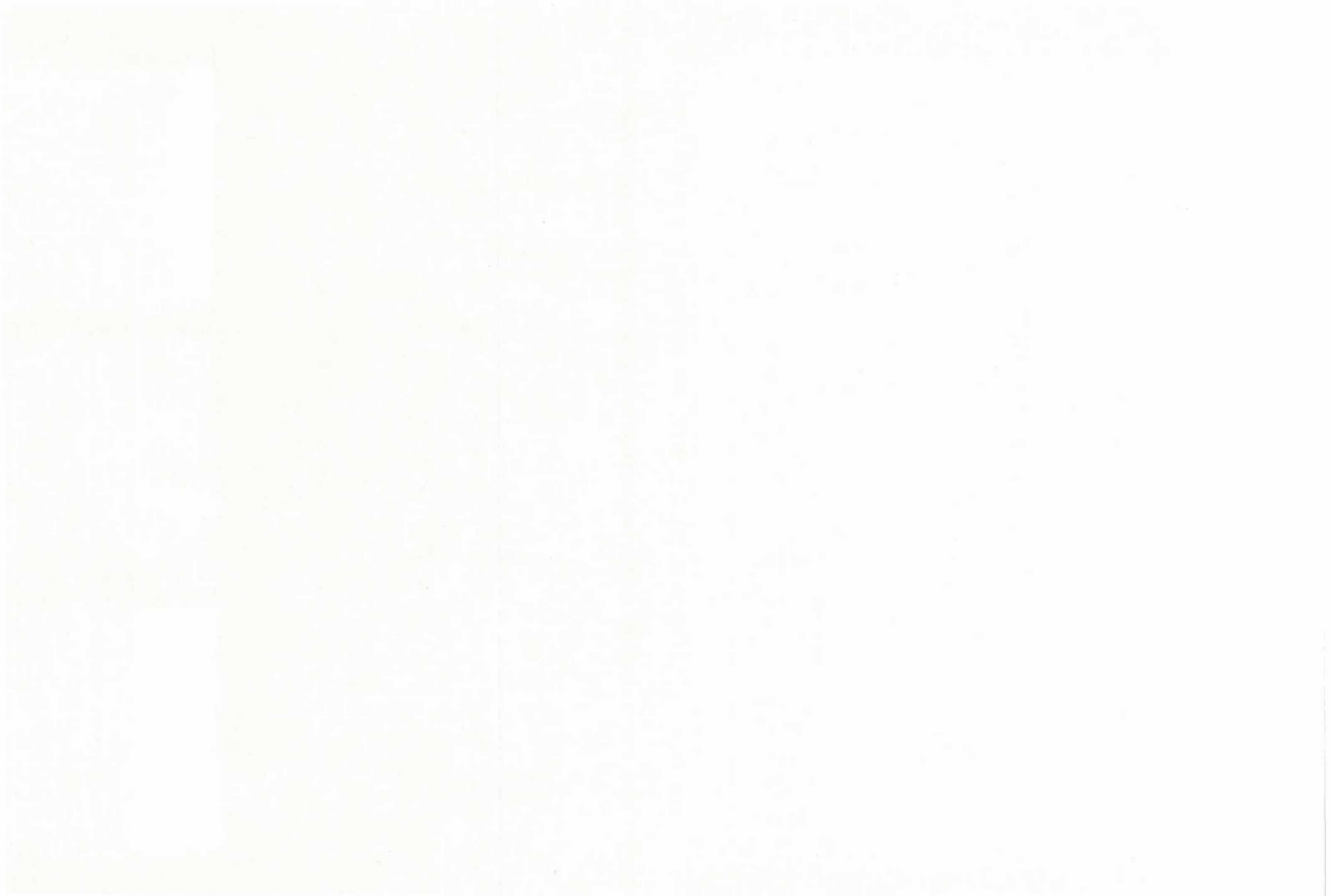


## **Development Servicing Plan For Greater Queanbeyan City Council Water Supply**

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







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# GREATER QUEANBEYAN CITY COUNCIL

## DEVELOPMENT SERVICING PLAN - WATER SUPPLY

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# DEVELOPMENT SERVICING PLAN - WATER SUPPLY

## **Summary**

This Development Servicing Plan (DSP) covers water supply developer charges (DC) for the Greater Queanbeyan City Council. This relates to assets such as transfer mains and storage reservoirs; it does not apply to bulk water supply from ACTEW Corporation.

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 water supply infrastructure to meet the demands generated by development.
2. Facilitate the future provision of a water supply to the Greater Queanbeyan City Council area which meets the required levels of service with regard to flows, pressure, water quantity and the frequency of restrictions.
3. Set out the schedule and programme of proposed works to meet increasing demands for a "town water" supply generated by development.
3. Detail the contribution rates and Greater Queanbeyan City Council's payment policies.

To enable this, a future demand estimate of water supply 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 water supply infrastructure to meet the expected demand.

The calculated DC, based on full cost recovery, is for Queanbeyan and Googong, \$3,225 per ET; and for Jerrabomberra and South West, \$6,726 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 water supply 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 water supply infrastructure to meet the demands generated by new development on headworks and distribution works.
2. Facilitate the provision of a water supply to the Greater Queanbeyan City Council area which meets the required levels of service with regard to flows, pressure, water quantity and the frequency of restrictions.
3. Identify the existing relevant works and set out a schedule and programme of proposed works to meet increasing demands for a "town water" supply generated by development.
4. Detail the contribution rates and Greater Queanbeyan City Council's payment policies.

The water supply system for which Greater Queanbeyan City Council seeks to levy DC includes "minor" headworks and distribution works. Bulk water supply "major" headworks is provided by ACTEW Corporation. 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 water benefit area (ie generally 225 metres from an existing water main) or which is to be connected to the water supply system as a result of development. Maps of water supply areas can be found in Appendix 3.

The water catchments are defined based on the existing suburbs which are Queanbeyan and Jerrabomberra. Jerrabomberra is a fairly recently developed area of about 20 years in age compared to Queanbeyan. Queanbeyan Zone consists of several pressure zones (Jerrabomberra Reservoirs, Crest Reservoirs, East Queanbeyan, Greenleigh Reservoirs and Rigdeway); each of the reservoirs are interconnected and therefore it is defined as one area. Jerrabomberra Zone consists of three pressure zones (Jerrabomberra Reservoirs, Thornton Reservoirs and Homestead Reservoir).

## **1.4 Calculation Guidelines**

This DSP has been prepared with consideration given to *Developer Charges Guidelines 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 17<sup>th</sup> 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 water supply 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 water supply 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. Headworks generally, which provide bulk treated water supply, are the responsibility of ACTEW Corporation and not included in this DSP. Distribution 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 Headworks**

For the purposes of this DSP headworks are defined as dams, water treatment plants and major pumping stations. They are not included in the DSP except for "minor" headworks for South West Queanbeyan and Googong development, which will be funded by Council.

### **1.7.2 Distribution Works**

Distribution works are primarily defined as trunk mains and service reservoirs, and also include minor pump stations.

### **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 water supply reticulation works within subdivisions.

Plans of water supply 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, water infrastructure consists of an on-going progression of old and new assets with complex interconnection. Water assets may be constructed many years ahead of full capacity to reflect cost effective and practical staging of works.

Only distribution 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).

$$\text{Developer charge} = \text{Capital charge} - \text{Reduction amount.}$$

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 water supply system. Water supply assets may directly or indirectly benefit a development by allowing increased demand to be met. 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 *Water Supply Investigation Manual*, 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
<b>Population</b>	27,414	43,600
<b>ET</b>	11,807	16,965

Planned development of the water supply 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 distribution works (and minor headworks), 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.



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

QUEANBEYAN WATER SUPPLY - Queanbeyan Zone

Component (Number)			
<b>Pre 1996 Works</b>			
<b>Dams &amp; Reservoirs</b>			
5	Upper Greenleigh	Reservoir	3 x 0.37 ML
6	Ridgeway	Reservoir	0.8 ML
7	Jerrabomberra	Reservoir	22.5 ML
9	Thorntons	Reservoir	1.0 ML
<b>Transfer System</b>			
7	HELLMUND ST	250	mm diameter
8	LANYON DR/HOOVER RD	250	mm diameter
9	LANYON DR	250	mm diameter
10	HOOVER RD	200	mm diameter
11	HELLMUND ST	250	mm diameter
12	LANYON DR/MCCRAE ST/1	250	mm diameter
13	MALONEY ST	250	mm diameter
14	MCCRAE ST/MALONEY ST	250	mm diameter
15	MCCRAE ST/MALONEY ST	250	mm diameter
16	MCRAE ST	250	mm diameter
17	HELLMUND ST	250	mm diameter
18	STEEL PL	250	mm diameter
19	MCCRAE ST/HELLMUND ST	250	mm diameter
20	MCCRAE ST	250	mm diameter
21	MCCRAE ST	250	mm diameter
22	MCCRAE ST	250	mm diameter
28	KENDALL AVE NORTH	200	mm diameter
29	KENDALL AVE NORTH	200	mm diameter
52	STUART ST/HEATHER ST	300	mm diameter
53	STUART ST	300	mm diameter
54	STUART ST	300	mm diameter
55	CREST RD - RESERVOIRS	375	mm diameter
60	CREST RD - RESERVOIRS	450	mm diameter
61	STUART ST	375	mm diameter
62	CREST RD - RESERVOIRS	250	mm diameter
63	CREST RD - RESERVOIRS	375	mm diameter
67	MUNRO RD	200	mm diameter
68	GILMORE PL	200	mm diameter
72	RESERVE	300	mm diameter
77	CREST RD - RESERVOIRS	375	mm diameter
89	RESERVE	300	mm diameter
90	RESERVE	300	mm diameter
107	THORPE AVE	250	mm diameter

108	THORPE AVE	250	mm diameter
109	CRAWFORD ST	250	mm diameter
110	GLEBE AVE	200	mm diameter
111	COOMA RD	250	mm diameter
112	COOMA RD/ISABELLA ST	200	mm diameter
113	ISABELLA ST	200	mm diameter
114	SOUTHBAR RD	200	mm diameter
115	SOUTHBAR RD	200	mm diameter
125	DOSWORTH ST	300	mm diameter
126	DODSWORTH ST/BROWN ST	300	mm diameter
131	DODSWPRTH ST	375	mm diameter
132	DODSWORTH ST	300	mm diameter
136	RESERVE - 2ND OFFTAKE	375	mm diameter
137	RESERVE - 2ND OFFTAKE	375	mm diameter
138	RESERVE - 2ND OFFTAKE	375	mm diameter
139	RESERVE - ESTQBN	375	mm diameter
140	RESERVE - ESTQBN	375	mm diameter
141	RESERVE - ESTQBN	375	mm diameter
142	RESERVE - ESTQBN	375	mm diameter
143	RESERVE - ESTQBN	375	mm diameter
144	EST QBN RESERVOIR	300	mm diameter
145	EST QBN RESERVOIR	375	mm diameter
146	EST QBN RESERVOIR	375	mm diameter
147	EST QBN RESERVOIR	375	mm diameter
148	EST QBN RESERVOIR	375	mm diameter
149	EST QBN RESERVOIR	375	mm diameter
150	EST QBN RESERVOIR	375	mm diameter
151	EST QBN RESERVOIR	375	mm diameter
152	EST QBN RESERVOIR	375	mm diameter
156	CREST RESERVOIR	450	mm diameter
198	ELLERTON DR	300	mm diameter
199	MOWATT ST	300	mm diameter
215	WYCOMBE ST/BASS ST	200	mm diameter
216	BARROW PL	200	mm diameter
217	BASS ST	200	mm diameter
218	BARROW PL	200	mm diameter
219	CARWOOLA ST	300	mm diameter
220	AURORA AVE	300	mm diameter
221	CARWOOLA ST	300	mm diameter
222	BASS ST	200	mm diameter
231	URIARRA RD/ROSS RD	200	mm diameter
241	CRAWFORD ST	250	mm diameter
242	CRAWFORD ST	250	mm diameter
243	CRAWFORD ST/RUTLEDGE ST	250	mm diameter
244	CRAWFORD ST/RUTLEDGE ST	250	mm diameter
247	MONARO ST	300	mm diameter
248	MONARO ST	300	mm diameter
250	CRAWFORD ST	200	mm diameter
251	CRAWFORD ST/?	250	mm diameter
252	CRAWFORD ST	200	mm diameter
266	URIARRA RD	200	mm diameter
269	STORNAWAY RD	200	mm diameter
272	MORTON ST/STORNAWAY RD	200	mm diameter
277	STORNAWAY RD	200	mm diameter
282	MONARO ST/COLLETT ST	300	mm diameter
286	STORNAWAY RD	200	mm diameter



288	STORNAWAY RD	200	mm diameter
289	COOMA ST	250	mm diameter
298	DOSWORTH ST	375	mm diameter
299	ELLERTON DR	300	mm diameter
304	DONALD RD	200	mm diameter
310	COOMA RD	250	mm diameter
314	COOMA RD	250	mm diameter
315	ELLERTON DR	300	mm diameter
318	COOMA RD	250	mm diameter
332	URIARRA RD/CREST RD	200	mm diameter
344	STORNAWAY RD	200	mm diameter
360	CAMERON RD/ANNE ST/1	200	mm diameter
361	STORNAWAY RD	200	mm diameter
376	EST QBN RESERVOIR	375	mm diameter
377	ELLERTON DR	300	mm diameter
384	RESERVE - JERRA RES	450	mm diameter
386	RESERVE	300	mm diameter
387	RESERVE	300	mm diameter
388	SOUTHBAR RD	300	mm diameter
391	RESERVE - JERRA RES	450	mm diameter
392	RESERVE - JERRA RES	450	mm diameter
398	RESERVE	300	mm diameter
399	RESERVE	450	mm diameter
400	RESERVE	300	mm diameter
401	SOUTHBAR RD	300	mm diameter
402	RESERVE	300	mm diameter
404	RESERVE	300	mm diameter
405	SOUTHBAR RD	450	mm diameter
407	SOUTHBAR RD/THARWA RD	300	mm diameter
408	OAK PL	300	mm diameter
409	OAK PL	375	mm diameter
410	LANYON DR	250	mm diameter
411	LANYON DR	300	mm diameter
412	OAK PL	300	mm diameter
413	DONALD RD	200	mm diameter
414	DONALD RD	200	mm diameter
415	DONALD RD/ALANBAR ST	200	mm diameter
416	DONALD RD/HAKEA ST	250	mm diameter
417	HAKEA ST	250	mm diameter
418	DONALD RD	200	mm diameter
419	SOUTHBAR RD	200	mm diameter
420	SOUTHBAR RD	200	mm diameter
421	SOUTHBAR RD/CAMERON RD	200	mm diameter
422	SOUTHBAR RD	200	mm diameter
423	BANKSIA CRES	200	mm diameter
424	SOUTHBAR RD	200	mm diameter
425	SOUTHBAR RD/KARRI CRES	200	mm diameter
426	SOUTHBAR RD	200	mm diameter
427	SOUTHBAR RD	200	mm diameter
428	SOUTHBAR RD	200	mm diameter
429	SOUTHBAR RD/MALLEE CRES	200	mm diameter
430	BANKSIA CRES	200	mm diameter
431	BANKSIA CRES	200	mm diameter
432	BANKSIA CRES	200	mm diameter
433	HAKEA ST	300	mm diameter
434	OAK PL	300	mm diameter



435	HAKEA ST	300	mm diameter
436	HAKEA ST/DELMAR CRES	300	mm diameter
437	DELMAR CRES	200	mm diameter
438	INGLESIDE RD	200	mm diameter
439	HAKEA ST	300	mm diameter
440	HAKEA ST/SASSAFRAS CRES	300	mm diameter
445	DONALD RD	200	mm diameter
446	DONALD RD	200	mm diameter
447	DONALD RD	200	mm diameter
450	COOMA RD	250	mm diameter
451	COOMA RD/THORNTON RD/1	250	mm diameter
452	COOMA RD	250	mm diameter
453	COOMA ST	250	mm diameter
457	SOUTHBAR RD	200	mm diameter
458	SOUTHBAR RD/CANDLEBARK RD/1	200	mm diameter
459	SOUTHBAR RD	200	mm diameter
460	SOUTHBAR RD	200	mm diameter
461	SOUTHBAR RD	200	mm diameter
462	THORPE AVE	250	mm diameter
463	BULBAR ST	200	mm diameter
464	SOUTHBAR RD/COOMA RD	200	mm diameter
465	WILGABAR WY/ATHOLBAR WY	200	mm diameter
466	GLEBE AVE	200	mm diameter
467	CAMERON RD	200	mm diameter
468	HIRST AVE	200	mm diameter
469	SYMONDS ST	200	mm diameter
470	SOUTHBAR RD/WILSON ST	300	mm diameter
471	COOMA RD/LOCHIEL ST	250	mm diameter
473	COOMA RD	200	mm diameter
474	MEECH PL	250	mm diameter
475	MILLER ST/OLDFIELD RD	250	mm diameter
476	LANYON DR	250	mm diameter
477	LANYON DR	300	mm diameter
478	LANYON DR	300	mm diameter
<b>Treatment Works &amp; Pumping Stations</b>			
13	Ridgeway / Carwoola PS	Pumps & station equip.	2 x 20 l/s
14	Thorntons	Pumps & station equip.	2 x 90 l/s
<b>Post 1996 Works</b>			
<b>Dams &amp; Reservoirs</b>			
1	East Qbn	Reservoir	12.5ML
10	Thorntons	Reservoir	3.8ML
<b>Jerrabomberra reservoir roofing</b>			
<b>Transfer System</b>			
86	MORTON ST/CREST RD	250	mm diameter
91	MORTON ST/CREST RD	250	mm diameter

101	FERGUS RD	250	mm diameter
102	DONALD RD	250	mm diameter
133	RESERVE - 2ND OFFTAKE	375	mm diameter
134	RESERVE - 2ND OFFTAKE	375	mm diameter
135	RESERVE - 2ND OFFTAKE	375	mm diameter
153	CREST RESERVOIR	300	mm diameter
154	CREST RESERVOIR	300	mm diameter
186	CARWOOLA ST/SILVA AVE	300	mm diameter
191	CARWOOLA ST	300	mm diameter
205	ATKINSON ST	200	mm diameter
207	WANIASSA ST	200	mm diameter
209	WANIASSA ST	200	mm diameter
230	URIARRA RD/FEDERAL AVE	200	mm diameter
232	URIARRA RD	200	mm diameter
233	URIARRA RD	200	mm diameter
234	URIARRA RD/ROSS RD	200	mm diameter
235	URIARRA RD	200	mm diameter
240	CRAWFORD ST	250	mm diameter
258	URIARRA RD	200	mm diameter
259	URIARRA RD	200	mm diameter
260	URIARRA RD	200	mm diameter
261	URIARRA RD/RAILWAY AVE	200	mm diameter
262	URIARRA RD/CREST RD	200	mm diameter
268	URIARRA RD	200	mm diameter
295	ELLERTON DR	200	mm diameter
309	RESERVE - 2ND OFFTAKE	375	mm diameter
313	RESERVE - 2ND OFFTAKE	200	mm diameter
316	RESERVE - 2ND OFFTAKE	250	mm diameter
319	RESERVE - 2ND OFFTAKE	250	mm diameter
320	RESERVE - 2ND OFFTAKE	200	mm diameter
329	URIARRA RD/CREST RD	200	mm diameter
333	URIARRA RD/CREST RD	200	mm diameter
334	URIARRA RD/CREST RD	200	mm diameter
335	URIARRA RD	200	mm diameter
339	MORTON ST/CREST RD	250	mm diameter
346	MUNRO RD	300	mm diameter
348	MUNRO RD	300	mm diameter
350	GILMORE RD	300	mm diameter
351	THARWA RD/GILMORE RD/1	300	mm diameter
352	CALLUM ST	300	mm diameter
353	CALLUM ST	300	mm diameter
355	FERGUS RD	250	mm diameter
356	DONALD RD	250	mm diameter
359	ANNE ST	250	mm diameter
479	CREST RESERVOIR	300	mm diameter
Infill Consolidation			
Infill Consolidation			
Infill Consolidation			
Telemetry, flow monitoring upgrades			
Treatment Works & Pumping Stations			
12	Greenleigh	Pumps & station	2 x 23 l/s



Upper Thornton WPS switch board replacement		equip.	

**QUEANBEYAN WATER SUPPLY -Jerrabomberra Zone**

Component (Number)			
<b>Pre 1996 Works</b>			
<b>Dams &amp; Reservoirs</b>			
2	Homestead (Jerra.2)	Reservoir	4.5ML
7	Jerrabomberra	Reservoir	22.5 ML
9	Thorntons	Reservoir	1.0 ML
<b>Transfer System</b>			
87	RESERVE	300	mm diameter
88	RESERVE	300	mm diameter
106	RESERVE - JERRA PS	200	mm diameter
123	NICHOLII LOOP	200	mm diameter
160	RESERVE - HOMESTEAD	200	mm diameter
161	RESERVE	200	mm diameter
172	RESERVE	200	mm diameter
185	BICENTENNIAL DR	200	mm diameter
197	NICHOLII LOOP	200	mm diameter
201	NICHOLII LOOP	200	mm diameter
203	NICHOLII LOOP	200	mm diameter
210	RESERVE - HOMESTEAD	200	mm diameter
213	RESERVE - HOMESTEAD	200	mm diameter
223	RESERVE - HOMESTEAD	200	mm diameter
224	RESERVE - HOMESTEAD	200	mm diameter
227	RESERVE - HOMESTEAD	200	mm diameter
238	RESERVE - HOMESTEAD	200	mm diameter
239	RESERVE - HOMESTEAD	200	mm diameter
249	RESERVE - JERRA PS	200	mm diameter
263	RESERVE - JERRA PS	200	mm diameter
267	RESERVE - JERRA PS	200	mm diameter
271	RESERVE - JERRA PS	200	mm diameter
273	RESERVE - HOMESTEAD	200	mm diameter
278	RESERVE - HOMESTEAD	200	mm diameter

287	ROSEWOOD GL	450	mm diameter
306	RESERVE - JERRA RES	200	mm diameter
307	BINALONG RSE	200	mm diameter
317	COOMA RD	250	mm diameter
323	HALLORAN DR	600	mm diameter
337	RESERVE - JERRA PS	300	mm diameter
363	RESERVE - HOMESTEAD	200	mm diameter
367	JERRABOMBERRA PKWY	375	mm diameter
368	RESERVE - JERRA PS	375	mm diameter
371	RESERVE - THORNTON RES	200	mm diameter
372	EDWIN LAND PKWY	450	mm diameter
373	JERRABOMBERRA HILL RD	600	mm diameter
378	RESERVE - JERRA PS	375	mm diameter
379	TERRARA CL	600	mm diameter
381	RESERVE - JERRA PS	375	mm diameter
382	JERRA RESERVOIR	600	mm diameter
383	JERRA RESERVOIR	450	mm diameter
385	RESERVE - JERRA PS	450	mm diameter
389	RESERVE - JERRA RES	450	mm diameter
390	RESERVE - JERRA RES	450	mm diameter
393	JERRABOMBERRA HILL RD	806	mm diameter
395	RESERVE - JERRA RES	600	mm diameter
396	RESERVE - JERRA RES	600	mm diameter
397	RESERVE - JERRA RES	600	mm diameter
455	RESERVE - THORNTON RES	200	mm diameter
456	RESERVE - THORNTON RES	300	mm diameter
472	COOMA RD	250	mm diameter
480	HOMESTEAD RESERVOIR	200	mm diameter
<u>Treatment Works &amp; Pumping Stations</u>			
14	Thorntons	Pumps & station equip.	2 x 90 l/s
15	Homestead (Jerra.2)	Pumps & station equip.	2 x 42 l/s
<b>Post 1996 Works</b>			
<u>Dams &amp; Reservoirs</u>			
10	Thorntons	Reservoir	3.8ML
Jerrabomberra reservoir roofing			
<u>Transfer System</u>			
1	JERRABOMBERRA PKWY/1	450	mm diameter



2	Reserve	225	mm diameter
3	PANNAMENA CRES	225	mm diameter
4	PEMBERTON PL	225	mm diameter
5	ADINA CRT	225	mm diameter
6	EDWIN LN PKWY	225	mm diameter
23	JERRABOMBERRA PKWY	450	mm diameter
41	JERRABOMBERRA PKWY	375	mm diameter
124	ROSEWOOD GL	450	mm diameter
162	NICHOLII LOOP	225	mm diameter
177	NICHOLII LOOP	225	mm diameter
187	NICHOLII LOOP	225	mm diameter
293	PANNAMENA CRES	225	mm diameter
305	BINALONG RSE	200	mm diameter
311	NICHOLII LOOP	200	mm diameter
312	RESERVE - 2ND OFFTAKE	375	mm diameter
364	RESERVE - HOMESTEAD	225	mm diameter
365	RESERVE - HOMESTEAD	225	mm diameter
366	RESERVE - HOMESTEAD	225	mm diameter
374	NICHOLLI LOOP	225	mm diameter
375	THORNTON RESERVOIR	200	mm diameter
444	RESERVE	225	mm diameter
481	RESERVE - HOMESTEAD RES	225	mm diameter
	Telemetry, flow monitoring upgrades		
	Jerra water main augmentations		
	<u>Treatment Works &amp; Pumping Stations</u>		
	Upper Thornton WPS switch board replacement		

QUEANBEYAN WATER SUPPLY - South-West Zone

Component
<b><i>Pre 1996 Works</i></b>
<u>Dams &amp; Reservoirs</u>
-
<u>Transfer System</u>
-
<u>Treatment Works &amp; Pumping Stations</u>
-
<b><i>Post 1996 Works</i></b>
<u>Dams &amp; Reservoirs</u>
SW Qbn Headworks
SW Qbn Headworks
SW Qbn Headworks
<u>Transfer System</u>
-
<u>Treatment Works &amp; Pumping Stations</u>
Total



QUEANBEYAN WATER SUPPLY -Googong Zone

Component
<b><i>Pre 1996 Works</i></b>
<u>Dams &amp; Reservoirs</u>
-
<u>Transfer System</u>
-
<u>Treatment Works &amp; Pumping Stations</u>
-
<b><i>Post 1996 Works</i></b>
<u>Dams &amp; Reservoirs</u>
Googong Headworks
<u>Transfer System</u>
-
<u>Treatment Works &amp; Pumping Stations</u>
-
<b>Total</b>

## 4. Levels of Service and Design Parameters

### 4.1 Levels of Service

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

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current	Target
<b>AVAILABILITY OF SUPPLY</b>			
<b>Normal Quantity Available:</b>			
Domestic Peak day	L/tenement/day	4,500 (design)	Reduce
Domestic Annual	kL/tenement/yr	175 plus external	175 + reduced external
Total Annual Average Consumption	ML/yr	5134	Reduce
Total Peak Daily Consumption	ML/day	63.61	Reduce
Peak/Average consumption	-	4.52	Reduce
<b>Fire Fighting:</b>			
Compliance with The Water Supply Investigation Manual*	% area served	100	100
<b>Pressure:</b>			
Minimum pressure when conveying 0.2 L/s/tenement.	metres head	20	30
Maximum static pressure.	metres head	117	88 <sup>1</sup>
<b>Consumption Restrictions in Droughts:</b>			
Level of restriction applied through a repeat of the worst drought on record			
Average duration of restrictions	% normal usage	40	40
Average frequency of restrictions	months per 10/year period	24	6
<b>Supply Interruptions to Consumers</b>			
Planned:			
- Notice given to domestic customers	days	1	1
- Notice given to commercial customers	days	1	1
- Notice given to industrial customers	days	1	1
- Maximum duration of interruption	hrs	8	8
- Number of interruptions	No/customer/yr /1000 tenements	20	20

<sup>1</sup> Although a maximum static pressure of 88 metres is desirable, it may not be cost effective to install pressure reduction valves to a few dwellings at the end of a line.



<b>Emergency Incidents:</b>			
- Maximum duration	hrs	8	8
- Maximum number per two years	times	100	50
Total number of interruptions	Number of interruptions/yr /1000 connection	5	5
<b>RESPONSE TIMES</b>			
(Defined as time to have staff on-site to rectify problem)			
<b>Supply Failure:</b>			
All Customers:			
- During working hours	hours	60	60
- Out of working hours	hours	60	60
<b>Minor Problems &amp; general Inquiries:</b>			
Oral inquiry	days	1	1
Written inquiry	days	5	5
Note: Times apply for 95% of occasions			
<b>SERVICE PROVIDED</b>			
Time to provide an individual connection to water supply in serviced area (90% of times)	working days	10	10
<b>WATER QUALITY</b>			
Colour units:			
- Raw water	Max	N/A	
- Treated water	Max	N/A	
Turbidity Units:			
- Raw water	Max	N/A	
- Treated water	Max	0.7	0.7
Percentage Compliance with 1996 NHMRC / ARMCANZ Australian Drinking Water Guidelines:			
Physical	%	100	100
Chemical	%	80	100
Turbidity	%	100	100
pH	%	100	100
Colour	%	N/A	100
E.coli	%	100	100
Total Coliforms	%	98	100

## 4.2 Design Parameters

Investigation and design of water supply system components is based on the *Water Supply Investigation Manual* (1986). This manual was prepared by NSW Public Works and is now managed by DEUS.

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

## **5. Developer Charges**

### **5.1 Headworks and Distribution Works**

The calculated DC, based on full cost recovery, is for Queanbeyan and Googong, \$3,225 per ET; and for Jerrabomberra and South West, \$6,726 per ET. This is based on full cost recovery. This has been arrived at through a process of structured consultation with representatives of stakeholders and the general community. This covers both "minor" headworks (to be funded by Council) and distribution works. Bulk water supply (major) headworks, under the jurisdiction of ACTEW Corporation, are excluded.

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

### **5.2 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.

### **5.3 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) GHD Pty Ltd. *Queanbeyan City Water Supply for Development* (1985).
- (2) Public Works Department, *Water Supply Investigation Manual* (1986).
- (3) Public Works Department, *Water Supply and Sewerage Management Guidelines* (1991).
- (4) Department of Land and Water Conservation, *Guidelines - Developer Charges for Water Supply, Sewerage and Stormwater* (2002).
- (5) GHD Pty Ltd. *Strategic Master Plan for Water Supply for South West Region* (2003).
- (6) Optimatics Pty Ltd *Genetic Algorithm Optimisation for the Jerrabomberra Distribution System* (2003).
- (7) Department of Commerce, *Greater Queanbeyan City Council Water Supply Developer Charges Calculation* (2004).

**APPENDIX No. 1 - STATE ENVIRONMENTAL PLANNING  
POLICIES APPLYING TO GREATER  
QUEANBEYAN CITY COUNCIL WATER SUPPLY**

There are no State Environmental Planning Policies applicable to the Greater Queanbeyan City Council water supply 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 WATER SUPPLY SCHEME**





Figure 1 – Map of Greater Queanbeyan City Council Area

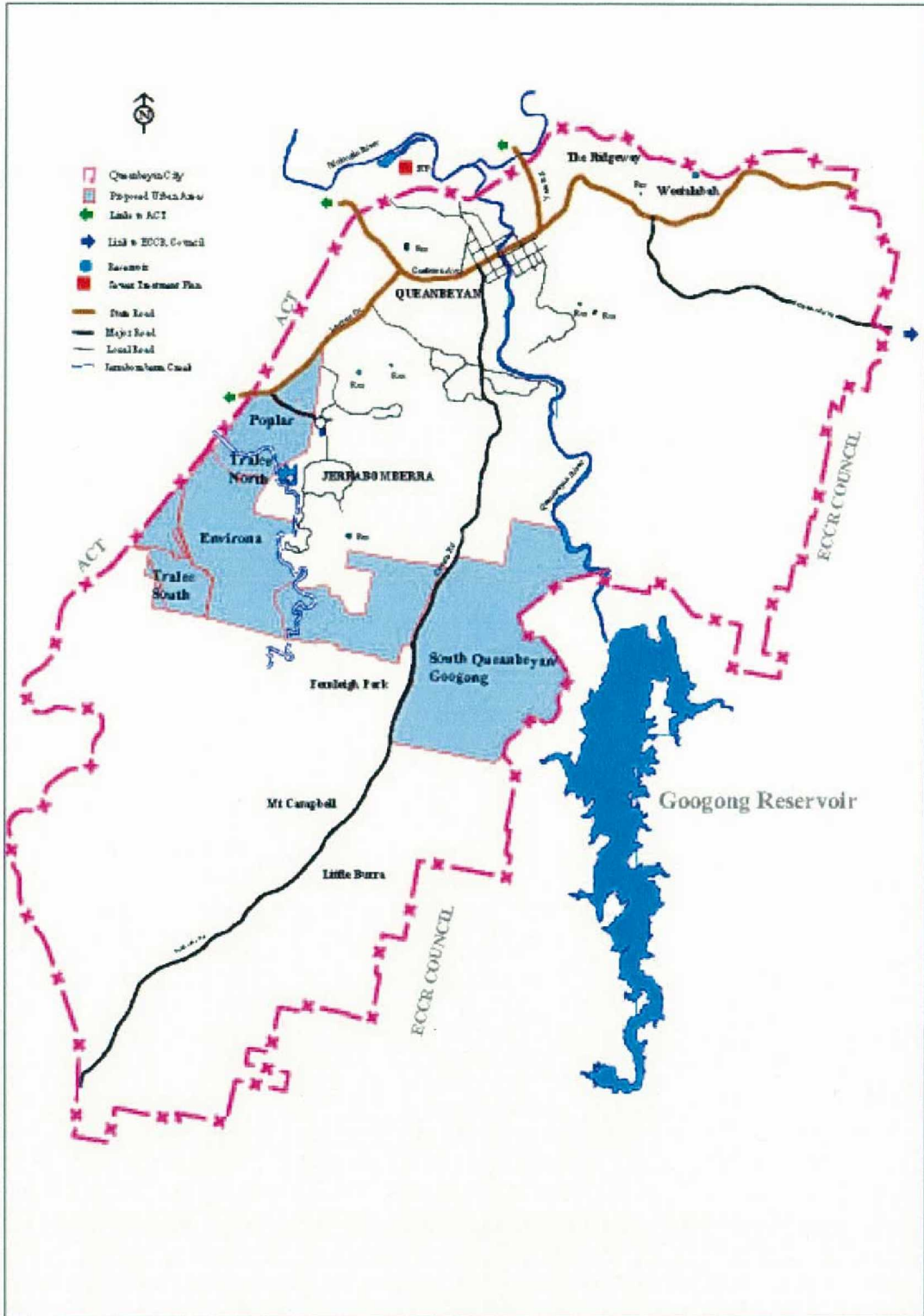
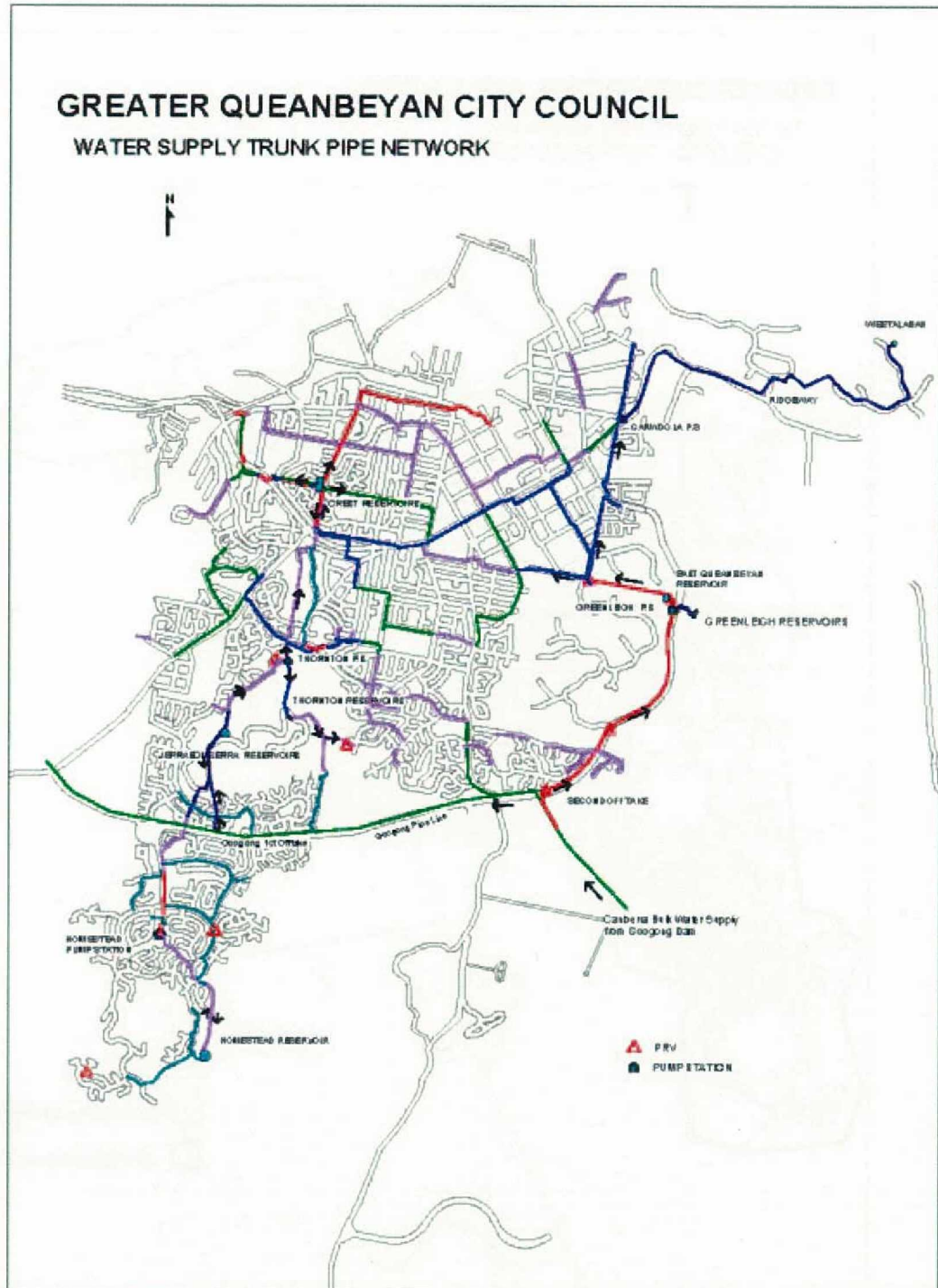
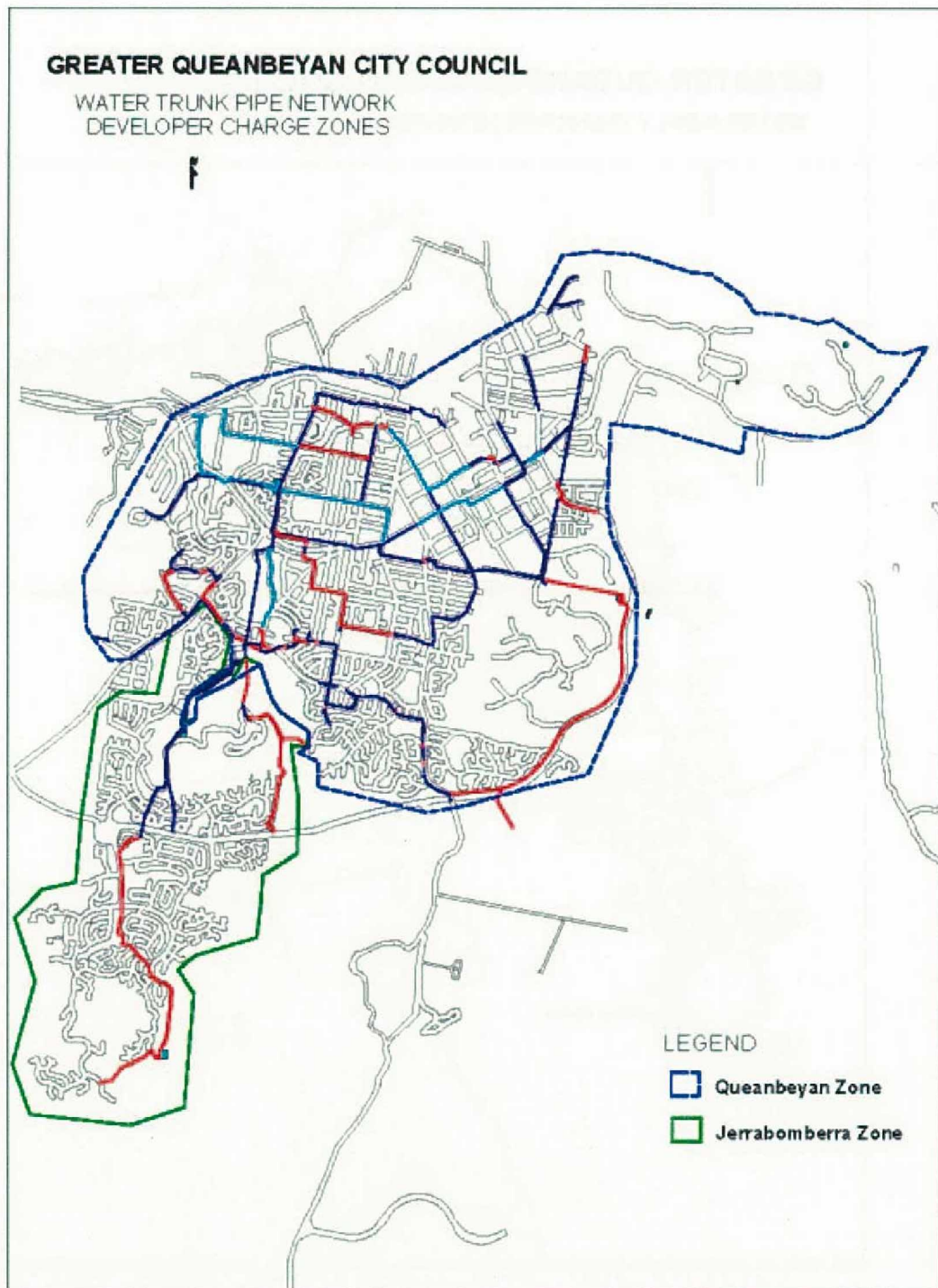


Figure 2 – Greater Queanbeyan City Council Water Supply Town Service Area





**Figure 3 – Greater Queanbeyan City Council Water Supply Town Service Area - Developer Charge Zone Boundaries**

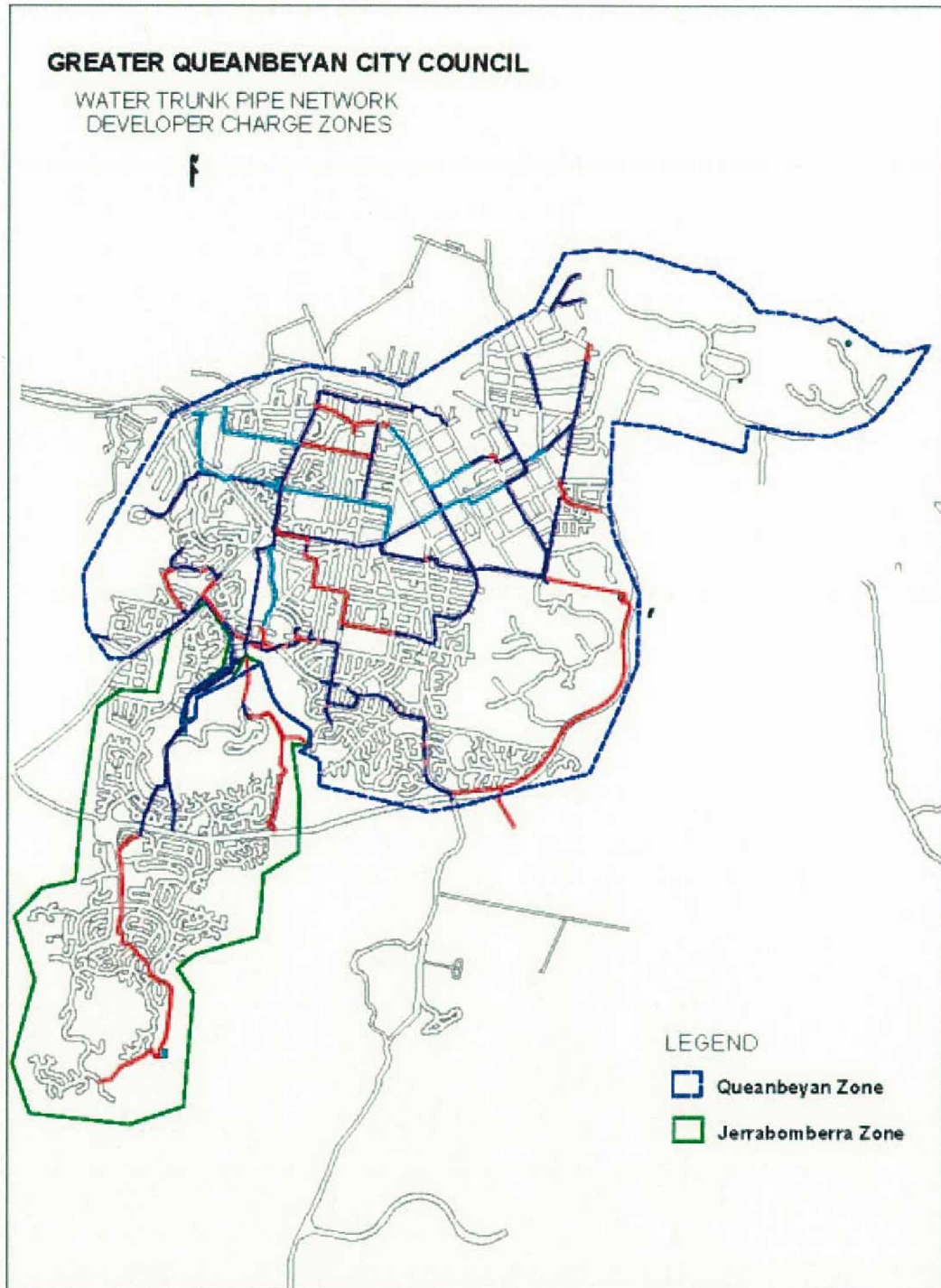


**Figure 4 – Greater Queanbeyan City Council Water Supply Town Service Area – Queanbeyan Developer Charge Zone**





Figure 3 – Greater Queanbeyan City Council Water Supply Town Service Area - Developer Charge Zone Boundaries



**Figure 4 – Greater Queanbeyan City Council Water Supply Town Service Area – Queanbeyan Developer Charge Zone**

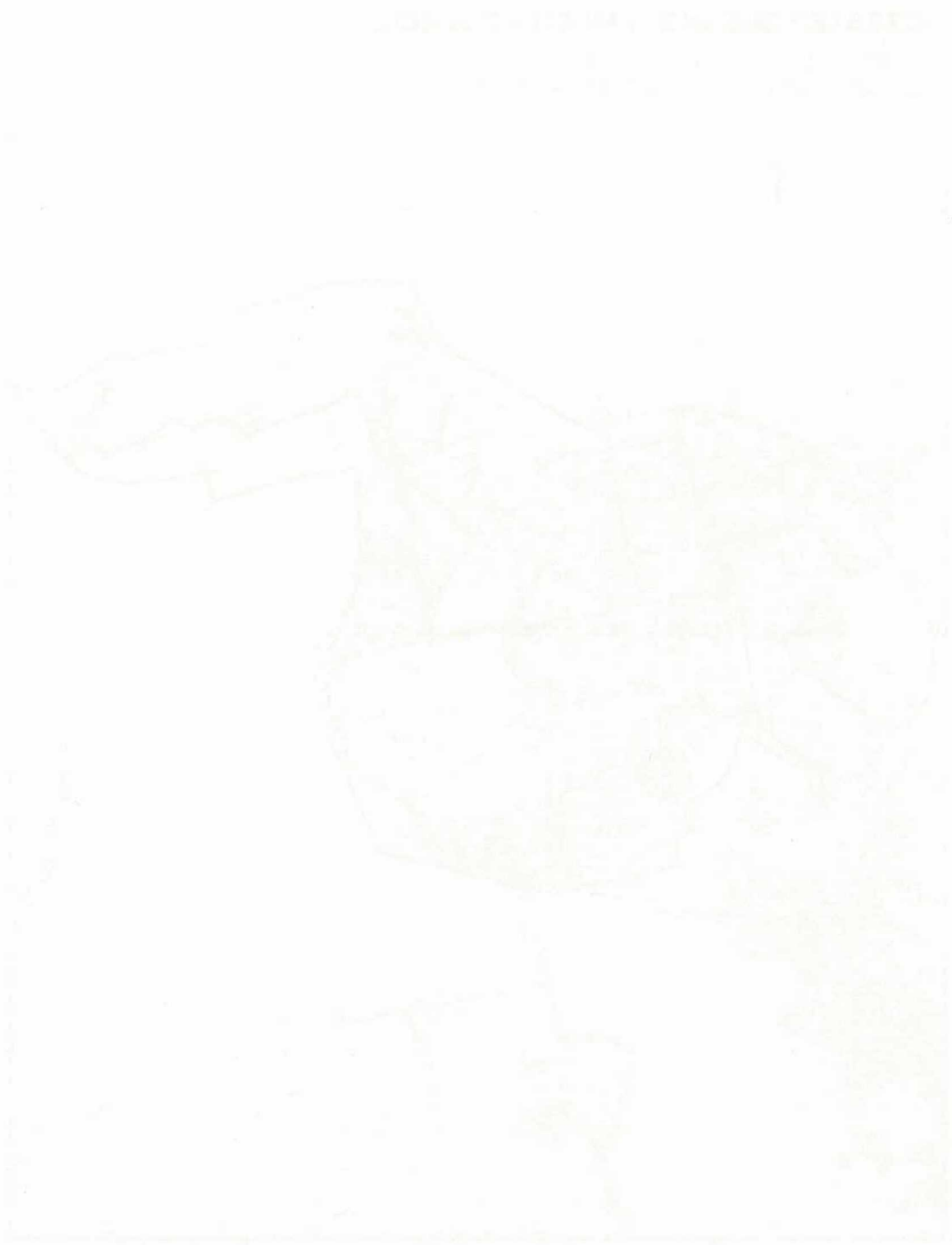
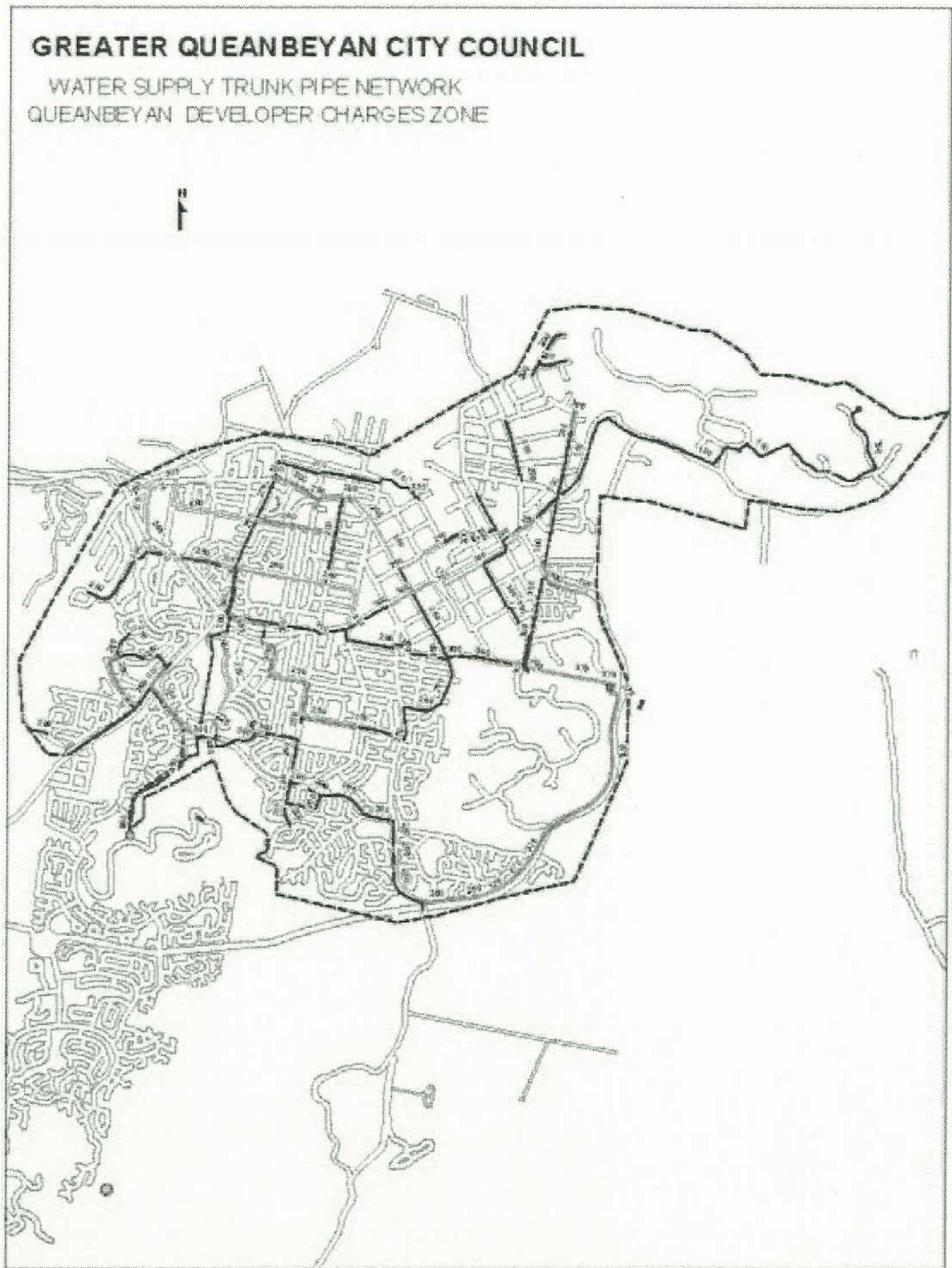


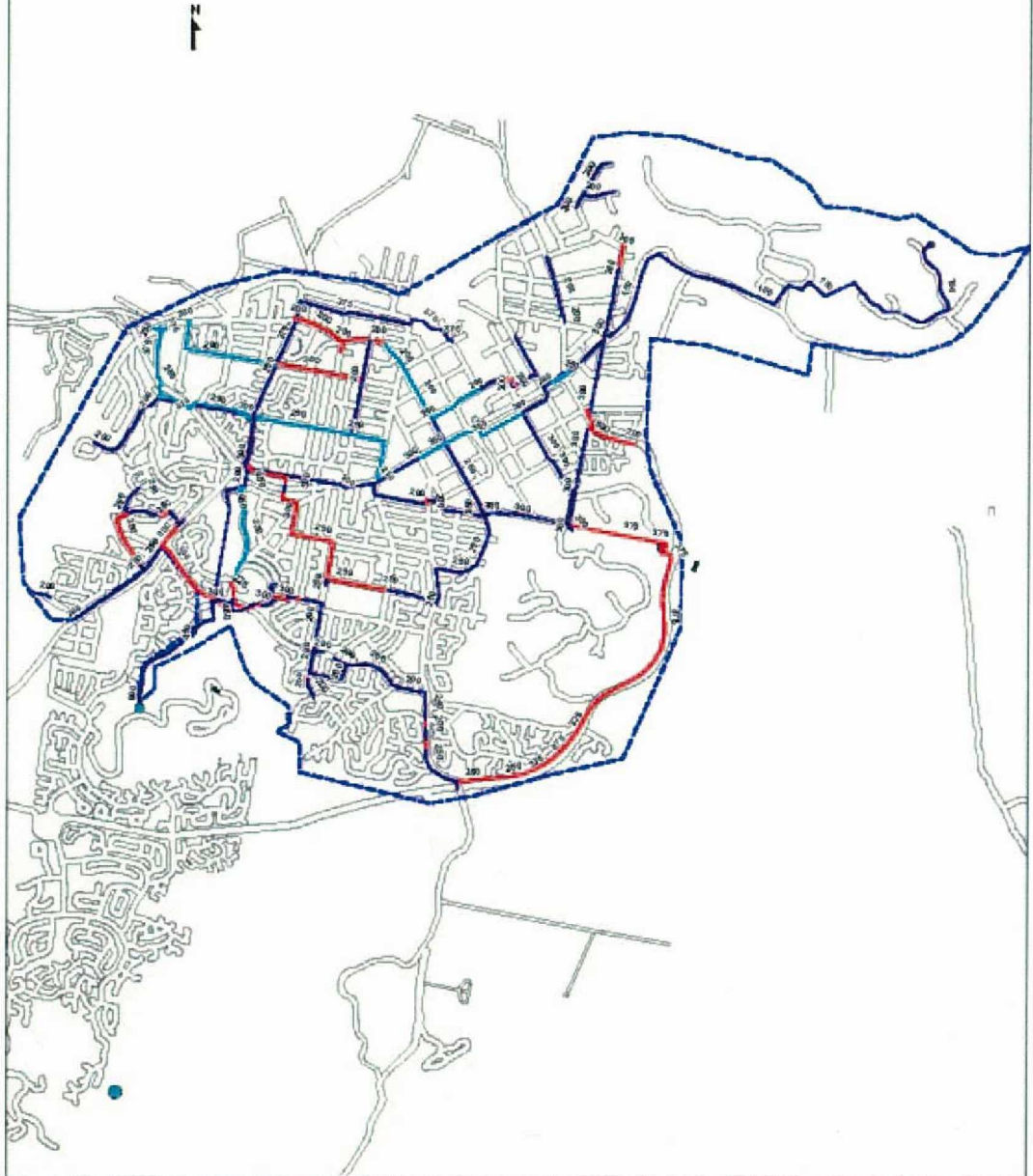


Figure 7 - Greater Queanbeyan City Council Water Supply Zone  
Greater Queanbeyan City Council - Water Supply Zone



**GREATER QUEANBEYAN CITY COUNCIL**

WATER SUPPLY TRUNK PIPE NETWORK  
QUEANBEYAN DEVELOPER CHARGES ZONE

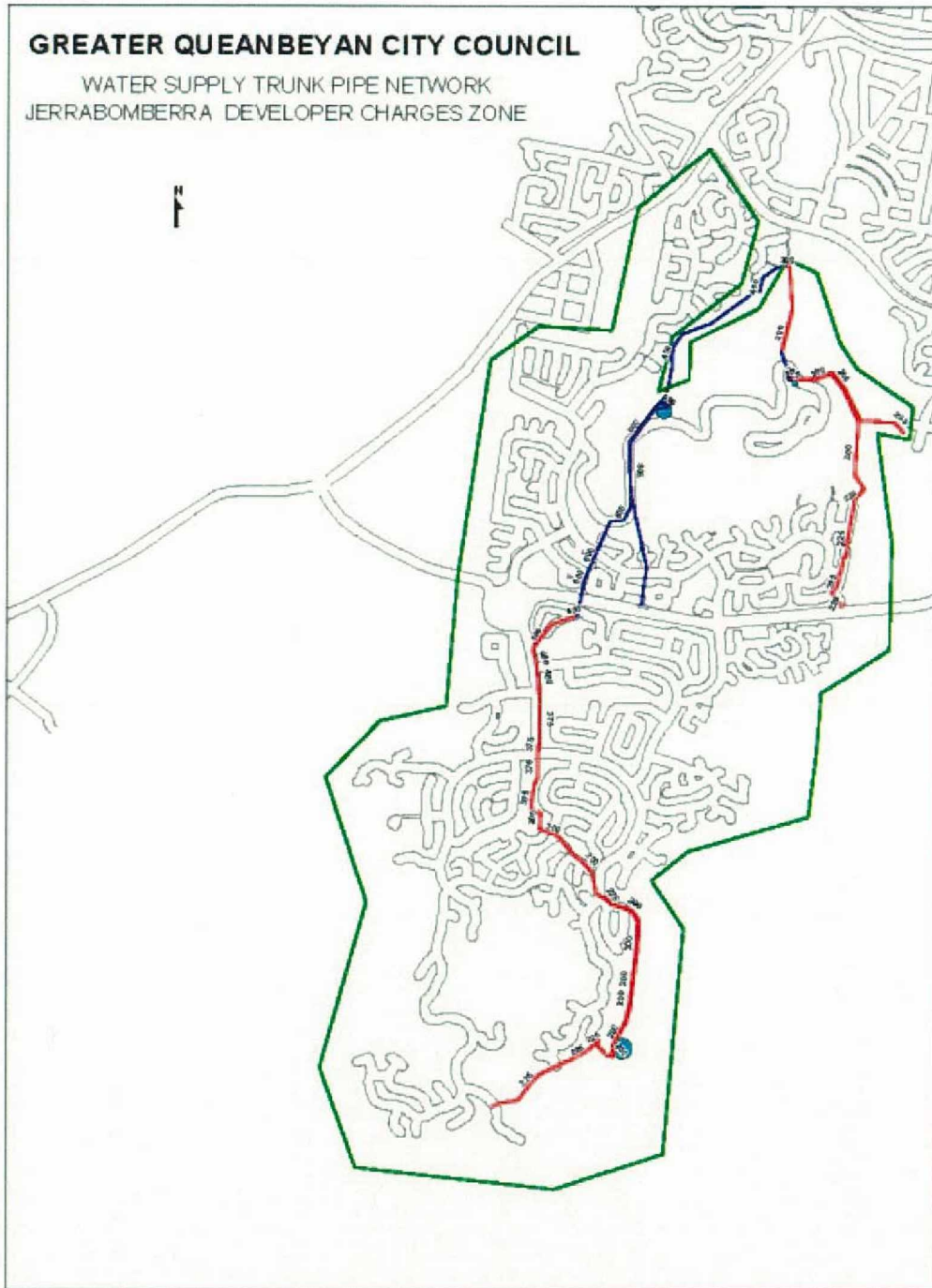




**Figure 5 – Greater Queanbeyan City Council Water Supply Town Service Area -**

**Jerrabomberra Developer Charge Zone**





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