Richmond Valley Council
Development Servicing Plan
Sewerage Services

DRAFT FOR PUBLIC DISPLAY

February 2013

SUMMARY

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

Table 1 – Service Areas

Service Area	Areas Included
Casino	The area served by the Casino Sewage Treatment Plant (STP)
Evans Head/Woodburn/ Broadwater	The area served by the Evans Head STP
Coraki	The area served by the Coraki STP
Rileys Hill	The area served by the Rileys Hill STP

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 4.5.

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

Table 2 – Developer Charge

DSP Area	Developer Charge (2013 $ per Equivalent Tenement)
Casino	$8,000
Evans Head, Woodburn and Broadwater	$8,000
Coraki	$8,000
Rileys Hill	$8,000

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 sewerage 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 sewerage assets and to this DSP can be found in the Background Document in Appendix 1.

CONTENTS

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 sewerage services to the areas served by the Richmond Valley sewerage schemes.

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 sewerage 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 sewerage developer charges.

2. ADMINISTRATION

DSP Name	Casino Sewerage
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 STP. The sewerage scheme is discussed in Section 4.1.

DSP Name	Evans Head, Woodburn and Broadwater Sewerage
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 Evans Head STP. The sewerage scheme is discussed in Section 4.1.

DSP Name	Rileys Hill Sewerage
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 Rileys Hill STP. The sewerage scheme is discussed in Section 4.1.

DSP Name	Coraki Sewerage
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 Coraki STP. The sewerage scheme is discussed in Section 4.1.

Developments may attract contributions where such development will utilise the Richmond Valley sewerage schemes.

Richmond Valley Council does not intend to provide sewerage services outside these DSP areas within the next 5 years. Any development outside these DSP areas that requires a sewerage 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 sewerage 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, 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.

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

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.

Developer Charge = *Capital Charge (cost of providing the assets) –*

Reduction Amount (cost recovered through annual bills).

The Capital Charge and Reduction Amount are discussed further in the following sections. The developer charges process is described fully in the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (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 sometime after construction of the asset. The Return on Investment (ROI), also known as a holding charge, is based on the cost of early investment and recovery of the cost over time. The ROI factor is dependent on the period for take-up of the asset capacity, and the rate of return required for the asset.

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

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

- An area served by a separate STP;
- 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 sewerage 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 SEWERAGE SERVICES

4.1 Sewerage Schemes

The sewerage system includes four sewage treatment plants (STPs) at Casino, Evans Head (which also receives raw sewage from Woodburn), Coraki and Rileys Hill (refer Figure 1). Scheme maps are attached in Appendix 2.

Figure 1 – Richmond Valley Local Government Area

4.1.1 Casino

Casino STP includes three trickling filters and an extended aeration tank (EAT). Treated effluent is discharged into a tertiary pond and then into a constructed wetland area within the STP site. The transfer system includes 15 pumping stations and a network of rising mains and gravity reticulation mains. The Casino system also comprises a comminutor to macerate raw effluent prior to transfer under the Richmond River via a dual pipe inverted siphon system.

4.1.2 Evans Head

Evans Head STP was augmented in 2007 with a new intermittently decanted extended aeration (IDEA) treatment plant replacing the old trickling filter plant. The augmentation also included new inlet works (fine

step screen, grit arrestor, flume and flow division), two IDEA tanks, deodorisation bed, balance/catch tank attached to aeration tanks, chemical dosing systems, two new sludge tanks, a sludge dewatering area and UV disinfection. The Evans Head transport sewage system includes nine pumping stations. The Woodburn sewage transport system includes four pumping stations together with a network of rising mains and gravity reticulation mains. Treated effluent is discharged from the STP via an open drain to natural wetlands that drain into Salty Lagoon.

The Broadwater sewerage scheme (under construction) consists of a pressure sewerage system with sewage transferred to Evans Head STP for treatment. Council has adopted a Pressure Sewerage Policy describing the requirements for developers in connecting to pressure sewerage systems.

4.1.3 Coraki

Coraki STP comprises a trickling filter and two tertiary maturation ponds. The transport system includes two pumping stations and a network of rising mains and gravity reticulation mains. Effluent from the final maturation pond is discharged via a concrete outfall pipe onto adjacent swampland and drains into the Richmond River.

4.1.4 Rileys Hill

Rileys Hill STP is an activated sludge plant incorporating UV disinfection and phosphorus removal. The transport system includes one pumping station and a network of rising mains and gravity reticulation mains. Effluent is discharged directly into the Richmond River.

4.2 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.

The adopted population growth rates are given in Table 3.

Table 3 - Population Growth Rates

Town	30 year Average Growth Rate (average % p.a.)
Casino	0.4 %
Evans Head, Woodburn, Broadwater	1.8 %
Rileys Hill	0.5 %
Coraki	0.5 %
Shire-wide average	0.8 %

The projected number of sewerage tenements (equivalent tenements, ET) in each area is shown in Table 4.

Table 4 - Sewerage Assessment Projections

Service Area	Type	2012	2017	2022	2027	2032	2037	2042
Casino	Residential	4,070	4,161	4,223	4,293	4,372	4,459	4,554
	Non-residential	453	464	475	487	498	510	523
	Total assessments	4,523	4,625	4,698	4,779	4,870	4,969	5,076
Evans Head, Woodburn and Broadwater	Residential	1,746	1,972	2,280	2,520	2,658	2,797	2,937
	Non-residential	173	252	268	285	295	295	295
	Total assessments	1,919	2,224	2,548	2,805	2,953	3,092	3,232
Rileys Hill	Residential	33	34	35	36	36	37	38
	Non-residential	4	4	4	4	4	5	5
	Total assessments	37	38	39	40	41	42	43
Coraki	Residential	424	435	446	457	468	480	492
	Non-residential	49	50	52	53	54	56	57
	Total assessments	473	485	497	510	523	536	549
RVC Total	Residential	6,273	6,602	6,983	7,305	7,535	7,774	8,021
	Non-residential	679	770	799	829	852	865	879
	Total assessments	6,952	7,372	7,782	8,134	8,387	8,639	8,901

4.3 System Capacity

RVC plans to augment its sewerage systems to cater for population growth and regulatory requirements. The system capacity (Table 5) is based on the following:

- A sewerage residential assessment is equivalent to 0.98 sewerage ET and a sewerage non-residential assessment is equivalent to 1.3 sewerage ET (refer Appendix 1);
- Sewage treatment plants – ultimate design capacity of STPs (EP) including any planned augmentations within 30 years and average occupancy ratio from census data; and
- Distribution system – projected number of tenements served at the end of the design horizon (30 years).

Table 5 – System Capacity

Asset	Capacity	Capacity (ET)
Casino STP	Design capacity = 12,700 EP	5,520
Evans Head STP	Design capacity = 11,000 EP	5,240
Coraki STP	Design capacity = 1,300 EP	500
Rileys Hill STP	Design capacity = 200 EP	80
Casino Transfer System	5,076 total assessments at 2039	5,135
Evans Head, Woodburn and Broadwater Transfer System	3,232 total assessments at 2039	3,258
Rileys Hill Transfer System	43 total assessments at 2039	44
Coraki Transfer System	549 total assessments at 2039	556

4.4 Design Parameters

Investigation and design of sewerage system components is based on the Manual of Practice: Sewer Design (1984), Manual of Practice: Sewage Pumping Station Design (1986), WSA Sewerage Code of Australia (WSA 02-2002), WSA Sewerage Pumping Code of Australia (WSA 04-2005), WSA Pressure Sewerage Code of Australia (WSA 07-2007, V1.1) and AUSPEC design specifications for sewerage.

4.5 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 – Sewerage Levels of Service

Description	Units	Target Level of Service
Availability of Service		
Residential Areas		All urban residential and industrial areas where practical.
Frequency of System Failures		
Dry weather sewer overflows	per 100km p.a.	20
Customer Complaints		
Service Complaint	per 1,000 properties p.a.	5
Odour Complaint (Odour complaints shall be considered resolved when 90% of residents in the originally affected area are satisfied).	per 1,000 properties p.a.	5
Treatment Plant	events per year per plant	3
Other	events per year per scheme	10
Effluent Discharge Compliance		
Compliance with Licence Conditions	%	100

Priority, Issues and Effects	***Customer given feedback***	***Repairs to commence***
Priority 1: A complete failure to contain sewerage within the Sewer System or any problem affecting many users resulting in one or more of the following occurring.		
Possible Issue: Blockage overflowing Sewer System, manhole overflowing, Broken Gravity/Rising Main, Pump Station failure, Missing Manhole Lid Typical Effects: Personal injury or significant risk to health, Surcharge inside/outside a building, Property damage eg subsidence of critical asset eg roadway, buildings, railway etc, Environmental impact eg Tradewaste spill, Subsidence causing danger	Within 1 hour	Within 1 hour
Priority 2: Minor failure within the Sewer System or any problem affecting users resulting in one or more of the following effects occurring.		
Possible Issue: Cracked sewer pipe, Odour Complaint, Partial sewer blockage, Noisy manhole, Noisy Pump Station. Typical Effects: Slow moving toilet flush	Within 1 working day	Within 3 days
Priority 3: Non urgent fault but significant in the belief of the customer.		
Possible Issue: Minor subsidence, Restoration, Locations Typical Effects: No impact on the environment, Seepage investigation	Within 3 working days	Programmed Maintenance

4.6 Future Capital Works

Capital works of $69.6 M (2013 $) will be required over the next 30 years to provide sewerage 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 8. Calculations are given in Appendix 1.

Table 7 – Calculated Capital Charge (2013 $ per ET)

Service Area	Initial Capital Charge (2013 $ per ET)
Casino	14,493
Evans Head, Woodburn and Broadwater	19,226
Rileys Hill	56,754
Coraki	18,699

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 9. 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 (2013 $ per ET)

Service Area	Capital Charge	DSP Area 1 (% of highest)	DSP Area 2 (% of highest)	Proportion of LGA Growth	DSP Area Capital Charge	Weighted Average Capital Charge
Rileys Hill	56,754	100%		0.3%	56,754	174
Evans Head, Woodburn and Broadwater	19,226	34%	100%	99.7%	17,857	17,802
Coraki	18,699		97%			
Casino	14,493		75%			
Totals				100%		17,976

5.2 Reduction Amount

The reduction amount for RVC developer charges for sewerage was calculated as $2,127 per ET (2013 $) (refer to Appendix 1).

5.3 Developer Charges

The calculated developer charges for the DSP areas are shown in Table 10. These developer charges reflect the cost of assets for serving new development.

Table 9 – Calculated Developer Charges

DSP Area	Capital Charge (2013 $/ET)	Reduction Amount (2013 $/ET)	Calculated Developer Charge (2013 $/ET)
Rileys Hill	56,754	2,127	54,627
Evans Head, Woodburn and Broadwater, Coraki, Casino	17,857		15,730
RVC	17,976		15,849

RVC will apply developer charges for sewerage based on application of a uniform developer charge of $8,000 per ET. The developer charge and the cross-subsidy payable by existing customers are shown in Table 11.

Table 10 – Adopted Developer Charges

DSP Area	Developer Charge (2013 $ per ET)
Rileys Hill	$8,000
Evans Head, Woodburn, Broadwater, Coraki and Casino	$8,000
Weighted Average	$8,000

Cross-Subsidy	Amount
Cross-Subsidy (reduction in developer charge that will be recovered through annual charges)	$7,849 per ET
Total Cross-Subsidy (based on the predicted average of 66 new ET per year over the next 30 years)	$515,700 p.a.
Cross-Subsidy per residential assessment (based on an average of 7,255 residential assessments per year over the next 30 years)	$71 per residential assessment p.a.

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.

6. ABBREVIATIONS AND GLOSSARY

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 ne 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
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 STP, a small separate town or village, or a new development of over 500 lots.
STP	Sewage treatment plant

7. REFERENCES

DLWC (2002) *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*.

Hydrosphere (2010) Draft *Strategic Business Plans for Water Supply and Sewerage Services*

NSW Water Directorate (2005) *Section 64 Determinations of Equivalent Tenements Guidelines.*

Appendix 1 - DSP Background Document

2011/12

Customer Type	**Sewer Assessments**	**Proportion of annual sewer charge**	**Sewer ET**
Residential			
Residential occupied	5147	1.00	5147
Residential vacant	213	1.00	213
Pensioners	914	0.87	795
Total res	6274		6155
Residential ET per assessment			**0.981**

Non-residential	
Non-residential occupied	779
Non-residential vacant	91
Total non-res	870

		ratio
Non-residential sewer revenue 11/12	$958,000	0.181
Residential sewer revenue	$5,307,000	

	Sewer ET
Non-residential ET	1111
Non-Residential ET per assessment	**1.28**

Growth Projections		year	5	10	15	20	25	30		
Service Area	**Type**	**Sewer Assessments**							**30 year growth**	**Proportion of RVC growth**
		2012	**2017**	**2022**	**2027**	**2032**	**2037**	**2042**		
Casino	Residential	4,070	4,161	4,223	4,293	4,372	4,459	4,554		
	Non-residential	453	464	475	487	498	510	523		
	Total	4,523	4,625	4,698	4,779	4,870	4,969	5,076	553	28%
	Growth (% p.a.)		0.3%	0.3%	0.4%	0.4%	0.4%	0.4%		
Evans Head, Woodburn and Broadwater	Residential	1,746	1,972	2,280	2,520	2,658	2,797	2,937		
	Non-residential	173	252	268	285	295	295	295		
	Total	1,919	2,224	2,548	2,805	2,953	3,092	3,232	1313	67%
	Growth (% p.a.)		3.0%	2.6%	1.1%	0.9%	0.9%	0.9%		
Rileys Hill	Residential	33	34	35	36	36	37	38		
	Non-residential	4	4	4	4	4	5	5		
	Total	37	38	39	40	41	42	43	6	0%
	Growth (% p.a.)		0.5%	0.5%	0.5%	0.5%	0.5%	0.5%		
Coraki	Residential	424	435	446	457	468	480	492		
	Non-residential	49	50	52	53	54	56	57		
	Total	473	485	497	510	523	536	549	76	4%
	Growth (% p.a.)		0.5%	0.5%	0.5%	0.5%	0.5%	0.5%		
RVC	Residential	6,273	6,602	6,983	7,305	7,535	7,774	8,021		
	Non-residential	679	770	799	829	852	865	879		
	Total	6,952	7,372	7,782	8,134	8,387	8,639	8,901	1949	100%
	Growth (% p.a.)		1.1%	1.1%	0.6%	0.6%	0.6%	0.6%		

Sewer ET capacity

Sewer Transfer System	Assessments at	2042	ET/ assessment	ET
Casino	Residential	4554	0.981	4467
	Non-Residential	523	1.277	667
	Total	5076	1.01	5135
Evans Head, Woodburn and Broadwater	Residential	2937	0.981	2881
	Non-Residential	295	1.277	377
	Total	3232	1.01	3258
Coraki	Residential	492	0.981	483
	Non-Residential	57	1.277	73
	Total	549	1.008	556
Rileys Hill	Residential	38	0.981	38
	Non-Residential	5	1.277	6
	Total	43	1.01	44
Total	Residential	8021	0.981	7869
	Non-Residential	879	1.277	1123
	Total	8901	1.01	8992

STP	Occupancy ratio 2011 (CENSUS)	Existing STP capacity (EP)	STP ultimate capacity (EP)	Source	STP ultimate capacity (ET)
Casino	2.30	11000	12700	HWA Strategic Review 2012	5520
Evans Head, Woodburn and Broadwater	2.10	5500	11000	Commerce design	5240
Coraki	2.60	1300	1300	GeoLINK 2009, no augmentation	500
Rileys Hill	2.60	200	200	no augmentation	80

Richmond Valley Council
Capital Works Program
2013
All values are in year 2013 $'000

Base Case - Full Capital Works program with current estimates
Sewerage (updated with 2011/2012 Actuals and Sept 2012 budget review)

	Type of works				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Improved LOS	New System Assets	Renewals	30 year total	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42
					2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
CASINO SYSTEM																																		
Collection & Transfer																																		
T/Plant Casino - Sewerage system analysis	75%	25%		**35**	35																													
T/Plant Casino - Provide sewer to new release areas		100%		**3,000**							1500										1500		Hydrosphere estimate. Figures & timing subject to population growth.											
T/Plant Casino - Sewer System Improvements	100%			**500**			100			100			100			100			100				Hydrosphere estimate, total $500K. Timing will be subject to outcomes of sewer system modelling.											
Treatment																																		
T/Plant Casino - Wetland Pond		100%		**100**		100				Works involve filling the last pond to improve effluent quality.																								
T/Plant Casino - Infrastructure Optimisation	75%	25%		**121**	121					Hunter Water Investigations																								
T/Plant Casino - Chemical P Removal (HydroScience report)	75%	25%		**200**					200			Subject to STP review																						
T/Plant Casino - Biosolids management investigations	75%	25%		**50**						50		Subject to STP review																						
T/Plant Casino - Relocate Golf Course Re-Use Offtake	75%	25%		**30**					30			Dependant on Re-Use Review																						
T/Plant Casino - Re-use Investigations/Concept Development	75%	25%		**350**		50	100	200		See HWA Strategic Review (see Note 1 & 2)																								
T/Plant Casino - Trade Waste Investigations	75%	25%		**40**		20	20			See HWA Strategic Review																								
T/Plant Casino - Mechanical/electrical/civil assessment	75%	25%		**150**			150			See HWA Strategic Review																								
T/Plant Casino - Replace Trickling Filter Arms	75%	25%		**20**		20																												
T/Plant Casino - Blowers	75%	25%		**39**	39																													
T/Plant Casino - Internal Roads Upgrade	75%	25%		**73**	73																													
T/Plant Casino - Automated Bar Screen		100%		**80**	80																													
T/Plant Casino - PLC Upgrade			100%	**150**	150																													
T/Plant Casino - OHS Improvements	75%	25%		**20**	20																													
T/Plant Casino - Land Acquisition Lot 7304 DP 1138123	75%	25%		**7**	7																													
T/Plant Casino - Land Acquisition Lot 320 DP 755727		100%		**5**	5																													
T/Plant Casino - Augmentation Investigation, design and construction		100%		**13,500**									6000	7500		Estimate & timing by Hydrosphere (HydroScience Report). Will be subject to Re-use review & mechanical/electrical/civil assessment.																		
Renewals																																		
Casino Mains - Sewer main Farley/Dean St Casino diversion			100%	**25**	25																													
T/Plant Casino - Renewals - to be specified			100%	**1,470**	85	100	220	240	220	70	35	500				As per asset register by David Holstein. Unknown where figures have been derived from.																		
Casino Mains - Junction Repairs			100%	**12**	12																													
P/Stn Casino - PS1 Upgrade			100%	**625**					625							As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS3 Upgrade			100%	**200**								200				As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS4 Upgrade			100%	**220**						220						As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS5 Upgrade			100%	**195**							195					As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS6 Upgrade			100%	**180**									180			As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS7 Upgrade			100%	**175**				175								As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS8 Upgrade			100%	**170**					170							As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS9 Upgrade			100%	**145**									145			As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS10 Upgrade			100%	**260**				260								As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS11 Upgrade			100%	**260**							260					As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS12 Upgrade			100%	**215**						215						As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS13 Upgrade			100%	**175**											175	As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		
P/Stn Casino - PS14 Upgrade			100%	**160**											160	As per asset register by David Holstein. Unknown where figures have been derived from. Timing subject to sewer system analysis.																		

Richmond Valley Council
Capital Works Program
2013
All values are in year 2013 $'000

Base Case - Full Capital Works program with current estimates
Sewerage (updated with 2011/2012 Actuals and Sept 2012 budget review)

	Type of works				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Improved LOS	New System Assets	Renewals	30 year total	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42
EVANS HEAD / WOODBURN / BROADWATER SYSTEM																																		
Collection & Transfer																																		
P/Stn Evans Hd - Evans/Woodburn P/Stn & RM	55%	45%		**5,400**								4400										1000		As per GHD Report. Dependant on population growth.										
P/Stn Evans Hd - PS1 Upgrade	55%	45%		**419**	419																													
P/Stn Evans Hd - PS2 Upgrade	55%	45%		**271**		271																												
P/Stn Evans Hd - PS3 Upgrade	55%	45%		**227**		227																												
P/Stn Evans Hd - PS4 Upgrade	55%	45%		**689**	689																													
P/Stn Evans Hd - PS6 Upgrade	55%	45%		**270**		270																												
P/Stn Evans Hd - PS7 Upgrade	55%	45%		**306**	306																													
P/Stn Evans Hd - PS8 Upgrade	55%	45%		**1,028**	28							1000		As per GHD report. $1000 allowed for new wet well. Dependant on population growth.																					
T/Plant Broadwater - Augmentation	55%	45%		**3,683**	3683																													
T/Plant Broadwater - Augmentation (Retic)	55%	45%		**1,997**	1997																													
Evans Head STP Treatment and Effluent Management																																		
T/Plant Evans Hd Aug - Wet Weather Release (Beachwatch)	100%			**180**	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
T/Plant Evans Hd - Salty Lagoon Rehab	100%			**960**	200	120	130	110	150	50	50	50	50	50																				
T/Plant Evans Hd - STP Stage 2 construction		100%		**2,900**			100	500	2300		Commence investigations after connection of Broadwater																							
T/Plant Evans Hd - UV System Upgrades	55%	45%		**30**	30																													
Renewals																																		
Evans Hd Mains - Duplicate RM from WWPS 1 to WWPS 8 (150dia)			100%	**240**								240																						
Evans Hd Mains - Replace RM4 to WWTP 200dia			100%	**580**			580																											
CORAKI SYSTEM																																		
Collection & Transfer																																		
P/Stn Coraki - PS1& RM upgrade (incl safety upgrade for PS1)	76%	24%		**410**	410																													
P/Stn Coraki - pumps	76%	24%		**32**	32																													
P/Stn Coraki - PS 2 Upgrade	76%	24%		**440**	100	340																												
Treatment																																		
T/Plant Coraki - Chemical P removal & sludge handling	76%	24%		**480**						480		Hydrosphere estimate based on Geolink Report (subject to STP augmentation strategy)																						
T/Plant Coraki - Tertiary Ponds Recirculation	76%	24%		**2**	2																													
T/Plant Coraki - OHS Improvements	76%	24%		**25**	25																													
T/Plant Coraki - Blue Green Algae Management	76%	24%		**70**	70																													
T/Plant Coraki - Operational Audit/process sampling	76%	24%		**50**		50				As per GHD 2012 review																								
T/Plant Coraki - Investigate algae management options	76%	24%		**40**		40				As per GHD 2012 review																								
T/Plant Coraki - Inlet Works Design & Construct			100%	**350**		50	300			As per GHD 2012 review																								
T/Plant Coraki - Mechanical/electrical/civil assessment	76%	24%		**100**			100			As per GHD 2012 review																								
T/Plant Coraki - Augmentation Strategy	76%	24%		**150**				150		As per GHD 2012 review																								
Renewals																																		
T/Plant Coraki - Renewals - to be specified			100%	**260**	40	20		200			As per asset register by David Holstein. Unknown where figures have been derived from.																							
T/Plant Coraki - Electrical Upgrades			100%	**36**	36																													
RILEYS HILL SYSTEM																																		
Treatment																																		
T/Plant Rileys Hill - Refurbishment			100%	**60**	60																													
ALL AREAS																																		
Sewerage - Plant & Equipment			100%	**900**	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Mains Repairs - to be Allocated			100%	**475**	25	50	50	50	50	50	50	50	50	50																				
Relining Works - to be Allocated			100%	**12,860**	860	1000		1000		1000		1000		1000		1000		1000		1000		1000		600		600		600		600				600
Relining - Assess Effectiveness	100%			**115**	75	40																												
Junction Repairs - to be Allocated			100%	**988**	88	100	100	100	100	100	100	100	100	100																				
Manhole Repairs - to be allocated			100%	**1,100**	110	110	110	110	110	110	110	110	110	110																				
Pollution Reduction Program	100%			**10**	10																													
Telemetry upgrades - camera surveillance equipment		100%		**8**	8																													
Telemetery Upgrades - Minor Upgrades			100%	**170**	30	20	20	20	20	20	20	20																						
Telemetry - KMS Software			100%	**11**	11																													
Future Sewer Renewals			100%	**8,160**								400	400	400	400	390	390	390	390	390	400	400	400	400	400	290	290	290	290	290	290	290	290	290
Maintenance Management System Upgrade			100%	**50**	50																													
Sewerage System Analysis (All Areas)	75%	25%		**40**	40																													
Sewerage - Camera (Salty Lagoon)	100%			**0**	0																													
Push Camera & Inspection Equipment Replacement			100%	**50**	50																													
Total				**69,579**	**10,172**	**3,034**	**2,116**	**3,151**	**4,011**	**2,501**	**2,356**	**8,106**	**7,171**	**9,246**	**771**	**1,526**	**426**	**1,426**	**526**	**1,426**	**1,936**	**2,436**	**436**	**1,036**	**436**	**926**	**326**	**926**	**326**	**926**	**326**	**326**	**326**	**926**
Improved LOS				**11,890**	4,962	983	515	380	329	558	56	3,026	156	56	6	106	6	6	106	6	6	556	6	6	6	6	6	6	6	6	6	6	6	6
Other New System Assets (growth works)				**26,763**	3,549	571	192	586	2,358	128	1,500	2,430	6,000	7,500							1,500	450												
Renewals				**30,927**	1,662	1,480	1,410	2,185	1,325	1,815	800	2,650	1,015	1,690	765	1,420	420	1,420	420	1,420	430	1,430	430	1,030	430	920	320	920	320	920	320	320	320	920
Expected Grants	**Subsidy**																																	
Dry weather reuse system																																		
P/Stn Woodburn - PS & RM Augmentations	13.8%																																	
Broadwater - Sewerage Augmentation	15.2%			**822**	500	322																												
Total Grants				**822**	500	322																												
Developer Provided Assets																																		
Casino residential lots	45	per year		1,360	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
MLRR residential lots	57	per year		1,719	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
Asset Value	**$3,500**	**per lot**		**11,854**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**	**359**

Coraki Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**			$56,754	2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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 Treatment															
Pre-1970															
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	4	2012	4	1998	1998	4			49	2043	46	7%	3.15	154
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	2	2012	2	1998	1998	2			21	2043	46	7%	3.15	65
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	4	2012	4	1998	1998	4			54	2043	46	7%	3.15	170
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	11	2012	11	1998	1998	11			135	2043	46	7%	3.15	426
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	3	2012	4	1998	1998	4			45	2043	46	7%	3.15	140
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	3	2012	3	1998	1998	3			32	2043	46	7%	3.15	101
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	22	2012	23	1998	1998	23			283	2043	46	7%	3.15	892
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	15	2012	15	1998	1998	15			193	2043	46	7%	3.15	608
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	2	2012	2	1998	1998	2			28	2043	46	7%	3.15	89
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	8	2012	8	1998	1998	8			97	2043	46	7%	3.15	304
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	4	2012	4	1998	1998	4			55	2043	46	7%	3.15	174
Sewerage Treatment Plant	Aluminium Sulphate Dosing Tank	2	2012	2	1998	1998	2			28	2043	46	7%	3.15	89
Sewerage Treatment Plant	Clarifier Tank	7	2012	7	1998	1998	7			84	2043	46	7%	3.15	264
Sewerage Treatment Plant	Clarifier Tank	15	2012	15	1998	1998	15			187	2043	46	7%	3.15	588
Sewerage Treatment Plant	Clarifier Tank	23	2012	24	1998	1998	24			296	2043	46	7%	3.15	933
Sewerage Treatment Plant	Clarifier Tank	23	2012	24	1998	1998	24			296	2043	46	7%	3.15	933
Sewerage Treatment Plant	Clarifier Tank	17	2012	18	1998	1998	18			219	2043	46	7%	3.15	689
Sewerage Treatment Plant	Clarifier Tank	9	2012	9	1998	1998	9			111	2043	46	7%	3.15	349
Sewerage Treatment Plant	Clarifier Tank	9	2012	9	1998	1998	9			111	2043	46	7%	3.15	349
Sewerage Treatment Plant	Clarifier Tank	7	2012	7	1998	1998	7			85	2043	46	7%	3.15	268
Sewerage Treatment Plant	Drying Bed	16	2012	16	1998	1998	16			200	2043	46	7%	3.15	629
Sewerage Treatment Plant	Extended Aeration Tank	62	2012	64	1998	1998	64			798	2043	46	7%	3.15	2,514
Sewerage Treatment Plant	Extended Aeration Tank	64	2012	65	1998	1998	65			818	2043	46	7%	3.15	2,575
Sewerage Treatment Plant	Extended Aeration Tank	64	2012	65	1998	1998	65			818	2043	46	7%	3.15	2,575
Sewerage Treatment Plant	Extended Aeration Tank	216	2012	222	1998	1998	222			2,775	2043	46	7%	3.15	8,738
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	1998	1998	2			28	2043	46	7%	3.15	89
Sewerage Treatment Plant	Extended Aeration Tank	11	2012	11	1998	1998	11			142	2043	46	7%	3.15	446
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	1998	1998	2			23	2043	46	7%	3.15	73
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	1998	1998	2			19	2043	46	7%	3.15	61
Sewerage Treatment Plant	Extended Aeration Tank	10	2012	11	1998	1998	11			133	2043	46	7%	3.15	418
Sewerage Treatment Plant	Magflow Meter Pit	10	2012	10	1998	1998	10			124	2043	46	7%	3.15	389
Sewerage Treatment Plant	Magflow Meter Pit	4	2012	4	1998	1998	4			54	2043	46	7%	3.15	170
Sewerage Treatment Plant	Magflow Meter Pit	1	2012	1	1998	1998	1			18	2043	46	7%	3.15	58
Sewerage Treatment Plant	Magflow Meter Pit	1	2012	1	1998	1998	1			9	2043	46	7%	3.15	27
Sewerage Treatment Plant	Office Building	1	2012	1	1998	1998	1			15	2043	46	7%	3.15	49
Sewerage Treatment Plant	Office Building	1	2012	1	1998	1998	1			11	2043	46	7%	3.15	34
Sewerage Treatment Plant	Office Building	0	2012	0	1998	1998	0			3	2043	46	7%	3.15	10
Sewerage Treatment Plant	Office Building	16	2012	16	1998	1998	16			206	2043	46	7%	3.15	649
Sewerage Treatment Plant	On Site	7	2012	7	1998	1998	7			90	2043	46	7%	3.15	284
Sewerage Treatment Plant	On Site	3	2012	3	1998	1998	3			32	2043	46	7%	3.15	101
Sewerage Treatment Plant	On Site	11	2012	11	1998	1998	11			139	2043	46	7%	3.15	438
Sewerage Treatment Plant	On Site	23	2012	23	1998	1998	23			290	2043	46	7%	3.15	912
Sewerage Treatment Plant	On Site	3	2012	3	1998	1998	3			32	2043	46	7%	3.15	101
Sewerage Treatment Plant	On Site	3	2012	3	1998	1998	3			32	2043	46	7%	3.15	101
Sewerage Treatment Plant	Pump Station 2	6	2012	6	1998	1998	6			79	2043	46	7%	3.15	249
Sewerage Treatment Plant	Pump Station 2	6	2012	6	1998	1998	6			79	2043	46	7%	3.15	249
Sewerage Treatment Plant	Pump Station 2	16	2012	17	1998	1998	17			211	2043	46	7%	3.15	665
Sewerage Treatment Plant	Pump Station 2	11	2012	11	1998	1998	11			139	2043	46	7%	3.15	438
Sewerage Treatment Plant	Pump Station 2	6	2012	6	1998	1998	6			75	2043	46	7%	3.15	235
Sewerage Treatment Plant	Pump Station 2	6	2012	6	1998	1998	6			75	2043	46	7%	3.15	235
Sewerage Treatment Plant	Sludge Tank	7	2012	7	1998	1998	7			84	2043	46	7%	3.15	264
Sewerage Treatment Plant	Sludge Tank	23	2012	24	1998	1998	24			296	2043	46	7%	3.15	933
Sewerage Treatment Plant	Sludge Tank	4	2012	4	1998	1998	4			45	2043	46	7%	3.15	142
Sewerage Treatment Plant	Sludge Tank	7	2012	7	1998	1998	7			88	2043	46	7%	3.15	276
Sewerage Treatment Plant	Sludge Tank	6	2012	6	1998	1998	6			75	2043	46	7%	3.15	235
Sewerage Treatment Plant	Sludge Tank	3	2012	3	1998	1998	3			36	2043	46	7%	3.15	114
Sewerage Treatment Plant	Sludge Tank	11	2012	11	1998	1998	11			135	2043	46	7%	3.15	426
Sewerage Treatment Plant	UV Shed	88	2012	91	1998	1998	91			1,133	2043	46	7%	3.15	3,568
Sewerage Treatment Plant	Plant SCADA & Instrumentation	40	2012	41	1998	1998	41			515	2043	46	7%	3.15	1,622
Sewerage Treatment Plant	Plant Electrical Cabling	80	2012	82	1998	1998	82			1,030	2043	46	7%	3.15	3,244
Sewerage Treatment Plant	Mains Power Supply	80	2012	82	1998	1998	82			1,030	2043	46	7%	3.15	3,244
Sewerage Treatment Plant	Pump Station 2	49	2012	50	2001	2001	50			624	2043	43	7%	2.98	1,858
Sewerage Treatment Plant	On Site	19	2012	19	2006	2006	19			242	2043	38	7%	2.69	652
Sewerage Treatment Plant	UV Shed	25	2012	26	2006	2006	26			324	2043	38	7%	2.69	873
Sewerage Treatment Plant	UV Shed	0	2012	0	2006	2006	0			6	2043	38	7%	2.69	16
Sewerage Treatment Plant	UV Shed	17	2012	17	2006	2006	17			216	2043	38	7%	2.69	582
Sewerage Treatment Plant	UV Shed	17	2012	17	2006	2006	17			216	2043	38	7%	2.69	582
Sewerage Treatment Plant	UV Shed	5	2012	5	2006	2006	5			68	2043	38	7%	2.69	184
Sewerage Treatment Plant	UV Shed	11	2012	11	2006	2006	11			142	2043	38	7%	2.69	381
Sewerage Treatment Plant	UV Shed	6	2012	6	2006	2006	6			80	2043	38	7%	2.69	215
Sewerage Treatment Plant	On Site	1	2012	1	2008	2008	1			15	2043	36	7%	2.58	40
Future Treatment															
None															
Total Treatment		**1,264**					**1,302**		**80**	**16,275**					**50,549**

Coraki Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$56,754		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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 Transfer System															
Post-1970															
Sewerage Pump Station	SPS 402	3	2012	3	1998	1998	3			41	2043	46	7%	3.15	130
Sewerage Pump Station	SPS 402	1	2012	1	1998	1998	1			14	2043	46	7%	3.15	45
Sewerage Pump Station	SPS 402	1	2012	1	1998	1998	1			14	2043	46	7%	3.15	45
Sewerage Pump Station	SPS 402	2	2012	2	1998	1998	2			23	2043	46	7%	3.15	73
Sewerage Pump Station	SPS 402	2	2012	2	1998	1998	2			23	2043	46	7%	3.15	73
Sewerage Pump Station	SPS 402	36	2012	37	1998	1998	37			464	2043	46	7%	3.15	1,460
Sewerage Pump Station	SPS 402	4	2012	4	1998	1998	4			54	2043	46	7%	3.15	170
Sewerage Pump Station	SPS 402	11	2012	11	1998	1998	11			138	2043	46	7%	3.15	434
Sewerage Pump Station	SPS 401	4	2012	4	2001	2001	4			49	2043	43	7%	2.98	146
Sewerage Pump Station	SPS 401	10	2012	10	2001	2001	10			126	2043	43	7%	2.98	375
Sewerage Pump Station	SPS 402	10	2012	10	2001	2001	10			126	2043	43	7%	2.98	375
Manhole	62377	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62379	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62380	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62381	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62382	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62383	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62384	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62385	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62389	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62390	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62393	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62394	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62395	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62396	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62397	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62399	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62400	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	62401	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Effluent Pit	62494	4	2012	4	1999	1999	4			48	2043	45	7%	3.09	149
Manhole	82326	4	2012	4	2010	2010	4			48	2043	34	7%	2.47	119
Manhole	62376	7	2012	7	1999	1999	7			84	2043	45	7%	3.09	261
Manhole	62378	7	2012	7	1999	1999	7			84	2043	45	7%	3.09	261
Manhole	62386	7	2012	7	1999	1999	7			84	2043	45	7%	3.09	261
Manhole	62387	7	2012	7	1999	1999	7			84	2043	45	7%	3.09	261
Manhole	62388	7	2012	7	1999	1999	7			84	2043	45	7%	3.09	261
Manhole	62391	7	2012	7	1999	1999	7			84	2043	45	7%	3.09	261
Manhole	62398	7	2012	7	1999	1999	7			84	2043	45	7%	3.09	261
Manhole	62495	7	2012	7	1999	1999	7			84	2043	45	7%	3.09	261
Manhole	82324	7	2012	7	2010	2010	7			84	2043	34	7%	2.47	208
Manhole	82325	7	2012	7	2010	2010	7			84	2043	34	7%	2.47	208
ManholeDI	62392	9	2012	10	1999	1999	10			121	2043	45	7%	3.09	373
Future Transfer System															
None															
Total Transfer System		**160**					**164**		**44**	**2,056**					**6,205**
		.													
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 2013$ using Reference Rates															
4. Capital cost of future works discounted to 2013$															

Coraki Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**			$18,699	2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commissioned**	**Effective year commissioned**	**Present value 2013 ($'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 Treatment															
Pre-1970															
Sewerage Treatment Plant	Digester Tank	90	2012	93	1968	1996	93			185	2043	48	3%	1.84	342
Sewerage Treatment Plant	Digester Tank	16	2012	16	1968	1996	16			33	2043	48	3%	1.84	61
Sewerage Treatment Plant	Digester Tank	3	2012	3	1968	1996	3			6	2043	48	3%	1.84	11
Sewerage Treatment Plant	Digester Tank	23	2012	23	1968	1996	23			46	2043	48	3%	1.84	85
Sewerage Treatment Plant	Digester Tank	13	2012	13	1968	1996	13			26	2043	48	3%	1.84	48
Sewerage Treatment Plant	Digester Tank	330	2012	340	1968	1996	340			680	2043	48	3%	1.84	1,254
Sewerage Treatment Plant	Digester Tank	17	2012	17	1968	1996	17			35	2043	48	3%	1.84	64
Sewerage Treatment Plant	Digester Tank	2	2012	2	1968	1996	2			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Digester Tank	2	2012	2	1968	1996	2			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Digester Tank	2	2012	2	1968	1996	2			5	2043	48	3%	1.84	8
Sewerage Treatment Plant	Digester Tank	16	2012	17	1968	1996	17			34	2043	48	3%	1.84	62
Sewerage Treatment Plant	Digester Tank	12	2012	12	1968	1996	12			25	2043	48	3%	1.84	46
Sewerage Treatment Plant	Drying Bed	31	2012	32	1968	1996	32			64	2043	48	3%	1.84	118
Sewerage Treatment Plant	Drying Bed	31	2012	32	1968	1996	32			64	2043	48	3%	1.84	118
Sewerage Treatment Plant	Drying Bed	31	2012	32	1968	1996	32			64	2043	48	3%	1.84	118
Sewerage Treatment Plant	Drying Bed	31	2012	32	1968	1996	32			64	2043	48	3%	1.84	118
Sewerage Treatment Plant	Drying Bed	7	2012	7	1968	1996	7			14	2043	48	3%	1.84	25
Sewerage Treatment Plant	Humus Tank	4	2012	4	1968	1996	4			9	2043	48	3%	1.84	16
Sewerage Treatment Plant	Humus Tank	35	2012	36	1968	1996	36			73	2043	48	3%	1.84	134
Sewerage Treatment Plant	Humus Tank	22	2012	23	1968	1996	23			45	2043	48	3%	1.84	84
Sewerage Treatment Plant	Humus Tank	300	2012	309	1968	1996	309			618	2043	48	3%	1.84	1,140
Sewerage Treatment Plant	Humus Tank	22	2012	22	1968	1996	22			44	2043	48	3%	1.84	82
Sewerage Treatment Plant	Inlet Works	90	2012	93	1968	1996	93			185	2043	48	3%	1.84	342
Sewerage Treatment Plant	Inlet Works	23	2012	23	1968	1996	23			46	2043	48	3%	1.84	85
Sewerage Treatment Plant	Inlet Works	10	2012	11	1968	1996	11			21	2043	48	3%	1.84	40
Sewerage Treatment Plant	Inlet Works	12	2012	13	1968	1996	13			25	2043	48	3%	1.84	47
Sewerage Treatment Plant	Inlet Works	14	2012	14	1968	1996	14			29	2043	48	3%	1.84	53
Sewerage Treatment Plant	Inlet Works	30	2012	31	1968	1996	31			62	2043	48	3%	1.84	114
Sewerage Treatment Plant	Inlet Works	12	2012	12	1968	1996	12			25	2043	48	3%	1.84	46
Sewerage Treatment Plant	Inlet Works	25	2012	26	1968	1996	26			52	2043	48	3%	1.84	96
Sewerage Treatment Plant	Inlet Works	11	2012	11	1968	1996	11			22	2043	48	3%	1.84	40
Sewerage Treatment Plant	Magflow Pit	8	2012	8	1968	1996	8			16	2043	48	3%	1.84	30
Sewerage Treatment Plant	Magflow Pit	10	2012	10	1968	1996	10			20	2043	48	3%	1.84	37
Sewerage Treatment Plant	Magflow Pit	15	2012	15	1968	1996	15			30	2043	48	3%	1.84	55
Sewerage Treatment Plant	Magflow Pit	5	2012	5	1968	1996	5			10	2043	48	3%	1.84	18
Sewerage Treatment Plant	Office Building	20	2012	21	1968	1996	21			41	2043	48	3%	1.84	76
Sewerage Treatment Plant	Office Building	14	2012	14	1968	1996	14			29	2043	48	3%	1.84	53
Sewerage Treatment Plant	Office Building	14	2012	14	1968	1996	14			29	2043	48	3%	1.84	53
Sewerage Treatment Plant	Office Building	34	2012	35	1968	1996	35			69	2043	48	3%	1.84	128
Sewerage Treatment Plant	Office Building	0	2012	0	1968	1996	0			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Office Building	69	2012	71	1968	1996	71			141	2043	48	3%	1.84	261
Sewerage Treatment Plant	Office Building	9	2012	9	1968	1996	9			18	2043	48	3%	1.84	34
Sewerage Treatment Plant	Office Building	34	2012	35	1968	1996	35			70	2043	48	3%	1.84	129
Sewerage Treatment Plant	Office Building	30	2012	31	1968	1996	31			63	2043	48	3%	1.84	116
Sewerage Treatment Plant	Office Building	1	2012	1	1968	1996	1			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	On Site	55	2012	57	1968	1996	57			113	2043	48	3%	1.84	209
Sewerage Treatment Plant	On Site	3	2012	3	1968	1996	3			6	2043	48	3%	1.84	10
Sewerage Treatment Plant	On Site	14	2012	14	1968	1996	14			28	2043	48	3%	1.84	51
Sewerage Treatment Plant	On Site	10	2012	10	1968	1996	10			20	2043	48	3%	1.84	36
Sewerage Treatment Plant	On Site	16	2012	16	1968	1996	16			32	2043	48	3%	1.84	59
Sewerage Treatment Plant	On Site	7	2012	7	1968	1996	7			13	2043	48	3%	1.84	25
Sewerage Treatment Plant	On Site	9	2012	9	1968	1996	9			18	2043	48	3%	1.84	34
Sewerage Treatment Plant	On Site	22	2012	23	1968	1996	23			45	2043	48	3%	1.84	84
Sewerage Treatment Plant	Sedimentation Tank	4	2012	4	1968	1996	4			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Sedimentation Tank	5	2012	5	1968	1996	5			9	2043	48	3%	1.84	17
Sewerage Treatment Plant	Sedimentation Tank	22	2012	23	1968	1996	23			45	2043	48	3%	1.84	84
Sewerage Treatment Plant	Sedimentation Tank	180	2012	185	1968	1996	185			371	2043	48	3%	1.84	684
Sewerage Treatment Plant	Sedimentation Tank	17	2012	17	1968	1996	17			34	2043	48	3%	1.84	63
Sewerage Treatment Plant	Sedimentation Tank	3	2012	3	1968	1996	3			6	2043	48	3%	1.84	11
Sewerage Treatment Plant	Tertiary Ponds	380	2012	391	1968	1996	391			783	2043	48	3%	1.84	1,444
Sewerage Treatment Plant	Tertiary Ponds	85	2012	88	1968	1996	88			175	2043	48	3%	1.84	323
Sewerage Treatment Plant	Trickling Filter Tank	15	2012	15	1968	1996	15			31	2043	48	3%	1.84	57
Sewerage Treatment Plant	Trickling Filter Tank	620	2012	639	1968	1996	639			1,277	2043	48	3%	1.84	2,356
Sewerage Treatment Plant	Trickling Filter Tank	23	2012	24	1968	1996	24			47	2043	48	3%	1.84	87
Sewerage Treatment Plant	Tertiary Ponds	420	2012	433	1968	1996	433			865	2043	48	3%	1.84	1,596
Sewerage Treatment Plant	Plant SCADA	60	2012	62	1968	1996	62			124	2043	48	3%	1.84	228
Sewerage Treatment Plant	Plant Electrical Cabling	130	2012	134	1968	1996	134			268	2043	48	3%	1.84	494
Sewerage Treatment Plant	Mains Power Supply	100	2012	103	1968	1996	103			206	2043	48	3%	1.84	380
Sewerage Treatment Plant	Humus Tank	9	2012	9	1999	1999	9			18	2043	45	7%	3.09	54
Sewerage Treatment Plant	Humus Tank	1	2012	2	1999	1999	2			3	2043	45	7%	3.09	9
Sewerage Treatment Plant	On Site	32	2012	33	1999	1999	33			66	2043	45	7%	3.09	204
Sewerage Treatment Plant	Office Building	8	2012	8	2001	2001	8			15	2043	43	7%	2.98	46

Coraki Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**			$18,699	2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Treatment Plant	Office Building	8	2012	8	2001	2001	8			15	2043	43	7%	2.98	46
Sewerage Treatment Plant	Office Building	8	2012	8	2001	2001	8			17	2043	43	7%	2.98	50
Sewerage Treatment Plant	On Site	4	2012	4	2012	2012	4			7	2043	32	7%	2.36	17
Future Treatment															
T/Plant Coraki - STP Wireless Access		0	2013	0	2018	2018	0			0	2043	26	7%	2.05	0
T/Plant Coraki - Chemical P removal & sludge handling		0	2013	0	2013	2013	0			0	2043	31	7%	2.31	0
T/Plant Coraki - Tertiary Ponds Recirculation		2	2013	2	2013	2013	2			4	2043	31	7%	2.31	9
T/Plant Coraki - OHS Improvements		25	2013	25	2013	2013	25			50	2043	31	7%	2.31	116
T/Plant Coraki - Blue Green Algae Management		0	2013	0	2014	2014	0			0	2043	30	7%	2.26	0
T/Plant Coraki - Operational Audit/process sampling		50	2013	50	2014	2014	47			93	2043	30	7%	2.26	211
T/Plant Coraki - Inlet Works Design & Construct		300	2013	300	2015	2014	280			561	2043	30	7%	2.26	1,267
T/Plant Coraki - Mechanical/electrical/civil assessment		0	2013	0	2016	2015	0			0	2043	29	7%	2.21	0
Total Treatment		**4,169**					**4,260**		**500**	**8,519**					**16,175**
Existing Transfer System															
Post-1970															
Sewerage Pump Station	SPS 101	51	2012	53	2000	2000	53			106	2043	44	7%	3.03	321
Sewerage Pump Station	SPS 101	4	2012	4	2000	2000	4			8	2043	44	7%	3.03	24
Sewerage Pump Station	SPS 101	23	2012	23	2001	2001	23			46	2043	43	7%	2.98	138
Sewerage Pump Station	SPS 101	10	2012	10	2001	2001	10			20	2043	43	7%	2.98	60
Sewerage Pump Station	SPS 101	30	2012	30	2001	2001	30			61	2043	43	7%	2.98	181
Sewerage Pump Station	SPS 102	10	2012	10	2001	2001	10			20	2043	43	7%	2.98	60
Sewerage Pump Station	SPS 102	36	2012	37	2002	2002	37			74	2043	42	7%	2.92	216
Sewerage Pump Station	SPS 102	5	2012	5	2004	2004	5			9	2043	40	7%	2.80	26
Sewerage Pump Station	SPS 102	4	2012	4	2004	2004	4			8	2043	40	7%	2.80	22
Sewerage Pump Station	SPS 101	7	2012	7	2012	2012	7			13	2043	32	7%	2.36	32
Manhole	62499	4	2012	4	1990	1996	4			8	2043	48	3%	1.84	14
Manhole	62491	4	2012	4	2008	2008	4			8	2043	36	7%	2.58	20
Manhole	62222	7	2012	7	2004	2004	7			13	2043	40	7%	2.80	38
Manhole	62426	7	2012	7	2004	2004	7			13	2043	40	7%	2.80	38
Manhole	72909	7	2012	7	2009	2009	7			13	2043	35	7%	2.53	34
Manhole	62360	9	2012	10	2002	2002	10			19	2043	42	7%	2.92	56
Manhole	72907	9	2012	10	2009	2009	10			19	2043	35	7%	2.53	49
Manhole	72908	12	2012	13	2009	2009	13			25	2043	35	7%	2.53	63
Manhole	72910	15	2012	15	2009	2009	15			30	2043	35	7%	2.53	77
Overflow	250	1	2012	1	1990	1996	1			3	2043	48	3%	1.84	5
Overflow	250	17	2012	17	1990	1996	17			34	2043	48	3%	1.84	63
Stop Valve	86978	1	2012	1	1992	1996	1			2	2043	48	3%	1.84	3
Air Valve	74160	2	2012	2	2009	2009	2			5	2043	35	7%	2.53	12
Air Valve	74161	2	2012	2	2009	2009	2			5	2043	35	7%	2.53	12
Air Valve	74162	2	2012	2	2009	2009	2			5	2043	35	7%	2.53	12
Scour Valve	74169	1	2012	1	2009	2009	1			2	2043	35	7%	2.53	6
Scour Valve	74170	1	2012	1	2009	2009	1			2	2043	35	7%	2.53	6
Scour Valve	74171	1	2012	1	2009	2009	1			2	2043	35	7%	2.53	6
Scour	74163	5	2012	6	2009	2009	6			11	2043	35	7%	2.53	28
Scour	74164	5	2012	6	2009	2009	6			11	2043	35	7%	2.53	28
Scour	74165	5	2012	6	2009	2009	6			11	2043	35	7%	2.53	28
Air	74166	5	2012	6	2009	2009	6			11	2043	35	7%	2.53	28
Air	74167	5	2012	6	2009	2009	6			11	2043	35	7%	2.53	28
Air	74168	5	2012	6	2009	2009	6			11	2043	35	7%	2.53	28
Future Transfer System															
Collection & Transfer		0	2013	0	2013	2013	0			0	2043	31	7%	2.31	0
P/Stn Coraki - PS1& RM upgrade (incl safety upgrade for		410	2013	410	2013	2013	410			738	2043	31	7%	2.31	1705
P/Stn Coraki - pumps		32	2013	32	2013	2013	32			57	2043	31	7%	2.31	133
P/Stn Coraki - pumps		0	2013	0	2014	2014	0			0	2043	30	7%	2.26	0
Total Transfer System		**577**					**581**		**556**	**1,073**					**2,524**
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 2013$ using Reference Rates															
4. Capital cost of future works discounted to 2013$															

Evans Head Sewerage Scheme

Capital Charge Calculation

Pre 1996 discount rate	3%	**Summary**		
Post 1996 discount rate	7%	per ET	**Total**	
		Capital charge	$19,226	2013$ per ET

Asset	Detail	Capital cost ($'000)[1]	Year dollars[2]	Capital Cost ($'000, 2013$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2013 ($'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 Treatment															
Pre-1970															
Sewerage Treatment Plant	UV Building	20	2012	21	2006	2006	21			4	2043	38	7%	2.69	11
Sewerage Treatment Plant	UV Building	15	2012	15	2006	2006	15			3	2043	38	7%	2.69	8
Sewerage Treatment Plant	UV Building	132	2012	136	2006	2006	136			26	2043	38	7%	2.69	70
Sewerage Treatment Plant	Aluminium Dosing Area	92	2012	95	2007	2007	95			18	2043	37	7%	2.64	48
Sewerage Treatment Plant	Aluminium Dosing Area	18	2012	19	2007	2007	19			4	2043	37	7%	2.64	9
Sewerage Treatment Plant	Aluminium Dosing Area	19	2012	20	2007	2007	20			4	2043	37	7%	2.64	10
Sewerage Treatment Plant	Aluminium Dosing Area	3	2012	3	2007	2007	3			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Aluminium Dosing Area	28	2012	29	2007	2007	29			6	2043	37	7%	2.64	15
Sewerage Treatment Plant	Aluminium Dosing Area	36	2012	37	2007	2007	37			7	2043	37	7%	2.64	18
Sewerage Treatment Plant	Aluminium Dosing Area	16	2012	16	2007	2007	16			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Catch Balance Tank	27	2012	28	2007	2007	28			5	2043	37	7%	2.64	14
Sewerage Treatment Plant	Catch Balance Tank	98	2012	100	2007	2007	100			19	2043	37	7%	2.64	51
Sewerage Treatment Plant	Catch Balance Tank	323	2012	332	2007	2007	332			63	2043	37	7%	2.64	167
Sewerage Treatment Plant	Catch Balance Tank	323	2012	332	2007	2007	332			63	2043	37	7%	2.64	167
Sewerage Treatment Plant	Catch Balance Tank	56	2012	58	2007	2007	58			11	2043	37	7%	2.64	29
Sewerage Treatment Plant	Deodorisation Bed	6	2012	6	2007	2007	6			1	2043	37	7%	2.64	3
Sewerage Treatment Plant	Deodorisation Bed	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Deodorisation Bed	35	2012	36	2007	2007	36			7	2043	37	7%	2.64	18
Sewerage Treatment Plant	Drainage Pump Station	6	2012	6	2007	2007	6			1	2043	37	7%	2.64	3
Sewerage Treatment Plant	Drainage Pump Station	23	2012	23	2007	2007	23			4	2043	37	7%	2.64	12
Sewerage Treatment Plant	Drainage Pump Station	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	4
Sewerage Treatment Plant	Drainage Pump Station	10	2012	10	2007	2007	10			2	2043	37	7%	2.64	5
Sewerage Treatment Plant	Drainage Pump Station	9	2012	9	2007	2007	9			2	2043	37	7%	2.64	5
Sewerage Treatment Plant	Drying Bed	115	2012	118	2007	2007	118			23	2043	37	7%	2.64	60
Sewerage Treatment Plant	Extended Aeration Tank	3	2012	3	2007	2007	3			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	3	2012	3	2007	2007	3			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	3	2012	3	2007	2007	3			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	3	2012	3	2007	2007	3			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	5	2012	5	2007	2007	5			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Extended Aeration Tank	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Extended Aeration Tank	229	2012	235	2007	2007	235			45	2043	37	7%	2.64	118
Sewerage Treatment Plant	Extended Aeration Tank	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Extended Aeration Tank	46	2012	47	2007	2007	47			9	2043	37	7%	2.64	24
Sewerage Treatment Plant	Extended Aeration Tank	46	2012	47	2007	2007	47			9	2043	37	7%	2.64	24
Sewerage Treatment Plant	Extended Aeration Tank	46	2012	47	2007	2007	47			9	2043	37	7%	2.64	24
Sewerage Treatment Plant	Extended Aeration Tank	46	2012	47	2007	2007	47			9	2043	37	7%	2.64	24
Sewerage Treatment Plant	Extended Aeration Tank	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	4
Sewerage Treatment Plant	Extended Aeration Tank	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	4
Sewerage Treatment Plant	Extended Aeration Tank	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	4
Sewerage Treatment Plant	Extended Aeration Tank	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	4
Sewerage Treatment Plant	Extended Aeration Tank	16	2012	16	2007	2007	16			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Extended Aeration Tank	16	2012	16	2007	2007	16			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Extended Aeration Tank	16	2012	16	2007	2007	16			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Extended Aeration Tank	16	2012	16	2007	2007	16			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Extended Aeration Tank	26	2012	27	2007	2007	27			5	2043	37	7%	2.64	13
Sewerage Treatment Plant	Extended Aeration Tank	26	2012	27	2007	2007	27			5	2043	37	7%	2.64	13
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	3	2012	3	2007	2007	3			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Extended Aeration Tank	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Extended Aeration Tank	29	2012	29	2007	2007	29			6	2043	37	7%	2.64	15
Sewerage Treatment Plant	Extended Aeration Tank	8	2012	8	2007	2007	8			2	2043	37	7%	2.64	4
Sewerage Treatment Plant	Extended Aeration Tank	9	2012	9	2007	2007	9			2	2043	37	7%	2.64	5
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Extended Aeration Tank	15	2012	15	2007	2007	15			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Inlet Works	16	2012	16	2007	2007	16			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Inlet Works	6	2012	6	2007	2007	6			1	2043	37	7%	2.64	3
Sewerage Treatment Plant	Inlet Works	3	2012	3	2007	2007	3			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Inlet Works	3	2012	3	2007	2007	3			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Inlet Works	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Inlet Works	5	2012	5	2007	2007	5			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Inlet Works	13	2012	13	2007	2007	13			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Inlet Works	131	2012	135	2007	2007	135			26	2043	37	7%	2.64	68
Sewerage Treatment Plant	Inlet Works	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Inlet Works	5	2012	5	2007	2007	5			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Inlet Works	25	2012	26	2007	2007	26			5	2043	37	7%	2.64	13
Sewerage Treatment Plant	Inlet Works	25	2012	26	2007	2007	26			5	2043	37	7%	2.64	13

Evans Head Sewerage Scheme

Capital Charge Calculation

Pre 1996 discount rate	3%					**Summary**									
						per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**			$19,226	2013$ per ET					

Asset	Detail	Capital cost ($'000)[1]	Year dollars[2]	Capital Cost ($'000, 2013$)[3]	Year commissioned	Effective year commissioned	Present value 2013 ($'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)
Sewerage Treatment Plant	Inlet Works	23	2012	23	2007	2007	23			4	2043	37	7%	2.64	12
Sewerage Treatment Plant	Inlet Works	48	2012	49	2007	2007	49			9	2043	37	7%	2.64	25
Sewerage Treatment Plant	Inlet Works	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Inlet Works	28	2012	29	2007	2007	29			6	2043	37	7%	2.64	15
Sewerage Treatment Plant	Inlet Works	6	2012	6	2007	2007	6			1	2043	37	7%	2.64	3
Sewerage Treatment Plant	Inlet Works	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Inlet Works	1391	2012	1,433	2007	2007	1,433			273	2043	37	7%	2.64	721
Sewerage Treatment Plant	Inlet Works	15	2012	15	2007	2007	15			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Inlet Works	383	2012	394	2007	2007	394			75	2043	37	7%	2.64	198
Sewerage Treatment Plant	Inlet Works	175	2012	180	2007	2007	180			34	2043	37	7%	2.64	91
Sewerage Treatment Plant	Inlet Works	327	2012	337	2007	2007	337			64	2043	37	7%	2.64	169
Sewerage Treatment Plant	Inlet Works	192	2012	198	2007	2007	198			38	2043	37	7%	2.64	99
Sewerage Treatment Plant	Inlet Works	72	2012	74	2007	2007	74			14	2043	37	7%	2.64	37
Sewerage Treatment Plant	Inlet Works	72	2012	74	2007	2007	74			14	2043	37	7%	2.64	37
Sewerage Treatment Plant	Inlet Works	86	2012	89	2007	2007	89			17	2043	37	7%	2.64	45
Sewerage Treatment Plant	Inlet Works	15	2012	15	2007	2007	15			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Inlet Works	14	2012	15	2007	2007	15			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Inlet Works	14	2012	14	2007	2007	14			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Inlet Works	17	2012	17	2007	2007	17			3	2043	37	7%	2.64	9
Sewerage Treatment Plant	Inlet Works	23	2012	24	2007	2007	24			5	2043	37	7%	2.64	12
Sewerage Treatment Plant	Magnesium Dosing Area	30	2012	31	2007	2007	31			6	2043	37	7%	2.64	16
Sewerage Treatment Plant	Magnesium Dosing Area	19	2012	19	2007	2007	19			4	2043	37	7%	2.64	10
Sewerage Treatment Plant	Magnesium Dosing Area	17	2012	17	2007	2007	17			3	2043	37	7%	2.64	9
Sewerage Treatment Plant	Magnesium Dosing Area	19	2012	20	2007	2007	20			4	2043	37	7%	2.64	10
Sewerage Treatment Plant	Magnesium Dosing Area	9	2012	9	2007	2007	9			2	2043	37	7%	2.64	4
Sewerage Treatment Plant	Magnesium Dosing Area	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Magnesium Dosing Area	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	3
Sewerage Treatment Plant	Office Building	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Office Building	3	2012	3	2007	2007	3			1	2043	37	7%	2.64	1
Sewerage Treatment Plant	Office Building	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Office Building	0	2012	0	2007	2007	0			0	2043	37	7%	2.64	0
Sewerage Treatment Plant	Office Building	0	2012	0	2007	2007	0			0	2043	37	7%	2.64	0
Sewerage Treatment Plant	Office Building	0	2012	0	2007	2007	0			0	2043	37	7%	2.64	0
Sewerage Treatment Plant	Office Building	0	2012	0	2007	2007	0			0	2043	37	7%	2.64	0
Sewerage Treatment Plant	Office Building	0	2012	0	2007	2007	0			0	2043	37	7%	2.64	0
Sewerage Treatment Plant	Office Building	104	2012	107	2007	2007	107			20	2043	37	7%	2.64	54
Sewerage Treatment Plant	Office Building	163	2012	168	2007	2007	168			32	2043	37	7%	2.64	84
Sewerage Treatment Plant	Office Building	9	2012	9	2007	2007	9			2	2043	37	7%	2.64	5
Sewerage Treatment Plant	Office Building	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Office Building	52	2012	54	2007	2007	54			10	2043	37	7%	2.64	27
Sewerage Treatment Plant	On Site	119	2012	122	2007	2007	122			23	2043	37	7%	2.64	61
Sewerage Treatment Plant	On Site	90	2012	93	2007	2007	93			18	2043	37	7%	2.64	47
Sewerage Treatment Plant	On Site	90	2012	93	2007	2007	93			18	2043	37	7%	2.64	47
Sewerage Treatment Plant	On Site	85	2012	88	2007	2007	88			17	2043	37	7%	2.64	44
Sewerage Treatment Plant	On Site	55	2012	57	2007	2007	57			11	2043	37	7%	2.64	29
Sewerage Treatment Plant	On Site	82	2012	84	2007	2007	84			16	2043	37	7%	2.64	42
Sewerage Treatment Plant	On Site	72	2012	74	2007	2007	74			14	2043	37	7%	2.64	37
Sewerage Treatment Plant	On Site	22	2012	23	2007	2007	23			4	2043	37	7%	2.64	11
Sewerage Treatment Plant	On Site	62	2012	64	2007	2007	64			12	2043	37	7%	2.64	32
Sewerage Treatment Plant	Pump Station	15	2012	15	2007	2007	15			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	Pump Station	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Pump Station	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Pump Station	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Pump Station	5	2012	5	2007	2007	5			1	2043	37	7%	2.64	3
Sewerage Treatment Plant	Pump Station	19	2012	19	2007	2007	19			4	2043	37	7%	2.64	10
Sewerage Treatment Plant	Pump Station	19	2012	19	2007	2007	19			4	2043	37	7%	2.64	10
Sewerage Treatment Plant	Pump Station	19	2012	19	2007	2007	19			4	2043	37	7%	2.64	10
Sewerage Treatment Plant	Pump Station	88	2012	91	2007	2007	91			17	2043	37	7%	2.64	46
Sewerage Treatment Plant	Pump Station	25	2012	25	2007	2007	25			5	2043	37	7%	2.64	13
Sewerage Treatment Plant	Pump Station	6	2012	6	2007	2007	6			1	2043	37	7%	2.64	3
Sewerage Treatment Plant	Pump Station	47	2012	48	2007	2007	48			9	2043	37	7%	2.64	24
Sewerage Treatment Plant	Pump Station	13	2012	14	2007	2007	14			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Pump Station	14	2012	15	2007	2007	15			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Pump Station	47	2012	48	2007	2007	48			9	2043	37	7%	2.64	24
Sewerage Treatment Plant	Pump Station	13	2012	14	2007	2007	14			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Pump Station	14	2012	15	2007	2007	15			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Pump Station	47	2012	48	2007	2007	48			9	2043	37	7%	2.64	24
Sewerage Treatment Plant	Pump Station	13	2012	14	2007	2007	14			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Pump Station	14	2012	15	2007	2007	15			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Pump Station	42	2012	43	2007	2007	43			8	2043	37	7%	2.64	22
Sewerage Treatment Plant	Pump Station	14	2012	15	2007	2007	15			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Retic (potable water)	19	2012	19	2007	2007	19			4	2043	37	7%	2.64	10
Sewerage Treatment Plant	Retic (potable water)	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2

Evans Head Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**			$19,226	2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Treatment Plant	Retic (potable water)	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Retic (potable water)	10	2012	10	2007	2007	10			2	2043	37	7%	2.64	5
Sewerage Treatment Plant	Retic (potable water)	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Retic (potable water)	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	3
Sewerage Treatment Plant	Retic (potable water)	3	2012	3	2007	2007	3			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Retic (potable water)	8	2012	8	2007	2007	8			1	2043	37	7%	2.64	4
Sewerage Treatment Plant	Sludge Tank	11	2012	11	2007	2007	11			2	2043	37	7%	2.64	5
Sewerage Treatment Plant	Sludge Tank	11	2012	11	2007	2007	11			2	2043	37	7%	2.64	5
Sewerage Treatment Plant	Sludge Tank	11	2012	11	2007	2007	11			2	2043	37	7%	2.64	5
Sewerage Treatment Plant	Sludge Tank	11	2012	11	2007	2007	11			2	2043	37	7%	2.64	5
Sewerage Treatment Plant	Sludge Tank	13	2012	13	2007	2007	13			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Sludge Tank	13	2012	13	2007	2007	13			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Sludge Tank	13	2012	13	2007	2007	13			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Sludge Tank	13	2012	13	2007	2007	13			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Sludge Tank	11	2012	11	2007	2007	11			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	120	2012	124	2007	2007	124			24	2043	37	7%	2.64	62
Sewerage Treatment Plant	Sludge Tank	1060	2012	1,092	2007	2007	1,092			208	2043	37	7%	2.64	549
Sewerage Treatment Plant	Sludge Tank	1060	2012	1,092	2007	2007	1,092			208	2043	37	7%	2.64	549
Sewerage Treatment Plant	Sludge Tank	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Sludge Tank	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Sludge Tank	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Sludge Tank	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Sludge Tank	9	2012	9	2007	2007	9			2	2043	37	7%	2.64	4
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	9	2012	9	2007	2007	9			2	2043	37	7%	2.64	4
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	2	2012	2	2007	2007	2			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	Sludge Tank	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Sewerage Treatment Plant	Supernatant Pump Station	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	7
Sewerage Treatment Plant	Supernatant Pump Station	11	2012	11	2007	2007	11			2	2043	37	7%	2.64	6
Sewerage Treatment Plant	Supernatant Pump Station	13	2012	14	2007	2007	14			3	2043	37	7%	2.64	7
Sewerage Treatment Plant	Supernatant Pump Station	13	2012	13	2007	2007	13			2	2043	37	7%	2.64	7
Sewerage Treatment Plant	Supernatant Pump Station	37	2012	38	2007	2007	38			7	2043	37	7%	2.64	19
Sewerage Treatment Plant	Switchboard Building	3	2012	3	2007	2007	3			1	2043	37	7%	2.64	1
Sewerage Treatment Plant	Switchboard Building	0	2012	0	2007	2007	0			0	2043	37	7%	2.64	0
Sewerage Treatment Plant	Switchboard Building	44	2012	45	2007	2007	45			9	2043	37	7%	2.64	23
Sewerage Treatment Plant	Switchboard Building	50	2012	52	2007	2007	52			10	2043	37	7%	2.64	26
Sewerage Treatment Plant	Switchboard Building	35	2012	36	2007	2007	36			7	2043	37	7%	2.64	18
Sewerage Treatment Plant	Switchboard Building	1	2012	1	2007	2007	1			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	UV Building	1	2012	1	2007	2007	1			0	2043	37	7%	2.64	1
Sewerage Treatment Plant	UV Building	5	2012	5	2007	2007	5			1	2043	37	7%	2.64	3
Sewerage Treatment Plant	UV Building	0	2012	0	2007	2007	0			0	2043	37	7%	2.64	0
Sewerage Treatment Plant	UV Building	18	2012	19	2007	2007	19			4	2043	37	7%	2.64	9
Sewerage Treatment Plant	UV Building	21	2012	21	2007	2007	21			4	2043	37	7%	2.64	11
Sewerage Treatment Plant	UV Building	15	2012	15	2007	2007	15			3	2043	37	7%	2.64	8
Sewerage Treatment Plant	UV Building	1	2012	1	2007	2007	1			0	2043	37	7%	2.64	0
Sewerage Treatment Plant	UV Building	36	2012	37	2007	2007	37			7	2043	37	7%	2.64	19
Sewerage Treatment Plant	Water Supply into STP	98	2012	101	2007	2007	101			19	2043	37	7%	2.64	51
Sewerage Treatment Plant	Extended Aeration Tank	1096	2012	1,129	2007	2007	1,129			215	2043	37	7%	2.64	568
Sewerage Treatment Plant	Extended Aeration Tank	1096	2012	1,129	2007	2007	1,129			215	2043	37	7%	2.64	568
Sewerage Treatment Plant	Extended Aeration Tank	75	2012	77	2007	2007	77			15	2043	37	7%	2.64	39
Sewerage Treatment Plant	Extended Aeration Tank	75	2012	77	2007	2007	77			15	2043	37	7%	2.64	39
Sewerage Treatment Plant	Extended Aeration Tank	75	2012	77	2007	2007	77			15	2043	37	7%	2.64	39
Sewerage Treatment Plant	Extended Aeration Tank	75	2012	77	2007	2007	77			15	2043	37	7%	2.64	39
Sewerage Treatment Plant	Extended Aeration Tank	125	2012	128	2007	2007	128			24	2043	37	7%	2.64	65
Sewerage Treatment Plant	Plant SCADA	280	2012	288	2007	2007	288			55	2043	37	7%	2.64	145
Sewerage Treatment Plant	Plant Electrical Cabling	350	2012	361	2007	2007	361			69	2043	37	7%	2.64	181
Sewerage Treatment Plant	Mains Power Supply	280	2012	288	2007	2007	288			55	2043	37	7%	2.64	145
Sewerage Treatment Plant	Catch Balance Tank	12	2012	13	2012	2012	13			2	2043	32	7%	2.36	6
Sewerage Treatment Plant	Catch Balance Tank	12	2012	13	2012	2012	13			2	2043	32	7%	2.36	6
Future Treatment															
T/Plant Evans Hd - Entrance Road 700m x 4m		0	2013	0	2015	2015	0			0	2043	29	7%	2.21	0
T/Plant Evans Hd - Entrance Road 700m x 4m		0	2013	0	2016	2016	0			0	2043	28	7%	2.16	0
T/Plant Evans Hd - Entrance Road 700m x 4m		0	2013	0	2017	2017	0			0	2043	27	7%	2.11	0
T/Plant Evans Hd - Catch balance tank		0	2013	0	2013	2013	0			0	2043	31	7%	2.31	0
Total Treatment		**13,308**					**13,708**		**5,240**	**2,616**					**6,897**

Evans Head Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$19,226		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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 Transfer System															
Post-1970															
Sewerage Pump Station	SPS 303	25	2012	26	1980	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 304	9	2012	9	1990	1996	9			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 304	51	2012	53	1990	1996	53			10	2043	48	3%	1.84	19
Sewerage Pump Station	SPS 307	25	2012	26	1991	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 308	8	2012	8	1991	1996	8			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 308	8	2012	8	1991	1996	8			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 301	11	2012	11	1992	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 301	3	2012	3	1992	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 301	45	2012	46	1992	1996	46			9	2043	48	3%	1.84	16
Sewerage Pump Station	SPS 301	45	2012	46	1992	1996	46			9	2043	48	3%	1.84	16
Sewerage Pump Station	SPS 301	12	2012	12	1992	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 301	9	2012	10	1992	1996	10			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 301	9	2012	10	1992	1996	10			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 301	15	2012	15	1992	1996	15			3	2043	48	3%	1.84	5
Sewerage Pump Station	SPS 301	15	2012	15	1992	1996	15			3	2043	48	3%	1.84	5
Sewerage Pump Station	SPS 302	8	2012	8	1992	1996	8			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 308	11	2012	11	1993	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 308	11	2012	11	1993	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 308	25	2012	26	1993	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 308	3	2012	3	1993	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 308	1	2012	1	1993	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 308	12	2012	12	1993	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 308	142	2012	146	1993	1996	146			28	2043	48	3%	1.84	51
Sewerage Pump Station	SPS 308	8	2012	8	1993	1996	8			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 308	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 308	5	2012	5	1993	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 304	25	2012	26	1996	1996	26			5	2043	48	7%	3.27	16
Sewerage Pump Station	SPS 306	51	2012	53	2000	2000	53			10	2043	44	7%	3.03	31
Sewerage Pump Station	SPS 301	9	2012	9	2001	2001	9			2	2043	43	7%	2.98	5
Sewerage Pump Station	SPS 301	51	2012	53	2001	2001	53			10	2043	43	7%	2.98	30
Sewerage Pump Station	SPS 301	10	2012	10	2001	2001	10			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 302	4	2012	4	2001	2001	4			1	2043	43	7%	2.98	2
Sewerage Pump Station	SPS 302	10	2012	10	2001	2001	10			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 303	10	2012	10	2001	2001	10			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 305	10	2012	10	2001	2001	10			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 306	11	2012	11	2001	2001	11			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 306	11	2012	11	2001	2001	11			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 306	10	2012	10	2001	2001	10			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 307	10	2012	10	2001	2001	10			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 308	10	2012	10	2001	2001	10			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 301	25	2012	26	2002	2002	26			5	2043	42	7%	2.92	14
Sewerage Pump Station	SPS 301	70	2012	72	2002	2002	72			14	2043	42	7%	2.92	40
Sewerage Pump Station	SPS 301	80	2012	82	2002	2002	82			16	2043	42	7%	2.92	46
Sewerage Pump Station	SPS 303	9	2012	9	2002	2002	9			2	2043	42	7%	2.92	5
Sewerage Pump Station	SPS 303	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	29
Sewerage Pump Station	SPS 307	9	2012	9	2002	2002	9			2	2043	42	7%	2.92	5
Sewerage Pump Station	SPS 307	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	29
Sewerage Pump Station	SPS 309	11	2012	11	2002	2002	11			2	2043	42	7%	2.92	6
Sewerage Pump Station	SPS 309	25	2012	26	2002	2002	26			5	2043	42	7%	2.92	14
Sewerage Pump Station	SPS 309	42	2012	43	2002	2002	43			8	2043	42	7%	2.92	24
Sewerage Pump Station	SPS 309	3	2012	3	2002	2002	3			0	2043	42	7%	2.92	1
Sewerage Pump Station	SPS 309	6	2012	6	2002	2002	6			1	2043	42	7%	2.92	4
Sewerage Pump Station	SPS 309	6	2012	6	2002	2002	6			1	2043	42	7%	2.92	4
Sewerage Pump Station	SPS 309	8	2012	8	2002	2002	8			2	2043	42	7%	2.92	5
Sewerage Pump Station	SPS 309	54	2012	56	2002	2002	56			11	2043	42	7%	2.92	31
Sewerage Pump Station	SPS 309	10	2012	10	2002	2002	10			2	2043	42	7%	2.92	6
Sewerage Pump Station	SPS 309	1	2012	1	2002	2002	1			0	2043	42	7%	2.92	1
Sewerage Pump Station	SPS 309	1	2012	1	2002	2002	1			0	2043	42	7%	2.92	1
Sewerage Pump Station	SPS 309	2	2012	2	2002	2002	2			0	2043	42	7%	2.92	1
Sewerage Pump Station	SPS 309	2	2012	2	2002	2002	2			0	2043	42	7%	2.92	1
Sewerage Pump Station	SPS 309	6	2012	6	2002	2002	6			1	2043	42	7%	2.92	3
Sewerage Pump Station	SPS 305	9	2012	9	2004	2004	9			2	2043	40	7%	2.80	5
Sewerage Pump Station	SPS 305	9	2012	9	2004	2004	9			2	2043	40	7%	2.80	5
Sewerage Pump Station	SPS 305	51	2012	53	2004	2004	53			10	2043	40	7%	2.80	28
Sewerage Pump Station	SPS 305	8	2012	8	2004	2004	8			2	2043	40	7%	2.80	4
Sewerage Pump Station	SPS 305	8	2012	8	2004	2004	8			2	2043	40	7%	2.80	4
Sewerage Pump Station	SPS 302	9	2012	9	2006	2006	9			2	2043	38	7%	2.69	4
Sewerage Pump Station	SPS 302	9	2012	9	2006	2006	9			2	2043	38	7%	2.69	4
Sewerage Pump Station	SPS 302	51	2012	53	2006	2006	53			10	2043	38	7%	2.69	27
Sewerage Pump Station	SPS 308	51	2012	53	2006	2006	53			10	2043	38	7%	2.69	27

Evans Head Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$19,226		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Pump Station	SPS 304	25	2012	26	2008	2008	26			5	2043	36	7%	2.58	13
Sewerage Pump Station	SPS 307	7	2012	7	2012	2012	7			1	2043	32	7%	2.36	3
Sewerage Pump Station	SPS 501	51	2012	53	1995	1996	53			10	2043	48	3%	1.84	19
Sewerage Pump Station	SPS 501	6	2012	6	1995	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 502	51	2012	53	1995	1996	53			10	2043	48	3%	1.84	19
Sewerage Pump Station	SPS 502	6	2012	6	1995	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 502	6	2012	6	1995	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 501	10	2012	10	2001	2001	10			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 502	10	2012	10	2001	2001	10			2	2043	43	7%	2.98	6
Sewerage Pump Station	SPS 503	24	2012	25	2011	2011	25			5	2043	33	7%	2.42	12
Sewerage Pump Station	SPS 503	14	2012	14	2011	2011	14			3	2043	33	7%	2.42	7
Sewerage Pump Station	SPS 503	1	2012	1	2011	2011	1			0	2043	33	7%	2.42	1
Sewerage Pump Station	SPS 503	11	2012	11	2011	2011	11			2	2043	33	7%	2.42	5
Sewerage Pump Station	SPS 503	25	2012	26	2011	2011	26			5	2043	33	7%	2.42	12
Sewerage Pump Station	SPS 503	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2
Sewerage Pump Station	SPS 503	3	2012	3	2011	2011	3			0	2043	33	7%	2.42	1
Sewerage Pump Station	SPS 503	62	2012	64	2011	2011	64			12	2043	33	7%	2.42	29
Sewerage Pump Station	SPS 503	6	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Sewerage Pump Station	SPS 503	12	2012	12	2011	2011	12			2	2043	33	7%	2.42	6
Sewerage Pump Station	SPS 503	7	2012	7	2011	2011	7			1	2043	33	7%	2.42	3
Sewerage Pump Station	SPS 503	69	2012	71	2011	2011	71			14	2043	33	7%	2.42	33
Sewerage Pump Station	SPS 503	45	2012	46	2011	2011	46			9	2043	33	7%	2.42	21
Sewerage Pump Station	SPS 503	45	2012	46	2011	2011	46			9	2043	33	7%	2.42	21
Sewerage Pump Station	SPS 503	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2
Sewerage Pump Station	SPS 503	5	2012	5	2011	2011	5			1	2043	33	7%	2.42	2
Sewerage Pump Station	SPS 503	9	2012	9	2011	2011	9			2	2043	33	7%	2.42	4
Sewerage Pump Station	SPS 503	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1
Sewerage Pump Station	SPS 503	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1
Sewerage Pump Station	SPS 503	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1
Sewerage Pump Station	SPS 503	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2
Sewerage Pump Station	SPS 503	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2
Sewerage Pump Station	SPS 503	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2
Sewerage Pump Station	SPS 503	14	2012	15	2011	2011	15			3	2043	33	7%	2.42	7
Manhole	62499	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Manhole	62491	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62222	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	4
Manhole	62426	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	4
Manhole	72909	7	2012	7	2009	2009	7			1	2043	35	7%	2.53	3
Manhole	62360	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	72907	9	2012	10	2009	2009	10			2	2043	35	7%	2.53	5
Manhole	72908	12	2012	13	2009	2009	13			2	2043	35	7%	2.53	6
Manhole	72910	15	2012	15	2009	2009	15			3	2043	35	7%	2.53	7
Manhole	61735	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	61897	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	62479	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	61755	4	2012	4	1981	1996	4			1	2043	48	3%	1.84	1
Manhole	61756	4	2012	4	1981	1996	4			1	2043	48	3%	1.84	1
Manhole	61943	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	61956	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	61957	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	61959	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	61992	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	62428	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	61743	4	2012	4	1996	1996	4			1	2043	48	7%	3.27	2
Manhole	61744	4	2012	4	1996	1996	4			1	2043	48	7%	3.27	2
Manhole	61909	4	2012	4	1996	1996	4			1	2043	48	7%	3.27	2
Manhole	61995	4	2012	4	1996	1996	4			1	2043	48	7%	3.27	2
Manhole	62480	4	2012	4	1996	1996	4			1	2043	48	7%	3.27	2
Manhole	61893	4	2012	4	1998	1998	4			1	2043	46	7%	3.15	2
Manhole	61684	4	2012	4	1999	1999	4			1	2043	45	7%	3.09	2
Manhole	61685	4	2012	4	2000	2000	4			1	2043	44	7%	3.03	2
Manhole	61920	4	2012	4	2002	2002	4			1	2043	42	7%	2.92	2
Manhole	72904	4	2012	4	2009	2009	4			1	2043	35	7%	2.53	2
Manhole	77780	4	2012	4	2009	2009	4			1	2043	35	7%	2.53	2
Manhole	61736	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61739	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61740	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61746	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61751	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61752	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61754	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61757	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61780	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2

Evans Head Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$19,226		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	61899	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61993	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61712	7	2012	7	1981	1996	7			1	2043	48	3%	1.84	2
Manhole	61713	7	2012	7	1981	1996	7			1	2043	48	3%	1.84	2
Manhole	61714	7	2012	7	1981	1996	7			1	2043	48	3%	1.84	2
Manhole	61720	7	2012	7	1981	1996	7			1	2043	48	3%	1.84	2
Manhole	61721	7	2012	7	1981	1996	7			1	2043	48	3%	1.84	2
Manhole	61722	7	2012	7	1981	1996	7			1	2043	48	3%	1.84	2
Manhole	61723	7	2012	7	1981	1996	7			1	2043	48	3%	1.84	2
Manhole	61716	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	61844	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	61715	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	61939	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	61737	7	2012	7	1996	1996	7			1	2043	48	7%	3.27	4
Manhole	61738	7	2012	7	1996	1996	7			1	2043	48	7%	3.27	4
Manhole	61745	7	2012	7	1996	1996	7			1	2043	48	7%	3.27	4
Manhole	61896	7	2012	7	1996	1996	7			1	2043	48	7%	3.27	4
Manhole	61898	7	2012	7	1996	1996	7			1	2043	48	7%	3.27	4
Manhole	61890	7	2012	7	1998	1998	7			1	2043	46	7%	3.15	4
Manhole	61894	7	2012	7	1998	1998	7			1	2043	46	7%	3.15	4
Manhole	61895	7	2012	7	1998	1998	7			1	2043	46	7%	3.15	4
Manhole	61933	7	2012	7	1998	1998	7			1	2043	46	7%	3.15	4
Manhole	61934	7	2012	7	1998	1998	7			1	2043	46	7%	3.15	4
Manhole	61935	7	2012	7	1998	1998	7			1	2043	46	7%	3.15	4
Manhole	61936	7	2012	7	1998	1998	7			1	2043	46	7%	3.15	4
Manhole	61867	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61910	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61912	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61913	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61915	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Drop Type	62442	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61914	7	2012	7	2001	2001	7			1	2043	43	7%	2.98	4
Manhole	61916	7	2012	7	2001	2001	7			1	2043	43	7%	2.98	4
Manhole	61917	7	2012	7	2001	2001	7			1	2043	43	7%	2.98	4
Manhole	61918	7	2012	7	2001	2001	7			1	2043	43	7%	2.98	4
Manhole	61678	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61762	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61764	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61868	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61884	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61919	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61921	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61922	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61923	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61924	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	62431	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	62443	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	72846	7	2012	7	2005	2005	7			1	2043	39	7%	2.75	4
Manhole	72902	7	2012	7	2009	2009	7			1	2043	35	7%	2.53	3
Manhole	72903	7	2012	7	2009	2009	7			1	2043	35	7%	2.53	3
Manhole	86096	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	61747	9	2012	10	1979	1996	10			2	2043	48	3%	1.84	3
Manhole	61749	9	2012	10	1979	1996	10			2	2043	48	3%	1.84	3
Manhole	61753	9	2012	10	1979	1996	10			2	2043	48	3%	1.84	3
Manhole	61777	9	2012	10	1979	1996	10			2	2043	48	3%	1.84	3
Manhole	61778	9	2012	10	1979	1996	10			2	2043	48	3%	1.84	3
Manhole	61779	9	2012	10	1979	1996	10			2	2043	48	3%	1.84	3
Manhole	61719	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61839	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61841	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61842	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61953	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	62429	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	62430	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61710	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61711	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61717	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61718	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61937	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61938	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61944	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61945	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61947	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3

Evans Head Sewerage Scheme																
Capital Charge Calculation						**Summary**										
Pre 1996 discount rate	3%					per ET			**Total**							
Post 1996 discount rate	7%					**Capital charge**			$19,226	2013$ per ET						
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	61742	9	2012	10	1996	1996	10			2	2043	48	7%	3.27	6
Manhole	61891	9	2012	10	1996	1996	10			2	2043	48	7%	3.27	6
Manhole	61903	9	2012	10	1996	1996	10			2	2043	48	7%	3.27	6
Manhole	61904	9	2012	10	1996	1996	10			2	2043	48	7%	3.27	6
Manhole	61905	9	2012	10	1996	1996	10			2	2043	48	7%	3.27	6
Manhole	61908	9	2012	10	1996	1996	10			2	2043	48	7%	3.27	6
Manhole	61927	9	2012	10	1996	1996	10			2	2043	48	7%	3.27	6
Manhole	61892	9	2012	10	1998	1998	10			2	2043	46	7%	3.15	6
Manhole	61900	9	2012	10	1998	1998	10			2	2043	46	7%	3.15	6
Manhole	61901	9	2012	10	1998	1998	10			2	2043	46	7%	3.15	6
Manhole	61902	9	2012	10	1998	1998	10			2	2043	46	7%	3.15	6
Drop Type	61911	9	2012	10	1998	1998	10			2	2043	46	7%	3.15	6
Manhole	61994	9	2012	10	1998	1998	10			2	2043	46	7%	3.15	6
Manhole	61775	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	61776	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	61850	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	61853	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	61854	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	61875	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	61876	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	61991	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	62457	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	62458	9	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Manhole	72905	9	2012	10	2009	2009	10			2	2043	35	7%	2.53	5
Manhole	61725	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61726	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61932	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61942	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61949	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61954	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61955	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61709	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61928	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Drop Type	61929	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61930	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61940	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Drop Type	61941	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61946	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61948	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61906	12	2012	13	1996	1996	13			2	2043	48	7%	3.27	8
Manhole	62386	7	2012	7	1999	1999	7			1	2043	45	7%	3.09	4
Manhole	62387	7	2012	7	1999	1999	7			1	2043	45	7%	3.09	4
Manhole	62388	7	2012	7	1999	1999	7			1	2043	45	7%	3.09	4
Manhole	62391	7	2012	7	1999	1999	7			1	2043	45	7%	3.09	4
Manhole	62398	7	2012	7	1999	1999	7			1	2043	45	7%	3.09	4
Manhole	62495	7	2012	7	1999	1999	7			1	2043	45	7%	3.09	4
Manhole	82324	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	82325	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	62392	9	2012	10	1999	1999	10			2	2043	45	7%	3.09	6
Manhole	62026	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	62027	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	61998	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62000	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62001	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62002	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62003	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62009	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62010	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62018	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62019	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62020	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62021	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62031	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62033	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62034	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62035	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62036	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62037	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62039	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62040	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62041	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62044	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62045	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1

Evans Head Sewerage Scheme																
Capital Charge Calculation						**Summary**										
Pre 1996 discount rate	3%					per ET			**Total**							
Post 1996 discount rate	7%					**Capital charge**			$19,226	2013$ per ET						
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	62046	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62049	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62050	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62057	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62058	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62059	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62060	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62069	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62070	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62076	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62077	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62078	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62080	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62084	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62085	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62086	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62087	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62088	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62092	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62093	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62095	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62096	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62100	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62101	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62102	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62104	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62106	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62107	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62108	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62110	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62112	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62113	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62114	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62121	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62124	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62125	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62131	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	62497	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Manhole	62025	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61996	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	61999	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62004	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62005	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62006	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62007	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62008	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62011	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62012	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62013	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62014	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62015	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62016	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62022	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62023	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62024	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62032	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62038	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62042	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62043	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62051	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62052	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62053	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62054	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62061	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62062	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62063	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62064	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62065	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62067	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62068	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62072	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62073	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62074	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2

Evans Head Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$19,226		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	62075	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62079	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62081	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62082	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62083	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62089	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62090	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62091	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62094	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62097	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62099	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62103	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62109	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62111	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62115	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62116	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62117	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62118	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62119	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62120	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62122	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62123	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62126	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62127	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62132	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62133	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62459	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	62496	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	3
Manhole	62017	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62028	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62029	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62030	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62047	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62048	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62055	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62056	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62066	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62071	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	62105	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Rising Main	200	10	2012	10	1979	1996	10			2	2043	48	3%	1.84	4
Gravity Main	225	11	2012	11	1991	1996	11			2	2043	48	3%	1.84	4
Gravity Main	225	1	2012	1	1991	1996	1			0	2043	48	3%	1.84	1
Gravity Main	225	5	2012	5	1991	1996	5			1	2043	48	3%	1.84	2
Gravity Main	225	16	2012	16	1993	1996	16			3	2043	48	3%	1.84	6
Gravity Main	225	10	2012	10	1993	1996	10			2	2043	48	3%	1.84	4
Gravity Main	225	2	2012	2	1993	1996	2			0	2043	48	3%	1.84	1
Gravity Main	225	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Gravity Main	225	9	2012	9	1993	1996	9			2	2043	48	3%	1.84	3
Gravity Main	225	1	2012	1	1993	1996	1			0	2043	48	3%	1.84	0
Gravity Main	225	11	2012	11	1996	1996	11			2	2043	48	7%	3.27	7
Gravity Main	225	26	2012	27	1996	1996	27			5	2043	48	7%	3.27	17
Gravity Main	225	18	2012	19	1996	1996	19			4	2043	48	7%	3.27	12
Gravity Main	225	14	2012	14	2004	2004	14			3	2043	40	7%	2.80	8
Gravity Main	225	16	2012	16	2004	2004	16			3	2043	40	7%	2.80	9
Gravity Main	225	18	2012	18	2004	2004	18			4	2043	40	7%	2.80	10
Gravity Main	225	13	2012	14	2004	2004	14			3	2043	40	7%	2.80	7
Gravity Main	225	15	2012	15	2004	2004	15			3	2043	40	7%	2.80	8
Gravity Main	225	15	2012	15	2004	2004	15			3	2043	40	7%	2.80	8
Gravity Main	225	10	2012	10	2004	2004	10			2	2043	40	7%	2.80	6
Gravity Main	225	9	2012	9	2004	2004	9			2	2043	40	7%	2.80	5
Gravity Main	225	8	2012	9	2004	2004	9			2	2043	40	7%	2.80	5
Gravity Main	225	22	2012	23	2004	2004	23			4	2043	40	7%	2.80	12
Gravity Main	225	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Gravity Main	225	3	2012	3	2007	2007	3			1	2043	37	7%	2.64	2
Gravity Main	225	16	2012	16	2007	2007	16			3	2043	37	7%	2.64	8
Gravity Main	225	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	4
Gravity Main	225	9	2012	9	2007	2007	9			2	2043	37	7%	2.64	5
Gravity Main	225	8	2012	8	2007	2007	8			1	2043	37	7%	2.64	4
Gravity Main	225	16	2012	17	2007	2007	17			3	2043	37	7%	2.64	8
Rising Main	300	1487	2012	1,532	2011	2011	1,532			292	2043	33	7%	2.42	707
Rising Main	300	519	2012	535	2011	2011	535			102	2043	33	7%	2.42	247
Rising Main	300	477	2012	491	2011	2011	491			94	2043	33	7%	2.42	227
Rising Main	315	27	2012	28	2011	2011	28			5	2043	33	7%	2.42	13

Evans Head Sewerage Scheme																
Capital Charge Calculation						**Summary**										
Pre 1996 discount rate	3%					per ET			**Total**							
Post 1996 discount rate	7%					**Capital charge**			$19,226	2013$ per ET						
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**	
Gravity Main	300	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1	
Rising Main	250	2323	2012	2,392	2011	2011	2,392			457	2043	33	7%	2.42	1,104	
Scour Valve	87726	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87727	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87728	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87729	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87730	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87731	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87732	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87733	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87734	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87735	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87736	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87737	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87738	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87739	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87740	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Scour Valve	87741	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87742	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87743	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87744	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Stop Valve	87745	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Scour Valve	87746	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87747	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87748	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87749	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87750	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87751	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87752	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87753	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87754	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87755	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87756	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87757	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87758	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Scour Valve	87759	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87760	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Air Valve	87761	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87762	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87763	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87764	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87765	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87766	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87767	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87768	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87769	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87770	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Stop Valve	87771	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Scour Valve	87774	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87775	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87776	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87777	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87778	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	2	
Air Valve	87682	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87711	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87712	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87713	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87714	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87715	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87716	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87717	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87718	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87719	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87720	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87721	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87722	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Scour Valve	87723	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Air Valve	87724	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2	
Stop Valve	87725	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1	
Scour	87685	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3	
Scour	87686	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3	
Scour	87687	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3	
Scour	87688	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3	

Evans Head Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$19,226		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Scour	87689	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87690	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87691	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87692	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87693	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87694	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87695	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87696	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87697	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87698	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87699	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87700	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87701	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87702	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87703	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87704	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87705	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87706	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87707	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87708	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87709	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87710	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87772	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87773	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87779	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87780	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87781	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87683	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Scour	87684	5	2012	6	2011	2011	6			1	2043	33	7%	2.42	3
Vent Stack		4	2012	4	1991	1996	4			1	2043	48	3%	1.84	2
Future Transfer System															
P/Stn Evans Hd - Evans/Woodburn P/Stn & RM		4,400	2013	4,400	2020	2020	2,740			523	2043	24	7%	1.96	1,023
P/Stn Evans Hd - Evans/Woodburn P/Stn & RM		1,000	2013	1,000	2030	2030	317			97	2043	14	7%	1.50	145
P/Stn Evans Hd - PS1 Upgrade		419	2013	419	2013	2013	419			129	2043	31	7%	2.31	297
P/Stn Evans Hd - PS2 Upgrade		271	2013	271	2014	2014	253			78	2043	30	7%	2.26	176
P/Stn Evans Hd - PS3 Upgrade		227	2013	227	2014	2014	212			65	2043	30	7%	2.26	147
P/Stn Evans Hd - PS4 Upgrade		689	2013	689	2013	2013	689			211	2043	31	7%	2.31	489
P/Stn Evans Hd - PS6 Upgrade		270	2013	270	2014	2014	252			77	2043	30	7%	2.26	175
P/Stn Evans Hd - PS7 Upgrade		306	2013	306	2013	2013	306			94	2043	31	7%	2.31	217
P/Stn Evans Hd - PS8 Upgrade		28	2013	28	2013	2013	28			9	2043	31	7%	2.31	20
P/Stn Evans Hd - PS8 Upgrade		1,000	2013	1,000	2020	2020	623			191	2043	24	7%	1.96	374
Maintenance Management System Upgrade		50	2013	50	2013	2013	50			15	2043	31	7%	2.31	35
T/Plant Broadwater - Augmentation		71	2013	71	2011	2011	71			22	2043	33	7%	2.42	53
T/Plant Broadwater - Augmentation		2,862	2013	2,862	2012	2012	2,862			878	2043	32	7%	2.36	2077
T/Plant Broadwater - Augmentation		3,683	2013	3,683	2013	2013	3,683			1,130	2043	31	7%	2.31	2613
Total Transfer System		**24,809**					**22,324**		**3,258**	**5,394**					**12,329**
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 2013$ using Reference Rates															
4. Capital cost of future works discounted to 2013$															

Casino Sewerage Scheme															
Capital Charge Calculation						Summary									
Pre 1996 discount rate	3%					per ET		Total							
Post 1996 discount rate	7%					Capital charge		$14,493		2013$ per ET					
Asset	Detail	Capital cost ($'000)[1]	Year dollars[2]	Capital Cost ($'000, 2013$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2013 ($'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 Treatment															
Pre-1970															
Sewerage Treatment Plant	Back well	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Back well	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Back well	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Back well	38	2012	39	1933	1996	39			7	2043	48	3%	1.84	13
Sewerage Treatment Plant	Biological Filters	1200	2012	1,236	1933	1996	1,236			224	2043	48	3%	1.84	413
Sewerage Treatment Plant	Biological Filters	1200	2012	1,236	1933	1996	1,236			224	2043	48	3%	1.84	413
Sewerage Treatment Plant	Biological Filters	18	2012	19	1933	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	18	2012	19	1933	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	18	2012	19	1933	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	18	2012	19	1933	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	18	2012	19	1933	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	18	2012	19	1933	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	18	2012	19	1933	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	18	2012	19	1933	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	2	2012	2	1933	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Biological Filters	6	2012	6	1933	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Biological Filters	2	2012	2	1933	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Biological Filters	6	2012	6	1933	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester No 1 Well	6	2012	6	1933	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester No 1 Well	325	2012	335	1933	1996	335			61	2043	48	3%	1.84	112
Sewerage Treatment Plant	Digester No 2 Well	15	2012	15	1933	1996	15			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Digester No 2 Well	325	2012	335	1933	1996	335			61	2043	48	3%	1.84	112
Sewerage Treatment Plant	Digester No 3 Well	3	2012	3	1933	1996	3			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Transfer Pump	6	2012	6	1933	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Transfer Pump	2	2012	2	1933	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Transfer Pump	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Transfer Pump	45	2012	46	1933	1996	46			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Digester Transfer Pump	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Transfer Pump	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Transfer Pump	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Well House Building	10	2012	10	1933	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Digester Well House Building	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Well House Building	75	2012	77	1933	1996	77			14	2043	48	3%	1.84	26
Sewerage Treatment Plant	Digester Well House Building	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Well House Building	10	2012	10	1933	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Digester Well House Building	6	2012	6	1933	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Well House Building	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Well House Building	4	2012	4	1933	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Well House Building	4	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Well House Building	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Well House Building	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Well House Building	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Well House Building	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Digester Well House Building	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Well House Building	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Well House Building	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Well House Building	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Well House Building	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester Well House Building	65	2012	67	1933	1996	67			12	2043	48	3%	1.84	22
Sewerage Treatment Plant	Dosing Siphon Chambers	26	2012	26	1933	1996	26			5	2043	48	3%	1.84	9
Sewerage Treatment Plant	Dosing Siphon Chambers	26	2012	26	1933	1996	26			5	2043	48	3%	1.84	9
Sewerage Treatment Plant	Dosing Siphon Chambers	4	2012	4	1933	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Dosing Siphon Chambers	4	2012	4	1933	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Drying Bed	5	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Drying Bed	23	2012	24	1933	1996	24			4	2043	48	3%	1.84	8
Sewerage Treatment Plant	Inlet Works	9	2012	9	1933	1996	9			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	On Site	100	2012	103	1933	1996	103			19	2043	48	3%	1.84	34
Sewerage Treatment Plant	Recirculation Pump Station	15	2012	16	1933	1996	16			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Recirculation Pump Station	0	2012	0	1933	1996	0			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Recirculation Pump Station	4	2012	4	1933	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	4	2012	5	1933	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	18	2012	18	1933	1996	18			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	4	1933	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	4	1933	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	4	1933	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	3	1933	1996	3			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1

Casino Sewerage Scheme

Capital Charge Calculation

Pre 1996 discount rate	3%					per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**			$14,493	2013$ per ET					

Summary

Asset	Detail	Capital cost ($'000)[1]	Year dollars[2]	Capital Cost ($'000, 2013$)[3]	Year commiss-ioned	Effective year commiss-ioned	Present value 2013 ($'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)
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Recirculation Pump Station	15	2012	15	1933	1996	15			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Recirculation Pump Station	27	2012	28	1933	1996	28			5	2043	48	3%	1.84	9
Sewerage Treatment Plant	Sedimentation Tank	13	2012	13	1933	1996	13			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Sedimentation Tank	48	2012	49	1933	1996	49			9	2043	48	3%	1.84	17
Sewerage Treatment Plant	Sedimentation Tank	27	2012	28	1933	1996	28			5	2043	48	3%	1.84	9
Sewerage Treatment Plant	Sedimentation Tank	375	2012	386	1933	1996	386			70	2043	48	3%	1.84	129
Sewerage Treatment Plant	Sedimentation Tank	375	2012	386	1933	1996	386			70	2043	48	3%	1.84	129
Sewerage Treatment Plant	Sedimentation Tank	9	2012	9	1933	1996	9			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Sedimentation Tank	17	2012	17	1933	1996	17			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Sedimentation Tank	17	2012	17	1933	1996	17			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Sedimentation Tank	3	2012	3	1933	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Switchboard Building	13	2012	14	1933	1996	14			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Switchboard Building	15	2012	16	1933	1996	16			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Switchboard Building	11	2012	11	1933	1996	11			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Drying Bed	178	2012	184	1933	1996	184			33	2043	48	3%	1.84	61
Sewerage Treatment Plant	Plant SCADA	280	2012	288	1933	1996	288			52	2043	48	3%	1.84	96
Sewerage Treatment Plant	Plant Electrical Cabling	300	2012	309	1933	1996	309			56	2043	48	3%	1.84	103
Sewerage Treatment Plant	Mains Power Supply	180	2012	185	1933	1996	185			34	2043	48	3%	1.84	62
Sewerage Treatment Plant	Biological Filters	1200	2012	1,236	1956	1996	1,236			224	2043	48	3%	1.84	413
Sewerage Treatment Plant	Biological Filters	18	2012	19	1956	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	18	2012	19	1956	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	18	2012	19	1956	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Biological Filters	4	2012	4	1956	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Biological Filters	4	2012	4	1956	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Digester No 3 Well	325	2012	335	1956	1996	335			61	2043	48	3%	1.84	112
Sewerage Treatment Plant	Drying Bed	5	2012	5	1956	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Drying Bed	22	2012	23	1956	1996	23			4	2043	48	3%	1.84	8
Sewerage Treatment Plant	Drying Bed	5	2012	5	1956	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Drying Bed	22	2012	23	1956	1996	23			4	2043	48	3%	1.84	8
Sewerage Treatment Plant	Humus Pump Station	41	2012	42	1956	1996	42			8	2043	48	3%	1.84	14
Sewerage Treatment Plant	Humus Pump Station	13	2012	13	1956	1996	13			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Humus Pump Station	8	2012	8	1956	1996	8			1	2043	48	3%	1.84	3
Sewerage Treatment Plant	Humus Pump Station	7	2012	7	1956	1996	7			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Humus Pump Station	9	2012	9	1956	1996	9			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Humus Pump Station	15	2012	15	1956	1996	15			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Humus Tank	4	2012	4	1956	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Humus Tank	7	2012	8	1956	1996	8			1	2043	48	3%	1.84	3
Sewerage Treatment Plant	Humus Tank	3	2012	3	1956	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Humus Tank	320	2012	330	1956	1996	330			60	2043	48	3%	1.84	110
Sewerage Treatment Plant	Humus Tank	320	2012	330	1956	1996	330			60	2043	48	3%	1.84	110
Sewerage Treatment Plant	Humus Tank	9	2012	10	1956	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Humus Tank	9	2012	10	1956	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Sedimentation Tank	4	2012	4	1956	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sedimentation Tank	465	2012	479	1956	1996	479			87	2043	48	3%	1.84	160
Sewerage Treatment Plant	Sedimentation Tank	9	2012	9	1956	1996	9			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Sedimentation Tank	17	2012	17	1956	1996	17			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Sedimentation Tank	3	2012	3	1956	1996	3			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Supernatant Pump Station	6	2012	7	1956	1996	7			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Supernatant Pump Station	15	2012	16	1956	1996	16			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Supernatant Pump Station	16	2012	16	1956	1996	16			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Drying Bed	151	2012	155	1956	1996	155			28	2043	48	3%	1.84	52
Sewerage Treatment Plant	Drying Bed	151	2012	155	1956	1996	155			28	2043	48	3%	1.84	52
Sewerage Treatment Plant	Tertiary Ponds	115	2012	118	1976	1996	118			21	2043	48	3%	1.84	40
Post-1970															
Sewerage Treatment Plant	Storm Water Ponds	13	2012	13	1976	1996	13			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Bio Solids Pond	11	2012	11	1976	1996	11			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Distribution Box	27	2012	27	1991	1996	27			5	2043	48	3%	1.84	9
Sewerage Treatment Plant	Distribution Box	31	2012	31	1991	1996	31			6	2043	48	3%	1.84	10
Sewerage Treatment Plant	Drying Bed	16	2012	16	1991	1996	16			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Drying Bed	13	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Drying Bed	13	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Drying Bed	5	2012	5	1991	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Drying Bed	15	2012	15	1991	1996	15			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Drying Bed	18	2012	19	1991	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Extended Aeration Tank	6	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Extended Aeration Tank	6	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Extended Aeration Tank	6	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Extended Aeration Tank	6	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Extended Aeration Tank	60	2012	62	1991	1996	62			11	2043	48	3%	1.84	21
Sewerage Treatment Plant	Extended Aeration Tank	48	2012	49	1991	1996	49			9	2043	48	3%	1.84	17

Casino Sewerage Scheme															
Capital Charge Calculation						Summary									
Pre 1996 discount rate	3%					per ET			Total						
Post 1996 discount rate	7%					Capital charge			$14,493	2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Treatment Plant	Extended Aeration Tank	5	2012	5	1991	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Extended Aeration Tank	1	2012	1	1991	1996	1			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Extended Aeration Tank	1	2012	1	1991	1996	1			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Extended Aeration Tank	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Extended Aeration Tank	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Extended Aeration Tank	9	2012	9	1991	1996	9			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Extended Aeration Tank	5	2012	5	1991	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Extended Aeration Tank	25	2012	26	1991	1996	26			5	2043	48	3%	1.84	9
Sewerage Treatment Plant	Extended Aeration Tank	1100	2012	1,133	1991	1996	1,133			205	2043	48	3%	1.84	379
Sewerage Treatment Plant	Extended Aeration Tank	15	2012	15	1991	1996	15			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Extended Aeration Tank	86	2012	88	1991	1996	88			16	2043	48	3%	1.84	29
Sewerage Treatment Plant	Extended Aeration Tank	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Extended Aeration Tank	16	2012	16	1991	1996	16			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Extended Aeration Tank	13	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Humus Pump Station	8	2012	8	1991	1996	8			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Humus Pump Station	8	2012	8	1991	1996	8			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Inlet Works	6	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Inlet Works	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	13	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Inlet Works	1	2012	1	1991	1996	1			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Inlet Works	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	5	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Inlet Works	5	2012	5	1991	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Inlet Works	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Inlet Works	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Inlet Works	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Inlet Works	12	2012	12	1991	1996	12			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Inlet Works	19	2012	19	1991	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Inlet Works	160	2012	165	1991	1996	165			30	2043	48	3%	1.84	55
Sewerage Treatment Plant	Inlet Works	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	8	2012	8	1991	1996	8			1	2043	48	3%	1.84	3
Sewerage Treatment Plant	Inlet Works	31	2012	32	1991	1996	32			6	2043	48	3%	1.84	11
Sewerage Treatment Plant	Inlet Works	362	2012	373	1991	1996	373			68	2043	48	3%	1.84	125
Sewerage Treatment Plant	Inlet Works	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	15	2012	15	1991	1996	15			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Inlet Works	1	2012	1	1991	1996	1			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Inlet Works	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	42	2012	43	1991	1996	43			8	2043	48	3%	1.84	14
Sewerage Treatment Plant	Inlet Works	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	3	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	3	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	3	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Inlet Works	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Irrigation Shed	11	2012	11	1991	1996	11			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Irrigation Shed	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Irrigation Shed	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Irrigation Shed	8	2012	8	1991	1996	8			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Irrigation Shed	1	2012	1	1991	1996	1			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Irrigation Shed	1	2012	1	1991	1996	1			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Irrigation Shed	0	2012	0	1991	1996	0			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Irrigation Shed	0	2012	0	1991	1996	0			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Office Building	0	2012	0	1991	1996	0			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Office Building	0	2012	0	1991	1996	0			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Office Building	0	2012	0	1991	1996	0			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Office Building	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Office Building	76	2012	79	1991	1996	79			14	2043	48	3%	1.84	26
Sewerage Treatment Plant	Office Building	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Office Building	34	2012	35	1991	1996	35			6	2043	48	3%	1.84	12
Sewerage Treatment Plant	Office Building	38	2012	39	1991	1996	39			7	2043	48	3%	1.84	13
Sewerage Treatment Plant	Office Building	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	On Site	67	2012	69	1991	1996	69			13	2043	48	3%	1.84	23
Sewerage Treatment Plant	On Site	47	2012	49	1991	1996	49			9	2043	48	3%	1.84	16
Sewerage Treatment Plant	On Site	70	2012	72	1991	1996	72			13	2043	48	3%	1.84	24
Sewerage Treatment Plant	Pump Station	33	2012	34	1991	1996	34			6	2043	48	3%	1.84	11

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**			$14,493	2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)**[1]	**Year dollars**[2]	**Capital Cost ($'000, 2013$)**[3]	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Treatment Plant	Pump Station	6	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Pump Station	6	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Pump Station	15	2012	15	1991	1996	15			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Pump Station	21	2012	22	1991	1996	22			4	2043	48	3%	1.84	7
Sewerage Treatment Plant	Recirculation Pump Station	49	2012	51	1991	1996	51			9	2043	48	3%	1.84	17
Sewerage Treatment Plant	Recirculation Pump Station	12	2012	12	1991	1996	12			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Recirculation Pump Station	5	2012	5	1991	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Recirculation Pump Station	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Recirculation Pump Station	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Recirculation Pump Station	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Sludge Lagoon	489	2012	504	1991	1996	504			91	2043	48	3%	1.84	168
Sewerage Treatment Plant	Sludge Lagoon	489	2012	504	1991	1996	504			91	2043	48	3%	1.84	168
Sewerage Treatment Plant	Sludge Lagoon	19	2012	19	1991	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	Sludge Lagoon	5	2012	5	1991	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Sludge Lagoon	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	22	2012	23	1991	1996	23			4	2043	48	3%	1.84	8
Sewerage Treatment Plant	Sludge Lagoon	5	2012	5	1991	1996	5			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Supernatant Pump Station	41	2012	42	1991	1996	42			8	2043	48	3%	1.84	14
Sewerage Treatment Plant	Supernatant Pump Station	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Supernatant Pump Station	6	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Supernatant Pump Station	6	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	Switchboard Building	40	2012	41	1991	1996	41			7	2043	48	3%	1.84	14
Sewerage Treatment Plant	Switchboard Building	20	2012	21	1991	1996	21			4	2043	48	3%	1.84	7
Sewerage Treatment Plant	Switchboard Building	20	2012	21	1991	1996	21			4	2043	48	3%	1.84	7
Sewerage Treatment Plant	Switchboard Building	3	2012	3	1991	1996	3			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Switchboard Building	9	2012	9	1991	1996	9			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Tertiary Ponds	14	2012	15	1991	1996	15			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Water Supply into STP	25	2012	26	1991	1996	26			5	2043	48	3%	1.84	9
Sewerage Treatment Plant	Water Supply into STP	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Water Supply into STP	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Water Supply into STP	3	2012	3	1991	1996	3			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	3	2012	3	1991	1996	3			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Water Supply into STP	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	3	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	3	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	2	2012	2	1991	1996	2			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Water Supply into STP	33	2012	34	1991	1996	34			6	2043	48	3%	1.84	11
Sewerage Treatment Plant	Water Supply into STP	10	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	Extended Aeration Tank	13	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Water Supply into STP	1	2012	1	1991	1996	1			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Inlet Works	126	2012	130	1991	1996	130			24	2043	48	3%	1.84	43
Sewerage Treatment Plant	Drying Bed	172	2012	177	1991	1996	177			32	2043	48	3%	1.84	59
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Sewerage Treatment Plant	Extended Aeration Tank	22	2012	23	1991	1996	23			4	2043	48	3%	1.84	8
Sewerage Treatment Plant	Extended Aeration Tank	22	2012	23	1991	1996	23			4	2043	48	3%	1.84	8
Sewerage Treatment Plant	Extended Aeration Tank	22	2012	23	1991	1996	23			4	2043	48	3%	1.84	8
Sewerage Treatment Plant	Extended Aeration Tank	22	2012	23	1991	1996	23			4	2043	48	3%	1.84	8
Sewerage Treatment Plant	Extended Aeration Tank	15	2012	15	1991	1996	15			3	2043	48	3%	1.84	5
Sewerage Treatment Plant	Extended Aeration Tank	52	2012	53	1991	1996	53			10	2043	48	3%	1.84	18
Sewerage Treatment Plant	Digester No 1 Well	38	2012	39	1992	1996	39			7	2043	48	3%	1.84	13

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Treatment Plant	Digester No 2 Well	38	2012	39	1992	1996	39			7	2043	48	3%	1.84	13
Sewerage Treatment Plant	Digester No 3 Well	38	2012	39	1992	1996	39			7	2043	48	3%	1.84	13
Sewerage Treatment Plant	Digester Transfer Pump	13	2012	13	1992	1996	13			2	2043	48	3%	1.84	4
Sewerage Treatment Plant	Drying Bed	19	2012	19	1992	1996	19			3	2043	48	3%	1.84	6
Sewerage Treatment Plant	On Site	35	2012	36	1992	1996	36			6	2043	48	3%	1.84	12
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1992	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Switchboard Building	0	2012	0	1992	1996	0			0	2043	48	3%	1.84	0
Sewerage Treatment Plant	Drying Bed	740	2012	762	1992	1996	762			138	2043	48	3%	1.84	255
Sewerage Treatment Plant	Inlet Works	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	On Site	39	2012	40	1993	1996	40			7	2043	48	3%	1.84	13
Sewerage Treatment Plant	On Site	10	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Sewerage Treatment Plant	On Site	122	2012	126	1993	1996	126			23	2043	48	3%	1.84	42
Sewerage Treatment Plant	On Site	75	2012	77	1993	1996	77			14	2043	48	3%	1.84	26
Sewerage Treatment Plant	On Site	6	2012	6	1993	1996	6			1	2043	48	3%	1.84	2
Sewerage Treatment Plant	On Site	3	2012	3	1993	1996	3			0	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	3	2012	3	1993	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Storage shed	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Storage shed	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Storage shed	3	2012	3	1994	1996	3			1	2043	48	3%	1.84	1
Sewerage Treatment Plant	Biological Filters	5	2012	5	1996	1996	5			1	2043	48	7%	3.27	3
Sewerage Treatment Plant	Biological Filters	5	2012	5	1996	1996	5			1	2043	48	7%	3.27	3
Sewerage Treatment Plant	Biological Filters	9	2012	9	1996	1996	9			2	2043	48	7%	3.27	5
Sewerage Treatment Plant	Inlet Works	20	2012	21	1996	1996	21			4	2043	48	7%	3.27	12
Sewerage Treatment Plant	Inlet Works	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Sewerage Treatment Plant	On Site	40	2012	41	1997	1997	41			7	2043	47	7%	3.21	24
Sewerage Treatment Plant	On Site	12	2012	12	1997	1997	12			2	2043	47	7%	3.21	7
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1999	1999	4			1	2043	45	7%	3.09	2
Sewerage Treatment Plant	Sludge Lagoon	3	2012	3	1999	1999	3			1	2043	45	7%	3.09	2
Sewerage Treatment Plant	Sludge Lagoon	16	2012	16	1999	1999	16			3	2043	45	7%	3.09	9
Sewerage Treatment Plant	Sludge Lagoon	4	2012	4	1999	1999	4			1	2043	45	7%	3.09	2
Sewerage Treatment Plant	Switchboard Building	1	2012	1	1999	1999	1			0	2043	45	7%	3.09	0
Sewerage Treatment Plant	Digester No 1 Well	12	2012	12	2000	2000	12			2	2043	44	7%	3.03	7
Sewerage Treatment Plant	Digester No 2 Well	12	2012	12	2000	2000	12			2	2043	44	7%	3.03	7
Sewerage Treatment Plant	Digester No 3 Well	6	2012	6	2000	2000	6			1	2043	44	7%	3.03	3
Sewerage Treatment Plant	Dosing Siphon Chambers	6	2012	6	2000	2000	6			1	2043	44	7%	3.03	3
Sewerage Treatment Plant	Humus Tank	19	2012	19	2000	2000	19			3	2043	44	7%	3.03	10
Sewerage Treatment Plant	Humus Tank	19	2012	19	2000	2000	19			3	2043	44	7%	3.03	10
Sewerage Treatment Plant	Sedimentation Tank	18	2012	19	2000	2000	19			3	2043	44	7%	3.03	10
Sewerage Treatment Plant	Sedimentation Tank	18	2012	19	2000	2000	19			3	2043	44	7%	3.03	10
Sewerage Treatment Plant	Sedimentation Tank	18	2012	19	2000	2000	19			3	2043	44	7%	3.03	10
Sewerage Treatment Plant	Sludge Lagoon	22	2012	22	2000	2000	22			4	2043	44	7%	3.03	12
Sewerage Treatment Plant	Biological Filters	18	2012	19	2002	2002	19			3	2043	42	7%	2.92	10
Sewerage Treatment Plant	Drying Bed	70	2012	72	2002	2002	72			13	2043	42	7%	2.92	38
Sewerage Treatment Plant	Drying Bed	28	2012	29	2002	2002	29			5	2043	42	7%	2.92	15
Sewerage Treatment Plant	Extended Aeration Tank	38	2012	39	2002	2002	39			7	2043	42	7%	2.92	21
Sewerage Treatment Plant	Extended Aeration Tank	38	2012	39	2002	2002	39			7	2043	42	7%	2.92	21
Sewerage Treatment Plant	Tertiary Ponds	16	2012	17	2003	2003	17			3	2043	41	7%	2.86	9
Sewerage Treatment Plant	Tertiary Ponds	7	2012	7	2003	2003	7			1	2043	41	7%	2.86	4
Sewerage Treatment Plant	Tertiary Ponds	7	2012	7	2003	2003	7			1	2043	41	7%	2.86	4
Sewerage Treatment Plant	Tertiary Ponds	7	2012	7	2003	2003	7			1	2043	41	7%	2.86	4
Sewerage Treatment Plant	Wetland	4	2012	5	2003	2003	5			1	2043	41	7%	2.86	2
Sewerage Treatment Plant	Wetland	4	2012	5	2003	2003	5			1	2043	41	7%	2.86	2
Sewerage Treatment Plant	Wetland	10	2012	11	2003	2003	11			2	2043	41	7%	2.86	5
Sewerage Treatment Plant	Wetland	4	2012	5	2003	2003	5			1	2043	41	7%	2.86	2
Sewerage Treatment Plant	Wetland	4	2012	5	2003	2003	5			1	2043	41	7%	2.86	2
Sewerage Treatment Plant	Wetland	8	2012	8	2003	2003	8			1	2043	41	7%	2.86	4
Sewerage Treatment Plant	Wetland	4	2012	5	2003	2003	5			1	2043	41	7%	2.86	2
Sewerage Treatment Plant	Wetland	5	2012	5	2003	2003	5			1	2043	41	7%	2.86	3
Sewerage Treatment Plant	Office Building	9	2012	9	2004	2004	9			2	2043	40	7%	2.80	4
Sewerage Treatment Plant	Office Building	37	2012	39	2004	2004	39			7	2043	40	7%	2.80	20
Sewerage Treatment Plant	Switchboard Building	9	2012	9	2004	2004	9			2	2043	40	7%	2.80	4
Sewerage Treatment Plant	Extended Aeration Tank	38	2012	39	2012	2012	39			7	2043	32	7%	2.36	17
Sewerage Treatment Plant	Extended Aeration Tank	38	2012	39	2012	2012	39			7	2043	32	7%	2.36	17
Future Treatment															
T/Plant Casino - Wetland Pond		100	2013	100	2014	2014	93			17	2043	30	7%	2.26	38
T/Plant Casino - Infrastructure Optimisation		121	2013	121	2013	2013	121			22	2043	31	7%	2.31	51
T/Plant Casino - Chemical P Removal (HydroScience report)		200	2013	200	2017	2017	153			28	2043	27	7%	2.11	58
T/Plant Casino - Biosolids management investigations		50	2013	50	2018	2018	36			6	2043	26	7%	2.05	13
T/Plant Casino - Relocate Golf Course Re-Use Offtake		30	2013	30	2017	2017	23			4	2043	27	7%	2.11	9
T/Plant Casino - Re-use Investigations/Concept Development		50	2013	50	2014	2017	38			7	2043	27	7%	2.11	15

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
T/Plant Casino - Re-use Investigations/Concept Development		100	2013	100	2015	2014	93			17	2043	30	7%	2.26	38
T/Plant Casino - Re-use Investigations/Concept Development		200	2013	200	2016	2015	175			32	2043	29	7%	2.21	70
T/Plant Casino - Trade Waste Investigations		20	2013	20	2014	2014	19			3	2043	30	7%	2.26	8
T/Plant Casino - Trade Waste Investigations		20	2013	20	2015	2015	17			3	2043	29	7%	2.21	7
T/Plant Casino - Mechanical/electrical/civil assessment		150	2013	150	2015	2015	131			24	2043	29	7%	2.21	52
T/Plant Casino - Replace Trickling Filter Arms		20	2013	20	2014	2014	19			3	2043	30	7%	2.26	8
T/Plant Casino - Blowers		39	2013	39	2013	2013	39			7	2043	31	7%	2.31	16
T/Plant Casino - Internal Roads Upgrade		73	2013	73	2013	2013	73			13	2043	31	7%	2.31	31
T/Plant Casino - Automated Bar Screen		80	2013	80	2013	2013	80			14	2043	31	7%	2.31	34
T/Plant Casino - PLC Upgrade		150	2013	150	2013	2013	150			27	2043	31	7%	2.31	63
T/Plant Casino - OHS Improvements		20	2013	20	2013	2013	20			4	2043	31	7%	2.31	8
T/Plant Casino - Land Acquisition Lot 7304 DP 1138123		7	2013	7	2013	2013	7			1	2043	31	7%	2.31	3
T/Plant Casino - Land Acquisition Lot 320 DP 755727		5	2013	5	2013	2013	5			1	2043	31	7%	2.31	2
T/Plant Casino - Augmentation Investigation, design and construction		6,000	2013	6,000	2021	2021	3,492			633	2043	23	7%	1.91	1,206
T/Plant Casino - Augmentation Investigation, design and construction		7,500	2013	7,500	2022										
Total Treatment		**31,081**					**21,414**		**5,520**	**3,879**					**7,421**
Existing Transfer System															
Post-1970															
Sewerage Pump Station	SPS 608	25	2012	26	1973	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 608	65	2012	67	1973	1996	67			12	2043	48	3%	1.84	22
Sewerage Pump Station	SPS 608	7	2012	7	1973	1996	7			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 607	11	2012	11	1979	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 607	25	2012	26	1979	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 607	2	2012	2	1979	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 607	3	2012	3	1979	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 607	129	2012	133	1979	1996	133			24	2043	48	3%	1.84	44
Sewerage Pump Station	SPS 607	19	2012	19	1979	1996	19			3	2043	48	3%	1.84	6
Sewerage Pump Station	SPS 607	48	2012	49	1979	1996	49			9	2043	48	3%	1.84	17
Sewerage Pump Station	SPS 607	11	2012	11	1979	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 607	5	2012	5	1979	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 607	5	2012	5	1979	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 607	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 607	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 607	5	2012	5	1979	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 607	5	2012	5	1979	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	Comminutor	3	2012	3	1990	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 601	2	2012	2	1990	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 601	25	2012	26	1990	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 601	24	2012	25	1990	1996	25			4	2043	48	3%	1.84	8
Sewerage Pump Station	SPS 601	2	2012	2	1990	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 601	13	2012	13	1990	1996	13			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 601	2	2012	2	1990	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 601	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 601	1	2012	1	1990	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 601	3	2012	3	1990	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 601	19	2012	19	1990	1996	19			3	2043	48	3%	1.84	6
Sewerage Pump Station	SPS 601	19	2012	19	1990	1996	19			3	2043	48	3%	1.84	6
Sewerage Pump Station	SPS 601	19	2012	19	1990	1996	19			3	2043	48	3%	1.84	6
Sewerage Pump Station	SPS 601	20	2012	20	1990	1996	20			4	2043	48	3%	1.84	7
Sewerage Pump Station	SPS 601	20	2012	20	1990	1996	20			4	2043	48	3%	1.84	7
Sewerage Pump Station	SPS 601	20	2012	20	1990	1996	20			4	2043	48	3%	1.84	7
Sewerage Pump Station	SPS 601	20	2012	20	1990	1996	20			4	2043	48	3%	1.84	7
Sewerage Pump Station	SPS 601	20	2012	20	1990	1996	20			4	2043	48	3%	1.84	7
Sewerage Pump Station	SPS 601	24	2012	25	1990	1996	25			5	2043	48	3%	1.84	8
Sewerage Pump Station	SPS 601	24	2012	25	1990	1996	25			5	2043	48	3%	1.84	8
Sewerage Pump Station	SPS 601	8	2012	8	1990	1996	8			1	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 601	8	2012	8	1990	1996	8			1	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 601	21	2012	22	1990	1996	22			4	2043	48	3%	1.84	7
Sewerage Pump Station	SPS 601	147	2012	151	1990	1996	151			27	2043	48	3%	1.84	51
Sewerage Pump Station	SPS 601	13	2012	14	1990	1996	14			2	2043	48	3%	1.84	5
Sewerage Pump Station	SPS 601	43	2012	44	1990	1996	44			8	2043	48	3%	1.84	15
Sewerage Pump Station	SPS 601	20	2012	20	1990	1996	20			4	2043	48	3%	1.84	7
Sewerage Pump Station	SPS 601	24	2012	25	1990	1996	25			5	2043	48	3%	1.84	8
Sewerage Pump Station	SPS 601	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 602	58	2012	60	1990	1996	60			11	2043	48	3%	1.84	20
Sewerage Pump Station	SPS 602	1	2012	1	1990	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 602	1	2012	1	1990	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 602	2	2012	2	1990	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 602	3	2012	3	1990	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 602	8	2012	8	1990	1996	8			1	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 602	8	2012	8	1990	1996	8			1	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 602	2	2012	2	1990	1996	2			0	2043	48	3%	1.84	1

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**			$14,493	2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)**[1]	**Year dollars**[2]	**Capital Cost ($'000, 2013$)**[3]	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Pump Station	SPS 602	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 602	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 602	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 602	15	2012	15	1990	1996	15			3	2043	48	3%	1.84	5
Sewerage Pump Station	SPS 602	15	2012	15	1990	1996	15			3	2043	48	3%	1.84	5
Sewerage Pump Station	SPS 602	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 604	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 604	3	2012	3	1990	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 604	1	2012	1	1990	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 604	11	2012	12	1990	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 604	11	2012	12	1990	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 604	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 604	10	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 605	11	2012	11	1990	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 605	25	2012	26	1990	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 605	3	2012	3	1990	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 605	11	2012	12	1990	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 605	11	2012	12	1990	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 605	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 605	78	2012	80	1990	1996	80			15	2043	48	3%	1.84	27
Sewerage Pump Station	SPS 605	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 605	10	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 605	15	2012	15	1990	1996	15			3	2043	48	3%	1.84	5
Sewerage Pump Station	SPS 605	2	2012	2	1990	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 605	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 605	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 605	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 608	11	2012	11	1990	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 608	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 608	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 608	1	2012	1	1990	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 608	3	2012	3	1990	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 608	8	2012	8	1990	1996	8			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 608	8	2012	8	1990	1996	8			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 608	8	2012	8	1990	1996	8			1	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 608	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 608	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 608	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 608	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 610	25	2012	26	1990	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 610	13	2012	13	1990	1996	13			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 610	1	2012	1	1990	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 610	3	2012	3	1990	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 610	1	2012	1	1990	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 610	286	2012	295	1990	1996	295			53	2043	48	3%	1.84	98
Sewerage Pump Station	SPS 610	54	2012	56	1990	1996	56			10	2043	48	3%	1.84	19
Sewerage Pump Station	SPS 610	19	2012	19	1990	1996	19			3	2043	48	3%	1.84	6
Sewerage Pump Station	SPS 610	19	2012	19	1990	1996	19			3	2043	48	3%	1.84	6
Sewerage Pump Station	SPS 610	17	2012	18	1990	1996	18			3	2043	48	3%	1.84	6
Sewerage Pump Station	SPS 610	12	2012	12	1990	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 610	12	2012	12	1990	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 610	12	2012	12	1990	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 610	12	2012	12	1990	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 611	11	2012	11	1990	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 611	25	2012	26	1990	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 611	3	2012	3	1990	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 611	1	2012	1	1990	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 611	2	2012	2	1990	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 611	19	2012	20	1990	1996	20			4	2043	48	3%	1.84	7
Sewerage Pump Station	SPS 611	19	2012	20	1990	1996	20			4	2043	48	3%	1.84	7
Sewerage Pump Station	SPS 611	8	2012	8	1990	1996	8			1	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 611	78	2012	80	1990	1996	80			15	2043	48	3%	1.84	27
Sewerage Pump Station	SPS 611	2	2012	2	1990	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 611	15	2012	16	1990	1996	16			3	2043	48	3%	1.84	5
Sewerage Pump Station	SPS 611	5	2012	5	1990	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 611	5	2012	5	1990	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 611	5	2012	5	1990	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 611	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 611	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 612	11	2012	11	1990	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 612	25	2012	26	1990	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 612	3	2012	3	1990	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 612	8	2012	8	1990	1996	8			2	2043	48	3%	1.84	3

Casino Sewerage Scheme															
Capital Charge Calculation						Summary									
Pre 1996 discount rate	3%					per ET		Total							
Post 1996 discount rate	7%					Capital charge		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Pump Station	SPS 612	8	2012	8	1990	1996	8			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 612	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 612	78	2012	80	1990	1996	80			15	2043	48	3%	1.84	27
Sewerage Pump Station	SPS 612	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 612	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 612	15	2012	16	1990	1996	16			3	2043	48	3%	1.84	5
Sewerage Pump Station	SPS 612	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 612	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 612	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 612	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 612	5	2012	5	1990	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 610	11	2012	11	1992	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	Comminutor	3	2012	3	1993	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	Comminutor	45	2012	46	1993	1996	46			8	2043	48	3%	1.84	15
Sewerage Pump Station	Comminutor	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	Comminutor	2	2012	2	1993	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	Comminutor	2	2012	2	1993	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	Comminutor	51	2012	53	1994	1996	53			10	2043	48	3%	1.84	18
Sewerage Pump Station	Comminutor	3	2012	3	1994	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	Comminutor	16	2012	17	1994	1996	17			3	2043	48	3%	1.84	6
Sewerage Pump Station	Comminutor	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 603	11	2012	11	1994	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 603	2	2012	2	1994	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 603	0	2012	0	1994	1996	0			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 603	10	2012	10	1994	1996	10			2	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 603	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 606	11	2012	11	1994	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 606	32	2012	33	1994	1996	33			6	2043	48	3%	1.84	11
Sewerage Pump Station	SPS 606	12	2012	12	1994	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 606	12	2012	12	1994	1996	12			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 609	11	2012	11	1994	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 609	25	2012	26	1994	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 609	3	2012	3	1994	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 609	1	2012	1	1994	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 609	3	2012	3	1994	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 609	6	2012	6	1994	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 609	6	2012	6	1994	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 609	5	2012	6	1994	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 609	39	2012	40	1994	1996	40			7	2043	48	3%	1.84	13
Sewerage Pump Station	SPS 609	8	2012	8	1994	1996	8			1	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 609	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 609	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 609	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 609	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 613	11	2012	11	1995	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 613	25	2012	26	1995	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 613	3	2012	3	1995	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 613	11	2012	11	1995	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 613	11	2012	11	1995	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 613	5	2012	6	1995	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 613	56	2012	58	1995	1996	58			10	2043	48	3%	1.84	19
Sewerage Pump Station	SPS 613	3	2012	3	1995	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 613	5	2012	5	1995	1996	5			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 613	2	2012	2	1995	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 613	2	2012	2	1995	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 613	2	2012	2	1995	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 613	2	2012	2	1995	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 613	2	2012	2	1995	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 614	11	2012	11	1995	1996	11			2	2043	48	3%	1.84	4
Sewerage Pump Station	SPS 614	25	2012	26	1995	1996	26			5	2043	48	3%	1.84	9
Sewerage Pump Station	SPS 614	3	2012	3	1995	1996	3			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 614	8	2012	8	1995	1996	8			1	2043	48	3%	1.84	3
Sewerage Pump Station	SPS 614	6	2012	6	1995	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 614	6	2012	6	1995	1996	6			1	2043	48	3%	1.84	2
Sewerage Pump Station	SPS 614	33	2012	34	1995	1996	34			6	2043	48	3%	1.84	11
Sewerage Pump Station	SPS 614	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 614	1	2012	1	1995	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 614	1	2012	1	1995	1996	1			0	2043	48	3%	1.84	0
Sewerage Pump Station	SPS 614	3	2012	3	1995	1996	3			1	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 614	2	2012	2	1995	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 614	2	2012	2	1995	1996	2			0	2043	48	3%	1.84	1
Sewerage Pump Station	SPS 603	3	2012	3	1997	1997	3			0	2043	47	7%	3.21	1
Sewerage Pump Station	SPS 603	11	2012	12	1997	1997	12			2	2043	47	7%	3.21	7

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Pump Station	SPS 603	11	2012	12	1997	1997	12			2	2043	47	7%	3.21	7
Sewerage Pump Station	SPS 603	5	2012	6	1997	1997	6			1	2043	47	7%	3.21	3
Sewerage Pump Station	SPS 603	3	2012	3	1997	1997	3			1	2043	47	7%	3.21	2
Sewerage Pump Station	SPS 603	3	2012	3	1997	1997	3			1	2043	47	7%	3.21	2
Sewerage Pump Station	SPS 603	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Sewerage Pump Station	SPS 603	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Sewerage Pump Station	SPS 603	1	2012	1	1997	1997	1			0	2043	47	7%	3.21	0
Sewerage Pump Station	SPS 606	3	2012	3	1997	1997	3			0	2043	47	7%	3.21	1
Sewerage Pump Station	SPS 606	5	2012	5	1997	1997	5			1	2043	47	7%	3.21	3
Sewerage Pump Station	SPS 606	5	2012	5	1997	1997	5			1	2043	47	7%	3.21	3
Sewerage Pump Station	SPS 606	5	2012	6	1997	1997	6			1	2043	47	7%	3.21	3
Sewerage Pump Station	SPS 606	2	2012	2	1997	1997	2			0	2043	47	7%	3.21	1
Sewerage Pump Station	SPS 606	3	2012	3	1997	1997	3			1	2043	47	7%	3.21	2
Sewerage Pump Station	SPS 606	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Sewerage Pump Station	SPS 606	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Sewerage Pump Station	SPS 604	5	2012	5	2000	2000	5			1	2043	44	7%	3.03	3
Sewerage Pump Station	SPS 604	8	2012	8	2000	2000	8			1	2043	44	7%	3.03	4
Sewerage Pump Station	SPS 604	9	2012	9	2000	2000	9			2	2043	44	7%	3.03	5
Sewerage Pump Station	SPS 604	5	2012	5	2000	2000	5			1	2043	44	7%	3.03	3
Sewerage Pump Station	SPS 604	5	2012	5	2000	2000	5			1	2043	44	7%	3.03	3
Sewerage Pump Station	SPS 604	4	2012	4	2000	2000	4			1	2043	44	7%	3.03	2
Sewerage Pump Station	SPS 604	4	2012	4	2000	2000	4			1	2043	44	7%	3.03	2
Sewerage Pump Station	SPS 606	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Sewerage Pump Station	SPS 606	1	2012	1	2000	2000	1			0	2043	44	7%	3.03	1
Sewerage Pump Station	SPS 601	135	2012	139	2002	2002	139			25	2043	42	7%	2.92	74
Sewerage Pump Station	SPS 602	45	2012	46	2002	2002	46			8	2043	42	7%	2.92	24
Sewerage Pump Station	SPS 602	45	2012	46	2002	2002	46			8	2043	42	7%	2.92	24
Sewerage Pump Station	SPS 603	10	2012	10	2002	2002	10			2	2043	42	7%	2.92	5
Sewerage Pump Station	SPS 603	11	2012	12	2002	2002	12			2	2043	42	7%	2.92	6
Sewerage Pump Station	SPS 603	1	2012	1	2002	2002	1			0	2043	42	7%	2.92	0
Sewerage Pump Station	SPS 603	9	2012	9	2002	2002	9			2	2043	42	7%	2.92	5
Sewerage Pump Station	SPS 603	30	2012	31	2002	2002	31			6	2043	42	7%	2.92	16
Sewerage Pump Station	SPS 604	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	28
Sewerage Pump Station	SPS 605	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	28
Sewerage Pump Station	SPS 607	32	2012	33	2002	2002	33			6	2043	42	7%	2.92	17
Sewerage Pump Station	SPS 608	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	28
Sewerage Pump Station	SPS 609	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	28
Sewerage Pump Station	SPS 610	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	28
Sewerage Pump Station	SPS 611	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	28
Sewerage Pump Station	SPS 612	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	28
Sewerage Pump Station	SPS 613	51	2012	53	2002	2002	53			10	2043	42	7%	2.92	28
Sewerage Pump Station	SPS 614	32	2012	33	2002	2002	33			6	2043	42	7%	2.92	17
Sewerage Pump Station	Comminutor	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 601	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 602	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 604	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 605	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 606	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 607	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 608	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 609	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 611	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 612	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 613	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 614	10	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Sewerage Pump Station	SPS 615	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Sewerage Pump Station	SPS 615	25	2012	26	2004	2004	26			5	2043	40	7%	2.80	13
Sewerage Pump Station	SPS 615	1	2012	1	2004	2004	1			0	2043	40	7%	2.80	1
Sewerage Pump Station	SPS 615	3	2012	3	2004	2004	3			0	2043	40	7%	2.80	1
Sewerage Pump Station	SPS 615	5	2012	6	2004	2004	6			1	2043	40	7%	2.80	3
Sewerage Pump Station	SPS 615	1	2012	1	2004	2004	1			0	2043	40	7%	2.80	0
Sewerage Pump Station	SPS 615	1	2012	1	2004	2004	1			0	2043	40	7%	2.80	0
Sewerage Pump Station	SPS 615	2	2012	2	2004	2004	2			0	2043	40	7%	2.80	1
Sewerage Pump Station	SPS 615	2	2012	2	2004	2004	2			0	2043	40	7%	2.80	1
Sewerage Pump Station	SPS 615	6	2012	6	2004	2004	6			1	2043	40	7%	2.80	3
Sewerage Pump Station	SPS 615	6	2012	6	2004	2004	6			1	2043	40	7%	2.80	3
Sewerage Pump Station	SPS 615	41	2012	42	2004	2004	42			8	2043	40	7%	2.80	21
Sewerage Pump Station	SPS 615	32	2012	33	2005	2005	33			6	2043	39	7%	2.75	16
Sewerage Pump Station	SPS 611	9	2012	9	2008	2008	9			2	2043	36	7%	2.58	4
Sewerage Pump Station	SPS 611	11	2012	12	2008	2008	12			2	2043	36	7%	2.58	5
Sewerage Pump Station	SPS 611	3	2012	3	2008	2008	3			1	2043	36	7%	2.58	2
Sewerage Pump Station	SPS 611	9	2012	9	2008	2008	9			2	2043	36	7%	2.58	4
Sewerage Pump Station	SPS 616	11	2012	11	2010	2010	11			2	2043	34	7%	2.47	5

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET			**Total**						
Post 1996 discount rate	7%					**Capital charge**			$14,493	2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Sewerage Pump Station	SPS 616	25	2012	26	2010	2010	26			5	2043	34	7%	2.47	12
Sewerage Pump Station	SPS 616	32	2012	33	2010	2010	33			6	2043	34	7%	2.47	15
Sewerage Pump Station	SPS 616	32	2012	33	2010	2010	33			6	2043	34	7%	2.47	15
Sewerage Pump Station	SPS 616	3	2012	3	2010	2010	3			1	2043	34	7%	2.47	1
Sewerage Pump Station	SPS 616	1	2012	1	2010	2010	1			0	2043	34	7%	2.47	1
Sewerage Pump Station	SPS 616	2	2012	2	2010	2010	2			0	2043	34	7%	2.47	1
Sewerage Pump Station	SPS 616	5	2012	6	2010	2010	6			1	2043	34	7%	2.47	2
Sewerage Pump Station	SPS 616	6	2012	6	2010	2010	6			1	2043	34	7%	2.47	3
Sewerage Pump Station	SPS 616	6	2012	6	2010	2010	6			1	2043	34	7%	2.47	3
Sewerage Pump Station	SPS 616	42	2012	43	2010	2010	43			8	2043	34	7%	2.47	19
Sewerage Pump Station	SPS 616	10	2012	10	2010	2010	10			2	2043	34	7%	2.47	5
Sewerage Pump Station	SPS 616	11	2012	11	2010	2010	11			2	2043	34	7%	2.47	5
Sewerage Pump Station	SPS 616	2	2012	2	2010	2010	2			0	2043	34	7%	2.47	1
Sewerage Pump Station	SPS 616	2	2012	2	2010	2010	2			0	2043	34	7%	2.47	1
Sewerage Pump Station	SPS 616	2	2012	2	2010	2010	2			0	2043	34	7%	2.47	1
Sewerage Pump Station	SPS 616	2	2012	2	2010	2010	2			0	2043	34	7%	2.47	1
Sewerage Pump Station	SPS 616	2	2012	2	2010	2010	2			0	2043	34	7%	2.47	1
Sewerage Pump Station	SPS 616	2	2012	2	2010	2010	2			0	2043	34	7%	2.47	1
Sewerage Pump Station	SPS 616	3	2012	3	2010	2010	3			1	2043	34	7%	2.47	1
Maintenance Shaft	74091	5	2012	5	2009	2009	5			1	2043	35	7%	2.53	2
Maintenance Shaft	74092	5	2012	5	2009	2009	5			1	2043	35	7%	2.53	2
Maintenance Shaft	74093	5	2012	5	2009	2009	5			1	2043	35	7%	2.53	2
Maintenance Shaft	74174	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Maintenance Shaft	91572	5	2012	5	2011	2011	5			1	2043	33	7%	2.42	2
Maintenance Shaft	91573	5	2012	5	2011	2011	5			1	2043	33	7%	2.42	2
Maintenance Shaft	91623	5	2012	5	2011	2011	5			1	2043	33	7%	2.42	2
Maintenance Shaft	91624	5	2012	5	2011	2011	5			1	2043	33	7%	2.42	2
Maintenance Shaft	91625	0	2012	0	2011	2011	0			0	2043	33	7%	2.42	0
Manhole	60699	4	2012	4	1970	1996	4			1	2043	48	3%	1.84	1
Manhole	60704	4	2012	4	1970	1996	4			1	2043	48	3%	1.84	1
Manhole	60705	4	2012	4	1970	1996	4			1	2043	48	3%	1.84	1
Manhole	61478	4	2012	4	1970	1996	4			1	2043	48	3%	1.84	1
Manhole	60672	4	2012	4	1971	1996	4			1	2043	48	3%	1.84	1
Manhole	61490	4	2012	4	1971	1996	4			1	2043	48	3%	1.84	1
Manhole	61496	4	2012	4	1971	1996	4			1	2043	48	3%	1.84	1
Manhole	61480	4	2012	4	1973	1996	4			1	2043	48	3%	1.84	1
Manhole	61481	4	2012	4	1973	1996	4			1	2043	48	3%	1.84	1
Manhole	61482	4	2012	4	1973	1996	4			1	2043	48	3%	1.84	1
Manhole	61489	4	2012	4	1973	1996	4			1	2043	48	3%	1.84	1
Manhole	61190	4	2012	4	1974	1996	4			1	2043	48	3%	1.84	1
Manhole	61193	4	2012	4	1974	1996	4			1	2043	48	3%	1.84	1
Manhole	60450	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60451	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60454	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60455	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60456	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60463	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60464	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60465	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60468	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60469	4	2012	4	1976	1996	4			1	2043	48	3%	1.84	1
Manhole	60329	4	2012	4	1977	1996	4			1	2043	48	3%	1.84	1
Manhole	60334	4	2012	4	1977	1996	4			1	2043	48	3%	1.84	1
Manhole	61455	4	2012	4	1978	1996	4			1	2043	48	3%	1.84	1
Manhole	60946	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	61529	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	61531	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	61534	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	61535	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	61536	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	61537	4	2012	4	1979	1996	4			1	2043	48	3%	1.84	1
Manhole	60328	4	2012	4	1980	1996	4			1	2043	48	3%	1.84	1
Manhole	60336	4	2012	4	1980	1996	4			1	2043	48	3%	1.84	1
Manhole	60337	4	2012	4	1980	1996	4			1	2043	48	3%	1.84	1
Manhole	60675	4	2012	4	1980	1996	4			1	2043	48	3%	1.84	1
Manhole	61058	4	2012	4	1980	1996	4			1	2043	48	3%	1.84	1
Manhole	61094	4	2012	4	1980	1996	4			1	2043	48	3%	1.84	1
Manhole	60419	4	2012	4	1981	1996	4			1	2043	48	3%	1.84	1
Manhole	60420	4	2012	4	1981	1996	4			1	2043	48	3%	1.84	1
Manhole	60421	4	2012	4	1981	1996	4			1	2043	48	3%	1.84	1
Manhole	60422	4	2012	4	1981	1996	4			1	2043	48	3%	1.84	1
Manhole	60357	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60359	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	60363	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60364	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60365	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60366	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60367	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60368	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60369	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60375	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60431	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60432	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60433	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60434	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60437	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60438	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60439	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60753	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60978	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60979	4	2012	4	1982	1996	4			1	2043	48	3%	1.84	1
Manhole	60311	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60312	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60313	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60314	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60316	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60318	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60322	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60323	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60324	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60325	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60327	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60343	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60380	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60385	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60397	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60399	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60400	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60401	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60402	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60403	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60404	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60407	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60408	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60409	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60410	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60411	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60414	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60416	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60417	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60418	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60528	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60609	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	61362	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	61363	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	61380	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	61381	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	61382	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	61383	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	61387	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	61388	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	61390	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Manhole	60387	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60388	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60389	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60390	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60393	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60394	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60395	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60460	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60461	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60466	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60478	4	2012	4	1984	1996	4			1	2043	48	3%	1.84	1
Manhole	60162	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	60287	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	60298	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	60299	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	60300	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	60301	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	60352	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	60428	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	60843	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	60847	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	60848	4	2012	4	1985	1996	4			1	2043	48	3%	1.84	1
Manhole	61183	4	2012	4	1986	1996	4			1	2043	48	3%	1.84	1
Manhole	60952	4	2012	4	1987	1996	4			1	2043	48	3%	1.84	1
Manhole	60953	4	2012	4	1987	1996	4			1	2043	48	3%	1.84	1
Manhole	60881	4	2012	4	1988	1996	4			1	2043	48	3%	1.84	1
Manhole	60972	4	2012	4	1988	1996	4			1	2043	48	3%	1.84	1
Manhole	60956	4	2012	4	1989	1996	4			1	2043	48	3%	1.84	1
Manhole	60957	4	2012	4	1989	1996	4			1	2043	48	3%	1.84	1
Manhole	61146	4	2012	4	1989	1996	4			1	2043	48	3%	1.84	1
Manhole	60999	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Manhole	61419	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Manhole	60103	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60105	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60106	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60107	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60108	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60114	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60115	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60117	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60119	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60121	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60132	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60133	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60134	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60135	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60136	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60139	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60147	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60156	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60157	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60275	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60277	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60278	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60279	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60282	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60284	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60659	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60660	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60701	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60855	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Manhole	60377	4	2012	4	1992	1996	4			1	2043	48	3%	1.84	1
Manhole	60378	4	2012	4	1992	1996	4			1	2043	48	3%	1.84	1
Manhole	60383	4	2012	4	1992	1996	4			1	2043	48	3%	1.84	1
Manhole	60384	4	2012	4	1992	1996	4			1	2043	48	3%	1.84	1
Manhole	60582	4	2012	4	1992	1996	4			1	2043	48	3%	1.84	1
Manhole	60618	4	2012	4	1992	1996	4			1	2043	48	3%	1.84	1
Manhole	60703	4	2012	4	1992	1996	4			1	2043	48	3%	1.84	1
Manhole	60658	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	60664	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	60669	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	60670	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	61001	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	61002	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	61004	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	61041	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	61276	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Manhole	60303	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Manhole	60304	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Manhole	60305	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Manhole	61076	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Manhole	61196	4	2012	4	1994	1996	4			1	2043	48	3%	1.84	1
Manhole	60085	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60089	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60090	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60092	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60093	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	60094	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60104	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60122	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60123	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60124	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60125	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60126	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60127	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60128	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60129	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60130	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60131	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60285	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	61013	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	61014	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	61015	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	61017	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	61082	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Manhole	60182	4	2012	4	1996	1996	4			1	2043	48	7%	3.27	2
Manhole	60193	4	2012	4	1996	1996	4			1	2043	48	7%	3.27	2
Manhole	60215	4	2012	4	1996	1996	4			1	2043	48	7%	3.27	2
Manhole	60216	4	2012	4	1996	1996	4			1	2043	48	7%	3.27	2
Manhole	60689	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	60690	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61086	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61559	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61560	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61562	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61563	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61572	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61573	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61574	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61575	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61576	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61577	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61579	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61583	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61584	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61590	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61627	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61628	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61634	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	61635	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Manhole	60691	4	2012	4	1998	1998	4			1	2043	46	7%	3.15	2
Manhole	61023	4	2012	4	2000	2000	4			1	2043	44	7%	3.03	2
Manhole	61024	4	2012	4	2000	2000	4			1	2043	44	7%	3.03	2
Manhole	61032	4	2012	4	2000	2000	4			1	2043	44	7%	3.03	2
Manhole	61441	4	2012	4	2000	2000	4			1	2043	44	7%	3.03	2
Discharge Tower	62450	4	2012	4	2000	2000	4			1	2043	44	7%	3.03	2
Manhole	61035	4	2012	4	2003	2003	4			1	2043	41	7%	2.86	2
Manhole	61645	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	61653	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	61655	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	61656	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62465	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62466	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62468	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62471	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62472	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62473	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62474	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62475	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62476	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Manhole	62477	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Emergency Relief Structure	62500	4	2012	4	2006	2006	4			1	2043	38	7%	2.69	2
Manhole	62481	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Manhole	62482	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Manhole	62483	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Manhole	62484	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Manhole	62485	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Manhole	62488	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Manhole	62492	4	2012	4	2007	2007	4			1	2043	37	7%	2.64	2
Manhole	62502	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	62503	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62504	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62505	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62507	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62508	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62509	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62510	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62511	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62513	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62514	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62515	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	62516	4	2012	4	2008	2008	4			1	2043	36	7%	2.58	2
Manhole	72898	4	2012	4	2009	2009	4			1	2043	35	7%	2.53	2
Manhole	74004	4	2012	4	2009	2009	4			1	2043	35	7%	2.53	2
Manhole	82087	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82088	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82089	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82090	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82091	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82097	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82100	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82101	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82102	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82103	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82104	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	82105	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	85976	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	85977	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	87262	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Manhole	87664	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2
Manhole	91567	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2
Manhole	61005	7	2012	7	1970	1996	7			1	2043	48	3%	1.84	2
Manhole	61028	7	2012	7	1970	1996	7			1	2043	48	3%	1.84	2
Manhole	60668	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	60671	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	60676	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61491	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61492	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61493	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61494	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61495	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61497	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61498	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61499	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61500	7	2012	7	1971	1996	7			1	2043	48	3%	1.84	2
Manhole	61479	7	2012	7	1973	1996	7			1	2043	48	3%	1.84	2
Manhole	61487	7	2012	7	1973	1996	7			1	2043	48	3%	1.84	2
Manhole	61488	7	2012	7	1973	1996	7			1	2043	48	3%	1.84	2
Manhole	61188	7	2012	7	1974	1996	7			1	2043	48	3%	1.84	2
Manhole	61189	7	2012	7	1974	1996	7			1	2043	48	3%	1.84	2
Manhole	61191	7	2012	7	1974	1996	7			1	2043	48	3%	1.84	2
Manhole	61192	7	2012	7	1974	1996	7			1	2043	48	3%	1.84	2
Manhole	60693	7	2012	7	1975	1996	7			1	2043	48	3%	1.84	2
Manhole	60453	7	2012	7	1976	1996	7			1	2043	48	3%	1.84	2
Manhole	60462	7	2012	7	1976	1996	7			1	2043	48	3%	1.84	2
Manhole	60330	7	2012	7	1977	1996	7			1	2043	48	3%	1.84	2
Manhole	60331	7	2012	7	1977	1996	7			1	2043	48	3%	1.84	2
Manhole	60332	7	2012	7	1977	1996	7			1	2043	48	3%	1.84	2
Manhole	60333	7	2012	7	1977	1996	7			1	2043	48	3%	1.84	2
Manhole	60335	7	2012	7	1977	1996	7			1	2043	48	3%	1.84	2
Manhole	61071	7	2012	7	1978	1996	7			1	2043	48	3%	1.84	2
Manhole	61399	7	2012	7	1978	1996	7			1	2043	48	3%	1.84	2
Manhole	61412	7	2012	7	1978	1996	7			1	2043	48	3%	1.84	2
Manhole	61452	7	2012	7	1978	1996	7			1	2043	48	3%	1.84	2
Manhole	61453	7	2012	7	1978	1996	7			1	2043	48	3%	1.84	2
Manhole	61454	7	2012	7	1978	1996	7			1	2043	48	3%	1.84	2
Manhole	61528	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61530	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61532	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	61533	7	2012	7	1979	1996	7			1	2043	48	3%	1.84	2
Manhole	60338	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	60339	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	60340	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	60714	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	60715	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61036	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61037	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61038	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61043	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61048	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61049	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61050	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61051	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61056	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61057	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61059	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61060	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61061	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61062	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61063	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61064	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61065	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61066	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61095	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61096	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	61442	7	2012	7	1980	1996	7			1	2043	48	3%	1.84	2
Manhole	60423	7	2012	7	1981	1996	7			1	2043	48	3%	1.84	2
Manhole	60358	7	2012	7	1982	1996	7			1	2043	48	3%	1.84	2
Manhole	60360	7	2012	7	1982	1996	7			1	2043	48	3%	1.84	2
Manhole	60361	7	2012	7	1982	1996	7			1	2043	48	3%	1.84	2
Manhole	60362	7	2012	7	1982	1996	7			1	2043	48	3%	1.84	2
Manhole	60435	7	2012	7	1982	1996	7			1	2043	48	3%	1.84	2
Manhole	60436	7	2012	7	1982	1996	7			1	2043	48	3%	1.84	2
Manhole	60440	7	2012	7	1982	1996	7			1	2043	48	3%	1.84	2
Manhole	60977	7	2012	7	1982	1996	7			1	2043	48	3%	1.84	2
Manhole	60288	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60289	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60290	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60291	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60292	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60293	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60294	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60295	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60296	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60297	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60308	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60309	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60310	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60315	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60317	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60319	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60321	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60326	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60341	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60342	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60344	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60379	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60381	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60382	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60391	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60392	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60396	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60398	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60405	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60406	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60412	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60413	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60415	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60424	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60425	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60479	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60480	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60481	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60482	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60529	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60530	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	60608	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60610	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60954	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	61389	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	61391	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	61392	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	61396	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	61397	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	61398	7	2012	7	1983	1996	7			1	2043	48	3%	1.84	2
Manhole	60386	7	2012	7	1984	1996	7			1	2043	48	3%	1.84	2
Manhole	60458	7	2012	7	1984	1996	7			1	2043	48	3%	1.84	2
Manhole	60459	7	2012	7	1984	1996	7			1	2043	48	3%	1.84	2
Manhole	60467	7	2012	7	1984	1996	7			1	2043	48	3%	1.84	2
Manhole	60161	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60286	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60306	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60307	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60346	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60350	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60351	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60353	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60354	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60355	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60426	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60427	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60429	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60430	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60777	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60833	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60842	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	61569	7	2012	7	1985	1996	7			1	2043	48	3%	1.84	2
Manhole	60531	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	60532	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	60932	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	60934	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	60935	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	60936	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	60937	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	60938	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	61112	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	61151	7	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Manhole	60763	7	2012	7	1989	1996	7			1	2043	48	3%	1.84	2
Manhole	61604	7	2012	7	1989	1996	7			1	2043	48	3%	1.84	2
Manhole	61605	7	2012	7	1989	1996	7			1	2043	48	3%	1.84	2
Manhole	61606	7	2012	7	1989	1996	7			1	2043	48	3%	1.84	2
Manhole	60998	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61072	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61073	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61074	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61384	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61386	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61407	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61408	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61409	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61410	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61425	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61426	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61642	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	61644	7	2012	7	1990	1996	7			1	2043	48	3%	1.84	2
Manhole	60109	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60110	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60111	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60113	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60116	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60118	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60120	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60137	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60138	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60140	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60141	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60142	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60143	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60145	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	60149	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60150	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60151	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60152	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60153	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60154	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60158	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60276	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60280	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60281	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60283	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60347	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60348	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60349	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60356	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60611	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60620	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60621	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60661	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60662	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60673	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60674	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60698	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60735	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60739	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60939	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60940	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60941	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60942	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60964	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Manhole	60958	7	2012	7	1992	1996	7			1	2043	48	3%	1.84	2
Manhole	60096	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	60098	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	60099	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	60100	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	60101	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	60102	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	61040	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	61047	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	61277	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	61414	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Manhole	60302	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Manhole	60734	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Manhole	60795	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Manhole	61075	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Manhole	61195	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Manhole	61275	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Manhole	61366	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Manhole	61367	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Manhole	61432	7	2012	7	1994	1996	7			1	2043	48	3%	1.84	2
Manhole	60077	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60079	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60080	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60081	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60082	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60086	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60087	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60088	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60091	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60095	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60677	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60678	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60680	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60681	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60683	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60684	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60685	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60686	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60687	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	60688	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61007	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61008	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61009	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	61010	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61011	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61012	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61016	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61079	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61080	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61081	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61083	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61084	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61085	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61427	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61428	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61429	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61430	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	62451	7	2012	7	1995	1996	7			1	2043	48	3%	1.84	2
Manhole	61006	7	2012	7	1996	1996	7			1	2043	48	7%	3.27	4
Manhole	61434	7	2012	7	1996	1996	7			1	2043	48	7%	3.27	4
Manhole	61435	7	2012	7	1996	1996	7			1	2043	48	7%	3.27	4
Manhole	61331	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61436	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61437	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61548	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61557	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61565	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61578	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61580	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61581	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61582	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61585	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61602	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61624	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61625	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61629	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61630	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61631	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61632	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61633	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	61636	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	62453	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	62454	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	74696	7	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Manhole	60209	7	2012	7	1998	1998	7			1	2043	46	7%	3.15	4
Manhole	60779	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61025	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61026	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61029	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61030	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61031	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61033	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61438	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61439	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61440	7	2012	7	2000	2000	7			1	2043	44	7%	3.03	4
Manhole	61003	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61034	7	2012	7	2002	2002	7			1	2043	42	7%	2.92	4
Manhole	61444	7	2012	7	2003	2003	7			1	2043	41	7%	2.86	3
Manhole	61445	7	2012	7	2003	2003	7			1	2043	41	7%	2.86	3
Manhole	61446	7	2012	7	2003	2003	7			1	2043	41	7%	2.86	3
Manhole	61675	7	2012	7	2003	2003	7			1	2043	41	7%	2.86	3
Manhole	61646	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61649	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61650	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61651	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61652	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61657	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61658	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61659	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61660	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61661	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61662	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61663	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61664	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61667	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61668	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	61669	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61676	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	62469	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	62470	7	2012	7	2004	2004	7			1	2043	40	7%	2.80	3
Manhole	61039	7	2012	7	2005	2005	7			1	2043	39	7%	2.75	3
Manhole	62467	7	2012	7	2005	2005	7			1	2043	39	7%	2.75	3
Manhole	62489	7	2012	7	2005	2005	7			1	2043	39	7%	2.75	3
Manhole	62490	7	2012	7	2005	2005	7			1	2043	39	7%	2.75	3
Manhole	61654	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	3
Manhole	62486	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	3
Manhole	62487	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	3
Manhole	62493	7	2012	7	2007	2007	7			1	2043	37	7%	2.64	3
Manhole	62498	7	2012	7	2008	2008	7			1	2043	36	7%	2.58	3
Manhole	62506	7	2012	7	2008	2008	7			1	2043	36	7%	2.58	3
Manhole	62512	7	2012	7	2008	2008	7			1	2043	36	7%	2.58	3
Manhole	62517	7	2012	7	2008	2008	7			1	2043	36	7%	2.58	3
Manhole	62518	7	2012	7	2008	2008	7			1	2043	36	7%	2.58	3
Manhole	82058	7	2012	7	2009	2009	7			1	2043	35	7%	2.53	3
Manhole	72337	7	2012	7	2009	2009	7			1	2043	35	7%	2.53	3
Manhole	72299	7	2012	7	2009	2009	7			1	2043	35	7%	2.53	3
Manhole	72300	7	2012	7	2009	2009	7			1	2043	35	7%	2.53	3
Manhole	74001	7	2012	7	2009	2009	7			1	2043	35	7%	2.53	3
Manhole	74002	7	2012	7	2009	2009	7			1	2043	35	7%	2.53	3
Manhole	82092	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	82093	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	82094	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	82095	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	82098	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	82099	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	87261	7	2012	7	2010	2010	7			1	2043	34	7%	2.47	3
Manhole	91626	7	2012	7	2011	2011	7			1	2043	33	7%	2.42	3
Manhole	91627	7	2012	7	2011	2011	7			1	2043	33	7%	2.42	3
Manhole	91628	7	2012	7	2011	2011	7			1	2043	33	7%	2.42	3
Manhole	91629	7	2012	7	2011	2011	7			1	2043	33	7%	2.42	3
Manhole	61501	9	2012	10	1971	1996	10			2	2043	48	3%	1.84	3
Manhole	61486	9	2012	10	1973	1996	10			2	2043	48	3%	1.84	3
Manhole	60449	9	2012	10	1976	1996	10			2	2043	48	3%	1.84	3
Manhole	61067	9	2012	10	1978	1996	10			2	2043	48	3%	1.84	3
Manhole	61068	9	2012	10	1978	1996	10			2	2043	48	3%	1.84	3
Manhole	61069	9	2012	10	1978	1996	10			2	2043	48	3%	1.84	3
Manhole	61070	9	2012	10	1978	1996	10			2	2043	48	3%	1.84	3
Manhole	61400	9	2012	10	1978	1996	10			2	2043	48	3%	1.84	3
Manhole	61401	9	2012	10	1978	1996	10			2	2043	48	3%	1.84	3
Manhole	61451	9	2012	10	1978	1996	10			2	2043	48	3%	1.84	3
Manhole	61571	9	2012	10	1978	1996	10			2	2043	48	3%	1.84	3
Manhole	61042	9	2012	10	1980	1996	10			2	2043	48	3%	1.84	3
Manhole	61052	9	2012	10	1980	1996	10			2	2043	48	3%	1.84	3
Manhole	61053	9	2012	10	1980	1996	10			2	2043	48	3%	1.84	3
Manhole	61054	9	2012	10	1980	1996	10			2	2043	48	3%	1.84	3
Manhole	61055	9	2012	10	1980	1996	10			2	2043	48	3%	1.84	3
Manhole	60320	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	60345	9	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Manhole	60452	9	2012	10	1984	1996	10			2	2043	48	3%	1.84	3
Manhole	60789	9	2012	10	1986	1996	10			2	2043	48	3%	1.84	3
Manhole	61284	9	2012	10	1987	1996	10			2	2043	48	3%	1.84	3
Manhole	60971	9	2012	10	1988	1996	10			2	2043	48	3%	1.84	3
Manhole	60974	9	2012	10	1988	1996	10			2	2043	48	3%	1.84	3
Manhole	60975	9	2012	10	1988	1996	10			2	2043	48	3%	1.84	3
Manhole	61141	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Manhole	61385	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Manhole	61405	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Manhole	61406	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Manhole	61415	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Manhole	61416	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Manhole	61417	9	2012	10	1990	1996	10			2	2043	48	3%	1.84	3
Manhole	60112	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	60144	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	60146	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	60148	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	60159	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	60273	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	60274	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	60740	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Manhole	60749	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	60963	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61118	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61119	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61120	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61121	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61210	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61259	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61260	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	61422	9	2012	10	1991	1996	10			2	2043	48	3%	1.84	3
Manhole	60097	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61000	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61044	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61045	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61046	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61159	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61421	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	62452	9	2012	10	1993	1996	10			2	2043	48	3%	1.84	3
Manhole	61287	9	2012	10	1994	1996	10			2	2043	48	3%	1.84	3
Manhole	61431	9	2012	10	1994	1996	10			2	2043	48	3%	1.84	3
Manhole	60078	9	2012	10	1995	1996	10			2	2043	48	3%	1.84	3
Manhole	60083	9	2012	10	1995	1996	10			2	2043	48	3%	1.84	3
Manhole	60084	9	2012	10	1995	1996	10			2	2043	48	3%	1.84	3
Manhole	60682	9	2012	10	1995	1996	10			2	2043	48	3%	1.84	3
Manhole	61077	9	2012	10	1995	1996	10			2	2043	48	3%	1.84	3
Manhole	61078	9	2012	10	1995	1996	10			2	2043	48	3%	1.84	3
Manhole	61433	9	2012	10	1996	1996	10			2	2043	48	7%	3.27	6
Manhole	61443	9	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Manhole	61643	9	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Manhole	61673	9	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Manhole	61674	9	2012	10	2003	2003	10			2	2043	41	7%	2.86	5
Manhole	61286	9	2012	10	2004	2004	10			2	2043	40	7%	2.80	5
Manhole	61641	9	2012	10	2004	2004	10			2	2043	40	7%	2.80	5
Manhole	61647	9	2012	10	2004	2004	10			2	2043	40	7%	2.80	5
Manhole	61648	9	2012	10	2004	2004	10			2	2043	40	7%	2.80	5
Manhole	61665	9	2012	10	2004	2004	10			2	2043	40	7%	2.80	5
Manhole	61666	9	2012	10	2004	2004	10			2	2043	40	7%	2.80	5
Manhole	62455	9	2012	10	2004	2004	10			2	2043	40	7%	2.80	5
Manhole	62519	9	2012	10	2008	2008	10			2	2043	36	7%	2.58	5
Manhole	72897	9	2012	10	2009	2009	10			2	2043	35	7%	2.53	4
Manhole	74003	9	2012	10	2009	2009	10			2	2043	35	7%	2.53	4
Manhole	82096	9	2012	10	2010	2010	10			2	2043	34	7%	2.47	4
Manhole	86919	9	2012	10	2010	2010	10			2	2043	34	7%	2.47	4
Manhole	86920	9	2012	10	2010	2010	10			2	2043	34	7%	2.47	4
Manhole	86921	9	2012	10	2010	2010	10			2	2043	34	7%	2.47	4
Manhole	87260	9	2012	10	2010	2010	10			2	2043	34	7%	2.47	4
Manhole	61402	12	2012	13	1978	1996	13			2	2043	48	3%	1.84	4
Manhole	61403	12	2012	13	1978	1996	13			2	2043	48	3%	1.84	4
Manhole	61411	12	2012	13	1978	1996	13			2	2043	48	3%	1.84	4
Manhole	61420	12	2012	13	1978	1996	13			2	2043	48	3%	1.84	4
Manhole	60725	12	2012	13	1984	1996	13			2	2043	48	3%	1.84	4
Manhole	61404	12	2012	13	1990	1996	13			2	2043	48	3%	1.84	4
Manhole	61418	12	2012	13	1990	1996	13			2	2043	48	3%	1.84	4
Manhole	60160	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61211	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61212	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61213	12	2012	13	1991	1996	13			2	2043	48	3%	1.84	4
Manhole	61154	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61155	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61156	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61157	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61158	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61413	12	2012	13	1993	1996	13			2	2043	48	3%	1.84	4
Manhole	61194	12	2012	13	1994	1996	13			2	2043	48	3%	1.84	4
Manhole	60155	15	2012	15	1991	1996	15			3	2043	48	3%	1.84	5
Manhole	61215	15	2012	15	1991	1996	15			3	2043	48	3%	1.84	5
Manhole	61216	15	2012	15	1991	1996	15			3	2043	48	3%	1.84	5
Manhole	61423	15	2012	15	1993	1996	15			3	2043	48	3%	1.84	5
Manhole	61424	15	2012	15	1993	1996	15			3	2043	48	3%	1.84	5
Manhole	72899	15	2012	15	2009	2009	15			3	2043	35	7%	2.53	7
Manhole	72900	15	2012	15	2009	2009	15			3	2043	35	7%	2.53	7
Manhole	72901	15	2012	15	2009	2009	15			3	2043	35	7%	2.53	7
Gravity Main	225	13	2012	13	1978	1996	13			2	2043	48	3%	1.84	4

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Gravity Main	225	13	2012	13	1978	1996	13			2	2043	48	3%	1.84	4
Gravity Main	225	1	2012	1	1978	1996	1			0	2043	48	3%	1.84	0
Gravity Main	225	17	2012	18	1982	1996	18			3	2043	48	3%	1.84	6
Gravity Main	225	5	2012	6	1983	1996	6			1	2043	48	3%	1.84	2
Gravity Main	225	16	2012	17	1983	1996	17			3	2043	48	3%	1.84	6
Gravity Main	225	12	2012	12	1983	1996	12			2	2043	48	3%	1.84	4
Gravity Main	225	4	2012	4	1983	1996	4			1	2043	48	3%	1.84	1
Gravity Main	225	14	2012	15	1983	1996	15			3	2043	48	3%	1.84	5
Gravity Main	225	6	2012	6	1983	1996	6			1	2043	48	3%	1.84	2
Gravity Main	300	20	2012	20	1983	1996	20			4	2043	48	3%	1.84	7
Gravity Main	300	20	2012	21	1983	1996	21			4	2043	48	3%	1.84	7
Gravity Main	300	9	2012	9	1983	1996	9			2	2043	48	3%	1.84	3
Gravity Main	300	14	2012	15	1983	1996	15			3	2043	48	3%	1.84	5
Gravity Main	450	52	2012	53	1983	1996	53			10	2043	48	3%	1.84	18
Gravity Main	450	53	2012	55	1983	1996	55			10	2043	48	3%	1.84	18
Gravity Main	450	49	2012	50	1983	1996	50			9	2043	48	3%	1.84	17
Gravity Main	450	53	2012	55	1983	1996	55			10	2043	48	3%	1.84	18
Gravity Main	450	50	2012	52	1983	1996	52			9	2043	48	3%	1.84	17
Gravity Main	450	54	2012	55	1983	1996	55			10	2043	48	3%	1.84	18
Gravity Main	450	35	2012	36	1983	1996	36			7	2043	48	3%	1.84	12
Gravity Main	450	37	2012	38	1983	1996	38			7	2043	48	3%	1.84	13
Gravity Main	450	50	2012	52	1983	1996	52			9	2043	48	3%	1.84	17
Gravity Main	450	50	2012	52	1983	1996	52			9	2043	48	3%	1.84	17
Gravity Main	450	21	2012	21	1983	1996	21			4	2043	48	3%	1.84	7
Gravity Main	450	24	2012	24	1983	1996	24			4	2043	48	3%	1.84	8
Gravity Main	450	19	2012	20	1983	1996	20			4	2043	48	3%	1.84	7
Gravity Main	450	19	2012	19	1983	1996	19			4	2043	48	3%	1.84	6
Gravity Main	450	22	2012	23	1983	1996	23			4	2043	48	3%	1.84	8
Gravity Main	450	26	2012	27	1983	1996	27			5	2043	48	3%	1.84	9
Gravity Main	450	18	2012	18	1983	1996	18			3	2043	48	3%	1.84	6
Gravity Main	450	50	2012	52	1983	1996	52			9	2043	48	3%	1.84	17
Gravity Main	450	53	2012	55	1983	1996	55			10	2043	48	3%	1.84	18
Gravity Main	450	19	2012	19	1983	1996	19			3	2043	48	3%	1.84	6
Gravity Main	450	25	2012	26	1983	1996	26			5	2043	48	3%	1.84	9
Gravity Main	450	15	2012	16	1983	1996	16			3	2043	48	3%	1.84	5
Gravity Main	450	23	2012	24	1983	1996	24			4	2043	48	3%	1.84	8
Gravity Main	450	48	2012	50	1983	1996	50			9	2043	48	3%	1.84	17
Gravity Main	450	47	2012	49	1983	1996	49			9	2043	48	3%	1.84	16
Gravity Main	450	49	2012	50	1983	1996	50			9	2043	48	3%	1.84	17
Gravity Main	450	49	2012	51	1983	1996	51			9	2043	48	3%	1.84	17
Gravity Main	450	50	2012	52	1983	1996	52			9	2043	48	3%	1.84	17
Gravity Main	450	53	2012	54	1983	1996	54			10	2043	48	3%	1.84	18
Gravity Main	450	51	2012	52	1983	1996	52			9	2043	48	3%	1.84	17
Gravity Main	450	56	2012	58	1983	1996	58			10	2043	48	3%	1.84	19
Gravity Main	450	36	2012	37	1983	1996	37			7	2043	48	3%	1.84	12
Gravity Main	450	23	2012	24	1983	1996	24			4	2043	48	3%	1.84	8
Gravity Main	450	36	2012	38	1983	1996	38			7	2043	48	3%	1.84	13
Gravity Main	450	45	2012	46	1983	1996	46			8	2043	48	3%	1.84	15
Gravity Main	450	58	2012	60	1983	1996	60			11	2043	48	3%	1.84	20
Gravity Main	450	10	2012	10	1983	1996	10			2	2043	48	3%	1.84	3
Gravity Main	225	17	2012	17	1984	1996	17			3	2043	48	3%	1.84	6
Gravity Main	300	14	2012	15	1984	1996	15			3	2043	48	3%	1.84	5
Gravity Main	300	35	2012	36	1984	1996	36			6	2043	48	3%	1.84	12
Gravity Main	225	11	2012	11	1985	1996	11			2	2043	48	3%	1.84	4
Gravity Main	225	14	2012	14	1985	1996	14			3	2043	48	3%	1.84	5
Gravity Main	225	2	2012	2	1985	1996	2			0	2043	48	3%	1.84	1
Gravity Main	225	10	2012	10	1985	1996	10			2	2043	48	3%	1.84	3
Gravity Main	225	16	2012	16	1988	1996	16			3	2043	48	3%	1.84	5
Gravity Main	225	15	2012	16	1988	1996	16			3	2043	48	3%	1.84	5
Gravity Main	225	10	2012	11	1988	1996	11			2	2043	48	3%	1.84	4
Gravity Main	225	12	2012	13	1988	1996	13			2	2043	48	3%	1.84	4
Gravity Main	225	1	2012	2	1988	1996	2			0	2043	48	3%	1.84	1
Gravity Main	225	3	2012	3	1988	1996	3			1	2043	48	3%	1.84	1
Gravity Main	225	9	2012	9	1988	1996	9			2	2043	48	3%	1.84	3
Gravity Main	225	2	2012	2	1988	1996	2			0	2043	48	3%	1.84	1
Gravity Main	225	9	2012	10	1988	1996	10			2	2043	48	3%	1.84	3
Gravity Main	225	8	2012	9	1988	1996	9			2	2043	48	3%	1.84	3
Gravity Main	225	6	2012	7	1988	1996	7			1	2043	48	3%	1.84	2
Gravity Main	300	15	2012	15	1988	1996	15			3	2043	48	3%	1.84	5
Rising Main	225	93	2012	96	1990	1996	96			17	2043	48	3%	1.84	32
Rising Main	225	56	2012	58	1990	1996	58			10	2043	48	3%	1.84	19
Rising Main	225	97	2012	100	1990	1996	100			18	2043	48	3%	1.84	33
Rising Main	225	24	2012	24	1990	1996	24			4	2043	48	3%	1.84	8

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Rising Main	225	46	2012	47	1990	1996	47			9	2043	48	3%	1.84	16
Rising Main	225	62	2012	63	1990	1996	63			11	2043	48	3%	1.84	21
Rising Main	225	54	2012	56	1990	1996	56			10	2043	48	3%	1.84	19
Rising Main	225	67	2012	69	1990	1996	69			12	2043	48	3%	1.84	23
Rising Main	225	13	2012	13	1990	1996	13			2	2043	48	3%	1.84	4
Rising Main	225	114	2012	118	1990	1996	118			21	2043	48	3%	1.84	39
Rising Main	225	15	2012	15	1990	1996	15			3	2043	48	3%	1.84	5
Rising Main	225	17	2012	18	1990	1996	18			3	2043	48	3%	1.84	6
Rising Main	225	77	2012	79	1990	1996	79			14	2043	48	3%	1.84	26
Rising Main	225	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Gravity Main	225	5	2012	5	1990	1996	5			1	2043	48	3%	1.84	2
Rising Main	300	36	2012	37	1990	1996	37			7	2043	48	3%	1.84	12
Rising Main	300	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Rising Main	300	41	2012	43	1990	1996	43			8	2043	48	3%	1.84	14
Rising Main	300	3	2012	3	1990	1996	3			1	2043	48	3%	1.84	1
Rising Main	300	5	2012	5	1990	1996	5			1	2043	48	3%	1.84	2
Rising Main	600	168	2012	173	1990	1996	173			31	2043	48	3%	1.84	58
Rising Main	600	260	2012	267	1990	1996	267			48	2043	48	3%	1.84	89
Rising Main	600	321	2012	331	1990	1996	331			60	2043	48	3%	1.84	110
Rising Main	600	527	2012	542	1990	1996	542			98	2043	48	3%	1.84	181
Rising Main	600	163	2012	168	1990	1996	168			30	2043	48	3%	1.84	56
Rising Main	600	58	2012	60	1990	1996	60			11	2043	48	3%	1.84	20
Rising Main	600	71	2012	74	1990	1996	74			13	2043	48	3%	1.84	25
Rising Main	600	105	2012	108	1990	1996	108			20	2043	48	3%	1.84	36
Rising Main	600	194	2012	199	1990	1996	199			36	2043	48	3%	1.84	67
Rising Main	600	57	2012	58	1990	1996	58			11	2043	48	3%	1.84	20
Rising Main	600	217	2012	224	1990	1996	224			40	2043	48	3%	1.84	75
Rising Main	600	53	2012	54	1990	1996	54			10	2043	48	3%	1.84	18
Rising Main	600	154	2012	159	1990	1996	159			29	2043	48	3%	1.84	53
Gravity Main	225	9	2012	9	1991	1996	9			2	2043	48	3%	1.84	3
Gravity Main	225	15	2012	16	1991	1996	16			3	2043	48	3%	1.84	5
Gravity Main	225	7	2012	7	1991	1996	7			1	2043	48	3%	1.84	2
Gravity Main	225	3	2012	3	1991	1996	3			1	2043	48	3%	1.84	1
Gravity Main	300	8	2012	8	1991	1996	8			1	2043	48	3%	1.84	3
Gravity Main	300	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Gravity Main	370	37	2012	38	1991	1996	38			7	2043	48	3%	1.84	13
Gravity Main	370	44	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Gravity Main	370	45	2012	46	1991	1996	46			8	2043	48	3%	1.84	15
Gravity Main	370	53	2012	54	1991	1996	54			10	2043	48	3%	1.84	18
Gravity Main	370	71	2012	73	1991	1996	73			13	2043	48	3%	1.84	24
Gravity Main	370	24	2012	24	1991	1996	24			4	2043	48	3%	1.84	8
Gravity Main	370	36	2012	37	1991	1996	37			7	2043	48	3%	1.84	13
Gravity Main	370	103	2012	106	1991	1996	106			19	2043	48	3%	1.84	36
Gravity Main	370	30	2012	31	1991	1996	31			6	2043	48	3%	1.84	10
Gravity Main	450	93	2012	96	1991	1996	96			17	2043	48	3%	1.84	32
Gravity Main	450	92	2012	95	1991	1996	95			17	2043	48	3%	1.84	32
Gravity Main	450	89	2012	92	1991	1996	92			17	2043	48	3%	1.84	31
Gravity Main	450	4	2012	5	1991	1996	5			1	2043	48	3%	1.84	2
Gravity Main	450	90	2012	93	1991	1996	93			17	2043	48	3%	1.84	31
Gravity Main	450	105	2012	108	1991	1996	108			20	2043	48	3%	1.84	36
Gravity Main	450	53	2012	54	1991	1996	54			10	2043	48	3%	1.84	18
Gravity Main	450	23	2012	23	1991	1996	23			4	2043	48	3%	1.84	8
Gravity Main	450	43	2012	45	1991	1996	45			8	2043	48	3%	1.84	15
Gravity Main	450	55	2012	57	1991	1996	57			10	2043	48	3%	1.84	19
Gravity Main	450	11	2012	12	1991	1996	12			2	2043	48	3%	1.84	4
Gravity Main	450	90	2012	93	1991	1996	93			17	2043	48	3%	1.84	31
Gravity Main	450	55	2012	57	1991	1996	57			10	2043	48	3%	1.84	19
Gravity Main	450	51	2012	53	1991	1996	53			10	2043	48	3%	1.84	18
Gravity Main	450	56	2012	58	1991	1996	58			10	2043	48	3%	1.84	19
Gravity Main	450	51	2012	52	1991	1996	52			9	2043	48	3%	1.84	17
Gravity Main	450	59	2012	60	1991	1996	60			11	2043	48	3%	1.84	20
Gravity Main	450	52	2012	53	1991	1996	53			10	2043	48	3%	1.84	18
Gravity Main	450	64	2012	66	1991	1996	66			12	2043	48	3%	1.84	22
Gravity Main	520	125	2012	128	1991	1996	128			23	2043	48	3%	1.84	43
Gravity Main	520	126	2012	130	1991	1996	130			24	2043	48	3%	1.84	43
Gravity Main	520	76	2012	79	1991	1996	79			14	2043	48	3%	1.84	26
Gravity Main	520	132	2012	136	1991	1996	136			25	2043	48	3%	1.84	45
Gravity Main	520	63	2012	65	1991	1996	65			12	2043	48	3%	1.84	22
Gravity Main	520	23	2012	23	1991	1996	23			4	2043	48	3%	1.84	8
Gravity Main	520	28	2012	28	1991	1996	28			5	2043	48	3%	1.84	9
Gravity Main	520	23	2012	24	1991	1996	24			4	2043	48	3%	1.84	8
Gravity Main	660	70	2012	72	1991	1996	72			13	2043	48	3%	1.84	24
Gravity Main	760	57	2012	59	1991	1996	59			11	2043	48	3%	1.84	20

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Gravity Main	225	13	2012	14	1993	1996	14			2	2043	48	3%	1.84	5
Gravity Main	600	4	2012	4	1993	1996	4			1	2043	48	3%	1.84	1
Gravity Main	600	7	2012	7	1993	1996	7			1	2043	48	3%	1.84	2
Gravity Main	600	8	2012	8	1993	1996	8			1	2043	48	3%	1.84	3
Gravity Main	600	7	2012	8	1993	1996	8			1	2043	48	3%	1.84	3
Gravity Main	225	4	2012	4	1997	1997	4			1	2043	47	7%	3.21	2
Gravity Main	225	11	2012	11	1997	1997	11			2	2043	47	7%	3.21	6
Gravity Main	225	11	2012	12	1997	1997	12			2	2043	47	7%	3.21	7
Gravity Main	225	2	2012	2	1997	1997	2			0	2043	47	7%	3.21	1
Gravity Main	225	10	2012	10	1997	1997	10			2	2043	47	7%	3.21	6
Gravity Main	225	2	2012	2	1997	1997	2			0	2043	47	7%	3.21	1
Gravity Main	225	3	2012	3	1997	1997	3			0	2043	47	7%	3.21	2
Gravity Main	225	10	2012	10	1997	1997	10			2	2043	47	7%	3.21	6
Gravity Main	300	14	2012	14	1997	1997	14			3	2043	47	7%	3.21	8
Gravity Main	300	5	2012	5	1997	1997	5			1	2043	47	7%	3.21	3
Gravity Main	300	11	2012	11	1997	1997	11			2	2043	47	7%	3.21	6
Gravity Main	300	11	2012	12	1997	1997	12			2	2043	47	7%	3.21	7
Gravity Main	300	14	2012	15	1997	1997	15			3	2043	47	7%	3.21	9
Gravity Main	300	15	2012	15	1997	1997	15			3	2043	47	7%	3.21	9
Gravity Main	300	15	2012	15	1997	1997	15			3	2043	47	7%	3.21	9
Gravity Main	300	11	2012	11	1997	1997	11			2	2043	47	7%	3.21	6
Gravity Main	300	6	2012	7	1997	1997	7			1	2043	47	7%	3.21	4
Rising Main	225	2	2012	2	2000	2000	2			0	2043	44	7%	3.03	1
Gravity Main	450	4	2012	4	2000	2000	4			1	2043	44	7%	3.03	2
Gravity Main	225	14	2012	15	2002	2002	15			3	2043	42	7%	2.92	8
Gravity Main	225	14	2012	15	2002	2002	15			3	2043	42	7%	2.92	8
Gravity Main	225	22	2012	23	2002	2002	23			4	2043	42	7%	2.92	12
Gravity Main	225	14	2012	15	2002	2002	15			3	2043	42	7%	2.92	8
Gravity Main	225	24	2012	24	2002	2002	24			4	2043	42	7%	2.92	13
Gravity Main	225	7	2012	7	2003	2003	7			1	2043	41	7%	2.86	3
Gravity Main	225	28	2012	29	2003	2003	29			5	2043	41	7%	2.86	15
Gravity Main	225	19	2012	19	2003	2003	19			3	2043	41	7%	2.86	10
Gravity Main	225	9	2012	9	2003	2003	9			2	2043	41	7%	2.86	5
Gravity Main	225	5	2012	5	2003	2003	5			1	2043	41	7%	2.86	3
Gravity Main	225	24	2012	25	2004	2004	25			5	2043	40	7%	2.80	13
Gravity Main	225	18	2012	19	2004	2004	19			3	2043	40	7%	2.80	10
Gravity Main	225	18	2012	19	2004	2004	19			3	2043	40	7%	2.80	9
Gravity Main	225	18	2012	18	2004	2004	18			3	2043	40	7%	2.80	9
Gravity Main	225	17	2012	18	2004	2004	18			3	2043	40	7%	2.80	9
Gravity Main	225	17	2012	18	2004	2004	18			3	2043	40	7%	2.80	9
Gravity Main	225	25	2012	25	2004	2004	25			5	2043	40	7%	2.80	13
Gravity Main	225	16	2012	17	2004	2004	17			3	2043	40	7%	2.80	8
Gravity Main	225	13	2012	14	2004	2004	14			3	2043	40	7%	2.80	7
Gravity Main	225	23	2012	24	2004	2004	24			4	2043	40	7%	2.80	12
Gravity Main	225	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Gravity Main	225	15	2012	15	2004	2004	15			3	2043	40	7%	2.80	8
Gravity Main	225	4	2012	4	2004	2004	4			1	2043	40	7%	2.80	2
Gravity Main	225	8	2012	8	2004	2004	8			1	2043	40	7%	2.80	4
Rising Main	225	86	2012	89	2007	2007	89			16	2043	37	7%	2.64	42
Gravity Main	225	23	2012	24	2008	2008	24			4	2043	36	7%	2.58	11
Gravity Main	225	14	2012	15	2008	2008	15			3	2043	36	7%	2.58	7
Gravity Main	225	16	2012	17	2009	2009	17			3	2043	35	7%	2.53	8
Encasement	300	25	2012	25	2009	2009	25			5	2043	35	7%	2.53	12
Gravity Main	225	7	2012	7	2011	2011	7			1	2043	33	7%	2.42	3
Encasement	300	2	2012	2	2011	2011	2			0	2043	33	7%	2.42	1
Air Valve	91722	4	2012	4	2011	2011	4			1	2043	33	7%	2.42	2
Stop Valve	91769	3	2012	3	2011	2011	3			1	2043	33	7%	2.42	1
Scour	66106	5	2012	6	1973	1996	6			1	2043	48	3%	1.84	2
Scour	66099	5	2012	6	1986	1996	6			1	2043	48	3%	1.84	2
Scour	66091	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66092	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66093	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66094	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66095	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66096	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66097	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66098	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66100	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66101	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66102	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66103	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66104	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66105	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2

Casino Sewerage Scheme															
Capital Charge Calculation						**Summary**									
Pre 1996 discount rate	3%					per ET		**Total**							
Post 1996 discount rate	7%					**Capital charge**		$14,493		2013$ per ET					
Asset	**Detail**	**Capital cost ($'000)[1]**	**Year dollars[2]**	**Capital Cost ($'000, 2013$)[3]**	**Year commiss-ioned**	**Effective year commiss-ioned**	**Present value 2013 ($'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)**
Scour	66107	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66108	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66109	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66110	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66111	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66112	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66113	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66114	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66115	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66116	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66118	5	2012	6	1990	1996	6			1	2043	48	3%	1.84	2
Scour	66090	5	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Scour	66117	5	2012	6	1991	1996	6			1	2043	48	3%	1.84	2
Rodding End	82567	1	2012	1	2009	2009	1			0	2043	35	7%	2.53	1
Rodding End	82568	1	2012	1	2009	2009	1			0	2043	35	7%	2.53	1
Rodding End	82569	1	2012	1	2009	2009	1			0	2043	35	7%	2.53	1
Rodding End	91630	1	2012	1	2011	2011	1			0	2043	33	7%	2.42	1
Rodding End	91631	1	2012	1	2011	2011	1			0	2043	33	7%	2.42	1
Rodding End	91632	1	2012	1	2011	2011	1			0	2043	33	7%	2.42	1
Vent Stack	66122	4	2012	4	1990	1996	4			1	2043	48	3%	1.84	1
Vent Stack	66120	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Vent Stack	66121	4	2012	4	1991	1996	4			1	2043	48	3%	1.84	1
Vent Stack	66123	4	2012	4	1995	1996	4			1	2043	48	3%	1.84	1
Vent Stack	82218	4	2012	4	2010	2010	4			1	2043	34	7%	2.47	2
Future Transfer System															
T/Plant Casino - Sewerage system analysis		35	2013	35	2013	2013	35			6	2043	31	7%	2.31	15
T/Plant Casino - Provide sewer to new release areas		1,500	2013	1,500	2019	2019	1,000			195	2043	25	7%	2.00	390
T/Plant Casino - Provide sewer to new release areas		1,500	2013	1,500	2029	2029	508			99	2043	15	7%	1.54	152
Total Transfer System		**20,199**					**19,222**		**5,135**	**3,503**					**7,072**
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 2013$ using Reference Rates															
4. Capital cost of future works discounted to 2013$															

Table RA2 - Calculation of Developer Charges using the NPV of Annual Charges Method **Richmond Valley Council - Sewerage**

Based on Input Reduction Amounts of $2,127 /ET (2nd iteration)

Year																					
Year No.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Year		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
Developer Charges																					
Year 1		2013	/14																		
Base Year		2012	/13																		
Average Capital Charges per ET	(2012/13$)	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976
Inflation from 2012/13 to 2013/14 (%)		2.50%																			
Capital Charge	(2013/14$)	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430	18,430
Input Reduction Amounts	**(2013/14$)**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**2,127**
Developer Charge per ET	(2013/14$)	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300
Developer Charges per assessment - Residential	(2012/13$)	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580	15,580
Developer Charges per assessment - Non-Residential	(2012/13$)	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355	20,355

Assessments & ETs																					
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
Residential Assessments at year end	6,345	6,378	6,452	6,527	6,602	6,677	6,753	6,829	6,906	6,983	7,060	7,138	7,216	7,261	7,305	7,351	7,396	7,442	7,488	7,535	7,582
Non Residential Assessments at year end	685	753	758	764	770	776	782	787	793	799	805	811	817	823	829	835	841	847	849	852	855
Backlog Assessments at year end	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Assessments at year end	7,030	7,131	7,211	7,291	7,372	7,453	7,535	7,617	7,699	7,782	7,865	7,949	8,033	8,083	8,134	8,185	8,237	8,289	8,338	8,387	8,437
ET per Residential Assessment	0.98																				
ET per Non Residential Assessment	1.28																				
Total ETs	7,095	7,214	7,294	7,374	7,455	7,537	7,618	7,701	7,783	7,866	7,950	8,033	8,118	8,169	8,220	8,272	8,324	8,377	8,426	8,475	8,524
New ETs per year (excluding backlog)	-	119	80	80	81	81	82	82	83	83	83	84	84	51	51	52	52	53	49	49	50
Cumulative New ETs (excluding backlog)	-	119	199	280	360	442	524	606	688	771	855	938	1,023	1,074	1,125	1,177	1,229	1,282	1,331	1,380	1,429
PV (new ETs excluding backlog) 5years @ 7% pa	-	**392**	**355**	**357**	**358**	**360**	**362**	**364**	**366**	**342**	**316**	**289**	**259**	**227**	**226**	**224**	**222**	**219**	**216**	**217**	**217**

Revenue and Expenditure																					
Rates & Charges Revenue, Trade Waste Charges, Other Sales and Charges, Pensioner Rebate Grant																					
Revenue ($'000)	(2012/13$)	6,142	6,258	6,328	6,400	6,635	6,908	6,986	7,061	7,138	7,217	7,293	7,371	7,451	7,499	7,548	7,597	7,650	7,697	6,191	6,224
OMA Expenditure ($'000)	(2012/13$)	3,509	3,512	3,589	3,600	3,619	3,654	3,698	3,783	3,807	3,808	3,808	3,807	3,807	3,808	3,808	3,807	3,807	3,807	3,807	3,807
Revenue less OMA Expenditure ($'000)		2,633	2,746	2,739	2,800	3,016	3,254	3,288	3,278	3,331	3,409	3,485	3,564	3,644	3,691	3,740	3,790	3,843	3,890	2,384	2,417
Revenue less OMA Expenditure for new ETs ($'000)		43	75	104	135	177	224	259	290	327	367	407	449	479	505	532	560	588	614	388	405
PV (Revenue less OMA Expenditure for new ETs) 30 years @ 7% pa ($'000)		**450**	**605**	**765**	**928**	**1,097**	**1,265**	**1,425**	**1,590**	**1,757**	**1,916**	**2,064**	**2,199**	**2,322**	**2,440**	**2,367**	**2,272**	**2,157**	**2,020**	**1,861**	**1,951**
Output (calculated) Reduction Amounts		**1,146**	**1,706**	**2,145**	**2,590**	**3,047**	**3,493**	**3,915**	**4,349**	**5,139**	**6,057**	**7,147**	**8,488**	**10,212**	**10,808**	**10,566**	**10,238**	**9,836**	**9,347**	**8,584**	**8980.5**
Average Calculated Reduction for a 5 yr Period		**2,127**	**2,127**	**2,127**	**2,127**	**2,127**	**3,493**	**3,915**	**4,349**	**5,139**	**6,057**	**7,147**	**8,488**	**10,212**	**10,808**	**10,566**	**10,238**	**9,836**	**9,347**	**8,584**	**8,980**
% Difference Between the Input and Output		**0%**																			

Difference Less Than 2%, Calculation Complete

Developer Charges for the first 5 years = $16300 in year 2013/14 dollars

Notes:

Refer to 1st iteration sheet

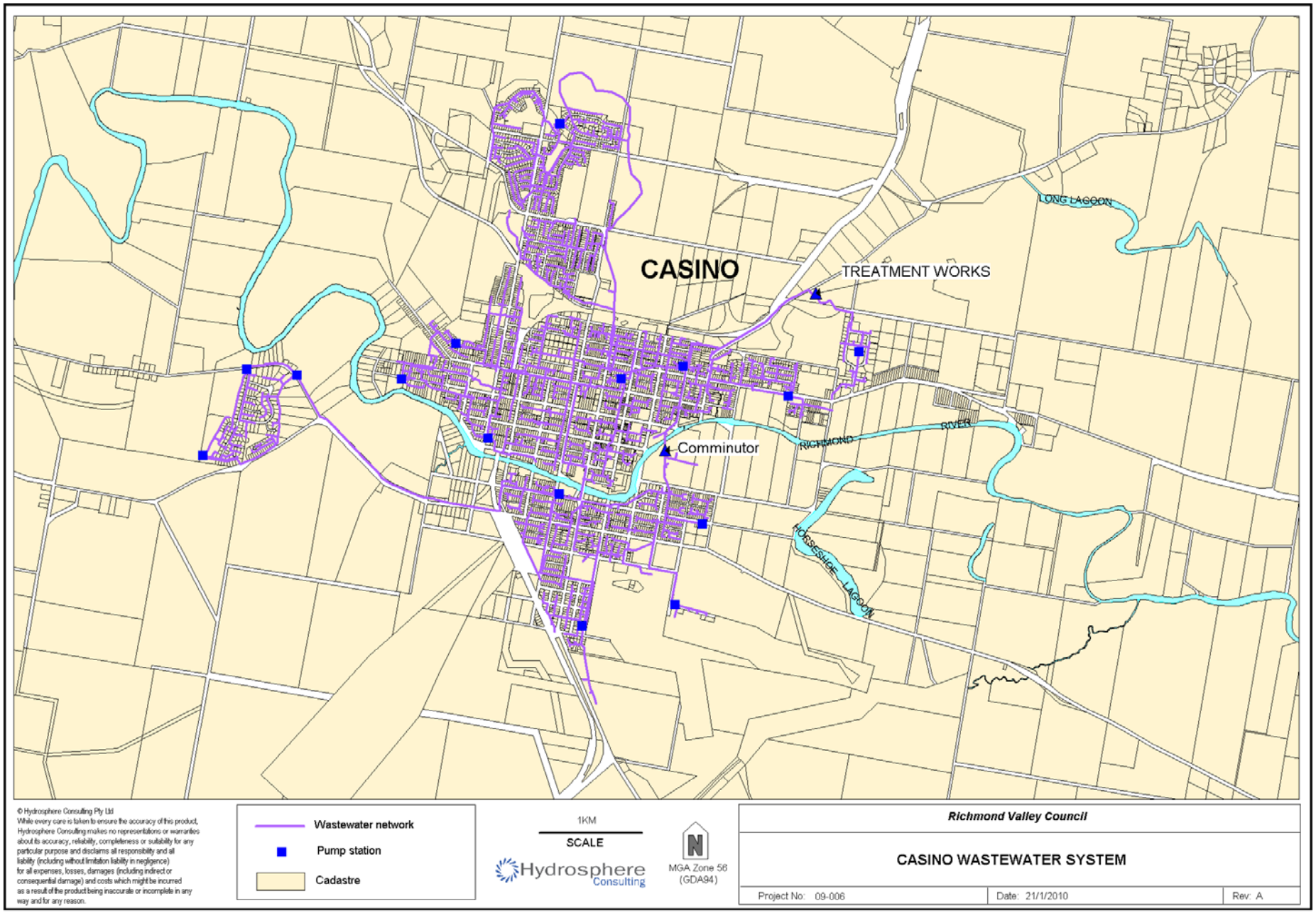
Developer Charge	16,303	16,303	16,303	16,303	16,303	14,937	14,515	14,081	13,291	12,373	11,283	9,942	8,218	7,622	7,864	8,192	8,594	9,083	9,846	9,450

Richmond Valley Council - Sewerage

Summary of NPV Annual Charges Calculation of Reduction Amount - Sewerage

Iteration	1	2
Weighted Average Capital Charge (2013$)	18,430	18,430
Input Reduction Amount, years 1 to 5 (2013 $)	2,000	2,127
Input Residential Developer Charge (2013 $)	16,430	15,580
Output Reduction Amount	2,127	2,127

Appendix 2 - Plans


CASINO
TREATMENT WORKS
LONG LAGOON
Comminutor
RICHMOND
RIVER
HORSESHOE LAGOON
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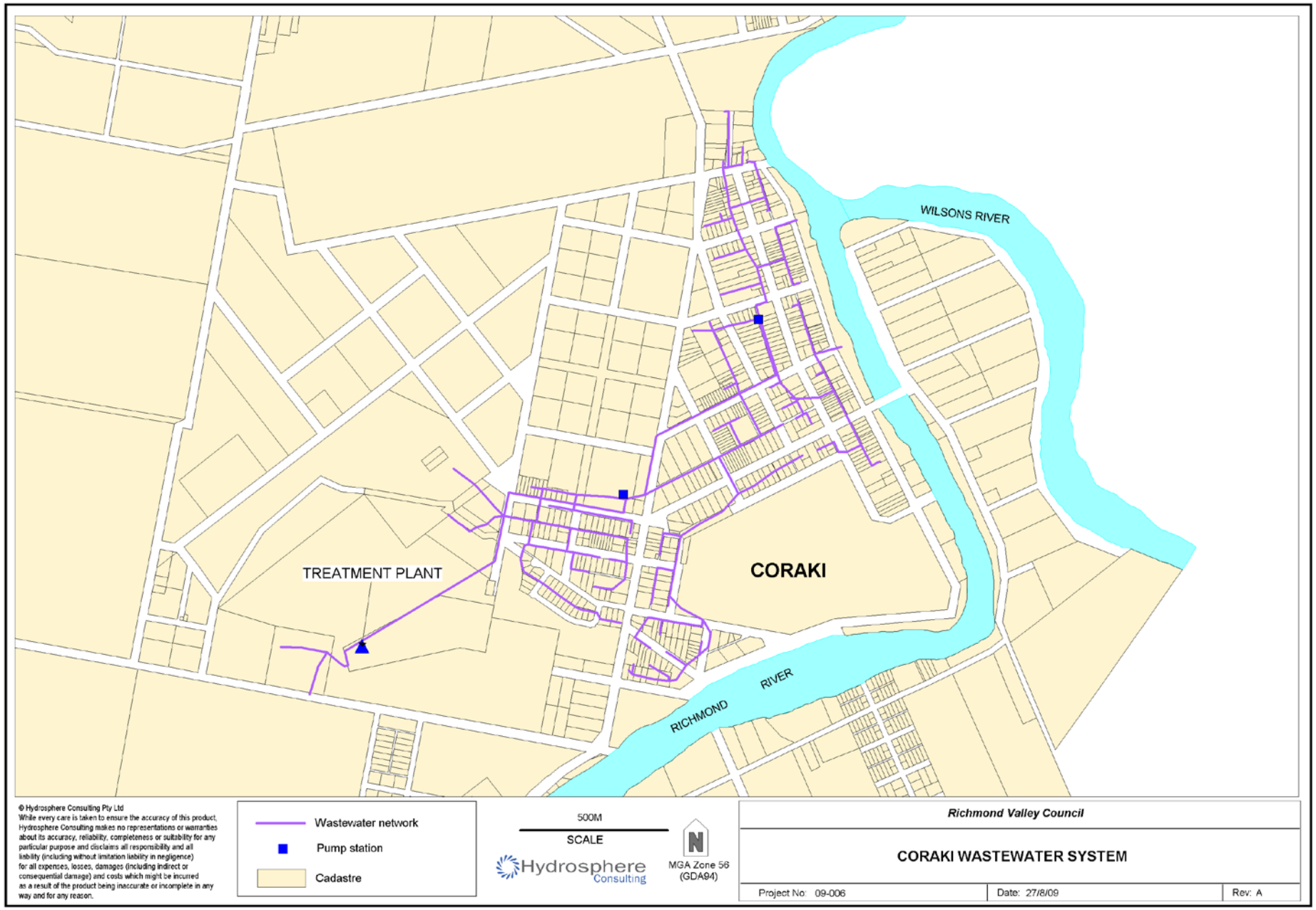
Wastewater network
Pump station
Cadastre
1KM
SCALE
Hydrosphere Consulting
N
MGA Zone 56 (GDA94)
Richmond Valley Council
CASINO WASTEWATER SYSTEM
Project No: 09-006
Date: 21/1/2010
Rev: A


WILSONS RIVER
TREATMENT PLANT
CORAKI
RICHMOND RIVER
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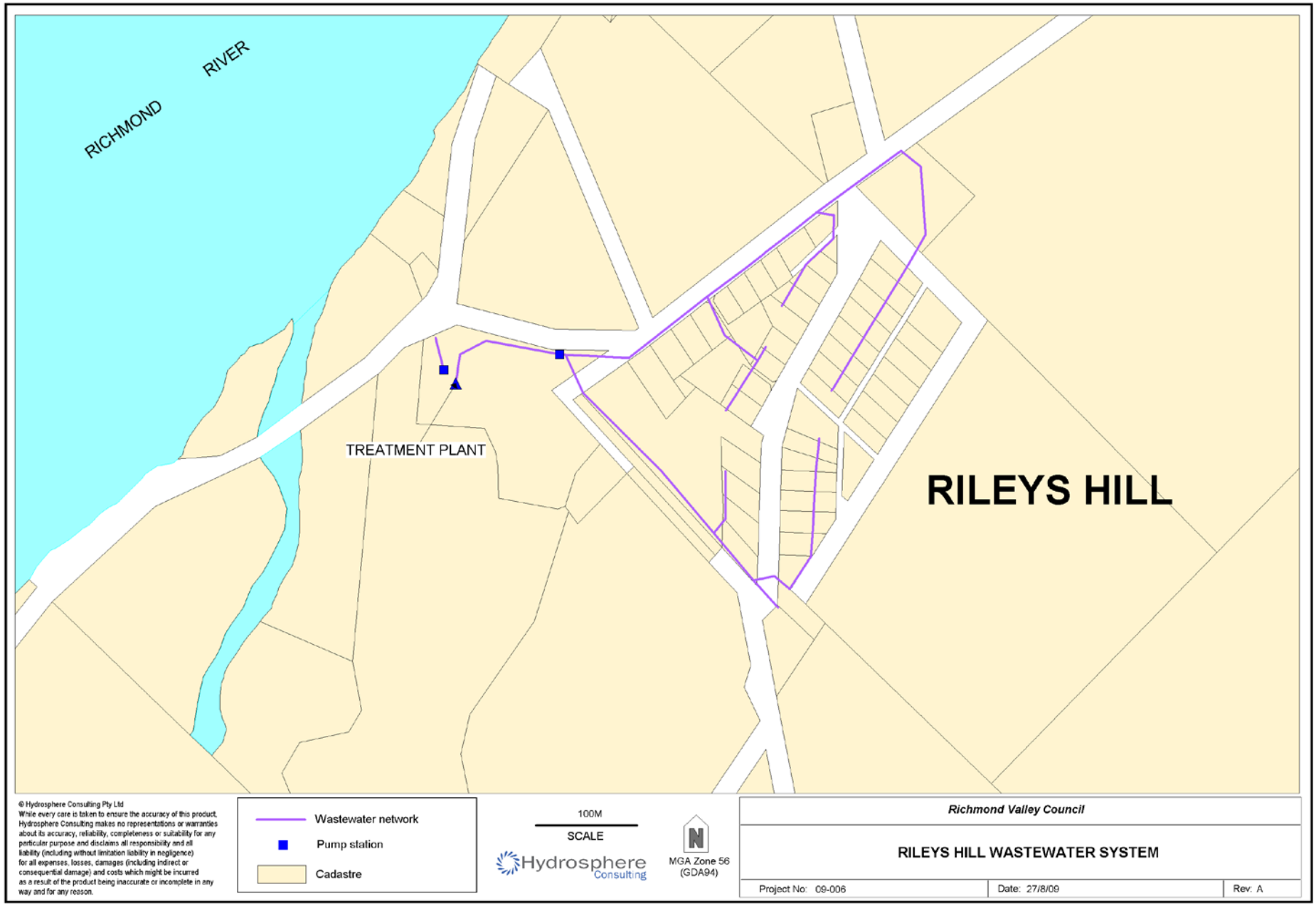
Wastewater network
Pump station
Cadastre
500M
SCALE
Hydrosphere Consulting
N
MGA Zone 56 (GDA94)
Richmond Valley Council
CORAKI WASTEWATER SYSTEM
Project No: 09-006
Date: 27/8/09
Rev: A


RICHMOND RIVER
TREATMENT PLANT
RILEYS HILL
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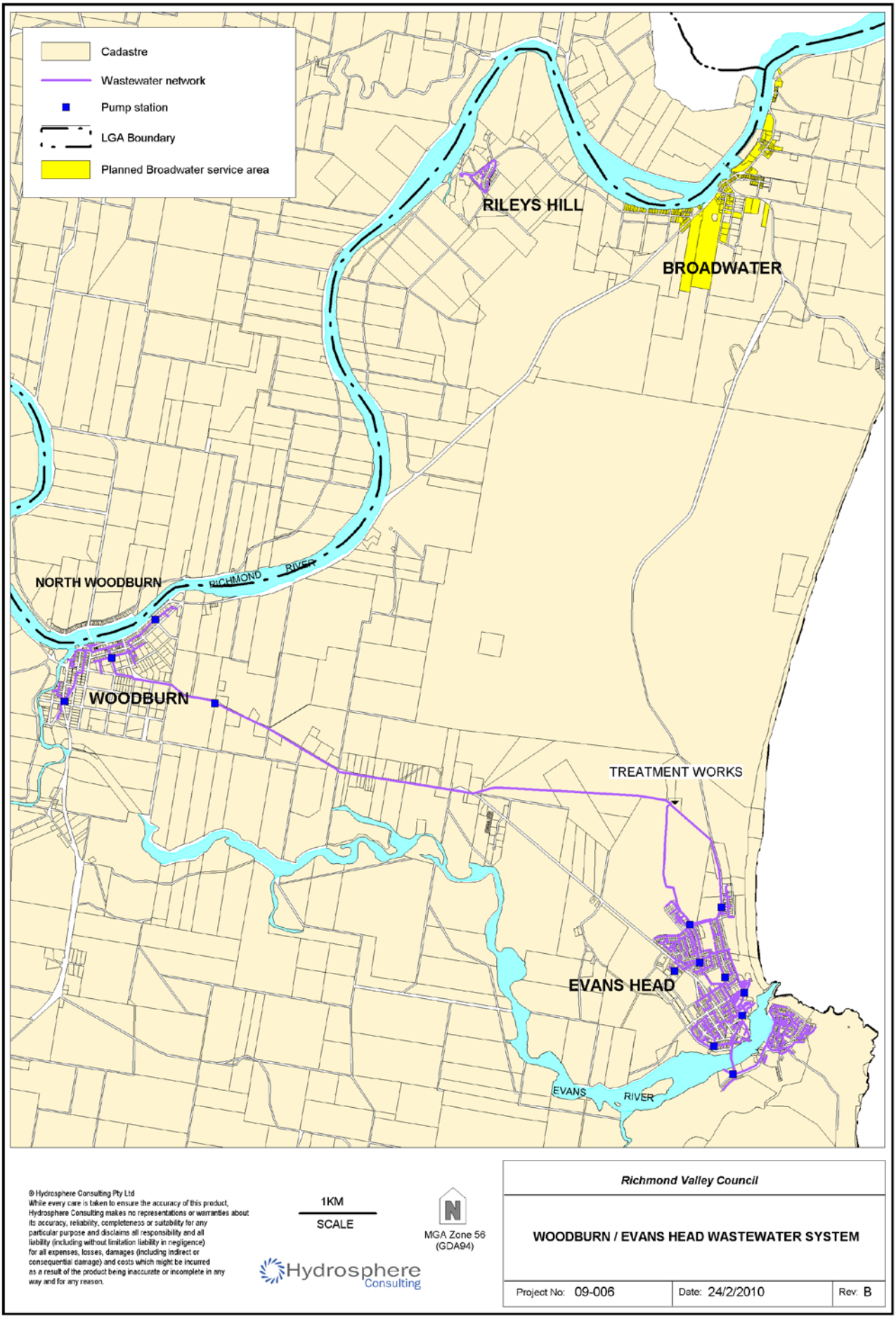
Wastewater network
Pump station
Cadastre
100M
SCALE
Hydrosphere Consulting
N
MGA Zone 56 (GDA94)
Richmond Valley Council
RILEYS HILL WASTEWATER SYSTEM
Project No: 09-006
Date: 27/8/09
Rev: A


Cadastre
Wastewater network
Pump station
LGA Boundary
Planned Broadwater service area
RILEYS HILL
BROADWATER
NORTH WOODBURN
RICHMOND RIVER
WOODBURN
TREATMENT WORKS
EVANS HEAD
EVANS RIVER
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1KM
SCALE
N
MGA Zone 56
(GDA94)
Hydrosphere Consulting
Richmond Valley Council
WOODBURN / EVANS HEAD WASTEWATER SYSTEM
Project No: 09-006
Date: 24/2/2010
Rev: B