



Richmond Valley Council

Development Servicing Plan

Water Supply Services

24 September 2010

DEVELOPMENT SERVICING PLAN – WATER SUPPLY

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DEVELOPMENT SERVICING PLAN – WATER SUPPLY

SUMMARY

This Development Servicing Plan (DSP) covers water supply Developer Charges for the areas served by the Richmond Valley Council water supply schemes.

Table 1 – Service Areas

Service Area	Areas Included
Casino	The area supplied by the Casino Water Treatment Plant (WTP)
Evans Head	The area supplied by the Evans Head distribution system
Coraki	The area supplied by the Coraki distribution system
Broadwater/Rileys Hill	The area supplied by the Broadwater/Rileys Hill distribution system
Woodburn	The area supplied by the Woodburn distribution system

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 (DLWC), now Department of Environment, Climate Change and Water (DECCW) pursuant to section 306 (3) of the *Water Management Act 2000*.

The timing and expenditure for works serving the area covered by this DSP and the calculation of developer charges is given in Appendix 1. Levels of service to be provided to the service areas are summarised in Section 4.6.

The developer charges for the water supply DSP areas are shown in Table 2.

Table 2 – Developer Charge (2009/10 \$ per Equivalent Tenement)

DSP Area	Step 1 from 1/01/2011	Step 2 from 1/07/2011	Step 3 from 1/7/2012
Casino	5,000	6,300	7,500
MLRR Area – Evans Head, Coraki, Woodburn, Broadwater and Rileys Hill	1,750	1,750	1,750

The developer shall also be liable for all additional works not specifically included in the capital works program, where required to serve the development. The developer shall be responsible for the full cost of the design and construction of water supply reticulation works within subdivisions.

Developer charges relating to this DSP will be reviewed after a period of not more than 6 years.

In the period between any review, developer charges will be adjusted annually on 1 July on the basis of the movements in the CPI for Sydney, excluding the impact of GST.

Further details relating to the water supply assets and to this DSP can be found in the Background Document in Appendix 1.



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1. INTRODUCTION

Section 64 of the Local Government Act 1993 enables a local water utility to levy developer charges for water supply and sewerage management works. This power 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 developer charges to be levied on development areas utilising a local water utility's infrastructure.

This DSP covers water supply Developer Charges for the provision of water to the areas served by the Richmond Valley water supply schemes. The provision of bulk water supply services by Rous Water is covered by the Rous Water Bulk Water Supply Development Servicing Plan.

This DSP has been prepared in accordance with the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (December 2002) issued by the Department for Land and Water Conservation (now NSW Office of Water - NOW), pursuant to section 306 (3) of the Water Management Act 2000.

This DSP supersedes any other requirements related to water supply developer charges for the areas 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.



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2. ADMINISTRATION

DSP Name	Casino Water Supply
DSP Area	The area covered by this DSP is shown in Appendix 2.
DSP Boundaries	The DSP area boundary is defined as the area served by the Casino water supply system. The water supply scheme is discussed in Section 4.

DSP Name	MLRR Water Supply
DSP Area	The area covered by this DSP is shown in Appendix 2.
DSP Boundaries	The DSP area boundary is defined as the area served by the Rous Water bulk supply system in Evans Head, Coraki, Woodburn, Broadwater and Rileys Hill. The water supply scheme is discussed in Section 4.

Developments may attract contributions where such development will utilise the Richmond Valley water supply schemes. Additional contributions related to the provision of bulk water supply services by Rous Water may also apply.

Richmond Valley Council does not intend to provide water supply services outside these DSP areas within the next 5 years. Any development outside these DSP areas that requires a water supply service may require a special agreement with Council.

2.1 Payment of Developer Charges

2.1.1 Indexation

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.

2.1.2 Tenement and Demand Projections

Most types of development will increase the demand on a water supply system. The increase in demand is assessed in terms of equivalent tenements (ET). The calculation of equivalent tenements for each development will be made in accordance with the methods described in the NSW Water Directorate publication *Section 64 Determinations of Equivalent Tenements Guidelines (2005)*.

2.1.3 Timing

On receipt of a Development Application or a Water Service Application, Richmond Valley Council will advise the charges payable under this DSP.

Payment of developer charges must be made in the form of a cash payment to Richmond Valley Council.



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The developer contribution will apply for 3 months from the date of the assessment notice. After this time, the rate may increase (through indexation or review of this DSP) from the time the condition appears on the notice of development consent until the payment is received.

2.1.4 Waiver

Richmond Valley Council may waive developer contributions where the proponent demonstrates to Council's satisfaction that it is a non-profit and charitable organisation, which by virtue of carrying out such development, is considered to be making a significant and positive contribution to the community and is unable to recover the charge from the end user.

2.2 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 services.

2.3 DSP Review

Developer charges relating to this DSP will be reviewed after a period of not more than 6 years.



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; and
- 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.

$$\text{Developer Charge} = \text{Capital Charge (cost of providing the assets)} - \text{Reduction Amount (cost recovered through annual bills)}.$$

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* (December 2002).

NSW non-metropolitan water supply authorities which propose to levy developer charges for water supply and/or sewerage need to prepare DSPs. The DSP details the calculation of the developer charges and is required to be fair and transparent.

Water supply authorities 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 DWE.

Developer charges relating to a particular DSP should be reviewed by the water authority 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, then a new DSP shall be prepared, exhibited and registered.

3.2 Capital Charge

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).

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



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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.

$$\text{Capital Charge} = \text{Capital Cost} \times \text{Return on Investment (ROI) Factor}$$

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; or
- A new development area of over 500 lots.

Where the capital charges for two or more service areas are within 30% of each other, they are agglomerated into a single DSP area.

3.3 Reduction Amount

Richmond Valley Council has adopted the NPV of annual charges method for calculation of the Reduction Amount. The Reduction Amount is calculated across all of the RVC water supply systems.

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. RICHMOND VALLEY WATER SUPPLY SERVICES

Richmond Valley water supply is comprised of two separate water supply systems – Casino and the Mid and Lower Richmond River (MLRR) serving the urban areas of the LGA (refer Figure 1). Scheme maps are attached in Appendix 2.



Figure 1 – Richmond Valley Local Government Area

4.1 Casino Water Supply

The Casino system comprises one water filtration plant, one raw water pumping station, four reservoirs, one distribution pump station and approximately 115km pipes that distributes water to customers. Raw water from the Richmond River (Jabour Weir) is fully treated and reticulated to the town of Casino.

4.2 Mid and Lower River (MLRR)

The MLRR system distributes water purchased from Rous Water. Water is supplied through four separate distribution systems as follows:

- Evans Head;



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- Woodburn;
- Broadwater and Rileys Hill; and
- Coraki (including Box Ridge).

Council operates 8 reservoirs, four pump stations and a network of pipes (77km). Rous Water uses Council's Langs Hill reservoir to provide bulk water to Broadwater and Rileys Hill.

4.3 Growth Projections

Developer charges contribute to the provision of system capacity to meet the demands of future development. New development may be served by a combination of existing and/or new assets. Long term (30 year) population growth in Evans Head, Broadwater, Coraki and Woodburn is assumed to correspond to lot releases in the RVC urban release strategies. Long term growth in Casino is expected to be 1.0% p.a. The population growth rates adopted in RVC's Strategic Business Plan are given in Table 3. The projected number of water supply assessments in each area is shown in Table 4.

Table 3 - Population Growth Rates

Town	Adopted 30 year Average Growth Rate (average % p.a.)
Casino	1.0 %
Broadwater/Rileys Hill	1.5 %
Coraki	0.8 %
Woodburn	1.8%
Evans Head	2.4 %
Shire-wide average	1.3 %

Table 4 - Water Supply Assessment Projections – 5 year intervals

Water	Type	2009	2010	2014	2019	2024	2029	2034	2039
Casino	Residential	4,088	4,127	4,287	4,497	4,717	4,949	5,192	5,448
	Non-residential	635	640	660	686	714	743	774	806
	Total assessments	4,723	4,767	4,948	5,184	5,432	5,692	5,966	6,254
Evans Head	Residential	1,439	1,481	1,663	1,867	2,058	2,269	2,501	2,758
	Non-residential	199	204	225	250	272	297	325	355
	Total assessments	1,638	1,685	1,888	2,117	2,330	2,566	2,826	3,113



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Water	Type	2009	2010	2014	2019	2024	2029	2034	2039
Woodburn	Residential	262	267	287	313	340	367	397	430
	Non-residential	61	62	67	73	79	85	92	99
	Total assessments	323	329	353	385	419	453	489	529
Broadwater /Rileys Hill	Residential	255	258	271	288	307	326	347	368
	Non-residential	27	27	28	30	31	33	35	37
	Total assessments	282	285	299	318	339	359	381	405
Coraki	Residential	469	473	487	506	525	545	566	588
	Non-residential	70	70	72	75	78	81	83	86
	Total assessments	539	543	559	581	603	626	650	675
RVC	Residential	6,513	6,606	6,994	7,471	7,948	8,457	9,004	9,592
	Non-residential	992	1,004	1,053	1,114	1,174	1,239	1,309	1,384
	Total assessments	7,505	7,610	8,047	8,585	9,122	9,696	10,312	10,976

4.4 System Capacity

RVC plans to augment its water supply systems to cater for population growth, improve security of supply during drought, adapt to new water access rules and to manage water quality. The system capacity is based on the following:

- A water supply residential assessment is equivalent to 0.932 water supply ET. A water supply non-residential assessment in Evans Head, Woodburn and Coraki is equivalent to 1.08 water supply ET and 4.41 water supply ET in Broadwater and Casino (refer Appendix 1);
- Headworks – secure yield of water sources (ML/yr) and average annual demand of 200kL/residential property/year;
- Water treatment plant – design capacity of WTP and peak day demand of 2,500L/ET/day;
- Reservoirs – capacity in ML and peak day demand of 2,500L/ET/day (unless the total capacity is less than the distribution system capacity); and
- Distribution system – projected number of tenements served at the end of the design horizon (30 years).

Design demand is based on Council's agreed levels of service (refer Section 4.6).



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Table 5 – System Capacity

Asset	Capacity	Capacity (ET)
Jabour Weir and Raw Water Pump Station	Secure Yield = 2,500 ML/a	11,600
Casino WTP	Capacity = 23 ML/d	8,600
Casino Transfer System	6,254 total assessments at 2039	8,636
Evans Head Transfer System	3,113 total assessments at 2039	2,954
Woodburn Transfer System	529 total assessments at 2039	508
Broadwater/Rileys Hill Transfer System	405 total assessments at 2039	505
Coraki Transfer System	675 total assessments at 2039	642

4.5 Design Parameters

Investigation and design of water supply system components is based on the Water Supply Investigation Manual (1986), WSAA Water Supply Code of Australia - WSA 03 2002, and AUSPEC design specifications for water supply.

4.6 Standards of Service

System design and operation are based on the following standards of service. The Levels of Service are the targets which RVC aims to meet and are not intended as a formal customer contract.

Table 6 – Levels of Service

Description	Units	Target Level of Service
System Performance		
Minimum pressure at water meter	m head	12 except for existing high level zones
Average annual demand	kL/res property	200
Domestic quantity available per peak day	L/tenement/day	2,500
Consumption Restrictions in Droughts		
Maximum frequency of restrictions (subject to supply volume, blue green algae and Rous Water Guidelines)	number of times per 10 years	5
Maximum duration of Restrictions	months/10 yr period	12
Ability to supply demand through the worst drought on record	% of water demand	80 (i.e. a 20% reduction in consumption).



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Description	Units	Target Level of Service
<i>Interruptions to Supply (per year per supply)</i>		
<i>Planned (95% of time)</i>		
Notice given to domestic customers (between 9am and 4pm)	days	1
Notice given to industrial and commercial customers (times to be negotiated)	days	7
<i>Unplanned</i>		
Maximum duration	hours	8
Maximum interruptions to supply	per 1,000 properties p.a.	70
Main breaks	per 100 km main p.a.	10
<i>Service Provided</i>		
Time to provide an individual, residential connection to water supply in serviced area	working days	10
<i>Customer Complaints</i>		
Number	events per 1000 properties p.a.	5
<i>Water Quality</i>		
Potable Water Quality		ADWG 2004

Response Time (time to have staff onsite or to investigate a problem or answer an enquiry)		
Priority, Issues and Effects	Customer given informed feedback	Repairs to commence
<i>Priority 1: A complete failure to maintain continuity of supply to large number of customers or critical user at critical time</i>		
Possible Issues: Broken water main, broken service, jammed hydrant, no water, dirty water, leak creating a major issue. Typical Effects: Personal injury or risk to public health, loss of supply, major property damage, failure to maintain quality or quantity of service, large volume of water wasted, significant unplanned depletion of service reservoir, major environmental impact.	Within 1 hour	Within 2 hours



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Response Time (time to have staff onsite or to investigate a problem or answer an enquiry)		
Priority, Issues and Effects	Customer given informed feedback	Repairs to commence
<i>Priority 2: Partial failure to maintain continuity of supply to small no. of customers or critical user at a non critical time</i>		
Possible Issues: Missing hydrant valve lid, poor pressure, leaking tapping, ferrule, stop tap, water main/service, valve or hydrant, minor leak on footpath or roadway, partial failure of connections, water hammer, faulty or damaged meter. Typical Effects: Minor property damage, minor environmental impact	Within 1 working day	Within 24 hours
<i>Priority 3: Known fault, non urgent</i>		
Possible Issues: Service disconnection, faulty hydrant valve, missing hydrant. Typical Effects: Need for preventative maintenance, minor customer impact.	Within 3 working days	Programmed Maintenance List

4.7 Future Capital Works

Capital works of \$44.2 M (2009/10 \$) will be required over the next 30 years to provide water supply services (refer Appendix 1). Any capital works in addition to those identified in this plan will be funded by developers. The developer shall be responsible for the full cost of the design and construction of reticulation works within subdivisions.



5. CALCULATION OF DEVELOPER CHARGES

5.1 Capital Charge

The capital charge was calculated for each service area based on the existing and future assets providing the services to each of the towns as shown in Table 7. Calculations are given in Appendix 1.

Table 7 – Calculated Capital Charges

Service Area	Initial Capital Charge (2009/10 \$ per ET)
Casino	9,047
Evans Head	2,551
Woodburn	2,464
Broadwater/Rileys Hill	11,584
Coraki	4,600

The capital charges were grouped into DSP areas of within 30% of the highest capital charge. The outcome is agglomeration of the DSP areas as shown in Table 8. The weighted average capital charge is determined from the proportion of growth in each DSP area. This is used to calculate the reduction amount for the whole shire.

Table 8 – Agglomeration of Service Areas (2009/10 \$ per ET)

Service Area	Capital Charge	DSP Area 1	DSP Area 2	DSP Area 3	Proportion of Growth	DSP Area Capital Charge	Weighted Average Capital Charge
Broadwater/Rileys Hill	11,584	100%	78%	4%	4%	9,235	411
Casino	9,047	44%			3,991		
Coraki	4,600	40%	100%		4%	4,600	180
Evans Head	2,551	55%	100%	42%	2,541	1,084	146
Woodburn	2,464		97%	6%			
Totals				100%			5,812



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5.2 Reduction Amount

The reduction amount for RVC developer charges for water supply was calculated as \$1,508 per ET (2009/10 \$) (refer to Appendix 1).

5.3 Developer Charges

The calculated developer charges for the DSP areas are shown in Table 9. These developer charges reflect the cost of assets for serving new development.

Table 9 – Calculated Developer Charges

DSP Area	Capital Charge (2009/10 \$/ET)	Reduction Amount (2009/10 \$/ET)	Calculated Developer Charge (2009/10 \$/ET)
Broadwater/ Rileys Hill	11,584	1,508	10,076
Casino	9,047		7,539
Coraki	4,600		3,092
Evans Head	2,551		1,043
Woodburn	2,464		956

RVC will apply developer charges for water supply based on application of the full calculated charge with charges for the MLRR towns (Evans Head, Woodburn, Coraki and Rileys Hill) agglomerated. The new charges for Casino will be phased in over a 2-year period. Developer charges and the cross-subsidy during the phase-in period are shown in Table 10. At the completion of the phase-in period, the cross-subsidy payable by existing customers would be zero.

Table 10 – Adopted Developer Charges

DSP Area	Developer Charge (2009/10 \$/ET)	Step 1 from 1/01/2011	Step 2 from 1/07/2011	Step 3 from 1/7/2012
Casino	7,500	5,000	6,300	7,500
MLRR - Evans Head, Coraki, Woodburn, Broadwater and Rileys Hill	1,750	1,750	1,750	1,750
Weighted Average	4,300	3,200	3,700	4,300
Total Cross-Subsidy (\$ p.a.)	-	155,115	86,122	0
Cross-subsidy (\$ per residential assessment p.a.)	-	23	13	0

Background information and calculations relating to this DSP are included in the Background Document attached in Appendix 1. This document contains detailed calculations for the capital charge and reduction amount, including asset commissioning dates, size/length of existing assets, valuation of assets and calculation of the reduction amount.



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6. ABBREVIATIONS AND GLOSSARY

Annual demand	Total annual water consumption
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
CPI	Consumer Price Index
Developer Charge (DC)	A charge levied on developers to recover part of the capital cost incurred in providing infrastructure to the development.
Discount Rate	The rate used to calculate the present value of money arising in the future.
DSP	Development Servicing Plan
DLWC	(former) Department of Land and Water Conservation
EP	Equivalent person
ET	Equivalent tenement
IPART	Independent Pricing and Regulatory Tribunal
kL	Kilolitres
L	Litres
LWU	Local water utility
MEERA	Modern Equivalent Engineering Replacement Asset
mg	milligrams
mL	millilitres
ML	Megalitres
NOW	NST Office of Water
NPV	Net present value
Peak day demand	Highest water consumption (in a day) in the year
PV	Present value.
Reduction Amount	The amount by which the capital charge is reduced to arrive at the developer charge. This amount reflects the present value of 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.
Service Area	An area served by a separate water supply system, a small separate town or village, or a new development of over 500 lots.
WTP	Water treatment plant



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7. REFERENCES

- DLWC (2002) *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*.
- Hydrosphere Consulting (2010) *Strategic Business Plans for Water Supply and Sewerage Services*
- NSW Water Directorate (2005) *Section 64 Determinations of Equivalent Tenements Guidelines*.



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Appendix 1 - DSP Background Document

RVC Growth Projections

Service Area	Type	Water Assessments								30 year growth	Proportion of RVC growth	Existing Customers	Future Customers	% Future MLRR Customers
		2009	2010	2014	2019	2024	2029	2034	2039					
Casino	Residential	4088	4127	4287	4497	4717	4949	5192	5448	1360	44%	76%	24%	
	Non-residential	635	640	660	686	714	743	774	806	171				
	Total	4723	4767	4948	5184	5432	5692	5966	6254	1531				
Evans Head	Residential	1439	1481	1663	1867	2058	2269	2501	2758	1319	42%	53%	47%	66%
	Non-residential	199	204	225	250	272	297	325	355	156				
	Total	1638	1685	1888	2117	2330	2566	2826	3113	1475				
Woodburn	Residential	262	267	287	313	340	367	397	430	168	6%	61%	39%	11%
	Non-residential	61	62	67	73	79	85	92	99	38				
	Total	323	329	353	385	419	453	489	529	206				
Broadwater/Rileys Hill	Residential	255	258	271	288	307	326	347	368	113	4%	70%	30%	9%
	Non-residential	27	27	28	30	31	33	35	37	10				
	Total	282	285	299	318	339	359	381	405	123				
Coraki	Residential	469	473	487	506	525	545	566	588	119	4%	80%	20%	14%
	Non-residential	70	70	72	75	78	81	83	86	16				
	Total	539	543	559	581	603	626	650	675	136				
RVC	Residential	6513	6606	6994	7471	7948	8457	9004	9592	3079	100%	68%	32%	
	Non-residential	992	1004	1053	1114	1174	1239	1309	1384	392				
	Total	7505	7610	8047	8585	9122	9696	10312	10976	3471				

RVC Total Assessments 2008/09

Customer Type	Water Assessments	Proportion of annual water charge	Water ET
Residential			
RES SINGLE	3469	1	3469
RES MULTIPLE	1003	1	1003
RES VACANT	292	0.25	72
Pensioners	1685	0.87	1466
Total res	6449		6010
Residential ET per assessment			0.932

Non-residential	Applies to Broadwater and Casino only. The ratio for other towns without significant non-res usage is the same as the sewerage ratio.
N/RES INDUSTRIAL	3
COMMERCIAL	791
COMMERCIAL VACANT	79
RURAL	64
PUBLIC PARK	119
CANCELLED ASSESSMENT	0
Total non-res	1056

		ratio
Non-residential water revenue 08/09	\$1,592,250	0.776
Residential water revenue	\$2,052,872	

Non-residential ET	4662
Non-Residential ET per assessment	4.41

Water ET capacity**Water Transfer Systems****System**

Casino

Assessments at	2039	ET/assessment	ET
Residential	5448	0.932	5077
Non-Residential	806	4.41	3559
Total	6254	1.38	8636

Evans Head

Residential	2758	0.932	2570
Non-Residential	355	1.082	384
Total	3113	0.95	2954

Woodburn

Residential	430	0.932	401
Non-Residential	99	1.082	108
Total	529	0.96	508

Broadwater/Rileys Hill

Residential	368	0.932	343
Non-Residential	37	4.414	162
Total	405	1.25	505

Coraki

Residential	588	0.932	548
Non-Residential	86	1.082	94
Total	675	0.95	642

Total RVC

Residential	9592	0.932	8939
Non-Residential	1384	3.112	4306
Total	10976	1.21	13245

Casino WTP**Capacity****PDD**

23 ML/day 2.5 kL/d per res property

2.683 kL/ET/d

WTP capacity**ET****Jabour Weir****Yield****ADD**

with 2m raising, lowest safe yield from available modelling

2500 ML/a

200 kL/res property/a

215 kL/ET/a

Weir capacity**ET**

All values are in year 2009/10 \$'000

Broadwater/Rileys Hill Water Supply Scheme													
Capital Charge Calculation													
Pre 1996 discount rate	3%												
Post 1996 discount rate	7%												
Peak day demand (L/ET/d)	2,683												
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up
Existing Water Sources													
Rous Water Bulk Supply													
Existing Treatment													
Rous Water Bulk Supply													
Existing Transfer System (including 150mm mains)													
Pump Station	CIVIL	119	2009	100%	119	1985	1996	119			235	2039	44
Pump Station	MECHANICAL	13	2009	100%	13	1985	1996	13			26	2039	44
Pump Station	STRUCTURAL	22	2009	100%	22	1985	1996	22			43	2039	44
Pump Station	ELECTRICAL	16	2009	100%	16	1985	1996	16			32	2039	44
Pump Station	ELECTRICAL	9	2009	100%	9	2001	2001	9			17	2039	39
Pump Station	MECHANICAL	49	2009	100%	49	2004	2004	49			96	2039	36
Pump Station	MECHANICAL	49	2009	100%	49	2004	2004	49			96	2039	36
Pipe Main	150	15	2009	100%	15	1998	1998	15			30	2039	42
Pipe Main	150	4	2009	100%	4	1998	1998	4			8	2039	42
Pipe Main	150	3	2009	100%	3	1998	1998	3			5	2039	42
Pipe Main	150	55	2009	100%	55	1998	1998	55			109	2039	42
Pipe Main	150	78	2009	100%	78	1998	1998	78			155	2039	42
Pipe Main	150	66	2009	100%	66	1998	1998	66			131	2039	42
Pipe Main	150	64	2009	100%	64	1998	1998	64			127	2039	42
Pipe Main	150	60	2009	100%	60	1998	1998	60			119	2039	42
Pipe Main	150	5	2009	100%	5	1998	1998	5			11	2039	42
Pipe Main	150	16	2009	100%	16	1998	1998	16			32	2039	42
Pipe Main	150	3	2009	100%	3	1998	1998	3			7	2039	42
Future Transfer System													
Water - Provide water supply to new release areas (Evans, Bwater,Wburn)													
		960	2009	9%	82	2013	2013	63			124	2039	27
Water - Water Supply System Analysis (all areas)													
Total Transfer System		1,666									711	505	1,407
Existing Reservoirs (all Headworks)													
Reservoir	STRUCTURAL	95	2009	100%	95	1953	1996	95	4.0	1,491	189	2039	44
Reservoir	STRUCTURAL	20	2009	100%	20	1953	1996	20	-	40	2039	44	3%
Reservoir	SITEWORKS	17	2009	100%	17	1953	1996	17	-	34	2039	44	3%
Pump Station	CIVIL	119	2009	100%	119	1985	1996	119	-	235	2039	44	3%
Pump Station	MECHANICAL	13	2009	100%	13	1985	1996	13	-	26	2039	44	3%
Pump Station	STRUCTURAL	22	2009	100%	22	1985	1996	22	-	43	2039	44	3%
Pump Station	ELECTRICAL	16	2009	100%	16	1985	1996	16	-	32	2039	44	3%
Pump Station	ELECTRICAL	9	2009	100%	9	2001	2001	9	-	17	2039	39	7%
Pump Station	MECHANICAL	49	2009	100%	49	2004	2004	49	-	96	2039	36	7%
Pump Station	MECHANICAL	49	2009	100%	49	2004	2004	49	-	96	2039	36	7%
Reservoir	STEELWORKS	22	2009	100%	22	1997	1997	22	-	43	2039	43	7%
Reservoir	PIPEWORK	49	2009	100%	49	1997	1997	49	-	96	2039	43	7%
Reservoir	ELECTRONIC	16	2009	100%	16	1997	1997	16	-	32	2039	43	7%
Reservoir	IMPROVEMENTS	4	2009	100%	4	2000	2000	4	-	8	2039	40	7%
Reservoir	IMPROVEMENTS	37	2009	100%	37	2000	2000	37	-	72	2039	40	7%
Reservoir	ELECTRONIC	9	2009	100%	9	2001	2001	9	-	17	2039	39	7%
Reservoir - High Pressure	STRUCTURAL	273	2009	100%	273	1997	1997	273	0.2	75	539	2039	43
Reservoir - High Pressure	STRUCTURAL	57	2009	100%	57	1997	1997	57	-	113	2039	43	7%
Reservoir - High Pressure	SITEWORKS	49	2009	100%	49	1997	1997	49	-	98	2039	43	7%
Reservoir - High Pressure	STEELWORKS	22	2009	100%	22	1997	1997	22	-	43	2039	43	7%
Reservoir - High Pressure	PIPEWORK	119	2009	100%	119	1997	1997	119	-	235	2039	43	7%
Reservoir - High Pressure	ELECTRICAL	16	2009	100%	16	1997	1997	16	-	32	2039	43	7%
Reservoir - High Pressure	ELECTRONIC	9	2009	100%	9	2001	2001	9	-	17	2039	39	7%
Reservoir	STRUCTURAL	48	2009	100%	48	1949	1996	48	0.1	37	94	2039	44
Reservoir	CIVIL	7	2009	100%	7	1949	1996	7	-	14	2039	44	3%
Reservoir	STEELWORKS	8	2009	100%	8	1949	1996	8	-	15	2039	44	3%
Reservoir	PIPEWORK	14	2009	100%	14	2008	2008	14	-	28	2039	32	7%
Reservoir	ELECTRICAL	9	2009	100%	9	1990	1996	9	-	17	2039	44	3%
Reservoir	ELECTRONIC	9	2009	100%	9	1990	1996	9	-	17	2039	44	3%
Future Reservoirs													
Included in Future Transfer System													
Total Reservoirs		1,183									1,183	505	2,341
Langs Hill Reservoir													
Langs Hill	STRUCTURAL	741	2009	100%	741	1949	1996	741	-	731	2039	44	3%
Langs Hill	STRUCTURAL	185	2009	100%	185	1949	1996	185	-	183	2039	44	3%

Broadwater/Rileys Hill Water Supply Scheme																
Capital Charge Calculation																
							Summary									
Pre 1996 discount rate	3%						per ET		Total							
Post 1996 discount rate	7%						Capital charge	\$11,584	2008/09\$ per ET							
Peak day demand (L/ET/d)	2,683															
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
Langs Hill	CIVIL	163	2009	100%	163	1949	1996	163	-	161	2039	44	3%	1.76	283	
Langs Hill	PIPEWORK	111	2009	100%	111	1975	1996	111	-	110	2039	44	3%	1.76	193	
Langs Hill	ELECTRONIC	9	2009	100%	9	2001	2001	9	-	9	2039	39	7%	2.75	23	
Total Langs Hill Reservoir		1,209			1,209			1,209		1,013	1,193				2,109	
Notes																
1. Capital cost from Council's asset registers and MEERA cost for future works																
2. Base year of capital cost varies depending on asset data																
3. Capital cost adjusted to 2009\$ using CPI for Sydney (ABS)																
4. Capital cost of future works discounted to 2009\$																

Casino Water Supply Scheme																		
Capital Charge Calculation																		
Pre 1996 discount rate	3%																	
Post 1996 discount rate	7%																	
Peak day demand (L/ET/d)		2,683																
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)		
Existing Water Sources																		
Jabour Weir	FISH LADDER	233	2009	100%	233	1972	1996	233			20	2039	44	3%	1.76	35		
Jabour Weir	FISH LADDER	27	2009	100%	27	1993	1996	27			2	2039	44	3%	1.76	4		
Jabour Weir	FISH LADDER	11	2009	100%	11	1993	1996	11			1	2039	44	3%	1.76	2		
Jabour Weir	FISH LADDER	29	2009	100%	29	1993	1996	29			3	2039	44	3%	1.76	4		
Jabour Weir	FISH LADDER	6	2009	100%	6	1997	1997	6			1	2039	43	7%	2.98	2		
Jabour Weir	STRUCTURAL ASSESSMENT	23	2009	100%	23	2008	2008	23			2	2039	32	7%	2.36	5		
Raw Water Pump Station	MECHANICAL	7	2009	100%	7	2008	2008	7			1	2039	32	7%	2.36	1		
River Intake	PAC DOSING SYSTEM	254	2009	100%	254	1985	1996	254			22	2039	44	3%	1.76	39		
River Intake	PIPEWORK	157	2009	100%	157	1985	1996	157			14	2039	44	3%	1.76	24		
River Intake	PIPEWORK	157	2009	100%	157	1985	1996	157			14	2039	44	3%	1.76	24		
River Intake	MECHANICAL	119	2009	100%	119	1985	1996	119			10	2039	44	3%	1.76	18		
River Intake	MECHANICAL	119	2009	100%	119	1985	1996	119			10	2039	44	3%	1.76	18		
River Intake	STRUCTURAL	211	2009	100%	211	1985	1996	211			18	2039	44	3%	1.76	32		
River Intake	STRUCTURAL	1,190	2009	100%	1,190	1985	1996	1,190			103	2039	44	3%	1.76	181		
River Intake	STEELWORKS	81	2009	100%	81	1985	1996	81			7	2039	44	3%	1.76	12		
River Intake	JOHNSON SCREEN	130	2009	100%	130	1985	1996	130			11	2039	44	3%	1.76	20		
River Intake	ROAD WORKS	56	2009	100%	56	1985	1996	56			5	2039	44	3%	1.76	9		
River Intake	PIPEWORK	265	2009	100%	265	1985	1996	265			23	2039	44	3%	1.76	40		
River Intake	MECHANICAL	70	2009	100%	70	1985	1996	70			6	2039	44	3%	1.76	11		
River Intake	JOHNSON SCREEN	92	2009	100%	92	1999	1999	92			8	2039	41	7%	2.86	23		
River Intake	ELECTRICAL	5	2009	100%	5	1999	1999	5			0	2039	41	7%	2.86	1		
River Intake	MIXER SYSTEM	15	2009	100%	15	1999	1999	15			1	2039	41	7%	2.86	4		
River Intake	MIXER SYSTEM	49	2009	100%	49	1999	1999	49			4	2039	41	7%	2.86	12		
River Intake	JOHNSON SCREEN	31	2009	100%	31	1999	1999	31			3	2039	41	7%	2.86	8		
River Intake	JOHNSON SCREEN	16	2009	100%	16	1999	1999	16			1	2039	41	7%	2.86	4		
River Intake	JOHNSON SCREEN	40	2009	100%	40	1999	1999	40			3	2039	41	7%	2.86	10		
River Intake	JOHNSON SCREEN	43	2009	100%	43	1999	1999	43			4	2039	41	7%	2.86	11		
River Intake	ELECTRICAL	14	2009	100%	14	2002	2002	14			1	2039	38	7%	2.69	3		
River Intake	PAC DOSING SYSTEM	26	2009	100%	26	2003	2003	26			2	2039	37	7%	2.64	6		
River Intake	PAC DOSING SYSTEM	12	2009	100%	12	2003	2003	12			1	2039	37	7%	2.64	3		
River Intake	PAC DOSING SYSTEM	7	2009	100%	7	2003	2003	7			1	2039	37	7%	2.64	1		
River Intake	PAC DOSING SYSTEM	7	2009	100%	7	2003	2003	7			1	2039	37	7%	2.64	1		
River Intake	PAC DOSING SYSTEM	3	2009	100%	3	2003	2003	3			0	2039	37	7%	2.64	1		
River Intake	PAC DOSING SYSTEM	3	2009	100%	3	2003	2003	3			0	2039	37	7%	2.64	1		
River Intake	PAC DOSING SYSTEM	12	2009	100%	12	2003	2003	12			1	2039	37	7%	2.64	3		
River Intake	PAC DOSING SYSTEM	12	2009	100%	12	2003	2003	12			1	2039	37	7%	2.64	3		
River Intake	PAC DOSING SYSTEM	77	2009	100%	77	2003	2003	77			7	2039	37	7%	2.64	17		
River Intake	ELECTRONIC	9	2009	100%	9	2003	2003	9			1	2039	37	7%	2.64	2		
Future Water Sources																		
Casino T/Works - Water Augmentation Scoping Study		200	2009	100%	200	2010	2010	187			16	2039	30	7%	2.26	36		
Casino T/Works - Source Augmentation Approvals		150	2009	100%	150	2011	2011	131			11	2039	29	7%	2.21	25		
Casino T/Works - Source Augmentation Pre/Post Construction Monitoring		100	2009	100%	100	2012	2012	82			7	2039	28	7%	2.16	15		
Casino T/Works - Source Augmentation Pre/Post Construction Monitoring		100	2009	100%	100	2013	2013	76			7	2039	27	7%	2.11	14		
Casino T/Works - Source Augmentation Design/Construction		100	2009	100%	100	2014	2014	71			6	2039	26	7%	2.05	13		
Casino T/Works - Source Augmentation Design/Construction		150	2009	100%	150	2011	2011	131			11	2039	29	7%	2.21	25		
Casino T/Works - Source Augmentation Design/Construction		1,000	2009	100%	1,000	2012	2012	816			70	2039	28	7%	2.16	152		
Casino T/Works - Source Augmentation Design/Construction		4,000	2009	100%	4,000	2013	2013	3,052			263	2039	27	7%	2.11	554		
Casino T/Works - Emergency Source Design & Development		30	2009	100%	30	2010	2010	28			2	2039	30	7%	2.26	5		
Casino T/Works - Emergency Source Design & Development		30	2009	100%	30	2011	2011	26			2	2039	29	7%	2.21	5		
Casino T/Works - Emergency Source Design & Development		200	2009	100%	200	2012	2012	163			14	2039	28	7%	2.16	30		
Emergency Source Construction		500	2009	100%	500	2013	2013	381			33	2039	27	7%	2.11	69		
Casino T/Works - Jabour Weir Easement for Access		40	2009	100%	40	2010	2010	37			3	2039	30	7%	2.26	7		
Total Water Sources		10,217						8,799			11,600	759				1,543		
Existing Treatment																		
Casino WTP Clear Water Pumps VSD Soft Starters		13	2009	100%	13	2009	2009	13			1	2039	31	7%	2.31	3		
Casino WTP Convert CL2 to Sodium Gas Hypo		151	2009	100%	151	2009	2009	151			18	2039	31	7%	2.31	40		
Casino WTP Dosing Pump DDI 209 S/N 916019 13.8l/h		2	2009	100%	2	2009	2009	2			0	2039	31	7%	2.31	1		
Casino WTP Filter Walls Concrete Repairs		51	2009	100%	51	2009	2009	51			6	2039	31	7%	2.31	14		
Casino WTP Fluoride System		139	2009	100%	139	2009	2009	139			16	2039	31	7%	2.31	37		
Casino WTP Storage Shed		27	2009	100%	27	2009	2009	27			3	2039	31	7%	2.31	7		
Filtration Plant		2163	2009	100%	2,163	1985	1996	2,163			252	2039	44	3%	1.76	443		
Filtration Plant		2163	2009	100%	2,163	1985	1996	2,163			252	2039	44	3%	1.76	443		
Filtration Plant		2163	2009	100%	2,163	1985	1996	2,163			252	2039	44	3%	1.76	443		
Filtration Plant		2163	2009	100%	2,163	1985	1996	2,163			252	2039	44	3%	1.76	443		
Filtration Plant		1082	2009	100%	1,082	1985	1996	1,082			126	2039	44	3%	1.76	221		
Filtration Plant		1082	2009	100%	1,082	1985	1996	1,082			126	2039	44	3%	1.76	221		
Filtration Plant		65	2009	100%	65	1985	1996	65			8	2039	44	3%	1.76	13		

Casino Water Supply Scheme											Summary						
Capital Charge Calculation											per ET						
Pre 1996 discount rate	3%										Total						
Post 1996 discount rate	7%										Capital charge						
Peak day demand (L/ET/d)	2,683										\$9,047 2008/09\$ per ET						
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)	
Filtration Plant		16	2009	100%	16	1985	1996	16			2	2039	44	3%	1.76	3	
Filtration Plant		24	2009	100%	24	1985	1996	24			3	2039	44	3%	1.76	5	
Filtration Plant		24	2009	100%	24	1985	1996	24			3	2039	44	3%	1.76	5	
Filtration Plant		128	2009	100%	128	1985	1996	128			15	2039	44	3%	1.76	26	
Filtration Plant		128	2009	100%	128	1985	1996	128			15	2039	44	3%	1.76	26	
Filtration Plant		31	2009	100%	31	1985	1996	31			4	2039	44	3%	1.76	6	
Filtration Plant		31	2009	100%	31	1985	1996	31			4	2039	44	3%	1.76	6	
Filtration Plant		318	2009	100%	318	1985	1996	318			37	2039	44	3%	1.76	65	
Filtration Plant		318	2009	100%	318	1985	1996	318			37	2039	44	3%	1.76	65	
Filtration Plant		318	2009	100%	318	1985	1996	318			37	2039	44	3%	1.76	65	
Filtration Plant		318	2009	100%	318	1985	1996	318			37	2039	44	3%	1.76	65	
Filtration Plant		26	2009	100%	26	1985	1996	26			3	2039	44	3%	1.76	5	
Filtration Plant		26	2009	100%	26	1985	1996	26			3	2039	44	3%	1.76	5	
Filtration Plant		26	2009	100%	26	1985	1996	26			3	2039	44	3%	1.76	5	
Filtration Plant		26	2009	100%	26	1985	1996	26			3	2039	44	3%	1.76	5	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		16	2009	100%	16	1985	1996	16			2	2039	44	3%	1.76	3	
Filtration Plant		638	2009	100%	638	1985	1996	638			74	2039	44	3%	1.76	131	
Filtration Plant		103	2009	100%	103	1985	1996	103			12	2039	44	3%	1.76	21	
Filtration Plant		103	2009	100%	103	1985	1996	103			12	2039	44	3%	1.76	21	
Filtration Plant		48	2009	100%	48	1985	1996	48			6	2039	44	3%	1.76	10	
Filtration Plant		13	2009	100%	13	1985	1996	13			2	2039	44	3%	1.76	3	
Filtration Plant		31	2009	100%	31	1985	1996	31			4	2039	44	3%	1.76	6	
Filtration Plant		31	2009	100%	31	1985	1996	31			4	2039	44	3%	1.76	6	
Filtration Plant		38	2009	100%	38	1985	1996	38			4	2039	44	3%	1.76	8	
Filtration Plant		38	2009	100%	38	1985	1996	38			4	2039	44	3%	1.76	8	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		16	2009	100%	16	1985	1996	16			2	2039	44	3%	1.76	3	
Filtration Plant		54	2009	100%	54	1985	1996	54			6	2039	44	3%	1.76	11	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		27	2009	100%	27	1985	1996	27			3	2039	44	3%	1.76	6	
Filtration Plant		16	2009	100%	16	1985	1996	16			2	2039	44	3%	1.76	3	
Filtration Plant		16	2009	100%	16	1985	1996	16			2	2039	44	3%	1.76	3	
Filtration Plant		16	2009	100%	16	1985	1996	16			2	2039	44	3%	1.76	3	
Filtration Plant		16	2009	100%	16	1985	1996	16			2	2039	44	3%	1.76	3	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		81	2009	100%	81	1985	1996	81			9	2039	44	3%	1.76	17	
Filtration Plant		81	2009	100%	81	1985	1996	81			9	2039	44	3%	1.76	17	
Filtration Plant		49	2009	100%	49	1985	1996	49			6	2039	44	3%	1.76	10	
Filtration Plant		223	2009	100%	223	1985	1996	223			26	2039	44	3%	1.76	46	
Filtration Plant		16	2009	100%	16	1985	1996	16			2	2039	44	3%	1.76	3	
Filtration Plant		162	2009	100%	162	1985	1996	162			19	2039	44	3%	1.76	33	
Filtration Plant		240	2009	100%	240	1985	1996	240			28	2039	44	3%	1.76	49	
Filtration Plant		81	2009	100%	81	1985	1996	81			9	2039	44	3%	1.76	17	
Filtration Plant		487	2009	100%	487	1985	1996	487			57	2039	44	3%	1.76	100	
Filtration Plant		65	2009	100%	65	1985	1996	65			8	2039	44	3%	1.76	13	
Filtration Plant		32	2009	100%	32	1985	1996	32			4	2039	44	3%	1.76	7	
Filtration Plant		27	2009	100%	27	1985	1996	27			3	2039	44	3%	1.76	6	
Filtration Plant		49	2009	100%	49	1985	1996	49			6	2039	44	3%	1.76	10	
Filtration Plant		22	2009	100%	22	1985	1996	22			3	2039	44	3%	1.76	4	
Filtration Plant		81	2009	100%	81	1985	1996	81			9	2039	44	3%	1.76	17	
Filtration Plant		27	2009	100%	27	1985	1996	27			3	2039	44	3%	1.76	6	
Filtration Plant		6	2009	100%	6	1985	1996	6			1	2039	44	3%	1.76	1	
Filtration Plant		135	2009	100%	135	1985	1996	135			16	2039	44	3%	1.76	28	
Filtration Plant		14	2009	100%	14	1985	1996	14			2	2039	44	3%	1.76	3	
Filtration Plant		465	2009	100%	465	1985	1996	465			54	2039	44	3%	1.76	95	
Filtration Plant		379	2009	100%	379	1985	1996	379			44	2039	44	3%	1.76	78	
Filtration Plant		13	2009	100%	13	1985	1996	13			2	2039	44	3%	1.76	3	
Filtration Plant		16	2009	100%	16	1990	1996	16			2	2039	44	3%	1.76	3	
Filtration Plant		14	2009	100%	14	1990	1996	14			2	2039	44	3%	1.76	3	

Casino Water Supply Scheme																					
Capital Charge Calculation																					
Pre 1996 discount rate	3%																				
Post 1996 discount rate	7%																				
Peak day demand (L/ET/d)		2,683																			
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)					
Filtration Plant		14	2009	100%	14	1990	1996	14			2	2039	44	3%	1.76	3					
Filtration Plant		5	2009	100%	5	1990	1996	5			1	2039	44	3%	1.76	1					
Filtration Plant		5	2009	100%	5	1990	1996	5			1	2039	44	3%	1.76	1					
Filtration Plant		16	2009	100%	16	1990	1996	16			2	2039	44	3%	1.76	3					
Filtration Plant		30	2009	100%	30	1990	1996	30			3	2039	44	3%	1.76	6					
Filtration Plant		30	2009	100%	30	1990	1996	30			3	2039	44	3%	1.76	6					
Filtration Plant		11	2009	100%	11	1990	1996	11			1	2039	44	3%	1.76	2					
Filtration Plant		200	2009	100%	200	1990	1996	200			23	2039	44	3%	1.76	41					
Filtration Plant		70	2009	100%	70	1990	1996	70			8	2039	44	3%	1.76	14					
Filtration Plant		151	2009	100%	151	1993	1996	151			18	2039	44	3%	1.76	31					
Filtration Plant		80	2009	100%	80	1993	1996	80			9	2039	44	3%	1.76	16					
Filtration Plant		6	2009	100%	6	1995	1996	6			1	2039	44	3%	1.76	1					
Filtration Plant		6	2009	100%	6	1995	1996	6			1	2039	44	3%	1.76	1					
Filtration Plant		6	2009	100%	6	1995	1996	6			1	2039	44	3%	1.76	1					
Filtration Plant		30	2009	100%	30	1995	1996	30			3	2039	44	3%	1.76	6					
Filtration Plant		30	2009	100%	30	1995	1996	30			3	2039	44	3%	1.76	6					
Filtration Plant		31	2009	100%	31	1995	1996	31			4	2039	44	3%	1.76	6					
Filtration Plant		31	2009	100%	31	1995	1996	31			4	2039	44	3%	1.76	6					
Filtration Plant		31	2009	100%	31	1995	1996	31			4	2039	44	3%	1.76	6					
Filtration Plant		30	2009	100%	30	1999	1999	30			4	2039	41	7%	2.86	10					
Filtration Plant		6	2009	100%	6	2000	2000	6			1	2039	40	7%	2.80	2					
Filtration Plant		6	2009	100%	6	2000	2000	6			1	2039	40	7%	2.80	2					
Filtration Plant		10	2009	100%	10	2000	2000	10			1	2039	40	7%	2.80	3					
Filtration Plant		10	2009	100%	10	2000	2000	10			1	2039	40	7%	2.80	3					
Filtration Plant		2	2009	100%	2	2000	2000	2			0	2039	40	7%	2.80	1					
Filtration Plant		2	2009	100%	2	2000	2000	2			0	2039	40	7%	2.80	1					
Filtration Plant		15	2009	100%	15	2000	2000	15			2	2039	40	7%	2.80	5					
Filtration Plant		15	2009	100%	15	2000	2000	15			2	2039	40	7%	2.80	5					
Filtration Plant		24	2009	100%	24	2002	2002	24			3	2039	38	7%	2.69	7					
Filtration Plant		5	2009	100%	5	2003	2003	5			1	2039	37	7%	2.64	2					
Filtration Plant		30	2009	100%	30	2003	2003	30			4	2039	37	7%	2.64	9					
Filtration Plant		4	2009	100%	4	2004	2004	4			1	2039	36	7%	2.58	1					
Filtration Plant		3	2009	100%	3	2004	2004	3			0	2039	36	7%	2.58	1					
Filtration Plant		11	2009	100%	11	2004	2004	11			1	2039	36	7%	2.58	3					
Filtration Plant		65	2009	100%	65	2004	2004	65			8	2039	36	7%	2.58	19					
Filtration Plant		827	2009	100%	827	2004	2004	827			96	2039	36	7%	2.58	248					
Filtration Plant		27	2009	100%	27	2005	2005	27			3	2039	35	7%	2.53	8					
Filtration Plant		49	2009	100%	49	2005	2005	49			6	2039	35	7%	2.53	14					
Filtration Plant		38	2009	100%	38	2006	2006	38			4	2039	34	7%	2.47	11					
Filtration Plant		7	2009	100%	7	2007	2007	7			1	2039	33	7%	2.42	2					
Filtration Plant		15	2009	100%	15	2008	2008	15			2	2039	32	7%	2.36	4					
Filtration Plant		1	2009	100%	1	2008	2008	1			0	2039	32	7%	2.36	0					
Treatment Works	CRIB ROOM	8	2009	100%	8	2008	2008	8			1	2039	32	7%	2.36	2					
Future Treatment																					
Casino T/Works - Construct PAC/P Permanganate System		350	2009	100%	350	2010	2010	327			38	2039	30	7%	2.26	86					
Casino T/Works - Convert CL2 Gas to Sodium Hypo		2	2009	100%	2	2010	2010	2			0	2039	30	7%	2.26	0					
Casino T/Works - Analysers		50	2009	100%	50	2010	2010	47			5	2039	30	7%	2.26	12					
Casino T/Works - Raw Water Pumps VSD Soft Starters		145	2009	100%	145	2010	2010	136			16	2039	30	7%	2.26	36					
Casino T/Works - Resurface No 2 Sludge Lagoon		20	2009	100%	20	2010	2010	19			2	2039	30	7%	2.26	4					
Casino T/Works - Chemical Bund Area (Alum & Hypo)		25	2009	100%	25	2010	2010	23			2	2039	30	7%	2.26	5					
Casino T/Works - Signs Audit		5	2009	100%	5	2010	2010	5			0	2039	30	7%	2.26	1					
Casino T/Works - Magflow Meter Installation		7	2009	100%	7	2010	2010	7			1	2039	30	7%	2.26	1					
Casino WTP augmentation		1,000	2009	100%	1,000	2033	2033	197			17	2039	7	7%	1.21	21					
Casino WTP augmentation		1,000	2009	100%	1,000	2034	2034	184			16	2039	6	7%	1.18	19					
Casino WTP augmentation		6,000	2009	100%	6,000	2035	2035	1,033			89	2039	5	7%	1.14	102					
Casino WTP augmentation		2,000	2009	100%	2,000	2036	2036	322			28	2039	4	7%	1.10	31					
Total Treatment		29,746									21,443	8,600	2,440			4,378					
Existing Transfer System																					
Pipe		300	0	2009	100%	0	1975	1996	0		0	2039	44	3%	1.76	0					
Pipe		300	0	2009	100%	0	1975	1996	0		0	2039	44	3%	1.76	0					
Pipe		300	0	2009	100%	0	1975	1996	0		0	2039	44	3%	1.76	0					
Pipe		300	0	2009	100%	0	1975	1996	0		0	2039	44	3%	1.76	0					
Pipe		600	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0					
Pipe		600	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0					
Pipe		600	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0					
Pipe		600	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0					
Pipe		600	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0					

Casino Water Supply Scheme																		
Capital Charge Calculation																		
Pre 1996 discount rate	3%																	
Post 1996 discount rate	7%																	
Peak day demand (L/ET/d)		2,683																
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)		
Fire Hydrant	200	2	2009	100%	2	2008	2008	2	0	2039	32	7%	2.36	1				
Fire Hydrant	200	2	2009	100%	2	2008	2008	2	0	2039	32	7%	2.36	1				
Fire Hydrant	200	2	2009	100%	2	2008	2008	2	0	2039	32	7%	2.36	1				
Fire Hydrant	200	2	2009	100%	2	2008	2008	2	0	2039	32	7%	2.36	1				
Pipe Main	200	23	2009	100%	23	2008	2008	23	3	2039	32	7%	2.36	6				
Pipe Main	200	12	2009	100%	12	2008	2008	12	1	2039	32	7%	2.36	3				
Pipe Main	200	0	2009	100%	0	2008	2008	0	0	2039	32	7%	2.36	0				
Pipe Main	200	4	2009	100%	4	2008	2008	4	0	2039	32	7%	2.36	1				
Pipe Main	200	15	2009	100%	15	2008	2008	15	2	2039	32	7%	2.36	4				
Pipe Main	200	0	2009	100%	0	2008	2008	0	0	2039	32	7%	2.36	0				
Pipe Main	200	3	2009	100%	3	2008	2008	3	0	2039	32	7%	2.36	1				
Pipe Main	200	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	200	2	2009	100%	2	2009	2009	2	0	2039	31	7%	2.31	1				
Pipe Main	200	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	200	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	225	1	2009	100%	1	2008	2008	1	0	2039	32	7%	2.36	0				
Pipe Main	225	5	2009	100%	5	2008	2008	5	1	2039	32	7%	2.36	1				
Pipe Main	300	5	2009	100%	5	2008	2008	5	1	2039	32	7%	2.36	1				
Pipe Main	300	4	2009	100%	4	2009	2009	4	0	2039	31	7%	2.31	1				
Pipe Main	300	5	2009	100%	5	2009	2009	5	1	2039	31	7%	2.31	1				
Pipe Main	300	0	2009	100%	0	2009	2009	0	0	2039	31	7%	2.31	0				
Pipe Main	300	8	2009	100%	8	2009	2009	8	1	2039	31	7%	2.31	2				
Pipe Main	300	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	300	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	300	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	300	0	2009	100%	0	2009	2009	0	0	2039	31	7%	2.31	0				
Pipe Main	300	10	2009	100%	10	2009	2009	10	1	2039	31	7%	2.31	3				
Pipe Main	300	7	2009	100%	7	2009	2009	7	1	2039	31	7%	2.31	2				
Pipe Main	300	4	2009	100%	4	2009	2009	4	0	2039	31	7%	2.31	1				
Pipe Main	300	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	300	0	2009	100%	0	2009	2009	0	0	2039	31	7%	2.31	0				
Pipe Main	300	2	2009	100%	2	2009	2009	2	0	2039	31	7%	2.31	0				
Pipe Main	300	0	2009	100%	0	2009	2009	0	0	2039	31	7%	2.31	0				
Pipe Main	300	6	2009	100%	6	2009	2009	6	1	2039	31	7%	2.31	2				
Pipe Main	300	8	2009	100%	8	2009	2009	8	1	2039	31	7%	2.31	2				
Pipe Main	300	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	300	4	2009	100%	4	2009	2009	4	0	2039	31	7%	2.31	1				
Pipe Main	300	6	2009	100%	6	2009	2009	6	1	2039	31	7%	2.31	2				
Pipe Main	300	2	2009	100%	2	2009	2009	2	0	2039	31	7%	2.31	0				
Pipe Main	300	0	2009	100%	0	2009	2009	0	0	2039	31	7%	2.31	0				
Pipe Main	300	6	2009	100%	6	2009	2009	6	1	2039	31	7%	2.31	2				
Pipe Main	300	8	2009	100%	8	2009	2009	8	1	2039	31	7%	2.31	2				
Pipe Main	300	3	2009	100%	3	2009	2009	3	0	2039	31	7%	2.31	1				
Pipe Main	300	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	450	2	2009	100%	2	2009	2009	2	0	2039	31	7%	2.31	0				
Pipe Main	450	18	2009	100%	18	2009	2009	18	2	2039	31	7%	2.31	5				
Pipe Main	450	6	2009	100%	6	2009	2009	6	1	2039	31	7%	2.31	2				
Pipe Main	450	8	2009	100%	8	2009	2009	8	1	2039	31	7%	2.31	2				
Pipe Main	450	1	2009	100%	1	2009	2009	1	0	2039	31	7%	2.31	0				
Pipe Main	450	25	2009	100%	25	1970	1996	25	3	2039	44	3%	1.76	5				
Pipe Main	200	13	2009	100%	13	1970	1996	13	2	2039	44	3%	1.76	3				
Pipe Main	200	8	2009	100%	8	1970	1996	8	1	2039	44	3%	1.76	2				
Pipe Main	200	8	2009	100%	8	1970	1996	8	1	2039	44	3%	1.76	2				
Pipe Main	200	10	2009	100%	10	1970	1996	10	1	2039	44	3%	1.76	2				
Pipe Main	200	2	2009	100%	2	1979	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	200	12	2009	100%	12	1979	1996	12	1	2039	44	3%	1.76	2				
Pipe Main	200	14	2009	100%	14	1979	1996	14	2	2039	44	3%	1.76	3				
Pipe Main	200	1	2009	100%	1	1979	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	5	2009	100%	5	1979	1996	5	1	2039	44	3%	1.76	1				
Pipe Main	200	10	2009	100%	10	1979	1996	10	1	2039	44	3%	1.76	2				
Pipe Main	200	13	2009	100%	13	1979	1996	13	2	2039	44	3%	1.76	3				
Pipe Main	200	5	2009	100%	5	1979	1996	5	1	2039	44	3%	1.76	1				
Pipe Main	200	11	2009	100%	11	1979	1996	11	1	2039	44	3%	1.76	2				
Pipe Main	200	11	2009	100%	11	1979	1996	11	1	2039	44	3%	1.76	2				
Pipe Main	200	5	2009	100%	5	1979	1996	5	1	2039	44	3%	1.76	1				
Pipe Main	200	5	2009	100%	5	1979	1996	5	1	2039	44	3%	1.76	1				
Pipe Main	200	5	2009	100%	5	1979	1996	5	1	2039	44	3%	1.76	1				

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Peak day demand (L/ET/d)		2,683																	
Asset	Detail		Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)		
Pipe Main	200	2	2009	100%	2	1979	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	4	2009	100%	4	1979	1996	4	0	2039	44	3%	1.76	1					
Pipe Main	200	16	2009	100%	16	1979	1996	16	2	2039	44	3%	1.76	3					
Pipe Main	200	6	2009	100%	6	1979	1996	6	1	2039	44	3%	1.76	1					
Pipe Main	200	2	2009	100%	2	1981	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	2	2009	100%	2	1981	1996	2	1	2039	44	3%	1.76	0					
Pipe Main	200	7	2009	100%	7	1981	1996	7	1	2039	44	3%	1.76	1					
Pipe Main	200	2	2009	100%	2	1981	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	2	2009	100%	2	1981	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	5	2009	100%	5	1981	1996	5	1	2039	44	3%	1.76	1					
Pipe Main	200	12	2009	100%	12	1981	1996	12	1	2039	44	3%	1.76	2					
Pipe Main	200	0	2009	100%	0	1981	1996	0	0	2039	44	3%	1.76	0					
Pipe Main	200	12	2009	100%	2	1981	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	0	2009	100%	0	1981	1996	0	0	2039	44	3%	1.76	0					
Pipe Main	200	0	2009	100%	0	1981	1996	0	0	2039	44	3%	1.76	0					
Pipe Main	200	2	2009	100%	2	1981	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	14	2009	100%	14	1981	1996	14	2	2039	44	3%	1.76	3					
Pipe Main	200	8	2009	100%	8	1981	1996	8	1	2039	44	3%	1.76	2					
Pipe Main	200	2	2009	100%	2	1981	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	16	2009	100%	16	1981	1996	16	2	2039	44	3%	1.76	3					
Pipe Main	200	11	2009	100%	11	1981	1996	11	1	2039	44	3%	1.76	2					
Pipe Main	200	3	2009	100%	3	1981	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	1	2009	100%	1	1981	1996	1	0	2039	44	3%	1.76	0					
Pipe Main	200	0	2009	100%	0	1981	1996	0	0	2039	44	3%	1.76	0					
Pipe Main	200	3	2009	100%	3	1981	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	7	2009	100%	7	1985	1996	7	1	2039	44	3%	1.76	2					
Pipe Main	200	1	2009	100%	1	1985	1996	1	0	2039	44	3%	1.76	0					
Pipe Main	200	11	2009	100%	11	1985	1996	11	1	2039	44	3%	1.76	2					
Pipe Main	200	5	2009	100%	5	1985	1996	5	1	2039	44	3%	1.76	1					
Pipe Main	200	7	2009	100%	7	1985	1996	7	1	2039	44	3%	1.76	1					
Pipe Main	200	3	2009	100%	3	1985	1996	3	0	2039	44	3%	1.76	0					
Pipe Main	200	0	2009	100%	0	1985	1996	0	0	2039	44	3%	1.76	0					
Pipe Main	200	0	2009	100%	0	1985	1996	0	0	2039	44	3%	1.76	0					
Pipe Main	200	5	2009	100%	5	1985	1996	5	1	2039	44	3%	1.76	1					
Pipe Main	200	1	2009	100%	1	1985	1996	1	0	2039	44	3%	1.76	0					
Pipe Main	200	9	2009	100%	9	1985	1996	9	1	2039	44	3%	1.76	2					
Pipe Main	200	9	2009	100%	9	1985	1996	9	1	2039	44	3%	1.76	1					
Pipe Main	200	4	2009	100%	4	1985	1996	4	1	2039	44	3%	1.76	1					
Pipe Main	200	12	2009	100%	12	1985	1996	12	1	2039	44	3%	1.76	2					
Pipe Main	200	4	2009	100%	4	1985	1996	4	0	2039	44	3%	1.76	1					
Pipe Main	200	0	2009	100%	0	1985	1996	0	0	2039	44	3%	1.76	0					
Pipe Main	200	8	2009	100%	8	1985	1996	8	1	2039	44	3%	1.76	2					
Pipe Main	200	3	2009	100%	3	1985	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	1	2009	100%	1	1985	1996	1	0	2039	44	3%	1.76	0					
Pipe Main	200	1	2009	100%	1	1985	1996	1	0	2039	44	3%	1.76	0					
Pipe Main	200	4	2009	100%	4	1985	1996	4	1	2039	44	3%	1.76	1					
Pipe Main	200	12	2009	100%	12	1985	1996	12	1	2039	44	3%	1.76	2					
Pipe Main	200	7	2009	100%	7	1985	1996	7	1	2039	44	3%	1.76	1					
Pipe Main	200	2	2009	100%	2	1985	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	9	2009	100%	9	1985	1996	9	1	2039	44	3%	1.76	2					
Pipe Main	200	6	2009	100%	6	1985	1996	6	1	2039	44	3%	1.76	1					
Pipe Main	200	2	2009	100%	2	1985	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	10	2009	100%	10	1985	1996	10	1	2039	44	3%	1.76	2					
Pipe Main	200	3	2009	100%	3	1985	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	5	2009	100%	5	1985	1996	5	1	2039	44	3%	1.76	1					
Pipe Main	200	3	2009	100%	3	1985	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	9	2009	100%	9	1985	1996	9	1	2039	44	3%	1.76	2					
Pipe Main	200	6	2009	100%	6	1985	1996	6	1	2039	44	3%	1.76	1					
Pipe Main	200	2	2009	100%	2	1985	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	10	2009	100%	10	1985	1996	10	1	2039	44	3%	1.76	2					
Pipe Main	200	4	2009	100%	4	1985	1996	4	0	2039	44	3%	1.76	1					
Pipe Main	200	3	2009	100%	3	1985	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	3	2009	100%	3	1985	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	3	2009	100%	3	1986	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	1	2009	100%	1	1986	1996	1	0	2039	44	3%	1.76	0					
Pipe Main	200	3	2009	100%	3	1988	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	3	2009	100%	3	1988	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	1	2009	100%	1	1988	1996	1	0	2039	44	3%	1.76	0					
Pipe Main	200	2	2009	100%	2	1988	1996	2	0	2039	44	3%	1.76	0					
Pipe Main	200	10	2009	100%	10	1988	1996	10	1	2039	44	3%	1.76	2					
Pipe Main	200	4	2009	100%	4	1988	1996	4	0	2039	44	3%	1.76	1					
Pipe Main	200	3	2009	100%	3	1988	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	3	2009	100%	3	1988	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	3	2009	100%	3	1988	1996	3	0	2039	44	3%	1.76	1					
Pipe Main	200	1	2009	100%	1	1988	1996	1	0	2039	44	3%	1.76	0					
Pipe Main	200	3	2009																

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Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)		
Pipe Main	200	1	2009	100%	1	1988	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	1	2009	100%	1	1988	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	1	2009	100%	1	1989	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	12	2009	100%	12	1989	1996	12	1	2039	44	3%	1.76	2				
Pipe Main	200	7	2009	100%	7	1989	1996	7	1	2039	44	3%	1.76	1				
Pipe Main	200	3	2009	100%	3	1989	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	3	2009	100%	3	1989	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	2	2009	100%	2	1989	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	200	1	2009	100%	1	1989	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	2	2009	100%	2	1990	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	200	3	2009	100%	3	1990	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	1	2009	100%	1	1990	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	0	2009	100%	0	1990	1996	0	0	2039	44	3%	1.76	0				
Pipe Main	200	0	2009	100%	0	1990	1996	0	0	2039	44	3%	1.76	0				
Pipe Main	200	0	2009	100%	0	1990	1996	0	0	2039	44	3%	1.76	0				
Pipe Main	200	0	2009	100%	0	1990	1996	0	0	2039	44	3%	1.76	0				
Pipe Main	200	0	2009	100%	0	1990	1996	0	0	2039	44	3%	1.76	0				
Pipe Main	200	1	2009	100%	1	1990	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	7	2009	100%	7	1991	1996	7	1	2039	44	3%	1.76	1				
Pipe Main	200	5	2009	100%	5	1991	1996	5	1	2039	44	3%	1.76	1				
Pipe Main	200	16	2009	100%	16	1992	1996	16	2	2039	44	3%	1.76	3				
Pipe Main	200	3	2009	100%	3	1992	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	2	2009	100%	2	1992	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	200	3	2009	100%	3	1992	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	13	2009	100%	13	1992	1996	13	1	2039	44	3%	1.76	3				
Pipe Main	200	2	2009	100%	2	1992	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	200	2	2009	100%	2	1992	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	200	2	2009	100%	2	1992	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	200	3	2009	100%	3	1993	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	6	2009	100%	6	1993	1996	6	1	2039	44	3%	1.76	1				
Pipe Main	200	10	2009	100%	10	1993	1996	10	1	2039	44	3%	1.76	2				
Pipe Main	200	12	2009	100%	12	1993	1996	12	1	2039	44	3%	1.76	2				
Pipe Main	200	13	2009	100%	13	1993	1996	13	1	2039	44	3%	1.76	3				
Pipe Main	200	15	2009	100%	15	1993	1996	15	2	2039	44	3%	1.76	3				
Pipe Main	200	3	2009	100%	3	1993	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	4	2009	100%	4	1993	1996	4	0	2039	44	3%	1.76	1				
Pipe Main	200	1	2009	100%	1	1993	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	1	2009	100%	1	1993	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	18	2009	100%	18	1993	1996	18	2	2039	44	3%	1.76	4				
Pipe Main	200	3	2009	100%	3	1993	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	2	2009	100%	2	1993	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	200	3	2009	100%	3	1993	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	5	2009	100%	5	1994	1996	5	1	2039	44	3%	1.76	1				
Pipe Main	200	5	2009	100%	5	1994	1996	5	1	2039	44	3%	1.76	1				
Pipe Main	200	1	2009	100%	1	1994	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	18	2009	100%	18	1994	1996	18	1	2039	44	3%	1.76	4				
Pipe Main	200	3	2009	100%	3	1994	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	2	2009	100%	2	1994	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	200	3	2009	100%	3	1994	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	200	4	2009	100%	4	1994	1996	4	0	2039	44	3%	1.76	1				
Pipe Main	200	10	2009	100%	10	1994	1996	10	1	2039	44	3%	1.76	2				
Pipe Main	200	10	2009	100%	10	1994	1996	10	1	2039	44	3%	1.76	2				
Pipe Main	200	6	2009	100%	6	1994	1996	6	1	2039	44	3%	1.76	1				
Pipe Main	200	8	2009	100%	8	1994	1996	8	1	2039	44	3%	1.76	0				
Pipe Main	200	12	2009	100%	12	1994	1996	12	1	2039	44	3%	1.76	4				
Pipe Main	200	12	2009	100%	12	1994	1996	12	1	2039	44	3%	1.76	4				
Pipe Main	200	6	2009	100%	6	1994	1996	6	1	2039	44	3%	1.76	2				
Pipe Main	200	21	2009	100%	21	1994	1996	21	2	2039	44	3%	1.76	7				
Pipe Main	200	4	2009	100%	4	1994	1996	4	0	2039	44	3%	1.76	0				
Pipe Main	200	2	2009	100%	2	1994	1996	2	0	2039	44	3%	1.76	1				
Pipe Main	200	19	2009	100%	19	1994	1996	19	2	2039	44	3%	1.76	7				
Pipe Main	200	1	2009	100%	1	1994	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	1	2009	100%	1	1994	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	200	2	2009	100%	2	1994	1996	2	0	2039	44	3%	1.76	1				
Pipe Main	200	12	2009	100%	12	1994	1996	12	1	2039	44	3%	1.76	4				
Pipe Main	200	15	2009	100%	15	1994	1996	15	2	2039	44	3%	1.76	5				
Pipe Main	200	2	2009	100%	2	1994	1996	2	0	2039	44	3%	1.76	1				
Pipe Main	200	9	2009	100%	9	1994	1996	9	1	2039	44	3%	1.76	3				

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Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)		
Pipe Main	200	10	2009	100%	10	1996	1996	10		1	2039	44	7%	3.03	3			
Pipe Main	200	3	2009	100%	3	1996	1996	3		0	2039	44	7%	3.03	1			
Pipe Main	200	4	2009	100%	4	1996	1996	4		0	2039	44	7%	3.03	1			
Pipe Main	200	2	2009	100%	2	1996	1996	2		0	2039	44	7%	3.03	1			
Pipe Main	200	3	2009	100%	3	1996	1996	3		0	2039	44	7%	3.03	1			
Pipe Main	200	5	2009	100%	5	1996	1996	5		1	2039	44	7%	3.03	2			
Pipe Main	200	2	2009	100%	2	1996	1996	2		0	2039	44	7%	3.03	1			
Pipe Main	200	7	2009	100%	7	1996	1996	7		1	2039	44	7%	3.03	2			
Pipe Main	200	11	2009	100%	11	1996	1996	11		1	2039	44	7%	3.03	4			
Pipe Main	200	7	2009	100%	7	1996	1996	7		1	2039	44	7%	3.03	3			
Pipe Main	200	11	2009	100%	11	1996	1996	11		1	2039	44	7%	3.03	4			
Pipe Main	200	7	2009	100%	7	1996	1996	7		1	2039	44	7%	3.03	3			
Pipe Main	200	1	2009	100%	1	1996	1996	1		0	2039	44	7%	3.03	1			
Pipe Main	200	2	2009	100%	2	1996	1996	2		0	2039	44	7%	3.03	1			
Pipe Main	200	4	2009	100%	4	1996	1996	4		0	2039	44	7%	3.03	1			
Pipe Main	200	16	2009	100%	16	1996	1996	16		2	2039	44	7%	3.03	6			
Pipe Main	200	6	2009	100%	6	1996	1996	6		1	2039	44	7%	3.03	2			
Pipe Main	200	1	2009	100%	1	1996	1996	1		0	2039	44	7%	3.03	0			
Pipe Main	200	2	2009	100%	2	1996	1996	2		0	2039	44	7%	3.03	1			
Pipe Main	200	1	2009	100%	1	1997	1997	1		0	2039	43	7%	2.98	0			
Pipe Main	200	14	2009	100%	14	1997	1997	14		2	2039	43	7%	2.98	5			
Pipe Main	200	2	2009	100%	2	1997	1997	2		0	2039	43	7%	2.98	1			
Pipe Main	200	1	2009	100%	1	1997	1997	1		0	2039	43	7%	2.98	1			
Pipe Main	200	1	2009	100%	1	1997	1997	1		0	2039	43	7%	2.98	0			
Pipe Main	200	11	2009	100%	11	1997	1997	11		1	2039	43	7%	2.98	4			
Pipe Main	200	7	2009	100%	7	1997	1997	7		1	2039	43	7%	2.98	2			
Pipe Main	200	4	2009	100%	4	1997	1997	4		0	2039	43	7%	2.98	1			
Pipe Main	200	4	2009	100%	4	1997	1997	4		0	2039	43	7%	2.98	1			
Pipe Main	200	4	2009	100%	4	1997	1997	4		0	2039	43	7%	2.98	1			
Pipe Main	200	1	2009	100%	1	1997	1997	1		0	2039	43	7%	2.98	0			
Pipe Main	200	3	2009	100%	3	1997	1997	3		0	2039	43	7%	2.98	1			
Pipe Main	200	5	2009	100%	5	1997	1997	5		1	2039	43	7%	2.98	2			
Pipe Main	200	1	2009	100%	1	1997	1997	1		0	2039	43	7%	2.98	0			
Pipe Main	200	1	2009	100%	1	1997	1997	1		0	2039	43	7%	2.98	0			
Pipe Main	200	6	2009	100%	6	1997	1997	6		1	2039	43	7%	2.98	2			
Pipe Main	200	10	2009	100%	10	1997	1997	10		1	2039	43	7%	2.98	3			
Pipe Main	200	0	2009	100%	0	1997	1997	0		0	2039	43	7%	2.98	0			
Pipe Main	200	11	2009	100%	11	1997	1997	11		1	2039	43	7%	2.98	4			
Pipe Main	200	1	2009	100%	1	1997	1997	1		0	2039	43	7%	2.98	0			
Pipe Main	200	0	2009	100%	0	1997	1997	0		0	2039	43	7%	2.98	0			
Pipe Main	200	0	2009	100%	0	1997	1997	0		0	2039	43	7%	2.98	0			
Pipe Main	200	3	2009	100%	3	1997	1997	3		0	2039	43	7%	2.98	1			
Pipe Main	200	2	2009	100%	2	1997	1997	2		0	2039	43	7%	2.98	0			
Pipe Main	200	1	2009	100%	1	1997	1997	1		0	2039	43	7%	2.98	0			
Pipe Main	200	2	2009	100%	2	1997	1997	2		0	2039	43	7%	2.98	0			
Pipe Main	200	1	2009	100%	1	1997	1997	1		0	2039	43	7%	2.98	0			
Pipe Main	200	8	2009	100%	8	1998	1998	8		1	2039	42	7%	2.92	3			
Pipe Main	200	8	2009	100%	8	1998	1998	8		1	2039	42	7%	2.92	3			
Pipe Main	200	9	2009	100%	9	1998	1998	9		1	2039	42	7%	2.92	3			
Pipe Main	200	1	2009	100%	1	1998	1998	1		0	2039	42	7%	2.92	0			
Pipe Main	200	2	2009	100%	2	1998	1998	2		0	2039	42	7%	2.92	0			
Pipe Main	200	5	2009	100%	5	1998	1998	5		1	2039	42	7%	2.92	2			
Pipe Main	200	7	2009	100%	7	1998	1998	7		1	2039	42	7%	2.92	2			
Pipe Main	200	11	2009	100%	11	1998	1998	11		1	2039	42	7%	2.92	4			
Pipe Main	200	7	2009	100%	7	1998	1998	7		1	2039	42	7%	2.92	2			
Pipe Main	200	1	2009	100%	1	1998	1998	1		0	2039	42	7%	2.92	0			
Pipe Main	200	4	2009	100%	4	1998	1998	4		0	2039	42	7%	2.92	1			
Pipe Main	200	2	2009	100%	2	1998	1998	2		0	2039	42	7%	2.92	1			
Pipe Main	200	4	2009	100%	4	1998	1998	4		0	2039	42	7%	2.92	1			
Pipe Main	200	15	2009	100%	15	1998	1998	15		2	2039	42	7%	2.92	5			
Pipe Main	200	15	2009	100%	15	1998	1998	15		2	2039	42	7%	2.92	5			
Pipe Main	200	15	2009	100%	15	1998	1998	15		2	2039	42	7%	2.92	5			
Pipe Main	200	3	2009	100%	3	1998	1998	3		0	2039	42	7%	2.92	1			
Pipe Main	200	1	2009	100%	1	1998	1998	1		0	2039	42	7%	2.92	0			
Pipe Main	200	1	2009	100%	1	1998	1998	1		0	2039	42	7%	2.92	0			
Pipe Main	200	2	2009	100%	2	1998	1998	2		0	2039	42	7%	2.92	1			
Pipe Main	200	16	2009	100%	16	1998	1998	16		2	2039	42	7%	2.92	5			
Pipe Main	200	15	2009	100%	15	1998	1998	15		2	2039	42	7%	2.92	5			
Pipe Main	200	16	2009	100%	16	1998	1998	16		2	2039	42	7%	2.92	5			
Pipe Main	200	8	2009	100%	8	1998	1998	8		1	2039	42	7%	2.92	3			

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Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)		
Pipe Main	200	1	2009	100%	1	1998	1998	1	0	2039	42	7%	2.92	0				
Pipe Main	200	12	2009	100%	12	1998	1998	12	1	2039	42	7%	2.92	4				
Pipe Main	200	17	2009	100%	17	1998	1998	17	2	2039	42	7%	2.92	6				
Pipe Main	200	16	2009	100%	16	1998	1998	16	2	2039	42	7%	2.92	5				
Pipe Main	200	9	2009	100%	9	1998	1998	9	1	2039	42	7%	2.92	3				
Pipe Main	200	2	2009	100%	2	1998	1998	2	0	2039	42	7%	2.92	1				
Pipe Main	200	0	2009	100%	0	1998	1998	0	0	2039	42	7%	2.92	0				
Pipe Main	200	3	2009	100%	3	2000	2000	3	0	2039	40	7%	2.80	1				
Pipe Main	200	6	2009	100%	6	2000	2000	6	1	2039	40	7%	2.80	2				
Pipe Main	200	13	2009	100%	13	2000	2000	13	2	2039	40	7%	2.80	4				
Pipe Main	200	6	2009	100%	6	2000	2000	6	1	2039	40	7%	2.80	2				
Pipe Main	200	1	2009	100%	1	2001	2001	1	0	2039	39	7%	2.75	0				
Pipe Main	200	1	2009	100%	1	2001	2001	1	0	2039	39	7%	2.75	0				
Pipe Main	200	13	2009	100%	13	2001	2001	13	2	2039	39	7%	2.75	4				
Pipe Main	200	1	2009	100%	1	2003	2003	1	0	2039	37	7%	2.64	0				
Pipe Main	200	2	2009	100%	2	2003	2003	2	0	2039	37	7%	2.64	1				
Pipe Main	200	3	2009	100%	3	2003	2003	3	0	2039	37	7%	2.64	1				
Pipe Main	200	3	2009	100%	3	2004	2004	3	0	2039	36	7%	2.58	1				
Pipe Main	200	3	2009	100%	3	2004	2004	3	0	2039	36	7%	2.58	1				
Pipe Main	200	4	2009	100%	4	2004	2004	4	0	2039	36	7%	2.58	1				
Pipe Main	200	4	2009	100%	4	2004	2004	4	0	2039	36	7%	2.58	1				
Pipe Main	200	3	2009	100%	3	2004	2004	3	0	2039	36	7%	2.58	1				
Pipe Main	200	3	2009	100%	3	2005	2005	2	0	2039	35	7%	2.53	0				
Pipe Main	200	1	2009	100%	1	2005	2005	1	0	2039	35	7%	2.53	0				
Pipe Main	200	21	2009	100%	21	2007	2007	21	2	2039	33	7%	2.42	6				
Pipe Main	200	34	2009	100%	34	2007	2007	34	4	2039	33	7%	2.42	9				
Pipe Main	200	30	2009	100%	30	2007	2007	30	4	2039	33	7%	2.42	8				
Pipe Main	200	4	2009	100%	4	2007	2007	4	0	2039	33	7%	2.42	1				
Pipe Main	200	4	2009	100%	4	2008	2008	4	0	2039	32	7%	2.36	1				
Pipe Main	200	1	2009	100%	1	2008	2008	1	0	2039	32	7%	2.36	0				
Pipe Main	200	8	2009	100%	8	2008	2008	8	1	2039	32	7%	2.36	2				
Pipe Main	200	16	2009	100%	16	2008	2008	16	2	2039	32	7%	2.36	4				
Pipe Main	200	5	2009	100%	5	2008	2008	5	1	2039	32	7%	2.36	1				
Pipe Main	200	13	2009	100%	13	2008	2008	13	1	2039	32	7%	2.36	4				
Pipe Main	200	7	2009	100%	7	2008	2008	7	1	2039	32	7%	2.36	2				
Pipe Main	200	6	2009	100%	6	2008	2008	6	1	2039	32	7%	2.36	2				
Pipe Main	200	1	2009	100%	1	2008	2008	1	0	2039	32	7%	2.36	0				
Pipe Main	200	5	2009	100%	5	2008	2008	5	1	2039	32	7%	2.36	1				
Pipe Main	200	4	2009	100%	4	2008	2008	4	0	2039	32	7%	2.36	1				
Pipe Main	200	7	2009	100%	7	2008	2008	7	1	2039	32	7%	2.36	2				
Pipe Main	200	5	2009	100%	5	2008	2008	5	1	2039	32	7%	2.36	1				
Pipe Main	200	1	2009	100%	1	2008	2008	1	0	2039	32	7%	2.36	0				
Pipe Main	200	1	2009	100%	1	2008	2008	1	0	2039	32	7%	2.36	0				
Pipe Main	200	3	2009	100%	3	2008	2008	3	0	2039	32	7%	2.36	1				
Pipe Main	200	5	2009	100%	5	2008	2008	5	1	2039	32	7%	2.36	1				
Pipe Main	225	5	2009	100%	5	2006	2006	5	1	2039	34	7%	2.47	1				
Pipe Main	250	10	2009	100%	10	1985	1996	10	1	2039	44	3%	1.76	2				
Pipe Main	250	24	2009	100%	24	1985	1996	24	3	2039	44	3%	1.76	5				
Pipe Main	250	12	2009	100%	12	1985	1996	12	1	2039	44	3%	1.76	2				
Pipe Main	250	1	2009	100%	1	1985	1996	1	0	2039	44	3%	1.76	0				
Pipe Main	250	8	2009	100%	8	1985	1996	8	1	2039	44	3%	1.76	2				
Pipe Main	250	21	2009	100%	21	1985	1996	21	2	2039	44	3%	1.76	4				
Pipe Main	250	8	2009	100%	8	1985	1996	8	1	2039	44	3%	1.76	2				
Pipe Main	250	2	2009	100%	2	1985	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	250	4	2009	100%	4	1985	1996	4	0	2039	44	3%	1.76	1				
Pipe Main	250	2	2009	100%	2	1985	1996	2	0	2039	44	3%	1.76	0				
Pipe Main	250	8	2009	100%	8	1985	1996	8	1	2039	44	3%	1.76	2				
Pipe Main	250	26	2009	100%	26	1985	1996	26	3	2039	44	3%	1.76	5				
Pipe Main	250	23	2009	100%	23	1985	1996	23	3	2039	44	3%	1.76	5				
Pipe Main	250	25	2009	100%	25	1985	1996	25	3	2039	44	3%	1.76	5				
Pipe Main	250	11	2009	100%	11	1985	1996	11	1	2039	44	3%	1.76	2				
Pipe Main	250	25	2009	100%	25	1985	1996	25	3	2039	44	3%	1.76	5				
Pipe Main	250	23	2009	100%	23	1985	1996	23	3	2039	44	3%	1.76	5				
Pipe Main	250	18	2009	100%	18	1985	1996	18	2	2039	44	3%	1.76	4				
Pipe Main	250	3	2009	100%	3	1990	1996	3	0	2039	44	3%	1.76	1				
Pipe Main	250	5	2009	100%	5	1990	1996	5	1	2039	44	3%	1.76	1				
Pipe Main	250	8	2009	100%	8	1990	1996	8	1	2039	44	3%	1.76	2				

Casino Water Supply Scheme																		
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Peak day demand (L/ET/d)	2,683																	
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)		
Pipe Main	250	6	2009	100%	6	1990	1996	6		1	2039	44	3%	1.76	1			
Pipe Main	250	2	2009	100%	2	1990	1996	2		0	2039	44	3%	1.76	0			
Pipe Main	250	12	2009	100%	12	1990	1996	12		1	2039	44	3%	1.76	3			
Pipe Main	250	10	2009	100%	10	1990	1996	10		1	2039	44	3%	1.76	2			
Pipe Main (Encasement)	250	5	2009	100%	5	1994	1996	5		1	2039	44	3%	1.76	1			
Pipe Main	250	55	2009	100%	55	1994	1996	55		6	2039	44	3%	1.76	11			
Pipe Main	250	6	2009	100%	6	1999	1999	6		1	2039	41	7%	2.86	2			
Pipe Main	250	4	2009	100%	4	1999	1999	4		0	2039	41	7%	2.86	1			
Pipe Main	250	6	2009	100%	6	1999	1999	6		1	2039	41	7%	2.86	2			
Pipe Main	250	8	2009	100%	8	2007	2007	8		1	2039	33	7%	2.42	2			
Pipe Main	250	3	2009	100%	3	2007	2007	3		0	2039	33	7%	2.42	1			
Pipe Main	250	2	2009	100%	2	2007	2007	2		0	2039	33	7%	2.42	0			
Pipe Main	300	78	2009	100%	78	1975	1996	78		9	2039	44	3%	1.76	16			
Pipe Main	300	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	300	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	300	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	300	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	300	2	2009	100%	2	1975	1996	2		0	2039	44	3%	1.76	0			
Pipe Main	300	22	2009	100%	22	1975	1996	22		3	2039	44	3%	1.76	5			
Pipe Main	300	2	2009	100%	2	1975	1996	2		0	2039	44	3%	1.76	0			
Pipe Main	300	15	2009	100%	15	1975	1996	15		2	2039	44	3%	1.76	3			
Pipe Main	300	12	2009	100%	12	1975	1996	12		1	2039	44	3%	1.76	2			
Pipe Main	300	60	2009	100%	60	1975	1996	60		7	2039	44	3%	1.76	12			
Pipe Main	300	32	2009	100%	32	1975	1996	32		4	2039	44	3%	1.76	6			
Pipe Main	300	22	2009	100%	22	1975	1996	22		3	2039	44	3%	1.76	5			
Pipe Main	300	60	2009	100%	60	1975	1996	60		7	2039	44	3%	1.76	12			
Pipe Main	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1			
Pipe Main	300	16	2009	100%	16	1975	1996	16		2	2039	44	3%	1.76	3			
Pipe Main	300	7	2009	100%	7	1986	1996	7		1	2039	44	3%	1.76	1			
Pipe Main	300	1	2009	100%	1	1986	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	300	24	2009	100%	24	1986	1996	24		3	2039	44	3%	1.76	5			
Pipe Main	300	17	2009	100%	17	1986	1996	17		2	2039	44	3%	1.76	3			
Pipe Main	300	17	2009	100%	17	1986	1996	17		2	2039	44	3%	1.76	3			
Pipe Main	300	3	2009	100%	3	1986	1996	3		0	2039	44	3%	1.76	1			
Pipe Main	300	25	2009	100%	25	1986	1996	25		3	2039	44	3%	1.76	5			
Pipe Main	300	25	2009	100%	25	1986	1996	25		3	2039	44	3%	1.76	5			
Pipe Main	300	33	2009	100%	33	1986	1996	33		4	2039	44	3%	1.76	7			
Pipe Main	300	1	2009	100%	1	1986	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	300	6	2009	100%	6	1986	1996	6		1	2039	44	3%	1.76	1			
Pipe Main	300	21	2009	100%	21	1986	1996	21		2	2039	44	3%	1.76	4			
Pipe Main	300	3	2009	100%	3	1986	1996	3		0	2039	44	3%	1.76	1			
Pipe Main	300	24	2009	100%	24	1986	1996	24		3	2039	44	3%	1.76	5			
Pipe Main	300	10	2009	100%	10	1986	1996	10		1	2039	44	3%	1.76	2			
Pipe Main	300	34	2009	100%	34	1986	1996	34		4	2039	44	3%	1.76	7			
Pipe Main	300	11	2009	100%	11	1986	1996	11		1	2039	44	3%	1.76	2			
Pipe Main	300	1	2009	100%	1	1990	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	300	2	2009	100%	2	1990	1996	2		0	2039	44	3%	1.76	0			
Pipe Main	300	1	2009	100%	1	1990	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	300	0	2009	100%	0	1990	1996	0		0	2039	44	3%	1.76	0			
Pipe Main	300	0	2009	100%	0	1990	1996	0		0	2039	44	3%	1.76	0			
Pipe Main	300	4	2009	100%	4	1999	1999	4		1	2039	41	7%	2.86	1			
Pipe Main	300	1	2009	100%	1	1999	1999	1		0	2039	41	7%	2.86	0			
Pipe Main	300	3	2009	100%	3	1999	1999	3		0	2039	41	7%	2.86	1			
Pipe Main	300	4	2009	100%	4	1999	1999	4		0	2039	41	7%	2.86	1			
Pipe Main	300	18	2009	100%	18	1999	1999	18		2	2039	41	7%	2.86	6			
Pipe Main	300	10	2009	100%	10	1999	1999	10		1	2039	41	7%	2.86	3			
Pipe Main	300	3	2009	100%	3	1999	1999	3		0	2039	41	7%	2.86	1			
Pipe Main	300	5	2009	100%	5	1999	1999	5		1	2039	41	7%	2.86	2			
Pipe Main	300	17	2009	100%	17	1999	1999	17		2	2039	41	7%	2.86	6			
Pipe Main	300	18	2009	100%	18	1999	1999	18		2	2039	41	7%	2.86	6			
Pipe Main	300	4	2009	100%	4	1999	1999	4		0	2039	41	7%	2.86	1			
Pipe Main	300	15	2009	100%	15	1999	1999	15		2	2039	41	7%	2.86	5			
Pipe Main	300	17	2009	100%	17	1999	1999	17		2	2039	41	7%	2.86	6			
Pipe Main	300	3	2009	100%	3	1999	1999	3		0	2039	41	7%	2.86	1			
Pipe Main	300	16	2009	100%	16	1999	1999	16		2	2039	41	7%	2.86	5			
Pipe Main	300	27	2009	100%	27	1999	1999	27		3	2039	41	7%	2.86	9			
Pipe Main	300	4	2009	100%	4	1999	1999	4		0	2039	41	7%	2.86	1			
Pipe Main	300	2	2009	100%	2	1999	1999	2		0	2039	41	7%	2.86	1			
Pipe Main	300	30	2009	100%	30	1999	1999	30		3	2039	41	7%	2.86	10			

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Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)			
Pipe Main	300	7	2009	100%	7	1999	1999	7		1	2039	41	7%	2.86	2				
Pipe Main	300	5	2009	100%	5	1999	1999	5		1	2039	41	7%	2.86	2				
Pipe Main	300	16	2009	100%	16	1999	1999	16		2	2039	41	7%	2.86	5				
Pipe Main	300	0	2009	100%	0	2001	2001	0		0	2039	39	7%	2.75	0				
Pipe Main	300	1	2009	100%	1	2001	2001	1		0	2039	39	7%	2.75	0				
Pipe Main	300	0	2009	100%	0	2001	2001	0		0	2039	39	7%	2.75	0				
Pipe Main	300	0	2009	100%	0	2001	2001	0		0	2039	39	7%	2.75	0				
Pipe Main	300	2	2009	100%	2	2001	2001	2		0	2039	39	7%	2.75	0				
Pipe Main	300	8	2009	100%	8	2001	2001	8		1	2039	39	7%	2.75	2				
Pipe Main	300	9	2009	100%	9	2001	2001	9		1	2039	39	7%	2.75	3				
Pipe Main	300	7	2009	100%	7	2003	2003	7		1	2039	37	7%	2.64	2				
Pipe Main	300	3	2009	100%	3	2003	2003	3		0	2039	37	7%	2.64	1				
Pipe Main	300	19	2009	100%	19	2003	2003	19		2	2039	37	7%	2.64	6				
Pipe Main	300	20	2009	100%	20	2003	2003	20		2	2039	37	7%	2.64	6				
Pipe Main	300	2	2009	100%	2	2003	2003	2		0	2039	37	7%	2.64	0				
Pipe Main	300	1	2009	100%	1	2003	2003	1		0	2039	37	7%	2.64	0				
Pipe Main	300	1	2009	100%	1	2003	2003	1		0	2039	37	7%	2.64	0				
Pipe Main	300	10	2009	100%	10	2003	2003	10		1	2039	37	7%	2.64	3				
Pipe Main	300	25	2009	100%	25	2003	2003	25		3	2039	37	7%	2.64	8				
Pipe Main	300	21	2009	100%	21	2003	2003	21		2	2039	37	7%	2.64	6				
Pipe Main	300	10	2009	100%	10	2003	2003	10		1	2039	37	7%	2.64	3				
Pipe Main	300	10	2009	100%	10	2003	2003	10		1	2039	37	7%	2.64	3				
Pipe Main	300	10	2009	100%	10	2003	2003	10		1	2039	37	7%	2.64	3				
Pipe Main	300	15	2009	100%	15	2003	2003	15		2	2039	37	7%	2.64	5				
Pipe Main	300	18	2009	100%	18	2003	2003	18		2	2039	37	7%	2.64	6				
Pipe Main	300	11	2009	100%	11	2003	2003	11		1	2039	37	7%	2.64	3				
Pipe Main	300	11	2009	100%	11	2003	2003	11		1	2039	37	7%	2.64	3				
Pipe Main	300	17	2009	100%	17	2003	2003	17		2	2039	37	7%	2.64	5				
Pipe Main	300	2	2009	100%	2	2003	2003	2		0	2039	37	7%	2.64	1				
Pipe Main	300	3	2009	100%	3	2003	2003	3		0	2039	37	7%	2.64	1				
Pipe Main	300	13	2009	100%	13	2003	2003	13		2	2039	37	7%	2.64	4				
Pipe Main	300	24	2009	100%	24	2003	2003	24		3	2039	37	7%	2.64	7				
Pipe Main	300	25	2009	100%	25	2003	2003	25		3	2039	37	7%	2.64	8				
Pipe Main	300	15	2009	100%	15	2003	2003	15		2	2039	37	7%	2.64	5				
Pipe Main	300	6	2009	100%	6	2003	2003	6		1	2039	37	7%	2.64	2				
Pipe Main	300	171	2009	100%	171	2005	2005	171		20	2039	35	7%	2.53	50				
Pipe Main	300	0	2009	100%	0	2005	2005	0		0	2039	35	7%	2.53	0				
Pipe Main	300	52	2009	100%	52	2005	2005	52		6	2039	35	7%	2.53	15				
Pipe Main	300	6	2009	100%	6	2005	2005	6		1	2039	35	7%	2.53	2				
Pipe Main	300	10	2009	100%	10	2006	2006	10		1	2039	34	7%	2.47	3				
Pipe Main	300	3	2009	100%	3	2006	2006	3		0	2039	34	7%	2.47	1				
Pipe Main	300	14	2009	100%	14	2006	2006	14		2	2039	34	7%	2.47	4				
Pipe Main	300	18	2009	100%	18	2006	2006	18		2	2039	34	7%	2.47	5				
Pipe Main	300	9	2009	100%	9	2006	2006	9		1	2039	34	7%	2.47	2				
Pipe Main	300	41	2009	100%	41	2006	2006	41		5	2039	34	7%	2.47	12				
Pipe Main	300	11	2009	100%	11	2006	2006	11		1	2039	34	7%	2.47	3				
Pipe Main	300	4	2009	100%	4	2006	2006	4		0	2039	34	7%	2.47	1				
Pipe Main	300	4	2009	100%	4	2006	2006	4		0	2039	34	7%	2.47	1				
Pipe Main	300	19	2009	100%	19	2006	2006	19		2	2039	34	7%	2.47	6				
Pipe Main	300	28	2009	100%	28	2006	2006	28		3	2039	34	7%	2.47	8				
Pipe Main	300	29	2009	100%	29	2006	2006	29		3	2039	34	7%	2.47	8				
Pipe Main	300	36	2009	100%	36	2006	2006	36		4	2039	34	7%	2.47	10				
Pipe Main	300	9	2009	100%	9	2006	2006	9		1	2039	34	7%	2.47	3				
Pipe Main	300	23	2009	100%	23	2006	2006	23		3	2039	34	7%	2.47	7				
Pipe Main	300	4	2009	100%	4	2006	2006	4		0	2039	34	7%	2.47	1				
Pipe Main	300	9	2009	100%	9	2006	2006	9		1	2039	34	7%	2.47	3				
Pipe Main (Encasement)	300	8	2009	100%	8	2007	2007	8		1	2039	33	7%	2.42	2				
Pipe Main	300	11	2009	100%	11	2008	2008	11		1	2039	32	7%	2.36	3				
Pipe Main	450	19	2009	100%	19	1984	1996	19		2	2039	44	3%	1.76	4				
Pipe Main	450	8	2009	100%	8	1985	1996	8		1	2039	44	3%	1.76	2				
Pipe Main	450	23	2009	100%	23	1985	1996	23		3	2039	44	3%	1.76	5				
Pipe Main	450	16	2009	100%	16	1985	1996	16		2	2039	44	3%	1.76	3				
Pipe Main	450	14	2009	100%	14	1985	1996	14		2	2039	44	3%	1.76	3				
Pipe Main	450	24	2009	100%	24	1985	1996	24		3	2039	44	3%	1.76	5				
Pipe Main	450	12	2009	100%	12	1985	1996	12		1	2039	44	3%	1.76	2				
Pipe Main	450	16	2009	100%	16	1985	1996	16		2	2039	44	3%	1.76	3				
Pipe Main	450	23	2009	100%	23	1985	1996	23		3	2039	44	3%	1.76	5				
Pipe Main	450	12	2009	100%	12	1985	1996	12		1	2039	44	3%	1.76	3				

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Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)		
Pipe Main	450	9	2009	100%	9	1985	1996	9		1	2039	44	3%	1.76	2			
Pipe Main	450	11	2009	100%	11	1985	1996	11		1	2039	44	3%	1.76	2			
Pipe Main	450	11	2009	100%	11	1985	1996	11		1	2039	44	3%	1.76	2			
Pipe Main	450	20	2009	100%	20	1985	1996	20		2	2039	44	3%	1.76	4			
Pipe Main	450	4	2009	100%	4	1985	1996	4		0	2039	44	3%	1.76	1			
Pipe Main	450	15	2009	100%	15	1985	1996	15		2	2039	44	3%	1.76	3			
Pipe Main	450	15	2009	100%	15	1985	1996	15		2	2039	44	3%	1.76	3			
Pipe Main	450	17	2009	100%	17	1985	1996	17		2	2039	44	3%	1.76	4			
Pipe Main	450	7	2009	100%	7	1985	1996	7		1	2039	44	3%	1.76	1			
Pipe Main	450	18	2009	100%	18	1985	1996	18		2	2039	44	3%	1.76	4			
Pipe Main	450	2	2009	100%	2	1985	1996	2		0	2039	44	3%	1.76	0			
Pipe Main	450	110	2009	100%	110	1985	1996	110		13	2039	44	3%	1.76	22			
Pipe Main	450	1	2009	100%	1	1985	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	450	2	2009	100%	2	1985	1996	2		0	2039	44	3%	1.76	0			
Pipe Main	450	6	2009	100%	6	1985	1996	6		1	2039	44	3%	1.76	1			
Pipe Main	450	18	2009	100%	18	1985	1996	18		2	2039	44	3%	1.76	4			
Pipe Main	450	8	2009	100%	8	1985	1996	8		1	2039	44	3%	1.76	2			
Pipe Main	450	19	2009	100%	19	1985	1996	19		2	2039	44	3%	1.76	4			
Pipe Main	450	8	2009	100%	8	1985	1996	8		1	2039	44	3%	1.76	2			
Pipe Main	450	6	2009	100%	6	1985	1996	6		1	2039	44	3%	1.76	1			
Pipe Main	450	28	2009	100%	28	1985	1996	28		3	2039	44	3%	1.76	6			
Pipe Main	450	11	2009	100%	11	1985	1996	11		1	2039	44	3%	1.76	2			
Pipe Main	450	11	2009	100%	11	1985	1996	11		1	2039	44	3%	1.76	2			
Pipe Main	450	27	2009	100%	27	1985	1996	27		3	2039	44	3%	1.76	5			
Pipe Main	450	25	2009	100%	25	1985	1996	25		3	2039	44	3%	1.76	5			
Pipe Main	450	26	2009	100%	26	1986	1996	26		3	2039	44	3%	1.76	5			
Pipe Main	450	11	2009	100%	11	1986	1996	11		1	2039	44	3%	1.76	2			
Pipe Main	450	1	2009	100%	1	1986	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	450	1	2009	100%	1	1986	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	450	9	2009	100%	9	1986	1996	9		1	2039	44	3%	1.76	2			
Pipe Main	450	30	2009	100%	30	1986	1996	30		3	2039	44	3%	1.76	6			
Pipe Main	450	1	2009	100%	1	1986	1996	1		0	2039	44	3%	1.76	0			
Pipe Main	450	9	2009	100%	9	1986	1996	9		0	2039	44	3%	1.76	0			
Pipe Main	500	24	2009	100%	24	1984	1996	24		3	2039	44	3%	1.76	5			
Pipe Main	500	80	2009	100%	80	1984	1996	80		9	2039	44	3%	1.76	16			
Pipe Main	500	53	2009	100%	53	1984	1996	53		6	2039	44	3%	1.76	11			
Pipe Main	500	60	2009	100%	60	1984	1996	60		7	2039	44	3%	1.76	12			
Pipe Main	500	75	2009	100%	75	1984	1996	75		9	2039	44	3%	1.76	15			
Pipe Main	500	126	2009	100%	126	1984	1996	126		15	2039	44	3%	1.76	26			
Pipe Main	500	40	2009	100%	40	1984	1996	40		5	2039	44	3%	1.76	8			
Pipe Main	500	63	2009	100%	63	1984	1996	63		7	2039	44	3%	1.76	13			
Pipe Main	500	63	2009	100%	63	1984	1996	63		7	2039	44	3%	1.76	13			
Pipe Main	500	82	2009	100%	82	1984	1996	82		10	2039	44	3%	1.76	17			
Pipe Main	500	19	2009	100%	19	1984	1996	19		2	2039	44	3%	1.76	4			
Pipe Main	500	53	2009	100%	53	1984	1996	53		6	2039	44	3%	1.76	11			
Pipe Main	500	63	2009	100%	63	1984	1996	63		7	2039	44	3%	1.76	13			
Pipe Main	500	63	2009	100%	63	1984	1996	63		7	2039	44	3%	1.76	13			
Pipe Main	500	89	2009	100%	89	1984	1996	89		10	2039	44	3%	1.76	18			
Pipe Main	500	15	2009	100%	15	1984	1996	15		2	2039	44	3%	1.76	3			
Pipe Main	500	23	2009	100%	23	1984	1996	23		3	2039	44	3%	1.76	5			
Pipe Main	500	96	2009	100%	96	1984	1996	96		11	2039	44	3%	1.76	20			
Pipe Main	500	8	2009	100%	8	1984	1996	8		1	2039	44	3%	1.76	2			
Pipe Main	500	59	2009	100%	59	1984	1996	59		7	2039	44	3%	1.76	12			
Pipe Main	500	44	2009	100%	44	1984	1996	44		5	2039	44	3%	1.76	9			
Pipe Main	500	41	2009	100%	41	1984	1996	41		5	2039	44	3%	1.76	8			
Pipe Main	500	5	2009	100%	5	1984	1996	5		1	2039	44	3%	1.76	1			
Pipe Main	500	18	2009	100%	18	1984	1996	18		2	2039	44	3%	1.76	4			
Pipe Main	600	165	2009	100%	165	1975	1996	165		19	2039	44	3%	1.76	34			
Pipe Main	600	15	2009	100%	15	1975	1996	15		2	2039	44	3%	1.76	3			
Pipe Main	600	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1			
Pipe Main	600	175	2009	100%	175	1975	1996	175		20	2039	44	3%	1.76	36			
Pipe Main	600	57	2009	100%	57	1975	1996	57		7	2039	44	3%	1.76	12			
Pipe Main	600	16	2009	100%	16	1975	1996	16		2	2039	44	3%	1.76	3			
Pipe Main	600	2	2009	100%	2	1975	1996	2		0	2039	44	3%	1.76	0			
Pipe Main	600	8	2009	100%	8	1975	1996	8		1	2039	44	3%	1.76	2			
Pipe Main	600	8	2009	100%	8	1975	1996	8		1	2039	44	3%	1.76	2			
Pipe Main	600	266	2009	100%	266	1975	1996	266		31	2039	44	3%	1.76	54			
Pipe Main	600	15	2009	100%	15	1975	1996	15		2	2039	44	3%	1.76	3			

Casino Water Supply Scheme								Summary								
Capital Charge Calculation								per ET		Total						
Pre 1996 discount rate	3%															
Post 1996 discount rate	7%							Capital charge		\$9,047						
Peak day demand (L/ET/d)	2,683							2008/09\$ per ET								
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
Pipe Main	600	11	2009	100%	11	1975	1996	11		1	2039	44	3%	1.76	2	
Pipe Main	600	5	2009	100%	5	1975	1996	5		1	2039	44	3%	1.76	1	
Pipe Main	600	16	2009	100%	16	1975	1996	16		2	2039	44	3%	1.76	3	
Pipe Main	600	2	2009	100%	2	1975	1996	2		0	2039	44	3%	1.76	0	
Pipe Main	600	6	2009	100%	6	1975	1996	6		1	2039	44	3%	1.76	1	
Pipe Main	600	8	2009	100%	8	1975	1996	8		1	2039	44	3%	1.76	2	
Pipe Main	600	11	2009	100%	11	1975	1996	11		1	2039	44	3%	1.76	2	
Pipe Main	600	11	2009	100%	11	1975	1996	11		1	2039	44	3%	1.76	2	
Pipe Main	600	7	2009	100%	7	1975	1996	7		1	2039	44	3%	1.76	1	
Pipe Main	600	8	2009	100%	8	1975	1996	8		1	2039	44	3%	1.76	2	
Pipe Main	600	5	2009	100%	5	1975	1996	5		1	2039	44	3%	1.76	1	
Pipe Main	600	164	2009	100%	164	1975	1996	164		19	2039	44	3%	1.76	34	
Pipe Main	600	91	2009	100%	91	1975	1996	91		11	2039	44	3%	1.76	19	
Pipe Main	600	91	2009	100%	91	1975	1996	91		11	2039	44	3%	1.76	19	
Pipe Main	600	23	2009	100%	23	1975	1996	23		3	2039	44	3%	1.76	5	
Pipe Main	600	49	2009	100%	49	1975	1996	49		6	2039	44	3%	1.76	10	
Pipe Main	600	62	2009	100%	62	1975	1996	62		7	2039	44	3%	1.76	13	
Pipe Main	600	62	2009	100%	62	1975	1996	62		7	2039	44	3%	1.76	13	
Pipe Main	600	7	2009	100%	7	1975	1996	7		1	2039	44	3%	1.76	1	
Pipe Main	600	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0	
Pipe Main	600	11	2009	100%	11	1975	1996	11		1	2039	44	3%	1.76	2	
Pipe Main	600	6	2009	100%	6	1975	1996	6		1	2039	44	3%	1.76	1	
Pipe Main	600	27	2009	100%	27	1999	1999	27		3	2039	41	7%	2.86	9	
Pipe Main	1050	23	2009	100%	23	1975	1996	23		3	2039	44	3%	1.76	5	
Stop	200	2	2009	100%	2	2008	2008	2		0	2039	32	7%	2.36	0	
Stop	200	2	2009	100%	2	2008	2008	2		0	2039	32	7%	2.36	0	
Stop	225	2	2009	100%	2	2008	2008	2		0	2039	32	7%	2.36	1	
Stop	225	2	2009	100%	2	2008	2008	2		0	2039	32	7%	2.36	1	
Stop	300	3	2009	100%	3	2009	2009	3		0	2039	31	7%	2.31	1	
Stop	300	3	2009	100%	3	2009	2009	3		0	2039	31	7%	2.31	1	
Stop	300	3	2009	100%	3	2009	2009	3		0	2039	31	7%	2.31	1	
Stop	450	4	2009	100%	4	2009	2009	4		1	2039	31	7%	2.31	1	
Stop	450	4	2009	100%	4	2009	2009	4		1	2039	31	7%	2.31	1	
Stop	200	2	2009	100%	2	2009	2009	2		0	2039	31	7%	2.31	0	
Stop	200	2	2009	100%	2	2009	2009	2		0	2039	31	7%	2.31	0	
Stop	450	3	2009	100%	3	2009	2009	3		0	2039	31	7%	2.31	1	
Double Air	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Stop	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Stop	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Scour	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Stop	600	7	2009	100%	7	1975	1996	7		1	2039	44	3%	1.76	1	
Stop	100	1	2009	100%	1	1975	1996	1		0	2039	44	3%	1.76	0	
Stop	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Double Air	600	10	2009	100%	10	1975	1996	10		1	2039	44	3%	1.76	2	
Stop	450	4	2009	100%	4	1975	1996	4		1	2039	44	3%	1.76	1	
Double Air	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Stop	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Stop	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Stop	450	4	2009	100%	4	1975	1996	4		1	2039	44	3%	1.76	1	
Stop	450	4	2009	100%	4	1975	1996	4		1	2039	44	3%	1.76	1	
Stop	525	6	2009	100%	6	1975	1996	6		1	2039	44	3%	1.76	1	
Stop	600	7	2009	100%	7	1975	1996	7		1	2039	44	3%	1.76	1	
Double Air	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Double Air	300	3	2009	100%	3	1975	1996	3		0	2039	44	3%	1.76	1	
Stop	450	4	2009	100%	4	1984	1996	4		1	2039	44	3%	1.76	1	
Stop	500	6	2009	100%	6	1984	1996	6		1	2039	44	3%	1.76	1	
Stop	500	6	2009	100%	6	1984	1996	6		1	2039	44	3%	1.76	1	
Stop	500	6	2009	100%	6	1984	1996	6		1	2039	44	3%	1.76	1	
Stop	500	6	2009	100%	6	1984	1996	6		1	2039	44	3%	1.76	1	
Scour	150	1	2009	100%	1	1984	1996	1		0	2039	44	3%	1.76	0	
Scour	150	1	2009	100%	1	1984	1996	1		0	2039	44	3%	1.76	0	
Stop	450	4	2009	100%	4	1984	1996	4		1	2039	44	3%	1.76	1	
Reflux	450	4	2009	100%	4	1984	1996	4		1	2039	44	3%	1.76	1	
Stop	250	2	2009	100%	2	1985	1996	2		0	2039	44	3%	1.76	0	
Stop	250	2	2009	100%	2	1985	1996	2		0	2039	44	3%	1.76	0	
Stop	450	4	2009	100%	4	1985	1996	4		1	2039	44	3%	1.76	1	
Stop	450	4	2009	100%	4	1985	1996	4		1	2039	44	3%	1.76	1	

Casino Water Supply Scheme																				
Capital Charge Calculation																				
Pre 1996 discount rate	3%																			
Post 1996 discount rate	7%																			
Peak day demand (L/ET/d)		2,683																		
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)				
Stop	300	3	2009	100%	3	1986	1996	3		0	2039	44	3%	1.76	1					
Stop	300	3	2009	100%	3	1986	1996	3		0	2039	44	3%	1.76	1					
Stop	300	3	2009	100%	3	1986	1996	3		0	2039	44	3%	1.76	1					
Stop	200	2	2009	100%	2	1986	1996	2		0	2039	44	3%	1.76	0					
Stop	200	2	2009	100%	2	1986	1996	2		0	2039	44	3%	1.76	0					
Stop	300	3	2009	100%	3	1990	1996	3		0	2039	44	3%	1.76	1					
Stop	250	2	2009	100%	2	1990	1996	2		0	2039	44	3%	1.76	0					
Stop	250	2	2009	100%	2	1990	1996	2		0	2039	44	3%	1.76	0					
Stop	200	2	2009	100%	2	1997	1997	2		0	2039	43	7%	2.98	1					
Stop	600	7	2009	100%	7	1997	1997	7		1	2039	43	7%	2.98	2					
Stop	200	2	2009	100%	2	1998	1998	2		0	2039	42	7%	2.92	1					
Stop	250	2	2009	100%	2	1998	1998	2		0	2039	42	7%	2.92	1					
Stop	300	3	2009	100%	3	1999	1999	3		0	2039	41	7%	2.86	1					
Stop	300	3	2009	100%	3	1999	1999	3		0	2039	41	7%	2.86	1					
Stop	300	3	2009	100%	3	1999	1999	3		0	2039	41	7%	2.86	1					
Stop	300	3	2009	100%	3	2001	2001	3		0	2039	39	7%	2.75	1					
Stop	300	3	2009	100%	3	2001	2001	3		0	2039	39	7%	2.75	1					
Stop	300	3	2009	100%	3	2003	2003	3		0	2039	37	7%	2.64	1					
Stop	300	3	2009	100%	3	2003	2003	3		0	2039	37	7%	2.64	1					
Double Air	600	10	2009	100%	10	2003	2003	10		1	2039	37	7%	2.64	3					
Stop	300	3	2009	100%	3	2003	2003	3		0	2039	37	7%	2.64	1					
Stop	200	2	2009	100%	2	2004	2004	2		0	2039	36	7%	2.58	0					
Stop	200	2	2009	100%	2	2004	2004	2		0	2039	36	7%	2.58	0					
Stop	300	3	2009	100%	3	2005	2005	3		0	2039	35	7%	2.53	1					
Stop	300	3	2009	100%	3	2006	2006	3		0	2039	34	7%	2.47	1					
Stop	300	3	2009	100%	3	2006	2006	3		0	2039	34	7%	2.47	1					
Stop	200	2	2009	100%	2	2007	2007	2		0	2039	33	7%	2.42	0					
Reduced Pressure Zone	200	7	2009	100%	7	2007	2007	7		1	2039	33	7%	2.42	2					
Stop	200	2	2009	100%	2	2008	2008	2		0	2039	32	7%	2.36	0					
Stop	200	2	2009	100%	2	2008	2008	2		0	2039	32	7%	2.36	0					
Stop	200	2	2009	100%	2	2008	2008	2		0	2039	32	7%	2.36	0					
Stop	200	2	2009	100%	2	2008	2008	2		0	2039	32	7%	2.36	0					
Booster Pump Station	ELECTRICAL	70	2009	100%	70	1985	1996	70		8	2039	44	3%	1.76	14					
Booster Pump Station	PIPEWORK	146	2009	100%	146	1985	1996	146		17	2039	44	3%	1.76	30					
Booster Pump Station	ROAD WORKS	27	2009	100%	27	1985	1996	27		3	2039	44	3%	1.76	6					
Booster Pump Station	CIVIL	8	2009	100%	8	1985	1996	8		1	2039	44	3%	1.76	2					
Booster Pump Station	CIVIL	162	2009	100%	162	1985	1996	162		19	2039	44	3%	1.76	33					
Booster Pump Station	CHLORINATION	4	2009	100%	4	2001	2001	4		0	2039	39	7%	2.75	1					
Booster Pump Station	CHLORINATION	4	2009	100%	4	2001	2001	4		0	2039	39	7%	2.75	1					
Booster Pump Station	CHLORINATION	12	2009	100%	12	2001	2001	12		1	2039	39	7%	2.75	4					
Booster Pump Station	CHLORINATION	5	2009	100%	5	2001	2001	5		1	2039	39	7%	2.75	2					
Booster Pump Station	CHLORINATION	12	2009	100%	12	2001	2001	12		1	2039	39	7%	2.75	4					
Booster Pump Station	CHLORINATION	17	2009	100%	17	2001	2001	17		2	2039	39	7%	2.75	5					
Booster Pump Station	ELECTRONIC	9	2009	100%	9	2003	2003	9		1	2039	37	7%	2.64	3					
Booster Pump Station	MECHANICAL	27	2009	100%	27	2004	2004	27		3	2039	36	7%	2.58	8					
Booster Pump Station	MECHANICAL	27	2009	100%	27	2004	2004	27		3	2039	36	7%	2.58	8					
Booster Pump Station	PRESSURE TANK	2	2009	100%	2	2008	2008	2		0	2039	32	7%	2.36	0					
Telemetry Upgrades		53	2009	100%	53	2009	2009	53		6	2039	31	7%	2.31	14					
Future Transfer System																				
Casino Reservoir - Communications Hut Sth Reservoir		120	2009	100%	120	2010	2010	112		13	2039	30	7%	2.26	29					
Water - Provide water supply to new release areas (Casino)		1,500	2009	100%	1,500	2016	2016	934		108	2039	24	7%	1.96	212					
Water - Provide water supply to new release areas (Casino)		1,500	2009	100%	1,500	2022	2022	622		72	2039	18	7%	1.67	121					
Total Transfer System		11,581						10,129		8,636		1,173				2,361				
Existing Reservoirs																				
Reservoir South	ELECTRONIC	9	2009	100%	9	1985	1996	9		1	2039	44	3%	1.76	2					
Reservoir South	STEELWORKS	267	2009	100%	267	1986	1996	267		31	2039	44	3%	1.76	54					
Reservoir South	STEELWORKS	49	2009	100%	49	1986	1996	49		6	2039	44	3%	1.76	10					
Reservoir South	CHLORINATION	16	2009	100%	16	2001	2001	16		2	2039	39	7%	2.75	5					
Reservoir North No. 3	STRUCTURAL	999	2009	100%	999	1977	1996	999	11.32	4,220	116	2039	44	3%	1.76	204				
Reservoir North No. 3	STRUCTURAL	999	2009	100%	999	1977	1996	999		116	2039	44	3%	1.76	204					
Reservoir North No. 3	PIPEWORK	351	2009	100%	351	1977	1996	351		41	2039	44	3%	1.76	72					
Reservoir North No. 3	ELECTRONIC	13	2009	100%	13	1985	1996	13		2	2039	44	3%	1.76	3					
Reservoir North No. 3	STEELWORKS	250	2009	100%	250	1986	1996	250		29	2039	44	3%	1.76	51					
Reservoir North No. 3	STEELWORKS	49	2009	100%	49	1986	1996	49		6	2039	44	3%	1.76	10					
Reservoir North No. 3	CIVIL	39	2009	100%	39	1994	1996	39		5	2039	44	3%	1.76	8					
Reservoir North No. 3	STEELWORKS	27	2009	100%	27	2003	2003	27		3	2039	37	7%	2.64	8					

Casino Water Supply Scheme																				
Capital Charge Calculation																				
Pre 1996 discount rate	3%									per ET	Total									
Post 1996 discount rate	7%									Capital charge	\$9,047 2008/09\$ per ET									
Peak day demand (L/ET/d)	2,683																			
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)				
Reservoir North No. 2	STEELWORKS	135	2009	100%	135	1986	1996	135	-	16	2039	44	3%	1.76	27					
Reservoir North No. 2	STEELWORKS	49	2009	100%	49	1986	1996	49	-	6	2039	44	3%	1.76	10					
Reservoir North No. 2	MECHANICAL	6	2009	100%	6	1986	1996	6	-	1	2039	44	3%	1.76	1					
Reservoir North No. 2	CIVIL	180	2009	100%	180	1992	1996	180	-	21	2039	44	3%	1.76	37					
Reservoir North No. 2	ELECTRONIC	9	2009	100%	9	2001	2001	9	-	1	2039	39	7%	2.75	3					
Reservoir North No. 1	STEELWORKS	146	2009	100%	146	1986	1996	146	-	17	2039	44	3%	1.76	30					
Reservoir North No. 1	STEELWORKS	64	2009	100%	64	1986	1996	64	-	7	2039	44	3%	1.76	13					
Reservoir North No. 1	CIVIL	49	2009	100%	49	1991	1996	49	-	6	2039	44	3%	1.76	10					
Reservoir North No. 1	ELECTRONIC	9	2009	100%	9	2001	2001	9	-	1	2039	39	7%	2.75	3					
Future Reservoirs																				
Distribution			2009	100%		2010	2010			-		2039	30	7%	2.26					
Total Reservoirs		3,714						3,714		8,636	430								764	
Notes																				
1. Capital cost from Council's asset registers and MEERA cost for future works																				
2. Base year of capital cost varies depending on asset data																				
3. Capital cost adjusted to 2009\$ using CPI for Sydney (ABS)																				
4. Capital cost of future works discounted to 2009\$																				

Coraki Water Supply Scheme																				
Capital Charge Calculation																				
Pre 1996 discount rate	3%											per ET	Total							
Post 1996 discount rate	7%											Capital charge	\$4,600							
Peak day demand (L/ET/d)	2,683											2008/09\$ per ET								
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)				
Existing Water Sources																				
Rous Water Bulk Supply																				
Existing Treatment																				
Rous Water Bulk Supply																				
Existing Transfer System																				
Pipe Main	200	4	2009	100%	4	1979	1996	4	6	2039	44	3%	1.76	10						
Pipe Main	200	2	2009	100%	2	1979	1996	2	4	2039	44	3%	1.76	7						
Pipe Main	200	1	2009	100%	1	1979	1996	1	1	2039	44	3%	1.76	2						
Pipe Main	200	1	2009	100%	1	1979	1996	1	2	2039	44	3%	1.76	4						
Pipe Main	200	8	2009	100%	8	1979	1996	8	12	2039	44	3%	1.76	21						
Pipe Main	200	36	2009	100%	36	1979	1996	36	56	2039	44	3%	1.76	99						
Pipe Main	200	0	2009	100%	0	1979	1996	0	0	2039	44	3%	1.76	1						
Pipe Main	200	0	2009	100%	0	1979	1996	0	0	2039	44	3%	1.76	1						
Pipe Main	200	1	2009	100%	1	1979	1996	1	2	2039	44	3%	1.76	3						
Pipe Main	200	0	2009	100%	0	1979	1996	0	0	2039	44	3%	1.76	1						
Pipe Main	200	0	2009	100%	0	1979	1996	0	0	2039	44	3%	1.76	1						
Pipe Main	200	1	2009	100%	1	1979	1996	1	1	2039	44	3%	1.76	2						
Pipe Main	200	0	2009	100%	0	2000	2000	0	0	2039	40	7%	2.80	0						
Pipe Main	200	0	2009	100%	0	2000	2000	0	0	2039	40	7%	2.80	1						
Pipe Main	200	0	2009	100%	0	2000	2000	0	0	2039	40	7%	2.80	0						
Pipe Main	200	1	2009	100%	1	2000	2000	1	1	2039	40	7%	2.80	3						
Pipe Main	200	1	2009	100%	1	2000	2000	1	2	2039	40	7%	2.80	5						
Pump Station 01	MECHANICAL	10	2009	100%	10	1990	1996	10	16	2039	44	3%	1.76	28						
Pump Station 01	MECHANICAL	10	2009	100%	10	1990	1996	10	16	2039	44	3%	1.76	28						
Pump Station 01	ELECTRICAL	16	2009	100%	16	1990	1996	16	25	2039	44	3%	1.76	45						
Pump Station 01	PIPEWORK	13	2009	100%	13	1990	1996	13	20	2039	44	3%	1.76	36						
Pump Station 01	ELECTRONIC	9	2009	100%	9	2001	2001	9	13	2039	39	7%	2.75	37						
Pump Station 02	MECHANICAL	6	2009	100%	6	2005	2005	6	9	2039	35	7%	2.53	23						
Pump Station 02	MECHANICAL	6	2009	100%	6	2005	2005	6	9	2039	35	7%	2.53	23						
Pump Station 02	ELECTRICAL	11	2009	100%	11	2005	2005	11	17	2039	35	7%	2.53	43						
Pump Station 02	PIPEWORK	10	2009	100%	10	2005	2005	10	15	2039	35	7%	2.53	38						
Pump Station 02	ELECTRONIC	8	2009	100%	8	2005	2005	8	13	2039	35	7%	2.53	32						
Pump Station 02	TELEMETRY	9	2009	100%	9	2006	2006	9	13	2039	34	7%	2.47	33						
Future Transfer System																				
Water - Provide water supply to new release areas (Evans, Bwater,Wburn)		960	2009	14%	137	2013	2013	105	163	2039	27	7%	2.11	343						
Water - Water Supply System Analysis (all areas)		60	2009	4%	2	2010	2010	2	3	2039	30	7%	2.26	8						
Total Transfer System		1,186							272	642	425								881	
Existing Reservoirs																				
Reservoir	STRUCTURAL	508	2009	100%	508	1949	1996	508	0.9	335	792	2039	44	3%	1.76	1,395				
Reservoir	CIVIL	92	2009	100%	92	1949	1996	92	-	144	2039	44	3%	1.76	253					
Reservoir	PIPEWORK	216	2009	100%	216	1949	1996	216	-	337	2039	44	3%	1.76	594					
Reservoir	IMPROVEMENTS	3	2009	100%	3	1980	1996	3	-	4	2039	44	3%	1.76	7					
Reservoir	IMPROVEMENTS	13	2009	100%	13	1980	1996	13	-	20	2039	44	3%	1.76	35					
Reservoir	ELECTRICAL	16	2009	100%	16	1985	1996	16	-	25	2039	44	3%	1.76	45					
Reservoir	STRUCTURAL	107	2009	100%	107	1990	1996	107	-	167	2039	44	3%	1.76	294					
Reservoir	STEELWORKS	32	2009	100%	32	1990	1996	32	-	51	2039	44	3%	1.76	89					
Reservoir	ELECTRONIC	9	2009	100%	9	2001	2001	9	-	13	2039	39	7%	2.75	37					
Reservoir	IMPROVEMENTS	10	2009	100%	10	2005	2005	10	-	16	2039	35	7%	2.53	40					
Reservoir - Elevated No 1	STEELWORKS	54	2009	100%	54	1980	1996	54	-	84	2039	44	3%	1.76	148					
Reservoir - Elevated No 1	PIPEWORK	11	2009	100%	11	1980	1996	11	-	17	2039	44	3%	1.76	30					
Reservoir - Elevated No 1	STRUCTURAL	73	2009	100%	73	2007	2007	73	0.12	45	114	2039	33	7%	2.42	277				
Reservoir - Elevated No 2	STEELWORKS	54	2009	100%	54	1980	1996	54	-	84	2039	44	3%	1.76	148					
Reservoir - Elevated No 2	PIPEWORK	11	2009	100%	11	1980	1996	11	-	17	2039	44	3%	1.76	30					
Reservoir - Elevated No 2	STRUCTURAL	73	2009	100%	73	2007	2007	73	0.12	45	114	2039	33	7%	2.42	277				
Reservoir - Elevated No 1	STRUCTURAL	3	2009	100%	3	2008	2008	3	-	4	2039	32	7%	2.36	10					
Reservoir - Elevated No 2	STRUCTURAL	3	2009	100%	3	2008	2008	3	-	4	2039	32	7%	2.36	10					
Future Reservoirs																				
Included in Future Transfer System																				
Total Reservoirs		1,289							1,289	0.24	642	2,009							3,719	
Notes																				
1. Capital cost from Council's asset registers and MEERA cost for future works																				
2. Base year of capital costs varies depending on asset data																				
3. Capital cost adjusted to 2009\$ using CPI for Sydney (ABS)																				
4. Capital cost of future works discounted to 2009\$																				

Evans Head Water Supply Scheme																	
Capital Charge Calculation																	
Pre 1996 discount rate																	
3%																	
Post 1996 discount rate																	
7%																	
Peak day demand (L/ET/d)																	
2,683																	
Asset		Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
Existing Water Sources																	
Rous Water Bulk Supply																	
Existing Treatment																	
Rous Water Bulk Supply																	
Existing Transfer System																	
Fire Hydrant	250	3	2009	100%	3	1978	1996	3				1	2039	44	3%	1.76	2
Fire Hydrant	250	3	2009	100%	3	1978	1996	3				1	2039	44	3%	1.76	2
Fire Hydrant	250	3	2009	100%	3	1978	1996	3				1	2039	44	3%	1.76	2
Fire Hydrant	250	3	2009	100%	3	1978	1996	3				1	2039	44	3%	1.76	2
Fire Hydrant	250	3	2009	100%	3	1978	1996	3				1	2039	44	3%	1.76	2
Fire Hydrant	250	3	2009	100%	3	1978	1996	3				1	2039	44	3%	1.76	2
Pipe Main (Encasement)	200	2	2009	100%	2	2009	2009	2				1	2039	31	7%	2.31	2
Pipe Main	200	14	2009	100%	14	2001	2001	14				5	2039	39	7%	2.75	13
Pipe Main	200	9	2009	100%	9	2001	2001	9				3	2039	39	7%	2.75	8
Pipe Main	200	4	2009	100%	4	2001	2001	4				1	2039	39	7%	2.75	3
Pipe Main	250	1	2009	100%	1	1978	1996	1				0	2039	44	3%	1.76	0
Pipe Main	250	1	2009	100%	1	1978	1996	1				0	2039	44	3%	1.76	0
Pipe Main	250	1	2009	100%	1	1978	1996	1				0	2039	44	3%	1.76	0
Pipe Main	250	7	2009	100%	7	2005	2005	7				2	2039	35	7%	2.53	6
Pipe Main	250	1	2009	100%	1	2005	2005	1				0	2039	35	7%	2.53	0
Pipe Main	300	51	2009	100%	51	1978	1996	51				17	2039	44	3%	1.76	30
Pipe Main	300	55	2009	100%	55	1978	1996	55				19	2039	44	3%	1.76	33
Pipe Main	300	50	2009	100%	50	1978	1996	50				17	2039	44	3%	1.76	30
Pipe Main	300	88	2009	100%	88	1978	1996	88				30	2039	44	3%	1.76	53
Pipe Main (Encasement)	200	3	2009	100%	3	2008	2008	3				1	2039	32	7%	2.36	2
Pipe Main (Encasement)	200	1	2009	100%	1	2008	2008	1				0	2039	32	7%	2.36	1
Pipe Main	250	88	2009	100%	88	1978	1996	88				30	2039	44	3%	1.76	52
Pipe Main	250	17	2009	100%	17	1978	1996	17				6	2039	44	3%	1.76	10
Pipe Main	250	26	2009	100%	26	1978	1996	26				9	2039	44	3%	1.76	15
Pipe Main	250	27	2009	100%	27	1978	1996	27				9	2039	44	3%	1.76	16
Pipe Main	250	26	2009	100%	26	1978	1996	26				9	2039	44	3%	1.76	16
Pipe Main	250	7	2009	100%	7	1978	1996	7				2	2039	44	3%	1.76	4
Pipe Main	250	15	2009	100%	15	1978	1996	15				5	2039	44	3%	1.76	9
Pipe Main	250	11	2009	100%	11	1978	1996	11				4	2039	44	3%	1.76	7
Pipe Main	250	8	2009	100%	8	1978	1996	8				3	2039	44	3%	1.76	5
Pipe Main	250	5	2009	100%	5	1978	1996	5				2	2039	44	3%	1.76	3
Pipe Main	250	27	2009	100%	27	1978	1996	27				9	2039	44	3%	1.76	16
Pipe Main	250	8	2009	100%	8	1978	1996	8				3	2039	44	3%	1.76	5
Pipe Main	250	14	2009	100%	14	1978	1996	14				5	2039	44	3%	1.76	8
Pipe Main	250	68	2009	100%	68	1978	1996	68				23	2039	44	3%	1.76	40
Pipe Main	250	40	2009	100%	40	1978	1996	40				13	2039	44	3%	1.76	24
Pipe Main	250	3	2009	100%	3	1978	1996	3				1	2039	44	3%	1.76	2
Pipe Main	250	3	2009	100%	3	1978	1996	3				1	2039	44	3%	1.76	2
Pipe Main	250	98	2009	100%	98	1978	1996	98				33	2039	44	3%	1.76	58
Pipe Main	250	21	2009	100%	21	1978	1996	21				7	2039	44	3%	1.76	13
Pipe Main	250	12	2009	100%	12	1978	1996	12				4	2039	44	3%	1.76	7
Pipe Main	250	11	2009	100%	11	1978	1996	11				4	2039	44	3%	1.76	7
Pipe Main	250	40	2009	100%	40	1978	1996	40				14	2039	44	3%	1.76	24
Stop	250	2	2009	100%	2	1978	1996	2				1	2039	44	3%	1.76	1
Stop	250	2	2009	100%	2	1978	1996	2				1	2039	44	3%	1.76	1
Stop	250	2	2009	100%	2	1978	1996	2				1	2039	44	3%	1.76	1
Stop	250	2	2009	100%	2	1978	1996	2				1	2039	44	3%	1.76	1
Future Transfer System																	
Water - Provide water supply to new release areas (Evans, Bwater,Wburn)		960	2009	66%	633	2013	2013	483				163	2039	27	7%	2.11	344
Water - Water Supply System Analysis (all areas)		60	2009	42%	25	2010	2010	24				8	2039	30	7%	2.26	18
Total Transfer System																	
		1,908						1,395				2,954	472				905
Existing Reservoirs (all Headworks)																	
Reservoir	STRUCTURAL	500	2009	100%	500	1953	1996	500	-	169	2039	44	3%	1.76	298		
Reservoir	CIVIL	27	2009	100%	27	1953	1996	27	-	9	2039	44	3%	1.76	16		
Reservoir	PIPEWORK	22	2009	100%	22	1953	1996	22	-	7	2039	44	3%	1.76	13		
Reservoir	STEELWORKS	5	2009	100%	5	1975	1996	5	-	2	2039	44	3%	1.76	3		
Reservoir	STRUCTURAL	818	2009	100%	818	1978	1996	818	0.23	86	277	2039	44	3%	1.76	487	
Reservoir	STRUCTURAL	171	2009	100%	171	1978	1996	171	-	58	2039	44	3%	1.76	102		
Reservoir	CIVIL	148	2009	100%	148	1978	1996	148	-	50	2039	44	3%	1.76	88		

Evans Head Water Supply Scheme																
Capital Charge Calculation																
Pre 1996 discount rate	3%															
Post 1996 discount rate	7%															
Peak day demand (L/ET/d)	2,683															
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)
Reservoir	STEELWORKS	32	2009	100%	32	1978	1996	32	-	11	2039	44	3%	1.76	19	
Reservoir	PIPEWORK	297	2009	100%	297	1978	1996	297	-	101	2039	44	3%	1.76	177	
Reservoir	ELECTRICAL	8	2009	100%	8	1980	1996	8	-	3	2039	44	3%	1.76	5	
Reservoir	ELECTRICAL	16	2009	100%	16	1997	1997	16	-	5	2039	43	7%	2.98	16	
Reservoir	ELECTRONIC	9	2009	100%	9	2001	2001	9	-	3	2039	39	7%	2.75	8	
Reservoir	STRUCTURAL	8	2009	100%	8	2007	2007	8	-	3	2039	33	7%	2.42	7	
Reservoir - High Pressure	STRUCTURAL	270	2009	100%	270	1978	1996	270	0.5	186	92	2039	44	3%	1.76	161
Reservoir - High Pressure	STRUCTURAL	57	2009	100%	57	1978	1996	57	-	19	2039	44	3%	1.76	34	
Reservoir - High Pressure	CIVIL	41	2009	100%	41	1978	1996	41	-	14	2039	44	3%	1.76	25	
Reservoir - High Pressure	STEELWORKS	32	2009	100%	32	1978	1996	32	-	11	2039	44	3%	1.76	19	
Reservoir - High Pressure	STEELWORKS	88	2009	100%	88	1978	1996	88	-	30	2039	44	3%	1.76	52	
Reservoir - High Pressure	ELECTRICAL	16	2009	100%	16	1985	1996	16	-	5	2039	44	3%	1.76	10	
Reservoir - High Pressure	ELECTRONIC	9	2009	100%	9	2001	2001	9	-	3	2039	39	7%	2.75	8	
Reservoir - High Pressure Pump Station	CIVIL	119	2009	100%	119	1978	1996	119	-	40	2039	44	3%	1.76	71	
Reservoir - High Pressure Pump Station	MECHANICAL	5	2009	100%	5	1999	1999	5	-	2	2039	41	7%	2.86	5	
Reservoir - High Pressure Pump Station	ELECTRICAL	10	2009	100%	10	1999	1999	10	-	3	2039	41	7%	2.86	9	
Reservoir - High Pressure Pump Station	ELECTRONIC	9	2009	100%	9	2001	2001	9	-	3	2039	39	7%	2.75	8	
Reservoir - High Pressure Pump Station	MECHANICAL	5	2009	100%	5	2004	2004	5	-	2	2039	36	7%	2.58	4	
Future Reservoirs																
Included in Future Transfer System																
Total Reservoirs		2,722							2,722	2,954	921				1,646	
Notes																
1. Capital cost from Council's asset registers and MEERA cost for future works																
2. Base year of capital cost varies depending on asset data																
3. Capital cost adjusted to 2009\$ using CPI for Sydney (ABS)																
4. Capital cost of future works discounted to 2009\$																

Woodburn Water Supply Scheme											Summary								
Capital Charge Calculation											per ET								
Pre 1996 discount rate	3%											Total							
Post 1996 discount rate	7%											Capital charge		\$2,464	2008/09\$ per ET				
Peak day demand (L/ET/d)	2,683																		
Asset	Detail	Capital cost (\$'000) ¹	Year dollars ²	Percentage applicable to Service Area	Capital Cost (\$'000, 2009\$) ³	Year commissioned	Effective year commissioned	Present value 2009 (\$'000) ⁴	Capacity (ML)	Capacity (ETs)	Capital cost (\$/ET)	Year of full take-up	Years to full take-up	Discount Rate	ROI factor	Capital Charge (\$/ET)			
Existing Water Sources																			
Rous Water Bulk Supply																			
Existing Treatment																			
Rous Water Bulk Supply																			
Existing Transfer System																			
All pipes <200mm																			
Future Transfer System																			
Water - Provide water supply to new release areas (Evans, Bwater,Wburn)		960	2009	11%	108	2013	2013	82			162	2039	27	7%	2.11	340			
Water - Water Supply System Analysis (all areas)		60	2009	6%	4	2010	2010	3			7	2039	30	7%	2.26	15			
Total Transfer System		1,020			111			85			508	168				355			
Existing Reservoirs (all Headworks)																			
Langs Hill	STRUCTURA	741	2009	100%	741	1949	1996	741			-	731	2039	44	3%	1.76	1,288		
Langs Hill	STRUCTURA	185	2009	100%	185	1949	1996	185			-	183	2039	44	3%	1.76	322		
Langs Hill	CIVIL	163	2009	100%	163	1949	1996	163			-	161	2039	44	3%	1.76	283		
Langs Hill	PIPEWORK	111	2009	100%	111	1975	1996	111			-	110	2039	44	3%	1.76	193		
Langs Hill	ELECTRONIC	9	2009	100%	9	2001	2001	9			-	9	2039	39	7%	2.75	23		
Future Reservoirs																			
Included in Future Transfer System																			
Total Reservoirs		1,209					1,209				1,209		1,013	1,193				2,109	
Notes																			
1. Capital cost from Council's asset registers and MEERA cost for future works																			
2. Base year of capital cost varies depending on asset data																			
3. Capital cost adjusted to 2009\$ using CPI for Sydney (ABS)																			
4. Capital cost of future works discounted to 2009\$																			

Table - Calculation of Developer Charges using the NPV of Annual Charges Method
Based on Input Reduction Amounts of \$1,508 /ET (2nd iteration)

Richmond Valley Council - Water Supply

Year	Year No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Year	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
Developer Charges																					
Average Capital Charges per ET (2009/10\$)	Year 1 Base Year	2009/10	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	5,812	
Inflation from Base year to Year 1 (%)		0.00%																			
Capital Charge (2009/10\$)		5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	
Input Reduction Amounts (2009/10\$)		1,508																			
Developer Charge per ET (2009/10\$)		4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	
Developer Charges per assessment - Residential (2009/10\$)		4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	
Developer Charges per assessment - Non-Residential (2009/10\$)		13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	13,373	
Assessments & ETs																					
Residential Assessments at year end	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
	6,513	6,606	6,700	6,797	6,895	6,994	7,096	7,200	7,289	7,380	7,471	7,564	7,658	7,753	7,850	7,948	8,047	8,147	8,249	8,352	8,457
Non Residential Assessments at year end		992	1,004	1,016	1,028	1,040	1,053	1,066	1,079	1,090	1,102	1,114	1,126	1,138	1,150	1,162	1,174	1,187	1,200	1,213	1,226
Backlog Assessments at year end		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Assessments at year end		7,505	7,610	7,716	7,825	7,935	8,047	8,162	8,279	8,379	8,482	8,585	8,690	8,796	8,903	9,012	9,122	9,234	9,347	9,461	9,578
ET per Residential Assessment		0.93																			
ET per Non Residential Assessment		3.11																			
Total ETs		9,142	9,265	9,390	9,518	9,648	9,780	9,914	10,051	10,170	10,290	10,412	10,535	10,660	10,786	10,914	11,044	11,175	11,308	11,443	11,580
New ETs per year (excluding backlog)		-	123	125	127	130	132	135	137	119	120	122	123	125	126	128	130	131	133	135	137
Cumulative New ETs (excluding backlog)		-	123	248	376	505	637	772	909	1,028	1,148	1,270	1,393	1,517	1,644	1,772	1,901	2,033	2,166	2,301	2,437
PV (new ETs excluding backlog) 30 years @ 7% pa		-	1,720	1,729	1,735	1,740	1,742	1,743	1,740	1,735	1,749	1,762	1,775	1,787	1,798	1,808	1,817	1,825	1,832	1,842	1,844
Revenue and Expenditure																					
Rates & Charges Revenue, Trade Waste Charges, Other Sales and Charges, Pensioner Rebate Grant	Revenue (\$'000)	(2009/10\$)	4,435	5,031	5,342	5,426	5,503	5,589	5,670	5,749	5,820	5,128	5,194	5,268	5,335	5,402	5,472	5,546	5,618	5,695	5,764
OMA Expenditure (\$'000)	(2009/10\$)		3,389	3,436	3,484	3,535	3,584	3,634	3,686	3,727	3,769	3,815	3,861	3,906	3,953	4,001	4,049	4,098	4,148	4,199	4,248
Revenue less OMA Expenditure (\$'000)		1,046	1,595	1,858	1,891	1,919	1,955	1,984	2,022	2,051	1,313	1,333	1,362	1,382	1,401	1,423	1,448	1,470	1,496	1,516	1,541
Revenue less OMA Expenditure for new ETs (\$'000)		14	42	73	99	125	152	179	204	229	160	176	194	211	227	245	263	282	301	319	339
PV (Revenue less OMA Expenditure for new ETs) 30 years @ 7% pa (\$'000)		2,713	2,792	2,671	2,499	2,392	2,273	2,128	1,972	1,837	1,699	2,887	2,953	3,003	3,070	3,142	3,208	3,268	3,336	3,393	3,468
Output (calculated) Reduction Amounts		1,577	1,615	1,539	1,436	1,373	1,304	1,223	1,137	1,051	964	1,626	1,653	1,670	1,698	1,729	1,758	1,784	1,815	1,843	1,881.07
Average Calculated Reduction for a 5 yr Period		1,508	1,508	1,508	1,508	1,508	1,304	1,223	1,137	1,051	964	1,626	1,653	1,670	1,698	1,729	1,758	1,784	1,815	1,843	1,881
% Difference Between the Input and Output		0%																			

Difference Less Than 2%, Calculation Complete

Developer Charges for the first 5 years = \$4300 in year 2009/10 dollars

Notes:

Refer to 1st iteration sheet

Developer Charge 4,302 4,302 4,302 4,302 4,302 4,506 4,587 4,673 4,759 4,846 4,184 4,157 4,140 4,112 4,081 4,052 4,026 3,995 3,967 3,929

Richmond Valley Council - Water Supply

Summary of NPV Annual Charges Calculation of Reduction Amount - Water Supply

Iteration	1	2	3
Weighted Average Capital Charge (2005\$)	5,810	5,810	
Input Reduction Amount, years 1 to 5 (2006 \$)	1,000	1,508	
Input Residential Developer Charge (2005 \$)	4,810	4,302	
Output Reduction Amount	1,508	1,508	



DEVELOPMENT SERVICING PLAN – WATER SUPPLY

Appendix 2 - Plans











