

Adoption Date: 09/08/2005



LOCAL PLANNING POLICY NO. 1/96

TITLE: DEVELOPER CONTRIBUTION POLICY WATER AND SEWERAGE

PURPOSE:

The intent of this Policy is to ensure contributions are paid towards water supply and sewerage infrastructure in relation to developments throughout the Shire, specifically in the defined water and sewerage areas, and the contribution rates relate to the cost of infrastructure

SCOPE:

This Policy shall apply to every application for Reconfiguring a Lot and Material Change of Use which in the opinion of the Council could be connected, whether now or in the future, to the Gracemere Water Supply Scheme or the Gracemere Sewerage Scheme as described herein unless the Council in its discretion considers that by reason of the size, shape, location or topography of the said land or of the proposed new allotments or by reason of any prior works or contributions that such conditions, or any one or more of them, should not be imposed.

It is the policy of Council to require payment of capital contributions towards, or reimbursement of, the cost of construction and augmentation of water supply headworks, external water supply works, sewerage headworks and external sewerage works within Council's defined priority infrastructure area for Water Supply and Sewerage (see Figure 1) and to require the construction by the applicant of internal water supply works and internal sewerage works.

In the event that developments outside the defined priority infrastructure area are approved to connect into Council's existing water supply and sewerage systems additional headworks charges may be levied at the time of Council's development approval.

1.0 WATER SUPPLY INFRASTRUCTURE:

1.1 Cost Apportionment Principles

1.1.1 Existing Spare Capacity

Charges for spare capacity have been limited to trunk infrastructure. For water supply infrastructure, this consists of water mains 200 mm diameter and larger, pump stations and reservoirs.

Water treatment and storage works controlled by Rockhampton City Council have not been accounted for. The value of the supply main from the Athelstane Reservoir to the township of Gracemere has been included.

The costs for existing infrastructure are based on the current modern engineering equivalent replacement value. The value of the asset was proportioned between existing and future customers using results from the network models prepared for the 'Gracemere Water Supply Planning Report' (GHD, 2003b).

The results for the three Maximum Day dynamic run were collated for the existing and 2021 scenarios. For water mains, the proportions are based on the peak flow in the pipe over the three day period, excluding provision for fire flow. The applicable proportion was calculated using the following formula:

$$\% \text{ Apportioned to Future Users} = \frac{Q_{2021} - Q_{2002}}{Q_{2021}} \times 100 \text{ where } Q = \text{peak flow}$$

Similarly for water pump stations, the ratio between the peak pumped flow for the existing and future scenarios was used.

For water reservoirs, the cost allocations are based on the percentage of the total storage capacity used over three maximum days.

$$\% \text{ Apportioned to Future Users} = \frac{100 - S_{2002}}{100 - S_{2021}} \times 100 \quad \text{where } S = \text{Minimum percentage of storage capacity}$$

1.1.2 Future Capital Works

Future capital works are required to service further development in the town and are to be funded completely by infrastructure charges.

1.1.3 Future Infrastructure

The future infrastructure requirements were identified in 'Gracemere Water Supply Planning Report (GHD, 2003a). Capital works to be funded by FSC and not to be included in the infrastructure charges were identified separately.

A planning report was prepared on the supply of water to the rural-residential areas surrounding Gracemere (GHD, 2003). At this stage it is uncertain whether the extension of the network will proceed and these capital works have not been considered in the calculation of infrastructure charges.

The future water supply infrastructure is shown in Figure 2. The schedule of works is listed in the table below. Capital costs are expressed in 2003 dollars.

Water Supply Infrastructure		
Code	Description	Capital Cost (\$)
Year 2003		
W1	300 mm dia water main Length: 2040 m @ \$220/m	\$449,200
W2	300 mm dia water main Length: 950 m @ \$220/m	\$209,000
W3	250 mm dia water main Length: 563 m @ \$180/m	\$101,300
W4	250 mm dia water main Length: 543 m @ \$180/m	\$97,700
W5	3.75 ML reservoir	\$440,000
W6	Booster pumps at 3.75 ML reservoir	\$275,000
Year 2011		
W7	5 ML reservoir	\$500,000
W8	New pumps at 5 ML reservoir	\$410,000
Year 2016		
W9	Upgrade booster pumps at 3.75 ML reservoir	\$180,000

Year 2021		
W10	300 mm dia water main Length: 250 m @ \$220/m	\$53,900
Total		\$2,763,700

1.1.4 Infrastructure Charges

The water infrastructure charges are summarised in the table below.

Water Supply Infrastructure Charge Summary	
Description	Value
Spare Capacity	\$1,765,100
Future Works (NPV)	\$2,014,200
Infrastructure Charge	\$778 / EP
Water Supply Headworks Charge (Cost per Allotment)	\$2,334 / lot

2.0 SEWERAGE INFRASTRUCTURE:

2.1 Cost Apportionment Principles

2.1.1 Existing Spare Capacity

Charges for spare capacity have been limited to trunk infrastructure. For sewerage infrastructure, this consists of sewer mains 225 mm diameter and larger, all rising mains, pump stations and sewage treatment works.

The costs for existing infrastructure are based on the current modern engineering equivalent replacement value. The value of the asset was proportioned between existing and future customers based on the current and future usage of each system element.

The amount of usage was measured from the flows taken from the network analysis prepared for the 'Gracemere Sewerage Planning Report' (GHD, 2003a). The relevant scenarios were the 2001 and 2021 Peak Wet Weather Flow static analysis.

For sewer mains, the proportions are based on the flow through the pipe in the Peak Wet Weather Flow analysis. The proportion of the asset value to be funded from future users was calculated using the formula below:

$$\% \text{ Apportioned to Future Users} = \frac{Q_{2021} - Q_{2002}}{Q_{2021}} \times 100 \text{ where } Q = \text{peak flow}$$

For rising mains, a similar ratio was used to apportion costs between existing and future users based on the pumped flow through the main. For pump stations, the ratio was based on the sewage flow into the wet well.

2.1.2 Future Capital Works

Future capital works are required to service further development in the town and are to be funded completely by infrastructure charges.

2.1.3 Future Infrastructure

Sewage treatment plant works were identified in 'Gracemere STP Augmentation – Addendum to Planning Report' (GHD, 2000).

The future infrastructure requirements were identified in 'Gracemere Sewerage Planning Report' (GHD, 2003b). Capital works to be funded by FSC and not to be included in the infrastructure charges were identified separately.

The future sewerage infrastructure is shown in Figure 3. The schedule of works is listed in the table below. Capital costs are in 2003 dollars.

Sewerage Infrastructure		
Code	Description	Capital Cost (\$)
Year 2003		
S9	Treatment works: Secondary Clarifier and associated RAS system Increase capacity to 8,100 EP	\$700,000
S11	Irrigation Scheme Extension	\$63,000
Year 2004		
S12	Irrigation Scheme Extension	\$163,500
Year 2005		
S8	Upgrade Pump Station 4 45 L/s (duty and standby pumps operating)	\$72,000
Year 2006		
S1	200 mm dia rising main (PS1) Length: 1350 m @ \$140/m	\$188,700
S2	200 mm dia rising main extension (PS6) Length: 290 m @ \$140/m	\$64,100
S3	Upgrade Pump Station 1 80 L/s (duty and standby pumps operating)	\$89,000
S13	Irrigation Scheme Extension	\$162,700
Year 2009		
S10	Upgrade Grit Channel	\$76,400
Year 2011		
S4	Upgrade Pump Station 6 45 L/s (duty and standby pumps operating)	\$72,000
Year 2016		
S5	100 mm dia rising main (PS8) Length: 910 m @ \$70/m	\$63,800
S6	100 mm dia rising main (PS7) Length: 670 m @ \$70/m	\$46,600
S7	New Pump Station 8 10 L/s (duty and standby pumps operating)	\$75,000
Total		\$1,825,300

2.1.4 Infrastructure Charges

The sewerage infrastructure charges are summarised in the table below.

Sewerage Infrastructure Charge Summary	
Description	Value
Spare Capacity	\$669,100
Future Works (NPV)	\$1,013,000
Infrastructure Charge	\$494 / EP
Sewerage Headworks Charge (Cost per Allotment)	\$1,482 / lot

3.0 EQUIVALENCY RATES

In determining the pattern of consumption for water and sewerage across Gracemere, it is important to take into account the impact of non-residential users and residential users with higher than normal usage. In Gracemere's case, this potentially includes:

- Three schools, Gracemere SS, Waraburra SS and St Paul's Catholic School.
- The Gracemere Gardens Retirement Village.
- Commercial areas.

Notional populations attached to these areas are known as "equivalent populations", and are added to the residential population to assess consumption patterns. The table below summarises the adopted equivalent populations for existing facilities and outlines the equivalent allotments for typical development classes.

Equivalent Populations			
Description	Size	EP Ratio	Adopted EP
Gracemere SS	240 students	0.25 per student	60
Waraburra SS	415 students	0.25 per student	100
St Paul's Catholic School	200 students	0.25 per student	50
Commercial Areas	38 ha	10 EP/ha	380
Council Chambers			20
Gracemere Motor Inn	27 units	1 per unit	17
Gracemere Gardens	91 beds	3.4 per bed	315
Retirement Village	23 units	1.5 per unit	
Gracemere Caravan Park	116 permanent sites	1.5 per site	104
Gracemere Saleyards			218

Description	EP Ratio
Duplex (Dual Occupancy)	2.0 per unit
Multiple Unit	2.0 per unit
Schools	0.25 per student
Motels	1 per unit
Camping/Caravan Parks	1.5 per site
Convalescent Homes	3.4 per bed
	1.5 per unit
Service Stations	6

FIGURE 1 – Priority Infrastructure Area

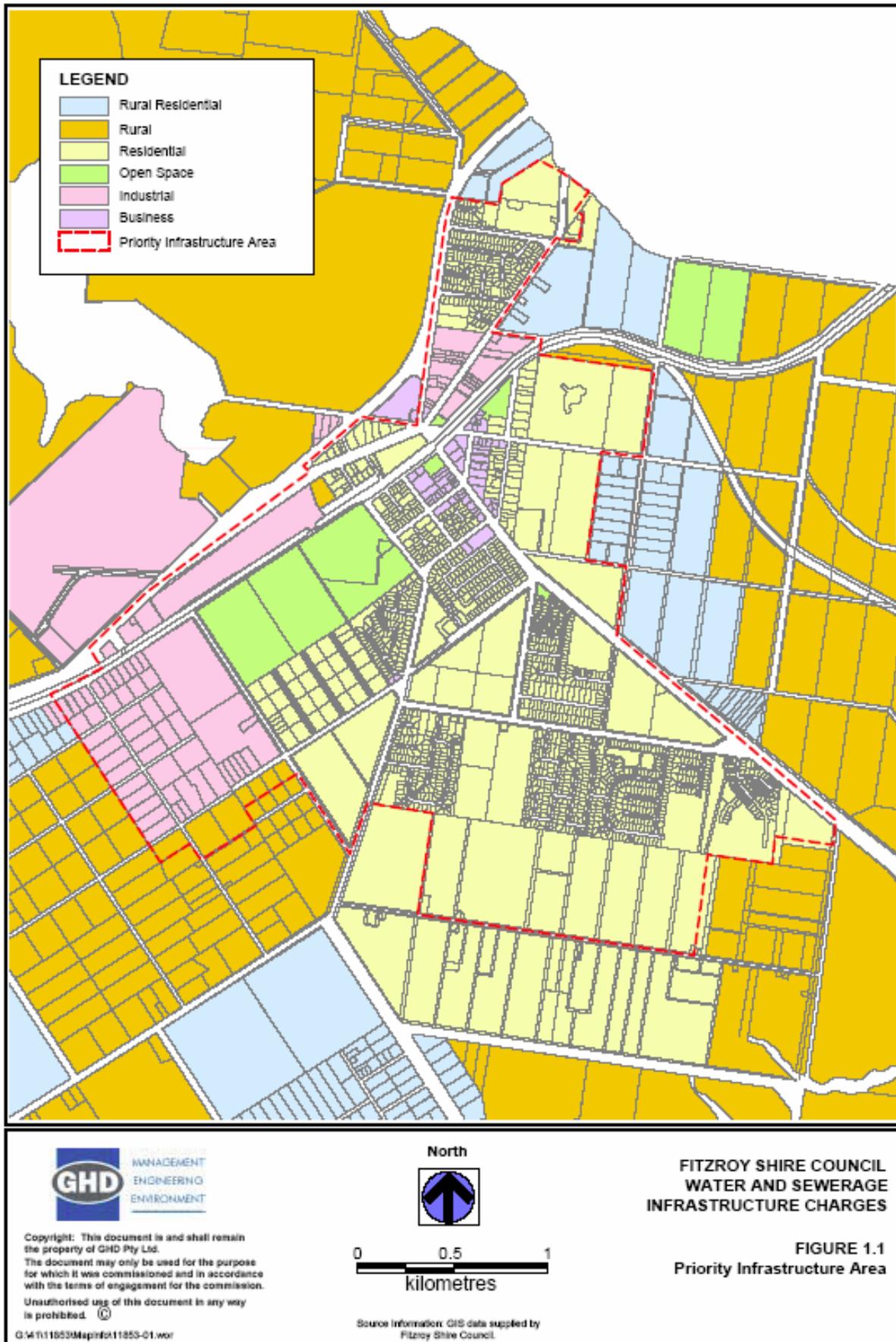


FIGURE 2 – TRUNK WATER SUPPLY AUGMENTATIONS

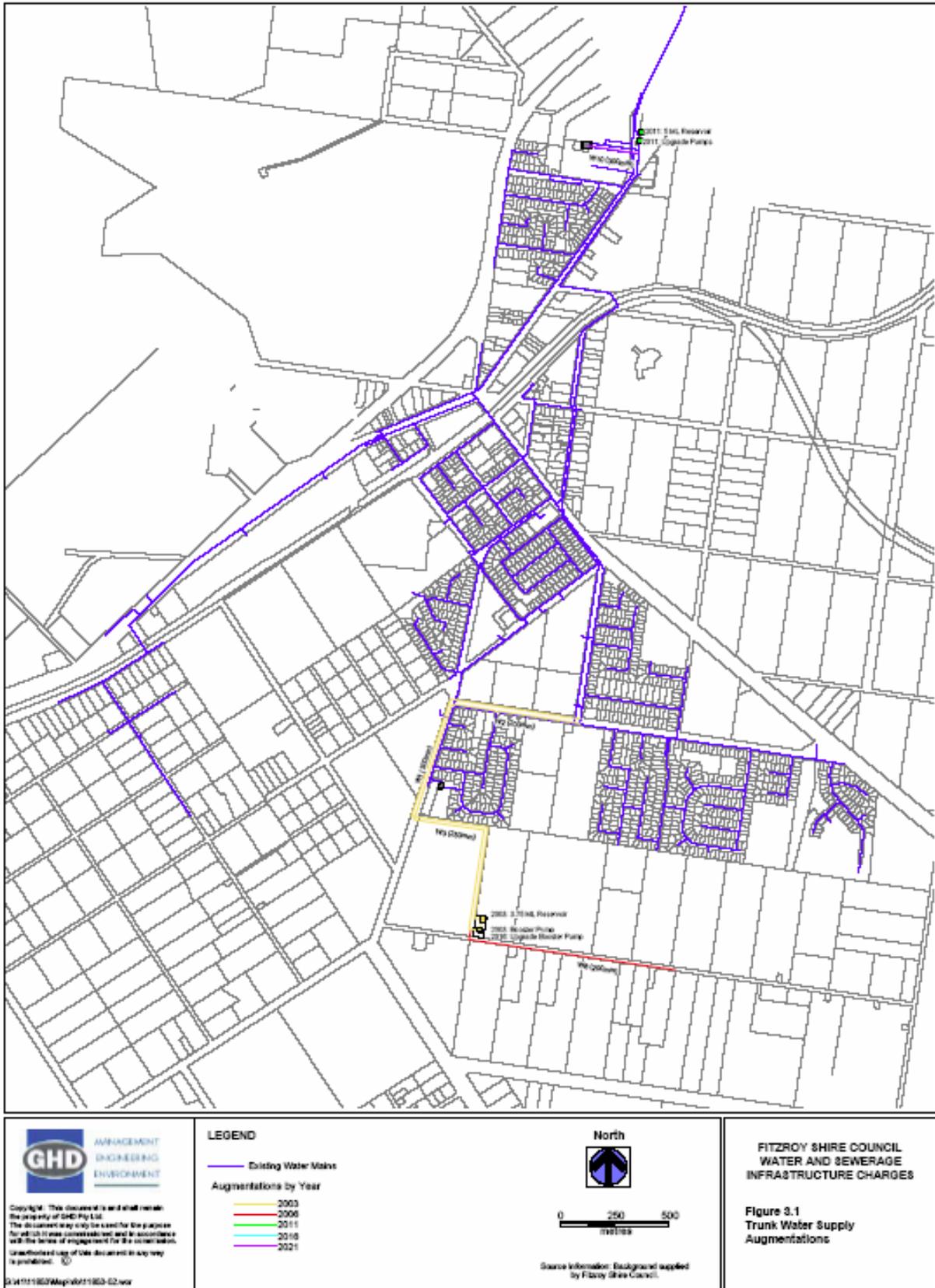


FIGURE 3 – TRUNK SEWERAGE AUGMENTATIONS



REFERENCES

- GHD Pty Ltd (2000), *Gracemere STP Augmentation - Addendum to Planning Report*, prepared for Fitzroy Shire Council, June 2000.
- GHD Pty Ltd (2003), *Gracemere Water Supply – Rural Residential Extensions Feasibility Study*, prepared for Fitzroy Shire Council, May 2003.
- GHD Pty Ltd (2003a), *Gracemere Sewerage Planning Report*, prepared for Fitzroy Shire Council, May 2003.
- GHD Pty Ltd (2003b), *Gracemere Water Supply Planning Report*, prepared for Fitzroy Shire Council, July 2003.