

Kempsey Shire Council
Macleay Water
Development Servicing Plans for
Sewerage Services

FINAL

July 2006



Kempsey Shire Council

Macleay Water Development Servicing Plan for Sewerage Services

July 2006

This plan was prepared for [Kempsey Shire Council](#) by John Wilson and Partners Pty Ltd

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Executive Summary

This document covers sewerage developer charges for the following development areas served by Macleay Water (MW):

Service Area	Areas Included
Crescent Head	Crescent Head
Frederickton	Frederickton
Hat Head	Hat Head
Smithtown/Gladstone	Smithtown and Gladstone
South Kempsey	South Kempsey, East Kempsey, Burnt Bridge
South West Rocks	South West Rocks, Arakoon
Stuarts Point	Stuarts Point
West Kempsey	West Kempsey, Kempsey, Greenhill

This document has been prepared in accordance with the Developer Charges Guidelines for Water Supply, Sewerage and Stormwater (December 2002) issued by the former Department of Land and Water Conservation (DWLC) pursuant to section 306 (3) of the Water Management Act 2000. This document is to be registered with the Department of Energy, Utilities, and Sustainability (DEUS).

The timing and expenditures for works serving the area covered by this document and the calculation of developer charges is given in **Appendix A**.

Levels of service to be provided to the service areas are stated within the Macleay Water Strategic Business Plan 2005/06.

One Development Servicing Plan (DSP) is covered by this document. The developer charge calculated is shown in **Table 1**.

Table 1 – Calculated Developer Charges

DSP Name	Calculated Developer Charge (2005/06 \$ per ET)	Adopted Developer Charge (2005/06 \$ per ET)
Macleay Water Sewerage	\$6,300	\$6,300

The developer charges adopted in this DSP are scheduled to commence on 1st July 2006.

Developer charges relating to these DSPs will be reviewed after a period of 5 to 6 years. A shorter review period is permitted if a major change in circumstances occurs. In the period between reviews, developer charges will be adjusted annually on 1 July on the basis of the movements in the CPI.

The developer shall be responsible for the full cost of the design and construction of reticulation works within subdivisions. Any development approved outside the service area boundaries shown in this report is also subject to this DSP.

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Appendix A Background Documents

1 Introduction

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*.

A Development Servicing Plan (DSP) is a document which details the sewerage developer charges to be levied on development areas utilising a Council's sewerage infrastructure.

This document contains one DSP that covers sewerage developer charges for the areas served by Macleay Water (MW).

This DSP has been prepared in accordance with the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (December 2002) issued by the Minister for Land and Water Conservation (now Minister for Energy and Utilities), pursuant to section 306 (3) of the *Water Management Act 2000*. This DSP is scheduled to commence on 1st July, 2006.

This DSP supersedes any other requirements related to sewerage developer charges for the area covered by the DSP. This DSP takes precedence over any of Council's codes or policies where there are any inconsistencies relating to sewerage developer charges.

2 Administration

DSP Name	Macleay Water Sewerage
DSP Area	The areas covered by this DSP are shown in Section 8 .
DSP Boundaries	<p>The basis for defining the DSP area boundaries is the sewerage catchments served by the existing assets of the Crescent Head, Frederickton, Hat Head, Smithtown/Gladstone, South Kempsey, South West Rocks, West Kempsey sewerage treatment plants and the future assets schedule for the next 5 years (also known as the capital works program).</p> <p>Any development approved outside the service area boundaries shown in this report is also subject to this DSP. Relevant development approvals are still required for development within the boundaries shown in this report. Development approval will be subject to the relevant planning instruments including standard investigations pertaining to the feasibility of connection to water supply or sewerage services as per Council's current policies for service provision.</p>
Payment of Developer Charges	The contribution(s) will be assessed by Council and will apply for 3 months from the date of the assessment notice. Contributions not received by Council within 3 months of the date of notice will be adjusted in accordance with the DSP current at the time of payment.
Indexation of Developer Charges	The developer charges will be indexed to ensure they are not eroded by inflation. Charges will be indexed on the 1st July each year in line with the Consumer Price Index (CPI, All Groups Sydney) as published by the Australian Bureau of Statistics.

3 The Developer Charges Process

3.1 Introduction

Developer charges are up-front charges levied to recover part of the infrastructure costs incurred in servicing new developments or additions/changes to existing developments. Developer charges serve two related functions:

- They provide a source of funding for infrastructure required for new urban development.
- They provide signals regarding the cost of urban development and thus encourage less costly forms and areas of development.

The Developer Charges calculation is based on the net present value (NPV) approach adopted by the Independent Pricing and Regulatory Tribunal (IPART) for the metropolitan water utilities. The fundamental principle of the NPV approach is that the investment in assets for serving a development area is fully recovered from the development. The investment is recovered through up-front charges (i.e. developer charges) and the present value (PV) of that part of annual bills received from the development in excess of operation, maintenance and administration (OMA) costs.

i.e. Developer Charge = Capital Charge (cost of providing the assets)
– Reduction Amount (cost recovered through annual bills).

The Capital Charge and Reduction Amount are discussed further in the following sections. The developer charges process is described fully in the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (DLWC, December 2002).

NSW local water utilities (LWUs) which propose to levy developer charges for water supply and/or sewerage need to prepare development servicing plans (DSPs). The DSP details the calculation of the developer charges and is required to be fair and transparent.

LWUs need to calculate and report developer charges in accordance with section 306 (3) of the *Water Management Act 2000* and the Guidelines, and to register their DSPs with DEUS by 30 June 2004.

Developer charges relating to a particular DSP should be reviewed by the LWU after a period of 5 to 6 years. If the review indicates that the developer charges in the DSP remain valid, the DSP will apply for a further 5 to 6 years after the utility releases a public notice to this effect. However, if it is considered that a new DSP is warranted a new DSP shall be prepared, exhibited and registered.

If a major change occurs in the LWU's circumstances such as the need for significant capital works that had not been included in the DSP, the LWU may carry out a review in less than 5 years, subject to approval by the Department of Energy, Utilities, and Sustainability.

3.2 The Capital Charge

Capital Charge = Capital Cost x Return on Investment (ROI) Factor

The capital cost includes the cost of providing, extending or augmenting assets required, or likely to be required, to provide

services to a development area. The capital cost per equivalent tenement (ET) is the value of the relevant assets divided by the capacity of these assets (in ETs).

Relevant assets include existing and future assets required to support growth, but exclude reticulation assets.

Typically, the capacity of an asset would not be fully utilised until some time after construction of the asset. The Return on Investment (ROI), also known as a holding charge, is based on the cost of early investment, and recovery of the cost over time. The ROI factor is dependent on the period for take-up of the asset capacity, and the rate of return required for the asset.

The capital charge is calculated for each service area. Service areas are:

- An area served by a separate sewerage treatment works
- Separate small towns or villages
- A new development area of over 500 lots

Where the capital charges for two or more service areas are within 30%, they are agglomerated into a single DSP. The local water utility may further agglomerate areas into a single DSP.

3.3 The Reduction Amount

Macleay Water has adopted the NPV of Annual Charges method for calculation of the Reduction Amount. In the long term, developer charges should cover the capital charge for serving a development area less the net present value of net income from annual charges for the development area. The reduction amount represents the NPV of net income (income less recurrent expenditure) from the development. Using the NPV of Annual Charge method requires a 30 year financial plan in order to calculate the reduction amount.

4 Kempsey Shire Sewerage

4.1 Existing Sewerage Services

There are seven separate sewerage reticulation systems in Kempsey Shire. The major schemes are in Kempsey (West & South), however smaller, independent schemes are provided for Crescent Head, Hat Head, Smithtown/Gladstone, South West Rocks, and Frederickton.

The areas supplied by each of the seven systems are set out in **Table 2**.

Table 2 – Existing areas with Sewerage Services provided by Macleay Water

Service Area	Areas Included
Crescent Head	Crescent Head
Frederickton	Frederickton
Hat Head	Hat Head
Smithtown/Gladstone	Smithtown and Gladstone
South Kempsey	South Kempsey, East Kempsey, Burnt Bridge
South West Rocks	South West Rocks, Arakoon
West Kempsey	West Kempsey, Kempsey, Greenhill

4.2 Growth Projections

Table 3 lists the sewerage service areas and the existing and expected future populations provided with reticulated sewerage. Population projections are based on the demographic forecasts developed as part of the Macleay Water Integrated Water Cycle Management Strategy (IWCMS). These projections are from the present year to 2034, which is Council’s planning horizon. No growth is forecast for Bellbrook and Willawarrin.

Table 3 - Projected Population of Areas Supplied with Reticulated Sewerage

Service Area	2005	2010	2020	2034
Bellbrook	109	109	109	109
Crescent Head	1,172	1,301	1,585	1,880
Hat Head	329	365	445	528
Kempsey and Lower Macleay	13,057	13,334	14,378	15,257
South West Rocks	4,682	5,306	6,723	8,246
Stuarts Point	821	867	977	1,082
Willawarrin	106	106	106	106
TOTAL	22,281	23,398	26,343	29,242

4.3 Land Use Information

This DSP should be read in conjunction with Council’s LEP and other planning instruments.

4.4 Design Parameters

Investigation and design of sewerage system components is based on the following design manuals:

- Manual of Practice: Sewer Design (1984)
- Manual of Practice: Sewage Pumping Station Design (1986)
- WSAA Sewerage Code of Australia (WSA02-2002)
- WSAA Sewerage Pumping Code of Australia (WSA04-2001)

4.5 Levels of Service

System design and operation are based on the levels of service stated within the document, “Macleay Water Strategic Business Plan for Water Supply and Sewerage Services” (JWP, 2005). A copy is also provided in **Appendix A**.

4.6 System Capacity

Macleay Water plans to augment its sewerage treatment and transfer systems to cater for future growth. The system capacities are shown in the following table. System capacity is based on the historical demand analysis, water demand forecasts and infrastructure assessments determined as part of the IWCMS. An average EP/ET ratio of 2 was adopted.

Table 4 – Sewerage Systems Capacity

Service Area	Treatment Works Capacity (Ultimate 2034 ET)		Transfer System Capacity (ET) (Ultimate 2034)	
	EP	ET	EP	ET
Crescent Head	4,000	2,000	4,000	2,000
Frederickton	1,000	500	1,000	500
Hat Head	2,000	1,000	2,000	1,000
Smithtown/Gladstone	1,550	775	1,550	775
South Kempsey	5,400	2,700	5,400	2,700
South West Rocks	12,000	6,000	12,000	6,000
Stuarts Point	1,500	750	1,500	750
West Kempsey	8,500	4,250	8,500	4,250

4.7 Capital Works

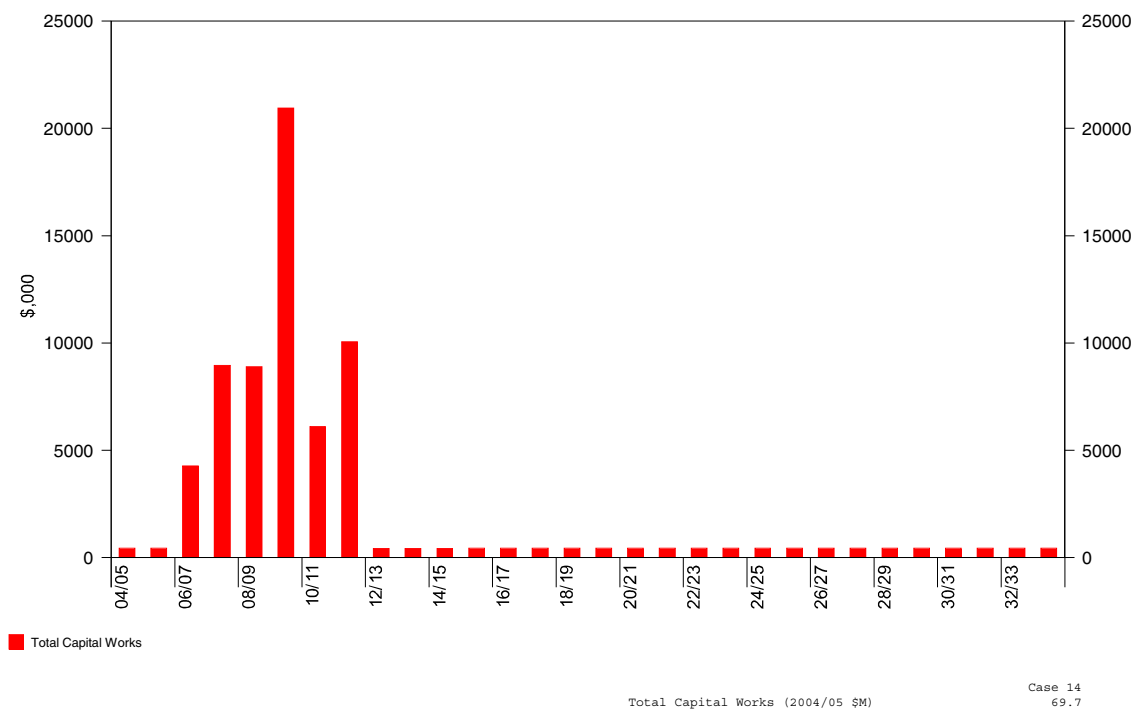
Capital works estimated at \$69.7 M (2005/06 \$) will be required over the next 30 years to provide sewerage services to the shire, comprising both new works and renewals.

4.8 Timing of Works and Expenditure

The timing and expenditure for sewerage works are shown in the capital works program, located in **Appendix A**. The annual capital works expenditure is shown graphically as **Figure 1**.

Figure 1 – Capital Works Program

Preferred Scenario DSP Base Case



5 Calculation of Developer Charges

5.1 Capital Charge

The capital charge was calculated for the sewerage service areas based on the existing and future assets providing the services to each of the towns. The capital charge for each area was calculated in **Table A2-A9** (refer **Appendix A**) and summarised in **Table 5**.

Table 5 – Initial Capital Charges

Capital Charge Area	Capital Charge per ET (2005/06 \$)
Stuarts Point	\$18,200
Hat Head	\$12,225
Frederickton	\$9,100
West Kempsey	\$8,675
South Kempsey	\$8,150
Smithtown-Gladstone	\$7,725
South West Rocks	\$7,325
Crescent Head	\$5,600

No developer charges were calculated for Bellbrook and Willawarrin as no growth is predicted for these towns and their capital charge would be nullified in the agglomeration process.

5.2 Agglomeration of Capital Charges

The capital charges were grouped into DSP areas of within 30% of the highest capital charge. The outcome is agglomeration of these charges into three DSP areas as shown in **Table 6** below.

The weighted average capital charge is calculated on the proportion of growth in each DSP area shown in **Table 3**. The weighted average capital charge is used to calculate the reduction amount for the whole shire. The capital charge for each DSP area is shown in the final column of **Table 6**. This comprises the total of the weighted capital charges for the DSP area divided by the total proportion of growth.

Table 6 – Agglomeration of Service Areas

DSP Area	2005\$ per ET Capital Charge	DSP Area 1 % of highest	DSP Area 2 % of highest	DSP Area 3 % of highest	DSP Area 4 % of highest	Proportion of Growth (%)	Weighted Average Capital Charge	DSP Area Capital Charge
Stuarts Point	\$18,200	100%				4%	\$758	\$18,200
Hat Head	\$12,225	67%	100%			3%	\$398	
Frederickton	\$9,100		74%			4%	\$321	\$9,500
West Kempsey	\$8,675		71%			9%	\$793	
South Kempsey	\$8,150		67%	100%		8%	\$670	
Smithtown-Gladstone	\$7,725			95%		4%	\$272	\$7,450
South West Rocks	\$7,325			90%		56%	\$4,134	
Crescent Head	\$5,600			69%	100%	12%	\$654	\$5,600
Weighted Average Capital Charge						100%	\$8,000	

5.3 Reduction Amount

Macleay Water has adopted the NPV of Annual Charges method to calculate the Reduction Amount (Refer Developer Charges Guidelines). The Reduction Amount is calculated across all of the Macleay Water sewerage systems.

KSC has resolved that new development will also contribute to the cost of projects which have environmental or public health outcomes that benefit the community as a whole. The reduction amount has been calculated on this basis.

In order to calculate the reduction amount using the NPV of Annual Charges Method, it is necessary to make a 30 year projection of future annual charges for residential customers. Such projections were made using the NSW Financial Planning Model (FINMOD).

Key forecasts for the Financial Planning Model for MW include:

- 2.5% inflation,
- 6.5% pa borrowing rate, with 20 year loans, and
- 5.5% pa investment rate.

The reduction amount for Macleay Water developer charges for sewerage was calculated as **\$1,700** per ET (2005/06 \$) (refer to **Appendix A**).

5.4 Developer Charges

The calculated developer charges for the DSP areas are shown in **Table 7**. These developer charges reflect the cost of assets for serving new development.

Table 7 – Developer Charges (2005/06 \$)

DSP Name	Capital Charge (\$ per ET)	Reduction Amount (\$ per ET)	Calculated Developer Charge (\$ per ET)
Macleay Water Sewerage	\$8,000	\$1,700	\$6,300

Macleay Water has elected to further agglomerate the charges to apply one charge over the entire service area. Weighted by growth, the charge across the whole service area was calculated as **\$6,300** per ET (2005/06 \$).

5.5 Reviewing/Updating of Calculated Developer Charges

As required by the Developer Charges Guidelines (section 2.5), the developer charges relating to this DSP will be reviewed by Macleay Water after a period of 5 to 6 years. If the review indicates that the developer charges remain valid, the DSP will apply for a further 5 to 6 years after the Council releases a public notice to this effect. However, if it is considered that a new DSP is warranted, a new DSP shall be prepared, exhibited and registered.

If a major change occurs in Macleay Water’s circumstances such as the need for significant capital works that had not been included in this DSP, Council may carry out a review in less than 5 years,

subject to approval by DEUS. If the review results in a new DSP, the new DSP will be exhibited and registered in accordance with the requirements of the guidelines.

In the period between any review, developer charges will be adjusted on 1 July each year on the basis of movements in the CPI for Sydney, in the preceding 12 months to December, excluding the impact of GST. The first adjustment will take effect from 1 July 2006.

5.6 Reticulation Works

The developer shall be responsible for the full cost of the design and construction of sewerage reticulation works within developments including subdivisions. The design and construction of the works shall be in accordance with Council’s development specifications for sewerage services.

5.7 Adopted Developer Charges

As shown in **Table 8**, Council intends to levy developer charges equivalent to the calculated developer charge for commencement on 1st July 2006. The calculated charge is the maximum amount which may be levied by Council. Council is required to disclose the cross subsidy by existing customers. No cross-subsidy will apply to existing customers as the full calculated charge is to be levied.

Table 8 – Adopted Developer Charges

DSP Name	Calculated Developer Charge (2005/06 \$ per ET)	Adopted Developer Charge (2005/06 \$ per ET)
Macleay Water Sewerage	\$6,300	\$6,300

6 Reference Documents

Background information and calculations relating to this DSP are contained in the Background Document attached in **Appendix A**. These documents contain detailed calculations for the capital charge and reduction amount, including asset commissioning dates, size/length of assets, MEERA valuation of assets, and financial modelling for calculation of reduction amounts.

7 Other DSPs and Related Plans

Other related plans include:

- Macleay Water DSP for Water Supply Services
- Other s.94 plans as made from time to time by Kempsey Shire Council

8 Plans

This section presents detailed plans of the DSP Areas.

Figure 2 – Crescent Head Sewerage Service Area

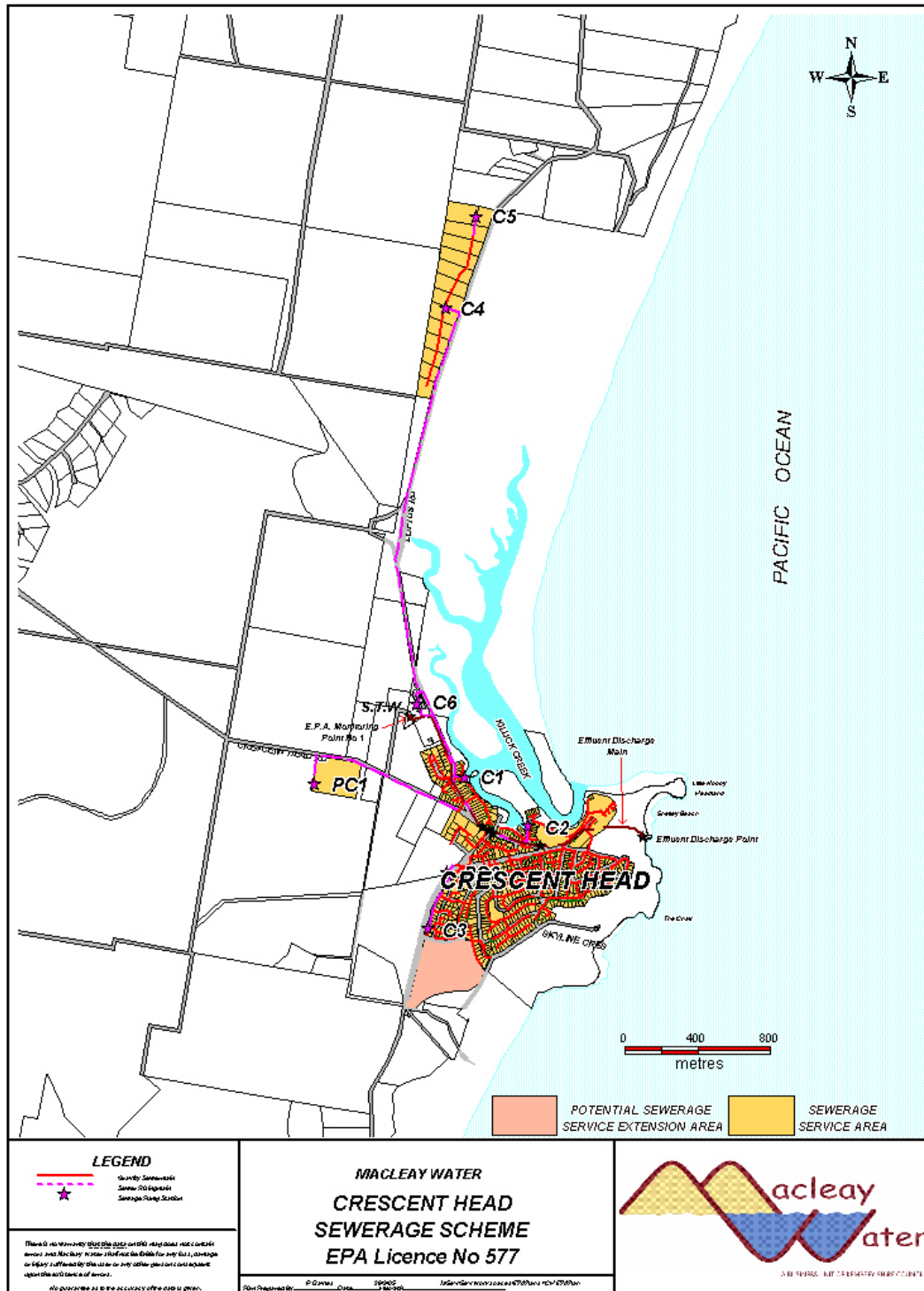


Figure 3 – Frederickton Sewerage Service Area

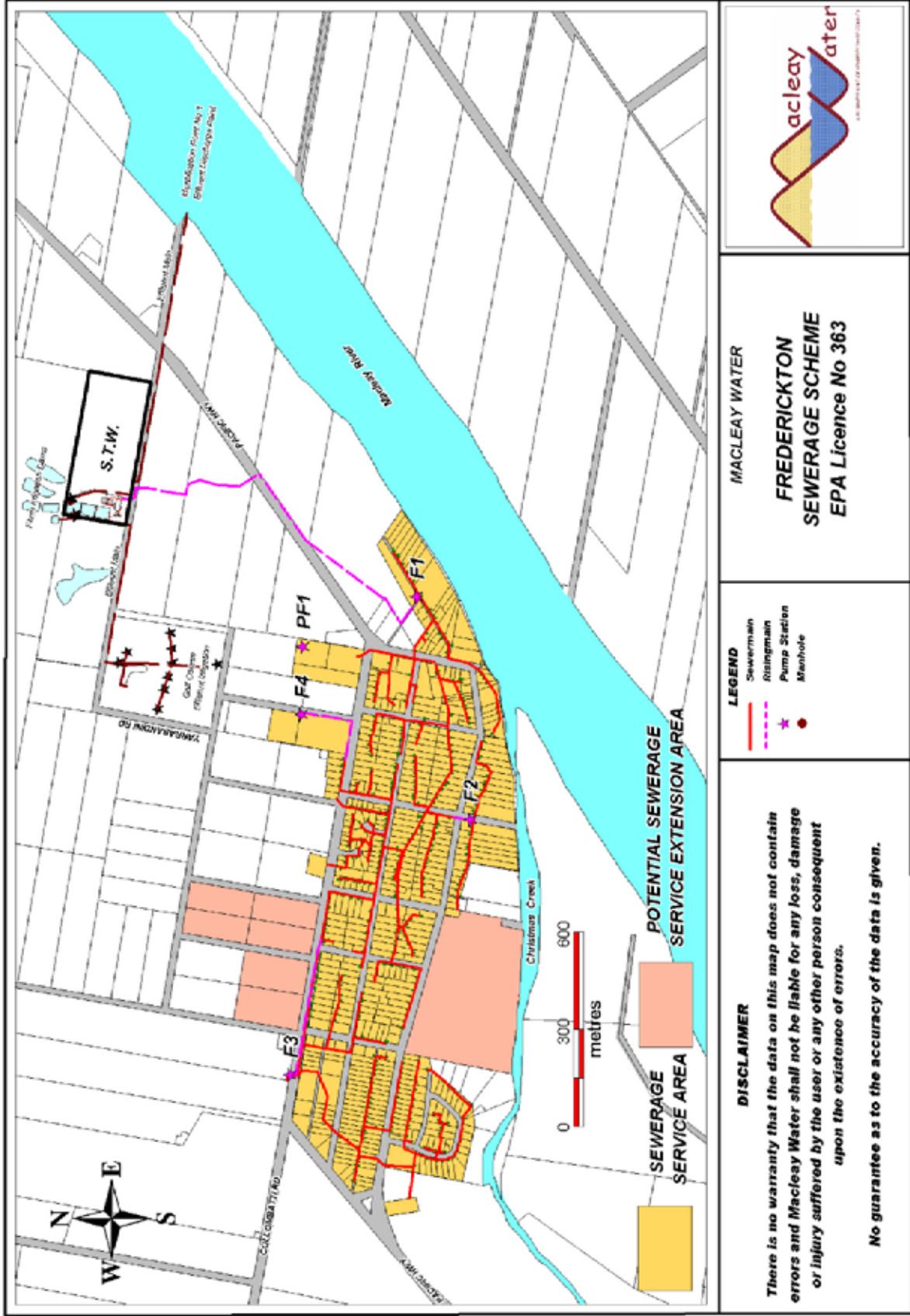


Figure 4 – Gladstone Sewerage Service Area

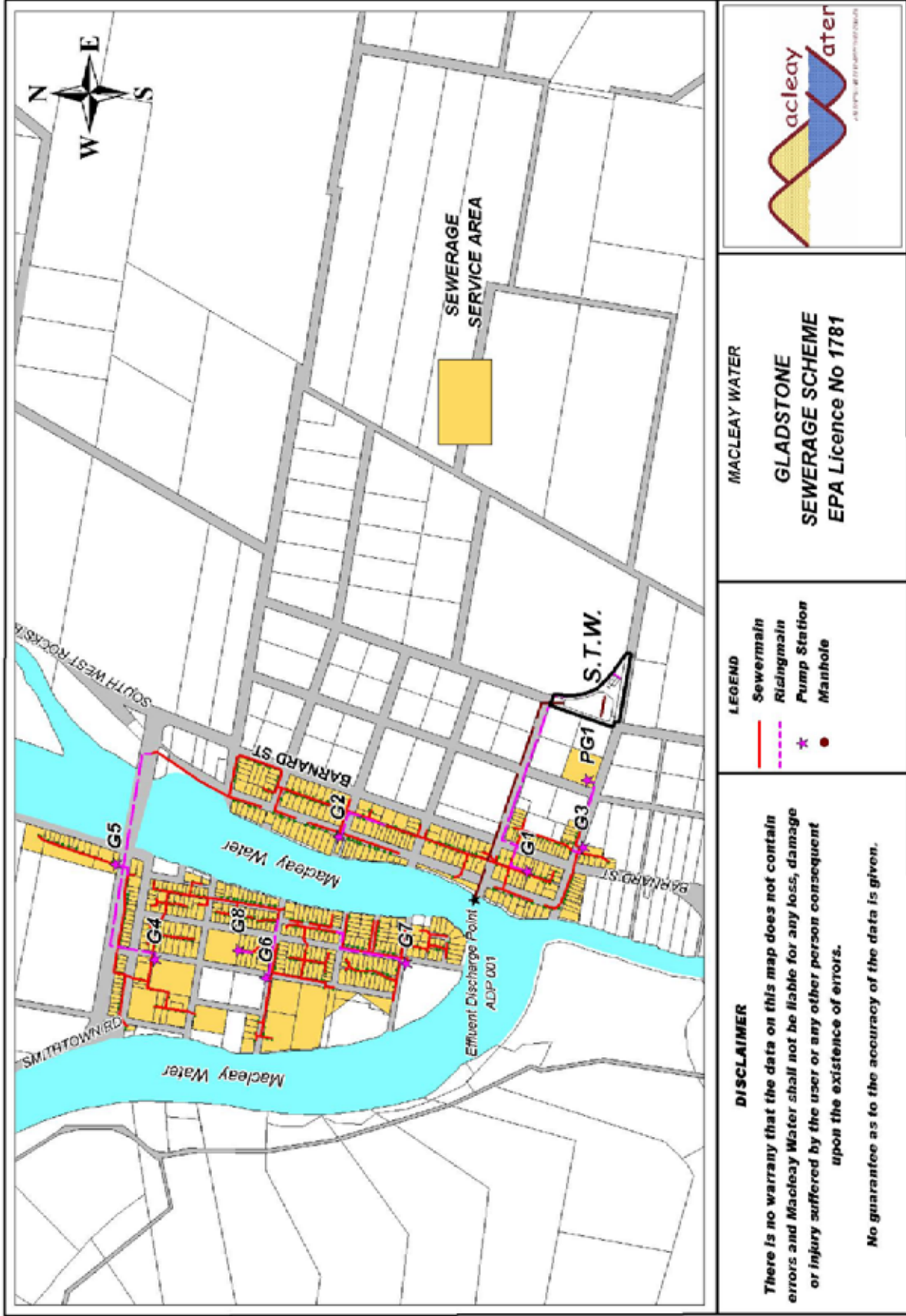


Figure 5 – Hat Head Sewerage Service Area

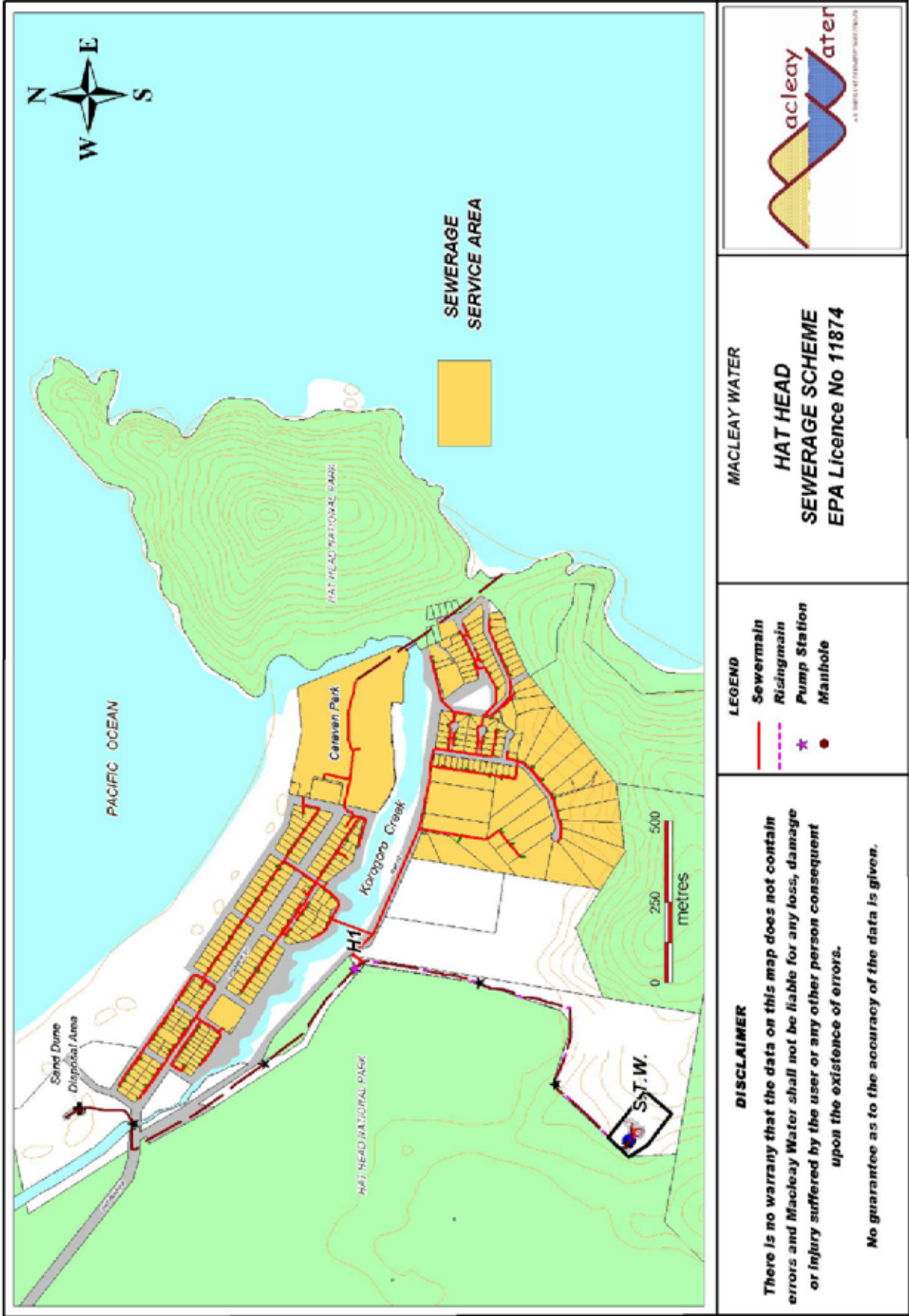


Figure 6 – South Kempsey Sewerage Service Area

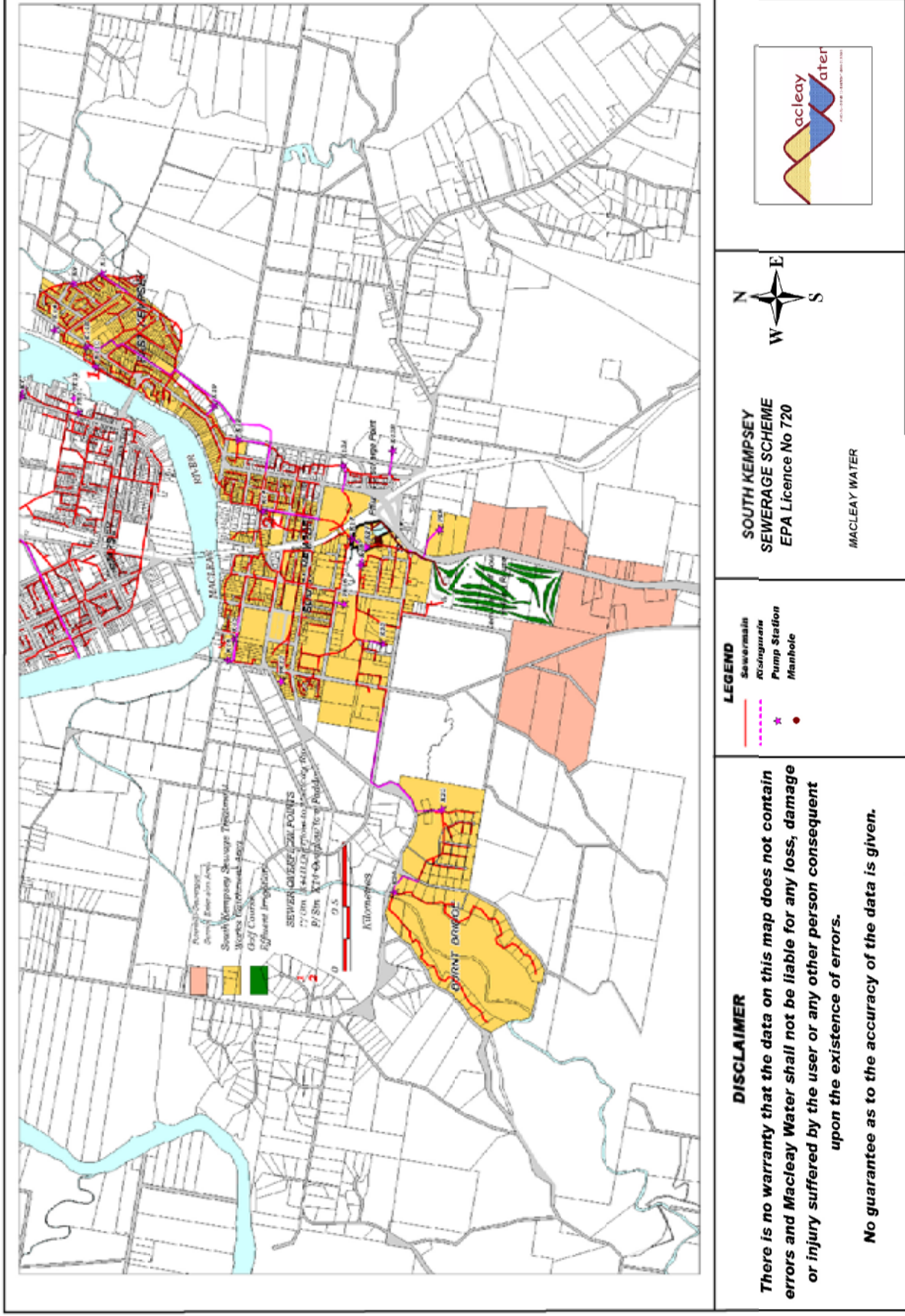
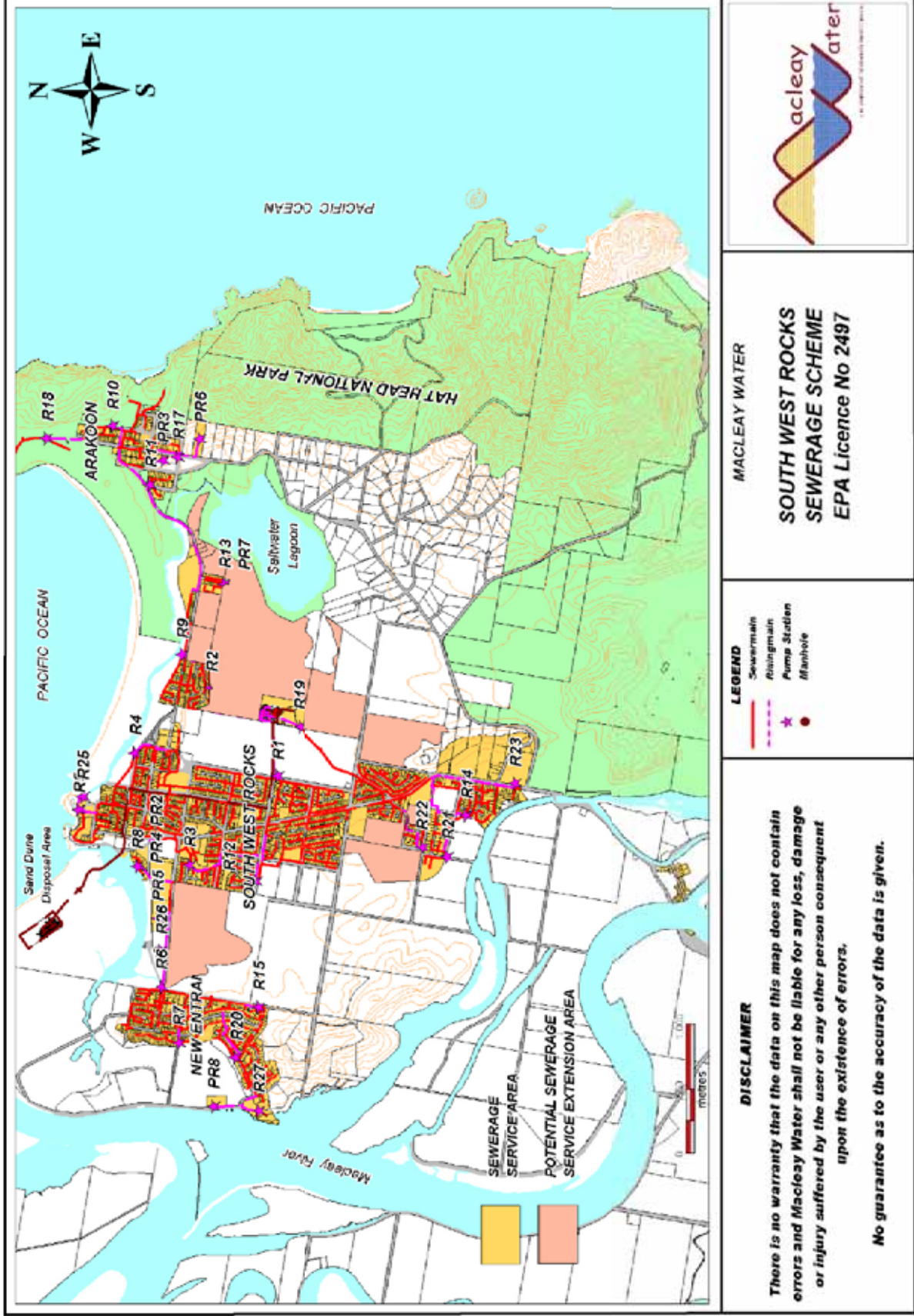


Figure 7 – South West Rocks Sewerage Service Area



DISCLAIMER

There is no warranty that the data on this map does not contain errors and Macleay Water shall not be liable for any loss, damage or injury suffered by the user or any other person consequent upon the existence of errors.

No guarantee as to the accuracy of the data is given.

LEGEND

- Sewer main
- - - Rising main
- ★ Pump Station
- Manhole

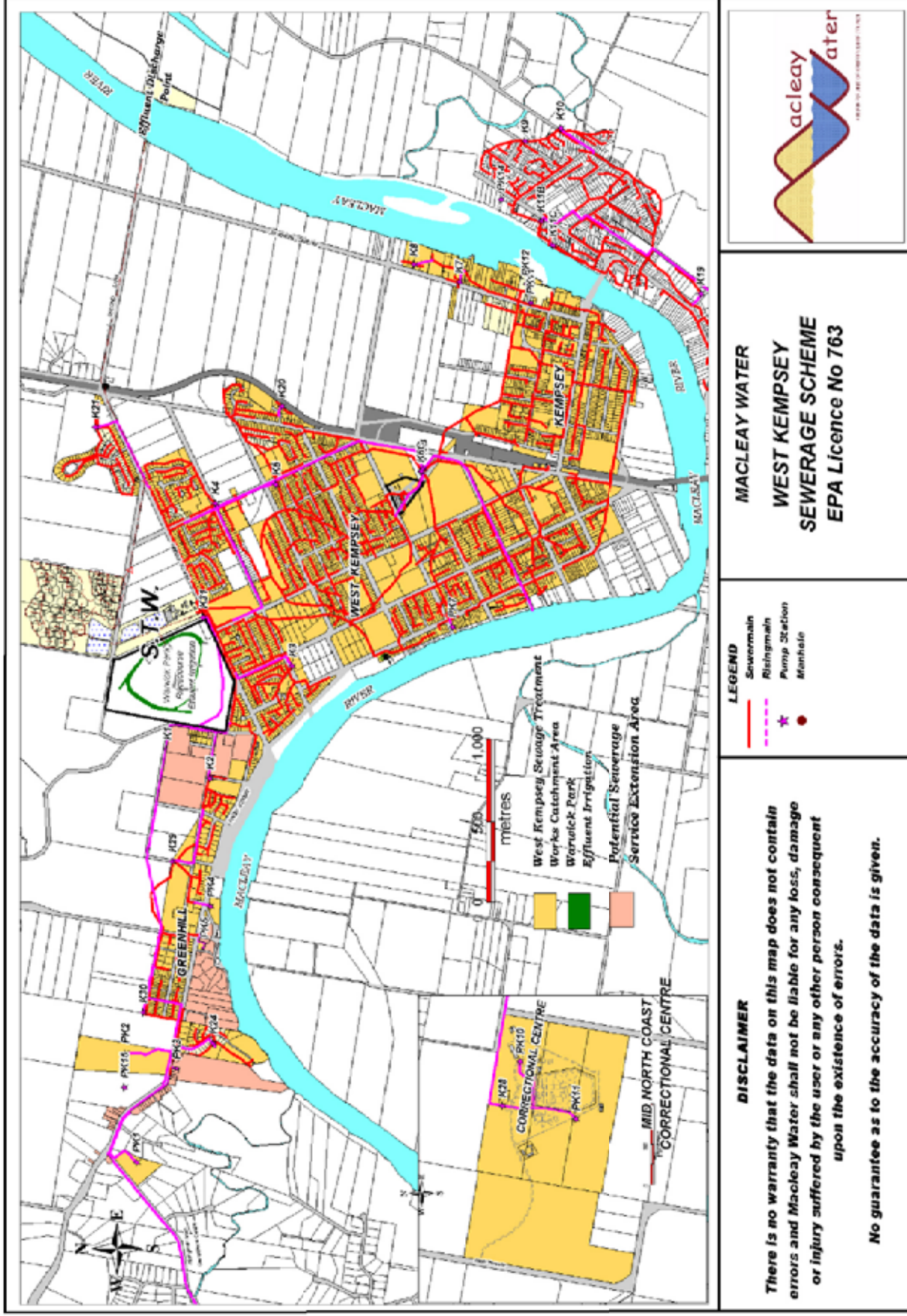
MACLEAY WATER

SOUTH WEST ROCKS SEWERAGE SCHEME

EPA Licence No 2497



Figure 8 – West Kempsey Sewerage Service Area



9 Glossary

ADWF	Average Dry Weather Flow
Capital Cost	The Present Value (MEERA basis) of assets used to service the development.
Capital Charge	Capital cost of assets per ET x Return on Investment (ROI) Factor.
DEUS	Department of Energy, Utilities, and Sustainability
Developer Charge	A charge levied on developers to recover all or part of the capital cost incurred in providing infrastructure to new development.
Discount Rate	The rate used to calculate the present value of money arising in the future.
DSP	Development Servicing Plan
DCP	Development Control Plan
DLWC	Former Department of Land and Water Conservation (this department no longer exists and its relevant responsibilities are assumed by DEUS).
EP	Equivalent Persons
ET	Equivalent Tenement
IPART	Independent Pricing and Regulatory Tribunal
kL/d	Kilolitres per day
LEP	Local Environmental Plan
LWU	Local Water Utility
MEERA	Modern Equivalent Engineering Replacement Asset
ML/d	Megalitres per day
NHMRC	National Health and Medical Research Council
NPV	Net Present Value
Post 1996 Asset	An Asset that was commissioned by a local water utility on or after 1 January 1996 or that is yet to be commissioned.
Pre-1996 Asset	An Asset that was commissioned by a local water utility before 1 January 1996.
PV	Present value. The value now of money, or ETs, in the future.
Real Terms	The value of a variable adjusted for inflation by a CPI adjustment.
Reduction Amount	The amount by which the capital charge is reduced to arrive at the developer charge. This amount reflects the capital contribution that will be paid by the occupier of a development as part of future annual charges.
ROI	Return on investment. Represents the income that is, or could be, generated by investing money.
SS	Suspended solids, or the concentration of particles in sewage. Used as a measure of the 'strength' of sewage.
PWWF	Peak Wet Weather Flow
PS	Pumping Station
STP	Sewage Treatment Plant

Appendix A

Background Documents

Table A1	Capital Works Plan
Table A2	Capital Charge Calculation Crescent Head
Table A3	Capital Charge Calculation Frederickton
Table A4a	Non uniform Capital Charge Calculation Hat Head
Table A4b	Hat Head Sewerage Scheme Existing Assets
Table A5	Capital Charge Calculation Smithtown/Gladstone
Table A6	Capital Charge Calculation South Kemspey
Table A7	Capital Charge Calculation South West Rocks
Table A8	Non-uniform Capital Charge Calculation Stuarts Point
Table A9	Capital Charge Calculation West Kempsey
Table A10	Agglomeration of Service Areas
Table A11	NPV Annual Charges - Operating Statement
Table A12	Summary of NPV Annual Charges Calculation of Reduction Amount
Table A13	Calculation of Developer Charges using the NPV Annual Charges Method – 3rd Iteration
Table A14	Levels of Service

Component Name	Item/Class	Year	Year	Effective year	Present value	Capacity	Capacity	Capital cost	Discount	ROI	Capital
		dollars ^{2,3}	commiss- ioned	commiss- ioned	2005/06 (\$'000) ⁴	(ML/d)	(ET/s)	2005/06 (\$'000) ⁴	Rate	factor	Change (\$/ET)

Service Area
Capital Charge

Crescent Head
per ET

Pre 1996 discount rate
Post 1996 discount rate

Component Name	Item/Class	Year	Year	Effective year	Present value	Capacity	Capacity	Capital cost	Discount	ROI	Capital
		dollars ^{2,3}	commiss- ioned	commiss- ioned	2005/06 (\$'000) ⁴	(ML/d)	(ET/s)	2005/06 (\$'000) ⁴	Rate	factor	Change (\$/ET)
PUMP STATION											
Existing Assets (pre-1996)											
	CRESCENT HD.SPS C1 PSET NO.1	1927	2003	1976	2017			2017	3%	1.49	14.99
	CRESCENT HD.SPS C1 PSET NO.2	2096	2003	1976	2194			2194	3%	1.49	16.30
	Catchment C1, Pump Station	10760	2003	1976	11263			11263	3%	1.49	83.69
	CRESCENT HD.SPS C1 S/BOARD	24.50	2003	1968	25.65			25.65	3%	1.49	19.05
	CRESCENT HD.SPS C1 TELEMETRY	4.80	2003	1976	5.13			5.13	3%	1.49	11.83
	CRESCENT HD.SPS C2 PSET NO.1	4.90	2003	1976	5.13			5.13	3%	1.49	3.81
	CRESCENT HD.SPS C2 PSET NO.2	104.00	2003	1976	108.86			108.86	3%	1.49	80.89
	Catchment C2, Pump Station	23.30	2003	1976	24.39			24.39	3%	1.49	18.12
	CRESCENT HD.SPS C2 S/BOARD	15.22	2003	1968	15.93			15.93	3%	1.49	11.83
	CRESCENT HD.SPS C3 PSET NO.1	5.00	2003	1992	5.23			5.23	3%	1.49	3.89
	CRESCENT HD.SPS C3 PSET NO.2	101.60	2003	1992	106.35			106.35	3%	1.49	79.02
	Catchment C3, Pump Station	23.30	2003	1992	24.39			24.39	3%	1.49	18.12
	CRESCENT HD.SPS C3 S/BOARD	15.22	2003	1996	15.93			15.93	3%	1.49	11.83
	CRESCENT HD.SPS C3 TELEMETRY	4.80	2003	1996	5.13			5.13	3%	1.49	3.81
PUMP Stations (post-1996)											
	PUMP SET	43.94	2003	2000	46.00			46.00	7%	2.26	51.96
	NO2	43.94	2003	2000	46.00			46.00	7%	2.26	51.96
	SWITCHBOARD	23.30	2003	2000	24.39			24.39	7%	2.26	27.55
	TELEMETRY	15.11	2003	2000	15.81			15.81	7%	2.26	17.87
	PUMP SET	14.65	2003	2000	15.33			15.33	7%	2.26	17.32
	NO2	14.65	2003	2000	15.33			15.33	7%	2.26	17.32
	SWITCHBOARD	10.00	2003	2000	10.47			10.47	7%	2.26	11.83
	Catchment C, Pump Station	30.29	2003	2000	31.71			31.71	7%	2.26	35.82
	TELEMETRY	15.11	2003	2000	15.81			15.81	7%	2.26	17.87
Future Assets											
	NONE										
Total PUMP STATIONS		701			734		2,000	367			631

Component Name	Item/Class	Year	Year	Effective year	Present value	Capacity	Capacity	Capital cost	Discount	ROI	Capital
		dollars ^{2,3}	commiss- ioned	commiss- ioned	2005/06 (\$'000) ⁴	(ML/d)	(ET/s)	2005/06 (\$'000) ⁴	Rate	factor	Change (\$/ET)
TRANSFER											
Wapino Number											
Existing Assets (pre-1996)											
	BAKER DR	9.45	2003	1970	9.89			9.89	3%	1.49	7.35
	BAKER DR	13.40	2003	1970	14.03			14.03	3%	1.49	10.42
	BELMORE ST 25-21	2.50	2003	1970	2.62			2.62	3%	1.49	1.94
	BELMORE ST	12.75	2003	1970	13.35			13.35	3%	1.49	9.82
	BELMORE ST 21-13	18.90	2003	1970	19.78			19.78	3%	1.49	14.70
	BELMORE ST 13-9	7.63	2003	1970	7.98			7.98	3%	1.49	5.93
	BELMORE ST 9-3	10.50	2003	1970	10.99			10.99	3%	1.49	8.17
	BELMORE ST 3-1	9.20	2003	1970	9.63			9.63	3%	1.49	7.16
	BERANGHI ST	15.05	2003	1970	15.75			15.75	3%	1.49	11.71
	PACIFIC ST 1-35	10.10	2003	1970	10.57			10.57	3%	1.49	7.86
	PACIFIC ST 35	6.63	2003	1970	6.93			6.93	3%	1.49	5.15
	PACIFIC ST 35	7.40	2003	1970	7.75			7.75	3%	1.49	5.76
	PACIFIC ST	10.43	2003	1970	10.91			10.91	3%	1.49	8.11
	RESERVE	22.91	2003	1970	23.98			23.98	3%	1.49	17.82
	WALKER ST	4.43	2003	1970	4.63			4.63	3%	1.49	3.44
	WALKER ST	4.35	2003	1970	4.55			4.55	3%	1.49	3.38
	WALKER ST	7.00	2003	1970	7.33			7.33	3%	1.49	5.44
	WALKER ST	9.15	2003	1970	9.58			9.58	3%	1.49	7.12
	WALKER ST	2.68	2003	1970	2.81			2.81	3%	1.49	2.12
	WALKER ST	11.96	2003	1970	12.52			12.52	3%	1.49	9.30
	RESERVE	23.95	2003	1970	25.07			25.07	3%	1.49	18.63
	WILLOW ST	4.04	2003	1970	4.23			4.23	3%	1.49	3.14
	CRESCENT Head	534.60	2003	1970	559.61			559.61	3%	1.49	415.79
	WILLOW ST	1.10	2003	1970	1.15			1.15	3%	1.49	0.86
	CRESCENT Head	160.60	2003	1970	168.11			168.11	3%	1.49	124.91
	CRESCENT Head	82.35	2003	1967	86.20			86.20	3%	1.49	64.04
	CRESCENT Head	115.60	2003	1995	121.01			121.01	3%	1.49	89.91
	CRESCENT Head	26.04	2003	1995	27.26			27.26	3%	1.49	20.25
Existing Assets (post-1996)		26.13	2003	1997	27.35			27.35	7%	2.26	30.89
Future Assets											
	150mm effluent transfer main to agricultural irrigation sites	414.00	2004	2006	424.34			424.34	7%	2.26	448.03
	150mm effluent transfer main to agricultural irrigation sites	414.00	2004	2007	424.34			424.34	7%	2.26	448.03
Total TRANSFER		2,012			2,006		2,000	1,003			1,768

Table A2: Capital Charge Calculation Macleay Water	Service Area Capital Charge	\$5,601	Crescent Head		per ET	Pre 1996 discount rate	3%
	Capital Charge		Post 1996 discount rate	7%			

Component Name	Item/Class	Year dollars ^{2,5}	Capital cost (\$'000) ¹	Year commis- sioned	Effective year commis-sioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML/d)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take- up	Years to full take- up	Discount Rate	ROI factor	Capital Charge (\$/ET)
SEWERAGE TREATMENT PLANT														
Existing Assets (pre-1996)														
CRES.HD. STW PMPST. PSET NO.1	STW P/STN PMP1 Replaced Effluent Pumps	2003	8.37	2001	2001	8.37			4.19	2035	30	7%	2.26	9.46
CRES.HD. STW PMPST. PSET NO.2	STW P/STN PMP2 Replaced Effluent Pumps	2003	8.37	2001	2001	8.37			4.19	2035	30	7%	2.26	9.46
CRES.HD. STW SLGE.PUMP NO.1	SLUDGE PUMP 1	2003	6.08	1995	1995	6.08			3.04	2035	30	3%	1.49	4.52
CRES.HD. STW SLGE.PUMP NO.2	SLUDGE PUMP 2	2003	6.08	1995	1995	6.08			3.04	2035	30	3%	1.49	4.52
STW CRESSENT HEAD	CIVIL - 18497 P	2003	35.64	1992	1996	35.64			9.32	2035	30	3%	1.49	47.52
STW CRESSENT HEAD	CIVIL - 18497 P	2003	35.64	1992	1996	35.64			9.32	2035	30	3%	1.49	47.52
STW CRESSENT HEAD	CIVIL - 18497 P	2003	35.64	1992	1996	35.64			9.32	2035	30	3%	1.49	47.52
STW CRESSENT HEAD	ELECT HLD TANK	2003	25.00	1970	1996	25.00			13.08	2035	30	3%	1.49	19.44
STW CRESSENT HEAD	HOLDING TANK	2003	84.21	1970	1996	84.21			47.10	2035	30	3%	1.49	70.00
STW CRESSENT HEAD	MECH HLD TANK	2003	29.31	1970	1996	29.31			14.65	2035	30	3%	1.49	21.78
STW CRESSENT HEAD	MECHELEC 74 PL	2003	532.00	1997	1997	532.00			278.44	2035	30	3%	1.49	413.76
STW CRESSENT HEAD	MECHELEC 96/97	2003	371.61	1992	1996	371.61			185.80	2035	30	3%	1.49	276.10
STW CRESSENT HEAD	OUTFALL PIPELIN	2003	232.38	1970	1996	232.38			116.19	2035	30	3%	1.49	172.66
STW CRESSENT HEAD	SODA ASH UNIT	1996	43.55	1992	1996	43.55			21.78	2035	30	3%	1.49	32.36
CRES.HD. STW	TUBE MAKERS TREATMENT PLANT	2003	432.72	1993	1996	432.72			226.48	2035	30	3%	1.49	336.55
STW CRESSENT HEAD	TELEMETRY	2003	5.00	1988	1996	5.23			2.62	2035	30	3%	1.49	3.89
Existing Assets (post-1996)														
CRES.HD. STW SLGE. MOTOR 1	SLUDGE MOTOR 1	2003	12.54	1997	1997	13.13			6.56	2035	30	7%	2.26	14.83
CRES.HD. STW SLGE. MOTOR 2	SLUDGE MOTOR 2	2003	12.54	1997	1997	13.13			6.56	2035	30	7%	2.26	14.83
CRES.HD. STW SIBOARD	SWITCHBOARD	2003	4.13	1997	1997	4.33			2.16	2035	30	7%	2.26	4.89
STW CRESSENT HEAD	EFFLUENT REUSE SYSTEM	2003	52.92	2000	2000	55.39			27.70	2035	30	7%	2.26	62.58
STW CRESSENT HEAD	PUMP	2003	23.81	2000	2000	24.92			12.46	2035	30	7%	2.26	28.15
Future Assets														
Minor upgrades (CHRS) to existing 4,000 EP tertiary plant		2004	53.81	2007	2007	47.00			23.50	2035	29	7%	2.21	51.88
Minor upgrades (CHRS) to existing 4,000 EP tertiary plant		2004	32.50	2008	2008	43.93			21.96	2035	28	7%	2.16	47.85
Total SEWERAGE TREATMENT PLANT														
						4,174	2,000		2,087			3,192		

- Notes
- Capital cost from Council's asset registers and MIEERA cost for future works
 - Base year of capital cost varies depending on asset data. Assets constructed prior to 1970 are not included (except headworks)
 - Capital cost adjusted to 2005\$ using CPI for Sydney (ABS)
 - Capital cost of future works discounted to 2005\$
 - Council's asset register was updated in 2003/04. The year dollars for existing assets is 2003/04 dollars

Table A3: Capital Charge Calculation
Macleay Water

Component Name	Item/Class	Capital cost (\$'000) ¹	Year dollars ^{2,3}	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML/d)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)	Frederickton	
															Service Area Capital Charge	per ET
NOTES: 2005/06 = 2005 year commissioned 2005/06 \$ = 2005 \$ Blue = linked to another sheet																
Pre 1996 discount rate 3% Post 1996 discount rate 7%																
PUMP STATION																
Existing Assets (pre-1996)																
NO1	FREDO SPS F1 PSET NO.1	5.90	2003	1977	1996	6.18			12.35	2035	30	3%	1.49	18.35		
NO2	FREDO SPS F1 PSET NO.2	5.90	2003	1977	1996	6.18			12.35	2035	30	3%	1.49	18.35		
	Catchment F1, Pump Station	126.40	2003	1977	1996	132.31			264.62	2035	30	3%	1.49	393.23		
	SWITCHBOARD	23.90	2003	1977	1996	25.02			50.04	2035	30	3%	1.49	74.35		
	FREDO SPS F1 SWITCHBOARD	15.22	2003	1990	1996	15.93			31.85	2035	30	3%	1.49	47.34		
	TELEMETRY	4.10	2003	1977	1996	4.29			8.58	2035	30	3%	1.49	12.76		
	FREDO NO.F2 SPS PSET NO.1	4.10	2003	1977	1996	4.29			8.58	2035	30	3%	1.49	12.76		
	PUMP SET	102.80	2003	1977	1996	107.61			215.22	2035	30	3%	1.49	319.81		
	Catchment F2, Pump Station	22.70	2003	1977	1996	23.76			47.52	2035	30	3%	1.49	70.62		
	SWITCHBOARD	15.22	2003	1990	1996	15.93			31.85	2035	30	3%	1.49	47.34		
	FREDO NO.F2 SPS SWITCHBOARD	5.90	2003	1977	1996	6.18			12.35	2035	30	3%	1.49	18.35		
	TELEMETRY	84.80	2003	1977	1996	88.56			177.11	2035	30	3%	1.49	263.19		
	Catchment F3, Pump Station	23.90	2003	1977	1996	25.02			50.04	2035	30	3%	1.49	74.35		
	FREDO NO.F3 SPS PSET NO.2	15.22	2003	1990	1996	15.93			31.85	2035	30	3%	1.49	47.34		
	TELEMETRY															
Existing Assets (post-1996)																
Future Assets																
NONE																
Total PUMP STATIONS		462				483	500	967						1,437		
TRANSFER																
MapInfo Number																
Existing Assets (pre-1996)																
407	CHAPMAN ST	8.67	2003	1976	1996	8.67			17.73	2035	30	3%	1.49	26.35		
406	GREEK ST	6.60	2003	1976	1996	6.60			13.19	2035	30	3%	1.49	19.60		
467	GREEK ST	12.61	2003	1976	1996	13.20			26.40	2035	30	3%	1.49	39.23		
412	EDGAR ST	2.86	2003	1976	1996	2.86			5.72	2035	30	3%	1.49	8.50		
413	EDGAR ST	10.85	2003	1976	1996	11.36			22.72	2035	30	3%	1.49	33.77		
414	EDGAR ST	13.18	2003	1976	1996	13.18			26.35	2035	30	3%	1.49	39.16		
423	EDGAR ST	12.69	2003	1976	1996	12.69			25.30	2035	30	3%	1.49	37.60		
424	EDGAR ST	15.78	2003	1976	1996	16.39			32.78	2035	30	3%	1.49	48.34		
421	EDGAR ST	9.33	2003	1976	1996	10.20			20.48	2035	30	3%	1.49	29.34		
420	EDGAR ST	10.89	2003	1976	1996	11.40			22.79	2035	30	3%	1.49	33.97		
422	EDGAR ST	2.01	2003	1975	1996	2.11			4.22	2035	30	3%	1.49	6.27		
411	EDGAR ST	13.12	2003	1976	1996	13.12			26.23	2035	30	3%	1.49	38.98		
417	GREAT NORTH RD	13.61	2003	1976	1996	14.24			28.49	2035	30	3%	1.49	42.33		
416	GREAT NORTH RD	10.45	2003	1976	1996	10.94			21.88	2035	30	3%	1.49	32.51		
397	LAWSON ST	2.78	2003	1976	1996	2.90			5.81	2035	30	3%	1.49	8.63		
398	LAWSON ST	22.85	2003	1976	1996	23.92			47.84	2035	30	3%	1.49	71.09		
399	LAWSON ST	16.68	2003	1976	1996	17.45			34.91	2035	30	3%	1.49	51.88		
400	LAWSON ST	10.90	2003	1976	1996	11.41			22.82	2035	30	3%	1.49	33.81		
425	LAWSON ST	4.47	2003	1976	1996	4.47			8.95	2035	30	3%	1.49	13.30		
408	MAGLEAY ST	11.72	2003	1976	1996	12.27			24.55	2035	30	3%	1.49	36.48		
409	MAGLEAY ST	12.34	2003	1976	1996	12.92			25.84	2035	30	3%	1.49	38.40		
410	MAGLEAY ST	12.21	2003	1976	1996	12.78			25.56	2035	30	3%	1.49	37.99		
419	NORTH ST	13.31	2003	1976	1996	13.31			26.62	2035	30	3%	1.49	39.56		
418	NORTH ST	10.14	2003	1976	1996	10.62			21.23	2035	30	3%	1.49	31.55		
401	PACIFIC HWY	8.10	2003	1976	1996	8.48			16.96	2035	30	3%	1.49	25.20		
404	PACIFIC HWY	15.53	2003	1976	1996	16.25			32.50	2035	30	3%	1.49	48.30		
405	PACIFIC HWY	14.08	2003	1976	1996	14.73			29.47	2035	30	3%	1.49	43.78		
406	PACIFIC HWY	28.28	2003	1976	1996	29.60			59.20	2035	30	3%	1.49	87.86		
EF F1	FREDERICKTON S.T.W.	210.56	2003	1996	1996	220.41			440.82	2035	30	3%	1.49	655.05		
EF F2	FREDERICKTON S.T.W.	34.63	2003	1990	1996	36.25			72.50	2035	30	3%	1.49	107.74		
EF F3	FREDERICKTON S.T.W.	11.18	2003	1990	1996	11.70			23.41	2035	30	3%	1.49	34.78		
Effluent Irrigation Main																
Existing Assets (post-1996)																
NONE																
Future Assets		45.54	2004	2008	2008	38.10	500	2,153						164.30		
80mm effluent transfer main to agricultural irrigation sites																
Total TRANSFER		1,097				1,076	500	2,153						3,250		

Table A3: Capital Charge Calculation		Service Area Capital Charge		Frederickton		Pre 1996 discount rate Post 1996 discount rate	
Macleay Water		\$9,082		per ET		3% 7%	

NOTES:
 2005/06 = 2005 year commissioned
 2005/06 \$ = 2005 \$
 Blue = linked to another sheet.

Component Name	Item/Class	Capital cost (\$'000) ¹	Year dollars ^{2,5}	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML/d)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
SEWERAGE TREATMENT PLANT														
Existing Assets (pre-1996)														
FREDO STW AER/INSIDE G/BOX	INSIDE G/BOX	4.84	2003	1993	1996	4.84			9.67	2035	30	3%	1.49	14.37
FREDO STW AER/OUTSIDE G/BOX	OUTSIDE G/BOX	4.84	2003	1993	1996	4.84			9.67	2035	30	3%	1.49	14.37
FREDO STW AER/INSIDE MOTOR	INSIDE MOTOR	4.84	2003	1993	1996	4.84			9.67	2035	30	3%	1.49	14.37
FREDO STW AER/OUTSIDE MOTOR	OUTSIDE MOTOR	4.84	2003	1993	1996	4.84			9.67	2035	30	3%	1.49	14.37
STW FREDERICKTON	CIVIL	735.00	1996	1977	1996	914.57			1829.14	2035	30	3%	1.49	2718.10
STW FREDERICKTON	EFFLUENT REUSE	27.00	2003	1991	1996	28.26			56.53	2035	30	3%	1.49	84.00
STW FREDERICKTON	MECHANICAL	330.00	1996	1977	1996	410.62			867.123	2035	30	3%	1.49	1240.37
STW FREDERICKTON	TELEMETRY	10.00	2003	1991	1996	10.47			20.94	2035	30	3%	1.49	31.11
Future Assets														
FREDO STW SWITCHBOARD	SWITCHBOARD	4.13	2003	1997	1997	4.33			8.65	2035	30	7%	2.26	19.55
FREDERICKTON STW	NOT (GOLF CLUB)		2003	1997	1997					2035	30	7%	2.26	
PUMP SET			2003	1999	1999					2035	30	7%	2.26	
Total Sewerage Treatment Plant														
Minor upgrades (CH&S) to existing 1,000 EP secondary plant		35.00	2004	2007	2007	31.33			62.67	2035	29	7%	2.21	138.34
Minor upgrades (CH&S) to existing 1,000 EP secondary plant		35.00	2004	2008	2008	29.28			58.57	2035	28	7%	2.16	126.28
Total Sewerage Treatment Plant		1,195				1,448		500	2,896					4,395

Notes
 1. Capital cost from Council's asset registers and MEERA cost for future works
 2. Base year of capital cost varies depending on asset data. Assets constructed prior to 1970 are not included (except headworks)
 3. Capital cost adjusted to 2005\$ using CPI for Sydney (ABS)
 4. Capital cost of future works discounted to 2005\$
 5. Council's asset register was updated in 2003/04. The year dollars for existing assets is 2003/04 dollars

**Table A4a: Non-uniform Capital Charge Calculation
Hat Head Sewerage**

Year Number	Year	Estimated Expenditure (2005/06\$) (\$'000)	PV Factor	NPV of Expenditure (@ 7%) (\$'000)	Number of New Lots (ETs)	NPV New Lots (ETs)
1	2003/04	4625	1.00	4625	258	258
2	2004/05		0.93		10	9
3	2005/06		0.87		10	9
4	2006/07		0.82		10	8
5	2007/08	10	0.76	8	10	8
6	2008/09	10	0.71	7	10	7
7	2009/10		0.67		10	7
8	2010/11		0.62		10	6
9	2011/12		0.58		10	6
10	2012/13		0.54		10	5
11	2013/14		0.51		10	5
12	2014/15		0.48		10	5
13	2015/16		0.44		10	4
14	2016/17		0.41		10	4
15	2017/18		0.39		10	4
16	2018/19		0.36		10	4
17	2019/20		0.34		10	3
18	2020/21		0.32		10	3
19	2021/22		0.30		10	3
20	2022/23		0.28		10	3
21	2023/24		0.26		10	3
22	2024/25		0.24		10	2
23	2025/26		0.23		10	2
24	2026/27		0.21		10	2
25	2027/28		0.20		9	2
26	2028/29		0.18		9	2
27	2029/30		0.17		9	2
28	2030/31		0.16		9	1
29	2031/32		0.15		9	1
30	2032/33		0.14		9	1
Total		4,646		4,640	542	379

Hat Head ET

258 in 2003/04

Capital Charge per ET **\$12,228**
Rate of return (post 1996) 7%

per ET 2005/06\$

Table A4b: Hat Head Sewerage Scheme Existing Assets

Asset	Capital cost (\$'000) ¹	Year dollars ²	Capital Cost (\$'000, 2005\$) ³	Year commissioned	Effective year commissioned
Pre 1996 discount rate	3%				
Post 1996 discount rate	7%				
Vacuum Reticulation System					
Reticulation	2030.65	2002	2186.1	2003	2003
Total Transfer System	2031				
Treatment Works and Effluent Management					
STW & Effluent Disposal Area	2718.10	2002	2926.1	2003	2003
Total treatment Works	2718				
Construction Management					
Project Management	82.35	2002	88.6	2003	2003
Construction Management	201.77	2002	217.2	2003	2003
Project Risk Management	11.37	2002	12.2	2003	2003
Reimbursables	28.25	2002	30.4	2003	2003
Council Costs	38.40	2002	41.3	2003	2003
Total Construction Management	362				
Miscellaneous					
Pre Construction Phase	762.90	2002	821.3	2003	2003
Technical Service Providers	35.70	2002	38.4	2003	2003
Land Matters	110.90	2002	119.4	2003	2003
Effluent Monitoring	123.20	2002	132.6	2003	2003
Total Miscellaneous	1033		6613.8		
Notes					
1. Capital cost from Council's asset registers and MEERA cost for future works					
2. Base year of capital cost varies depending on asset data					
3. Capital cost adjusted to 2005\$ using CPI for Sydney (ABS)					
4. Capital cost of future works discounted to 2005\$					

Table A5: Capital Charge Calculation

Pre 1996 discount rate 3%
Post 1996 discount rate 7%

Service Area **Smithtown/Gladstone**
Capital Charge **\$7,714** per ET

NOTES:
2005/06 = 2005 year commissioned
2005/06 \$ = 2005 \$
Blue = linked to another sheet.

Component Name	Item/Class	Capital cost (\$'000)	Year dollars ^{2,3}	Effective year commissioned	Year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML/d)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)	
PUMP STATION															
Existing Assets (pre-1996)															
Gladstone SPS G1	PSET NO.1	7.33	2003	1996	1979	7.33			7.33	2035	30	3%	1.49	10.89	
Gladstone SPS G2	PSET NO.2	7.33	2003	1996	1979	7.33			7.33	2035	30	3%	1.49	10.89	
catchment G1, Pump Station	STRUCTURE	124.46	2003	1996	1974	124.46			124.46	2035	30	3%	1.49	194.95	
Gladstone SPS G1	SWITCHBOARD	26.48	2003	1996	1979	26.48			26.48	2035	30	3%	1.49	39.35	
Gladstone SPS G2	TELEMETRY	15.93	2003	1996	1990	15.93			15.93	2035	30	3%	1.49	23.67	
Gladstone SPS G2	PSET NO.1	4.50	2003	1996	1980	4.50			4.50	2035	30	3%	1.49	6.69	
Gladstone SPS G2	PSET NO.2	4.50	2003	1996	1990	4.50			4.50	2035	30	3%	1.49	6.69	
catchment G2, Pump Station	STRUCTURE	108.86	2003	1996	1980	108.86			108.86	2035	30	3%	1.49	161.77	
Gladstone SPS G2	SWITCHBOARD	23.87	2003	1996	1990	23.87			23.87	2035	30	3%	1.49	35.47	
Gladstone SPS G2	TELEMETRY	15.93	2003	1996	1990	15.93			15.93	2035	30	3%	1.49	23.67	
Gladstone SPS G3	PSET NO.1	4.08	2003	1996	1979	4.08			4.08	2035	30	3%	1.49	6.07	
Gladstone SPS G3	PSET NO.2	4.08	2003	1996	1979	4.08			4.08	2035	30	3%	1.49	6.07	
catchment G3, Pump Station	STRUCTURE	82.80	2003	1996	1979	82.80			82.80	2035	30	3%	1.49	123.04	
Gladstone SPS G3	SWITCHBOARD	23.87	2003	1996	1979	23.87			23.87	2035	30	3%	1.49	35.47	
Gladstone SPS G3	TELEMETRY	15.93	2003	1996	1979	15.93			15.93	2035	30	3%	1.49	23.67	
Gladstone SPS G4	PSET NO.1	7.33	2003	1996	1983	7.33			7.33	2035	30	3%	1.49	10.89	
Gladstone SPS G4	PSET NO.2	7.33	2003	1996	1983	7.33			7.33	2035	30	3%	1.49	10.89	
catchment G4, Pump Station	STRUCTURE	125.09	2003	1996	1983	125.09			125.09	2035	30	3%	1.49	185.88	
Gladstone SPS G4	SWITCHBOARD	26.48	2003	1996	1983	26.48			26.48	2035	30	3%	1.49	39.35	
Gladstone SPS G4	TELEMETRY	15.93	2003	1996	1990	15.93			15.93	2035	30	3%	1.49	23.67	
Gladstone SPS G5	PSET NO.1	4.08	2003	1996	1979	4.08			4.08	2035	30	3%	1.49	6.07	
Gladstone SPS G5	PSET NO.2	4.08	2003	1996	1979	4.08			4.08	2035	30	3%	1.49	6.07	
catchment G5, Pump Station	STRUCTURE	105.10	2003	1996	1979	105.10			105.10	2035	30	3%	1.49	156.17	
Gladstone SPS G5	SWITCHBOARD	23.87	2003	1996	1979	23.87			23.87	2035	30	3%	1.49	35.47	
Gladstone SPS G5	TELEMETRY	15.93	2003	1996	1990	15.93			15.93	2035	30	3%	1.49	23.67	
Gladstone SPS G6	PSET NO.1	4.40	2003	1996	1979	4.40			4.40	2035	30	3%	1.49	6.53	
Gladstone SPS G6	PSET NO.2	4.40	2003	1996	1979	4.40			4.40	2035	30	3%	1.49	6.53	
catchment G6, Pump Station	STRUCTURE	85.10	2003	1996	1979	85.10			85.10	2035	30	3%	1.49	126.46	
Gladstone SPS G6	SWITCHBOARD	23.87	2003	1996	1979	23.87			23.87	2035	30	3%	1.49	35.47	
Gladstone SPS G6	TELEMETRY	15.93	2003	1996	1990	15.93			15.93	2035	30	3%	1.49	23.67	
Gladstone SPS G7	PSET NO.1	5.55	2003	1996	1979	5.55			5.55	2035	30	3%	1.49	8.24	
Gladstone SPS G7	PSET NO.2	5.55	2003	1996	1979	5.55			5.55	2035	30	3%	1.49	8.24	
catchment G7, Pump Station	STRUCTURE	106.96	2003	1996	1979	106.96			106.96	2035	30	3%	1.49	158.97	
Gladstone SPS G7	SWITCHBOARD	23.87	2003	1996	1979	23.87			23.87	2035	30	3%	1.49	35.47	
Gladstone SPS G7	TELEMETRY	15.93	2003	1996	1990	15.93			15.93	2035	30	3%	1.49	23.67	
Gladstone SPS G8	PSET NO.1	5.13	2003	1996	1981	5.13			5.13	2035	30	3%	1.49	7.62	
Gladstone SPS G8	PSET NO.2	5.13	2003	1996	1981	5.13			5.13	2035	30	3%	1.49	7.62	
catchment G8, Pump Station	STRUCTURE	103.21	2003	1996	1979	103.21			103.21	2035	30	3%	1.49	153.37	
Gladstone SPS G8	SWITCHBOARD	23.66	2003	1996	1979	23.66			23.66	2035	30	3%	1.49	35.15	
Gladstone SPS G8	TELEMETRY	15.93	2003	1996	1990	15.93			15.93	2035	30	3%	1.49	23.67	
Existing Assets (post-1996)															
NONE															
Future Assets															
NONE															
Total PUMP STATIONS															
		1,158				1,213		1,000	1,213					1,802	
TRANSFER															
MapInfo Number															
Existing Assets (pre-1996)															
ASHTON ST		17.18	2003	1996	1981	17.98			17.98	2035	30	3%	1.49	26.72	
ASHTON ST		20.52	2003	1996	1981	21.48			21.48	2035	30	3%	1.49	31.82	
ASHTON ST		3.62	2003	1996	1981	3.82			3.82	2035	30	3%	1.49	5.67	
ASHTON ST		15.35	2003	1996	1981	16.07			16.07	2035	30	3%	1.49	23.68	
BARNAUD ST		4.29	2003	1996	1981	4.49			4.49	2035	30	3%	1.49	6.68	
BARNAUD ST		1.03	2003	1996	1981	1.08			1.08	2035	30	3%	1.49	1.60	
BARNAUD ST		11.52	2003	1996	1981	12.05			12.05	2035	30	3%	1.49	17.81	
BARNAUD ST		10.44	2003	1996	1981	10.93			10.93	2035	30	3%	1.49	16.25	
BARNAUD ST		8.71	2003	1996	1981	9.12			9.12	2035	30	3%	1.49	13.55	
BARNAUD ST		9.46	2003	1996	1981	9.90			9.90	2035	30	3%	1.49	14.71	
BARNAUD ST		14.67	2003	1996	1981	15.35			15.35	2035	30	3%	1.49	22.81	
BARNAUD ST		14.40	2003	1996	1981	15.07			15.07	2035	30	3%	1.49	22.40	
BARNAUD ST		5.67	2003	1996	1981	5.93			5.93	2035	30	3%	1.49	8.81	
BARNAUD ST		13.86	2003	1996	1981	14.51			14.51	2035	30	3%	1.49	21.57	
BARNAUD ST		4.07	2003	1996	1981	4.27			4.27	2035	30	3%	1.49	6.34	
BARNAUD ST		15.99	2003	1996	1981	16.73			16.73	2035	30	3%	1.49	24.87	
BARNAUD ST		7.21	2003	1996	1981	7.55			7.55	2035	30	3%	1.49	11.22	
BARNAUD ST		15.44	2003	1996	1981	16.16			16.16	2035	30	3%	1.49	24.02	
BARNAUD ST		1.99	2003	1996	1981	2.09			2.09	2035	30	3%	1.49	3.10	
BARNAUD ST		12.73	2003	1996	1981	13.33			13.33	2035	30	3%	1.49	19.80	
BARNAUD ST		9.46	2003	1996	1981	9.90			9.90	2035	30	3%	1.49	14.71	
BARNAUD ST		5.34	2003	1996	1981	5.62			5.62	2035	30	3%	1.49	8.37	
BARNAUD ST		5.94	2003	1996	1981	6.21			6.21	2035	30	3%	1.49	9.30	
BARNAUD ST		14.28	2003	1996	1981	14.94			14.94	2035	30	3%	1.49	22.21	
BARNAUD ST		12.83	2003	1996	1981	13.43			13.43	2035	30	3%	1.49	19.96	

Table A5: Capital Charge Calculation
Macleay Water

Component Name	Item/Class	Year	Capital cost (\$'000) ¹	Year dollars ^{2,3}	Effective year commiss-ioned	Year commiss-ioned	Capital Cost (\$'000,068) ³	Present value 2005/06 (\$'000) ⁴	Capacity (ML/d)	Capacity (ETs)	Year of full lake-up	Years to full lake-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
NOTES: 2005/06 = 2005 year commissioned 2005/06 \$ = 2005 \$ Blue = linked to another sheet															
4088	BELMORE ST	2003	10.82	2003	1996	1991	11.32	11.32			2035	30	3%	1.49	16.82
4087	BELMORE ST	2003	14.83	2003	1996	1991	15.53	15.53			2035	30	3%	1.49	23.07
4086	BELMORE ST	2003	2.81	2003	1996	1991	3.05	3.05			2035	30	3%	1.49	4.53
4048	BELMORE ST	2003	1.64	2003	1996	1991	1.72	1.72			2035	30	3%	1.49	2.55
4049	BELMORE ST	2003	2.06	2003	1996	1991	2.16	2.16			2035	30	3%	1.49	3.20
4050	BELMORE ST	2003	1.83	2003	1996	1991	1.91	1.91			2035	30	3%	1.49	2.84
4085	FITZGERALD AVE	2003	6.47	2003	1996	1991	6.77	6.77			2035	30	3%	1.49	10.06
4084	FITZGERALD AVE	2003	10.53	2003	1996	1991	11.02	11.02			2035	30	3%	1.49	16.37
4117	JEFFERY ST	2003	1.89	2003	1996	1991	1.77	1.77			2035	30	3%	1.49	2.63
4117	JEFFERY ST	2003	4.21	2003	1996	1991	4.40	4.40			2035	30	3%	1.49	6.94
4104	KIPPER ST	2003	9.75	2003	1996	1991	10.21	10.21			2035	30	3%	1.49	15.16
4105	KINGHELA ST	2003	16.82	2003	1996	1991	17.40	17.40			2035	30	3%	1.49	25.66
4106	KINGHELA ST	2003	17.14	2003	1996	1991	17.94	17.94			2035	30	3%	1.49	26.66
4107	KINGHELA ST	2003	17.14	2003	1996	1991	17.94	17.94			2035	30	3%	1.49	26.66
4108	KINGHELA ST	2003	9.66	2003	1996	1991	10.11	10.11			2035	30	3%	1.49	15.03
3987	MACLEAY ST	2003	8.01	2003	1996	1991	8.39	8.39			2035	30	3%	1.49	12.46
3988	MACLEAY ST	2003	11.75	2003	1996	1991	12.29	12.29			2035	30	3%	1.49	18.27
4112	MORTON ST	2003	12.17	2003	1996	1991	12.74	12.74			2035	30	3%	1.49	18.93
4062	MORTON ST	2003	6.06	2003	1996	1991	6.34	6.34			2035	30	3%	1.49	9.43
4063	MORTON ST	2003	4.76	2003	1996	1991	4.98	4.98			2035	30	3%	1.49	7.40
4064	MORTON ST	2003	1.82	2003	1996	1991	1.90	1.90			2035	30	3%	1.49	2.82
4042	MORTON ST	2003	4.22	2003	1996	1991	4.42	4.42			2035	30	3%	1.49	6.57
3972	NORTH ST	2003	10.32	2003	1996	1991	10.81	10.81			2035	30	3%	1.49	16.06
3971	NORTH ST	2003	1.39	2003	1996	1991	1.46	1.46			2035	30	3%	1.49	2.17
4165	RAWSON ST	2003	14.62	2003	1996	1991	15.30	15.30			2035	30	3%	1.49	22.74
4094	RAWSON ST	2003	4.88	2003	1996	1991	5.11	5.11			2035	30	3%	1.49	7.59
4166	RAWSON ST	2003	12.40	2003	1996	1991	12.98	12.98			2035	30	3%	1.49	19.28
4116	RAWSON ST	2003	4.72	2003	1996	1991	4.94	4.94			2035	30	3%	1.49	7.34
4173	RAWSON ST	2003	14.26	2003	1996	1991	14.92	14.92			2035	30	3%	1.49	22.17
3997	RAWSON ST	2003	6.51	2003	1996	1991	6.82	6.82			2035	30	3%	1.49	10.13
3997	RAWSON ST	2003	6.51	2003	1996	1991	6.82	6.82			2035	30	3%	1.49	10.13
3976	VERGE ST	2003	17.51	2003	1996	1991	18.33	18.33			2035	30	3%	1.49	27.81
3963	VERGE ST	2003	13.68	2003	1996	1991	14.32	14.32			2035	30	3%	1.49	21.58
4060	VINCENT AVE	2003	7.48	2003	1996	1991	7.83	7.83			2035	30	3%	1.49	11.63
4069	VINCENT ST	2003	5.76	2003	1996	1991	6.03	6.03			2035	30	3%	1.49	8.95
Eff Main No 1 (Gravity)															
Gladstone															
3	Gladstone	2003	170.64	2003	1996	1976	178.62	178.62			2035	30	3%	1.49	265.43
4	Gladstone	2003	47.05	2003	1996	1973	49.25	49.25			2035	30	3%	1.49	73.19
5	Smithtown	2003	39.88	2003	1996	1973	41.74	41.74			2035	30	3%	1.49	62.03
6	Smithtown	2003	0.62	2003	1996	1973	0.65	0.65			2035	30	3%	1.49	0.96
7	Smithtown	2003	27.26	2003	1996	1973	28.54	28.54			2035	30	3%	1.49	42.40
53	Smithtown	2003	157.14	2003	1996	1973	164.49	164.49			2035	30	3%	1.49	244.43
64	Gladstone	2003	197.83	2003	1996	1976	207.08	207.08			2035	30	3%	1.49	307.73
85	Gladstone	2003	38.67	2003	1996	1976	40.47	40.47			2035	30	3%	1.49	60.14
8	Gladstone	2003	7.42	2003	1996	1973	7.77	7.77			2035	30	3%	1.49	11.95
8	Smithtown	2003	13.93	2003	1996	1973	14.58	14.58			2035	30	3%	1.49	21.67
Existing Assets (post-1996)															
NONE															
Future Assets															
Effluent Pumping Station & 80mm main to landscape irrigation															
Gladstone															
2004															
75.90															
2007															
67.95															
2005															
29															
7%															
2.21															
150.00															
Total TRANSFER															
1,342															
1,393															
1,000															
1,393															
2,119															

Table A5: Capital Charge Calculation Macleay Water	NOTES: - 2005/06 = 2005 year commissioned - 2005/06 \$ = 2005 \$ Blue = linked to another sheet	Service Area Capital Charge	Smithtown/Gladstone \$7,714	per ET	Pre 1996 discount rate 3%	Post 1996 discount rate 7%
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Component Name	Item/Class	Capital cost (\$'000) ¹	Year dollars ^{2,3}	Capital Cost (\$'000,000) ³	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML/d)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
SEWERAGE TREATMENT PLANT															
Existing Assets (pre-1996)															
STW GLADSTONE	CIVIL	1359.50	1996	1691.64	1978	1996	1691.64			1691.64	2005	30	3%	1.49	2513.78
STW GLADSTONE	MECH/ELECT	609.00	1996	757.79	1978	1996	757.79			757.79	2005	30	3%	1.49	1126.07
GLAD STW COPA-SCREENS	COPA-SCREENS	2.50	2003	2.62	1994	1996	2.62			2.62	2005	30	3%	1.49	3.89
STW GLADSTONE	TELEMETRY	5.00	2003	5.23	1991	1996	5.23			5.23	2005	30	3%	1.49	7.78
Existing Assets (post-1996)															
GLAD STW SWITCHBOARD	SWITCHBOARD	4.13	2003	4.33	1997	1997	4.33			4.33	2005	30	7%	2.26	9.78
Future Assets															
Minor upgrades: CHAS) to existing 2,000 EP secondary plant		35.00	2004	35.87	2007	2007	31.33			31.33	2005	28	7%	2.31	69.17
Minor upgrades: CHAS) to existing 2,000 EP secondary plant		35.00	2004	35.87	2008	2008	29.28			29.28	2005	28	7%	2.16	63.14
Total SEWERAGE TREATMENT PLANT		2,050		2,522			2,522	1,000		2,522					3,794

Notes

- Capital cost from Council's asset registers and MEERA cost for future works
- Base year of capital cost varies depending on asset data. Assets constructed prior to 1970 are not included (except headworks)
- Capital cost adjusted to 2005\$ using CPI for Sydney (ABS)
- Capital cost of future works discounted to 2005\$
- Council's asset register was updated in 2003/04. The year dollars for existing assets is 2003/04 dollars

NOTES:
2005/06 = 2005 year commissioned
2005/06 \$ = 2005 \$
Blue = linked to another sheet

Component Name	Item/Class	Capital cost (\$'000) ¹	Year dollars ^{2,3}	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML/d)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
PUMP STATION														
Existing Assets (pre-1996)														
KEMPESEY SPS K11B	PSET NO.1	8.60	2003	1984	1996	9.00			3.33	2035	30	3%	1.49	4.95
KEMPESEY SPS K11B	PSET NO.2	8.60	2003	1984	1996	9.00			3.33	2035	30	3%	1.49	4.95
Catchment K11B	Pump Station	115.90	2003	1984	1996	121.32			44.93	2035	30	3%	1.49	66.77
KEMPESEY SPS K11B	SWITCHBOARD	26.30	2003	1984	1996	27.53			10.20	2035	30	3%	1.49	15.15
KEMPESEY SPS K11B	TELEMETRY	5.00	2003	1988	1996	5.23			1.94	2035	30	3%	1.49	2.88
KEMPESEY SPS K12	PSET NO.1	4.90	2003	1984	1996	5.13			1.90	2035	30	3%	1.49	2.82
KEMPESEY SPS K12	PSET NO.2	4.90	2003	1984	1996	5.13			1.90	2035	30	3%	1.49	2.82
Catchment K12	Pump Station	99.80	2003	1984	1996	104.47			38.69	2035	30	3%	1.49	57.50
KEMPESEY SPS K12	SWITCHBOARD	23.00	2003	1984	1996	24.08			8.92	2035	30	3%	1.49	13.25
KEMPESEY SPS K12	TELEMETRY	5.00	2003	1988	1996	5.23			1.94	2035	30	3%	1.49	2.88
KEMPESEY SPS K13	PSET NO.1	5.70	2003	1989	1996	5.97			2.21	2035	30	3%	1.49	3.28
KEMPESEY SPS K13	PSET NO.2	5.70	2003	1989	1996	5.97			2.21	2035	30	3%	1.49	3.28
KEMPESEY SPS K13	SWITCHBOARD	22.00	2003	1989	1996	24.10			8.15	2035	30	3%	1.49	13.80
KEMPESEY SPS K13	TELEMETRY	3.00	2003	1989	1996	3.23			1.15	2035	30	3%	1.49	1.88
KEMPESEY SPS K13B	PSET NO.1	7.77	2003	1975	1996	8.14			3.01	2035	30	3%	1.49	4.48
Catchment K13B	Pump Station	75.30	2003	1975	1996	78.82			29.19	2035	30	3%	1.49	43.38
KEMPESEY SPS K13B	SWITCHBOARD	22.00	2003	1975	1996	23.03			8.53	2035	30	3%	1.49	12.87
KEMPESEY SPS K13B	TELEMETRY	5.00	2003	1988	1996	5.23			1.94	2035	30	3%	1.49	2.88
KEMPESEY SPS K14	PSET NO.1	10.09	2003	1985	1996	10.56			3.91	2035	30	3%	1.49	5.81
KEMPESEY SPS K14	PSET NO.2	10.09	2003	1985	1996	10.56			3.91	2035	30	3%	1.49	5.81
Catchment K14	Pump Station	388.00	2003	1985	1996	406.15			150.43	2035	30	3%	1.49	223.53
KEMPESEY SPS K14	SWITCHBOARD	27.53	2003	1985	1996	27.53			10.20	2035	30	3%	1.49	15.15
KEMPESEY SPS K14	TELEMETRY	5.00	2003	1988	1996	5.23			1.94	2035	30	3%	1.49	2.88
KEMPESEY SPS K15	PSET NO.1	8.69	2003	1988	1996	9.09			3.37	2035	30	3%	1.49	5.00
KEMPESEY SPS K15	PSET NO.2	8.69	2003	1988	1996	9.09			3.37	2035	30	3%	1.49	5.00
Catchment K15	Pump Station	98.82	2003	1988	1996	98.82			36.60	2035	30	3%	1.49	54.89
KEMPESEY SPS K15	SWITCHBOARD	24.90	2003	1988	1996	26.06			9.65	2035	30	3%	1.49	14.35
KEMPESEY SPS K15	TELEMETRY	5.00	2003	1988	1996	5.23			1.94	2035	30	3%	1.49	2.88
KEMPESEY SPS K17	PSET NO.1	5.90	2003	1985	1996	6.07			2.25	2035	30	3%	1.49	3.34
KEMPESEY SPS K17	PSET NO.2	5.90	2003	1985	1996	6.07			2.25	2035	30	3%	1.49	3.34
KEMPESEY SPS K17	PSET NO.3	5.90	2003	1985	1996	6.07			2.25	2035	30	3%	1.49	3.34
Catchment K17	Pump Station	120.70	2003	1985	1996	126.35			46.79	2035	30	3%	1.49	69.54
KEMPESEY SPS K17	SWITCHBOARD	24.60	2003	1985	1996	25.75			9.54	2035	30	3%	1.49	14.17
KEMPESEY SPS K17	TELEMETRY	5.00	2003	1988	1996	5.23			1.94	2035	30	3%	1.49	2.88
KEMPESEY SPS K18	PSET NO.1	45.21	2003	1970	1996	47.33			17.53	2035	30	3%	1.49	26.05
Catchment K18	Pump Station	105.20	2003	1970	1996	110.12			40.79	2035	30	3%	1.49	60.61
KEMPESEY SPS K18	SWITCHBOARD	22.40	2003	1970	1996	23.45			8.68	2035	30	3%	1.49	12.80
KEMPESEY SPS K18	TELEMETRY	5.00	2003	1988	1996	5.23			1.94	2035	30	3%	1.49	2.88
KEMPESEY SPS K19	PSET NO.1	5.40	2003	1985	1996	5.65			2.09	2035	30	3%	1.49	3.11
Catchment K19	Pump Station	100.40	2003	1985	1996	105.10			38.92	2035	30	3%	1.49	57.84
KEMPESEY SPS K19	SWITCHBOARD	22.30	2003	1985	1996	23.34			8.65	2035	30	3%	1.49	12.85
KEMPESEY SPS K19	TELEMETRY	5.00	2003	1988	1996	5.23			1.94	2035	30	3%	1.49	2.88
KEMPESEY SPS K23	PSET NO.1	4.10	2003	1980	1996	4.29			1.59	2035	30	3%	1.49	2.86
KEMPESEY SPS K23	PSET NO.2	4.10	2003	1980	1996	4.29			1.59	2035	30	3%	1.49	2.86
KEMPESEY SPS K23	PSET NO.3	4.10	2003	1980	1996	4.29			1.59	2035	30	3%	1.49	2.86
Catchment K23	Pump Station	75.30	2003	1980	1996	78.82			29.19	2035	30	3%	1.49	43.38
KEMPESEY SPS K23	SWITCHBOARD	23.34	2003	1980	1996	23.34			8.65	2035	30	3%	1.49	12.85
KEMPESEY SPS K23	TELEMETRY	5.00	2003	1980	1996	5.23			1.94	2035	30	3%	1.49	2.88
Catchment K25	Pump Station	5.76	2003	1992	1996	5.76			2.13	2035	30	3%	1.49	3.17
Catchment K25	Pump Station	5.76	2003	1992	1996	5.76			2.13	2035	30	3%	1.49	3.17
Catchment K25	Pump Station	4.19	2003	1992	1996	4.19			1.55	2035	30	3%	1.49	2.90
Catchment K25	Pump Station	4.19	2003	1992	1996	4.19			1.55	2035	30	3%	1.49	2.90
Catchment K25	Pump Station	73.50	2003	1992	1996	76.94			28.50	2035	30	3%	1.49	42.34
Catchment K25	Pump Station	23.40	2003	1992	1996	24.49			9.07	2035	30	3%	1.49	13.48
Catchment K25	Pump Station	5.00	2003	1992	1996	5.23			1.94	2035	30	3%	1.49	2.88
Catchment K26	Pump Station	4.80	2003	1992	1996	5.02			1.86	2035	30	3%	1.49	2.77
Catchment K26	Pump Station	4.80	2003	1992	1996	5.02			1.86	2035	30	3%	1.49	2.77
Catchment K26	Pump Station	4.19	2003	1992	1996	4.19			1.55	2035	30	3%	1.49	2.30
Catchment K26	Pump Station	4.19	2003	1992	1996	4.19			1.55	2035	30	3%	1.49	2.30
Catchment K26	Pump Station	78.00	2003	1992	1996	79.95			29.46	2035	30	3%	1.49	43.78
Catchment K26	Pump Station	23.67	2003	1992	1996	23.67			8.84	2035	30	3%	1.49	13.14
Catchment K26	Pump Station	5.00	2003	1992	1996	5.23			1.94	2035	30	3%	1.49	2.88
Existing Assets (post-1996)														
Future Assets														
NONE														

Table A6: Capital Charge Calculation		Service Area		South Kempsey		Pre 1996 discount rate		Post 1996 discount rate			
Macleay Water		Capital Charge		\$8,133		3%		7%			
NOTES: - 2005/06 = 2005 year commissioned - 2005/06 \$ = 2005 \$ - Blue = linked to another sheet.											
Component Name	Item/Class	Year	Year	Effective year	Present value	Capacity	Capacity	Years to	Discount	ROI	Capital
		commissioned	commissioned	commissioned	2005/06 (\$'000) ^a	(ML/d)	(ET/s)	full take-up	Rate	factor	Charge (\$/ET)
Total PUMP STATIONS		1,865		1,952	723	2,700					1,074
TRANSFER											
MapInfo Number	Location	Year	Year	Effective year	Present value	Capacity	Capacity	Years to	Discount	ROI	Capital
Existing Assets (pre-1996)		commissioned	commissioned	commissioned	2005/06 (\$'000) ^a	(ML/d)	(ET/s)	full take-up	Rate	factor	Charge (\$/ET)
	South Kempsey	1990	1990	1996	151.24			2035	3%	1.49	83.24
17	East Kempsey	1993	1993	1996	118.67			2035	3%	1.49	65.31
18	South Kempsey	1996	1996	1996	18.67			2035	3%	1.49	10.51
20	Kempsey	1972	1972	1996	25.54			2035	3%	1.49	16.26
21	Kempsey	1982	1982	1996	29.97			2035	3%	1.49	16.50
22	Kempsey	1982	1982	1996	28.63			2035	3%	1.49	16.50
23	South Kempsey	1982	1982	1996	28.81			2035	3%	1.49	16.86
25	Kempsey	1982	1982	1996	26.17			2035	3%	1.49	14.40
36	South Kempsey	1981	1981	1996	84.97			2035	3%	1.49	46.77
40	South Kempsey	1989	1989	1996	29.10			2035	3%	1.49	16.02
52	South Kempsey	1996	1996	1996	57.45			2035	3%	1.49	31.62
54	South Kempsey	1990	1990	1996	54.01			2035	3%	1.49	29.73
82	South Kempsey	1979	1979	1996	75.26			2035	3%	1.49	41.42
93	River bank Kempsey	1990	1990	1996	234.96			2035	3%	1.49	129.31
		3,27	1,984	1,996	3,42			2035	3%	1.49	1,88
Existing Assets (post-1996)											
3259	RUDDER ST	2003	2000	2000	54.22			2035	7%	2.26	45.38
3951	RUDDER ST	2003	2000	2000	66.62			2035	7%	2.26	55.75
4239	WHARF ST	2003	2001	2001	21.51			2035	7%	2.26	18.00
4283	WHARF ST	2003	1996	1996	0.74			2035	7%	2.26	0.62
4288	WHARF ST	2003	1996	1996	2.99			2035	7%	2.26	2.49
4282	WHARF ST	2003	1996	1996	4.71			2035	7%	2.26	3.94
4281	WHARF ST	2003	1996	1996	14.10			2035	7%	2.26	11.69
4240	WHARF ST	2003	1996	1996	21.10			2035	7%	2.26	17.66
18	Kempsey	2003	1998	1998	36.67			2035	7%	2.26	30.68
Future Assets											
	Effluent pumping station and 200mm effluent supply main to sites west of the plant	2004	2010	2010	832.01			2035	7%	2.05	633.18
	Pump station, reservoir, chlorination for 800 EP	2004	2010	2010	504.25			2035	7%	2.05	383.75
	450mm gravity main from plant to Macleay River	2004	2010	2010	1131.58			2035	7%	2.05	613.99
Total TRANSFER		4,046		3,308	1,225	2,700					2,336

Table A6: Capital Charge Calculation Macleay Water	Service Area Capital Charge	South Kempsey \$8,133	per ET	Pre 1996 discount rate 3%
				Post 1996 discount rate 7%

NOTES:
 - 2005/06 = 2005 year commissioned
 - 2005/06 \$ = 2005 \$
 - Blue = linked to another sheet

Component Name	Item/Class	Capital cost (\$'000) ¹	Year dollars ^{2,5}	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML/d)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
SEWERAGE TREATMENT PLANT														
Existing Assets (pre-1996)														
KEMPSY STH STW SDGE PUMP 1	SLUDGE PMP 1	4.98	2003	1994	1996	5.21			1.93	2035	30	3%	1.49	2.87
KEMPSY STH STW FLOW MONITOR	FLOW MONITOR	22.25	2003	1993	1996	23.29			8.63	2035	30	3%	1.49	12.82
STW SOUTH KEMPSY	BUILDING(1989)	142.46	2003	1985	1996	149.13			55.23	2035	30	3%	1.49	82.08
STW SOUTH KEMPSY	CIVIL(1960)	2280.80	2003	1956	1996	2387.49			884.25	2035	30	3%	1.49	1314.00
STW SOUTH KEMPSY	CIVIL(1989)	1034.95	2003	1985	1996	1083.36			401.25	2035	30	3%	1.49	596.25
STW SOUTH KEMPSY	CIVIL-PONDS(1960)	160.00	2003	1956	1996	167.46			62.03	2035	30	3%	1.49	92.16
STW SOUTH KEMPSY	MECH-ELECT(1960)	536.42	2003	1980	1996	549.57			92.43	2035	30	3%	1.49	137.36
STW SOUTH KEMPSY	MECH-ELECT(1989)	657.70	2003	1986	1996	688.06			253.89	2035	30	3%	1.49	378.91
STW SOUTH KEMPSY	TELEMETRY	5.00	2003	1989	1996	5.23			1.94	2035	30	3%	1.49	2.88
Existing Assets (post-1996)														
KEMPSY STH STW SWITCHBOARD	SWITCHBOARD	4.13	2003	1997	1997	4.33			1.60	2035	30	7%	2.26	3.62
STW SOUTH KEMPSY	SEPTIC TANK RECIEVAL UNIT	173.44	2003	1998	1999	181.55			67.24	2035	30	7%	2.26	151.93
Future Assets														
Add microfiltration to 5,400 EP existing trickling filter plant.		1275.12	2004	2008	2008	1066.88			395.14	2035	28	7%	2.16	851.94
Add microfiltration to 5,400 EP existing trickling filter plant.		1275.12	2004	2009	2009	997.09			369.29	2035	27	7%	2.11	777.41
Minor upgrades (O&M) to existing 5,400 EP secondary plant		75.00	2004	2007	2007	67.14			24.87	2035	29	7%	2.21	54.90
Minor upgrades (O&M) to existing 5,400 EP secondary plant		75.00	2004	2008	2008	62.75			23.24	2035	28	7%	2.16	50.11
Total SEWERAGE TREATMENT PLANT		7,796				7,528		2,700	2,788					4,723

Notes
 1. Capital cost from Council's asset registers and MEEFA cost for future works
 2. Base year of capital cost varies depending on asset data. Assets constructed prior to 1970 are not included (except headworks)
 3. Capital cost adjusted to 2005 using CPI for Sydney (ABS)
 4. Capital cost of future works based on 2005 prices
 5. Council's asset register was updated in 2003/04. The year dollars for existing assets is 2003/04 dollars

Table A7: Capital Charge Calculation
Macleay Water

Service Area
Capital Charge

South West Rocks
\$7,320

per ET

Pre 1986 discount rate
3%
Post 1986 discount rate
7%

NOTES:
2005/06 = 2005 year commissioned
2005/06 \$ = 2005 \$
Blue = linked to another sheet

Component Name	Item/Class	Capital cost (\$'000)	Year dollars ^{2,5}	Capital Cost 2005/06\$ ³	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML or ML/d)	Capacity (ETs)	Capital cost (\$'ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
PUMP STATION															
Existing Assets (pre-1996)															
NO1	STH.W. ROCKS SPS R1 PSET NO.1	32.14	2003	33.64	1985	1986	33.64			5.61	2035	30	3%	1.49	8.33
NO2	STH.W. ROCKS SPS R1 PSET NO.2	32.14	2003	33.64	1985	1986	33.64			5.61	2035	30	3%	1.49	8.33
NO3	STH.W. ROCKS SPS R1 PSET NO.3	32.14	2003	33.64	1985	1986	33.64			5.61	2035	30	3%	1.49	8.33
	Catchment R01, Pump Station	191.20	2003	200.14	1985	1986	200.14			33.36	2035	30	3%	1.49	49.57
	STH.W. ROCKS SPS R1 SWITCHBOARD	35.30	2003	36.95	1985	1986	36.95			6.16	2035	30	3%	1.49	9.15
	STH.W. ROCKS SPS R1 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R2 PSET NO.1	4.20	2003	4.40	1985	1986	4.40			0.73	2035	30	3%	1.49	1.09
	STH.W. ROCKS SPS R2 PSET NO.2	4.20	2003	4.40	1985	1986	4.40			0.73	2035	30	3%	1.49	1.09
	Catchment R02, Pump Station	120.70	2003	126.35	1985	1986	126.35			21.06	2035	30	3%	1.49	37.29
	STH.W. ROCKS SPS R2 SWITCHBOARD	22.30	2003	23.34	1985	1986	23.34			3.89	2035	30	3%	1.49	5.78
	STH.W. ROCKS SPS R2 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R3 PSET NO.1	8.60	2003	9.00	1985	1986	9.00			1.50	2035	30	3%	1.49	2.23
	STH.W. ROCKS SPS R3 PSET NO.2	8.60	2003	9.00	1985	1986	9.00			1.50	2035	30	3%	1.49	2.23
	Catchment R03, Pump Station	135.10	2003	141.42	1985	1986	141.42			23.57	2035	30	3%	1.49	35.02
	STH.W. ROCKS SPS R3 SWITCHBOARD	26.30	2003	27.53	1985	1986	27.53			4.59	2035	30	3%	1.49	6.82
	STH.W. ROCKS SPS R3 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R4 PSET NO.1	5.40	2003	5.65	1985	1986	5.65			0.94	2035	30	3%	1.49	1.40
	STH.W. ROCKS SPS R4 PSET NO.2	5.40	2003	5.65	1985	1986	5.65			0.94	2035	30	3%	1.49	1.40
	Catchment R04, Pump Station	112.90	2003	118.18	1985	1986	118.18			19.70	2035	30	3%	1.49	29.27
	STH.W. ROCKS SPS R4 SWITCHBOARD	24.49	2003	24.49	1985	1986	24.49			4.08	2035	30	3%	1.49	6.07
	STH.W. ROCKS SPS R4 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R5 PSET NO.1	4.20	2003	4.40	1985	1986	4.40			0.73	2035	30	3%	1.49	1.09
	STH.W. ROCKS SPS R5 PSET NO.2	4.20	2003	4.40	1985	1986	4.40			0.73	2035	30	3%	1.49	1.09
	Catchment R05, Pump Station	96.00	2003	100.49	1985	1986	100.49			16.75	2035	30	3%	1.49	24.89
	STH.W. ROCKS SPS R5 SWITCHBOARD	22.30	2003	23.34	1985	1986	23.34			3.89	2035	30	3%	1.49	5.78
	STH.W. ROCKS SPS R5 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R6 PSET NO.1	4.30	2003	4.50	1985	1986	4.50			0.75	2035	30	3%	1.49	1.11
	STH.W. ROCKS SPS R6 PSET NO.2	4.30	2003	4.50	1985	1986	4.50			0.75	2035	30	3%	1.49	1.11
	Catchment R06, Pump Station	100.00	2003	104.68	1985	1986	104.68			17.45	2035	30	3%	1.49	25.93
	STH.W. ROCKS SPS R6 SWITCHBOARD	22.50	2003	23.55	1985	1986	23.55			3.93	2035	30	3%	1.49	5.83
	STH.W. ROCKS SPS R6 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS R7 SPS PSET NO.1	5.40	2003	5.65	1985	1986	5.65			0.94	2035	30	3%	1.49	1.40
	STH.W. ROCKS R7 SPS PSET NO.2	5.40	2003	5.65	1985	1986	5.65			0.94	2035	30	3%	1.49	1.40
	Catchment R07, Pump Station	103.60	2003	108.45	1985	1986	108.45			18.07	2035	30	3%	1.49	26.86
	STH.W. ROCKS R7 SPS SWITCHBOARD	23.40	2003	24.49	1985	1986	24.49			4.08	2035	30	3%	1.49	6.07
	STH.W. ROCKS R7 SPS TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R8 PSET NO.1	3.90	2003	4.08	1985	1986	4.08			0.68	2035	30	3%	1.49	1.01
	STH.W. ROCKS SPS R8 PSET NO.2	3.90	2003	4.08	1985	1986	4.08			0.68	2035	30	3%	1.49	1.01
	Catchment R08, Pump Station	75.80	2003	79.35	1985	1986	79.35			13.22	2035	30	3%	1.49	19.65
	STH.W. ROCKS SPS R8 SWITCHBOARD	22.20	2003	23.24	1985	1986	23.24			3.87	2035	30	3%	1.49	5.76
	STH.W. ROCKS SPS R8 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R9 PSET NO.1	4.90	2003	5.13	1985	1986	5.13			0.85	2035	30	3%	1.49	1.27
	STH.W. ROCKS SPS R9 PSET NO.2	4.90	2003	5.13	1985	1986	5.13			0.85	2035	30	3%	1.49	1.27
	Catchment R09, Pump Station	124.30	2003	130.11	1985	1986	130.11			21.69	2035	30	3%	1.49	32.22
	STH.W. ROCKS SPS R9 SWITCHBOARD	23.00	2003	24.06	1985	1986	24.06			4.01	2035	30	3%	1.49	5.96
	STH.W. ROCKS SPS R9 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R10 PSET NO.1	7.20	2003	7.54	1985	1986	7.54			1.26	2035	30	3%	1.49	1.87
	STH.W. ROCKS SPS R10 PSET NO.2	7.20	2003	7.54	1985	1986	7.54			1.26	2035	30	3%	1.49	1.87
	Catchment R10, Pump Station	102.80	2003	107.61	1985	1986	107.61			17.93	2035	30	3%	1.49	26.65
	STH.W. ROCKS SPS R10 SWITCHBOARD	24.90	2003	26.06	1985	1986	26.06			4.34	2035	30	3%	1.49	6.46
	STH.W. ROCKS SPS R10 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R11 PSET NO.1	4.30	2003	4.50	1985	1986	4.50			0.75	2035	30	3%	1.49	1.11
	STH.W. ROCKS SPS R11 PSET NO.2	4.30	2003	4.50	1985	1986	4.50			0.75	2035	30	3%	1.49	1.11
	Catchment R11, Pump Station	73.00	2003	76.41	1985	1986	76.41			12.74	2035	30	3%	1.49	18.93
	STH.W. ROCKS SPS R11 SWITCHBOARD	22.50	2003	23.55	1985	1986	23.55			3.93	2035	30	3%	1.49	5.83
	STH.W. ROCKS SPS R11 TELEMETRY	5.00	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
	STH.W. ROCKS SPS R12 PSET NO.1	5.90	2003	6.18	1985	1986	6.18			1.03	2035	30	3%	1.49	1.53

NOTES:
2005/06 = 2005 year commissioned
2005/06 \$ = 2005 \$
Blue = linked to another sheet

Component Name	Year dollars ^{a,b}	Capital cost (\$'000)	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ^c	Capacity (ML or ML/d)	Capacity (ETs)	Capital cost (\$ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$ET)
STH.W. ROCKS SPS R12 PSET NO.2	2003	5.90	1985	1986	6.18			1.03	2035	30	3%	1.49	1.53
Catchment R12, Pump Station	2003	124.30	1985	1996	130.11			21.69	2035	30	3%	1.49	32.22
STH.W. ROCKS SPS R12 S/BOARD	2003	27.00	1985	1986	24.81			4.13	2035	30	3%	1.49	6.14
STH.W. ROCKS SPS R12 TELEMETRY	2003	5.00	1988	1996	5.23			0.87	2035	30	3%	1.49	1.30
STH.W. ROCKS SPS 14 PSET NO.1	2003	23.35	1985	1986	24.44			4.07	2035	30	3%	1.49	6.05
STH.W. ROCKS SPS 14 PSET NO.2	2003	23.35	1985	1986	24.44			4.07	2035	30	3%	1.49	6.05
Catchment R14, Pump Station	2003	102.20	1985	1996	106.98			17.83	2035	30	3%	1.49	26.30
STH.W. ROCKS SPS 14 S/BOARD	2003	22.80	1985	1986	23.87			3.98	2035	30	3%	1.49	5.91
STH.W. ROCKS SPS 14 TELEMETRY	2003	5.00	1988	1996	5.23			0.87	2035	30	3%	1.49	1.30
STH.W. ROCKS SPS 15 PSET NO.1	2003	4.10	1985	1986	4.29			0.72	2035	30	3%	1.49	1.06
STH.W. ROCKS SPS 15 PSET NO.2	2003	4.10	1985	1986	4.29			0.72	2035	30	3%	1.49	1.06
Catchment R15, Pump Station	2003	71.70	1985	1996	75.05			12.51	2035	30	3%	1.49	18.59
STH.W. ROCKS SPS 15 S/BOARD	2003	22.30	1985	1986	23.34			3.89	2035	30	3%	1.49	5.78
STH.W. ROCKS SPS 15 TELEMETRY	2003	10.22	1995	1996	10.70			1.78	2035	30	3%	1.49	2.65
STH.W. ROCKS SPS R17 PSET NO.1	2003	4.10	1993	1996	4.29			0.72	2035	30	3%	1.49	1.06
STH.W. ROCKS SPS R17 PSET NO.2	2003	4.10	1993	1996	4.29			0.72	2035	30	3%	1.49	1.06
Catchment R17, Pump Station	2003	118.24	1993	1996	123.77			20.63	2035	30	3%	1.49	30.65
STH.W. ROCKS SPS R17 S/BOARD	2003	22.30	1993	1996	23.34			3.89	2035	30	3%	1.49	5.78
STH.W. ROCKS SPS R17 TELEMETRY	2003	5.00	1993	1996	5.23			0.87	2035	30	3%	1.49	1.30
STH.W. ROCKS SPS R18 PSET NO.1	2003	4.50	1995	1996	4.71			0.79	2035	30	3%	1.49	1.17
STH.W. ROCKS SPS R18 PSET NO.2	2003	4.50	1995	1996	4.71			0.79	2035	30	3%	1.49	1.17
Catchment R18, Pump Station	2003	91.80	1995	1996	96.20			16.03	2035	30	3%	1.49	23.83
STH.W. ROCKS SPS R18 S/BOARD	2003	22.70	1995	1996	23.76			3.96	2035	30	3%	1.49	5.88
STH.W. ROCKS SPS R18 TELEMETRY	2003	5.00	1995	1996	5.23			0.87	2035	30	3%	1.49	1.30
STH.W. ROCKS SPS	2003	51.17	1995	1996	53.56			8.93	2035	30	3%	1.49	13.27
Existing Assets (post-1996)													
PUMP SET	2003	7.20	1998	1998	7.54			1.26	2035	30	7%	2.26	2.84
PUMP SET	2003	7.20	1998	1998	7.54			1.26	2035	30	7%	2.26	2.84
STRUCTURE	2003	116.88	1998	1998	122.35			20.39	2035	30	7%	2.26	46.07
SWITCHBOARD	2003	25.00	1998	1998	26.17			4.36	2035	30	7%	2.26	9.85
STH.W. ROCKS SPS R20 TELEMETRY	2003	5.00	1998	1998	5.23			0.87	2035	30	7%	2.26	1.97
STH.W. ROCKS SPS R20 PSET NO.1	2003	7.20	1996	1996	7.54			1.26	2035	30	7%	2.26	2.84
STH.W. ROCKS SPS R20 PSET NO.2	2003	7.20	1996	1996	7.54			1.26	2035	30	7%	2.26	2.84
Catchment R20, Pump Station	2003	109.30	1996	1996	114.41			19.07	2035	30	7%	2.26	43.08
STH.WEST ROCKS NO.R20 S/BOARD	2003	24.30	1996	1996	26.06			4.34	2035	30	7%	2.26	9.82
STH.W. ROCKS SPS R20 TELEMETRY	2003	5.00	1996	1996	5.23			0.87	2035	30	7%	2.26	1.97
SWR SPS NO13 PSET NO1	2003	7.00	1999	1999	7.33			1.22	2035	30	7%	2.26	2.76
SWR SPS R13 PSET NO2	2003	7.00	1999	1999	7.33			1.22	2035	30	7%	2.26	2.76
STRUCTURE	2003	20.00	1999	1999	20.94			3.49	2035	30	7%	2.26	7.88
SWR SPS R13 SWITCHBOARD	2003	2.00	1999	1999	2.09			0.35	2035	30	7%	2.26	0.79
SWR SPS R13 TELEMETRY	2003	5.00	1999	1999	5.23			0.87	2035	30	7%	2.26	1.97
S.W. ROCKS SPS	2003	50.00	1998	1998	52.34			8.72	2035	30	7%	2.26	19.71
S.W. ROCKS SPS	2003	126.00	1999	1999	131.89			21.98	2035	30	7%	2.26	49.67
S.W. ROCKS SPS	2003	9.96	1998	1998	10.43			1.74	2035	30	7%	2.26	3.93
S.W. ROCKS SPS	2003	10.36	1998	1998	10.84			1.81	2035	30	7%	2.26	4.08
S.W. ROCKS SPS	2003	48.26	1998	1998	50.52			8.42	2035	30	7%	2.26	19.02
PUMP SET	2003	8.47	1998	1998	8.86			1.48	2035	30	7%	2.26	3.34
PUMP SET	2003	8.47	1998	1998	8.86			1.48	2035	30	7%	2.26	3.34
SWITCHBOARD including telemetry	2003	7.00	1998	1998	7.33			1.22	2035	30	7%	2.26	2.76
S.W. ROCKS SPS	2003	127.76	1997	1997	133.73			22.29	2035	30	7%	2.26	50.36
S.W. ROCKS SPS	2003	138.12	2000	2000	144.58			24.10	2035	30	7%	2.26	54.44
Catchment Pump Station	2003	50.39	2000	2000	52.75			8.79	2035	30	7%	2.26	19.86
Future Assets													
NONE													
Total PUMP STATIONS													
3,488													
3,651													
6,000													
608													
1,031													
TRANSFER													
MapInfo Number													
Existing Assets (pre-1996)													
2462	2003	8.81	1981	1996	9.22			1.54	2035	30	3%	1.49	2.28
2094	2003	7.82	1981	1996	8.19			1.36	2035	30	3%	1.49	2.03
Location													
ARTHUR ST													
ARTHUR ST													

Table A7: Capital Charge Calculation
Macleay Water

Service Area
Capital Charge

South West Rocks
\$7,320

Pre 1996 discount rate
Post 1996 discount rate

3%
7%

NOTES:
2005/06 = 2005 year commissioned
2005/06 \$ = 2005 \$
Blue = linked to another sheet

Component Name	Item/Class	Year dollars ^{2,5}	Capital cost (\$'000)	Year commissioned	Capital Cost (\$'000)	Present value 2005/06 (\$'000) ⁴	Capacity (ML or ML/d)	Capacity (ETs)	Capital cost (\$ET)	Year of full take- up	Years to full take- up	Discount Rate	ROI factor	Capital Change (\$ET)
2100		2003	11.72	1981	11.72	11.72			1.95	2035	30	3%	1.49	2.90
2092	ARTHUR ST	2003	10.10	1981	10.57	10.57			1.76	2035	30	3%	1.49	2.62
2885	BELLE OCCONOR ST	2003	0.26	1993	0.27	0.27			0.05	2035	30	3%	1.49	0.07
2887	BELLE OCCONOR ST	2003	0.27	1993	0.27	0.27			0.05	2035	30	3%	1.49	0.07
2888	BELLE OCCONOR ST	2003	0.26	1993	0.27	0.27			0.05	2035	30	3%	1.49	0.07
2842	BELLE OCCONOR ST	2003	9.36	1993	9.80	9.80			1.63	2035	30	3%	1.49	2.43
2843	BELLE OCCONOR ST	2003	16.12	1993	16.87	16.87			2.81	2035	30	3%	1.49	4.18
4376	BELLE OCCONOR ST	2003	12.22	1993	12.79	12.79			2.13	2035	30	3%	1.49	3.17
4379	BELLE OCCONOR ST	2003	21.84	1993	22.86	22.86			3.81	2035	30	3%	1.49	5.66
2844	BELLE OCCONOR ST	2003	23.54	1993	24.64	24.64			4.11	2035	30	3%	1.49	6.10
2845	BELLE OCCONOR ST	2003	13.58	1993	14.21	14.21			2.37	2035	30	3%	1.49	3.52
2886	BELLE OCCONOR ST	2003	0.30	1993	0.30	0.30			0.05	2035	30	3%	1.49	0.07
2846	BELLE OCCONOR ST	2003	8.58	1993	8.96	8.96			1.50	2035	30	3%	1.49	2.22
2847	SWR GOLF COURSE	2003	18.20	1993	19.05	19.05			3.18	2035	30	3%	1.49	4.72
2848	SWR GOLF COURSE	2003	22.88	1993	23.95	23.95			3.99	2035	30	3%	1.49	5.93
2853	SWR GOLF COURSE	2003	21.58	1993	22.59	22.59			3.76	2035	30	3%	1.49	5.59
2101	BRUCE FIELD ST	2003	2.83	1981	2.86	2.86			0.48	2035	30	3%	1.49	0.73
2107	BRUCE FIELD ST	2003	7.32	1984	7.66	7.66			1.28	2035	30	3%	1.49	1.90
2460	COLONIAL CR	2003	8.92	1981	9.34	9.34			1.56	2035	30	3%	1.49	2.31
2461	COLONIAL CR	2003	27.03	1981	28.29	28.29			4.72	2035	30	3%	1.49	7.01
2184	CURRAWONG CR	2003	24.47	1981	25.62	25.62			4.27	2035	30	3%	1.49	6.34
2183	CURRAWONG CR	2003	11.80	1981	12.35	12.35			2.06	2035	30	3%	1.49	3.06
2182	CURRAWONG CR	2003	8.28	1981	8.67	8.67			1.44	2035	30	3%	1.49	2.15
2181	CURRAWONG CR	2003	7.13	1981	7.46	7.46			1.24	2035	30	3%	1.49	1.85
2186	CURRAWONG CR	2003	10.87	1981	11.38	11.38			1.90	2035	30	3%	1.49	2.82
2450	CURRAWONG CR	2003	1.08	1981	1.13	1.13			0.19	2035	30	3%	1.49	0.28
2505	DOLPHIN CRES	2003	19.65	1986	20.56	20.56			3.43	2035	30	3%	1.49	5.09
2077	GORDON YOUNG DRIVE	2003	19.07	1981	19.96	19.96			3.33	2035	30	3%	1.49	4.94
2078	GORDON YOUNG DRIVE	2003	12.70	1981	13.29	13.29			2.21	2035	30	3%	1.49	3.29
2346	GORDON YOUNG DRIVE	2003	15.41	1981	16.13	16.13			2.69	2035	30	3%	1.49	4.00
2236	GREGORY ST	2003	12.96	1981	13.57	13.57			2.26	2035	30	3%	1.49	3.36
2839	GREGORY ST	2003	20.01	1993	20.95	20.95			3.49	2035	30	3%	1.49	5.19
2839	GREGORY ST	2003	21.07	1993	21.07	21.07			3.51	2035	30	3%	1.49	5.22
2840	GREGORY ST	2003	23.73	1993	24.84	24.84			4.14	2035	30	3%	1.49	6.15
2896	GREGORY ST	2003	32.67	1993	34.20	34.20			5.70	2035	30	3%	1.49	8.47
2845	GREGORY ST	2003	20.81	1993	21.57	21.57			3.59	2035	30	3%	1.49	5.34
2084	JOHN SHAW CL	2003	13.20	1981	13.82	13.82			2.30	2035	30	3%	1.49	3.42
2459	JOHN SHAW CL	2003	4.42	1981	4.62	4.62			0.77	2035	30	3%	1.49	1.14
1906	LANDSBOROUGH ST	2003	14.67	1981	15.35	15.35			2.56	2035	30	3%	1.49	3.80
2464	LANDSBOROUGH ST	2003	8.97	1981	9.39	9.39			1.56	2035	30	3%	1.49	2.33
1907	LANDSBOROUGH ST	2003	5.80	1981	6.07	6.07			1.01	2035	30	3%	1.49	1.50
2463	LANDSBOROUGH ST	2003	1.59	1981	1.66	1.66			0.28	2035	30	3%	1.49	0.41
1894	LIVINGSTONE ST	2003	11.57	1981	12.11	12.11			2.02	2035	30	3%	1.49	3.00
1893	LIVINGSTONE ST	2003	5.54	1981	5.80	5.80			0.97	2035	30	3%	1.49	1.44
1896	MEMORIAL AVE	2003	8.14	1981	8.52	8.52			1.42	2035	30	3%	1.49	2.11
1898	MEMORIAL AVE	2003	2.59	1981	2.71	2.71			0.45	2035	30	3%	1.49	0.67
1895	MEMORIAL AVE	2003	8.07	1981	8.45	8.45			1.41	2035	30	3%	1.49	2.09
1905	MITCHELL ST	2003	15.41	1981	16.13	16.13			2.69	2035	30	3%	1.49	4.00
1904	MITCHELL ST	2003	14.33	1981	15.00	15.00			2.50	2035	30	3%	1.49	3.72
2055	MITCHELL ST	2003	30.58	1981	32.01	32.01			5.34	2035	30	3%	1.49	7.93
2059	MITCHELL ST	2003	22.28	1981	23.32	23.32			3.89	2035	30	3%	1.49	5.78
2060	MITCHELL ST	2003	13.67	1981	14.31	14.31			2.39	2035	30	3%	1.49	3.54
2061	MITCHELL ST	2003	14.50	1981	15.17	15.17			2.53	2035	30	3%	1.49	3.76
2001	MITCHELL ST	2003	18.38	1981	19.24	19.24			3.21	2035	30	3%	1.49	4.76
1997	MITCHELL ST	2003	11.95	1981	12.51	12.51			2.09	2035	30	3%	1.49	3.10
1996	MITCHELL ST	2003	14.14	1981	14.80	14.80			2.47	2035	30	3%	1.49	3.66
2054	MITCHELL ST	2003	12.98	1981	13.59	13.59			2.26	2035	30	3%	1.49	3.36
2465	PARAGON AVE	2003	9.98	1981	10.44	10.44			1.74	2035	30	3%	1.49	2.59
1899	PARAGON AVE	2003	10.02	1981	10.49	10.49			1.75	2035	30	3%	1.49	2.60
1902	PARAGON AVE	2003	8.74	1981	9.15	9.15			1.52	2035	30	3%	1.49	2.27
2083	PARK ST	2003	0.94	1981	0.99	0.99			0.16	2035	30	3%	1.49	0.24
2841	PETER MARK CIRCUIT	2003	22.23	1993	23.26	23.26			3.88	2035	30	3%	1.49	5.76
2451	PHILLIP DR	2003	2.62	1981	3.05	3.05			0.51	2035	30	3%	1.49	0.76
2148	PHILLIP DR	2003	3.86	1981	4.04	4.04			0.67	2035	30	3%	1.49	1.00
2149	PHILLIP DR	2003	4.18	1981	4.38	4.38			0.73	2035	30	3%	1.49	1.08
2154	PHILLIP DR	2003	17.24	1981	18.05	18.05			3.01	2035	30	3%	1.49	4.47
2151	PHILLIP DR	2003	3.79	1981	3.97	3.97			0.66	2035	30	3%	1.49	0.98
2152	PHILLIP DR	2003	6.33	1981	6.63	6.63			1.11	2035	30	3%	1.49	1.64
2153	PHILLIP DR	2003	6.36	1981	6.66	6.66			1.11	2035	30	3%	1.49	1.65
2147	PHILLIP DR	2003	24.61	1981	25.76	25.76			4.29	2035	30	3%	1.49	6.38
2881	SWR GOLF COURSE	2003	0.30	1994	0.30	0.30			0.05	2035	30	3%	1.49	0.07
2882	SWR GOLF COURSE	2003	0.30	1994	0.30	0.30			0.05	2035	30	3%	1.49	0.07

Table A7: Capital Charge Calculation
Macleay Water

Component Name	Item/Class	Year dollars ^{2,5}	Capital cost (\$'000)	Year commissioned	Capital Cost (\$'000,000) ³	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML or ML/d)	Capacity (ETs)	Capital cost (\$'ET)	Year of full take- up	Years to full take- up	Discount Rate	ROI factor	Capital Change (\$/ET)
2878	SWR GOLF COURSE	2003	1.44	1994	1.50	1996	1.50			0.25	2035	30	3%	1.49	0.37
2849	SWR GOLF COURSE	2003	24.97	1994	26.14	1996	26.14			4.36	2035	30	3%	1.49	6.47
2850	SWR GOLF COURSE	2003	18.67	1994	19.54	1996	19.54			3.26	2035	30	3%	1.49	4.84
2851	SWR GOLF COURSE	2003	23.77	1994	24.88	1996	24.88			4.15	2035	30	3%	1.49	6.16
2852	SWR GOLF COURSE	2003	25.86	1994	27.07	1996	27.07			4.51	2035	30	3%	1.49	6.70
2877	SWR GOLF COURSE	2003	1.57	1994	1.64	1996	1.64			0.27	2035	30	3%	1.49	0.41
2880	SWR GOLF COURSE	2003	0.29	1994	0.30	1996	0.30			0.05	2035	30	3%	1.49	0.07
2880	ROY SANDERS CL	2003	13.27	1981	13.89	1996	13.89			2.32	2035	30	3%	1.49	3.44
2458	ROY SANDERS CL	2003	3.88	1981	4.06	1996	4.06			0.68	2035	30	3%	1.49	1.01
2082	ROY SANDERS CL	2003	5.80	1981	6.07	1996	6.07			1.01	2035	30	3%	1.49	1.50
2081	ROY SANDERS CL	2003	4.53	1981	4.74	1996	4.74			0.79	2035	30	3%	1.49	1.17
2079	ROY SANDERS CL	2003	16.72	1981	17.50	1996	17.50			2.92	2035	30	3%	1.49	4.33
2564	ROY SANDERS CL	2003	10.24	1981	10.72	1996	10.72			1.79	2035	30	3%	1.49	2.65
2457	PARK	2003	1.03	1981	1.08	1996	1.08			0.18	2035	30	3%	1.49	0.27
2466	RUDDER ST	2003	7.00	1981	7.33	1996	7.33			1.22	2035	30	3%	1.49	1.82
2335	RUDDER ST	2003	4.07	1981	4.26	1996	4.26			0.71	2035	30	3%	1.49	1.06
2312	RUDDER ST	2003	2.49	1981	2.60	1996	2.60			0.43	2035	30	3%	1.49	0.64
1986	SHORT ST	2003	7.21	1981	7.54	1996	7.54			1.26	2035	30	3%	1.49	1.87
1985	SHORT ST	2003	9.53	1981	9.98	1996	9.98			1.66	2035	30	3%	1.49	2.47
1980	SHORT ST	2003	9.02	1981	9.44	1996	9.44			1.57	2035	30	3%	1.49	2.34
2241	SIMPSON ST	2003	11.06	1981	11.58	1996	11.58			1.93	2035	30	3%	1.49	2.87
2455	SIMPSON ST	2003	8.36	1981	8.75	1996	8.75			1.46	2035	30	3%	1.49	2.17
2239	SIMPSON ST	2003	9.53	1981	9.97	1996	9.97			1.66	2035	30	3%	1.49	2.47
2238	SIMPSON ST	2003	10.48	1981	10.97	1996	10.97			1.83	2035	30	3%	1.49	2.72
2237	SIMPSON ST	2003	10.67	1981	11.16	1996	11.16			1.86	2035	30	3%	1.49	2.77
2235	SIMPSON ST	2003	5.62	1981	5.89	1996	5.89			0.98	2035	30	3%	1.49	1.46
2231	SIMPSON ST	2003	9.77	1981	10.22	1996	10.22			1.70	2035	30	3%	1.49	2.53
2229	SIMPSON ST	2003	7.52	1981	7.88	1996	7.88			1.31	2035	30	3%	1.49	1.95
2233	SIMPSON ST	2003	0.44	1981	0.46	1996	0.46			0.08	2035	30	3%	1.49	0.12
2301	SIMPSON ST	2003	9.81	1981	10.27	1996	10.27			1.71	2035	30	3%	1.49	2.54
2300	SIMPSON ST	2003	20.17	1981	21.11	1996	21.11			3.52	2035	30	3%	1.49	5.23
2298	SIMPSON ST	2003	18.77	1981	19.65	1996	19.65			3.27	2035	30	3%	1.49	4.87
2297	SIMPSON ST	2003	11.55	1981	11.88	1996	11.88			1.98	2035	30	3%	1.49	2.94
2296	SIMPSON ST	2003	26.19	1981	27.42	1996	27.42			4.57	2035	30	3%	1.49	6.79
2070	SIMPSON ST	2003	21.88	1981	22.68	1996	22.68			3.78	2035	30	3%	1.49	5.62
2062	SIMPSON ST	2003	29.52	1981	30.70	1996	30.70			5.12	2035	30	3%	1.49	7.60
1982	TRIAL ST	2003	17.40	1981	18.22	1996	18.22			3.04	2035	30	3%	1.49	4.51
1981	TRIAL ST	2003	17.22	1981	18.02	1996	18.02			3.00	2035	30	3%	1.49	4.46
2452	UNFORMED RD	2003	25.17	1981	26.35	1996	26.35			4.39	2035	30	3%	1.49	6.53
2456	UNFORMED RD	2003	23.85	1981	24.97	1996	24.97			4.16	2035	30	3%	1.49	6.18
28	SWR	2003	123.10	1980	128.86	1996	128.86			21.48	2035	30	3%	1.49	31.91
29	SWR	2003	14.21	1980	14.88	1996	14.88			2.48	2035	30	3%	1.49	3.68
30	SWR	2003	22.57	1980	23.63	1996	23.63			3.94	2035	30	3%	1.49	5.85
42	SWR	2003	116.42	1980	121.87	1996	121.87			20.31	2035	30	3%	1.49	30.18
43	SWR	2003	135.24	1980	141.57	1996	141.57			23.59	2035	30	3%	1.49	35.06
44	SWR	2003	237.22	1985	248.31	1996	248.31			41.39	2035	30	3%	1.49	61.50
45	SWR	2003	78.80	1980	82.49	1996	82.49			13.75	2035	30	3%	1.49	20.43
46	SWR	2003	194.12	1980	203.20	1996	203.20			33.87	2035	30	3%	1.49	50.33
47	SWR	2003	346.73	1980	362.95	1996	362.95			60.49	2035	30	3%	1.49	89.89
49	SWR	2003	7.94	1980	8.31	1996	8.31			1.39	2035	30	3%	1.49	2.06
51	SWR	2003	67.85	1980	71.02	1996	71.02			11.84	2035	30	3%	1.49	17.59
57	SWR	2003	26.50	1987	27.74	1996	27.74			4.62	2035	30	3%	1.49	6.87
63	SWR	2003	71.90	1987	75.26	1996	75.26			12.54	2035	30	3%	1.49	18.64
71	SWR	2003	53.46	1993	55.96	1996	55.96			9.33	2035	30	3%	1.49	13.86
76	SWR	2003	33.17	1980	34.72	1996	34.72			5.79	2035	30	3%	1.49	8.60
31	SWR	2003	53.35	1980	55.85	1996	55.85			9.31	2035	30	3%	1.49	13.83
32	SWR	2003	17.20	1980	18.00	1996	18.00			3.00	2035	30	3%	1.49	4.46
48	SWR	2003	30.96	1980	32.41	1996	32.41			5.44	2035	30	3%	1.49	8.03
50	SWR	2003	20.30	1980	21.25	1996	21.25			3.54	2035	30	3%	1.49	5.26
58	SWR	2003	27.52	1980	28.81	1996	28.81			4.80	2035	30	3%	1.49	7.13
59	65-67 Cardwell St	2003	16.00	1981	16.74	1996	16.74			2.79	2035	30	3%	1.49	4.15
60	Buchanan St	2003	14.91	1981	15.61	1996	15.61			2.60	2035	30	3%	1.49	3.87
70	S.W.R./S.T.W.	2003	36.98	1980	38.71	1996	38.71			6.45	2035	30	3%	1.49	9.59
72	SWR Surf Life Saving	2003	19.78	1993	20.71	1996	20.71			3.45	2035	30	3%	1.49	5.13
74	SWR	2003	14.62	1981	15.30	1996	15.30			2.55	2035	30	3%	1.49	3.79
75	SWR	2003	17.20	1981	18.00	1996	18.00			3.00	2035	30	3%	1.49	4.46
77	SWR	2003	1.03	1992	1.08	1996	1.08			0.18	2035	30	3%	1.49	0.27
88	SWR	2003	59.68	1995	62.48	1996	62.48			10.41	2035	30	3%	1.49	15.47
94	New Entrance Rd SWR	2003	33.71	1993	35.29	1996	35.29			5.88	2035	30	3%	1.49	8.74
SWR	SWR	2003	3.30	1977	3.46	1996	3.46			0.58	2035	30	3%	1.49	0.86

NOTES:
2005/06 = 2005 year commissioned
2005/06 \$ = 2005 \$
Blue = linked to another sheet

Table A7: Capital Charge Calculation
Macleay Water

Service Area Capital Charge per ET

Pre 1986 discount rate 3%
Post 1986 discount rate 7%

Component Name	Item/Class	Year dollars ^{2,5}	Capital cost (\$'000)	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML or ML/d)	Capacity (ETs)	Capital cost (\$'ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Change (\$'ET)
S.W.R.Effluent Main No 1	SWR	2003	3.46	1977	1996	3.46			0.58	2035	30	3%	1.49	0.86
S.W.R.Effluent Main No 1	SWR	2003	3.46	1977	1996	3.46			0.58	2035	30	3%	1.49	0.86
S.W.R.Effluent Main No 1	SWR	2003	4.98	1977	1996	4.98			0.83	2035	30	3%	1.49	1.23
S.W.R.Effluent Main No 1	SWR	2003	4.98	1977	1996	4.98			0.83	2035	30	3%	1.49	1.23
S.W.R.Effluent Main No 1	SWR	2003	11.08	1977	1996	11.08			1.85	2035	30	3%	1.49	2.74
S.W.R.Effluent Main No 1	SWR	2003	31.10	1977	1996	31.10			5.18	2035	30	3%	1.49	7.70
S.W.R.Effluent Main No 1	SWR	2003	310.85	1977	1996	310.85			51.81	2035	30	3%	1.49	76.98
Overflow	SWRSTW	2003	69.76	1980	1996	69.76			11.63	2035	30	3%	1.49	17.28
S.W.R.Effluent Main No 1	SWR	2003	59.52	1977	1996	59.52			10.35	2035	30	3%	1.49	15.98
S.W.R.Effluent Main No 1	SWR	2003	273.31	1977	1996	273.31			45.55	2035	30	3%	1.49	67.69
Existing Assets (post-1996)														
3054	GREGORY ST	2003	0.26	1996	1996	0.26			0.04	2035	30	7%	2.26	0.10
3056	GREGORY ST	2003	2.58	1996	1996	2.58			0.43	2035	30	7%	2.26	0.97
STW SOUTH WEST ROCKS	JERSEVILLE	2003	1.08	2000	2000	1.08			0.18	2035	30	7%	2.26	0.41
86	Gregory Street	2003	36.23	1996	1996	36.23			6.04	2035	30	7%	2.26	13.64
89	Gregory Street	2003	44.95	1996	1996	44.95			7.49	2035	30	7%	2.26	16.93
80	SWR	2003	50.41	1996	1996	50.41			8.40	2035	30	7%	2.26	18.98
90	SWR	2003	81.02	1997	1997	81.02			13.50	2035	30	7%	2.26	30.51
92	SWR	2003	37.84	1997	1997	39.61			6.60	2035	30	7%	2.26	14.92
Future Assets														
Effluent pumping station and 250mm supply mains to landscape irrigation areas														
		2004	1492.27	2007	2007	1303.41			217.23	2035	29	7%	2.21	479.54
	Pump station, reservoir, chlorination for 1,400 ep	2004	1796.38	2007	2007	1569.03			261.51	2035	29	7%	2.21	577.27
Total TRANSFER														
										7,483	6,000	1,221	2,193	

SEWERAGE TREATMENT PLANT														
Existing Assets (pre-1996)														
CIVIL		1996	3915.28	1981	1996	3915.28			652.55	2035	30	3%	1.49	969.68
STW SOUTH WEST ROCKS	MECH/ELECT	1996	1750.77	1981	1996	1750.77			291.79	2035	30	3%	1.49	433.61
STW SOUTH WEST ROCKS	TELEMETRY	2003	5.23	1988	1986	5.23			0.87	2035	30	3%	1.49	1.30
S.W.ROCKS STW	NIVAL CADET/PS	2003	8.92	1994	1996	8.92			1.49	2035	30	3%	1.49	2.21
S.W.ROCKS STW	COPA SCREENS	2003	16.46	1993	1996	16.46			2.74	2035	30	3%	1.49	4.08
STW SOUTH WEST ROCKS		2003	174.81	1989	1996	174.81			29.14	2035	30	3%	1.49	43.29
Existing Assets (post-1996)														
S.W.ROCKS STW EFFLUENT PUMP 1	NO1	2003	32.10	1998	1998	32.10			5.35	2035	30	7%	2.26	12.09
S.W.ROCKS STW EFFLUENT PUMP 2	NO2	2003	32.10	1998	1998	32.10			5.35	2035	30	7%	2.26	12.09
S.W.ROCKS STW EFF PUMP 1 MOTOR	NO1	2003	20.94	1998	1998	20.94			3.49	2035	30	7%	2.26	7.89
S.W.ROCKS STW EFF PUMP 2 MOTOR	NO2	2003	20.94	1998	1998	20.94			3.49	2035	30	7%	2.26	7.89
S.W.ROCKS STW FENCING	DUNE DISCHARGE FENCING	2003	17.96	1996	1996	17.96			2.99	2035	30	7%	2.26	6.76
S.W.ROCKS STW SWITCHBOARD	SWITCHBOARD	2003	4.33	1997	1997	4.33			0.72	2035	30	7%	2.26	1.63
STW SOUTH WEST ROCKS	CIVIL	2003	624.74	2000	2000	624.74			104.12	2035	30	7%	2.26	235.26
Future Assets														
Augment existing plant to 12,000 EP, microfiltration for total plant capacity.														
		2004	3416.88	2006	2006	3273.12			545.52	2035	30	7%	2.26	1232.57
Augment existing plant to 12,000 EP, microfiltration for total plant capacity.														
		2004	3502.24	2007	2007	3058.99			509.83	2035	29	7%	2.21	1125.45
Total SEWERAGE TREATMENT PLANT														
										12,303	6,000	2,159	4,096	

Notes:
 1. Capital cost from Council's asset registers and MEERA cost for future works
 2. Base year or capital cost varies depending on asset data. Assets constructed prior to 1970 are not included (except headworks)
 3. Capital cost adjusted to 2005\$ using CPI for Sydney (ABS)
 4. Capital cost of future works discounted to 2005\$
 5. Council's asset register was updated in 2003/04. The year dollars for existing assets is 2003/04 dollars

Table A8: Non-uniform Capital Charge Calculation
Stuarts Point Sewerage

Year Number	Year	Estimated Expenditure (2004/05\$) (\$'000)	PV Factor	NPV of Expenditure (@ 7%) (\$'000)	Number of New Lots (ETs)	NPV New Lots (ETs)
1	2004/05		1.00			
2	2005/06		0.93			
3	2006/07		0.87			
4	2007/08		0.82			
5	2008/09		0.76			
6	2009/10	12277	0.71	8753	598	426
7	2010/11		0.67		7	5
8	2011/12		0.62		7	4
9	2012/13		0.58		7	4
10	2013/14		0.54		7	4
11	2014/15		0.51		7	4
12	2015/16		0.48		7	3
13	2016/17		0.44		7	3
14	2017/18		0.41		7	3
15	2018/19		0.39		7	3
16	2019/20		0.36		7	3
17	2020/21		0.34		7	2
18	2021/22		0.32		7	2
19	2022/23		0.30		7	2
20	2023/24		0.28		7	2
21	2024/25		0.26		6	2
22	2025/26		0.24		6	1
23	2026/27		0.23		6	1
24	2027/28		0.21		6	1
25	2028/29		0.20		6	1
26	2029/30		0.18		6	1
27	2030/31		0.17		6	1
28	2031/32		0.16		6	1
29	2032/33		0.15		6	1
Total		12,277		8,753	750	481

Stuarts Point ET

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Capital Charge per ET **\$18,205**
Rate of return (post 1996) 7%

per ET 2005/06\$

Table A9: Capital Charge Calculation			Service Area		West Kempsey	
Macleay Water			Capital Charge	\$8,673	per ET	
NOTES:			2005/06 = 2005 year commissioned		3%	
			2005/06 \$ = 2005 \$		7%	
			Blue = linked to another sheet			

Component Name	Item/Class	Capital cost (\$'000)	Year dollars ^{2,5}	Capital Cost (\$'000, 2005/06) ³	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML or ML/d)	Capacity (ETs)	Capital cost (\$'ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$'ET)
PUMP STATION															
Existing Assets (pre-1996)															
KEMPSEY SPS K2 PSET NO.1	NO1	5.90	2003	6.18	1986	1986	6.18			1.45	2035	30	3%	1.49	2.16
KEMPSEY SPS K2 PSET NO.2	NO2	5.90	2003	6.18	1986	1986	6.18			1.45	2035	30	3%	1.49	2.16
Catchment K02, Pump Station	STRUCTURE	110.90	2003	116.09	1986	1986	116.09			27.31	2035	30	3%	1.49	40.59
KEMPSEY SPS K2 SWITCHBOARD	SWITCHBOARD	23.70	2003	24.81	1986	1986	24.81			5.84	2035	30	3%	1.49	8.67
KEMPSEY SPS K2 TELEMETRY	TELEMETRY	5.00	2003	5.23	1988	1986	5.23			1.23	2035	30	3%	1.49	1.83
KEMPSEY SPS 6B PSET NO.1	NO1	19.60	2003	20.52	1989	1986	20.52			4.83	2035	30	3%	1.49	7.17
KEMPSEY SPS 6B PSET NO.2	NO2	19.60	2003	20.52	1989	1986	20.52			4.83	2035	30	3%	1.49	7.17
Catchment K06B, Pump Station	STRUCTURE	131.00	2003	137.13	1989	1986	137.13			32.27	2035	30	3%	1.49	47.95
KEMPSEY SPS 6B SWITCHBOARD	SWITCHBOARD	32.30	2003	34.44	1989	1986	34.44			8.10	2035	30	3%	1.49	12.04
KEMPSEY SPS 6B TELEMETRY	TELEMETRY	5.00	2003	5.23	1989	1986	5.23			1.23	2035	30	3%	1.49	1.83
KEMPSEY SPS 6C PSET NO.1	NO1	14.72	2003	15.41	1989	1986	15.41			3.63	2035	30	3%	1.49	5.39
KEMPSEY SPS 6C PSET NO.2	NO2	14.72	2003	15.41	1989	1986	15.41			3.63	2035	30	3%	1.49	5.39
Catchment K06C, Pump Station	STRUCTURE	400.00	2003	418.71	1989	1986	418.71			99.52	2035	30	3%	1.49	146.40
KEMPSEY SPS 6C SWITCHBOARD	SWITCHBOARD	29.30	2003	31.30	1989	1986	31.30			7.36	2035	30	3%	1.49	10.94
KEMPSEY SPS 6C TELEMETRY	TELEMETRY	5.00	2003	5.23	1989	1986	5.23			1.23	2035	30	3%	1.49	1.83
KEMPSEY SPS K30 PSET NO.1	NO1	5.10	2003	5.34	1982	1986	5.34			1.26	2035	30	3%	1.49	1.87
Catchment K20, Pump Station	STRUCTURE	87.20	2003	91.28	1982	1986	91.28			21.48	2035	30	3%	1.49	31.92
KEMPSEY SPS K20 SWITCHBOARD	SWITCHBOARD	22.20	2003	23.24	1986	1986	23.24			5.47	2035	30	3%	1.49	8.13
KEMPSEY SPS K20 TELEMETRY	TELEMETRY	5.00	2003	5.23	1988	1986	5.23			1.23	2035	30	3%	1.49	1.83
KEMPSEY SPS K21 PSET NO.1	NO1	5.00	2003	5.23	1987	1986	5.23			1.23	2035	30	3%	1.49	1.83
KEMPSEY SPS K21 PSET NO.2	NO2	5.00	2003	5.23	1987	1986	5.23			1.23	2035	30	3%	1.49	1.83
Catchment K21, Pump Station	STRUCTURE	105.10	2003	105.10	1987	1986	105.10			24.73	2035	30	3%	1.49	36.75
KEMPSEY SPS K21 SWITCHBOARD	SWITCHBOARD	23.20	2003	24.29	1987	1986	24.29			5.71	2035	30	3%	1.49	8.49
KEMPSEY SPS K21 TELEMETRY	TELEMETRY	5.00	2003	5.23	1988	1986	5.23			1.23	2035	30	3%	1.49	1.83
KEMPSEY SPS K24 PSET NO.1	NO1	4.10	2003	4.29	1994	1996	4.29			1.01	2035	30	3%	1.49	1.50
KEMPSEY SPS K24 PSET NO.2	NO2	4.10	2003	4.29	1994	1996	4.29			1.01	2035	30	3%	1.49	1.50
Catchment K24, Pump Station	STRUCTURE	76.50	2003	80.08	1994	1996	80.08			18.84	2035	30	3%	1.49	28.00
KEMPSEY SPS K24 SWITCHBOARD	SWITCHBOARD	22.30	2003	23.34	1994	1996	23.34			5.49	2035	30	3%	1.49	8.16
KEMPSEY SPS K24 TELEMETRY	TELEMETRY	5.00	2003	5.23	1994	1996	5.23			1.23	2035	30	3%	1.49	1.83
KEMPSEY SPS K29 PSET NO.1	NO1	5.90	2003	6.18	1986	1986	6.18			1.45	2035	30	3%	1.49	2.16
KEMPSEY SPS K29 PSET NO.2	NO2	5.90	2003	6.18	1986	1986	6.18			1.45	2035	30	3%	1.49	2.16
Catchment K29, Pump Station	STRUCTURE	108.70	2003	113.78	1986	1986	113.78			26.77	2035	30	3%	1.49	39.78
KEMPSEY SPS K29 SWITCHBOARD	SWITCHBOARD	23.70	2003	24.81	1986	1986	24.81			5.84	2035	30	3%	1.49	8.67
KEMPSEY SPS K29 TELEMETRY	TELEMETRY	5.00	2003	5.23	1988	1986	5.23			1.23	2035	30	3%	1.49	1.83
KEMPSEY SPS K30 PSET NO.1	NO1	5.00	2003	5.23	1986	1986	5.23			1.23	2035	30	3%	1.49	1.83
KEMPSEY SPS K30 PSET NO.2	NO2	5.00	2003	5.23	1986	1986	5.23			1.23	2035	30	3%	1.49	1.83
Catchment K30, Pump Station	STRUCTURE	93.30	2003	97.66	1986	1986	97.66			22.98	2035	30	3%	1.49	34.15
KEMPSEY SPS K30 SWITCHBOARD	SWITCHBOARD	23.20	2003	24.29	1986	1986	24.29			5.71	2035	30	3%	1.49	8.49
KEMPSEY SPS K30 TELEMETRY	TELEMETRY	5.00	2003	5.23	1988	1986	5.23			1.23	2035	30	3%	1.49	1.83
Existing Assets (post-1996)															
KEMPSEY SPS K11	PUMPSTATION	5.24	2003	5.49	1997	1997	5.49			1.29	2035	30	7%	2.26	2.92
Catchment - Pump Station	Safety Platforms	30.32	2003	31.74	2000	2000	31.74			7.47	2035	30	7%	2.26	16.87
Future Assets															
NONE															
Total PUMP STATIONS		1,510		1,581			1,581		4,250	372					560
TRANSFER															
Existing Assets (pre-1996)															
1579	ALVERTON ST	7.39	2003	7.74	1981	1986	7.74			1.82	2035	30	3%	1.49	2.71
1580	ALVERTON ST	22.88	2003	23.95	1981	1986	23.95			5.64	2035	30	3%	1.49	8.37
1581	ALVERTON ST	13.72	2003	13.31	1981	1986	13.31			3.13	2035	30	3%	1.49	4.66
1582	ALVERTON ST	11.90	2003	12.45	1981	1986	12.45			2.93	2035	30	3%	1.49	4.35
1440	ALVERTON ST	11.67	2003	12.43	1981	1986	12.43			2.92	2035	30	3%	1.49	4.34
1441	ALVERTON ST	12.94	2003	13.55	1981	1986	13.55			3.19	2035	30	3%	1.49	4.74
1578	PAODOCK	6.64	2003	6.95	1981	1986	6.95			1.64	2035	30	3%	1.49	2.43
1883	QUEEN ST	8.48	2003	8.86	1981	1986	8.86			2.09	2035	30	3%	1.49	3.10
1442	ROSE ST	19.20	2003	20.10	1981	1986	20.10			4.73	2035	30	3%	1.49	7.03
832	SEA ST	5.67	2003	5.94	1981	1986	5.94			1.40	2035	30	3%	1.49	2.08
1575	PS29	11.73	2003	12.28	1981	1986	12.28			2.89	2035	30	3%	1.49	4.29

Table AB: Capital Charge Calculation
Macleay Water

Service Area Capital Charge
West Kempsey \$8,673 per ET

Pre 1986 discount rate 3%
Post 1986 discount rate 7%

Component Name	Item/Glass	Year dollars ^{2,5}	Capital cost (\$'000)	Year commissioned	Capital Cost (\$'000)	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML or ML/d)	Capacity (ETs)	Capital cost (\$'ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Change (\$'ET)
1573		16.21	16.21	2003	16.97	1981	1996	16.97			3.99	2005	30	3%	1.49	5.93
1574		24.02	24.02	2003	25.15	1981	1996	25.15			5.92	2005	30	3%	1.49	8.79
1576		18.95	18.95	2003	19.84	1981	1996	19.84			4.67	2005	30	3%	1.49	6.94
1577		4.80	4.80	2003	5.03	1981	1996	5.03			1.18	2005	30	3%	1.49	1.76
2078		7.73	7.73	2003	8.09	1981	1996	8.09			1.90	2005	30	3%	1.49	2.83
765		3.48	3.48	2003	3.64	1983	1996	3.64			0.86	2005	30	3%	1.49	1.27
766		3.06	3.06	2003	3.20	1983	1996	3.20			0.75	2005	30	3%	1.49	1.12
767		5.14	5.14	2003	5.38	1983	1996	5.38			1.27	2005	30	3%	1.49	1.88
768		7.51	7.51	2003	7.86	1983	1996	7.86			1.85	2005	30	3%	1.49	2.75
1537		1.95	1.95	2003	2.04	1983	1996	2.04			0.48	2005	30	3%	1.49	0.71
1452		16.50	16.50	2003	17.27	1983	1996	17.27			4.06	2005	30	3%	1.49	6.04
1097		18.57	18.57	2003	19.44	1995	1996	19.44			4.57	2005	30	3%	1.49	6.80
66	Greenhills	88.00	92.12	2003	92.12	1976	1996	92.12			21.67	2005	30	3%	1.49	32.21
26	Kempsey	8.90	9.31	2003	9.31	1977	1996	9.31			2.19	2005	30	3%	1.49	3.26
27	Greenhills	22.99	24.07	2003	24.07	1980	1996	24.07			5.66	2005	30	3%	1.49	8.41
33	Greenhills	60.40	63.23	2003	63.23	1980	1996	63.23			14.88	2005	30	3%	1.49	22.11
67	Greenhills	18.58	19.44	2003	19.44	1981	1996	19.44			4.58	2005	30	3%	1.49	6.80
68	Greenhills	19.95	20.89	2003	20.89	1981	1996	20.89			4.91	2005	30	3%	1.49	7.30
35	Kempsey	122.16	127.87	2003	127.87	1982	1996	127.87			30.09	2005	30	3%	1.49	44.71
38	Kempsey	1.00	1.05	2003	1.05	1982	1996	1.05			0.25	2005	30	3%	1.49	0.37
61	Kempsey	5.16	5.40	2003	5.40	1982	1996	5.40			1.27	2005	30	3%	1.49	1.89
12	Kempsey	436.26	456.67	2003	456.67	1984	1996	456.67			107.45	2005	30	3%	1.49	159.67
55	Sherwood Pulp School	147.92	154.84	2003	154.84	1986	1996	154.84			36.43	2005	30	3%	1.49	54.14
56	Greenhills	6.36	6.66	2003	6.66	1987	1996	6.66			1.57	2005	30	3%	1.49	2.33
34	Greenhills	38.23	40.01	2003	40.01	1988	1996	40.01			9.41	2005	30	3%	1.49	13.99
82	Greenhills	41.97	43.93	2003	43.93	1991	1996	43.93			10.34	2005	30	3%	1.49	15.36
81	Greenhills	97.18	101.73	2003	101.73	1992	1996	101.73			23.94	2005	30	3%	1.49	35.57
83	West Kempsey	597.82	625.78	2003	625.78	1993	1996	625.78			147.24	2005	30	3%	1.49	218.80
EF.WK1	WEST KEMPSEY	443.84	464.71	2003	464.71	1992	1996	464.71			109.34	2005	30	3%	1.49	162.48
EF.WK1(Graviv Sect)	WEST KEMPSEY	613.06	641.74	2003	641.74	1992	1996	641.74			151.00	2005	30	3%	1.49	224.38
87	Correctional Centre	144.48	151.24	2003	151.24	1997	1997	151.24			35.59	2005	30	7%	2.26	80.40
10	West Kempsey	44.72	46.81	2003	46.81	1998	1998	46.81			11.01	2005	30	7%	2.26	24.89
95	Correctional Centre	19.78	20.71	2003	20.71	1998	1998	20.71			4.87	2005	30	7%	2.26	11.01
96	Correctional Centre	39.59	41.23	2003	41.23	1998	1998	41.23			9.70	2005	30	7%	2.26	21.92
Future Assets																
Effluent pumping station, 200mm main to agricultural, & 80mm main to landscape and agricultural opportunities																
450mm gravity main from plant to main																
Total TRANSFER																
4,791																
4,537																
4,250																
1,782																

SEWERAGE TREATMENT PLANT																
Existing Assets (pre-1996)																
STW WEST KEMPSEY	CIVIL(1934)	1709.00	1788.94	2003	1788.94	1930	1996	1788.94			420.93	2009	14	3%	1.20	506.49
STW WEST KEMPSEY	MECH/ELEC 1934	90.00	94.21	2003	94.21	1930	1996	94.21			22.17	2009	14	3%	1.20	26.67
STW WEST KEMPSEY	CIVIL(1966)	1096.00	1148.00	2003	1148.00	1962	1996	1148.00			270.12	2009	14	3%	1.20	325.02
STW WEST KEMPSEY	CIVIL POND(S)1966	491.00	513.97	2003	513.97	1962	1996	513.97			120.93	2009	14	3%	1.20	145.52
STW WEST KEMPSEY	MECH/ELEC 1966	57.00	59.67	2003	59.67	1962	1996	59.67			14.04	2009	14	3%	1.20	16.88
STW WEST KEMPSEY	BUILDING(1989)	150.50	157.54	2003	157.54	1985	1996	157.54			37.07	2009	14	3%	1.20	44.80
STW WEST KEMPSEY	CIVIL(1989)	1115.77	1167.96	2003	1167.96	1985	1996	1167.96			274.81	2009	14	3%	1.20	330.68
STW WEST KEMPSEY	MECH/ELEC 1989	295.00	308.80	2003	308.80	1985	1996	308.80			72.66	2009	14	3%	1.20	87.43
STW WEST KEMPSEY	TELEMETRY	5.00	5.23	2003	5.23	1988	1996	5.23			1.23	2009	14	3%	1.20	1.48
STW WEST KEMPSEY	EFFLUENT REUSE	59.79	62.59	2003	62.59	1989	1996	62.59			14.73	2009	14	3%	1.20	17.72
STW WEST KEMPSEY	EFFLUENT IRRIG	348.00	364.28	2003	364.28	1991	1996	364.28			85.71	2009	14	3%	1.20	103.14
STW WEST KEMPSEY	NUTRIENT REM	80.00	83.74	2003	83.74	1992	1996	83.74			19.70	2009	14	3%	1.20	23.71
STW WEST KEMPSEY	STWATER DRAIN	35.50	37.16	2003	37.16	1992	1996	37.16			8.74	2009	14	3%	1.20	10.52
KEMPSEY STW ODOUR COMPRESSOR	ODOUR COMP	3.33	3.49	2003	3.49	1995	1996	3.49			0.82	2009	14	3%	1.20	0.99
KEMPSEY STW ODOUR COMP MOTOR	ODOUR COMP MOT.	3.33	3.49	2003	3.49	1995	1996	3.49			0.82	2009	14	3%	1.20	0.99
KEMPSEY STW ODOUR COMP-TANK	ODOUR COMP-TANK	3.33	3.49	2003	3.49	1995	1996	3.49			0.82	2009	14	3%	1.20	0.99
Existing Assets (post-1996)																
KEMPSEY STW IRRIGATION PUMP 1	IRRIG. PMP 1	12.51	13.10	2003	13.10	1997	1997	13.10			3.08	2005	30	7%	2.26	6.96
KEMPSEY STW IRRIGATION PUMP 2	IRRIG. PMP 2	12.51	13.10	2003	13.10	1997	1997	13.10			3.08	2005	30	7%	2.26	6.96
KEMPSEY STW IRRIG.PUMP1 MOTOR	IRRIG. PMP1 MOT	12.51	13.10	2003	13.10	1997	1997	13.10			3.08	2005	30	7%	2.26	6.96
KEMPSEY STW IRRIG.PUMP2 MOTOR	IRRIG. PMP2 MOT	12.51	13.10	2003	13.10	1997	1997	13.10			3.08	2005	30	7%	2.26	6.96
KEMPSEY STW SWITCHBOARD	SWITCHBOARD	4.13	4.33	2003	4.33	1997	1997	4.33			1.02	2005	30	7%	2.26	2.30
KEMPSEY STW STEFF.-HOLDING TANK	EFF. HOLDING TANK	10.15	10.62	2003	10.62	1998	1998	10.62			2.50	2005	30	7%	2.26	5.65

Table A9: Capital Charge Calculation Macleay Water		Service Area Capital Charge		West Kempsey		per ET										
NOTES: 2005/06 = 2005 year commissioned 2005/06 \$ = 2005 \$ Blue = linked to another sheet		\$8,673				Pre 1986 discount rate Post 1986 discount rate										
						3% 7%										
Component Name	Item/Class	Capital cost (\$'000)	Year dollars ^{2,5}	Capital Cost (\$'000, 2005/06) ³	Year commissioned	Effective year commissioned	Present value 2005/06 (\$'000) ⁴	Capacity (ML or ML/d)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)	
STW WEST KEMPSEY	Investigation	11,79	2003	12,34	2000	2000	12,34			2,90	2035	30	7%	2,26	6,56	
Future Assets																
8500 EP new treatment plant with microfiltration		5723,55	2004	5866,54	2008	2008	4788,84			1126,79	2035	28	7%	2,16	2,429,41	
8500 EP new treatment plant with microfiltration		5723,55	2004	5866,54	2009	2009	4475,55			1053,07	2035	27	7%	2,11	2216,86	
Total SEWERAGE TREATMENT PLANT											17,066	15,147	4,250	3,564	6,331	

Notes

1. Capital cost from Council's asset registers and MEERA cost for future works
2. Base year of capital cost varies depending on asset data. Assets constructed prior to 1970 are not included (except headworks)
3. Capital cost adjusted to 2005\$ using CPI for Sydney (ABS)
4. Capital cost of future works discounted to 2005\$
5. Council's asset register was updated in 2003/04. The year dollars for existing assets is 2003/04 dollars

TABLE A10: Agglomeration

Reduction Amount 2005\$ \$1,703

Area	2005\$ per ET Capital Charge	DSP Area 1 % of highest	DSP Area 2 % of highest	DSP Area 3 % of highest	DSP Area 4 % of highest	Proportion of Growth %	Weighted Average Capital Charge	DSP Area Capital Charge	Calculated Developer Charge
Stuarts Point	\$18,205	100%					4%	\$18,205	\$16,501
Hat Head	\$12,228	67%	100%				3%	\$398	
Frederickton	\$9,082		74%				4%	\$9,491	\$7,788
West Kempsey	\$8,673		71%				9%	\$793	
South Kempsey	\$8,133		67%	100%			8%	\$670	
Smithtown-Gladstone	\$7,714			95%			4%	\$272	\$5,735
South West Rocks	\$7,320			90%			56%	\$4,134	
Crescent Head	\$5,601			69%	100%		12%	\$654	\$3,898
Weighted Average Capital Charge						100%	\$ 7,999		\$6,296

360065 Kempsey Sewerage : Preferred without backlog DSP it 3

Operating Statement

FINMOD
JWP

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	
EXPENSES																										
Management Expenses	808	797	764	774	782	810	820	835	845	856	866	878	889	900	909	921	932	940	949	959	968	978	986	995	1003	
Administration	398	392	376	381	385	390	395	400	406	412	416	422	428	433	438	444	449	453	458	463	467	472	475	479	483	
Engineering and Supervision	410	405	388	393	397	420	425	434	439	444	450	456	461	466	471	477	482	487	491	496	501	507	511	516	520	
Operation and Maintenance Expenses	2070	2043	1961	1986	2013	2125	2151	2199	2226	2255	2284	2312	2339	2366	2394	2422	2451	2476	2501	2526	2551	2577	2597	2618	2638	
Operation Expenses	900	888	852	863	874	924	935	955	967	979	992	1005	1016	1028	1040	1052	1065	1076	1086	1097	1108	1119	1127	1137	1146	
Maintenance Expenses	907	895	859	869	881	930	942	962	973	986	999	1011	1023	1035	1047	1059	1072	1082	1093	1104	1115	1126	1135	1144	1153	
Energy Costs	196	184	187	189	192	202	205	209	213	215	218	220	223	226	229	231	234	237	239	242	245	248	249	251	253	
Chemical Costs	67	66	64	65	66	69	70	72	73	74	75	75	77	78	79	79	80	81	82	83	84	85	85	86	87	
Depreciation	1276	1274	1266	1373	1494	1611	1693	1710	1710	1711	1711	1710	1710	1710	1710	1710	1710	1709	1709	1710	1709	1709	1709	1709	1709	
System Assets	1198	1198	1253	1373	1494	1611	1693	1710	1710	1711	1711	1710	1710	1710	1710	1710	1710	1709	1709	1710	1709	1709	1709	1709	1709	
Plant & Equipment	78	76	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Interest Expenses	257	229	209	259	721	1207	1506	1494	1403	1312	1220	1129	1037	948	866	783	700	617	536	458	379	300	220	140	68	
Other Expenses	214	217	219	222	225	237	241	246	249	251	255	258	261	264	268	271	273	277	279	281	284	287	289	291	293	
TOTAL EXPENSES	4625	4560	4419	4614	5235	5990	6410	6484	6434	6385	6336	6287	6235	6188	6146	6106	6065	6019	5974	5934	5892	5851	5801	5753	5712	
REVENUES																										
Rates & Service Availability Charges	4573	4800	5025	5254	5337	5418	5501	5582	5689	5756	5848	5940	4400	4460	4526	4592	4655	4715	4772	4836	4889	4948	5001	5052	5101	
Residential	3380	3428	3486	3539	3594	3649	3704	3760	3818	3876	3939	4000	2963	3004	3048	3092	3135	3176	3214	3257	3293	3332	3368	3402	3436	
Non-Residential	1193	1372	1538	1715	1743	1769	1796	1822	1851	1879	1909	1940	1437	1456	1478	1500	1520	1540	1558	1579	1596	1616	1633	1650	1665	
Trade Waste Charges	0	98	103	107	109	110	112	114	116	118	120	121	90	91	93	94	95	96	97	99	100	101	102	103	104	
Other Sales and Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Extra Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Interest Income	312	386	378	189	79	114	144	164	185	212	243	277	270	245	225	209	196	182	160	150	148	147	145	145	158	
Other Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grants	102	100	100	98	98	96	96	94	93	92	91	90	89	89	87	86	85	84	83	81	80	79	78	77	75	
Grants for Acquisition of Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pensioner Rebate Subsidy	102	100	100	98	98	96	96	94	93	92	91	90	89	89	87	86	85	84	83	81	80	79	78	77	75	
Other Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Contributions	408	471	625	644	656	668	711	717	729	742	754	766	711	717	729	742	754	638	644	656	662	668	539	546	552	
Developer Charges	408	471	625	644	656	668	711	717	729	742	754	766	711	717	729	742	754	638	644	656	662	668	539	546	552	
Developer Provided Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Contributions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL REVENUES	5395	5856	6231	6292	6278	6407	6564	6670	6792	6920	7056	7195	5560	5601	5660	5722	5785	5716	5756	5822	5879	5943	5865	5922	5990	
OPERATING RESULT	770	1296	1811	1678	1044	417	153	187	358	535	719	908	-676	-587	-486	-385	-280	-304	-218	-111	-12	92	64	169	278	
OPERATING RESULT (less Grants for Acq of Assets)	770	1296	1811	1678	1044	417	153	187	358	535	719	908	-676	-587	-486	-385	-280	-304	-218	-111	-12	92	64	169	278	

Table A12: Summary of Reduction Amount Iterations

	Iteration 1	Iteration 2	Iteration 3
Weighted Average Capital Charge (2004\$)	7,791	7,791	7,791
Input Reduction Amount, years 1 to 5 (2004\$)	2,000	1,710	1,660
Input Residential Developer Charge (2004\$)	5,791	6,081	6,131
Output Reduction Amount (2004\$)	1,710	1,660	1,660

GREEN CELLS HAVE BEEN CARRIED OVER FROM THE PREVIOUS ITERATION

**Table A13 - Calculation of Developer Charges using the NPV of Annual Charges Method
Based on Input Reduction Amounts of
###/##/ET (3rd Iteration)**

Kempsey Shire Council - Macleay Water

Year No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29								
Year	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33								
Developer Charges																																					
Year 1																																					
Base Year	2004/05																																				
Average Capital Charges per ET (2004/05)	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	
Inflation from base year to Year 1 (%)	0.02%																																				
Capital Charges (2004/05)	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791	7,791
Input Reduction Amounts (2004/05)	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660
Developer Charge per ET (2004/05)	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130	6,130
Developer Charges per assessment - Residential (2004/05)	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010	6,010
Developer Charges per assessment - Non-Residential (2004/05)	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	10,227	
Assessments & ETs																																					
Residential Assessments at year end	2033/04	2034/05	2035/06	2036/07	2037/08	2038/09	2039/10	2040/11	2041/12	2042/13	2043/14	2044/15	2045/16	2046/17	2047/18	2048/19	2049/20	2050/21	2051/22	2052/23	2053/24	2054/25	2055/26	2056/27	2057/28	2058/29	2059/30	2060/31	2061/32	2062/33							
Non Residential Assessments at year end	7,889	7,881	7,881	7,847	7,746	7,647	7,540	7,436	7,333	7,230	7,128	7,025	6,922	6,819	6,716	6,613	6,510	6,407	6,304	6,201	6,098	5,995	5,892	5,789	5,686	5,583	5,480	5,377	5,274	5,171	5,068	4,965	4,862	4,759	4,656	4,553	
Backlog Assessments at year end	739	745	751	757	763	769	775	781	787	793	799	805	811	817	823	829	835	841	846	851	856	861	866	871	876	881	886	891	896	901	906	911	916	921	926	931	
Total Assessments at year end	8,628	8,626	8,632	8,604	8,569	8,516	8,459	8,392	8,325	8,258	8,191	8,124	8,057	7,990	7,923	7,856	7,789	7,722	7,655	7,588	7,521	7,454	7,387	7,320	7,253	7,186	7,119	7,052	6,985	6,918	6,851	6,784	6,717	6,650	6,583		
ET per Residential Assessment	0.98																																				
ET per Non Residential Assessment	2.7																																				
Total ETs	8,217	8,215	8,208	8,159	8,109	8,059	8,009	7,959	7,909	7,859	7,809	7,759	7,709	7,659	7,609	7,559	7,509	7,459	7,409	7,359	7,309	7,259	7,209	7,159	7,109	7,059	7,009	6,959	6,909	6,859	6,809	6,759	6,709	6,659	6,609		
New ETs per year (excluding backlog)	-	89	112	110	113	115	117	124	126	127	129	131	133	134	135	137	139	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	
Cumulative New ETs (excluding backlog)	-	89	211	321	434	549	667	791	916	1,043	1,171	1,302	1,435	1,569	1,704	1,841	1,980	2,121	2,264	2,409	2,556	2,704	2,853	2,994	3,137	3,282	3,429	3,578	3,729	3,881	4,034	4,189	4,344	4,491			
PV (new ETs excluding backlog) 30 years @ 7% pa	-	1,585	1,585	1,591	1,601	1,608	1,613	1,616	1,613	1,608	1,600	1,591	1,579	1,562	1,555	1,546	1,534	1,519	1,502	1,485	1,468	1,451	1,434	1,417	1,400	1,383	1,366	1,349	1,332	1,315	1,298	1,281	1,264	1,247	1,230		
Revenue and Expenditure																																					
Rates & Charges Revenue, Trade Waste Charges, Other Sales and Charges, Pensioner Rebate Grant	4,875	4,988	5,226	5,459	5,844	6,044	6,261	6,496	6,750	6,924	7,118	7,331	7,564	7,818	8,092	8,386	8,700	9,034	9,388	9,762	10,156	10,570	11,004	11,458	11,932	12,426	12,940	13,474	14,028	14,602	15,196	15,810	16,444	17,098	17,772	18,466	
Revenue (\$'000) (2004/05)	4,875	4,988	5,226	5,459	5,844	6,044	6,261	6,496	6,750	6,924	7,118	7,331	7,564	7,818	8,092	8,386	8,700	9,034	9,388	9,762	10,156	10,570	11,004	11,458	11,932	12,426	12,940	13,474	14,028	14,602	15,196	15,810	16,444	17,098	17,772	18,466	
OMA Expenditure (\$'000) (2004/05)	2,878	2,840	2,725	2,760	2,795	2,855	2,971	3,054	3,071	3,111	3,150	3,190	3,228	3,266	3,303	3,343	3,383	3,416	3,450	3,485	3,520	3,555	3,591	3,626	3,661	3,696	3,731	3,766	3,801	3,836	3,871	3,906	3,941	3,976	4,011	4,046	
Revenue less OMA Expenditure (\$'000)	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	1,797	
Revenue less OMA Expenditure for new ETs (\$'000)	19	48	84	121	155	181	216	249	285	322	360	399	438	477	516	555	594	633	672	711	750	789	828	867	906	945	984	1,023	1,062	1,101	1,140	1,179	1,218	1,257	1,296		
PV (Revenue less OMA Expenditure for new ETs) 30 years @ 7% pa (\$'000)	3,021	2,960	2,745	2,414	2,037	1,687	1,400	1,140	911	719	559	427	322	242	184	137	92	55	22	-14	-43	-83	-124	-166	-209	-253	-297	-341	-385	-429	-473	-517	-561	-605	-649		
Output (calculated) Reduction Amounts	1,931	1,868	1,725	1,508	1,267	1,046	866	602	335	14	-341	-744	-1,193	-1,559	-1,841	-2,041	-2,166	-2,214	-2,285	-2,378	-2,492	-2,626	-2,779	-2,951	-3,141	-3,350	-3,578	-3,826	-4,094	-4,382	-4,690	-5,018	-5,366	-5,734			
Average Calculated Reduction for a 5 yr Period	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660	1,660		
% Difference Between the Input and Output	0%																																				

Developer Charges for the first 5 years = \$6130 per ET in year 2004/05
 Difference Less Than 2% Calculation Complete
 Approximately three iterations of the financial planning model are normally required until the Output Reduction Amount for the first 5 years is within 2% of the Input Reduction Amount.

General Note:
 1.

Table A14 – Sewerage Levels of Service

Sewerage System Design Parameters	
Average dry weather flow (ADWF)	0.011 L/s/tenement
Peak wet weather flow including storm allowance (PWWF)	0.077 L/s/tenement
Description	Level of Service
AVAILABILITY OF SERVICE	
Extent of area serviced	West Kempsey, South Kempsey, Frederickton, Smithtown, Gladstone, South West Rocks, Hat Head, Crescent Head
SERVICE INTERRUPTION TO CUSTOMERS	
STP failure due to rainfall and deficient capacity	Maximum 2 failures per year
Pumping station failures due to pump or other breakdown including power failure	Maximum 2 failures per year
Unplanned interruptions	Maximum 3 unplanned interruptions per year
Sewer main chokes and collapses per 100 km of sewer main per year	Maximum 50 per year
Catastrophic and major dry-weather sewer overflows per 100 km of sewer main per year	Maximum 1 failure per year
Dry weather overflows resulting in pollution of waters from any sewage pumping station(s) installed within the sewage treatment system.	None as per Operating Licence
Customer complaints about odours	2 per pumping station per year 5 per treatment works per year
SERVICE PROVIDED	
- Depth <=2m	- 7 working days
- Depth >2m	- 10 working days

Description	Level of Service
<p>RESPONSE TIMES</p> <p>Defined as maximum time to have staff on site to commence rectification after notification</p>	
System failure or complaint	Response Times
<p>PRIORITY 1:</p> <ul style="list-style-type: none"> - Break, collapse, blockage, overloading of system, failure of pumping station 	<p>1 hour (during business hours)</p> <p>2 hours (during after hours)</p>
<p>PRIORITY 2:</p> <ul style="list-style-type: none"> - Cracked pipe or partial blockage of the sewer 	<p>2 hours (during business hours)</p> <p>4 hours (during after hours)</p>
<p>PRIORITY 3:</p> <ul style="list-style-type: none"> - Sudden extra hydraulic load which backs up but then clears itself - Partial main blockage - Partial house service blockage - Broken junction connection 	<p>One working day</p>
<p>PRIORITY 4:</p> <ul style="list-style-type: none"> - A minor problem or complaint which can be dealt with at a time convenient to customer and Council – e.g. adjustments to manholes etc. 	<p>Within 2 weeks</p>
