Kempsey Shire Council

Macleay Water

Development Servicing Plans for Water Supply Services

FINAL

July 2006

Prepared by JWP on behalf of Macleay Water

Kempsey Shire Council

Macleay Water Development Servicing Plan for Water Supply Services

July 2006

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Executive Summary

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

Service Area	Areas Included
Bellbrook	Bellbrook
Crescent Head	Crescent Head
Hat Head	Hat Head
Kempsey-Lower Macleay	West Kempsey, South Kempsey, East Kempsey, Kempsey, Aldavilla, Frederickton, Clybucca, Smithtown, Gladstone, Kinchela, Jerseyville
South West Rocks	South West Rocks, Arakoon
Stuarts Point	Stuarts Point, Fishermans Reach, Grassy Head
Willawarrin	Willawarrin

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	$7,468	$7,468

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.

Contents

1 Introduction

Section 64 of the *Local Government Ac 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 water supply developer charges to be levied on development areas utilising a Council's water supply infrastructure.

This document contains one DSP that covers water supply 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 water supply 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 water supply developer charges.

2 Administration

DSP Name	Macleay Water
DSP Area	The areas covered by this DSP are shown in **Section 8**.
DSP Boundaries	The basis for defining the DSP area boundaries is the water supply catchments served by existing assets of the Bellbrook, Crescent Head, Hat Head, Kempsey-Lower Macleay, South West Rocks, Stuarts Point and Willawarrin water supply schemes and the future assets schedule for the next 5 years (also known as the capital works program). 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.
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 water supply system
- 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 Water Supplies

4.1 Existing Water Supply Services

Macleay Water operates seven town water supply systems in the Kempsey Shire. The largest system is the Kempsey Lower Macleay system that supplies water to West Kempsey, South Kempsey, Aldavilla, Frederickton, Clybucca, Smithtown, Gladstone, and Kinchela. In times of water scarcity, this scheme can be used to provide water for South West Rocks.

Six smaller independent systems supply water to the towns of Bellbrook, Willawarrin, Stuarts Point, South West Rocks, Hat Head, and Crescent Head.

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

Table 2 – Existing areas supplied by Macleay Water

Service Area	Areas Included
Bellbrook	Bellbrook
Crescent Head	Crescent Head
Hat Head	Hat Head
Kempsey and Lower Macleay	West Kempsey, South Kempsey, East Kempsey, Kempsey, Aldavilla, Frederickton, Clybucca, Smithtown, Gladstone, Kinchela, Jerseyville
South West Rocks	South West Rocks, Arakoon
Stuarts Point	Stuarts Point, Fishermans Reach, Grassy Head
Willawarrin	Willawarrin

4.2 Growth Projections

Table 3 lists the water supply areas and the existing and expected future populations provided with water. 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 Water Supply Areas

Water Supply 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 water supply system components is based on the following design manuals:

- Water Supply Investigation Manual (1986),
- WSAA water supply code of Australia - WSA 03 2002, and
- AUSPEC design specifications for water supply.

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 water supply 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.

Table 4 – Water Supply Capacity

Service Area	Headworks Capacity (Ultimate 2034 ET)	Transfer System Capacity (ET) (Ultimate 2034)
Crescent Head	1,415	1,415
Hat Head	570	570
Kempsey-Lower Macleay	18,200	8,637
South West Rocks	5,719	5,719
Stuarts Point	870	870

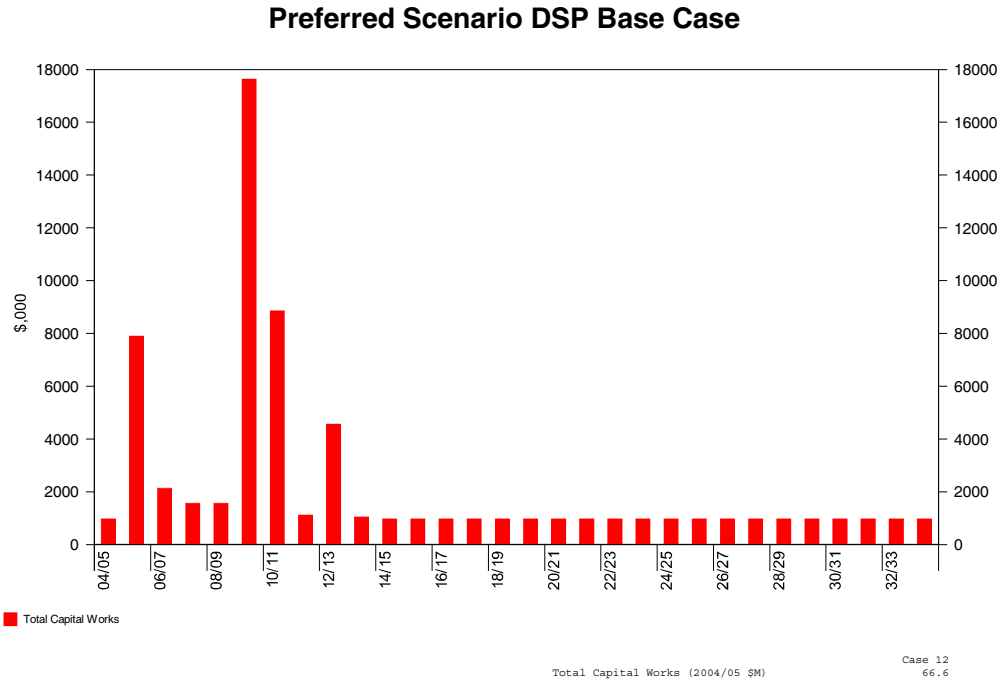
4.7 Capital Works

Capital works estimated at $66.6 M (2005/06 $) will be required over the next 30 years to provide water supply services to the shire, comprising both new works and renewals.

4.8 Timing of Works and Expenditure

The timing and expenditure for water supply 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



5 Calculation of Developer Charges

5.1 Capital Charge

The capital charge was calculated for the water supply 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 B1** (refer **Appendix A**) and summarised in **Table 5**.

Table 5 – Initial Capital Charges

Capital Charge Area	Capital Charge per ET (2005/06 $)
Crescent Head	$8,236
Hat Head	$12,671
Kempsey and Lower Macleay and South West Rocks	$8,741
Stuarts Point	$9,759

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	Proportion of Growth (%)	Weighted Average Capital Charge	DSP Area Capital Charge
Hat Head	$12,671	100%	-	3%	$410	$11,037
Stuarts Point	$9,759	77%	-	4%	$404	
Kempsey, Lower Macleay and SWR	$8,741	-	100%	81%	$7,082	$8,677
Crescent Head	$8,236	-	94%	12%	$955	
Weighted Average Capital Charge				100%	$8,852	

5.3 Reduction Amount

Macleay Water has adopted the NPV of Annual Charges method to calculate the Reduction Amount. The Reduction Amount is calculated across all of the Macleay Water water supplies.

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 water was calculated as **$1,383** 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)
Hat Head, Stuarts Point	$11,037	$1,383	$9,654
Kempsey-Lower Macleay , South West Rocks, Crescent Head	$8,677		$7,294

Macleay Water has elected to further agglomerate the charges to apply one charge over the entire service area (including Bellbrook and Willawarrin in the event of unexpected growth). Weighted by growth, the charge across the whole service area was calculated as **$7,468** 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 water supply reticulation works within developments including subdivisions. The design and construction of the works shall be in accordance with Council's development specifications for water supply 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	$7,468	$7,468

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 Sewerage 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 – Bellbrook Water Supply Service Area.

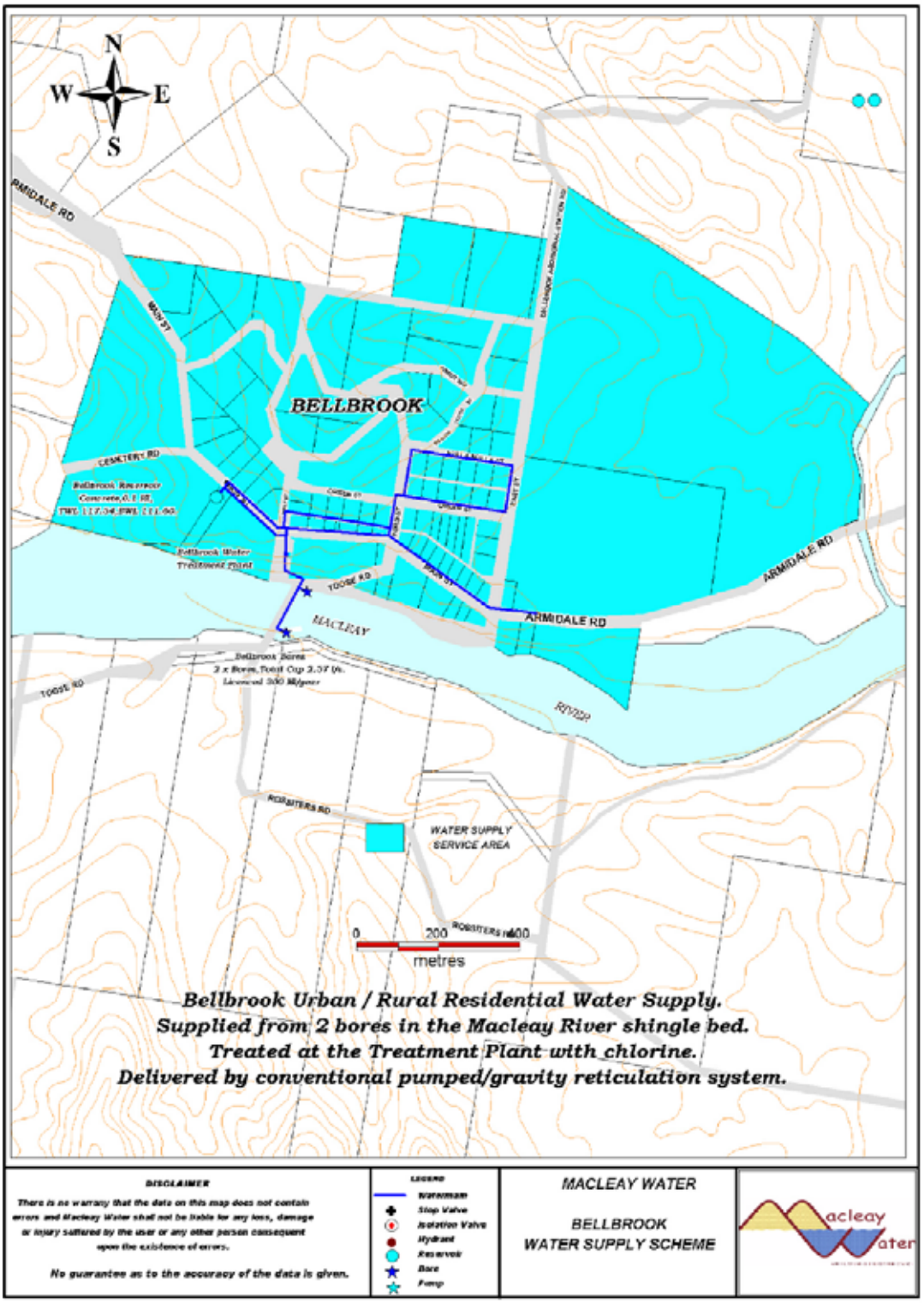


Figure 3 – Crescent Head Water Supply Service Area.

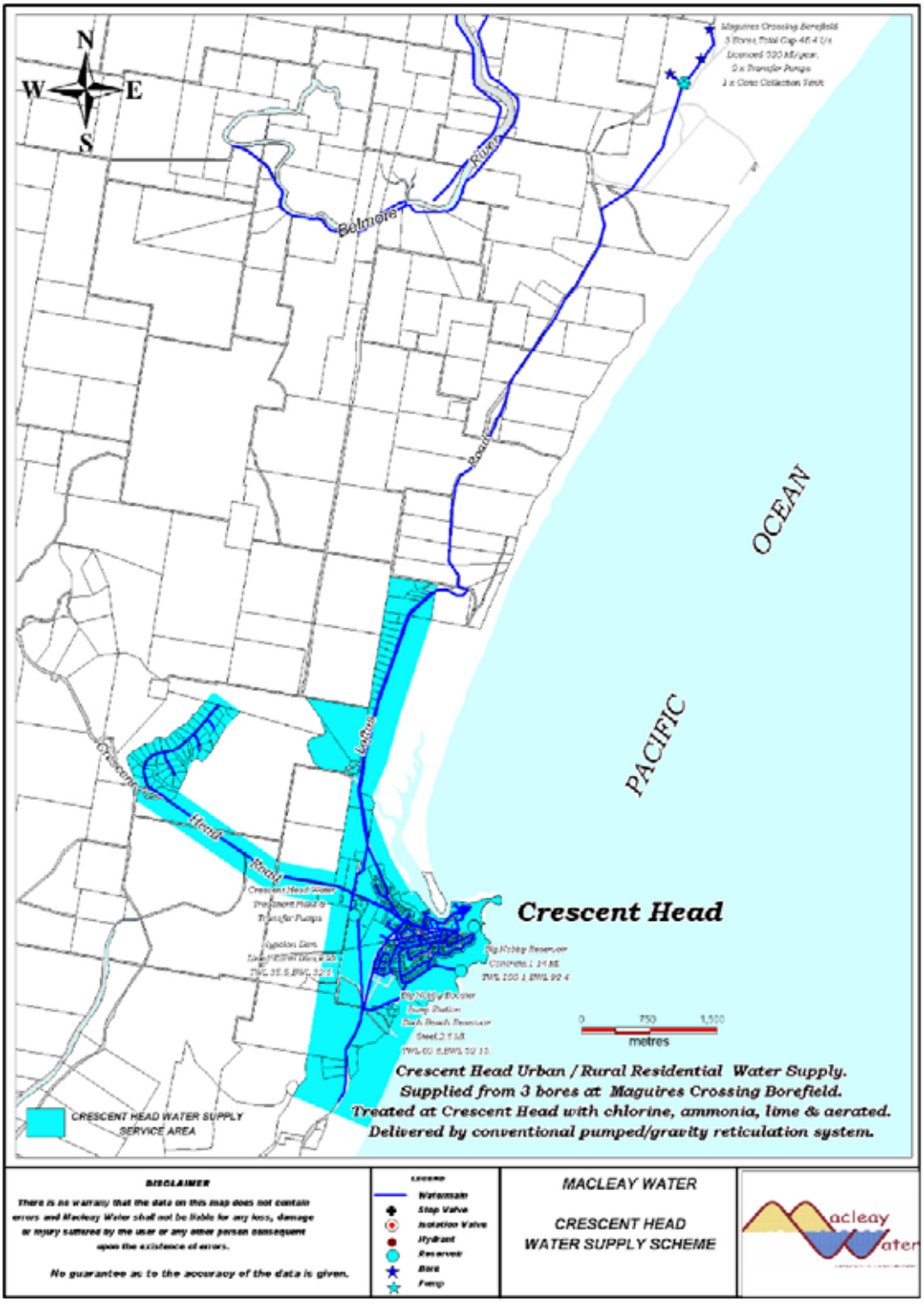


Figure 4 – Hat Head Water Supply Service Area.

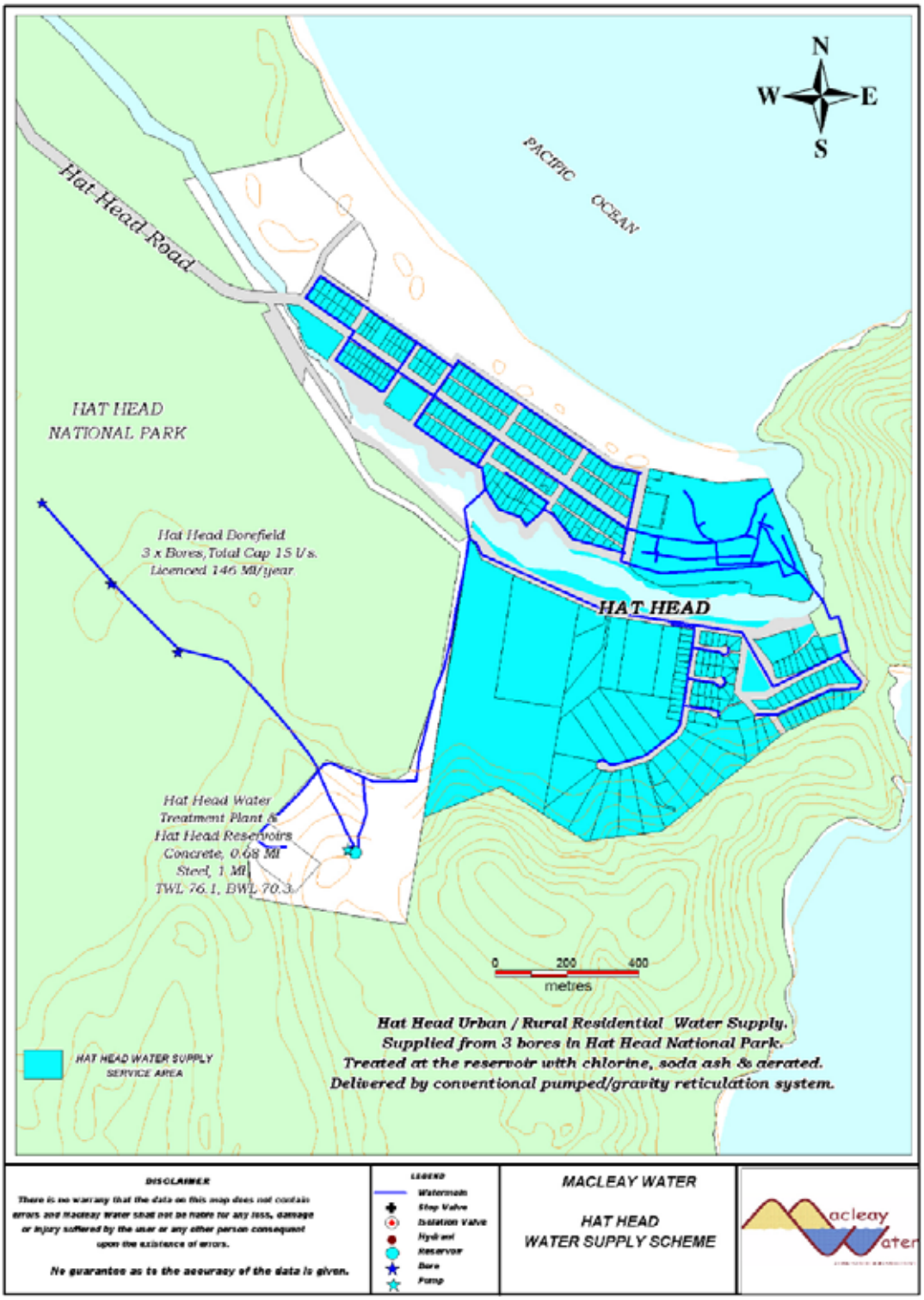


Figure 5 – Kempsey-Lower Macleay Water Supply Service Area.

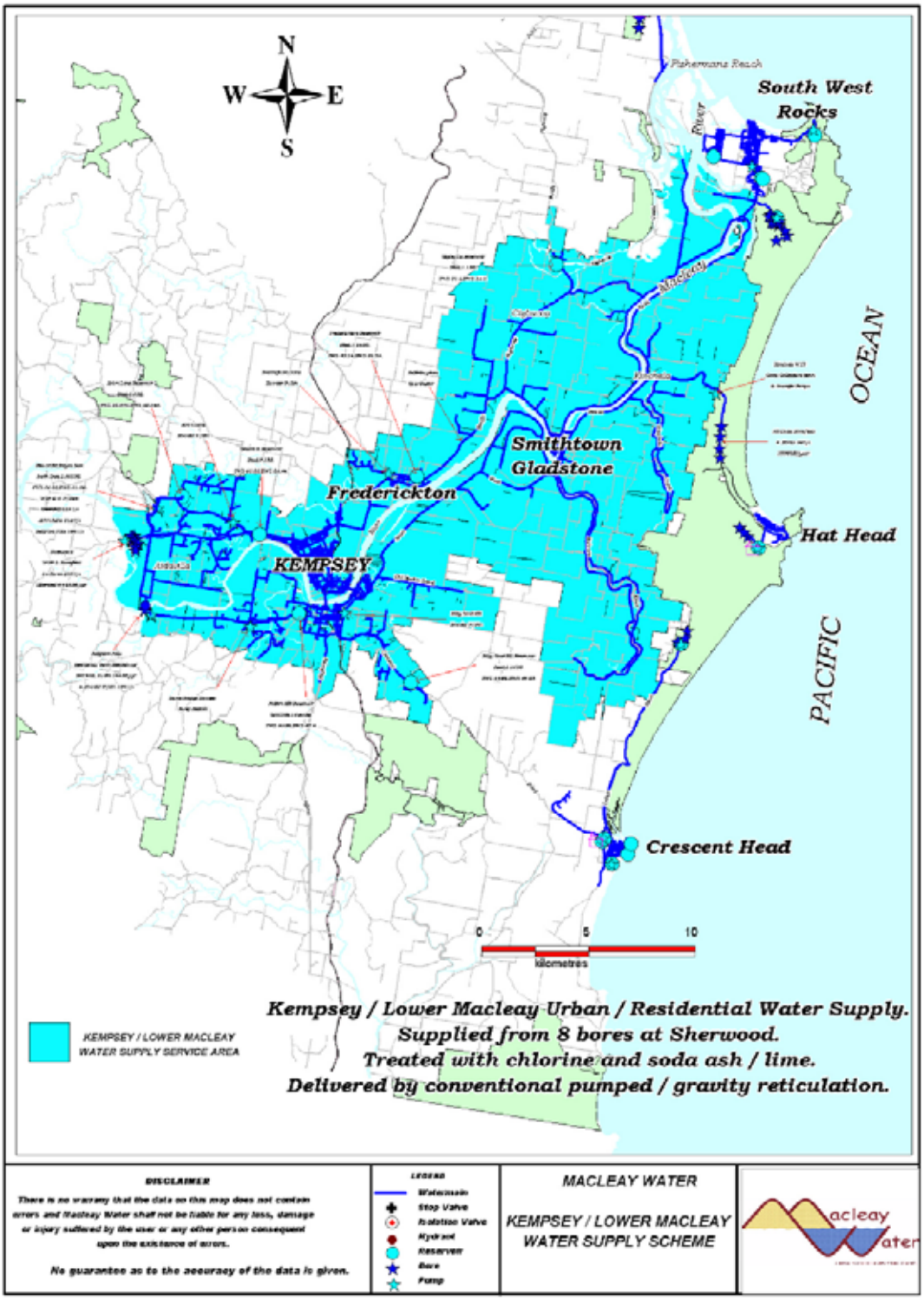


Figure 6 – South West Rocks Water Supply Service Area.

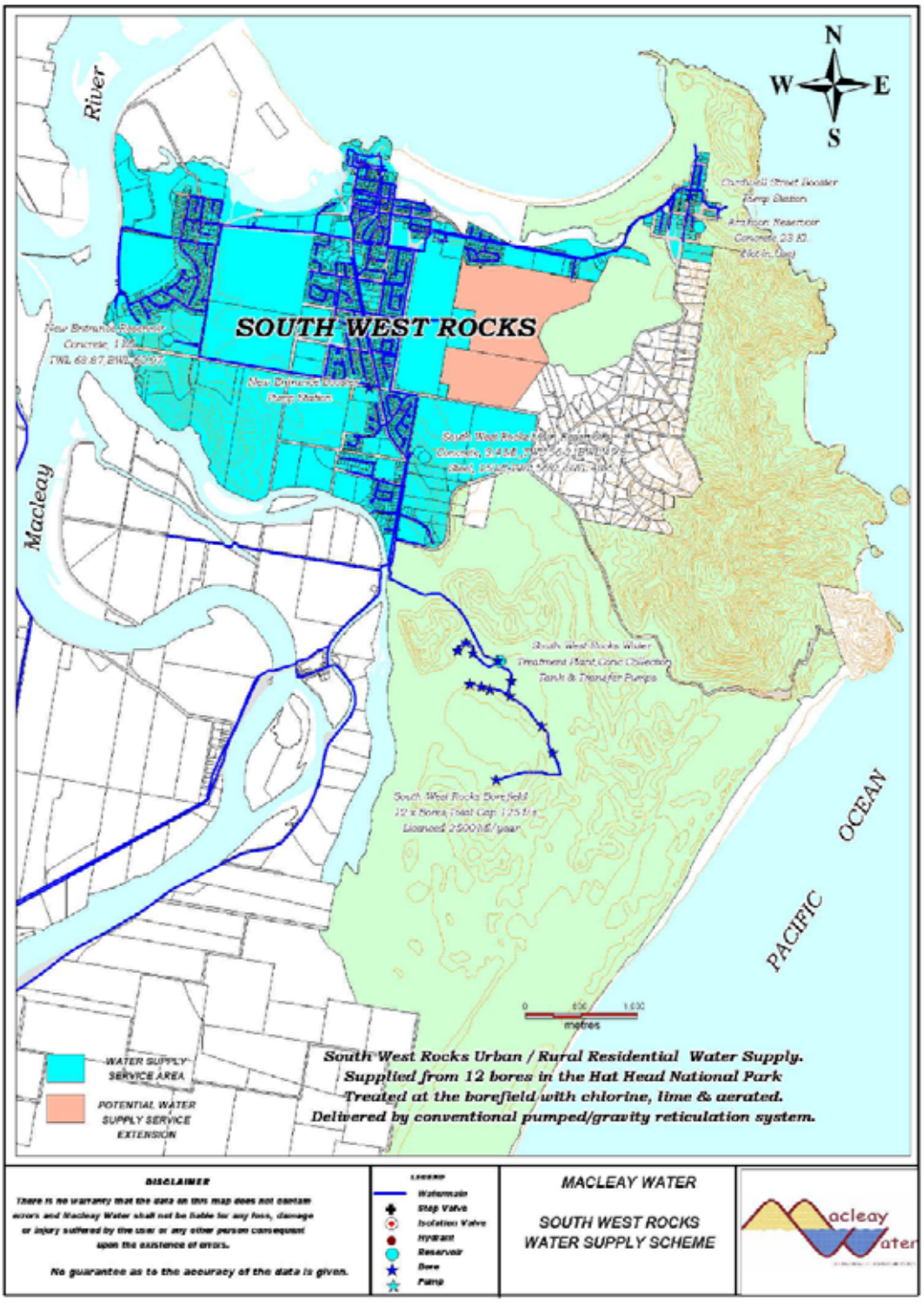


Figure 7 – Stuarts Point Water Supply Service Area.

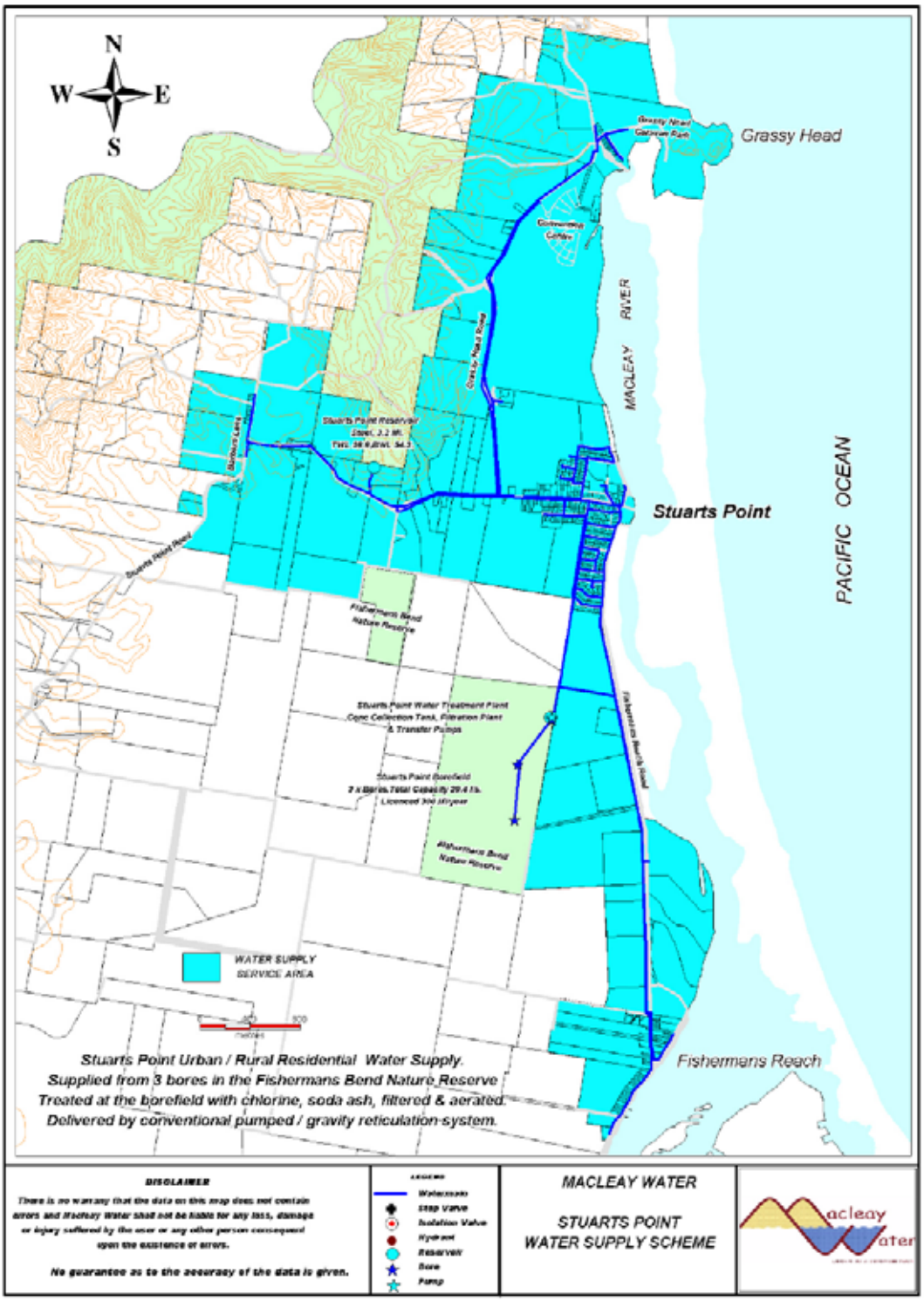
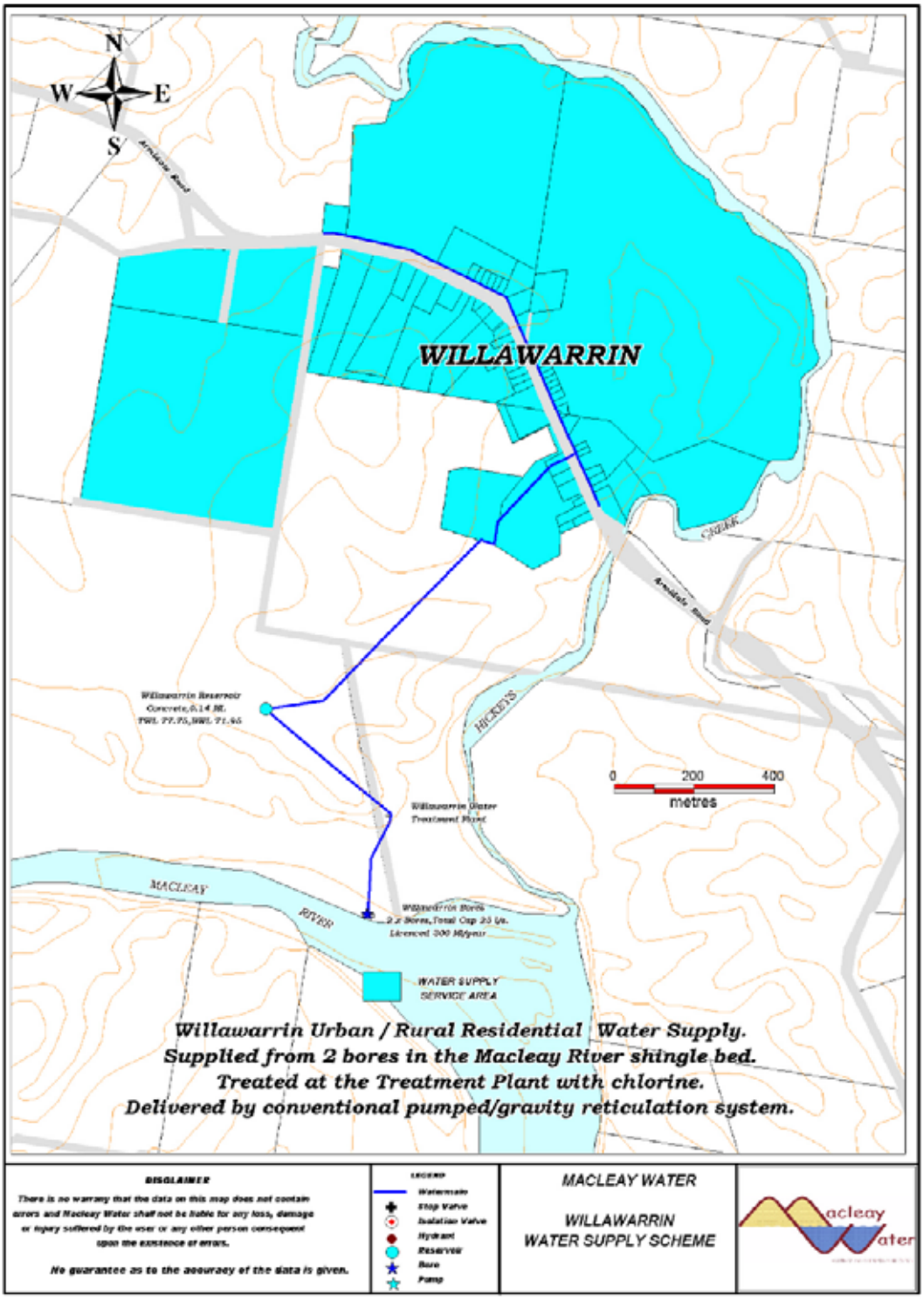


Figure 8 – Willawarrin Water Supply Service Area.



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 Hat Head
Table A4	Capital Charge Calculation Kempsey-Lower Macleay and South West Rocks
Table A5	Capital Charge Calculation Stuarts Point
Table A6	Agglomeration of Water Supply Catchments
Table A7	NPV Annual Charges - Operating Statement
Table A8	Summary of NPV Annual Charges Calculation of Reduction Amount
Table A9	Calculation of Developer Charges using the NPV Annual Charges Method – 3rd Iteration
Table A10	Levels of Service

					2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
	100%			**40**	20	20																								
l Water Use	100%			**84**			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	100%			**1**			0.3	0.3	0.3																					
	100%			**0**			0.02	0.02	0.02																					
	100%			**182**		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Savings	100%			**8**			2	2	2	2	2																			
			100%	**755**	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
			100%	**72**	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
			100%	**91**	6	6	6	6	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
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	65%	35%		**12**			4	4	4																					
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Savings	65%	35%		**17**			3	3	3	3	4																			
Savings	65%	35%		**12**			0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	65%	35%		**230**	230																									
iltration, pH correction (soda																														
	65%	35%		**3,588**								3,588																		
	65%	35%		**306**		306																								
			100%	**1,000**	1,000																									
			100%	**892**	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
			100%	**85**	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
			100%	**106**	7	7	8	8	8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
			100%	**2**	0.5	0.5	0.5	0.5	0.5																					
gmentation																														
n bores, 1 production bore)	65%	35%		**156**	78	78																								
	65%	35%		**40**	20	20																								
l Water Use	65%	35%		**140**			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	65%	35%		**2**			1	1	1																					
	65%	35%		**4**			1	1	1																					
	65%	35%		**108**		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Savings	65%	35%		**8**			2	2	2	2	2																			
			100%	**446**	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
			100%	**42**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
			100%	**54**	3	3	4	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
			100%	**1**	0.2	0.2	0.2	0.2	0.2																					
gmentation																														
duction)	65%	35%		**106**	53	53																								
	95%	5%		**40**	20	20																								
l Water Use	95%	5%		**280**			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	95%	5%		**86**			29	29	29																					
	95%	5%		**6**			2	2	2																					
	95%	5%		**8**			3	3	3																					
	95%	5%		**19**			7	6	6																					
	95%	5%		**3,159**		109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
Savings	95%	5%		**610**			120	121	122	123	124																			
Savings	95%	5%		**367**			12	12	12	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	14	14	14	14	14
activated carbon dosing,																														
nfection	95%	5%		**15,474**					7,737	7,737																				
	95%	5%		**230**	230																									
			100%	**13,072**	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436
			100%	**1,245**	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
			100%	**1,570**	100	100	111	111	111	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
			100%	**35**	7	7	7	7	7																					

	60%	40%		40	20	20																									
l Water Use	60%	40%		280			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	60%	40%		47			15	16	16																						
	60%	40%		3			1	1	1																						
	60%	40%		2			1	1	1																						
	60%	40%		8			3	3	3																						
	60%	40%		498		17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Savings	60%	40%		76			14	15	15	15	16																				
Savings	60%	40%		56			1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	60%	40%		4,900	4,900																										
	60%	40%		230	230																										
	60%	40%		4,272					4,272																						
e)	60%	40%		103					103																						
	60%	40%		1,000					1,000																						
lift	60%	40%		180					180																						
	60%	40%		1,944					1,944																						
	60%	40%		555					555																						
	60%	40%		555					555																						
lving, PSs)	100%			223		152						70																			
		100%		812		271	271	271																							
			100%	2,059	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
			100%	196	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
			100%	247	16	16	17	17	17	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
			100%	5	1	1	1	1	1																						
gmentation																															
n, 2 production bores)	100%			190	95	95																									
tion)	100%			60	30	30																									
WR	100%			36	36																										
	100%			27	27																										
	80%	20%		40	20	20																									
l Water Use	80%	20%		140			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	80%	20%		8			3	3	3																						
	80%	20%		0.2			0.1	0.1	0.1																						
	80%	20%		1			0.2	0.2	0.2																						
	80%	20%		0.5			0.2	0.2	0.2																						
	80%	20%		1			0.2	0.2	0.2																						
	80%	20%		224		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Savings	80%	20%		4			1	1	1	1	1																				
Savings	80%	20%		3			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
			100%	926	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
			100%	88	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
			100%	111	7	7	8	8	8	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
			100%	2	0.5	0.5	0.5	0.5	0.5																						
	100%			40	20	20																									
l Water Use	100%			84			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	100%			1			0.2	0.2	0.2																						
	100%			0.3			0.1	0.1	0.1																						
	100%			182		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Savings	100%			8			2	2	2	2	2																				
			100%	755	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
			100%	72	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
			100%	91	6	6	6	6	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
			100%	2	0.4	0.4	0.4	0.4	0.4																						
			Total	**66,572**	**7,894**	**2,127**	**1,556**	**1,559**	**17,637**	**8,847**	**1,112**	**4,551**	**1,033**	**963**	**963**	**963**	**963**	**964**	**964**	**964**	**964**	**964**	**964**	**964**	**965**	**965**	**966**	**966**	**966**
			Improved LOS	**32,949**	3,832	814	371	373	12,891	7,668	319	2,517	255	185	185	185	185	186	186	186	186	186	186	186	186	187	187	187
			Other New System Assets (growth works)	**9,603**	2,217	468	325	326	3,886	429	43	1,284	28	28	28	28	28	28	28	28	28	28	28	28	29	29	29	29
			Renewals	**24,020**	1,845	845	860	860	860	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750
			Other Grants (NSW Health for fluoridation)	**690**	690																										

Table A2: Capital Charge Calculation	NOTES:	Service Area	Crescent Head		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,236	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
BORES															
Existing Assets (pre-1996)															
CRESCENT HEAD BORE C1	CIVIL	18.96	2003	19.85	1989	1996	19.85			14.03	2035	30	3%	1.49	20.85
CRESCENT HEAD BORE C1	ELEC	13.98	2003	14.63	1989	1996	14.63			10.34	2035	30	3%	1.49	15.36
CRESCENT HEAD BORE C1	MECH	27.77	2003	29.07	1989	1996	29.07			20.54	2035	30	3%	1.49	30.53
CRESCENT HEAD BORE C1	TELEMETRY	5.00	2003	5.23	1989	1996	5.23			3.70	2035	30	3%	1.49	5.50
CRESCENT HEAD BORE C2	CIVIL	19.15	2003	20.04	1989	1996	20.04			14.16	2035	30	3%	1.49	21.05
CRESCENT HEAD BORE C2	ELEC	16.10	2003	16.85	1989	1996	16.85			11.91	2035	30	3%	1.49	17.70
CRESCENT HEAD BORE C2	MECH	28.97	2003	30.32	1989	1996	30.32			21.43	2035	30	3%	1.49	31.85
CRESCENT HEAD BORE C2	TELEMETRY	5.00	2003	5.23	1989	1996	5.23			3.70	2035	30	3%	1.49	5.50
CRESCENT HEAD BORE C3	CIVIL	19.04	2003	19.93	1989	1996	19.93			14.08	2035	30	3%	1.49	20.93
CRESCENT HEAD BORE C3	ELEC	26.09	2003	27.31	1989	1996	27.31			19.30	2035	30	3%	1.49	28.68
CRESCENT HEAD BORE C3	MECH	15.66	2003	16.39	1989	1996	16.39			11.58	2035	30	3%	1.49	17.21
CRESCENT HEAD BORE C3	TELEMETRY	5.00	2003	5.23	1989	1996	5.23			3.70	2035	30	3%	1.49	5.50
Existing Assets (post-1996)															
CRESCENT HEAD BORE C3	AERATOR	25.51	2003	26.70	2004	2004	26.70			18.87	2035	30	7%	2.26	42.64
CRESCENT HEAD BORE C3	SWITCHBOARD	53.93	2003	56.46	2004	2004	56.46			39.90	2035	30	7%	2.26	90.15
Future Assets															
Groundwater source monitoring and augmentation	Maguires Crossing borefield (6 observation bores, 1 production bore)	78.00	2004	79.95	2005	2005	79.95			56.50	2035	30	7%	2.26	127.66
Groundwater source monitoring and augmentation	Maguires Crossing borefield (6 observation bores, 1 production bore)	78.00	2004	79.95	2006	2006	74.72			52.80	2035	30	7%	2.26	119.31
Total BORES		**436**					**448**		**1,415**	**317**					**600**
DAMS															
Existing Assets (pre-1996)															
NONE															
Existing Assets (post-1996)															
CRESCENT HEAD DAM	DAM	56.56	2003	59.21	1996	1996	59.21			41.84	2035	30	7%	2.26	94.54
Future Assets															
NONE															
Total DAMS		**57**					**59**		**1,415**	**42**					**95**
PUMP STATIONS															
Existing Assets (pre-1996)															
CRESCENT HD.WPS 1	CIVIL	82.54	2003	86.40	1988	1996	86.40			61.06	2035	30	3%	1.49	90.73
CRESCENT HD.WPS 1	ELEC	41.53	2003	43.48	1988	1996	43.48			30.73	2035	30	3%	1.49	45.66
CRESCENT HD.WPS 1	MECH	82.30	2003	86.15	1988	1996	86.15			60.89	2035	30	3%	1.49	90.48
CRESCENT HD.WPS 1	TELEMETRY	5.00	2003	5.23	1988	1996	5.23			3.70	2035	30	3%	1.49	5.50
CRESCENT HD.WPS 2	CIVIL	111.30	2003	116.51	1988	1996	116.51			82.34	2035	30	3%	1.49	122.35
CRESCENT HD.WPS 2	ELEC	24.94	2003	26.10	1988	1996	26.10			18.45	2035	30	3%	1.49	27.41
CRESCENT HD.WPS 2	MECH	126.21	2003	132.11	1988	1996	132.11			93.37	2035	30	3%	1.49	138.74
CRESCENT HD.WPS 2	TELEMETRY	5.00	2003	5.23	1988	1996	5.23			3.70	2035	30	3%	1.49	5.50
CRESCENT HD.WPS 3	CIVIL	19.17	2003	20.07	1988	1996	20.07			14.18	2035	30	3%	1.49	21.07
CRESCENT HD.WPS 3	ELEC	25.56	2003	26.75	1988	1996	26.75			18.91	2035	30	3%	1.49	28.10
CRESCENT HD.WPS 3	MECH	27.69	2003	28.98	1988	1996	28.98			20.48	2035	30	3%	1.49	30.44
CRESCENT HD.WPS 3	TELEMETRY	5.00	2003	5.23	1988	1996	5.23			3.70	2035	30	3%	1.49	5.50
Existing Assets (post-1996)															
NONE															
Future Assets															
NONE															
Total PUMP STATIONS		**556**					**582**		**1,415**	**411**					**611**

Table A2: Capital Charge Calculation	NOTES:	Service Area	Crescent Head		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,236	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
RESERVOIRS															
Existing Assets (pre-1996)															
CRESCENT HD.NO.2 RESERVOIR BACK BEACH	ROOF	46.00	2003	48.15	1988	1996	48.15			34.03	2037	30	3%	1.49	50.57
CRESCENT HD.NO.2 RESERVOIR BACK BEACH	STRUCTURE	372.00	2003	389.40	1988	1996	389.40			275.19	2038	30	3%	1.49	408.94
CRESCENT HD. RESERVOIR - BIG NOBBY	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			3.70	2039	30	3%	1.49	5.50
CRESCENT HD.NO.2 RESERVOIR BACK BEACH	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			3.70	2040	30	3%	1.49	5.50
Existing Assets (post-1996)															
NONE															
Future Assets															
NONE															
Total RESERVOIRS		**428**					**448**		**1,415**	**317**					**470**
WATER TREATMENT PLANT															
Existing Assets (pre-1996)															
CRESCENT HD.WATER TREAT.PLANT	CIVIL	190.99	2003	199.93	1980	1996	199.93			141.29	2035	30	3%	1.49	209.96
CRESCENT HD.WATER TREAT.PLANT	ELEC	40.49	2003	42.38	1988	1996	42.38			29.95	2035	30	3%	1.49	44.51
CRESCENT HD.WATER TREAT.PLANT	MECH	171.65	2003	179.68	1988	1996	179.68			126.98	2035	30	3%	1.49	188.69
CRESCENT HD.WATER TREAT.PLANT	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			3.70	2035	30	3%	1.49	5.50
Existing Assets (post-1996)															
CRESCENT HD.WATER TREAT.PLANT	CARBON DIOXIDE INJECTION	12.19	2003	12.76	2000	2000	12.76			9.02	2035	30	7%	2.26	20.38
CRESCENT HD.WATER TREAT.PLANT	BILGE PUMP	1.82	2003	1.90	2001	2001	1.90			1.35	2035	30	7%	2.26	3.04
CRESCENT HD.WATER TREAT.PLANT	CHLORINATOR	19.61	2003	20.53	2001	2001	20.53			14.51	2035	30	7%	2.26	32.78
Future Assets															
3 ML/d water treatment plant: aeration, filtration, pH correction (soda ash addition), chlorination		3588.00	2004	3677.64	2012	2012	2290.25			1618.55	2035	24	7%	1.96	3165.30
Total WATER TREATMENT PLANT		**4,030**					**2,753**		**1,415**	**1,945**					**3,670**

Table A2: Capital Charge Calculation	NOTES:	Service Area	Crescent Head		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,236	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
TRANSFER															
Existing Assets (pre-1996)															
Mapinfo Pipe Number	**STREET**														
2054	LOFTUS ROAD	234.02	2003	244.97	1976	1996	244.97			173.12	2035	30	3%	1.49	257.26
2052	LOFTUS ROAD	88.43	2003	92.57	1979	1996	92.57			65.42	2035	30	3%	1.49	97.21
2053	LOFTUS ROAD	423.83	2003	443.66	1979	1996	443.66			313.54	2035	30	3%	1.49	465.92
125	BAKER DR	0.59	2003	0.62	1988	1996	0.62			0.43	2035	30	3%	1.49	0.65
165	BAKER DR	19.11	2003	20.00	1988	1996	20.00			14.14	2035	30	3%	1.49	21.01
166	BAKER DR	2.65	2003	2.77	1988	1996	2.77			1.96	2035	30	3%	1.49	2.91
167	BAKER DR	3.09	2003	3.23	1988	1996	3.23			2.28	2035	30	3%	1.49	3.39
168	BAKER DR	57.33	2003	60.01	1988	1996	60.01			42.41	2035	30	3%	1.49	63.02
169	BAKER/RES	48.51	2003	50.78	1988	1996	50.78			35.89	2035	30	3%	1.49	53.33
170	BAKER/RES	11.03	2003	11.54	1988	1996	11.54			8.16	2035	30	3%	1.49	12.12
171	BAKER/RES	38.22	2003	40.01	1988	1996	40.01			28.27	2035	30	3%	1.49	42.02
172	BACK BEACH RES	28.95	2003	30.30	1988	1996	30.30			21.42	2035	30	3%	1.49	31.82
1920	DAM TO RESERVOIR	2.56	2003	2.68	1988	1996	2.68			1.89	2035	30	3%	1.49	2.81
1921	DAM TO RESERVOIR	2.56	2003	2.68	1988	1996	2.68			1.89	2035	30	3%	1.49	2.81
2378	DAM TO RESERVOIR	213.53	2003	223.52	1988	1996	223.52			157.96	2035	30	3%	1.49	234.73
2055	RM BORFLD/DAM	281.52	2003	294.69	1976	1996	294.69			208.26	2035	30	3%	1.49	309.47
2120	Loftus Road	30.15	2003	31.56	1979	1996	31.56			22.30	2035	30	3%	1.49	33.14
126	BACK BEACH RES	3.60	2003	3.77	1988	1996	3.77			2.66	2035	30	3%	1.49	3.96
127	BACK BEACH RES	38.25	2003	40.04	1988	1996	40.04			28.30	2035	30	3%	1.49	42.05
Existing Assets (post-1996)															
2050	LOFTUS ROAD	46.37	2003	48.54	1997	1997	48.54			34.31	2035	30	7%	2.26	77.51
2051	LOFTUS ROAD	35.59	2003	37.25	1997	1997	37.25			26.33	2035	30	7%	2.26	59.48
2138	0	32.50	2003	34.02	1999	1999	34.02			24.04	2035	30	7%	2.26	54.32
2007	Loftus Road	25.23	2003	26.42	1997	1997	26.42			18.67	2035	30	7%	2.26	42.18
2180	Crescent Head Rd	59.15	2003	61.92	1999	1999	61.92			43.76	2035	30	7%	2.26	98.87
2181	Crescent Head Rd	2.13	2003	2.23	1999	1999	2.23			1.58	2035	30	7%	2.26	3.56
2182	Crescent Head Rd	15.01	2003	15.71	1999	1999	15.71			11.10	2035	30	7%	2.26	25.09
2183	Crescent Head Rd	29.25	2003	30.62	1999	1999	30.62			21.64	2035	30	7%	2.26	48.89
2184	Crescent Head Rd	2.27	2003	2.38	1999	1999	2.38			1.68	2035	30	7%	2.26	3.80
2185	Crescent Head Rd	65.00	2003	68.04	1999	1999	68.04			48.09	2035	30	7%	2.26	108.64
2186	Crescent Head Rd	2.27	2003	2.38	1999	1999	2.38			1.68	2035	30	7%	2.26	3.80
2187	Crescent Head Rd	15.64	2003	16.37	1999	1999	16.37			11.57	2035	30	7%	2.26	26.14
2188	Crescent Head Rd	2.27	2003	2.38	1999	1999	2.38			1.68	2035	30	7%	2.26	3.80
2189	Crescent Head Rd	9.88	2003	10.34	1999	1999	10.34			7.31	2035	30	7%	2.26	16.51
2190	Crescent Head Rd	2.27	2003	2.38	1999	1999	2.38			1.68	2035	30	7%	2.26	3.80
2191	Crescent Head Rd	72.80	2003	76.21	1999	1999	76.21			53.86	2035	30	7%	2.26	121.68
2192	Crescent Head Rd	3.98	2003	4.16	1999	1999	4.16			2.94	2035	30	7%	2.26	6.65
2193	Crescent Head Rd	50.05	2003	52.39	1999	1999	52.39			37.03	2035	30	7%	2.26	83.66
2155	Crescent Head Roa	0.20	2003	0.20	1999	1999	0.20			0.14	2035	30	7%	2.26	0.33
Future Assets															
Upgrade main (200 dia DICL, 3000m)		107.10	2004	109.78	2006	2006	102.59			72.50	2035	30	7%	2.26	163.82
Total TRANSFER		**2,107**					**2,196**		**1,415**	**1,552**					**2,632**
DEMAND MANAGEMENT															
Existing Assets (pre-1996)															
NONE															
Existing Assets (post-1996)															
NONE															
Future Assets															
Pricing Measure Model		20.00	2004	20.50	2005	2005	20.50			14.49	2035	30	7%	2.26	32.73
Pricing Measure Model		20.00	2004	20.50	2006	2006	19.16			13.54	2035	30	7%	2.26	30.59
Public Education for Reduction of External Water Use		5.00	2004	5.12	2007	2007	4.48			3.16	2035	29	7%	2.21	6.98
Public Education for Reduction of External Water Use		5.00	2004	5.12	2008	2008	4.18			2.96	2035	28	7%	2.16	6.37
Public Education for Reduction of External Water Use		5.00	2004	5.12	2009	2009	3.91			2.76	2035	27	7%	2.11	5.82

Table A2: Capital Charge Calculation	NOTES:	Service Area	Crescent Head		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,236	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
Resident House Shower Retrofit		4.00	2004	4.10	2007	2007	3.58			2.53	2035	29	7%	2.21	5.59
Resident House Shower Retrofit		4.00	2004	4.10	2008	2008	3.35			2.37	2035	28	7%	2.16	5.10
Resident House Shower Retrofit		4.00	2004	4.10	2009	2009	3.13			2.21	2035	27	7%	2.11	4.65
Resident Flat Shower Retrofit		0.29	2004	0.30	2007	2007	0.26			0.18	2035	29	7%	2.21	0.40
Resident Flat Shower Retrofit		0.29	2004	0.30	2008	2008	0.25			0.17	2035	28	7%	2.16	0.38
Resident Flat Shower Retrofit		0.30	2004	0.31	2009	2009	0.23			0.17	2035	27	7%	2.11	0.35
Holiday House Shower Retrofit		0.29	2004	0.30	2007	2007	0.26			0.18	2035	29	7%	2.21	0.40
Holiday House Shower Retrofit		0.29	2004	0.30	2008	2008	0.25			0.17	2035	28	7%	2.16	0.38
Holiday House Shower Retrofit		0.30	2004	0.31	2009	2009	0.23			0.17	2035	27	7%	2.11	0.35
Holiday Flat Shower Retrofit		0.92	2004	0.94	2007	2007	0.83			0.58	2035	29	7%	2.21	1.29
Holiday Flat Shower Retrofit		0.94	2004	0.97	2008	2008	0.79			0.56	2035	28	7%	2.16	1.20
Holiday Flat Shower Retrofit		0.96	2004	0.99	2009	2009	0.75			0.53	2035	27	7%	2.11	1.12
Leak Detection and Repair		7.43	2004	7.62	2006	2006	7.12			5.03	2035	30	7%	2.26	11.37
Leak Detection and Repair		7.43	2004	7.62	2007	2007	6.66			4.70	2035	29	7%	2.21	10.38
Leak Detection and Repair		7.43	2004	7.62	2008	2008	6.22			4.40	2035	28	7%	2.16	9.48
Leak Detection and Repair		7.43	2004	7.62	2009	2009	5.81			4.11	2035	27	7%	2.11	8.65
Business Audit and Retrofit - Permanent Savings		3.23	2004	3.31	2007	2007	2.89			2.04	2035	29	7%	2.21	4.50
Business Audit and Retrofit - Permanent Savings		3.30	2004	3.38	2008	2008	2.76			1.95	2035	28	7%	2.16	4.20
Business Audit and Retrofit - Permanent Savings		3.36	2004	3.45	2009	2009	2.63			1.86	2035	27	7%	2.11	3.91
Business Audit and Retrofit - Temporary Savings		0.32	2004	0.33	2007	2007	0.29			0.20	2035	29	7%	2.21	0.45
Business Audit and Retrofit - Temporary Savings		0.33	2004	0.34	2008	2008	0.28			0.19	2035	28	7%	2.16	0.42
Business Audit and Retrofit - Temporary Savings		0.34	2004	0.34	2009	2009	0.26			0.19	2035	27	7%	2.11	0.39
Total DEMAND MANAGEMENT		**112**					**100**		**1,415**	**71**					**157**

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 A3: Capital Charge Calculation	NOTES:	Service Area	Hat Head		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$12,671	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
BORES															
Existing Assets (pre-1996)															
HAT HEAD BORE H1	CIVIL	19.47	2003	20.38	1970	1996	20.38			35.75	2035	30	3%	1.49	53
HAT HEAD BORE H1	ELEC	14.41	2003	15.09	1970	1996	15.09			26.47	2035	30	3%	1.49	39
HAT HEAD BORE H1	MECH	17.06	2003	17.86	1970	1996	17.86			31.33	2035	30	3%	1.49	47
HAT HEAD BORE H1	TELEMETRY	5.00	2003	5.23	1970	1996	5.23			9.18	2035	30	3%	1.49	14
HAT HEAD BORE H2	CIVIL	19.32	2003	20.22	1970	1996	20.22			35.48	2035	30	3%	1.49	53
HAT HEAD BORE H2	ELEC	14.41	2003	15.09	1970	1996	15.09			26.47	2035	30	3%	1.49	39
HAT HEAD BORE H2	MECH	17.06	2003	17.86	1970	1996	17.86			31.33	2035	30	3%	1.49	47
HAT HEAD BORE H2	TELEMETRY	5.00	2003	5.23	1970	1996	5.23			9.18	2035	30	3%	1.49	14
HAT HEAD BORE H3	CIVIL	27.04	2003	28.31	1970	1996	28.31			49.67	2035	30	3%	1.49	74
HAT HEAD BORE H3	ELEC	14.41	2003	15.09	1970	1996	15.09			26.47	2035	30	3%	1.49	39
HAT HEAD BORE H3	MECH	17.06	2003	17.86	1970	1996	17.86			31.33	2035	30	3%	1.49	47
HAT HEAD BORE H3	TELEMETRY	5.00	2003	5.23	1970	1996	5.23			9.18	2035	30	3%	1.49	14
Existing Assets (post-1996)															
HAT HEAD EMERGENCY BORES	AERATION PLANT	438.40	2003	458.91	1996	1996	458.91			805.10	2035	30	7%	2.26	1819.07
HAT HEAD EMERGENCY BORES	BORES	1168.20	2003	1222.84	1996	1996	1222.84			2145.34	2035	30	7%	2.26	4847.25
Future Assets															
Groundwater source monitoring and augmentation	Hat Head Borefield (3 observation, 1 production)	53.00	2004	54.32	2005	2005	54.32			95.31	2035	30	7%	2.26	215.34
Groundwater source monitoring and augmentation	Hat Head Borefield (3 observation, 1 production)	53.00	2004	54.32	2006	2006	50.77			89.07	2035	30	7%	2.26	201.25
Total BORES		**1,888**					**1,970**		**570**	**3,457**					**7,561**
PUMP STATIONS															
Existing Assets (pre-1996)															
HAT HEAD WPS NO.1	CIVIL	34.33	2003	35.94	1994	1996	35.94			63.05	2035	30	3%	1.49	93.70
HAT HEAD WPS NO.1	ELEC	25.56	2003	26.75	1994	1996	26.75			46.94	2035	30	3%	1.49	69.75
HAT HEAD WPS NO.1	MECH	28.22	2003	29.54	1994	1996	29.54			51.83	2035	30	3%	1.49	77.02
HAT HEAD WPS NO.1	TELEMETRY	5.00	2003	5.23	1994	1996	5.23			9.18	2035	30	3%	1.49	13.64
Existing Assets (post-1996)															
NONE															
Future Assets															
NONE															
Total PUMP STATIONS		**93**					**97**		**570**	**171**					**254**
RESERVOIRS															
Existing Assets (pre-1996)															
HAT HEAD RESERVOIR - STEEL	ROOF	78.85	2003	82.54	1994	1996	82.54			144.80	2035	30	3%	1.49	215.18
HAT HEAD RESERVOIR - STEEL	STRUCTURE	234.00	2003	244.95	1994	1996	244.95			429.73	2035	30	3%	1.49	638.58
HAT HEAD RESERVOIR - STEEL	TELEMETRY	30.40	2003	31.82	1994	1996	31.82			55.83	2035	30	3%	1.49	82.96
Existing Assets (post-1996)															
HAT HEAD RESERVOIRS - ROCKET SYSTEM		288.00	2003	301.47	2000	2000	301.47			528.90	2035	30	7%	2.26	1195.01
Future Assets															
NONE															
Total RESERVOIRS		**631**					**661**		**570**	**1,159**					**2,132**

Table A3: Capital Charge Calculation	NOTES:	Service Area	Hat Head		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$12,671	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
WATER TREATMENT PLANT															
Existing Assets (pre-1996)															
HAT HEAD WATER TREATMENT PLANT	CIVIL	216.83	2003	226.97	1994	1996	226.97			398.20	2035	30	3%	1.49	591.73
HAT HEAD WATER TREATMENT PLANT	ELEC	37.27	2003	39.01	1994	1996	39.01			68.44	2035	30	3%	1.49	101.71
HAT HEAD WATER TREATMENT PLANT	MECH	158.00	2003	165.39	1994	1996	165.39			290.15	2035	30	3%	1.49	431.16
HAT HEAD WATER TREATMENT PLANT	TELEMETRY	5.00	2003	5.23	1994	1996	5.23			9.18	2035	30	3%	1.49	13.64
Existing Assets (post-1996)															
HAT HEAD WATER TREATMENT PLANT	AERATION	115.80	2003	121.22	2000	2000	121.22			212.66	2035	30	7%	2.26	480.49
Future Assets															
NONE															
Total WATER TREATMENT PLANT		**533**					**558**		**570**	**979**					**1,619**
TRANSFER															
Existing Assets (pre-1996)															
Mapinfo Pipe Number	**STREET**														
1996	Borefield Access Road	40.50	2003	42.39	1970	1996	42.39			74.38	2035	30	3%	1.49	110.52
1997	Borefield Access Road	44.25	2003	46.32	1970	1996	46.32			81.26	2035	30	3%	1.49	120.76
2081	Reservoir Access Road	3.00	2003	3.14	1970	1996	3.14			5.51	2035	30	3%	1.49	8.19
2082	Reservoir Access Road	0.45	2003	0.47	1970	1996	0.47			0.83	2035	30	3%	1.49	1.23
2083	Reservoir Access Road	1.95	2003	2.04	1970	1996	2.04			3.58	2035	30	3%	1.49	5.32
2084	Borefield Access Road	120.00	2003	125.61	1970	1996	125.61			220.37	2035	30	3%	1.49	327.47
2085	Reservoir Access Road	0.90	2003	0.94	1970	1996	0.94			1.65	2035	30	3%	1.49	2.46
2088	Reservoir Access Road	2.55	2003	2.67	1970	1996	2.67			4.68	2035	30	3%	1.49	6.96
2090	Reservoir Access Road	9.00	2003	9.42	1970	1996	9.42			16.53	2035	30	3%	1.49	24.56
2079	Reservoir Access Road	2.97	2003	3.11	1994	1996	3.11			5.45	2035	30	3%	1.49	8.11
2080	Reservoir Access Road	2.55	2003	2.67	1994	1996	2.67			4.68	2035	30	3%	1.49	6.96
2089	Reservoir Access Road	1.20	2003	1.26	1995	1996	1.26			2.20	2035	30	3%	1.49	3.27
2091	Reservoir Access Road	1.20	2003	1.26	1995	1996	1.26			2.20	2035	30	3%	1.49	3.27
2092	Reservoir Access Road	1.20	2003	1.26	1995	1996	1.26			2.20	2035	30	3%	1.49	3.27
2093	Reservoir Access Road	0.45	2003	0.47	1995	1996	0.47			0.83	2035	30	3%	1.49	1.23
Existing Assets (post-1996)															
2363	Reservoir Access Road	0.93	2003	0.97	2000	2000	0.97			1.70	2035	30	7%	2.26	3.85
2364	Reservoir Access Road	0.53	2003	0.56	2000	2000	0.56			0.97	2035	30	7%	2.26	2.20
2455	Hungry Head Road	43.00	2003	45.01	2003	2003	45.01			78.97	2035	30	7%	2.26	178.42
Future Assets															
NONE															
Total TRANSFER		**277**					**290**		**570**	**508**					**818**

Table A3: Capital Charge Calculation	NOTES:	Service Area	Hat Head		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$12,671	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
DEMAND MANAGEMENT															
Existing Assets (pre-1996)															
NONE															
Existing Assets (post-1996)															
NONE															
Future Assets															
Pricing Measure Model		20.00	2004	20.50	2005	2005	20.50			35.96	2035	30	7%	2.26	81.26
Pricing Measure Model		20.00	2004	20.50	2006	2006	19.16			33.61	2035	30	7%	2.26	75.94
Public Education for Reduction of External Water Use		5.00	2004	5.12	2007	2007	4.48			7.85	2035	29	7%	2.21	17.34
Public Education for Reduction of External Water Use		5.00	2004	5.12	2008	2008	4.18			7.34	2035	28	7%	2.16	15.82
Public Education for Reduction of External Water Use		5.00	2004	5.12	2009	2009	3.91			6.86	2035	27	7%	2.11	14.44
Resident House Shower Retrofit		0.51	2004	0.52	2007	2007	0.45			0.80	2035	29	7%	2.21	1.76
Resident House Shower Retrofit		0.52	2004	0.53	2008	2008	0.43			0.76	2035	28	7%	2.16	1.64
Resident House Shower Retrofit		0.53	2004	0.54	2009	2009	0.41			0.73	2035	27	7%	2.11	1.53
Holiday House Shower Retrofit		1.34	2004	1.37	2007	2007	1.20			2.10	2035	29	7%	2.21	4.64
Holiday House Shower Retrofit		1.37	2004	1.40	2008	2008	1.14			2.01	2035	28	7%	2.16	4.33
Holiday House Shower Retrofit		1.40	2004	1.43	2009	2009	1.09			1.92	2035	27	7%	2.11	4.03
Leak Detection and Repair		3.72	2004	3.81	2006	2006	3.56			6.25	2035	30	7%	2.26	14.11
Leak Detection and Repair		3.72	2004	3.81	2007	2007	3.33			5.84	2035	29	7%	2.21	12.89
Leak Detection and Repair		3.72	2004	3.81	2008	2008	3.11			5.46	2035	28	7%	2.16	11.76
Leak Detection and Repair		3.72	2004	3.81	2009	2009	2.91			5.10	2035	27	7%	2.11	10.73
Business Audit and Retrofit - Permanent Savings		1.53	2004	1.57	2007	2007	1.37			2.41	2035	29	7%	2.21	5.31
Business Audit and Retrofit - Permanent Savings		1.57	2004	1.61	2008	2008	1.31			2.30	2035	28	7%	2.16	4.96
Business Audit and Retrofit - Permanent Savings		1.60	2004	1.64	2009	2009	1.25			2.19	2035	27	7%	2.11	4.62
Total DEMAND MANAGEMENT		**80**					**74**		**570**	**129**					**287**

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 A4: Capital Charge Calculation	NOTES:	Service Area	Kempsey and Lower Macleay + SWR		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.	Capital Charge	$8,741	per ET	Post 1996 discount rate	7%

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
BORES															
Existing Assets (pre-1996)															
KEMPSEY BORE S1	CIVIL	150.26	2003	157.29	1986	1996	157.29			10.96	2035	30	3%	1.49	16.28
KEMPSEY BORE S1	ELEC	20.02	2003	20.96	1986	1996	20.96			1.46	2035	30	3%	1.49	2.17
KEMPSEY BORE S1	MECH	22.14	2003	23.17	1986	1996	23.17			1.61	2035	30	3%	1.49	2.40
KEMPSEY BORE S1	TELEMETRY	5.00	2003	5.23	1986	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY BORE S2	CIVIL	164.49	2003	172.18	1988	1996	172.18			11.99	2035	30	3%	1.49	17.82
KEMPSEY BORE S2	ELEC	20.02	2003	20.96	1988	1996	20.96			1.46	2035	30	3%	1.49	2.17
KEMPSEY BORE S2	MECH	22.14	2003	23.17	1988	1996	23.17			1.61	2035	30	3%	1.49	2.40
KEMPSEY BORE S2	TELEMETRY	5.00	2003	5.23	1988	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY BORE S3	CIVIL	18.59	2003	19.46	1988	1996	19.46			1.36	2035	30	3%	1.49	2.01
KEMPSEY BORE S3	ELEC	20.02	2003	20.96	1988	1996	20.96			1.46	2035	30	3%	1.49	2.17
KEMPSEY BORE S3	MECH	22.14	2003	23.17	1988	1996	23.17			1.61	2035	30	3%	1.49	2.40
KEMPSEY BORE S3	TELEMETRY	5.00	2003	5.23	1988	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY BORE S4	CIVIL	19.25	2003	20.15	1988	1996	20.15			1.40	2035	30	3%	1.49	2.09
KEMPSEY BORE S4	ELEC	20.92	2003	21.90	1988	1996	21.90			1.53	2035	30	3%	1.49	2.27
KEMPSEY BORE S4	MECH	23.00	2003	24.07	1988	1996	24.07			1.68	2035	30	3%	1.49	2.49
KEMPSEY BORE S4	TELEMETRY	5.00	2003	5.23	1988	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY BORE S5	CIVIL	150.34	2003	157.37	1989	1996	157.37			10.96	2035	30	3%	1.49	16.29
KEMPSEY BORE S5	ELEC	20.92	2003	21.90	1989	1996	21.90			1.53	2035	30	3%	1.49	2.27
KEMPSEY BORE S5	MECH	23.00	2003	24.07	1989	1996	24.07			1.68	2035	30	3%	1.49	2.49
KEMPSEY BORE S5	TELEMETRY	5.00	2003	5.23	1989	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY BORE S6	CIVIL	18.51	2003	19.38	1989	1996	19.38			1.35	2035	30	3%	1.49	2.01
KEMPSEY BORE S6	ELEC	20.72	2003	21.69	1989	1996	21.69			1.51	2035	30	3%	1.49	2.25
KEMPSEY BORE S6	MECH	22.81	2003	23.88	1989	1996	23.88			1.66	2035	30	3%	1.49	2.47
KEMPSEY BORE S6	TELEMETRY	5.00	2003	5.23	1989	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY BORE S11	CIVIL	19.98	2003	20.91	1990	1996	20.91			1.46	2035	30	3%	1.49	2.16
KEMPSEY BORE S11	ELEC	22.29	2003	23.33	1990	1996	23.33			1.63	2035	30	3%	1.49	2.41
KEMPSEY BORE S11	MECH	24.25	2003	25.39	1990	1996	25.39			1.77	2035	30	3%	1.49	2.63
KEMPSEY BORE S11	TELEMETRY	5.00	2003	5.23	1990	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY BORE S12	CIVIL	20.35	2003	21.30	1990	1996	21.30			1.48	2035	30	3%	1.49	2.20
KEMPSEY BORE S12	ELEC	27.58	2003	28.87	1990	1996	28.87			2.01	2035	30	3%	1.49	2.99
KEMPSEY BORE S12	MECH	28.51	2003	29.85	1990	1996	29.85			2.08	2035	30	3%	1.49	3.09
KEMPSEY BORE S12	TELEMETRY	5.00	2003	5.23	1990	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS BORE NO.R1	CIVIL	38.20	2003	39.99	1995	1996	39.99			2.79	2035	30	3%	1.49	4.14
STH.WEST ROCKS BORE NO.R1	ELEC	13.20	2003	13.81	1995	1996	13.81			0.96	2035	30	3%	1.49	1.43
STH.WEST ROCKS BORE NO.R1	MECH	15.53	2003	16.26	1995	1996	16.26			1.13	2035	30	3%	1.49	1.68
STH.WEST ROCKS BORE NO.R1	TELEMETRY	5.00	2003	5.23	1995	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS BORE NO.R2	CIVIL	38.19	2003	39.98	1970	1996	39.98			2.78	2035	30	3%	1.49	4.14
STH.WEST ROCKS BORE NO.R2	ELEC	13.20	2003	13.81	1970	1996	13.81			0.96	2035	30	3%	1.49	1.43
STH.WEST ROCKS BORE NO.R2	MECH	13.28	2003	13.90	1970	1996	13.90			0.97	2035	30	3%	1.49	1.44
STH.WEST ROCKS BORE NO.R2	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS BORE NO.R3	CIVIL	17.49	2003	18.31	1970	1996	18.31			1.28	2035	30	3%	1.49	1.89
STH.WEST ROCKS BORE NO.R3	ELEC	22.10	2003	23.13	1970	1996	23.13			1.61	2035	30	3%	1.49	2.39
STH.WEST ROCKS BORE NO.R3	MECH	15.53	2003	16.26	1970	1996	16.26			1.13	2035	30	3%	1.49	1.68
STH.WEST ROCKS BORE NO.R3	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS BORE NO.R4	CIVIL	25.22	2003	26.40	1970	1996	26.40			1.84	2035	30	3%	1.49	2.73
STH.WEST ROCKS BORE NO.R4	ELEC	13.20	2003	13.81	1970	1996	13.81			0.96	2035	30	3%	1.49	1.43
STH.WEST ROCKS BORE NO.R4	MECH	13.28	2003	13.90	1970	1996	13.90			0.97	2035	30	3%	1.49	1.44
STH.WEST ROCKS BORE NO.R4	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS BORE NO.R5	CIVIL	29.25	2003	30.61	1970	1996	30.61			2.13	2035	30	3%	1.49	3.17
STH.WEST ROCKS BORE NO.R5	ELEC	13.20	2003	13.81	1970	1996	13.81			0.96	2035	30	3%	1.49	1.43
STH.WEST ROCKS BORE NO.R5	MECH	15.53	2003	16.26	1970	1996	16.26			1.13	2035	30	3%	1.49	1.68
STH.WEST ROCKS BORE NO.R6	CIVIL	25.95	2003	27.16	1970	1996	27.16			1.89	2035	30	3%	1.49	2.81
STH.WEST ROCKS BORE NO.R6	ELEC	13.20	2003	13.81	1970	1996	13.81			0.96	2035	30	3%	1.49	1.43
STH.WEST ROCKS BORE NO.R6	MECH	13.28	2003	13.90	1970	1996	13.90			0.97	2035	30	3%	1.49	1.44
STH.WEST ROCKS BORE NO.R6	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54

Table A4: Capital Charge Calculation	NOTES:	Service Area	Kemspey and Lower Macleay + SWR		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,741	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
STH.WEST ROCKS BORE NO.R7	CIVIL	24.08	2003	25.21	1970	1996	25.21			1.76	2035	30	3%	1.49	2.61
STH.WEST ROCKS BORE NO.R7	ELEC	13.19	2003	13.80	1970	1996	13.80			0.96	2035	30	3%	1.49	1.43
STH.WEST ROCKS BORE NO.R7	MECH	13.28	2003	13.90	1970	1996	13.90			0.97	2035	30	3%	1.49	1.44
STH.WEST ROCKS BORE NO.R7	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS BORE NO.R8	CIVIL	25.58	2003	26.78	1970	1996	26.78			1.87	2035	30	3%	1.49	2.77
STH.WEST ROCKS BORE NO.R8	ELEC	13.54	2003	14.18	1970	1996	14.18			0.99	2035	30	3%	1.49	1.47
STH.WEST ROCKS BORE NO.R8	MECH	13.33	2003	13.95	1970	1996	13.95			0.97	2035	30	3%	1.49	1.44
STH.WEST ROCKS BORE NO.R8	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS BORE NO.R9	CIVIL	27.41	2003	28.70	1980	1996	28.70			2.00	2035	30	3%	1.49	2.97
STH.WEST ROCKS BORE NO.R9	ELEC	13.54	2003	14.18	1980	1996	14.18			0.99	2035	30	3%	1.49	1.47
STH.WEST ROCKS BORE NO.R9	MECH	15.58	2003	16.31	1980	1996	16.31			1.14	2035	30	3%	1.49	1.69
STH.WEST ROCKS BORE NO.R9	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS BORE NO.R10	CIVIL	27.05	2003	28.31	1980	1996	28.31			1.97	2035	30	3%	1.49	2.93
STH.WEST ROCKS BORE NO.R10	ELEC	13.54	2003	14.18	1980	1996	14.18			0.99	2035	30	3%	1.49	1.47
STH.WEST ROCKS BORE NO.R10	MECH	15.58	2003	16.31	1980	1996	16.31			1.14	2035	30	3%	1.49	1.69
STH.WEST ROCKS BORE NO.R10	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY EMERGENCY DROUGHT BORE BELGRAVE FALLS	EMERG DROUGHT BORE	187.50	2003	196.27	1996	1996	196.27			13.67	2035	30	7%	2.26	30.89
KEMPSEY INFILT. WELL(BELGRAVE)	CIVIL	855.90	2003	895.94	1995	1996	895.94			62.41	2035	30	3%	1.49	92.74
KEMPSEY RECHARGE WELL	CIVIL	987.56	2003	1033.76	1995	1996	1033.76			72.01	2035	30	3%	1.49	107.00
KEMPSEY RECHARGE WELL	ELEC	36.00	2003	37.68	1995	1996	37.68			2.62	2035	30	3%	1.49	3.90
KEMPSEY RECHARGE WELL	MECH	250.00	2003	261.69	1995	1996	261.69			18.23	2035	30	3%	1.49	27.09
KEMPSEY RECHARGE WELL	TELEMETRY	5.00	2003	5.23	1995	1996	5.23			0.36	2035	30	3%	1.49	0.54
Existing Assets (post-1996)															
NONE															
Future Assets															
Groundwater source monitoring and augmentation	South West Rocks borefield (5 observation, 2 production bores)	95.00	2004	97.37	2005	2005	97.37			6.78	2035	30	7%	2.26	15.33
Groundwater source monitoring and augmentation	South West Rocks borefield (5 observation, 2 production bores)	95.00	2004	97.37	2006	2006	91.00			6.34	2035	30	7%	2.26	14.32
Groundwater source monitoring and augmentation	Kinchela emergency borefield (3 observation)	30.00	2004	30.75	2005	2005	30.75			2.14	2035	30	7%	2.26	4.84
Groundwater source monitoring and augmentation	Kinchela emergency borefield (3 observation)	30.00	2004	30.75	2006	2006	28.74			2.00	2035	30	7%	2.26	4.52
Groundwater source monitoring and augmentation	Two layer groundwater flow model for SWR	36.00	2004	36.90	2005	2005	36.90			2.57	2035	30	7%	2.26	5.81
Groundwater source monitoring and augmentation	Optimisation of the SWR Borefield	27.00	2004	27.67	2005	2005	27.67			1.93	2035	30	7%	2.26	4.36
Total BORES		**4,207**					**4,388**		**14,356**	**306**					**482**
DAMS															
Existing Assets (pre-1996)															
NONE															
Existing Assets (post-1996)															
STEUART MCINTYRE DAM		17858.12	2003	18693.44	2004	2004	18693.44			1027.11	2035	30	7%	2.26	2320.69
Future Assets															
NONE															
Total DAMS		**17,858**					**18,693**		**18,200**	**1,027**					**2,321**

Table A4: Capital Charge Calculation

Macleay Water

NOTES:
Fluoridation funded by NSW Health, not included in capital charge
THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.

Service Area	**Kemspey and Lower Macleay + SWR**		
Capital Charge	**$8,741**	**per ET**	
Pre 1996 discount rate	3%		
Post 1996 discount rate	7%		

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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 STATIONS															
Existing Assets (pre-1996)															
KEMPSEY WPS 1 (BLOOMFIELD ST.)	CIVIL	24.49	2003	25.64	1988	1996	25.64			1.79	2035	30	3%	1.49	2.65
KEMPSEY WPS 1 (BLOOMFIELD ST.)	ELEC	25.56	2003	26.75	1988	1996	26.75			1.86	2035	30	3%	1.49	2.77
KEMPSEY WPS 1 (BLOOMFIELD ST.)	MECH	28.75	2003	30.10	1988	1996	30.10			2.10	2035	30	3%	1.49	3.12
KEMPSEY WPS 1 (BLOOMFIELD ST.)	TELEMETRY	5.00	2003	5.23	1988	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY WPS 2 (BURNT BRIDGE)	CIVIL	23.43	2003	24.52	1988	1996	24.52			1.71	2035	30	3%	1.49	2.54
KEMPSEY WPS 2 (BURNT BRIDGE)	ELEC	25.56	2003	26.75	1988	1996	26.75			1.86	2035	30	3%	1.49	2.77
KEMPSEY WPS 2 (BURNT BRIDGE)	MECH	28.75	2003	30.10	1988	1996	30.10			2.10	2035	30	3%	1.49	3.12
KEMPSEY WPS 2 (BURNT BRIDGE)	TELEMETRY	5.00	2003	5.23	1988	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS WPS NO.1	CIVIL	60.70	2003	63.54	1970	1996	63.54			4.43	2035	30	3%	1.49	6.58
STH.WEST ROCKS WPS NO.1	ELEC	38.34	2003	40.13	1970	1996	40.13			2.80	2035	30	3%	1.49	4.15
STH.WEST ROCKS WPS NO.1	MECH	52.18	2003	54.62	1970	1996	54.62			3.81	2035	30	3%	1.49	5.65
STH.WEST ROCKS WPS NO.1	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS WPS NO.2	CIVIL	19.17	2003	20.07	1970	1996	20.07			1.40	2035	30	3%	1.49	2.08
STH.WEST ROCKS WPS NO.2	ELEC	25.56	2003	26.75	1970	1996	26.75			1.86	2035	30	3%	1.49	2.77
STH.WEST ROCKS WPS NO.2	MECH	27.69	2003	28.98	1970	1996	28.98			2.02	2035	30	3%	1.49	3.00
STH.WEST ROCKS WPS NO.2	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS WPS NO.3	CIVIL	17.57	2003	18.39	1970	1996	18.39			1.28	2035	30	3%	1.49	1.90
STH.WEST ROCKS WPS NO.3	ELEC	36.68	2003	38.40	1970	1996	38.40			2.67	2035	30	3%	1.49	3.97
STH.WEST ROCKS WPS NO.3	MECH	22.36	2003	23.41	1970	1996	23.41			1.63	2035	30	3%	1.49	2.42
STH.WEST ROCKS WPS NO.3	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
Existing Assets (post-1996)															
NONE															
Future Assets															
NONE															
Total PUMP STATIONS		**482**					**504**		**14,356**	**35**					**52**
RESERVOIRS															
Existing Assets (pre-1996)															
KEMPSEY RESERVOIR NO.5 BILLY GOAT HILL	ROOF	40.00	2003	41.87	1989	1996	41.87			2.92	2035	30	3%	1.49	4.33
KEMPSEY RESERVOIR NO.5 BILLY GOAT HILL	STRUCTURE	330.00	2003	345.44	1989	1996	345.44			24.06	2035	30	3%	1.49	35.76
KEMPSEY RESERVOIR NO.5 BILLY GOAT HILL	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY RESERVOIR NO.6 JOHN LANE ROAD	ROOF	56.00	2003	58.62	1994	1996	58.62			4.08	2035	30	3%	1.49	6.07
KEMPSEY RESERVOIR NO.6 JOHN LANE ROAD	STRUCTURE	458.00	2003	479.42	1994	1996	479.42			33.40	2035	30	3%	1.49	49.63
KEMPSEY RESERVOIR NO.6 JOHN LANE ROAD	TELEMETRY	5.00	2003	5.23	1994	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS RES. NO.2 GREGORY ST - STEEL	ROOF	164.00	2003	171.67	1991	1996	171.67			11.96	2035	30	3%	1.49	17.77
STH.WEST ROCKS RES. NO.2 GREGORY ST - STEEL	STRUCTURE	1336.00	2003	1398.49	1991	1996	1398.49			97.41	2035	30	3%	1.49	144.76
STH.WEST ROCKS RES. NO.2 GREGORY ST - STEEL	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS RES.NO.3 NEW ENTRANCE	ROOF	29.00	2003	30.36	1992	1996	30.36			2.11	2035	30	3%	1.49	3.14
STH.WEST ROCKS RES.NO.3 NEW ENTRANCE	STRUCTURE	234.00	2003	244.95	1992	1996	244.95			17.06	2035	30	3%	1.49	25.35
STH.WEST ROCKS RES.NO.3 NEW ENTRANCE	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
STH.WEST ROCKS RES.NO.4 ARAKOON TANK	ROOF	2.00	2003	2.09	1991	1996	2.09			0.15	2035	30	3%	1.49	0.22
STH.WEST ROCKS RES.NO.4 ARAKOON TANK	STRUCTURE	15.00	2003	15.70	1991	1996	15.70			1.09	2035	30	3%	1.49	1.63
Existing Assets (post-1996)															
NONE															
Future Assets															
NONE															
Total RESERVOIRS		**2,684**					**2,810**		**14,356**	**196**					**291**

Table A4: Capital Charge Calculation	NOTES:	Service Area	Kemspey and Lower Macleay + SWR		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,741	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
WATER TREATMENT PLANT															
Existing Assets (pre-1996)															
KEMPSEY WTP 1 (SHERWOOD)	CIVIL	197.84	2003	207.09	1988	1996	207.09			14.43	2035	30	3%	1.49	21.44
KEMPSEY WTP 1 (SHERWOOD)	ELEC	132.24	2003	138.43	1988	1996	138.43			9.64	2035	30	3%	1.49	14.33
KEMPSEY WTP 1 (SHERWOOD)	MECH	227.80	2003	238.46	1988	1996	238.46			16.61	2035	30	3%	1.49	24.68
KEMPSEY WTP 1 (SHERWOOD)	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
KEMPSEY WTP 2 (BELLGRAVE FALLS)	CIVIL	131.53	2003	137.68	1990	1996	137.68			9.59	2035	30	3%	1.49	14.25
KEMPSEY WTP 2 (BELLGRAVE FALLS)	ELEC	108.30	2003	113.36	1990	1996	113.36			7.90	2035	30	3%	1.49	11.73
KEMPSEY WTP 2 (BELLGRAVE FALLS)	MECH	207.70	2003	217.42	1990	1996	217.42			15.14	2035	30	3%	1.49	22.50
KEMPSEY WTP 2 (BELLGRAVE FALLS)	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
S.W.ROCKS WATER TREAT.PLANT	CIVIL	355.01	2003	371.61	1970	1996	371.61			25.89	2035	30	3%	1.49	38.47
S.W.ROCKS WATER TREAT.PLANT	ELEC	75.06	2003	78.58	1970	1996	78.58			5.47	2035	30	3%	1.49	8.13
S.W.ROCKS WATER TREAT.PLANT	MECH	284.20	2003	297.49	1970	1996	297.49			20.72	2035	30	3%	1.49	30.79
S.W.ROCKS WATER TREAT.PLANT	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			0.36	2035	30	3%	1.49	0.54
Existing Assets (post-1996)															
KEMPSEY WTP 1 (SHERWOOD)	LIME DOSE PMP	27.15	2003	28.42	2000	2000	28.42			1.98	2035	30	7%	2.26	4.47
BELLIMBOPINNI WATER	CHLORINATION UNIT	40.19	2003	42.07	2003	2003	42.07			2.93	2035	30	7%	2.26	6.62
S.W.ROCKS WATER TREAT.PLANT	AERATION TOWER	97.41	2003	101.96	2002	2002	101.96			7.10	2035	30	7%	2.26	16.05
S.W.ROCKS WATER TREAT.PLANT	CHLORINATOR	34.03	2003	35.62	2002	2002	35.62			2.48	2035	30	7%	2.26	5.61
S.W.ROCKS WATER TREAT.PLANT NO 2	FILTRATION PLANT	96.59	2003	101.11	2004	2004	101.11			7.04	2035	30	7%	2.26	15.91
Water treatment	Water treatment	4900.00	2004	5022.41	2005	2005	5022.41			349.85	2035	30	7%	2.26	790.45
Future Assets															
Water treatment	21 ML/d plant w/ coagulation, powdered activated carbon dosing, sedimentation, filtration and chlorine disinfection	7737.25	2004	7930.55	2009	2009	6050.18			421.44	2035	27	7%	2.11	887.18
Water treatment	21 ML/d plant w/ coagulation, powdered activated carbon dosing, sedimentation, filtration and chlorine disinfection	7737.25	2004	7930.55	2010	2010	5654.37			393.87	2035	26	7%	2.05	809.30
Total WATER TREATMENT PLANT		**22,405**					**18,852**		**14,356**	**1,313**					**2,724**

Table A4: Capital Charge Calculation	NOTES:	Service Area	Kemspey and Lower Macleay + SWR		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,741	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
TRANSFER															
Existing Assets (pre-1996)															
Mapinfo Pipe Number	**STREET**														
33	SHERWOOD RD, Aldavilla	50.96	2003	53.34	1980	1996	53.34			3.72	2035	30	3%	1.49	5.52
2298	SHERWOOD RD, Aldavilla	1.73	2003	1.81	1980	1996	1.81			0.13	2035	30	3%	1.49	0.19
2425	SHERWOOD RD, Aldavilla	47.32	2003	49.53	1980	1996	49.53			3.45	2035	30	3%	1.49	5.13
67	HILLVIEW DRIVE WEST END, Aldavilla	37.86	2003	39.63	1981	1996	39.63			2.76	2035	30	3%	1.49	4.10
2427	SHERWOOD RD, Aldavilla	35.46	2003	37.12	1992	1996	37.12			2.59	2035	30	3%	1.49	3.84
2013	Bellgrave Falls R, Aldavilla	10.22	2003	10.70	1994	1996	10.70			0.75	2035	30	3%	1.49	1.11
2060	Belgrave Falls Rd, Aldavilla	22.92	2003	23.99	1994	1996	23.99			1.67	2035	30	3%	1.49	2.48
2061	Belgrave Falls Rd, Aldavilla	95.48	2003	99.95	1994	1996	99.95			6.96	2035	30	3%	1.49	10.35
2062	Wards Rd, Aldavilla	46.00	2003	48.15	1994	1996	48.15			3.35	2035	30	3%	1.49	4.98
2063	Wards Rd, Aldavilla	39.42	2003	41.26	1994	1996	41.26			2.87	2035	30	3%	1.49	4.27
2064	Aldavilla Rd, Aldavilla	109.79	2003	114.93	1994	1996	114.93			8.01	2035	30	3%	1.49	11.90
2371	Wards Rd, Aldavilla	120.16	2003	125.78	1994	1996	125.78			8.76	2035	30	3%	1.49	13.02
2306	South West Rocks Road, Austral Eden	55.10	2003	57.68	1991	1996	57.68			4.02	2035	30	3%	1.49	5.97
2308	South West Rocks Road, Austral Eden	30.40	2003	31.82	1991	1996	31.82			2.22	2035	30	3%	1.49	3.29
2309	South West Rocks Road, Austral Eden	39.90	2003	41.77	1991	1996	41.77			2.91	2035	30	3%	1.49	4.32
2012	Belgrave Falls Rd, BELGRAVE	13.58	2003	14.21	1994	1996	14.21			0.99	2035	30	3%	1.49	1.47
1635	Sutherlands Lane, Bellimbopinni	145.53	2003	152.34	1991	1996	152.34			10.61	2035	30	3%	1.49	15.77
1069	VERG/BEL, Central Kempsey	5.04	2003	5.28	1982	1996	5.28			0.37	2035	30	3%	1.49	0.55
675	BELGRAVE ST, Central Kempsey	7.17	2003	7.50	1986	1996	7.50			0.52	2035	30	3%	1.49	0.78
676	BELGRAVE ST, Central Kempsey	6.61	2003	6.92	1986	1996	6.92			0.48	2035	30	3%	1.49	0.72
693	BELGRAVE ST, Central Kempsey	8.51	2003	8.91	1986	1996	8.91			0.62	2035	30	3%	1.49	0.92
713	SYDNEY, Central Kempsey	7.14	2003	7.47	1986	1996	7.47			0.52	2035	30	3%	1.49	0.77
1075	BELGRAVE, Central Kempsey	1.12	2003	1.17	1986	1996	1.17			0.08	2035	30	3%	1.49	0.12
680	BELGRAVE ST, Central Kempsey	5.71	2003	5.98	1987	1996	5.98			0.42	2035	30	3%	1.49	0.62
685	VERGE, Central Kempsey	4.12	2003	4.31	1987	1996	4.31			0.30	2035	30	3%	1.49	0.45
714	VERGES LANE, Central Kempsey	46.70	2003	48.89	1988	1996	48.89			3.41	2035	30	3%	1.49	5.06
1064	BELGRAVE, Central Kempsey	6.05	2003	6.33	1990	1996	6.33			0.44	2035	30	3%	1.49	0.66
1881	YORK LANE, Central Kempsey	3.14	2003	3.28	1990	1996	3.28			0.23	2035	30	3%	1.49	0.34
1237	MARYS BAY, Dondingalong	9.01	2003	9.44	1993	1996	9.44			0.66	2035	30	3%	1.49	0.98
2483	Marys Bay Road, Dondingalong	33.41	2003	34.97	1993	1996	34.97			2.44	2035	30	3%	1.49	3.62
765	LORD ST, East Kempsey	8.74	2003	9.14	1985	1996	9.14			0.64	2035	30	3%	1.49	0.95
1078	PACIF/GILL, East Kempsey	0.34	2003	0.35	1985	1996	0.35			0.02	2035	30	3%	1.49	0.04
1247	WASHINGTON, East Kempsey	40.40	2003	42.29	1993	1996	42.29			2.95	2035	30	3%	1.49	4.38
1251	MACLEAY/WASHING, East Kempsey	25.96	2003	27.17	1993	1996	27.17			1.89	2035	30	3%	1.49	2.81
1865	JAMES GRIMWADE, East Kempsey	20.50	2003	21.46	1993	1996	21.46			1.49	2035	30	3%	1.49	2.22
1167	Marys Bay Road, Euroka	42.01	2003	43.97	1980	1996	43.97			3.06	2035	30	3%	1.49	4.55
2437	Marys Bay Road, Euroka	17.59	2003	18.41	1980	1996	18.41			1.28	2035	30	3%	1.49	1.91
1177	Marys Bay Road, Euroka	1.52	2003	1.59	1990	1996	1.59			0.11	2035	30	3%	1.49	0.16
1021	River Street, Greenhills	68.40	2003	71.60	1980	1996	71.60			4.99	2035	30	3%	1.49	7.41
1025	Queen Street, Greenhills	5.76	2003	6.03	1980	1996	6.03			0.42	2035	30	3%	1.49	0.62
2424	River Street, Greenhills	96.96	2003	101.50	1980	1996	101.50			7.07	2035	30	3%	1.49	10.51
1253	Old Station Road, Hampden Hall	99.79	2003	104.46	1988	1996	104.46			7.28	2035	30	3%	1.49	10.81
1892	SOUTH WEST ROCKS, Jerseyville	83.75	2003	87.67	1990	1996	87.67			6.11	2035	30	3%	1.49	9.07
2110	Plummers Lane, Jerseyville	111.43	2003	116.64	1995	1996	116.64			8.12	2035	30	3%	1.49	12.07

Table A4: Capital Charge Calculation	NOTES:	Service Area	Kemspey and Lower Macleay + SWR		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,741	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
2111	Plummers Lane, Jerseyville	92.13	2003	96.43	1995	1996	96.43			6.72	2035	30	3%	1.49	9.98
1249	MACLEAY/WASHIN, KEMPSEY	77.16	2003	80.77	1993	1996	80.77			5.63	2035	30	3%	1.49	8.36
2109	Hat Head Road, Kinchela	131.08	2003	137.21	1995	1996	137.21			9.56	2035	30	3%	1.49	14.20
2136	Hat Head Road, Kinchela	342.02	2003	358.01	1995	1996	358.01			24.94	2035	30	3%	1.49	37.06
1681	South West Rocks Road, Pola Creek	28.08	2003	29.39	1991	1996	29.39			2.05	2035	30	3%	1.49	3.04
2112	Plummers Lane, Rainbow Reach	26.98	2003	28.24	1995	1996	28.24			1.97	2035	30	3%	1.49	2.92
817	WEST, South Kempsey	16.27	2003	17.03	1976	1996	17.03			1.19	2035	30	3%	1.49	1.76
888	Middleton Street, South Kempsey	0.70	2003	0.73	1976	1996	0.73			0.05	2035	30	3%	1.49	0.08
889	Middleton Street, South Kempsey	23.80	2003	24.91	1976	1996	24.91			1.74	2035	30	3%	1.49	2.58
893	West Street, South Kempsey	19.60	2003	20.52	1976	1996	20.52			1.43	2035	30	3%	1.49	2.12
935	WEST, South Kempsey	10.92	2003	11.43	1976	1996	11.43			0.80	2035	30	3%	1.49	1.18
936	WEST, South Kempsey	3.22	2003	3.37	1976	1996	3.37			0.23	2035	30	3%	1.49	0.35
965	West Street, South Kempsey	55.44	2003	58.03	1976	1996	58.03			4.04	2035	30	3%	1.49	6.01
1166	MIDD/RESERVOIR, South Kempsey	36.68	2003	38.40	1976	1996	38.40			2.67	2035	30	3%	1.49	3.97
815	WEST, South Kempsey	8.82	2003	9.23	1979	1996	9.23			0.64	2035	30	3%	1.49	0.96
818	WEST, South Kempsey	2.10	2003	2.20	1979	1996	2.20			0.15	2035	30	3%	1.49	0.23
891	West Street, South Kempsey	29.68	2003	31.07	1979	1996	31.07			2.16	2035	30	3%	1.49	3.22
892	West Street, South Kempsey	3.50	2003	3.66	1979	1996	3.66			0.26	2035	30	3%	1.49	0.38
1104	EAST, South Kempsey	133.50	2003	139.75	1988	1996	139.75			9.73	2035	30	3%	1.49	14.47
1107	Crescent Head Road, South Kempsey	12.77	2003	13.37	1988	1996	13.37			0.93	2035	30	3%	1.49	1.38
1109	Crescent Head Road, South Kempsey	2.58	2003	2.70	1988	1996	2.70			0.19	2035	30	3%	1.49	0.28
1111	Crescent Head Road, South Kempsey	179.76	2003	188.17	1988	1996	188.17			13.11	2035	30	3%	1.49	19.48
1120	Crescent Head Road, South Kempsey	63.06	2003	66.01	1988	1996	66.01			4.60	2035	30	3%	1.49	6.83
1129	Crescent Head Road, South Kempsey	153.66	2003	160.85	1988	1996	160.85			11.20	2035	30	3%	1.49	16.65
1137	Crescent Head Road, South Kempsey	27.78	2003	29.08	1988	1996	29.08			2.03	2035	30	3%	1.49	3.01
1139	Crescent Head Road, South Kempsey	24.86	2003	26.03	1988	1996	26.03			1.81	2035	30	3%	1.49	2.69
1144	Crescent Head Road, South Kempsey	38.30	2003	40.10	1988	1996	40.10			2.79	2035	30	3%	1.49	4.15
1145	Crescent Head Road, South Kempsey	25.76	2003	26.96	1988	1996	26.96			1.88	2035	30	3%	1.49	2.79
1149	Crescent Head Road, South Kempsey	1.41	2003	1.48	1988	1996	1.48			0.10	2035	30	3%	1.49	0.15
1150	Crescent Head Road, South Kempsey	1.62	2003	1.69	1988	1996	1.69			0.12	2035	30	3%	1.49	0.18
1151	Crescent Head Road, South Kempsey	1.21	2003	1.27	1988	1996	1.27			0.09	2035	30	3%	1.49	0.13
1245	Crescent Head Road, South Kempsey	2.35	2003	2.46	1988	1996	2.46			0.17	2035	30	3%	1.49	0.25
1246	Crescent Head Road, South Kempsey	14.56	2003	15.24	1988	1996	15.24			1.06	2035	30	3%	1.49	1.58
1922	Crescent Head Road, South Kempsey	31.14	2003	32.59	1988	1996	32.59			2.27	2035	30	3%	1.49	3.37
1932	Crescent Head Road, South Kempsey	5.70	2003	5.97	1988	1996	5.97			0.42	2035	30	3%	1.49	0.62
840	MIDDLETON, South Kempsey	1.88	2003	1.96	1989	1996	1.96			0.14	2035	30	3%	1.49	0.20
887	Middleton Street, South Kempsey	2.63	2003	2.75	1989	1996	2.75			0.19	2035	30	3%	1.49	0.28
898	MIDDLETON, South Kempsey	9.38	2003	9.81	1989	1996	9.81			0.68	2035	30	3%	1.49	1.02
901	MIDDLETON, South Kempsey	16.88	2003	17.66	1989	1996	17.66			1.23	2035	30	3%	1.49	1.83
865	EAST ST, South Kempsey	0.75	2003	0.78	1990	1996	0.78			0.05	2035	30	3%	1.49	0.08
1254	Old Station Road, Verges Creek	66.46	2003	69.57	1989	1996	69.57			4.85	2035	30	3%	1.49	7.20
522	NORTH, West Kempsey	31.81	2003	33.30	1970	1996	33.30			2.32	2035	30	3%	1.49	3.45
581	NORTH, West Kempsey	24.64	2003	25.79	1970	1996	25.79			1.80	2035	30	3%	1.49	2.67
1199	DANGAR ST, West Kempsey	2.91	2003	3.05	1970	1996	3.05			0.21	2035	30	3%	1.49	0.32
463	TOZER, West Kempsey	1.79	2003	1.88	1971	1996	1.88			0.13	2035	30	3%	1.49	0.19
464	TOZER, West Kempsey	38.42	2003	40.21	1971	1996	40.21			2.80	2035	30	3%	1.49	4.16
507	TOZER, West Kempsey	12.10	2003	12.66	1971	1996	12.66			0.88	2035	30	3%	1.49	1.31
508	TOZER, West Kempsey	22.40	2003	23.45	1971	1996	23.45			1.63	2035	30	3%	1.49	2.43
1240	NORTH ST, West Kempsey	36.18	2003	37.87	1974	1996	37.87			2.64	2035	30	3%	1.49	3.92
573	GAMMACKS LANE, West Kempsey	36.10	2003	37.79	1975	1996	37.79			2.63	2035	30	3%	1.49	3.91
509	NORTH, West Kempsey	10.08	2003	10.55	1979	1996	10.55			0.73	2035	30	3%	1.49	1.09

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Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
510	NORTH, West Kempsey	1.12	2003	1.17	1979	1996	1.17			0.08	2035	30	3%	1.49	0.12
1102	KEMP, West Kempsey	30.10	2003	31.51	1979	1996	31.51			2.19	2035	30	3%	1.49	3.26
448	POLWD INT, West Kempsey	10.25	2003	10.73	1980	1996	10.73			0.75	2035	30	3%	1.49	1.11
499	SEA ST, West Kempsey	25.20	2003	26.38	1980	1996	26.38			1.84	2035	30	3%	1.49	2.73
1034	KEMP, West Kempsey	28.75	2003	30.09	1988	1996	30.09			2.10	2035	30	3%	1.49	3.12
1046	KEMP, West Kempsey	9.97	2003	10.43	1988	1996	10.43			0.73	2035	30	3%	1.49	1.08
997	COCHRANE, West Kempsey	34.63	2003	36.24	1990	1996	36.24			2.52	2035	30	3%	1.49	3.75
1042	KEMP, West Kempsey	14.34	2003	15.01	1990	1996	15.01			1.05	2035	30	3%	1.49	1.55
1045	KEMP, West Kempsey	21.62	2003	22.63	1990	1996	22.63			1.58	2035	30	3%	1.49	2.34
1847	KEMP, West Kempsey	73.58	2003	77.03	1991	1996	77.03			5.37	2035	30	3%	1.49	7.97
2078	KEMP ST, West Kempsey	8.28	2003	8.67	1991	1996	8.67			0.60	2035	30	3%	1.49	0.90
31	SHERWOOD RD, Yarravel	44.72	2003	46.81	1970	1996	46.81			3.26	2035	30	3%	1.49	4.85
2	CROTTY'S LANE, Yarravel	80.29	2003	84.04	1973	1996	84.04			5.85	2035	30	3%	1.49	8.70
38	HILLVIEW EST, Yarravel	6.24	2003	6.53	1975	1996	6.53			0.45	2035	30	3%	1.49	0.68
39	PARK RD, Yarravel	19.97	2003	20.90	1975	1996	20.90			1.46	2035	30	3%	1.49	2.16
42	HILLVIEW DR, Yarravel	31.20	2003	32.66	1975	1996	32.66			2.27	2035	30	3%	1.49	3.38
43	HILLVIEW DR, Yarravel	12.90	2003	13.50	1975	1996	13.50			0.94	2035	30	3%	1.49	1.40
17	ARMIDALE RD, Yarravel	5.20	2003	5.44	1980	1996	5.44			0.38	2035	30	3%	1.49	0.56
23	ARMIDALE RD, Yarravel	41.60	2003	43.55	1980	1996	43.55			3.03	2035	30	3%	1.49	4.51
24	SHERWOOD RD, Yarravel	0.42	2003	0.44	1980	1996	0.44			0.03	2035	30	3%	1.49	0.05
28	SHERWOOD RD, Yarravel	0.76	2003	0.80	1980	1996	0.80			0.06	2035	30	3%	1.49	0.08
29	SHERWOOD RD, Yarravel	3.80	2003	3.98	1980	1996	3.98			0.28	2035	30	3%	1.49	0.41
68	HILLVIEW WEST, Yarravel	18.72	2003	19.60	1981	1996	19.60			1.36	2035	30	3%	1.49	2.03
69	HILLVIEW WEST, Yarravel	24.54	2003	25.69	1981	1996	25.69			1.79	2035	30	3%	1.49	2.66
2014	Sherwood Rd, Yarravel	21.18	2003	22.17	1983	1996	22.17			1.54	2035	30	3%	1.49	2.29
2015	Sherwood Rd, Yarravel	21.18	2003	22.17	1983	1996	22.17			1.54	2035	30	3%	1.49	2.29
44	HILLVIEW DR, Yarravel	9.57	2003	10.02	1989	1996	10.02			0.70	2035	30	3%	1.49	1.04
46	HILLVIEW DR, Yarravel	28.08	2003	29.39	1989	1996	29.39			2.05	2035	30	3%	1.49	3.04
1894	John Lane Road, Yarravel	133.00	2003	139.22	1994	1996	139.22			9.70	2035	30	3%	1.49	14.41
2065	Aldavilla Rd, Yarravel	120.45	2003	126.09	1994	1996	126.09			8.78	2035	30	3%	1.49	13.05
2066	Aldavilla Rd, Yarravel	20.15	2003	21.09	1994	1996	21.09			1.47	2035	30	3%	1.49	2.18
2176	John Lane Road, Yarravel	1.46	2003	1.53	1994	1996	1.53			0.11	2035	30	3%	1.49	0.16
2077	Sherwood Rd, Yarravel	19.36	2003	20.27	1995	1996	20.27			1.41	2035	30	3%	1.49	2.10
1529	SWR New Entrance Reservoir	19.43	2003	20.33	1987	1996	20.33			1.42	2035	30	3%	1.49	2.10
1825	SWR New Entrance Reservoir	33.41	2003	34.97	1987	1996	34.97			2.44	2035	30	3%	1.49	3.62
1507	SWR New Entrance Reservoir	38.73	2003	40.54	1988	1996	40.54			2.82	2035	30	3%	1.49	4.20
1530	SWR New Entrance Reservoir	3.22	2003	3.37	1990	1996	3.37			0.23	2035	30	3%	1.49	0.35
1900	Gregory St Steel & Conc Reserv	110.25	2003	115.41	1990	1996	115.41			8.04	2035	30	3%	1.49	11.95
1492	Gregory St Steel & Conc Reserv	139.36	2003	145.88	1991	1996	145.88			10.16	2035	30	3%	1.49	15.10
1493	Gregory St Steel & Conc Reserv	10.16	2003	10.64	1991	1996	10.64			0.74	2035	30	3%	1.49	1.10
1494	Gregory St Steel & Conc Reserv	120.12	2003	125.74	1991	1996	125.74			8.76	2035	30	3%	1.49	13.02
1495	Gregory St Steel & Conc Reserv	54.75	2003	57.31	1991	1996	57.31			3.99	2035	30	3%	1.49	5.93
1496	Gregory St Steel & Conc Reserv	77.62	2003	81.25	1991	1996	81.25			5.66	2035	30	3%	1.49	8.41
1497	Gregory St Steel & Conc Reserv	140.25	2003	146.81	1991	1996	146.81			10.23	2035	30	3%	1.49	15.20
1498	Gregory St Steel & Conc Reserv	12.86	2003	13.47	1991	1996	13.47			0.94	2035	30	3%	1.49	1.39
1499	Gregory St Steel & Conc Reserv	40.20	2003	42.08	1991	1996	42.08			2.93	2035	30	3%	1.49	4.36
1500	Gregory St Steel & Conc Reserv	21.71	2003	22.73	1991	1996	22.73			1.58	2035	30	3%	1.49	2.35
1502	Gregory St Steel & Conc Reserv	42.85	2003	44.85	1991	1996	44.85			3.12	2035	30	3%	1.49	4.64
1503	Gregory St Steel & Conc Reserv	32.16	2003	33.66	1991	1996	33.66			2.34	2035	30	3%	1.49	3.48
1512	Gregory St Steel & Conc Reserv	3.15	2003	3.30	1991	1996	3.30			0.23	2035	30	3%	1.49	0.34
1531	SWR New Entrance Reservoir	14.07	2003	14.73	1991	1996	14.73			1.03	2035	30	3%	1.49	1.52
1532	SWR New Entrance Reservoir	40.47	2003	42.36	1991	1996	42.36			2.95	2035	30	3%	1.49	4.38
1533	SWR New Entrance Reservoir	0.67	2003	0.70	1991	1996	0.70			0.05	2035	30	3%	1.49	0.07
1808	Gregory St Steel & Conc Reserv	63.52	2003	66.49	1991	1996	66.49			4.63	2035	30	3%	1.49	6.88
1927	Gregory St Steel & Conc Reserv	2.66	2003	2.79	1991	1996	2.79			0.19	2035	30	3%	1.49	0.29
2059	Gregory St Steel & Conc Reserv	11.13	2003	11.65	1991	1996	11.65			0.81	2035	30	3%	1.49	1.21

Table A4: Capital Charge Calculation	NOTES:	Service Area	Kemspey and Lower Macleay + SWR		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,741	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
1602	Gregory St Steel & Conc Reserv	97.20	2003	101.75	1994	1996	101.75			7.09	2035	30	3%	1.49	10.53
2008	0	228.57	2003	239.26	1995	1996	239.26			16.67	2035	30	3%	1.49	24.77
2011	0	107.16	2003	112.17	1995	1996	112.17			7.81	2035	30	3%	1.49	11.61
2115	0	1.90	2003	1.99	1995	1996	1.99			0.14	2035	30	3%	1.49	0.21
298	Collombatti Road	75.15	2003	78.67	1986	1996	78.67			5.48	2035	30	3%	1.49	8.14
1944	EVERINGHAM'S LANE	7.35	2003	7.69	1986	1996	7.69			0.54	2035	30	3%	1.49	0.80
2125	Borefield Access Road	49.50	2003	51.82	1976	1996	51.82			3.61	2035	30	3%	1.49	5.36
2402	Borefield Access Road	10.00	2003	10.47	1979	1996	10.47			0.73	2035	30	3%	1.49	1.08
2401	Borefield Access Road	11.40	2003	11.93	1979	1996	11.93			0.83	2035	30	3%	1.49	1.24
2116	Borefield Access Road	1.50	2003	1.57	1995	1996	1.57			0.11	2035	30	3%	1.49	0.16
2117	Borefield Access Road	1.50	2003	1.57	1995	1996	1.57			0.11	2035	30	3%	1.49	0.16
Existing Assets (post-1996)															
2165	Hillview Drive, Aldavilla	44.65	2003	46.74	1999	1999	46.74			3.26	2035	30	7%	2.26	7.36
2273	Link Road, Aldavilla	56.54	2003	59.18	2000	2000	59.18			4.12	2035	30	7%	2.26	9.31
2331	Link Road, Aldavilla	0.60	2003	0.63	2000	2000	0.63			0.04	2035	30	7%	2.26	0.10
2332	Link Road, Aldavilla	46.99	2003	49.19	2000	2000	49.19			3.43	2035	30	7%	2.26	7.74
2333	Link Road, Aldavilla	1.33	2003	1.39	2000	2000	1.39			0.10	2035	30	7%	2.26	0.22
2426	OLD AERODROME RD, Aldavilla	2.28	2003	2.39	2004	2004	2.39			0.17	2035	30	7%	2.26	0.38
2323	First Lane, Central Kempsey	129.76	2003	135.83	2002	2002	135.83			9.46	2035	30	7%	2.26	21.38
2373	Smith Street, Central Kempsey	3.27	2003	3.42	2002	2002	3.42			0.24	2035	30	7%	2.26	0.54
1999	Oaklands Drive, Dondingalong	234.82	2003	245.81	1999	1999	245.81			17.12	2035	30	7%	2.26	38.69
2145	Gowings Hill Road, Dondingalong	115.80	2003	121.22	1999	1999	121.22			8.44	2035	30	7%	2.26	19.08
2146	Gowings Hill Road, Dondingalong	474.66	2003	496.86	2000	2000	496.86			34.61	2035	30	7%	2.26	78.20
2356	Oaklands Drive, Dondingalong	19.94	2003	20.88	2000	2000	20.88			1.45	2035	30	7%	2.26	3.29
2357	Oaklands Drive, Dondingalong	1.93	2003	2.02	2000	2000	2.02			0.14	2035	30	7%	2.26	0.32
2358	Oaklands Drive, Dondingalong	1.29	2003	1.35	2000	2000	1.35			0.09	2035	30	7%	2.26	0.21
2484	Marys Bay Road, Dondingalong	5.13	2003	5.37	2004	2004	5.37			0.37	2035	30	7%	2.26	0.85
2493	Stewart Place, Euroka	4.18	2003	4.38	2003	2003	4.38			0.30	2035	30	7%	2.26	0.69
2100	Armidale Road & Queen Street, Greenhills	169.36	2003	177.28	1996	1996	177.28			12.35	2035	30	7%	2.26	27.90
2344	Queen Street, Greenhills	7.72	2003	8.08	2000	2000	8.08			0.56	2035	30	7%	2.26	1.27
2428	Roberts Street, Greenhills	152.19	2003	159.31	2004	2004	159.31			11.10	2035	30	7%	2.26	25.07
2429	Nancy Ellis Street, Greenhills	99.24	2003	103.88	2004	2004	103.88			7.24	2035	30	7%	2.26	16.35
2103	Hat Head Road, Hat Head Road	428.51	2003	448.55	1996	1996	448.55			31.24	2035	30	7%	2.26	70.59
2104	Hat Head Rd, Kinchela	0.13	2003	0.14	1996	1996	0.14			0.01	2035	30	7%	2.26	0.02
2105	Hat Head Rd, Kinchela	0.26	2003	0.27	1996	1996	0.27			0.02	2035	30	7%	2.26	0.04
2106	Hat Head Road, Kinchela	217.94	2003	228.14	1996	1996	228.14			15.89	2035	30	7%	2.26	35.91
2107	Hat Head Road, Kinchela	50.60	2003	52.96	1996	1996	52.96			3.69	2035	30	7%	2.26	8.34
2137	Hat Head Road, Kinchela	33.58	2003	35.15	1996	1996	35.15			2.45	2035	30	7%	2.26	5.53
2221	Belgrave Falls to, South Kempsey	110.04	2003	115.18	2000	2000	115.18			8.02	2035	30	7%	2.26	18.13
2416	Gordon Lane, West Kempsey	10.48	2003	10.97	2003	2003	10.97			0.76	2035	30	7%	2.26	1.73
2068	Sherwood Road, Yarravel	310.54	2003	325.07	1996	1996	325.07			22.64	2035	30	7%	2.26	51.16
2102	Armidale Road, Yarravel	33.43	2003	35.00	1996	1996	35.00			2.44	2035	30	7%	2.26	5.51
1	CROTTY'S LANE, Yarravel	0.62	2003	0.65	1998	1998	0.65			0.05	2035	30	7%	2.26	0.10
2119	Armidale Road, Yarravel	150.15	2003	157.17	1998	1998	157.17			10.95	2035	30	7%	2.26	24.74
2140	Armidale Road, Yarravel	2.28	2003	2.39	1998	1998	2.39			0.17	2035	30	7%	2.26	0.38
2141	Armidale Road, Yarravel	52.96	2003	55.44	1998	1998	55.44			3.86	2035	30	7%	2.26	8.73
2143	Armidale Road, Yarravel	97.79	2003	102.36	2000	2000	102.36			7.13	2035	30	7%	2.26	16.11
2177	John Lane Road, Yarravel	2.30	2003	2.41	2000	2000	2.41			0.17	2035	30	7%	2.26	0.38
2178	John Lane Road, Yarravel	1.15	2003	1.20	2000	2000	1.20			0.08	2035	30	7%	2.26	0.19

Table A4: Capital Charge Calculation	NOTES:	Service Area	Kemspey and Lower Macleay + SWR		Pre 1996 discount rate	3%
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	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
2226	Armidale Road, Yarravel	0.27	2003	0.29	2000	2000	0.29			0.02	2035	30	7%	2.26	0.04
2227	John Lane Road, Yarravel	46.32	2003	48.49	2000	2000	48.49			3.38	2035	30	7%	2.26	7.63
2228	Armidale Road, Yarravel	0.26	2003	0.27	2000	2000	0.27			0.02	2035	30	7%	2.26	0.04
2229	Armidale Road, Yarravel	66.14	2003	69.23	2000	2000	69.23			4.82	2035	30	7%	2.26	10.90
2230	John Lane Road, Yarravel	43.75	2003	45.79	2000	2000	45.79			3.19	2035	30	7%	2.26	7.21
2232	Armidale Road, Yarravel	114.56	2003	119.92	2000	2000	119.92			8.35	2035	30	7%	2.26	18.87
2233	John Lane Road, Yarravel	0.13	2003	0.13	2000	2000	0.13			0.01	2035	30	7%	2.26	0.02
2234	John Lane Road, Yarravel	3.86	2003	4.04	2000	2000	4.04			0.28	2035	30	7%	2.26	0.64
2235	Armidale Road, Yarravel	68.84	2003	72.06	2000	2000	72.06			5.02	2035	30	7%	2.26	11.34
2236	Link Road, Yarravel	0.97	2003	1.01	2000	2000	1.01			0.07	2035	30	7%	2.26	0.16
2237	Link Road, Yarravel	7.49	2003	7.84	2000	2000	7.84			0.55	2035	30	7%	2.26	1.23
2281	Link Road, Yarravel	229.04	2003	239.75	2000	2000	239.75			16.70	2035	30	7%	2.26	37.73
2326	Link Road, Yarravel	171.61	2003	179.64	2000	2000	179.64			12.51	2035	30	7%	2.26	28.27
2327	Link Road, Yarravel	0.48	2003	0.51	2000	2000	0.51			0.04	2035	30	7%	2.26	0.08
2328	Link Road, Yarravel	227.40	2003	238.04	2000	2000	238.04			16.58	2035	30	7%	2.26	37.46
2329	Link Road, Yarravel	200.65	2003	210.04	2000	2000	210.04			14.63	2035	30	7%	2.26	33.06
2330	Link Road, Yarravel	94.23	2003	98.63	2000	2000	98.63			6.87	2035	30	7%	2.26	15.52
2334	Link Road, Yarravel	56.78	2003	59.43	2000	2000	59.43			4.14	2035	30	7%	2.26	9.35
2335	Link Road, Yarravel	0.60	2003	0.63	2000	2000	0.63			0.04	2035	30	7%	2.26	0.10
2336	Link Road, Yarravel	1.33	2003	1.39	2000	2000	1.39			0.10	2035	30	7%	2.26	0.22
2337	Link Road, Yarravel	47.11	2003	49.32	2000	2000	49.32			3.44	2035	30	7%	2.26	7.76
2338	Armidale Road, Yarravel	31.40	2003	32.86	2000	2000	32.86			2.29	2035	30	7%	2.26	5.17
2339	Armidale Road, Yarravel	3.60	2003	3.77	2000	2000	3.77			0.26	2035	30	7%	2.26	0.59
2340	Armidale Road, Yarravel	97.79	2003	102.36	2000	2000	102.36			7.13	2035	30	7%	2.26	16.11
2346	Sherwood Road, Yarravel	1.63	2003	1.71	2000	2000	1.71			0.12	2035	30	7%	2.26	0.27
2351	Sherwood Road, Yarravel	135.12	2003	141.44	2000	2000	141.44			9.85	2035	30	7%	2.26	22.26
2353	Sherwood Road, Yarravel	35.52	2003	37.18	2000	2000	37.18			2.59	2035	30	7%	2.26	5.85
2354	Sherwood Road, Yarravel	0.82	2003	0.86	2000	2000	0.86			0.06	2035	30	7%	2.26	0.13
2231	Hillview Drive West End, Yarravel	96.71	2003	101.23	2002	2002	101.23			7.05	2035	30	7%	2.26	15.93
2127	Gregory St Steel & Conc Reserv	46.06	2003	48.21	1998	1998	48.21			3.36	2035	30	7%	2.26	7.59
2129	Gregory St Steel & Conc Reserv	8.90	2003	9.32	1998	1998	9.32			0.65	2035	30	7%	2.26	1.47
2157	0	61.70	2003	64.58	1998	1998	64.58			4.50	2035	30	7%	2.26	10.16
2158	0	59.79	2003	62.58	1998	1998	62.58			4.36	2035	30	7%	2.26	9.85
2159	0	203.11	2003	212.61	1998	1998	212.61			14.81	2035	30	7%	2.26	33.46
2160	0	33.31	2003	34.86	1998	1998	34.86			2.43	2035	30	7%	2.26	5.49
2161	0	21.02	2003	22.00	1998	1998	22.00			1.53	2035	30	7%	2.26	3.46
2361	Gregory St Steel & Conc Reserv	5.46	2003	5.72	1998	1998	5.72			0.40	2035	30	7%	2.26	0.90
2290	Gregory St Steel & Conc Reserv	9.88	2003	10.34	2001	2001	10.34			0.72	2035	30	7%	2.26	1.63
2291	Gregory St Steel & Conc Reserv	3.80	2003	3.98	2001	2001	3.98			0.28	2035	30	7%	2.26	0.63
2293	Gregory St Steel & Conc Reserv	11.40	2003	11.93	2001	2001	11.93			0.83	2035	30	7%	2.26	1.88
2406	Gregory St Steel & Conc Reserv	46.10	2003	48.25	2003	2003	48.25			3.36	2035	30	7%	2.26	7.59
2407	Gregory St Steel & Conc Reserv	5.32	2003	5.57	2003	2003	5.57			0.39	2035	30	7%	2.26	0.88
2409	Gregory St Steel & Conc Reserv	64.02	2003	67.02	2003	2003	67.02			4.67	2035	30	7%	2.26	10.55
2410	Gregory St Steel & Conc Reserv	32.01	2003	33.51	2003	2003	33.51			2.33	2035	30	7%	2.26	5.27
2450	Gregory St Steel & Conc Reserv	15.49	2003	16.21	2003	2003	16.21			1.13	2035	30	7%	2.26	2.55
2451	Gregory St Steel & Conc Reserv	0.47	2003	0.49	2003	2003	0.49			0.03	2035	30	7%	2.26	0.08
2452	Gregory St Steel & Conc Reserv	3.73	2003	3.91	2003	2003	3.91			0.27	2035	30	7%	2.26	0.61
2454	Gregory St Steel & Conc Reserv	1.12	2003	1.17	2003	2003	1.17			0.08	2035	30	7%	2.26	0.18
2350	Link Road	0.22	2003	0.23	2000	2000	0.23			0.02	2035	30	7%	2.26	0.04
2179	John Lane Road	23.16	2003	24.25	2000	2000	24.25			1.69	2035	30	7%	2.26	3.82
2341	Queen Street	3.09	2003	3.23	2000	2000	3.23			0.23	2035	30	7%	2.26	0.51
2345	Link Road	2.32	2003	2.42	2000	2000	2.42			0.17	2035	30	7%	2.26	0.38

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Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
2347	Sherwood Road	3.09	2003	3.23	2000	2000	3.23			0.23	2035	30	7%	2.26	0.51
2348	Sherwood Road	3.09	2003	3.23	2000	2000	3.23			0.23	2035	30	7%	2.26	0.51
2349	Sherwood Road	3.09	2003	3.23	2000	2000	3.23			0.23	2035	30	7%	2.26	0.51
2355	Sherwood Road	3.09	2003	3.23	2000	2000	3.23			0.23	2035	30	7%	2.26	0.51
2168	Collombatti Road	28.95	2003	30.30	2000	2000	30.30			2.11	2035	30	7%	2.26	4.77
2170	Collombatti Road	1.20	2003	1.26	2000	2000	1.26			0.09	2035	30	7%	2.26	0.20
Future Assets															
Distribution system augmentation	Upgrade mains PCV 375 mm	4272.00	2004	4378.73	2009	2009	3340.51			232.69	2035	27	7%	2.11	489.84
Distribution system augmentation	Upgrade mains Steel 375 mm (submarine)	103.00	2004	105.57	2009	2009	80.54			5.61	2035	27	7%	2.11	11.81
Distribution system augmentation	Submarine River crossing	1000.00	2004	1024.98	2009	2009	781.95			54.47	2035	27	7%	2.11	114.66
Distribution system augmentation	New Booster pump station 9ML/d @70m lift	180.00	2004	184.50	2009	2009	140.75			9.80	2035	27	7%	2.11	20.64
Distribution system augmentation	Contingency	1943.93	2004	1992.49	2009	2009	1520.06			105.88	2035	27	7%	2.11	222.90
Distribution system augmentation	Survey, Investigation and Design	555.41	2004	569.28	2009	2009	434.30			30.25	2035	27	7%	2.11	63.69
Distribution system augmentation	Construction Supervision	555.41	2004	569.28	2009	2009	434.30			30.25	2035	27	7%	2.11	63.69
Distribution system augmentation	Works augmentation to trunk system (valving, PSs)	152.34	2004	156.15	2006	2006	145.93			10.17	2035	30	7%	2.26	22.97
Distribution system augmentation	Lead in mains for new devt areas	270.75	2004	277.51	2006	2006	259.36			18.07	2035	30	7%	2.26	40.82
Distribution system augmentation	Lead in mains for new devt areas	270.75	2004	277.51	2007	2007	242.39			16.88	2035	29	7%	2.21	37.27
Distribution system augmentation	Lead in mains for new devt areas	270.75	2004	277.51	2008	2008	226.53			15.78	2035	28	7%	2.16	34.02
Total TRANSFER		**21,295**					**19,875**		**14,356**	**1,384**					**2,706**
DEMAND MANAGEMENT															
Existing Assets (pre-1996)															
NONE															
Existing Assets (post-1996)															
NONE															
Future Assets															
Pricing Measure Model		20.00	2004	20.50	2005	2005	20.50			1.43	2035	30	7%	2.26	3.23
Pricing Measure Model		20.00	2004	20.50	2006	2006	19.16			1.33	2035	30	7%	2.26	3.02
Public Education for Reduction of External Water Use		10.00	2004	10.25	2007	2007	8.95			0.62	2035	29	7%	2.21	1.38
Public Education for Reduction of External Water Use		10.00	2004	10.25	2008	2008	8.37			0.58	2035	28	7%	2.16	1.26
Public Education for Reduction of External Water Use		10.00	2004	10.25	2009	2009	7.82			0.54	2035	27	7%	2.11	1.15
Resident House Shower Retrofit		28.59	2004	29.31	2007	2007	25.60			1.78	2035	29	7%	2.21	3.94
Resident House Shower Retrofit		28.73	2004	29.45	2008	2008	24.04			1.67	2035	28	7%	2.16	3.61
Resident House Shower Retrofit		28.86	2004	29.58	2009	2009	22.57			1.57	2035	27	7%	2.11	3.31
Resident Flat Shower Retrofit		2.02	2004	2.07	2007	2007	1.81			0.13	2035	29	7%	2.21	0.28
Resident Flat Shower Retrofit		2.03	2004	2.08	2008	2008	1.70			0.12	2035	28	7%	2.16	0.26
Resident Flat Shower Retrofit		2.04	2004	2.09	2009	2009	1.59			0.11	2035	27	7%	2.11	0.23
Rural Residential Shower Retrofit		2.51	2004	2.57	2007	2007	2.25			0.16	2035	29	7%	2.21	0.35
Rural Residential Shower Retrofit		2.65	2004	2.71	2008	2008	2.22			0.15	2035	28	7%	2.16	0.33
Rural Residential Shower Retrofit		2.79	2004	2.86	2009	2009	2.18			0.15	2035	27	7%	2.11	0.32
Rural (S&D) Shower Retrofit		6.56	2004	6.73	2007	2007	5.88			0.41	2035	29	7%	2.21	0.90
Rural (S&D) Shower Retrofit		6.50	2004	6.66	2008	2008	5.44			0.38	2035	28	7%	2.16	0.82
Rural (S&D) Shower Retrofit		6.43	2004	6.59	2009	2009	5.03			0.35	2035	27	7%	2.11	0.74
Leak Detection and Repair		108.94	2004	111.66	2006	2006	104.35			7.27	2035	30	7%	2.26	16.42
Leak Detection and Repair		108.94	2004	111.66	2007	2007	97.53			6.79	2035	29	7%	2.21	15.00
Leak Detection and Repair		108.94	2004	111.66	2008	2008	91.15			6.35	2035	28	7%	2.16	13.69
Leak Detection and Repair		108.94	2004	111.66	2009	2009	85.18			5.93	2035	27	7%	2.11	12.49
Business Audit and Retrofit - Permanent Savings		120.35	2004	123.36	2007	2007	107.75			7.51	2035	29	7%	2.21	16.57
Business Audit and Retrofit - Permanent Savings		121.21	2004	124.24	2008	2008	101.42			7.06	2035	28	7%	2.16	15.23
Business Audit and Retrofit - Permanent Savings		122.06	2004	125.11	2009	2009	95.44			6.65	2035	27	7%	2.11	14.00
Business Audit and Retrofit - Temporary Savings		12.04	2004	12.34	2007	2007	10.77			0.75	2035	29	7%	2.21	1.66
Business Audit and Retrofit - Temporary Savings		12.12	2004	12.42	2008	2008	10.14			0.71	2035	28	7%	2.16	1.52
Business Audit and Retrofit - Temporary Savings		12.21	2004	12.51	2009	2009	9.54			0.66	2035	27	7%	2.11	1.40

Table A4: Capital Charge Calculation	NOTES:	Service Area	Kemspey and Lower Macleay + SWR		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$8,741	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
			2004												
Pricing Measure Model		20.00	2004	20.50	2005	2005	20.50			1.43	2035	30	7%	2.26	3.23
Pricing Measure Model		20.00	2004	20.50	2006	2006	19.16			1.33	2035	30	7%	2.26	3.02
Public Education for Reduction of External Water Use		10.00	2004	10.25	2007	2007	8.95			0.62	2035	29	7%	2.21	1.38
Public Education for Reduction of External Water Use		10.00	2004	10.25	2008	2008	8.37			0.58	2035	28	7%	2.16	1.26
Public Education for Reduction of External Water Use		10.00	2004	10.25	2009	2009	7.82			0.54	2035	27	7%	2.11	1.15
Resident House Shower Retrofit		15.24	2004	15.62	2007	2007	13.65			0.95	2035	29	7%	2.21	2.10
Resident House Shower Retrofit		15.64	2004	16.03	2008	2008	13.09			0.91	2035	28	7%	2.16	1.97
Resident House Shower Retrofit		16.03	2004	16.43	2009	2009	12.54			0.87	2035	27	7%	2.11	1.84
Resident Flat Shower Retrofit		1.01	2004	1.04	2007	2007	0.90			0.06	2035	29	7%	2.21	0.14
Resident Flat Shower Retrofit		1.04	2004	1.06	2008	2008	0.87			0.06	2035	28	7%	2.16	0.13
Resident Flat Shower Retrofit		1.06	2004	1.09	2009	2009	0.83			0.06	2035	27	7%	2.11	0.12
Rural Residential Shower Retrofit		0.73	2004	0.75	2007	2007	0.65			0.05	2035	29	7%	2.21	0.10
Rural Residential Shower Retrofit		0.75	2004	0.77	2008	2008	0.63			0.04	2035	28	7%	2.16	0.09
Rural Residential Shower Retrofit		0.77	2004	0.79	2009	2009	0.60			0.04	2035	27	7%	2.11	0.09
Rural (S&D) Shower Retrofit		2.58	2004	2.64	2007	2007	2.31			0.16	2035	29	7%	2.21	0.35
Rural (S&D) Shower Retrofit		2.64	2004	2.71	2008	2008	2.21			0.15	2035	28	7%	2.16	0.33
Rural (S&D) Shower Retrofit		2.71	2004	2.78	2009	2009	2.12			0.15	2035	27	7%	2.11	0.31
Leak Detection and Repair		17.16	2004	17.58	2006	2006	16.43			1.14	2035	30	7%	2.26	2.59
Leak Detection and Repair		17.16	2004	17.58	2007	2007	15.36			1.07	2035	29	7%	2.21	2.36
Leak Detection and Repair		17.16	2004	17.58	2008	2008	14.35			1.00	2035	28	7%	2.16	2.16
Leak Detection and Repair		17.16	2004	17.58	2009	2009	13.41			0.93	2035	27	7%	2.11	1.97
Business Audit and Retrofit - Permanent Savings		14.36	2004	14.71	2007	2007	12.85			0.90	2035	29	7%	2.21	1.98
Business Audit and Retrofit - Permanent Savings		14.73	2004	15.10	2008	2008	12.33			0.86	2035	28	7%	2.16	1.85
Business Audit and Retrofit - Permanent Savings		15.10	2004	15.48	2009	2009	11.81			0.82	2035	27	7%	2.11	1.73
Business Audit and Retrofit - Temporary Savings		1.44	2004	1.47	2007	2007	1.29			0.09	2035	29	7%	2.21	0.20
Business Audit and Retrofit - Temporary Savings		1.47	2004	1.51	2008	2008	1.23			0.09	2035	28	7%	2.16	0.19
Business Audit and Retrofit - Temporary Savings		1.51	2004	1.55	2009	2009	1.18			0.08	2035	27	7%	2.11	0.17
Total DEMAND MANAGEMENT		**1,273**					**1,094**		**14,356**	**76**					**166**

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 A5: Capital Charge Calculation	NOTES:	Service Area	Stuarts Point		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$9,759	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
BORES															
Existing Assets (pre-1996)															
STUARTS POINT BORE NO.P1	CIVIL	18.13	2003	18.98	1985	1996	18.98			21.81	2035	30	3%	1.49	32.41
STUARTS POINT BORE NO.P1	ELEC	15.21	2003	15.92	1985	1996	15.92			18.29	2035	30	3%	1.49	27.18
STUARTS POINT BORE NO.P1	MECH	27.43	2003	28.71	1985	1996	28.71			32.99	2035	30	3%	1.49	49.02
STUARTS POINT BORE NO.P1	TELEMETRY	5.00	2003	5.23	1994	1996	5.23			6.01	2035	30	3%	1.49	8.94
STUARTS POINT BORE NO.P2	CIVIL	18.13	2003	18.98	1985	1996	18.98			21.81	2035	30	3%	1.49	32.41
STUARTS POINT BORE NO.P2	ELEC	13.95	2003	14.61	1985	1996	14.61			16.78	2035	30	3%	1.49	24.94
STUARTS POINT BORE NO.P2	MECH	27.17	2003	28.44	1985	1996	28.44			32.68	2035	30	3%	1.49	48.56
STUARTS POINT BORE NO.P2	TELEMETRY	5.00	2003	5.23	1994	1996	5.23			6.01	2035	30	3%	1.49	8.94
STUARTS POINT BORE NO.P3	CIVIL	18.13	2003	18.98	1989	1996	18.98			21.81	2035	30	3%	1.49	32.41
STUARTS POINT BORE NO.P3	ELEC	15.30	2003	16.01	1989	1996	16.01			18.40	2035	30	3%	1.49	27.34
STUARTS POINT BORE NO.P3	MECH	27.52	2003	28.81	1989	1996	28.81			33.10	2035	30	3%	1.49	49.19
STUARTS POINT BORE NO.P3	TELEMETRY	5.00	2003	5.23	1989	1996	5.23			6.01	2035	30	3%	1.49	8.94
Existing Assets (post-1996)															
NONE															
Future Assets															
NONE															
Total BORES		**196**					**205**		**870**	**236**					**350**
PUMP STATIONS															
Existing Assets (pre-1996)															
STUARTS POINT WPS NO.1	CIVIL	61.94	2003	64.84	1985	1996	64.84			74.50	2035	30	3%	1.49	110.70
STUARTS POINT WPS NO.1	ELEC	59.24	2003	62.01	1985	1996	62.01			71.25	2035	30	3%	1.49	105.87
STUARTS POINT WPS NO.1	MECH	44.73	2003	46.82	1985	1996	46.82			53.79	2035	30	3%	1.49	79.94
STUARTS POINT WPS NO.1	TELEMETRY	5.00	2003	5.23	1994	1996	5.23			6.01	2035	30	3%	1.49	8.94
Existing Assets (post-1996)															
NONE															
Future Assets															
NONE															
Total PUMP STATIONS		**171**					**179**		**870**	**206**					**305**
RESERVOIRS															
Existing Assets (pre-1996)															
STUARTS POINT RESERVOIR	ROOF	76.00	2003	79.55	1984	1996	79.55			91.40	2035	30	3%	1.49	135.83
STUARTS POINT RESERVOIR	STRUCTURE	620.00	2003	649.00	1984	1996	649.00			745.66	2035	30	3%	1.49	1108.05
STUARTS POINT RESERVOIR	TELEMETRY	5.00	2003	5.23	1992	1996	5.23			6.01	2035	30	3%	1.49	8.94
Existing Assets (post-1996)															
NONE															
Future Assets															
NONE															
Total RESERVOIRS		**701**					**734**		**870**	**843**					**1,253**
WATER TREATMENT PLANT															
Existing Assets (pre-1996)															
STUARTS PNT WATER TREAT.PLANT	CIVIL	210.39	2003	220.23	1985	1996	220.23			253.03	2035	30	3%	1.49	376.01
STUARTS PNT WATER TREAT.PLANT	ELEC	39.76	2003	41.62	1985	1996	41.62			47.81	2035	30	3%	1.49	71.05
STUARTS PNT WATER TREAT.PLANT	MECH	181.07	2003	189.54	1985	1996	189.54			217.77	2035	30	3%	1.49	323.60
STUARTS PNT WATER TREAT.PLANT	TELEMETRY	5.00	2003	5.23	1994	1996	5.23			6.01	2035	30	3%	1.49	8.94
Existing Assets (post-1996)															
STUARTS PNT WATER TREAT.PLANT	PWD UPGRADE	1621.04	2003	1696.86	2004	2004	1696.86			1949.58	2035	30	7%	2.26	4404.95
Future Assets															
NONE															
Total WATER TREATMENT PLANT		**2,057**					**2,153**		**870**	**2,474**					**5,185**

Table A5: Capital Charge Calculation	NOTES:	Service Area	Stuarts Point		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$9,759	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
TRANSFER															
Existing Assets (pre-1996)															
Mapinfo Pipe Number	**STREET**														
1269	FOURTH AVENUE, Stuarts Point	1.34	2003	1.41	1984	1996	1.41			1.62	2035	30	3%	1.49	2.40
1270	FOURTH AVENUE, Stuarts Point	21.84	2003	22.86	1984	1996	22.86			26.27	2035	30	3%	1.49	39.03
1271	FOURTH AVENUE, Stuarts Point	13.89	2003	14.54	1984	1996	14.54			16.70	2035	30	3%	1.49	24.82
1272	FOURTH AVENUE, Stuarts Point	1.68	2003	1.76	1984	1996	1.76			2.02	2035	30	3%	1.49	3.00
1273	WALTER CONN, Stuarts Point	2.24	2003	2.34	1984	1996	2.34			2.69	2035	30	3%	1.49	4.00
1274	WALTER CONN, Stuarts Point	8.51	2003	8.91	1984	1996	8.91			10.24	2035	30	3%	1.49	15.21
1275	JAMIESON ST, Stuarts Point	9.86	2003	10.32	1984	1996	10.32			11.85	2035	30	3%	1.49	17.61
1277	OCEAN, Stuarts Point	10.42	2003	10.90	1984	1996	10.90			12.53	2035	30	3%	1.49	18.62
1279	Stuarts Point Road, Stuarts Point	1.51	2003	1.58	1984	1996	1.58			1.82	2035	30	3%	1.49	2.70
1279	Stuarts Pt Reservoir, Stuarts Point	2.46	2003	2.57	1984	1996	2.57			2.95	2035	30	3%	1.49	4.39
1287	OCEAN, Stuarts Point	2.24	2003	2.34	1984	1996	2.34			2.69	2035	30	3%	1.49	4.00
1288	OCEAN, Stuarts Point	7.06	2003	7.39	1984	1996	7.39			8.49	2035	30	3%	1.49	12.61
1289	Stuarts Point Road, Stuarts Point	61.91	2003	64.81	1984	1996	64.81			74.46	2035	30	3%	1.49	110.64
1290	Stuarts Point Road, Stuarts Point	2.27	2003	2.37	1984	1996	2.37			2.72	2035	30	3%	1.49	4.05
1291	Stuarts Point Road, Stuarts Point	13.59	2003	14.23	1984	1996	14.23			16.34	2035	30	3%	1.49	24.29
1294	SIXTH, Stuarts Point	13.44	2003	14.07	1984	1996	14.07			16.16	2035	30	3%	1.49	24.02
1304	THIRD AVENUE, Stuarts Point	20.16	2003	21.10	1984	1996	21.10			24.25	2035	30	3%	1.49	36.03
1305	SECOND AVENUE, Stuarts Point	7.73	2003	8.09	1984	1996	8.09			9.29	2035	30	3%	1.49	13.81
1306	SECOND AVENUE, Stuarts Point	2.58	2003	2.70	1984	1996	2.70			3.10	2035	30	3%	1.49	4.60
1308	SECOND AVENUE, Stuarts Point	6.16	2003	6.45	1984	1996	6.45			7.41	2035	30	3%	1.49	11.01
1309	SECOND AVENUE, Stuarts Point	11.20	2003	11.72	1984	1996	11.72			13.47	2035	30	3%	1.49	20.02
1310	SECOND AVENUE, Stuarts Point	18.43	2003	19.29	1984	1996	19.29			22.17	2035	30	3%	1.49	32.94
1311	SECOND AVENUE, Stuarts Point	10.53	2003	11.02	1984	1996	11.02			12.66	2035	30	3%	1.49	18.82
1312	SECOND AVENUE, Stuarts Point	9.07	2003	9.50	1984	1996	9.50			10.91	2035	30	3%	1.49	16.21
1313	SECOND AVENUE, Stuarts Point	15.20	2003	15.91	1984	1996	15.91			18.28	2035	30	3%	1.49	27.17
1314	SECOND AVENUE, Stuarts Point	9.18	2003	9.61	1984	1996	9.61			11.05	2035	30	3%	1.49	16.41
1316	Water Treatment Works Road, Stuarts Point	107.21	2003	112.22	1984	1996	112.22			128.94	2035	30	3%	1.49	191.60
1342	NINETEENTH, Stuarts Point	27.22	2003	28.49	1984	1996	28.49			32.73	2035	30	3%	1.49	48.64
1343	MARINE PARADE, Stuarts Point	5.94	2003	6.21	1984	1996	6.21			7.14	2035	30	3%	1.49	10.61
1344	MARINE PARADE, Stuarts Point	1.12	2003	1.17	1984	1996	1.17			1.35	2035	30	3%	1.49	2.00
1345	MARINE PARADE, Stuarts Point	17.92	2003	18.76	1984	1996	18.76			21.55	2035	30	3%	1.49	32.03
1346	MARINE PARADE, Stuarts Point	10.46	2003	10.95	1984	1996	10.95			12.58	2035	30	3%	1.49	18.69
1347	MARINE PARADE, Stuarts Point	10.86	2003	11.37	1984	1996	11.37			13.07	2035	30	3%	1.49	19.42
1348	MARINE PARADE, Stuarts Point	19.04	2003	19.93	1984	1996	19.93			22.90	2035	30	3%	1.49	34.03
1349	MARINE PARADE, Stuarts Point	8.96	2003	9.38	1984	1996	9.38			10.78	2035	30	3%	1.49	16.01
1350	MARINE PARADE, Stuarts Point	14.00	2003	14.65	1984	1996	14.65			16.84	2035	30	3%	1.49	25.02
1351	MARINE PARADE, Stuarts Point	8.85	2003	9.26	1984	1996	9.26			10.64	2035	30	3%	1.49	15.81
1835	OCEAN, Stuarts Point	26.21	2003	27.43	1984	1996	27.43			31.52	2035	30	3%	1.49	46.84
2000	Water Treatment Works Road, Stuarts Point	86.07	2003	90.10	1984	1996	90.10			103.51	2035	30	3%	1.49	153.82
2001	Water Treatment Works Road, Stuarts Point	113.44	2003	118.74	1984	1996	118.74			136.43	2035	30	3%	1.49	202.73
2494	Stuarts Point Road, Stuarts Point	166.10	2003	173.87	1984	1996	173.87			199.76	2035	30	3%	1.49	296.85
										0.00	2035	30	3%	1.49	0.00
1280	Stuarts Point Road, Yarrahapinni	2.42	2003	2.53	1984	1996	2.53			2.91	2035	30	3%	1.49	4.32
1281	Stuarts Point Road, Yarrahapinni	31.71	2003	33.19	1984	1996	33.19			38.14	2035	30	3%	1.49	56.67
Existing Assets (post-1996)															
2282	Stuarts Point Road, Stuarts Point	277.28	2003	290.25	2001	2001	290.25			333.47	2035	30	7%	2.26	753.46
2287	Water Treatment Works Road, Stuarts Point	0.21	2003	0.22	2001	2001	0.22			0.26	2035	30	7%	2.26	0.58
2288	Stuarts Point Road, Stuarts Point	0.21	2003	0.22	2001	2001	0.22			0.26	2035	30	7%	2.26	0.58
2385	Stuarts Point Road, Stuarts Point	0.21	2003	0.22	2001	2001	0.22			0.26	2035	30	7%	2.26	0.58
Future Assets															
NONE															
Total TRANSFER		**1,220**					**1,277**		**870**	**1,467**					**2,439**

Table A5: Capital Charge Calculation	NOTES:	Service Area	Stuarts Point		Pre 1996 discount rate	3%
Macleay Water	Fluoridation funded by NSW Health, not included in capital charge	Capital Charge	$9,759	per ET	Post 1996 discount rate	7%
	THE YEAR WHEN CAPACITY IS TAKEN UP IS THE YEAR WHEN A NEW RESERVOIR IS REQUIRED FOR THE TOWN.					

Asset	Asset Sub-set	Capital cost ($'000)[1]	Year dollars[2,5]	Capital Cost ($'000, 2005/06$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2005/06 ($'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)
DEMAND MANAGEMENT															
Existing Assets (pre-1996)															
NONE															
Existing Assets (post-1996)															
NONE															
Future Assets															
Pricing Measure Model		20.00	2004	20.50	2005	2005	20.50			23.55	2035	30	7%	2.26	53.22
Pricing Measure Model		20.00	2004	20.50	2006	2006	19.16			22.01	2035	30	7%	2.26	49.73
Public Education for Reduction of External Water Use		5.00	2004	5.12	2007	2007	4.48			5.14	2035	29	7%	2.21	11.35
Public Education for Reduction of External Water Use		5.00	2004	5.12	2008	2008	4.18			4.81	2035	28	7%	2.16	10.36
Public Education for Reduction of External Water Use		5.00	2004	5.12	2009	2009	3.91			4.49	2035	27	7%	2.11	9.46
Resident House Shower Retrofit		2.53	2004	2.59	2007	2007	2.27			2.60	2035	29	7%	2.21	5.75
Resident House Shower Retrofit		2.55	2004	2.62	2008	2008	2.14			2.45	2035	28	7%	2.16	5.29
Resident House Shower Retrofit		2.57	2004	2.64	2009	2009	2.01			2.31	2035	27	7%	2.11	4.87
Resident Flat Shower Retrofit		0.07	2004	0.08	2007	2007	0.07			0.08	2035	29	7%	2.21	0.17
Resident Flat Shower Retrofit		0.07	2004	0.08	2008	2008	0.06			0.07	2035	28	7%	2.16	0.16
Resident Flat Shower Retrofit		0.08	2004	0.08	2009	2009	0.06			0.07	2035	27	7%	2.11	0.14
Holiday House Shower Retrofit		0.18	2004	0.18	2007	2007	0.16			0.18	2035	29	7%	2.21	0.40
Holiday House Shower Retrofit		0.18	2004	0.18	2008	2008	0.15			0.17	2035	28	7%	2.16	0.37
Holiday House Shower Retrofit		0.18	2004	0.18	2009	2009	0.14			0.16	2035	27	7%	2.11	0.34
Holiday Flat Shower Retrofit		0.16	2004	0.16	2007	2007	0.14			0.16	2035	29	7%	2.21	0.36
Holiday Flat Shower Retrofit		0.16	2004	0.17	2008	2008	0.13			0.16	2035	28	7%	2.16	0.33
Holiday Flat Shower Retrofit		0.16	2004	0.17	2009	2009	0.13			0.15	2035	27	7%	2.11	0.31
Rural (S&D) Shower Retrofit		0.23	2004	0.24	2007	2007	0.21			0.24	2035	29	7%	2.21	0.52
Rural (S&D) Shower Retrofit		0.23	2004	0.24	2008	2008	0.19			0.22	2035	28	7%	2.16	0.48
Rural (S&D) Shower Retrofit		0.23	2004	0.24	2009	2009	0.18			0.21	2035	27	7%	2.11	0.44
Leak Detection and Repair		7.72	2004	7.91	2006	2006	7.40			8.50	2035	30	7%	2.26	19.20
Leak Detection and Repair		7.72	2004	7.91	2007	2007	6.91			7.94	2035	29	7%	2.21	17.53
Leak Detection and Repair		7.72	2004	7.91	2008	2008	6.46			7.42	2035	28	7%	2.16	16.00
Leak Detection and Repair		7.72	2004	7.91	2009	2009	6.04			6.94	2035	27	7%	2.11	14.60
Business Audit and Retrofit - Permanent Savings		0.77	2004	0.79	2007	2007	0.69			0.80	2035	29	7%	2.21	1.76
Business Audit and Retrofit - Permanent Savings		0.78	2004	0.80	2008	2008	0.65			0.75	2035	28	7%	2.16	1.62
Business Audit and Retrofit - Permanent Savings		0.79	2004	0.81	2009	2009	0.61			0.71	2035	27	7%	2.11	1.49
Business Audit and Retrofit - Temporary Savings		0.08	2004	0.08	2007	2007	0.07			0.08	2036	30	7%	2.26	0.18
Business Audit and Retrofit - Temporary Savings		0.08	2004	0.08	2008	2008	0.07			0.07	2037	30	7%	2.26	0.17
Business Audit and Retrofit - Temporary Savings		0.08	2004	0.08	2009	2009	0.06			0.07	2038	30	7%	2.26	0.16
Total DEMAND MANAGEMENT		**98**					**89**		**870**	**103**					**227**

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 A6: Agglomeration

						Reduction Amount 2005$	$1,383	
Area	2005$ per ET Capital Charge	DSP Area 1 % of highest	DSP Area 2 % of highest	5 year growth (2005-2010)	Proportion of Growth %	Weighted Average Capital Charge	DSP Area Capital Charge	**Calculated Developer Charge**
Hat Head	$ 12,670.89	100%		36	3%	$ 410.21	$11,037	$9,654
Stuarts Point	$ 9,758.51	77%		46	4%	$ 403.68		
Kempsey, Lower Macleay and SWR	$ 8,740.71		100%	901	81%	$ 7,082.18	$8,677	$7,294
Crescent Head	$ 8,235.87		94%	129	12%	$ 955.42		
Weighted Average Capital Charge					100%	$ 8,851.48		**$7,468**

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Operating Statement

	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	*796*	*784*	*753*	*761*	*773*	*782*	*792*	*803*	*812*	*822*	*831*	*841*	*851*	*861*	*871*	*881*	*891*	*899*	*907*	*915*	*924*	*934*	*942*	*950*	*959*
Administration	353	347	333	337	342	346	351	356	360	364	369	373	378	382	387	391	396	400	403	407	410	415	418	422	426
Engineering and Supervision	443	437	420	424	430	436	441	447	451	457	462	468	474	479	484	490	495	499	504	509	514	519	524	528	533
Operation and Maintenance Expenses	*1522*	*1503*	*1442*	*1459*	*1475*	*1522*	*1539*	*1558*	*1578*	*1596*	*1615*	*1636*	*1654*	*1672*	*1692*	*1710*	*1729*	*1746*	*1761*	*1779*	*1797*	*1814*	*1827*	*1840*	*1854*
Operation Expenses	335	331	317	320	324	328	332	337	341	346	350	354	359	363	368	373	377	381	384	388	392	395	398	401	404
Maintenance Expenses	930	918	880	891	901	913	924	936	948	959	971	984	996	1007	1019	1030	1042	1052	1062	1073	1084	1094	1104	1112	1121
Energy Costs	235	232	223	225	227	231	233	236	239	241	244	247	249	252	255	258	260	263	265	268	271	274	275	277	279
Chemical Costs	22	22	22	22	22	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Purchase of Water	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
Depreciation	*1525*	*1610*	*1626*	*1634*	*1642*	*1877*	*1925*	*1930*	*1984*	*1987*	*1990*	*1994*	*1996*	*1999*	*2002*	*2005*	*2008*	*2012*	*2015*	*2018*	*2021*	*2024*	*2027*	*2030*	*2033*
System Assets	1444	1531	1549	1559	1569	1809	1925	1930	1984	1987	1990	1994	1996	1999	2002	2005	2008	2012	2015	2018	2021	2024	2027	2030	2033
Plant & Equipment	81	79	77	75	73	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Expenses	774	775	711	652	589	1354	1784	1661	1790	1656	1523	1395	1274	1160	1046	933	825	731	641	556	470	385	301	217	132
Other Expenses	311	315	319	323	328	332	336	340	344	348	352	357	361	365	369	373	377	381	384	388	392	396	400	403	406
TOTAL EXPENSES	**4928**	**4987**	**4850**	**4830**	**4807**	**5868**	**6376**	**6292**	**6508**	**6409**	**6311**	**6222**	**6137**	**6057**	**5980**	**5902**	**5831**	**5768**	**5709**	**5656**	**5604**	**5553**	**5497**	**5440**	**5385**
REVENUES																									
Rates & Service Availability Charges	*2933*	*2943*	*3038*	*3085*	*3131*	*3175*	*3218*	*3267*	*3314*	*3360*	*3411*	*3460*	*2132*	*2160*	*2193*	*2221*	*2253*	*2278*	*2309*	*2339*	*2367*	*2394*	*2413*	*2439*	*2462*
Residential	2227	2235	2307	2342	2377	2410	2444	2480	2516	2551	2590	2627	1619	1640	1665	1686	1710	1730	1753	1776	1797	1818	1833	1852	1869
Non-Residential	706	708	731	743	754	765	774	787	798	809	821	833	513	520	528	534	542	549	556	563	570	576	581	587	593
User Charges	*2506*	*2515*	*2596*	*2636*	*2676*	*2713*	*2751*	*2792*	*2832*	*2871*	*2915*	*2957*	*1821*	*1846*	*1875*	*1897*	*1925*	*1947*	*1974*	*1999*	*2022*	*2045*	*2063*	*2084*	*2104*
Sales of Water : Residential	1583	1589	1640	1665	1691	1714	1738	1764	1789	1814	1841	1868	1150	1166	1185	1199	1216	1230	1247	1262	1278	1292	1303	1316	1329
Sales of Water : Non-Residential	923	926	956	971	986	1000	1013	1028	1043	1058	1073	1089	671	680	691	699	709	717	727	736	745	753	760	767	775
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	290	230	168	230	311	274	241	275	310	340	376	422	404	355	312	274	249	226	208	195	185	179	170	162	156
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	*136*	*824*	*133*	*132*	*130*	*129*	*127*	*126*	*124*	*123*	*122*	*120*	*119*	*118*	*115*	*115*	*113*	*111*	*110*	*108*	*107*	*105*	*103*	*101*	*100*
Grants for Acquisition of Assets	0	690	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	136	135	133	132	130	129	127	126	124	123	122	120	119	118	115	115	113	111	110	108	107	105	103	101	100
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	*359*	*1025*	*1011*	*1040*	*1055*	*1069*	*1091*	*1098*	*1120*	*1135*	*1156*	*1178*	*1084*	*1098*	*1113*	*1142*	*1156*	*975*	*989*	*1004*	*1018*	*1025*	*829*	*836*	*844*
Developer Charges	359	1025	1011	1040	1055	1069	1091	1098	1120	1135	1156	1178	1084	1098	1113	1142	1156	975	989	1004	1018	1025	829	836	844
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	**6224**	**7539**	**6945**	**7123**	**7304**	**7360**	**7427**	**7558**	**7701**	**7829**	**7979**	**8138**	**5560**	**5577**	**5609**	**5649**	**5695**	**5538**	**5590**	**5645**	**5699**	**5749**	**5579**	**5622**	**5666**
OPERATING RESULT	**1296**	**2551**	**2095**	**2294**	**2497**	**1492**	**1051**	**1266**	**1193**	**1420**	**1668**	**1916**	**-578**	**-480**	**-371**	**-253**	**-135**	**-230**	**-119**	**-11**	**95**	**196**	**82**	**182**	**281**
OPERATING RESULT (less Grants for Acq of Assets)	**1296**	**1861**	**2095**	**2294**	**2497**	**1492**	**1051**	**1266**	**1193**	**1420**	**1668**	**1916**	**-578**	**-480**	**-371**	**-253**	**-135**	**-230**	**-119**	**-11**	**95**	**196**	**82**	**182**	**281**

Table A8: Summary of Reduction Amount Iterations

	Iteration 1	Iteration 2	Iteration 3
Weighted Average Capital Charge (2004$)	8,621	8,621	8,621
Input Reduction Amount, years 1 to 5 (2004$)	1,000	1,307	1,348
Input Residential Developer Charge (2004$)	7,621	7,314	7,273
Output Reduction Amount (2004$)	1,307	1,348	1,348

Table A9 - Calculation of Developer Charges using the NPV of Annual Charges Method **X Council - Utility**

Based on Input Reduction Amounts of ##### /ET (3rd iteration)

Year	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		2004/05																													
Base Year		2004/05																													
Average Capital Charges per ET	(2004/05$)	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621	8,621
Inflation from Base year to Year 1 (%)		0.00%																													
Capital Charges	(2004/05$)	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,620	8,621	8,621	8,621
Input Reduction Amounts	**(2004/05$)**	**1,348**	**1,348**	**1,348**	**1,348**	**1,348**	**778**	**556**	**299**	**14**	**-301**	**-649**	**-1,045**	**-1,481**	**407**	**305**	**185**	**58**	**-93**	**-230**	**-397**	**-570**	**-776**	**-997**	**-1,226**	**-1,491**	**-1,770**	**-2,084**	**-2,422**	**-2,773**
Developer Charge per ET	(2004/05$)	7,270	7,270	7,270	7,270	7,270	7,840	8,060	8,320	8,610	8,920	9,270	9,660	10,100	8,210	8,320	8,430	8,560	8,710	8,850	9,020	9,190	9,400	9,620	9,850	10,110	10,390	10,700	11,040	11,390	
Developer Charges per assessment - Residential	(2004/05$)	7,120	7,120	7,120	7,120	7,120	7,680	7,900	8,150	8,440	8,740	9,080	9,470	9,900	8,050	8,150	8,260	8,390	8,540	8,670	8,840	9,010	9,210	9,430	9,650	9,910	10,180	10,490	10,820	11,160	
Developer Charges per assessment - Non-Residential	(2004/05$)	19,224	19,224	19,224	19,224	19,224	20,736	21,330	22,005	22,788	23,598	24,516	25,569	26,730	21,735	22,005	22,302	22,653	23,058	23,409	23,868	24,327	24,867	25,461	26,055	26,757	27,486	28,323	29,214	30,132	
Assessments & ETs		2003/04	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
Residential Assessments at year end		9,541	9,649	9,776	9,901	10,030	10,161	10,294	10,430	10,567	10,707	10,849	10,994	11,142	11,278	11,416	11,556	11,699	11,844	11,966	12,090	12,216	12,344	12,473	12,577	12,682	12,788	12,895	13,003	13,084	13,166
Non Residential Assessments at year end		1,686	1,700	1,714	1,728	1,742	1,756	1,770	1,784	1,798	1,812	1,826	1,840	1,854	1,867	1,880	1,893	1,907	1,921	1,933	1,945	1,957	1,969	1,981	1,991	2,001	2,011	2,021	2,031	2,040	2,049
Backlog Assessments at year end		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Assessments at year end		11,227	11,349	11,490	11,629	11,772	11,917	12,064	12,214	12,365	12,519	12,675	12,834	12,996	13,145	13,296	13,449	13,606	13,765	13,899	14,035	14,173	14,313	14,454	14,568	14,683	14,799	14,916	15,034	15,124	15,215
ET per Residential Assessment		0.98																													
ET per Non Residential Assessment		2.7																													
Total ETs		13,902	14,046	14,208	14,369	14,533	14,699	14,867	15,038	15,210	15,385	15,562	15,742	15,925	16,093	16,264	16,436	16,614	16,794	16,946	17,100	17,256	17,256	17,256	17,256	17,256	17,256	17,256	17,256	17,256	17,256
New ETs per year (excluding backlog)		-	144	162	160	164	166	168	171	172	175	177	180	183	168	170	172	178	180	152	154	156	156	156	156	156	156	156	156	156	156
Cumulative New ETs (excluding backlog)		-	144	306	466	630	797	965	1,136	1,308	1,483	1,660	1,840	2,023	2,191	2,361	2,534	2,712	2,891	3,043	3,197	3,353	3,509	3,665	3,821	3,977	4,133	4,288	4,444	4,600	4,756
PV (new ETs excluding backlog) 30 years @ 7% pa		-	**2,191**	**2,212**	**2,215**	**2,221**	**2,223**	**2,222**	**2,220**	**2,214**	**2,207**	**2,196**	**2,182**	**2,165**	**2,142**	**2,134**	**2,123**	**2,109**	**2,088**	**2,064**	**2,068**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**	**2,070**
Revenue and Expenditure																															
Rates & Charges Revenue, Trade Waste Charges, Other Sales and Charges, Pensioner Rebate Grant																															
Revenue ($'000)	(2004/05$)	5,575	5,593	5,767	5,853	5,937	6,017	6,096	6,185	6,270	6,354	6,448	6,537	4,072	4,124	4,183	4,233	4,291	4,336	4,393	4,446	4,496	4,544	4,579	4,624	4,666	4,715	4,760	4,793	4,822	
OMA Expenditure ($'000)	(2004/05$)	2,318	2,287	2,195	2,220	2,248	2,304	2,331	2,361	2,390	2,418	2,446	2,477	2,505	2,533	2,563	2,591	2,620	2,645	2,668	2,694	2,721	2,748	2,769	2,790	2,813	2,837	2,858	2,875	2,894	
Revenue less OMA Expenditure ($'000)		3,257	3,306	3,572	3,633	3,689	3,713	3,765	3,824	3,880	3,936	4,002	4,060	1,567	1,591	1,620	1,642	1,671	1,691	1,725	1,752	1,775	1,796	1,810	1,834	1,853	1,878	1,902	1,918	1,928	
Revenue less OMA Expenditure for new ETs ($'000)		33	71	116	158	200	241	284	329	374	420	468	516	213	231	250	268	288	304	323	340	361	381	401	423	444	467	490	511	531	
PV (Revenue less OMA Expenditure for new ETs) 30 years @ 7% pa ($'000)		**3,608**	**3,382**	**3,071**	**2,635**	**2,204**	**1,729**	**1,234**	**663**	**32**	**-660**	**-1,416**	**-2,262**	**-3,174**	**869**	**647**	**391**	**121**	**-191**	**-475**	**-821**	**-1,181**	**-1,605**	**-2,063**	**-2,538**	**-3,086**	**-3,664**	**-4,312**	**-5,012**	**-5,739**	
Output (calculated) Reduction Amounts		**1,647**	**1,529**	**1,386**	**1,186**	**992**	**778**	**556**	**299**	**14**	**-301**	**-649**	**-1,045**	**-1,481**	**407**	**305**	**185**	**58**	**-93**	**-230**	**-397**	**-570**	**-776**	**-997**	**-1,226**	**-1,491**	**-1,770**	**-2,084**	**-2,422**	**-2,773**	
Average Calculated Reduction for a 5 yr Period		**1,348**	**1,348**	**1,348**	**1,348**	**1,348**	**778**	**556**	**299**	**14**	**-301**	**-649**	**-1,045**	**-1,481**	**407**	**305**	**185**	**58**	**-93**	**-230**	**-397**	**-570**	**-776**	**-997**	**-1,226**	**-1,491**	**-1,770**	**-2,084**	**-2,422**	**-2,773**	
% Difference Between the Input and Output		**0%**																													

Difference Less Than 2%, Calculation Complete

Developer Charges for the first 5 years = $7270 per ET in year 2004/05 $

General Notes:

1. Approximately three iterations of the financial planning model are normally required until the Ouput Reduction Amount for the first 5 years is within 2% of the Input Reduction Amount.

Table A10 – Water Supply Levels of Service.

Description	Level of Service
AVAILABILITY OF SERVICE	
Extent of area serviced	Bellbrook, Willawarrin, Kempsey District (West Kempsey, South Kempsey, Frederickton, Clybucca, Smithtown/Gladstone), Stuarts Point, South West Rocks, Hat Head, Crescent Head
Domestic peak day	2,500 L/ tenement /day
Domestic Annual[1]	197 kL / connected property
Total Annual Average Consumption (potable + non-potable)[2]	4,300 ML / annum
Peak day/average day consumption ratio	Kempsey and Lower Macleay System 2.0 Bellbrook and Willawarrin 2.4 Stuarts Point 3.2 South West Rocks 2.8 Hat Head 3.1 Crescent Head 2.6
Maximum static pressure[3]	90 m head
Minimum static pressure - new developments - existing customers	 15 m head 12 m head
Water flow rates Diameter of the water service pipe (millimetres) - 20 - 25 - 32 - 40 - 50	 Minimum flow rate (litres per minute) - 20 - 35 - 60 - 90 - 160
SERVICE INTERRUPTIONS TO CONSUMERS:	
Planned:	
Notice given to customers	2 days
Duration of interruptions	Notification of duration will be given to affected customers
Unplanned:	
Total number of interruptions per year	No more than 2 per customer per year

[1] 2003/04 NSW Water Utility Performance Summary, DEUS
[2] 2003/04 NSW Water Utility Performance Summary, DEUS
[3] Kempsey Shire Council Strategic Business Plan for Water Supply Services, 1997

Description	Level of Service
SERVICE PROVIDED	
Time to provide an individual standard connection to water supply in a serviced area	10 working days
RESPONSE TIMES Defined as time to have staff on-site or to investigate problem or answer inquiry. The following response times are to be achieved in 90% of cases.	
System failure or complaint	Response Times
PRIORITY 1: - Pump station failure - Water treatment plant malfunction - Valve failure - Major main break	1 hour (during business hours) 2 hours (during after hours)
PRIORITY 2: - Minor main break - Leaking property connection - Telemetry failure - Partial valve failure	2 hours (during business hours) 4 hours (during after hours)
PRIORITY 3: - Leak from water main - Leak from hydrant - Partial failure of property connection	1 working day
PRIORITY 4: - Minor problem or complaint which can be dealt with at a time convenient to customer and Council, e.g. a minor leak in a water service	Within 2 weeks
CONSUMPTION RESTICTIONS IN DROUGHTS	
Level of restriction aphid through a repeat of the worst drought on record	80% normal usage
Maximum duration of restrictions	6 months / 10 year period
Maximum frequency of restrictions	1 in 10 year period