MAROOCHY SHIRE COUNCIL PLANNING SCHEME
POLICY NO. DC1
WATER SUPPLY & SEWERAGE INFRASTRUCTURE

DC 1.1 INTRODUCTION

(1) From an infrastructure planning and charging perspective, the development of the water supply and sewerage infrastructure strategy has been generally based on a number of community outcomes or objectives outlined in the customer services standards for Maroochy Water Services (the commercialised business unit of Council).

(2) For water supply infrastructure, Maroochy Water Services is to provide water that:
- is a of a quality that maintains the health of the community;
- is clear and free from objectionable odour and taste;
- is reliably supplied to each property within the water service area;
- performs an effective and affordable service in relation to:
  - delivering water to a desirable pressure and flow
  - ensuring fire fighting can be undertaken with the supply
  - optimising the network and operating conditions to reduce whole of life costs and provide an efficient service
- fosters sustainable water consumption, including:
  - ensuring that potable water supply methods are applied in the context of water sensitive urban design
  - managing the collection and use of water on-site
  - allowing for the efficient development of land through innovative use of on-site storage where appropriate.

(3) For sewerage infrastructure, Maroochy Water Services is to provide sewerage services that:
- effectively and efficiently remove wastewater from premises located within the sewerage service area;
- appropriately treat wastewater to maintain the health of the community and reduce the impact on the natural environment including contaminant and nutrient loading on waterways;
- reduce odours from the sewerage system and improve the amenity of premises;
- perform an effective and affordable service in relation to:
  - Conveying sewage at adequate velocity to limit blockages and detention times
  - Limiting surcharging of the network
  - Reducing whole of life costs
  - Treating wastewater from industry and the community
- ensure wastewater disposal methods (including effluent reuse) are applied in the context of water sensitive urban design.

(4) Council is committed to ensure that the water supply & sewerage network provides an effective, efficient and quality service to the community.

(5) This Planning Scheme Policy is the mechanism to partially fund, via developer contributions, the construction of water supply & sewerage trunk infrastructure.

(6) Infrastructure contributions are to be provided towards the establishment costs incurred or to be incurred in providing existing and future water supply truck infrastructure and sewerage truck infrastructure in accordance with this planning scheme policy.

(7) The scope of water supply & sewerage infrastructure for which funding is obtained via this planning scheme policy is limited to water supply & sewerage trunk infrastructure.

(8) This planning scheme policy –

(a) specifies the methodology for determining contributions for water supply headworks or sewerage headworks;
(b) specifies the works, structures or equipment determined to be water supply headworks or sewerage headworks.

NOTE DC 1.1 INTERNAL WATER SUPPLY & SEWERAGE INFRASTRUCTURE

1) The 'internal' water supply & sewerage infrastructure (eg. water supply or sewerage reticulation mains) is the responsibility of the Developer and will be applied as a condition in any development approval.
2) For the purpose of clarity it is recorded that the Council is not responsible for the construction or the cost of any part of internal water supply & sewerage infrastructure.
3) Infrastructure contributions payable by a Developer pursuant to this Planning Scheme Policy are additional to the 'internal' infrastructure that the Developer is required to provide as part of a development.

(9) The provisions in this planning scheme policy relate to the Infrastructure Contributions for water supply & sewerage trunk infrastructure as follows -

a) The existing water supply & sewerage trunk infrastructure (see section DC 1.2);
b) The future water supply & sewerage trunk infrastructure (see section DC 1.3);
c) The desired standard of service for water supply & sewerage trunk infrastructure (see section DC 1.4);
d) The estimated establishment cost of water supply & sewerage trunk infrastructure (see section DC 1.5);
e) The estimated establishment cost of water supply & sewerage trunk infrastructure to be funded by the contribution (see section DC 1.6); and
f) Infrastructure contributions and calculations (see sections DC 1.7 and Schedule DC 1).

DC 1.2 EXISTING WATER SUPPLY & SEWERAGE TRUNK INFRASTRUCTURE

NOTE DC 1.2 A

Water Supply

1) The Local Government operates an integrated water supply scheme for the Image Flat/Landers Shute Scheme and a localised scheme for the Town of Kenilworth.
2) For the Image Flat/Landers Shute Scheme treated water supplied is purchased in bulk from the Caloundra –Maroochy Water Supply Board by agreement, with the remainder being supplied from the Local Government's own dams and treatment plant at Image Flat.
3) For the Kenilworth Scheme water is sourced from bores and a well adjacent to the Mary River and treated at its own treatment plant.

Sewerage

4) The Local Government operates the following sewerage schemes -
   (a) Maroochydore;
   (b) Nambour;
   (c) Coolum;
   (d) Suncoast;
   (e) Yandina;
   (f) Kenilworth;
   (g) Eumundi.

(1) The existing water supply trunk infrastructure is generally shown on DC1 Figure 1 including reference to the detailed drawings (refer Appendix 1).
(2) The existing sewerage trunk infrastructure is generally shown on DC1 Figure 2 including reference to the detailed drawings (refer Appendix 2).

NOTE DC 1.2 B
Further details in relation to existing water supply & sewerage trunk infrastructure, can be found in the 'Water and Sewerage Network Analysis 2004 including supporting detailed drawings', that forms part of this planning scheme policy.

DC 1.3 FUTURE WATER SUPPLY & SEWERAGE TRUNK INFRASTRUCTURE

(1) The future trunk infrastructure to be provided for—

(a) District and zonal water supply trunk infrastructure is generally shown on DC1 Figure 1 including reference to the detailed drawings (refer Appendix 1).
(b) District and sub–catchment sewerage trunk infrastructure is generally shown on DC1 Figure 2 including reference to the detailed drawings (refer Appendix 2).

NOTE DC 1.3
Further details in relation to future water supply & sewerage trunk infrastructure, can be found in the 'Water and Sewerage Network Analysis 2004 including supporting detailed drawings', that forms part of this planning scheme policy.

DC 1.4 DESIRED STANDARD OF SERVICE FOR WATER SUPPLY & SEWERAGE TRUNK INFRASTRUCTURE

(1) The desired standard of service for water supply & sewerage trunk infrastructure is outlined in Table DC 1.4.1 (refer Appendix 3).

NOTE DC 1.4
1) It is acknowledged that in some cases, due to local circumstances, the desired standard of service may not be met.
2) In these situations, water supply & sewerage trunk infrastructure aims to meet the standards to the greatest degree practicable.

DC 1.5 ESTIMATED COST OF WATER SUPPLY AND SEWERAGE TRUNK INFRASTRUCTURE

(1) The estimated establishment costs for water supply & sewerage trunk infrastructure is outlined in Table DC 1.5.

TABLE DC 1.5 WATER SUPPLY & SEWERAGE TRUNK INFRASTRUCTURE COSTS ($)

Infrastructure Works	Existing Trunk Infrastructure	Future Trunk Infrastructure	Total
Water Supply			
District	$173,065,019	$283,693,155	$456,758,175
Zonal	$86,768,044	$48,743,145	$135,511,190
Sewerage			
District	$138,183,123	$422,026,189	$560,209,312
Sub-catchment	$106,864,117	$46,150,050	$153,014,168
Total	$504,880,304	$800,612,540	$1,305,492,844

NOTE DC 1.5

1) Further details in relation to the estimated establishment costs for future water supply & sewerage trunk infrastructure for the various water supply zones and sewerage sub-catchments can be found in the 'Water and Sewerage Network Analysis 2004 including supporting detailed drawings', that forms part of this planning scheme policy.
2) Within the water supply and sewerage trunk infrastructure categories, connecting works have not been costed as these works are generally not planned in the overall network analysis.

DC 1.6 PROPORTION OF WATER SUPPLY & SEWERAGE TRUNK INFRASTRUCTURE ESTABLISHMENT COSTS TO BE FUNDED BY INFRASTRUCTURE CONTRIBUTIONS

(1) The proportion of water supply & sewerage trunk infrastructure costs attributable to infrastructure contributions is outlined in Table DC 1.6.

TABLE DC1.6 PROPORTION OF WATER SUPPLY & SEWERAGE TRUNK INFRASTRUCTURE ESTABLISHMENT COSTS SUBJECT TO INFRASTRUCTURE CONTRIBUTIONS ($)

TYPE OF WORKS	COSTS NOT SUBJECT TO INFRASTRUCTURE CONTRIBUTIONS	COSTS SUBJECT TO INFRASTRUCTURE CONTRIBUTIONS
WATER SUPPLY DISTRICT	$148,562,113	$308,196,062
WATER SUPPLY ZONAL	$48,418,707	$87,092,482
SEWERAGE DISTRICT	$148,634,678	$411,574,634
SEWERAGE SUB-CATCHMENT	$48,068,396	$104,945,772
TOTAL	**$393,683,894**	**$911,808,950**

DC1.7 INFRASTRUCTURE CONTRIBUTIONS AND CALCULATIONS

(1) Those areas of the Shire and the type of development applications subject to water supply and sewerage trunk infrastructure contributions together with the method of calculating the contribution is outlined in Schedule DC 1.

SCHEDULE DC 1: WATER SUPPLY & SEWERAGE TRUNK INFRASTRUCTURE CONTRIBUTIONS SCHEDULE

AREAS WHERE INFRASTRUCTURE CONTRIBUTIONS APPLY

(1) For the purpose of determining infrastructure contributions towards water supply and sewerage trunk infrastructure, water supply and sewerage trunk infrastructure has been generally categorised as outlined in Table 1—

Table 1: Water Supply & Sewerage Trunk Infrastructure Categories

Infrastructure Category	Area	Type of Work
Water Supply	District	Dams, water treatment plants, raw water mains to water treatment plants, treated water mains to Council bulk supply points, trunk delivery mains from bulk supply points and water treatment plants, pump stations, reservoirs, associated telemetry systems and monitoring instrumentation.
Water Supply	Zonal	Zonal raw water mains and raw water pumping stations (eg Kenilworth), zonal water treatment plants (eg Kenilworth), Distribution mains, elevated and non-District reservoirs, Distribution pump stations, associated telemetry systems and monitoring instrumentation.
Sewerage	District	Sewage Treatment Plants, effluent and biosolids reuse and disposal systems, trunk sewers, pressure mains, pump stations, associated telemetry systems, instrumentation and odour control systems.
Sewerage	Sub-catchment	Trunk collection sewers and pressure mains, pump stations, associated telemetry systems, instrumentation and odour control systems.

(2) Those areas of the Shire that are to be provided with District trunk infrastructure are to be subject to a District trunk infrastructure contribution, which is that part of the Water Supply & Sewerage Trunk Infrastructure Contribution used to provide District facilities.

(3) Those areas of the Shire that are to be provided with Zonal or Sub-catchment trunk infrastructure are to be subject to a Zonal or Sub-catchment trunk infrastructure contribution, which is that part of the Water Supply & Sewerage Trunk Infrastructure Contribution used to provide respectively Zonal and Sub-catchment facilities.

(4) Those areas of the Shire subject to trunk infrastructure contributions and the boundaries of the various infrastructure categories are, for water supply zones shown on DC1 Figure 3 (refer Appendix 4) and for sewerage sub-catchments shown on DC1 Figure 4 (refer Appendix 5).

APPLICATION OF CONTRIBUTION

(5) Water Supply & Sewerage Trunk Infrastructure Contributions apply to every development application that involves-
(a) Reconfiguring a lot; or
(b) A material change of use.

DETERMINATION OF WATER SUPPLY & SEWERAGE TRUNK INFRASTRUCTURE UNIT RATES

(6) The Water Supply & Sewerage Trunk Infrastructure Unit Rates for the purposes of calculating Water Supply & Sewerage Trunk Infrastructure Contributions is to be determined for each area in respect of each category of Water Supply & Sewerage trunk infrastructure set out in Table 1.

(7) The Water Supply & Sewerage Trunk Infrastructure Unit rate has been calculated as follows—

Rate = A + B

Where

A is the district rate determined by the relevant district establishment costs ÷ equivalent population for the area serviced by the district infrastructure.

B is the zonal or sub-catchment rate determined by the relevant establishment costs for each applicable zone or sub-catchment ÷ equivalent population for each applicable zone or sub-catchment.

(8) The water supply & sewerage trunk infrastructure unit rates for the various zones or sub-catchments, based on the calculation in paragraph (7), are contained in Table 3 (Water Supply) and Table 4 (Sewerage).

DETERMINATION AND CALCULATION OF WATER SUPPLY OR SEWERAGE TRUNK INFRASTRUCTURE CONTRIBUTIONS

(9) The water supply or sewerage trunk infrastructure contribution for any proposed development is to be calculated as follows –

[(A – B) – C] x D x E

Where

A (being proposed demand) is –
   i. For reconfiguring a lot the water supply or sewerage demand factor for the Land or lots (excluding any Dedicated Lots) included in the development application determined using the rates outlined in Table 2(a) or Table 2(b).
   ii. For a material change of use the water supply or sewerage demand factor for the use or Land calculated using the rates outlined in Table 2(a) or Table 2(b).

B (being existing use demand entitlements) is –
   i. For vacant land, the water supply or sewerage demand factor allowed for a single detached house (3.2 EP)[1] or where previous infrastructure contributions have been paid to Council the demand on which the previous contributions were based[2].
   ii. Otherwise, the existing use demand entitlement[3].

C is any applicable infrastructure credit for the land (granted as a result of providing advanced funding for the construction of trunk infrastructure or contributing trunk infrastructure) as outlined in the register of Infrastructure Contributions and Credits.

D is the applicable water supply or sewerage trunk infrastructure unit rate as outlined respectively in Tables 3 or 4 for the zone or sub-catchment in which the land is situated.

E is the applicable water supply or sewerage trunk infrastructure unit charge at the date of payment (refer to Section 3.5 Infrastructure Unit Charges in Planning Scheme Policy DCA – Administration for details of the water supply or sewerage trunk infrastructure unit charge currently in force).

NOTE 1 SCHEDULE DC 1
UNIT CHARGES

(1) For convenience, the trunk infrastructure unit charge for water supply trunk infrastructure or sewerage trunk infrastructure is contained in the Local Government's Scale of Fees and Charges.

[1] For water supply and sewerage trunk infrastructure contributions, any equivalent population (EP) for a single detached house only applies where the lot or dwelling is already connected to the reticulated water supply or sewerage network or where the lot is subject to a vacant water supply or sewerage charge. In this regard the water supply and sewerage networks are to be treated as separate systems, subject to separate determinations about infrastructure.

[2] The onus is upon the applicant to provide evidence of any previous infrastructure contributions paid to Council.

[3] Refer to Division 10 – Glossary of Terms in Planning Scheme Policy DCA – Administration for an explanation of the term "existing use demand entitlement".

NOTE 2 SCHEDULE DC1

EXAMPLES

(1) (a) It is proposed to reconfigure 3 hectares of land at Coolum Beach on the boundaries of Precincts 4 and 9 into:-

(A): 1 lot (8000m²) for future unspecified shops;

(B): 1 lot (5000m²) for future house sites (unspecified number of lots) and

(C): 19 residential lots on 1.7 hectares comprising 15 traditional house lots and 4 courtyard lots

(b) No previous water supply contributions were paid nor is the land subject to infrastructure credits. The land is subject to a vacant water rate.

(c) The water supply infrastructure demand for the proposed development using the rates outlined in Table 2(a) is as follows:-

A 8000m^2	B 5000 m^2	C 1.7 ha
As there is no actual proposal for the lot use the land area method to determine the demand factor	As there is no actual proposal for the lot use the land area method to determine the demand factor	As there is a proposal for the land use both the land area and the number of lots method to determine the demand factor and choose whichever method has the highest demand factor (i.e. EP)
$\frac{35 \text{ EP/ha} \times 8000\text{m}^2}{10000\text{m}^2}$ = 28 EP ✓	$\frac{30 \text{ EP/ha} \times 5000\text{m}^2}{10000\text{m}^2}$ = 15 EP ✓	30 EP/ha x 1.7 ha = 51 EP ✗ OR 15 trad. lots x 3.2 EP = 48 EP 4 c'yard lots x 3.2 = 12.8 EP = 60.8 EP ✓

(d) The water supply demand for the development (A) = 103.8 EP

(e) As the land is not subject to infrastructure credits nor the subject of previous water supply contributions but is subject to a vacant water rate the existing demand is that allowed for a single detached house (refer to 'B' in the calculation formula).

(f) The demand for a single detached house is 3.2 EP (refer to 'B' in the calculation formula).

B = 3.2EP

(g) The increase in demand is A – B = 100.6 EP

(h) The infrastructure contribution is -

100.6 x 2,081 (from Table 3 Zone 12-Coolum Int)

209,348.60 x $1.0762 (Infrastructure Unit Charge)

= $225,300.96

(2) (a) It is proposed to extend by 500m^2 an existing 1000m^2 shop at Kuluin / KundaPark (i.e. GFA increase only – no requirements for additional parking, landscaping, etc).

(b) The shop is on land (3000m^2) within the 'Local Centre' Precinct.

(c) No previous water supply contributions were paid nor is the land subject to infrastructure credits.

(d) The water supply infrastructure demand for the proposed development using the rates outlined in Table 2(a) is as follows:-

Use both the land area and GFA method to determine the demand factor and choose whichever method has the highest demand factor (i.e. EP)

$$\frac{35 \text{ EP / ha} \times 3000\text{m}^2}{10000\text{m}^2} = 10.5 \text{ EP} \checkmark$$

OR

$$\frac{1500\text{m}^2 \times 0.70 \text{ EP}}{100\text{m}^2} = 10.5 \text{ EP} \checkmark$$

(e) The water supply demand for the development (A) = 10.5 EP

(f) The existing water supply infrastructure demand for the shop is as follows-

$$\frac{1000\text{m}^2 \times 0.70 \text{ EP}}{100\text{m}^2}$$ B= 7EP

(To ascertain the demand factor for an existing use only the GFA method is used)

(g) The increase in infrastructure demand is A-B which equals 3.5EP.

(h) The infrastructure contribution is-

3.5 x 1,538 (from Table 3 Zone 17 – Kunda)

5,383 x $1.0762 (Infrastructure Unit Charge)

= $5,793.18

(3) (a) In this example assume the same parameters as outlined in example (2) except that the land area is 5000m^2.

(b) The water supply infrastructure demand for the proposed development using the rates outlined in Table 2(a) is as follows:-

Use both the land area and GFA method to determine the demand factor and choose whichever method has the highest demand factor (i.e. EP)

$$\frac{35 \text{ EP / ha} \times 5000m^2}{10000m^2}$$

= 17.5 EP ✓

OR

$$\frac{1500m^2}{100m^2} \times 0.70 \text{ EP}$$

= 10.5 EP ✗

(c) The water supply demand for the development (A) = 17.5 EP.

(d) The existing water supply infrastructure demand is 7 EP (refer example 2).

(e) The increase in infrastructure demand is A–B which equals 10.5 EP.

(f) The infrastructure contribution is –

10.5 x 1,538 (from Table 3 Zone 17 – Kunda)
16,149 x $1.0762 (Infrastructure Unit Charge)

= $17,379.55

(g) In this example an infrastructure credit of 7 EP would accrue to the land.

(4) (a) In this example assume the same parameters as outlined in example (2) except that previous contributions of $5,200 were paid for the existing centre.

(b) The water supply demand for the development (A) = 10.5 EP (refer example 2).

(c) The existing EP demand is to be equal to the EP on which the previous payment was determined. It was ascertained that the $5,200 previous payment was determined using 5.5 EP. The 5.5 EP becomes the existing use demand factor.

(d) The increase in infrastructure demand is A-B which equals 5.0 EP.

(e) The infrastructure contribution is –

5 x 1,538 (from Table 3 Zone 17 - Kunda)
7,690 x $1.0762 (Infrastructure Unit Charge)

= $8,275.98

(5) (a) It is proposed to change (by demolition) an existing fabrication industry (2000m^2 GFA) to 2500m^2 shops at Kunda Park.

(b) The land is 8000m^2 within the 'Local Centre' Precinct.

(c) No previous water supply contributions were paid nor is the land subject to infrastructure credits.

(d) The water supply infrastructure demand for the proposed development using the rates outlined in Table 2(a) is as follows -

Use both the land area and GFA method to determine the demand factor and choose whichever method has the highest demand factor (i.e. EP)

$$\frac{35 \text{ EP / ha} \times 8000\text{m}^2}{10000\text{m}^2}$$

= 28 EP ✓

OR

$$\frac{2500\text{m}^2}{100\text{m}^2} \times 0.70 \text{ EP}$$

= 17.5 EP ✗

(e) The water supply demand for the development (A) = 28 EP.

(f) The existing water supply infrastructure demand for the fabrication industry is as follows –

$$\frac{2000\text{m}^2 \times 0.55 \text{ EP}^*}{100\text{m}^2}$$ B= 11EP

(To ascertain the demand factor for an existing use only the GFA method is used). *Because the fabrication industry is an inconsistent use in the Local Centre Precinct, the water supply demand factor has been determined using the precinct that most closely aligns with the existing use – in this example the Core Industry Precinct which has a GFA demand factor of 0.55 EP/100m^2 GFA (refer Table 2(a)).

(g) The increase in infrastructure demand is A – B which equals 17 EP.

(h) The infrastructure contribution is –

17 x 1,538 (from Table 3 Zone 17 – Kunda)
26,146 x $1.0762 (Infrastructure Unit Charge)

= $28,138.33

(6) (a) It is proposed to change (by demolition) existing shops (2000m^2 GFA) to 120 dwelling units and 1000m^2 shops at Maroochydore.

(b) The land is 8000 m^2 within the 'Multi-storey Residential' Precinct.

(c) No previous water supply contributions were paid nor in the land subject to infrastructure credits.

(d) The water supply infrastructure demand for the proposed development using the rates outlined in Table 2 (a) is as follows:–

Use both the land area and GFA method to determine the demand factor and choose whichever method has the highest demand factor (i.e. EP)

$$\frac{300 \text{ EP} \times 8000\text{m}^2}{10000\ \text{m}^2}$$

= 240 EP ✘

OR

120 units x 2.0 EP / du = 240 EP

$$\frac{1000\ \text{m}^2}{100\ \text{m}^2} \times 1.0 \text{ EP} = 10 \text{ EP}$$

= 250EP ✓

(e) The water supply demand for the development (A) = 250 EP.

(f) The existing water supply infrastructure demand for the shops is as follows -

$$\frac{2000\ \text{m}^2 \times 1.0 \text{ EP}^*}{100\text{m}^2} \qquad B = 20 \text{ EP}$$

(To ascertain the demand factor for an existing use only the GFA method is used)
*Because shops are a consistent use in the Multi-storey Residential precinct, the water supply demand factor can be determined using the GFA figure for the Multi-storey Residential precinct (i.e. 1.00 EP/ 100 m^2 GFA).

(g) The increase in infrastructure contribution is A – B which equals 230 EP.

(h) The infrastructure contribution is –

230 x 1,396 (from Table 3 Zone 18 – Maroochy South)
321,080 x $1.0762 (Infrastructure Unit Charge)

= $345,546.29

Notes:
EP = Equivalent Population
du = Dwelling unit
GFA = Gross Floor Area
ha = Hectare

Water Supply and Sewerage Demand Factor Rates

(10) The water supply and sewerage demand factor rates for the various precinct classes within each Planning Area outlined in Volume 3 of this Planning Scheme is shown in Table 2 (a) or Table 2 (b).

(11) Where a Table has more than one calculation method for determining the water supply or sewerage demand factor rate, the method producing the highest demand factor rate is to be used as the water supply or sewerage demand factor.

(12) Where a use is proposed within a precinct and that use or use type is not consistent with the water supply or sewerage demand factor assumed for the precinct (eg. retirement village development within the neighbourhood residential precinct), the water supply or sewerage demand factor for the use is to be based on the dwelling unit or GFA method for the precinct outlined in the following tables that most closely align with the proposed development (provided that as a minimum the water supply or sewerage demand factor for the land is not to be below the per hectare (ha) planned population rate as outlined for the relevant precinct).

Table 2 (a): Water Supply & Sewerage Demand Factor Rates for General Precincts

PRECINCT*	WATER SUPPLY DEMAND FACTOR**	SEWERAGE DEMAND FACTOR**
Business and Industry	25EP/ha or 0.55EP/100m^2 GFA	35EP/ha or 0.78EP/100m^2 GFA
Core Industry	25EP/ha or 0.55EP/100m^2 GFA	35EP/ha or 0.78EP/100m^2 GFA
General Rural Lands	N/A	N/A
Hillslope Residential	3.2EP/du or 15EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 15EP/ha or 2.00EP/100m^2 GFA
Local Centre	35EP/ha or 0.70EP/100m^2 GFA or 2.4EP/du	70EP/ha or 1.40EP/100m^2 GFA or 3.2EP/du
Master Planned Community***	3.2EP/du or 30EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 30EP/ha or 2.00EP/100m^2 GFA
Mixed Housing***	2.4EP/du or 100EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 133EP/ha or 2.00EP/100m^2 GFA
Multi-storey Residential***	2.0EP/du or 300 EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 480EP/ha or 2.00EP/100m^2 GFA
Neighbourhood Residential***	3.2EP/du or 30EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 30EP/ha or 2.00EP/100m^2 GFA
Special Purpose***	To determine demand factor rates, use the precinct or precincts from this table that most closely align with the proposed development	To determine demand factor rates, use the precinct or precincts from this table that most closely align with the proposed development
Sustainable Cane Lands	N/A	N/A
Sustainable Horticultural Lands	N/A	N/A
Sustainable Pastoral Lands	N/A	N/A
Sustainable Rural Residential	3.2EP/du or 6EP/ha	N/A
Town Centre Core***	2.0EP/du or 0.50 EP/100m^2 GFA or 50EP/ha	3.2EP/du or 1.00 EP/100m^2 GFA or 100EP/ha
Town Centre Frame***	2.0EP/du or 0.50EP /100m^2 GFA or 50EP/ha	3.2EP/du or 1.00EP /100m^2 GFA or 100EP/ha
Village Centre***	2.0EP/du or 0.35 EP/100m^2 GFA or 35EP/ha	3.2EP/du or 0.70 EP/100m^2 GFA or 70EP/ha
Water Resource Catchment Area	N/A	N/A

*Where contained in an urban or service area and requires service of the infrastructure network
**The Water Supply & Sewerage demand factor is to be based on the highest EP rate
***Demand Factor variations exist for some Specific Precincts – Refer to Table 2(b) Water Supply & Sewerage Demand Factor Rates for Specific Precincts

Notes:

EP = Equivalent Person
du = Dwelling Unit
ha = Hectare
GFA = Gross Floor Area

TABLE 2(b): Water Supply & Sewerage Demand Factor Rates for Specific Precincts

Code	Planning Area	Precinct Number	Precinct	Water Supply Demand Factor*	Sewerage Demand Factor*
1	Maroochydore	1	Town Centre Core	2.0EP/du or 300EP/ha or 3.00EP/100m^2 GFA	3.2EP/du or 600EP/ha or 6.00EP/100m^2 GFA
1	Maroochydore	2	Town Centre Core	2.0EP/du or 200EP/ha or 2.00EP/100m^2 GFA	3.2EP/du or 400EP/ha or 4.00EP/100m^2 GFA
1	Maroochydore	3	Town Centre Core	2.0EP/du or 110EP/ha or 1.10EP/100m^2 GFA	3.2EP/du or 220EP/ha or 2.20EP/100m^2 GFA
1	Maroochydore	4	Town Centre Core	2.0EP/du or 300EP/ha or 3.00EP/100m^2 GFA	3.2EP/du or 600EP/ha or 6.00EP/100m^2 GFA
1	Maroochydore	5	Town Centre Frame	2.0EP/du or 40EP/ha or 0.40EP/100m^2 GFA	3.2EP/du or 80EP/ha or 0.80EP/100m^2 GFA
1	Maroochydore	6	Town Centre Frame	2.0EP/du or 35EP/ha or 0.35EP/100m^2 GFA	3.2EP/du or 70EP/ha or 0.70EP/100m^2 GFA
1	Maroochydore	7	Town Centre Frame	2.0EP/du or 150EP/ha or 1.50EP/100m^2 GFA	3.2EP/du or 300EP/ha or 3.00EP/100m^2 GFA
1	Maroochydore	8	Town Centre Frame	2.0EP/du or 200EP/ha or 2.00EP/100m^2 GFA	3.2EP/du or 400EP/ha or 4.00EP/100m^2 GFA
1	Maroochydore	9	Master Planned Community	3.2EP/du or 110EP/ha or 1.10EP/100m^2 GFA	3.2EP/du or 121EP/ha or 1.21EP/100m^2 GFA
1	Maroochydore	10	Master Planned Community	3.2EP/du or 110EP/ha or 1.10EP/100m^2 GFA	3.2EP/du or 121EP/ha or 1.21EP/100m^2 GFA
1	Maroochydore	11	Master Planned Community	3.2EP/du or 110EP/ha or 1.10EP/100m^2 GFA	3.2EP/du or 121EP/ha or 1.21EP/100m^2 GFA
1	Maroochydore	13	Mixed Housing	2.4EP/du or 135EP/ha or 1.35EP/100m^2 GFA	3.2EP/du or 180EP/ha or 1.80EP/100m^2 GFA
1	Maroochydore	15	Master Planned Community	3.2EP/du or 90EP/ha or 0.9EP/100m^2 GFA	3.2EP/du or 99EP/ha or 0.99EP/100m^2 GFA
1	Maroochydore	17	Mixed Housing	2.4EP/du or 120EP/ha or 1.20EP/100m^2 GFA	3.2EP/du or 160EP/ha or 1.60EP/100m^2 GFA
1	Maroochydore	20	Mixed Housing	2.4EP/du or 120EP/ha or 1.20EP/100m^2 GFA	3.2EP/du or 160EP/ha or 1.60EP/100m^2 GFA
1	Maroochydore	22	Local Centre	2.4EP/du or 45EP/ha or 0.90EP/100m^2 GFA	3.2EP/du or 90EP/ha or 1.80EP/100m^2 GFA
1	Maroochydore	23	Mixed Housing	2.4EP/du or 110EP/ha or 1.10EP/100m^2 GFA	3.2EP/du or 146EP/ha or 1.46EP/100m^2 GFA
1	Maroochydore	25	Mixed Housing	2.4EP/du or 135EP/ha or 1.35EP/100m^2 GFA	3.2EP/du or 180EP/ha or 1.80EP/100m^2 GFA
1	Maroochydore	27	Mixed Housing	2.4EP/du or 120EP/ha or 1.20EP/100m^2 GFA	3.2EP/du or 160EP/ha or 1.60EP/100m^2 GFA

Code	Planning Area	Precinct Number	Precinct	Water Supply Demand Factor*	Sewerage Demand Factor*
2	Nambour	1	Town Centre Core	2.0EP/du or 50EP/ha or 0.50EP/100m^2 GFA	3.2EP/du or 100EP/ha or 1.00EP/100m^2 GFA
2	Nambour	2	Town Centre Frame	2.0EP/du or 45EP/ha or 0.45EP/100m^2 GFA	3.2EP/du or 90EP/ha or 0.90EP/100m^2 GFA
2	Nambour	3	Mixed Housing	2.4EP/du or 80EP/ha or 0.80EP/100m^2 GFA	3.2EP/du or 106EP/ha or 1.06EP/100m^2 GFA
2	Nambour	4	Mixed Housing	2.4EP/du or 80EP/ha or 0.80EP/100m^2 GFA	3.2EP/du or 106EP/ha or 1.06EP/100m^2 GFA
2	Nambour	28	Master Planned Community	3.2EP/du or 35EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 38.5EP/ha or 1.00EP/100m^2 GFA
3	Sippy Downs	1	Town Centre Core	2.0EP/du or 60EP/ha or 0.60EP/100m^2 GFA	3.2EP/du or 120EP/ha or 1.20EP/100m^2 GFA
3	Sippy Downs	2	Town Centre Frame	2.0EP/du or 80EP/ha or 0.80EP/100m^2 GFA	3.2EP/du or 160EP/ha or 1.60EP/100m^2 GFA
3	Sippy Downs	3	Special Purpose	3.2EP/du or 150EP/ha or 1.50EP/100m^2 GFA	3.2EP/du or 150EP/ha or 1.50EP/100m^2 GFA
3	Sippy Downs	4	Master Planned Community	3.2EP/du or 40EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 44EP/ha or 1.00EP/100m^2 GFA
3	Sippy Downs	5	Master Planned Community	3.2EP/du or 40EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 44EP/ha or 1.00EP/100m^2 GFA
3	Sippy Downs	8	Master Planned Community	3.2EP/du or 40EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 44EP/ha or 1.00EP/100m^2 GFA
3	Sippy Downs	11	Master Planned Community	3.2EP/du or 40EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 44EP/ha or 1.00EP/100m^2 GFA
4	Mooloolaba	1	Town Centre Core	2.0EP/du or 300EP/ha or 3.00EP/100m^2 GFA	3.2EP/du or 600EP/ha or 6.00EP/100m^2 GFA
4	Mooloolaba	2	Town Centre Frame	2.0EP/du or 200EP/ha or 2.00EP/100m^2 GFA	3.2EP/du or 400EP/ha or 4.00EP/100m^2 GFA
4	Mooloolaba	3	Town Centre Frame	2.0EP/du or 200EP/ha or 2.00EP/100m^2 GFA	3.2EP/du or 400EP/ha or 4.00EP/100m^2 GFA
4	Mooloolaba	4	Town Centre Frame	2.0EP/du or 100EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 200EP/ha or 2.00EP/100m^2 GFA
4	Mooloolaba	5	Multi-storey Residential	2.0EP/du or 240EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 384EP/ha or 1.00EP/100m^2 GFA
4	Mooloolaba	6	Multi-storey Residential	2.0EP/du or 240EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 384EP/ha or 1.00EP/100m^2 GFA
4	Mooloolaba	7	Mixed Housing	2.4EP/du or 135EP/ha or 1.35EP/100m^2 GFA	3.2EP/du or 180EP/ha or 1.80EP/100m^2 GFA
4	Mooloolaba	8	Mixed Housing	2.4EP/du or 135EP/ha or 1.35EP/100m^2 GFA	3.2EP/du or 180EP/ha or 1.80EP/100m^2 GFA

Code	Planning Area	Precinct Number	Precinct	Water Supply Demand Factor*	Sewerage Demand Factor*
4	Mooloolaba	13	Mixed Housing	2.4EP/du or 140EP/ha or 1.40EP/100m^2 GFA	3.2EP/du or 186EP/ha or 1.86EP/100m^2 GFA
6	Buderim	1A	Village Centre	2.0EP/du or 45EP/ha or 0.45EP/100m^2 GFA	3.2EP/du or 90EP/ha or 0.90EP/100m^2 GFA
6	Buderim	1B	Village Centre	2.0EP/du or 45EP/ha or 0.45EP/100m^2 GFA	3.2EP/du or 90EP/ha or 0.90EP/100m^2 GFA
6	Buderim	2	Mixed Housing	2.4EP/du or 85EP/ha or 0.85EP/100m^2 GFA	3.2EP/du or 113EP/ha or 1.13EP/100m^2 GFA
7	Alexandra Headland/Cotton Tree	2	Multi-storey Residential	2.0EP/du or 320EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 512EP/ha or 1.00EP/100m^2 GFA
7	Alexandra Headland/Cotton Tree	5	Mixed Housing	2.4EP/du or 120EP/ha or 1.20EP/100m^2 GFA	3.2EP/du or 160EP/ha or 1.60EP/100m^2 GFA
7	Alexandra Headland/Cotton Tree	8	Mixed Housing	2.4EP/du or 140EP/ha or 1.40EP/100m^2 GFA	3.2EP/du or 186EP/ha or 1.86EP/100m^2 GFA
7	Alexandra Headland/Cotton Tree	10	Mixed Housing	2.4EP/du or 120EP/ha or 1.20EP/100m^2 GFA	3.2EP/du or 160EP/ha or 1.60EP/100m^2 GFA
7	Alexandra Headland/Cotton Tree	11	Mixed Housing	2.4EP/du or 135EP/ha or 1.35EP/100m^2 GFA	3.2EP/du or 180EP/ha or 1.80EP/100m^2 GFA
8	Kuluin/Kunda Park	1	Town Centre Frame	2.0EP/du or 35EP/ha or 0.35EP/100m^2 GFA	3.2EP/du or 70EP/ha or 0.70EP/100m^2 GFA
8	Kuluin/Kunda Park	4	Mixed Housing	2.4EP/du or 70EP/ha or 0.70EP/100m^2 GFA	3.2EP/du or 93EP/ha or 0.93EP/100m^2 GFA
9	North Shore	2	Multi-storey Residential	2.0EP/du or 200EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 320EP/ha or 1.00EP/100m^2 GFA
9	North Shore	13	Mixed Housing	2.4EP/du or 70EP/ha or 0.70EP/100m^2 GFA	3.2EP/du or 93EP/ha or 0.93EP/100m^2 GFA
9	North Shore	15	Master Planned Community	3.2EP/du or 30EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 33EP/ha or 1.00EP/100m^2 GFA
9	North Shore	16	Master Planned Community	3.2EP/du or 190EP/ha or 1.90EP/100m^2 GFA	3.2EP/du or 209EP/ha or 2.09EP/100m^2 GFA
10	Mt. Coolum	2	Mixed Housing	2.4EP/du or 140EP/ha or 1.40EP/100m^2 GFA	3.2EP/du or 186EP/ha or 1.86EP/100m^2 GFA
10	Mt. Coolum	8	Master Planned Community	3.2EP/du or 100EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 133EP/ha or 1.33EP/100m^2 GFA
10	Mt. Coolum	9	Master Planned Community	3.2EP/du or 35EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 38.5EP/ha or 1.00EP/100m^2 GFA
11	Coolum Beach	1	Village Centre	2.0EP/du or 200EP/ha or 2.00EP/100m^2 GFA	3.2EP/du or 400EP/ha or 4.00EP/100m^2 GFA
11	Coolum Beach	3	Mixed Housing	2.4EP/du or 200EP/ha or 2.00EP/100m^2 GFA	3.2EP/du or 266EP/ha or 2.66EP/100m^2 GFA

Code	Planning Area	Precinct Number	Precinct	Water Supply Demand Factor*	Sewerage Demand Factor*
15	Woombye	2	Mixed Housing	2.4EP/du or 60EP/ha or 0.6EP/100m^2 GFA	3.2EP/du or 80EP/ha or 0.80EP/100m^2 GFA
17	Eumundi	6	Mixed Housing	2.4EP/du or 60EP/ha or 0.6EP/100m^2 GFA	3.2EP/du or 80EP/ha or 0.80EP/100m^2 GFA
21	Eudlo Creek Valley	16	Master Planned Community	3.2EP/du or 50EP/ha or 1.00EP/100m^2 GFA	3.2EP/du or 55EP/ha or 1.00EP/100m^2 GFA

*The Water Supply & Sewerage demand factor is to be based on the highest EP rate.

Notes:

EP = Equivalent Person
du = Dwelling Unit
ha = Hectare
GFA = Gross Floor Area

Schedule of Infrastructure Unit Rates

(13) The water supply and sewerage infrastructure unit rates for the various water supply zones (refer Figure 3) or sewerage sub-catchments (refer Figure 4) are shown in the following Tables for water supply (Table 3) or sewerage (Table 4).

TABLE 3: Schedule of Water Supply Trunk Infrastructure Unit Rates

Zonal Name	Zone Number	District (Per EP)	Zonal (Per EP)	Infrastructure Unit Rate per Equivalent Person (EP)
Atkinson Rd	01	1,849	2,532	4,380
Bli Bli	02	1,636	234	1,870
BT1 / Pringle R	03	869	0	869
Buderim - H	04	1,384	323	1,707
Buderim - Int	05	1,439	406	1,845
Buderim - LL	06	1,599	584	2,183
Cathedral	07	1,413	414	1,827
Coes Creek	08	1,184	297	1,481
Coolum	09	1,627	330	1,958
Coolum - H	10	1,588	648	2,236
Coolum - Ind	11	1,746	201	1,946
Coolum - Int	12	1,677	404	2,081
Craigs Hill	13	941	586	1,527
Eumundi	14	1,823	415	2,238
Harbour Hill	15	1,070	494	1,564
Kiel Mountain W	16	1,044	2,690	3,733
Kunda	17	926	612	1,538
Maroochy South	18	992	404	1,396
Mountain Creek	19	1,268	294	1,562
Nambour West	20	1,057	455	1,512
North Arm	21	1,501	2,880	4,381
Panorama	22	1,037	525	1,563
Peregian	23	1,891	304	2,196
Pringle Hill	24	1,288	198	1,486
Rosemount	25	1,210	3,731	4,941
Sippy Downs	26	795	125	920
Woombye	27	1,419	604	2,023
Yandina - H	28	1,190	620	1,810
Yandina - L	29	1,574	325	1,899
Yandina - S1	30	1,493	321	1,814
Yandina - S2	31	1,298	88	1,386
Kenilworth Scheme	32	-	692	692

TABLE 4: Schedule of Sewerage Trunk Infrastructure Unit Rates

Catchment	District (Per EP)	Sub-Catchment (Per EP)	Infrastructure Unit Rate per Equivalent Person (EP)
Sub-catchment (M01)	1,131	164	1,295
Sub-catchment (M02)	1,213	294	1,506
Sub-catchment (M03)	1,367	410	1,777
Sub-catchment (M04)	1,172	116	1,288
Sub-catchment (M05)	1,262	392	1,654
Sub-catchment (M06)	1,387	690	2,077
Sub-catchment (M07)	1,394	111	1,505
Sub-catchment (M08)	1,441	216	1,657
Sub-catchment (M09)	1,441	192	1,633
Sub-catchment (M10)	1,092	461	1,553
Sub-catchment (M11)	1,089	266	1,356
Sub-catchment (M12)	1,195	385	1,580
Sub-catchment (M13)	1,373	157	1,530
Sub-catchment (M14)	1,402	802	2,204
Sub-catchment (M15)	1,064	1,273	2,336
Sub-catchment (N01)	1,134	800	1,935
Sub-catchment (N02)	1,196	290	1,486
Sub-catchment (N03)	1,294	324	1,618
Sub-catchment (N04)	1,294	524	1,818
Sub-catchment (N05)	1,581	367	1,948
Sub-catchment (N06)	1,590	727	2,317
Sub-catchment (N07)	1,188	458	1,646
Sub-catchment (N08)	1,025	637	1,662
Eumundi (N09)	1,669	1,314	2,983
Yandina (N10)	1,862	551	2,413
Sub-catchment (C01)	1,200	434	1,634
Sub-catchment (C02)	1,293	374	1,667
Sub-catchment (C03)	1,298	251	1,549
Sub-catchment (C04)	1,442	489	1,930
Sub-catchment (C05)	1,442	877	2,318
Sub-catchment (C06)	1,541	89	1,629
Sub-catchment (C07)	1,693	309	2,003
Sub-catchment (S01)	1,304	296	1,600
Sub-catchment (S02)	1,179	759	1,939
Sub-catchment (S03)	1,084	859	1,943
Sub-catchment (S04)	1,207	371	1,579
Kenilworth (K01)	2,155	2,000	4,156

APPENDIX 1
DC1 FIGURE 1. WATER SUPPLY TRUNK INFRASTRUCTURE

DC1 Figure 1 Water Supply Trunk Infrastructure generally shows the existing and future water supply trunk infrastructure and has been compiled from the following Drawings –

Drawing No.	Title	Date
2838/12/01 – WA	Overall Key Layout Plan	03-05-2005
2838/12/01 – WB	Layout Plan – Eumundi and North Arm Districts	03-05-2005
2838/12/01 – WD	Layout Plan – Peregian District	03-05-2005
2838/12/01 – WE	Layout Plan – North Arm and Yandina Districts	03-05-2005
2838/12/01 – WF	Layout Plan – Coolum District	03-05-2005
2838/12/01 – WG	Layout Plan – Coolum District	03-05-2005
2838/12/01 – WH	Layout Plan – Yandina and Nambour Districts	03-05-2005
2838/12/01 – WJ	Layout Plan – Atkinson Road and Bli Bli Districts	03-05-2005
2838/12/01 – WK	Layout Plan – Coolum District	03-05-2005
2838/12/01 – WL	Layout Plan – Nambour District	03-05-2005
2838/12/01 – WM	Layout Plan – Bli Bli, Keil Mountain and Coolum Districts	03-05-2005
2838/12/01 – WN	Layout Plan – Coolum and Maroochydore Districts	03-05-2005
2838/12/01 – WP	Layout Plan – Woombye and Nambour Districts	03-05-2005
2838/12/01 – WQ	Layout Plan – Keil Mountain and Buderim Districts	03-05-2005
2838/12/01 – WR	Layout Plan – Maroochydore and Buderim Districts	03-05-2005
2838/12/01 – WS	Layout Plan – Landers Shute and Eudlo Districts	03-05-2005
2838/12/01 – WT	Layout Plan – Sippy Downs District	03-05-2005
2838/12/01 – WU	Layout Plan – Sippy Downs District	03-05-2005
2838/12/01 – WV	Layout Plan – Kenilworth District	03-05-2005
2838/12/01 – WX	Layout Plan – Yandina and Nambour Districts	03-05-2005

The abovementioned drawings, whilst part of this planning scheme policy, have been collated separately from this document for ease of use. These drawings are available from the Council.

APPENDIX 2
DC1 FIGURE 2. SEWERAGE TRUNK INFRASTRUCTURE

DC1 Figure 2 Sewerage Trunk Infrastructure generally shows the existing and future sewerage trunk infrastructure and has been compiled from the following Drawings –

Drawing No.	Title	Date
2838/12/01 – SA	Key Plan	03-05-2005
2838/12/01 – SB	Eumundi Sewerage Catchment	03-05-2005
2838/12/01 – SC	Yandina Sewerage Catchment	03-05-2005
2838/12/01 – SD	Nambour Sewerage Catchment	03-05-2005
2838/12/01 – SE	Nambour Sewerage Catchment	03-05-2005
2838/12/01 – SF	Nambour Sewerage Catchment	03-05-2005
2838/12/01 – SG	Coolum Sewerage Catchment	03-05-2005
2838/12/01 – SH	Coolum Sewerage Catchment	03-05-2005
2838/12/01 – SJ	Suncoast Sewerage Catchment	03-05-2005
2838/12/01 – SK	Maroochydore Sewerage Catchment	03-05-2005
2838/12/01 – SL	Maroochydore Sewerage Catchment	03-05-2005
2838/12/01 – SM	Maroochydore Sewerage Catchment	03-05-2005
2838/12/01 – SN	Maroochydore Sewerage Catchment	03-05-2005
2838/12/01 – SP	Maroochydore Sewerage Catchment	03-05-2005
2838/12/01 – SQ	Kenilworth Sewerage Catchment	03-05-2005

The abovementioned drawings, whilst part of this planning scheme policy, have been collated separately from this document for ease of use. These drawings are available from the Council.

APPENDIX 3 WATER SUPPLY AND SEWERAGE DESIRED STANDARDS OF SERVICE

TABLE DC 1.4.1

Water Supply	Sewerage
▪ Provide a service of potable water that meets the performance standards outlined in the Australian Drinking Water Guidelines (1996) issued by the National Health and Medical Research Council (NHMRC)	▪ Provide a service of sanitary drainage that meets the Environmental Protection Authority (EPA) requirements with respect to the containment of sewage and effluent disposal.
▪ Design of the water supply network is to comply with established codes and standards including: - Water Services Association of Australia Code for Water Supply - Queensland Water Resources Commission "Guidelines for Planning and Design of Urban Water Supply Schemes" - Water Act 2000 (N.B. Community expectations should be reflected where codes or standards can be interpreted to the contrary)	▪ Design of the sewerage network is to comply with established codes and standards including: - Water Services Association of Australia Code for Sewerage Services - Queensland Water Resources Commission "Guidelines for Planning and Design of Sewerage Schemes" - Water Act 2000 and the Plumbing and Drainage Act 2002 - EPA approval conditions and standards (N.B. Community expectations should be reflected where codes or standards can be interpreted to the contrary)
▪ The water supply distribution system is to be designed generally in accordance with State Government Guidelines with: - The minimum pressure expectation at a property boundary being 22 metres head - Average Day Demand (AD) = 370L/EP/day - Design of any non-conventional system will reflect the precepts of the Queensland Water Recycling Strategy and best appropriate practices that achieve the desired outcomes for the potable water supply.	▪ The sewerage system is to be designed generally in accordance with State Government Guidelines and requirements with: - For gravity sewers a per capita flow based on Average Dry Weather Flow (ADWF) = 225L/EP/day

APPENDIX 4
DC1 FIGURE 3. WATER SUPPLY ZONAL HEADWORKS AREAS

APPENDIX 5
DC1 FIGURE 4. SEWERAGE SUB-CATCHMENT HEADWORKS AREAS