

# **Strategic Business Plan for Water Supply and Sewerage Services**



**2014**



## Document Control

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# Acknowledgements

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The Plan is based on a workshops held on 16 -17 October 2013 in which Councillors and senior Council staff were represented.

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# Abbreviations

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Abbreviation	Description
ADWG	Australian Drinking Water Guidelines
BOD	Biochemical oxygen demand, a measure of 'strength' of organic pollutants in wastewater/ sewage.
CENTROC	Central Regional Organisation of Councils
CWP	Capital Works Program
CWUA	Centroc Water Utilities Alliance
DCP	Development Control Plan
DFS	Department of Finance and Services
DLG	Division of Local Government
DMERP	Drought Management and Emergency Response Plan
EEO	Equal Employment Opportunity
EPA	Environment Protection Authority
EIS	Environmental impact statement
EP/ ET	Equivalent Population/ Equivalent Tenement
IDEA	Intermittently Decanted Extended Aeration – A sewerage treatment process
IPR	Integrated Planning and Reporting
IWCM	Integrated Water Cycle Management
LEP	Local environment plan
LGA	Local Government Area
LGSA	Local Government and Shires Associations
LOS	Levels of Service
NFR	Non-filterable residue (also refers to as suspended solids), a measure of fine particle pollutants in wastewater
NHMRC/ AWRC	National Health and Medical Research Council / Australian Water Research Council
NOW	NSW Office of Water
NSWPW	NSW Public Works
NWI	National Water Initiative
OEH	Office of Environment and Heritage
SCADA	Supervisory Control and Data Acquisition
SEPP	State Environmental Planning Policy
STP/ WTP	Sewage Treatment Plant / Water Treatment Plant
WDCC	Written Down Current Cost (also known as 'Fair Value')
WELS	Water Efficiency Labelling and Standards
WHS	Work Health and Safety
TAM	Total Asset Management
TCM	Total catchment management

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# Executive Summary

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This Strategic Business Plan covers the development and operation of Forbes Shire Council's Water Supply and Sewerage Schemes. It provides supporting information for Council's Integrated Planning and Reporting (IP&R) as well as satisfying compliance requirements for NSW Office of Water.

## Mission for Water Supply and Sewerage

Council's corporate mission for its water supply and sewerage services is:

***To provide water supply and sewerage services, which comply with recognised health and environmental standards and meet the quality and quantity requirements of the community at an appropriate cost for current and future customers***

Council's corporate policies and objectives also place specific requirements on the water supply and sewerage services. These are detailed in Section 2 of this Business Plan.

## Operating Environment Review

A review of operating environment in Section 5 of this Business Plan explores the internal and external conditions such as institutional arrangements, legislative framework, future development potentials and opportunities etc. under which Council delivers services now, and those, which will be likely to prevail in the future.

Council currently provides services to the communities listed in the following table.

### Communities currently provided with Services

Town/Zone	Estimated Population	Water Supply	Sewerage
Forbes	7700	Potable	Yes
Ootha	50	Non-potable	Septic tanks
Calarie/ Alcaringa	200	Potable	Septic tanks
Daroobalgie	10	Potable	Septic tanks

Rural properties and industries outside of the communities listed above are responsible for their own water supply and generally source their water from rainwater tanks, groundwater bores and surface water allocations. These rural properties and industries use on-site sewage management systems. The inspection of these systems is the responsibility of Council's Environmental Services and Planning Department.

More detailed descriptions, including service area maps of Council's water supply and sewerage schemes, are presented in Section 3 of this Business Plan.

## Levels of Service

Council's primary objective with water supply and sewerage services is to meet the adopted Levels of Service, which cover the following areas:

### Water supply

- Quality, quantity and pressure
- Availability during droughts
- Greenhouse gas emissions

#### Sewerage

- Proportion of sewage treated to various standards
- Number of overflow events
- Greenhouse gas emissions

#### Customer Service

- Frequency and duration of planned and unplanned service interruptions
- Response times to service interruptions
- Frequency of customer complaints
- Response times for customer requests

Levels of Service with predicted improvements are summarised on the following pages. Note the Levels of Service are the targets, which Council aims to meet; they are not intended as a formal customer contract. Much of the planned improvements in the levels of service require improved staffing at the field level in addition to the capital expenditure for asset refurbishment and/or renewal.

## Principal Issues

Current services are generally regarded as satisfactory by customers. There are however, some issues which will need to be addressed in the short term:

- Meeting NOW Best Practice Management Guidelines and the adopted levels of service
- Equitable pricing and full cost recovery
- Reticulation asset upgrades for extension of services to residential growth areas to avoid likely drops in levels of service in the existing service areas
- Adequate funding for asset renewals to maintain Levels of Service
- Meeting Australian Drinking Water Quality Guidelines
- Community education and awareness
- Ageing infrastructure and asset renewal
- Maintaining adequate levels of appropriately skilled staff and succession planning

## Summary of Levels of Service Improvements – Water Supply

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current	Future
SUPPLY INTERRUPTIONS TO CUSTOMERS:			
Unplanned			
- Water main breaks	No./100 km/ Yr.	22	10 (state medians)
- Average duration	Hours/event	2	2
- Frequency	No./ 1000 connections/Yr	123	37 (state medians)
Response Times for Service Interruptions* (Time to have staff on-site commence work after notification)			
Priority 1 (Failure to maintain continuity or quality of supply to a large number of customers or to a critical user at a critical time)			
All Customers			
- 90% of times	Minutes	30	30
- 100% of times	Minutes	120	120
Priority 2 (Failure to maintain continuity or quality of supply to a small number of customers or to a non-critical user at a non-critical time)			
All Customers			
- 90% of times	Minutes	60	60
- 100% of times	Minutes	120	120
Priority 3 (Failure to maintain continuity or quality of supply to a single customer)			
All Customers			
- 90% of times	Minutes	180	180
- 100% of times	Minutes	180	180
CUSTOMER FEEDBACK/ COMPLAINTS® (identified in the CRM system)			
Complaints Received	No./ 1000 connections		
- Water quality complaints		<1	<1
- Service complaints		3	3
- Billing and account complaints		0	0
WATER QUALITY (POTABLE WATER) (Compliance with ADWG, NHMRC & NRMCC, 2011)			
Microbial Parameters			
Total coliforms	CFU/100ml	0	0
E-coliform	CFU/100ml	0	0
Percentage Compliance	No./ Total No. of Zones		
Zones achieving compliance with			
- Physical parameters		1	1
- Chemical Parameters®		1	1
- Microbiological parameters®		1	1

## Summary of Levels of Service Improvements – Sewerage

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current Target	Future Target
SERVICE AVAILABILITY			
Extent of area serviced	% Service area	98	100
SYSTEM FAILURES (OVERFLOWS TO THE ENVIRONMENT)			
Category One			
Failure due to rainfall and deficient capacity <sup>@</sup>	No./100 km/Year	0.5	0.2
Category Two			
Failure due to pump or other breakdown including power failure	No./100 km/Year	0	0
Category Three			
Failure due to main blockages and collapses <sup>@</sup>	No./100 km/Year	91	38
CUSTOMER FEEDBACK/ COMPLAINTS <sup>@</sup> (identified in the CRM system)			
Complaints received	No./ 1000 properties/ year		
Service complaints		3	?
Odour Complaints			
- Treatment works (outside designated buffer zone)		0	?
- Pumping Stations		0	?
- Reticulation system		0	?
Billing and account complaints		<1	?
Response Times for Feedback/ Complaints*			
% calls answered by an operator within 30 seconds	%	98	98
General complaints and inquiries:			
- Written/ Email Complaints	Working Days	5	3
- Personal/ oral complaints	Working Days	2	1
ENVIRONMENT <sup>@</sup>			
Recycle/ reuse of wastewater (dry weather conditions)	% total volume of sewage treated	5	5
Effluent discharge compliance with licence limits	% of samples/year	100	100
Net greenhouse gas emissions (for Water services and Sewerage) <sup>@</sup>	Tonnes CO2 equivalent/ year	560	400

@ - NWI Performance Indicators; \* - Times apply for 95% of incidents

## Objectives and Performance Targets

Council has recognised five Key Result Areas that must be managed well to achieve success in the long-term provision of water supply and sewerage services to its customers. These are:

- Customer service;
- Environmental protection and sustainable development;
- Total asset management;
- Work force; and
- Finance.

Objectives and Performance Targets have been set in these Key Result Areas. These are summarised in the Table below, and discussed in detail in Sections 8 through 12.

Notable capital work outcomes Council plans to achieve over the next 10 years include:

- Development of bore no. 3 and pipe line (375 mm) from bore no 3
- WTP components and electrical controls upgrade/replacement
- Decommissioning Camp Hill reservoir
- Mains replacement/renewal as per Water Asset Management Plan
- Telemetry renewal and upgrade
- Repair and repainting of sand filters
- Sewage pump station (SPS 18) replacement
- Odour and corrosion control works for SPS (1,4 and 11) and vent shafts
- Sewer relining / replacement and manhole refurbishment
- Renewal of rising main from Fitzgerald Bridge (SPS 5) to STP
- Replacement/ upgrade of pumps, switchboards and electrical components including PLC and SCADA at STP

### Objectives and Performance Targets

Key Result Area	Objective	Performance Target (s)
<b>Customer Service</b>		
Levels of Service Review (Performance Management)	To meet adopted levels of service for water supply/ sewerage	- 95% compliance with levels of service and action planning
Areas to be Serviced	Services to extend to all remaining un-serviced urban areas where economically feasible and other areas in accordance with LEP on a user pay basis	- Options study to extend service to un-serviced areas and future service areas completed by June 2015
Sewer Loads Management	Reduce wet weather hydraulic sewage loading to its economic limit and manage the biochemical load due to liquid trade wastes	- Implement LTW Pricing by June 2014
Water Conservation and Demand Management	To provide, maintain and operate effective urban and rural water supplies and minimise wastage	- Implement reuse of backwash water from WTP for irrigating botanical garden sporting complex. - Review and update the Drought Management Plan by Dec 2014

Key Result Area	Objective	Performance Target (s)
Service Pricing	Pricing which is equitable and allows the water and sewerage systems to provide for operations and future infrastructure needs	- Review tariffs and price paths in-line with NOW guidelines to achieve full cost recovery by June 2014
Customer Relations	Provide services in a professional and efficient manner and achieve high level of customer satisfaction	- Implement corporate customer complaints handling policy
Community Involvement	Seek community consultation with regard to service targets and prior to any major decisions regarding changes in service levels.	- Media releases as appropriate to advertise all significant actions
<b>Environmental Protection and Sustainable Development</b>		
Environmental Sustainability	Manage the system to prevent adverse environmental impacts and where possible use waste for beneficial purposes	<ul style="list-style-type: none"> <li>- Prepare and implement bio-solids management plan by October 2014</li> <li>- Investigate odour and corrosion issues in sewer network by December 2015</li> <li>- Undertake energy audit and review energy usage by water supply and sewerage assets by December 2015</li> </ul>
<b>Total Asset Management</b>		
Operations and Maintenance	Operate and maintain the water supply/ sewerage scheme to meet the adopted levels of service at least life cycle cost	<ul style="list-style-type: none"> <li>- Acquire technology for asset condition monitoring by June 2014</li> <li>- Review and update Operations and Maintenance Plan by June 2015</li> </ul>
Capital Works	Provide capital works to meet levels of service for existing and future customers at least life cycle cost	- Implement planned capital works on time and budget
<b>Work Force</b>		
Workforce Planning	To maintain adequate levels of appropriately skilled staff resources within a safe working environment to achieve the adopted level of service and promote job satisfaction	Complete Needs Analysis and Position Analysis by June 2014
<b>Finance</b>		
Financial Plan	Sound financial plan which allows for current and future service delivery at an affordable and sustainable price path for water supply/ sewerage infrastructure	- Review and update long-term financial plans annually

## Projected Financial Position – Water Supply

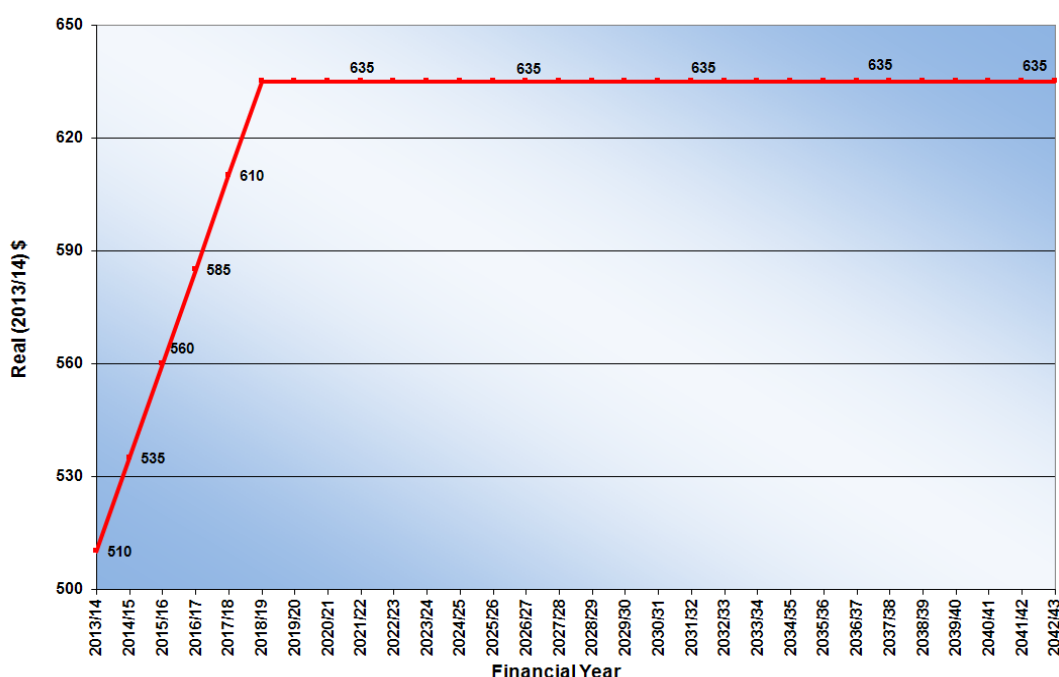
Financial projections have been made considering that government grant/ subsidy will be available as expected for the planned capital works during the forecast period. Following Table presents the summary of forecast financial position of Council's water fund over the next 30 years at five-year intervals. Note all projected values are in 2013/14 dollars.

### Summary of Financial Projections – Water Supply

2013/14 \$ ('000)	2013/14	2017/18	2022/23	2027/28	2032/33	2037/38	2042/43
Estimated Total Revenue	2,722	3,118	3,289	3,316	3,137	3,052	3,061
Estimated Total Expenditure	3,241	3,301	3,297	3,307	3,319	3,481	3,450
Operating Surplus / (Deficit)	-519	-183	-9	10	-182	-430	-388
Acquisition of Assets	1,149	450	614	699	3,569	589	430
Principal Loan Payments	0	0	0	0	0	54	66
Borrowings Outstanding	0	0	0	0	0	1,798	1,298
Cash and Investments	7,247	6,733	8,317	9,579	4,315	2,116	2,163
Total Assets	41,585	40,970	38,903	36,670	36,461	36,924	34,169
Total Liabilities	23	24	26	26	26	1,824	1,323

Financial modelling has demonstrated that the current (2013/14) typical residential bill (TRB) for water supply services of \$510 p.a. has to be increased by \$25/year for the next five years to a TRB of \$ 635 p.a. in 2018/19. Thereafter, the TRB can be maintained at that level for the remainder of the 30-year forecast period (see Figure below).

### Typical Residential Water Bill



This level of typical water charges for water supply is sufficient to maintain liquidity with a minimum of \$1.0 Million of cash in hand over the forecast period. For the next 20 years, all the planned capital works can be internally funded from available cash and investments and annual revenue. New borrowings will be required for capital works only after this period.

See Section 12.4.1 for more financial projection details.

## Projected Financial Position – Sewerage

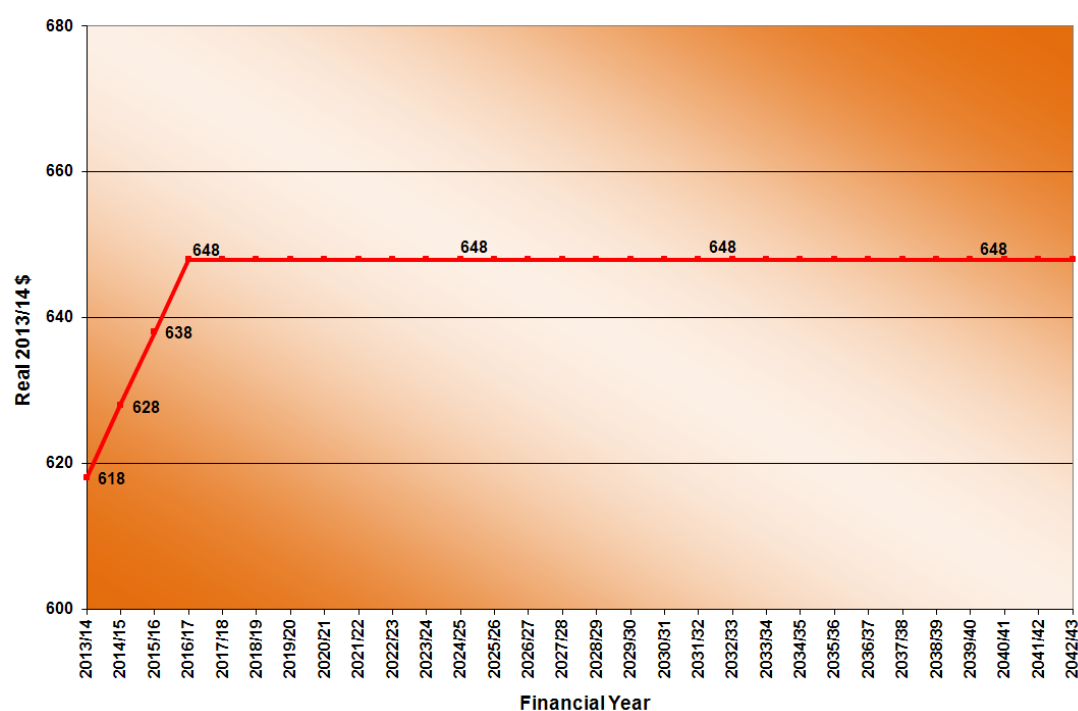
Financial projections have been made considering that no subsidy will be available for the planned capital works during the forecast period. Following Table presents the summary of forecast financial position of Council's sewer fund over the next 30 years at five-year intervals. Note all projected values are in 2013/14 dollars.

### Summary of Financial Projections – Sewerage

2013/14 \$ ('000)	2013/14	2017/18	2022/23	2027/28	2032/33	2037/38	2042/43
Estimated Total Revenue	2,331	2,307	2,317	2,331	2,375	2,419	2,464
Estimated Total Expenditure	2,380	2,385	2,390	2,412	2,398	2,398	2,384
Operating Surplus / (Deficit)	(49)	(79)	(74)	(81)	(23)	22	80
Acquisition of Assets	810	852	264	327	252	252	261
Principal Loan Payments	243	104	158	50	61	74	26
Borrowings Outstanding	1,494	864	998	962	582	187	28
Cash and Investments	3,338	812	1,033	1,045	2,063	3,243	4,701
Total Assets	34,698	33,656	33,318	32,813	32,089	31,452	31,122
Total Liabilities	1,494	864	998	962	582	187	28

Financial modelling has demonstrated that the current (2013/14) typical residential bill (TRB) for sewerage services of \$618 p.a. has to be increased by \$10/year for the next three years to a TRB of \$648 p.a. in 2016/17. Thereafter, the TRB can be maintained at that level for the remainder of the forecast period (see Figure below).

### Typical Residential Sewer Bill



This level of charges is sufficient to maintain liquidity with a minimum of \$ 600K of cash in hand over the period. All the planned capital works will be funded through a mix of available cash and investments, annual revenue and external borrowings. New external borrowing will be required to fund planned renewal works from 2017/18 onwards. The outstanding borrowing will be at a maximum of \$1,553 K in 2019/20 and will be fully retired at the end of the forecast period (2042/43).

See Section 12.4.2 for financial projection details.

# 1 Introduction

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## 1.1 Purpose of the Plan

The purpose of the plan is to provide guidance for the future management of Forbes Shire Council's water supply and sewerage businesses with the aims of:

- Providing the information for Council's Resourcing Strategy as required for compliance with the Integrated Planning and Reporting Framework and for the Management Plan;
- Focusing attention on the key issues affecting the day to day operations of water supply and sewerage services;
- Demonstrating to stakeholders that the schemes are well managed;
- Identifying the financial and other resources required to operate these services on a commercial basis;
- Providing a long term price path for services;
- Assisting in the development of a long-term capital works program with an affordable price path for the services;
- Enabling Council to model 'what-if' scenarios and see their impact on customer charges; and
- Allowing future financial performance indicators to be calculated, such as return on capital invested.

## 1.2 Integrated Planning and Reporting Framework

The Strategic Business Plan is required under the NSW Integrated Planning & Reporting Framework (Figure 1) and it enabled the State Government to:

- Gain an overview of the current status and future water supply and sewerage needs of non-metropolitan NSW; and
- Gather information to assist in directing policy and programs for financial and technical assistance towards the needs of the utilities.

The main elements of the IPR framework are the:

- Community Strategic Plan (CSP)
- Delivery Program
- Resourcing Strategy
- Operational Plan
- Annual Report
- Perpetual monitoring and review

**Figure 1 – Local Government Planning and Reporting Framework**



### 1.3 Benefits of Strategic Business Plans

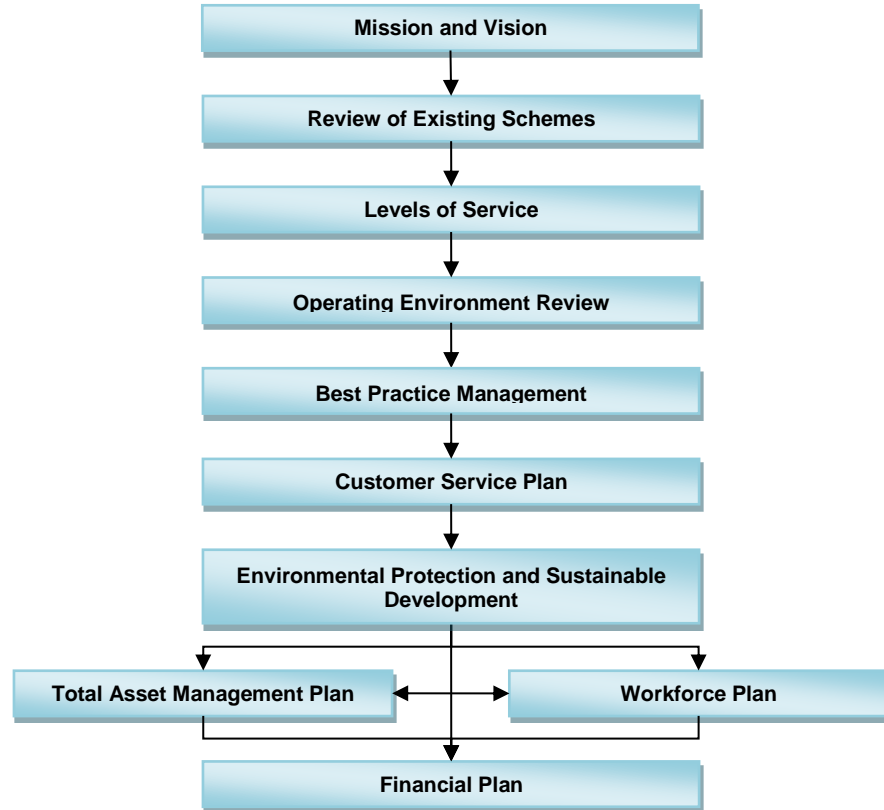
Strategic Business Plans will provide many benefits to Council including:

- improved management performance;
- improved financial performance;
- avoidance or minimisation of increases to Typical Residential Bills (TRBs); and
- increased accountability to customers.

## 1.4 Plan Structure

The structure of this Strategic Business Plan is outlined in Figure 2.

**Figure 2 – Structure of Plan**



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## 2 Mission and Vision

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Strategic business planning aims to optimise service delivery in terms of long term cost effectiveness and sustainability, and the prime driver is Council's vision of the future and definition of a mission statement. For Forbes Shire Council, in conjunction with the Corporate Values, they provide the direction for specific mission statements for water supply and sewerage.

### 2.1 Corporate Vision 2030

Council's vision for the LGA is:

***A prosperous rural community where residents and visitors enjoy a clean, safe environment enhanced by our unique heritage and country lifestyle***

### 2.2 Corporate Mission and Values

Council's corporate mission is the framework that reflects the ambitions of the community and the Council's role in achieving the outcome of its Vision 2030:

***For the whole community to grow and prosper through effective leadership, provision of sustainable services and promotion of economic development opportunities***

Council has adopted a number of corporate values/goals reflecting the way the council's businesses are run. These are:

- Sustained Economic Development in Forbes Shire
- Sound environmental management practices and improved community amenity
- Services and infrastructure provided to the community in the most efficient and economical manner
- A Council responsive to the needs of its Community
- An organisation characterised by highly competent staff, good moral and job satisfaction.

### 2.3 Mission for Water Supply and Sewerage

Council's corporate mission for the water supply and sewerage services is:

***To provide water supply and sewerage services, which comply with recognised health and environmental standards and meet the quality and quantity requirements of the community at an appropriate cost for current and future customers***

### 2.4 Implications of Vision Statements

The implications of Council's vision, mission and values for the provision of the water supply and sewerage services can be summarised as follows:

- To strive for excellence in customer service
- To have a strong economic base
- To ensure a sustainable infrastructure and assets
- To meet community expectations
- To maintain suitably skilled and experienced staff
- To provide necessary services efficiently
- To be dynamic and responsive to change
- To be environmentally committed and responsible

Figure 3 – Map of Forbes Shire Council



## 3 Existing Schemes

Forbes Shire Council provides reticulated potable water supply to the town of Forbes and to the villages of Calarie and Daroobalgie. Sewerage services are provided to the township of Forbes. Council also provides non-potable water supply to the village of Ootha. Those villages which do not have reticulated sewerage systems are serviced by septic tanks. All rural properties within the LGA with lot sizes larger than two hectares have on-site sewage treatment systems (i.e. septic tanks).

The communities serviced are summarised in Table 3-1.

**Table 3-1: Communities serviced**

Town/ Zone	Estimated Population	Potable Water Supply	Sewerage
Forbes	7700	Potable	Sewage Scheme
Ootha	50	Non-potable	Septic tanks
Calarie/ Alcaringa	200	Potable	Septic tanks
Daroobalgie	10	Potable	Septic tanks

### 3.1 Water Supply Schemes

The Forbes water supply system draws raw water from two streams. The primary source is the Lachlan River as supplied from water storage at the Wyangala Dam. Forbes' water allocation is covered by the Water Sharing Plan for the Lachlan Regulated River Water Source 2003. The current agreement came into force in 2011 and is due for extension or replacement in July 2014.

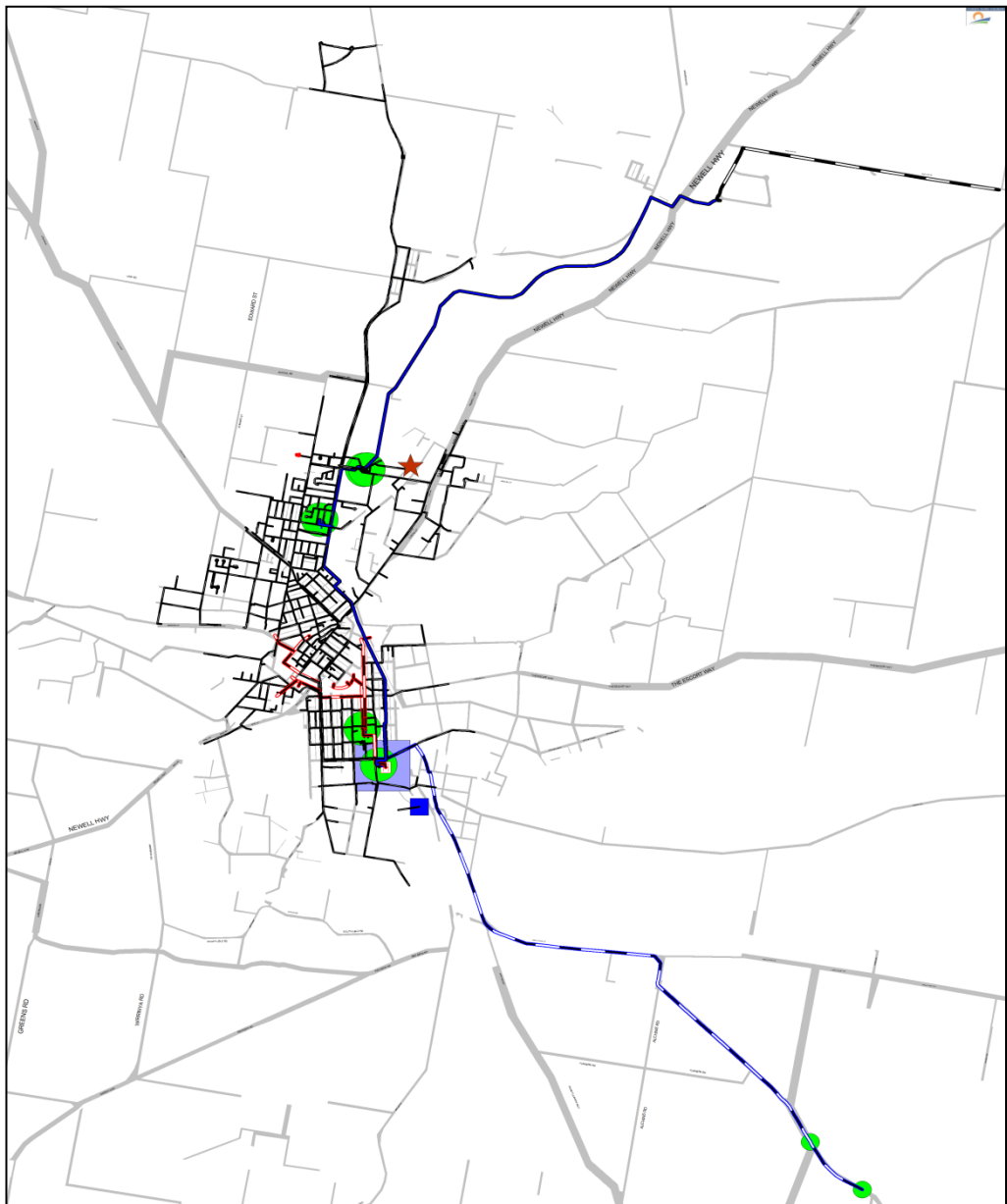
The second stream is a groundwater sourced from the Lachlan River Groundwater Basin. Council has two existing bores operating in this aquifer with a combined capacity of 11.1 ML/d. Council has commenced the construction of a third bore.

Forbes Shire Council provides potable water to the town of Forbes and the villages of Calarie and part of Daroobalgie. Non-potable water is currently supplied to the village of Ootha. The water filtration plant has a capacity of 26 ML/day.

The Forbes potable water supply system comprises:

- Rapid Sand Filtration WTP
- 5 Service Reservoirs (Capacity: 30 ML)
- 5 Pump Stations: (3 for potable supply, 1 ground water bore pumps and 1 river raw water pumps)
- 31 km of transfer and trunk supply mains
- 111 km of trunk reticulation mains

Figure 4: Forbes Water Supply System



### 3.1.1 Water Assets Summary

Forbes Shire Council has recently carried out valuation of the water assets as required by the Division of Local Government. However, a detailed condition audit of underground assets has not been carried out with estimates of the timing of replacement of assets based on the nominal lives of the assets. At this stage there is only a general idea of condition of water pipes based on the day to day experience of the maintenance staff. A projection of costs has been made for modelling purposes based on this knowledge and the asset register data.

The estimated values of Council's major water assets are presented in Table 3-2.

**Table 3-2: Asset Condition Summary - Forbes Water Supply System**

Asset	Quantity	Average Remaining Life (Years)	Condition (1 - Near new 5 – Poor)
Reticulation	111km	37	4
Trunk mains	31km	37	4
<b>Reservoirs</b>			
Turners Hill Reservoir 1	10ML	43	3
Turners Hill Reservoir 2	2.7ML	73	2
Turners Hill Reservoir 3	10ML	73	2
Gale St Reservoir	6.8ML	39	3
Clear Water Reservoir (FP)	2.8ML	16	4
<b>Water filtration plant</b>			
Plant A (Civil)	14ML/d	32	3
Plant B (Civil)	14ML/d	10	4
Buildings, Plants and Equipment including Telemetry	Various	10	4
<b>Pumping Stations</b>			
High Lift	85kW x3 Nos	33	3
Low Lift	30kW x3 Nos	33	4
Intake	41kW	33	4
Booster Pumps	25kW x5 Nos	45	4
Bore Pumps	32kW x5 Nos	56	1

**Table 3-3: Asset Condition Summary - Ootha Water Supply System**

Asset	Quantity	Average Remaining Life (Years)	Condition (1 - Near new 5 – Poor)
Reticulation	7km	28	4
Reservoirs	0.0675ML x 2Nos	23	4
Pumping Stations	8kW	20	4

**Table 3-4: Asset Value Summary - Forbes Water Supply system**

<b>Asset</b>	<b>Current Replacement Cost (\$'000) (MEERA) June 2012</b>	<b>Fair Value (\$'000) June 2012</b>
Reticulation	20,952,000	10,957,300
Trunk mains	12,765,300	8,521,800
<b>Reservoirs</b>		
Turners Hill Reservoir 1	2,246,700	902,000
Turners Hill Reservoir 2	896,700	639,000
Turners Hill Reservoir 3	1,953,600	1,406,400
Gale St Reservoir	1,211,500	400,400
Clear Water Reservoir (FP)	801,800	256,600
<b>Water filtration plant</b>		
Plant A (Civil)	6,564,100	2,625,700
Plant B (Civil)	6,564,100	820,500
Buildings, Plants and Equipment including Telemetry	8,752,100	2,567,300
<b>Pumping Stations</b>		
High Lift	1,021,000	302,400
Low Lift	750,200	180,500
Intake	144,100	64,500
Booster Pumps	457,600	188,100
Bore Pumps	1,430,300	1,190,700
<b>TOTAL</b>	<b>66,511,100</b>	<b>31,023,200</b>

**Table 3-5: Asset Value Summary - Ootha Water Supply system**

<b>Asset</b>	<b>Current Replacement Cost (\$'000) (MEERA) June 2012</b>	<b>Fair Value (\$'000) June 2012</b>
Reticulation	940,000	404,900
Reservoirs	75,100	26,950
Pumping Stations	115,700	81,950
<b>TOTAL</b>	<b>1,130,800</b>	<b>513,800</b>

### 3.1.2 Capital Works Program for Water Supply

Table 3-6 contains a summary of the major water supply capital works planned for Forbes Shire Council and the justification for why they have been planned, over the next 10 years.

**Table 3-6: Major Water Supply Capital Works**

Proposed Capital Work	Year	Justification
Development of bore no.3 and pipe line (375mm) from the bore	2014-2015	Improved Levels of Service
WTP components and electrical controls upgrade/replacement including telemetry	2014-2019	Asset renewal and upgrade for improved levels of service and to cater for growth
Decommissioning of Camp Hill reservoir	2014-2015	Improved Levels of Service
Repair and epoxy coating of WTP sand filters	2014-2024	Refurbishment of ageing assets
Mains replacement/renewal as per the Water AMP	Ongoing	Renewal of ageing assets

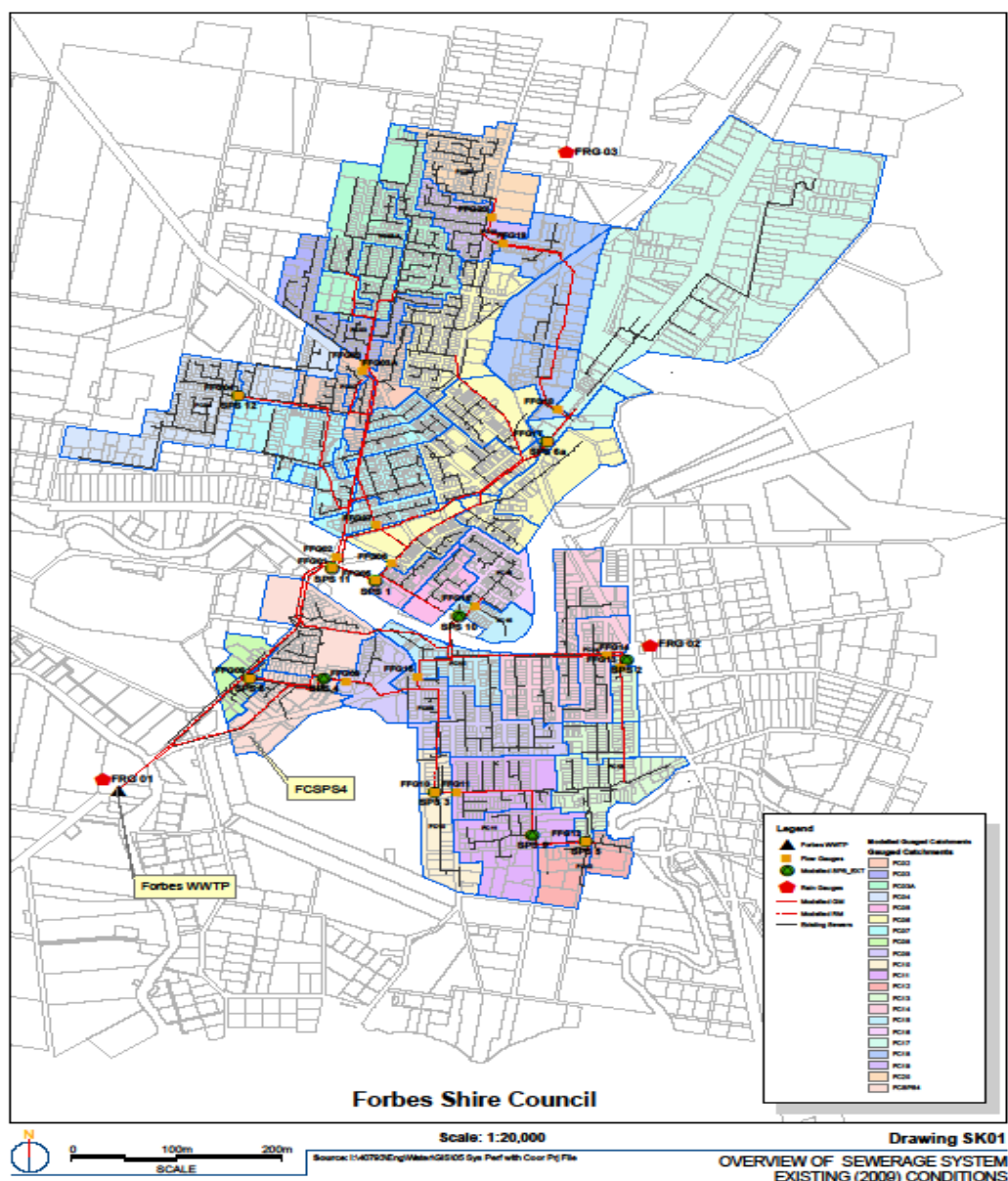
## 3.2 Sewerage Schemes

Council operates a reticulated sewerage system for the township of Forbes. All other villages in the Council area are serviced by on-site sewage management systems. Forbes town sewage is collected and pumped using 17 pumping stations into the Forbes sewage treatment plant (STP). The STP has a capacity of 12,000 EP. After treatment, the STP discharges its treated effluent into either the Lachlan River or Gum Swamp.

The Forbes sewage treatment system comprises:

- Intermittent Extended Aeration (Activated Sludge) Plant
- 17 Pump Stations
- 73 km of reticulation and gravity mains
- 11 km of rising mains

**Figure 5 – Service Area Map of Forbes Sewerage Scheme**



### 3.2.1 Sewerage Assets Summary

Forbes Shire Council has prepared an Asset Register and the locations of all major sewerage assets have been recorded. Council is continuously updating the asset register.

Council has recently carried out valuation of the sewerage assets including the inspection of a representative sample of sewer pipes as required by the Division of Local Government. However, a detailed condition audit of underground assets has yet to be carried out. Estimates of the timing for replacement needs in the medium and long term are based on the nominal lives of the assets. At this stage there is a general idea of condition based on the day to day experience of the maintenance staff. A projection of costs has been made for modelling purposes based on this knowledge and the asset register data.

The estimated values of Council's major sewer assets are presented in Table 3-7.

**Table 3-7: Asset Condition Summary – Forbes Sewerage**

Asset	Quantity	Average Remaining Life (Years)	Condition (1 - Near new 5 – Poor)
Gravity mains including Trunk mains	73km	25	5
Rising mains	11km	40	4
Sewage pumping stations	17Nos (20ML/d)	Mech.& Elec. - 30 Civil - 40	4
Sewage Treatment Plants	1No (12,000EP)	53	2
Buildings, Plants and Equipment including Telemetry		12	3

**Table 3-8: Asset Value Summary - Forbes Sewerage**

Asset	Current Replacement Cost (MEERA) (\$'000) June 2012	Fair Value (\$'000) June 2012
Gravity mains including Trunk mains	25,404,200	15,832,300
Rising mains	3,922,000	2,597,800
Sewage pumping stations	5,859,000	4,434,300
Sewage Treatment Plants	13,350,100	11,581,600
Buildings, Plants and Equipment including Telemetry	354,000	233,900
<b>TOTAL</b>	<b>48,889,300</b>	<b>34,679,900</b>

### 3.2.2 Capital Works Program for Sewerage

The following is a summary of the major sewerage capital works planned for Forbes Shire Council over the next 10 years. The justification for why they have been planned is also shown below.

**Table 3-9: Major Sewerage Capital Works**

Proposed Capital Work	Year	Justification
Sewage pump station (SPS 18) replacement	2014-15	Replacement of ageing asset
Replacement of rising main from Fitzgerald Bridge (SPS 5) to STP	2014	Renewal and upgrade for improved levels of service
Sewer relining / replacement and manhole refurbishment	2014 onwards	Repair and refurbishment of ageing assets
Odour and corrosion control for SPS (1, 4 and 11) and vent shafts	2014 onwards	Increased Levels of Service
Replacement/upgrade of pumps, switchboards and electrical components including PLC and SCADA at STP	2014 onwards	Asset Renewal

## 4 Levels of Service

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The Levels of Service:

- define explicitly the standards required
- are an expansion of the mission statements
- largely shape Council's detailed planning

The Levels of Service define the deliverables and are the driving force for the management and development of the water supply and sewerage schemes. Achieving the target Levels of Service is the **primary goal**.

This section reviews the services currently provided by the Council's water supply and sewerage schemes. In addition to identifying areas where improvements are necessary, the review also refers to aspects of the operation that are being performed well.

Council uses its judgement in setting standards and while there are statutory service standards in some areas such as water quality, effluent quality, noise, and sludge management, in other areas, stakeholders may be consulted and may desire levels of service which are even more stringent than the regulatory requirements.

While Council endeavours to close any perceived gap between the stakeholder expectations and the levels of services provided, this is also subject to economic, social and environmental considerations. This Plan presents Council's proposed approach to future service delivery.

It should be noted that while the current Levels of Service are the target, which Council aims to meet, they are not intended as a formal customer contract.

It is Council's responsibility to strive for continual improvement to achieve these levels in the most cost effective way. To demonstrate continuous improvement, Council will seek to provide the target Levels of Service in the most efficient manner. A number of items are of particular importance and these will be addressed under the relevant key result areas.

The current and target levels of service are shown in the following Tables.

**Table 4-1: Levels of Service – Water Supply**

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current	Future
AVAILABILITY OF SERVICE			
Normal Quantity Available^:			
Domestic Peak Day – Urban Areas	kL/tenement/ day	5	6
Domestic Average Annual Consumption – Urban Areas	kL/tenement/ year	386	400
Total Average Annual Consumption	ML/year	2005	2070
Total Peak Daily Consumption	ML/day	17.5	24
Peak/Average consumption	Ratio	3.2	4.2
Service Provision:			
Time to provide a domestic individual connection to water supply in serviced area*	Working days	10	7
Fire fighting:			
Compliance with the Water Supply Investigation Manual* (AS 2419.1 classifications 2,3,4.& 9 with floor area less than 1000 m <sup>2</sup> )	% area served	100(urban)	100(urban)
Pressure:			
Min. pressure when delivering 0.1L/sec	Metres	12	30
Max. static pressure - Urban Areas	Metres	<=50	<=50
CONSUMPTION RESTRICTIONS IN DROUGHTS:			
Level of restriction applied through a repeat of the worst drought on record	Restriction as % of normal usage	30%	
Average duration of restrictions	Months/ 10 years	12	
Average frequency of restrictions	No./ 10 yr. period	1	
SUPPLY INTERRUPTIONS TO CUSTOMERS:			
Planned			
- Notice given to domestic customers *	Days	7	7
- Notice given to commercial customers *	Days	7	7
- Notice given to industrial customers *	Days	7	7
- Maximum Duration	Hours/event	8	8
- Frequency	No./Year per customer	2	2
Unplanned			
- Water main breaks	No./100 km/Year	22	10 (state medians)
- Average duration	Hours/event	2	2
- Frequency	No./ per 1000 connections/ Year	123	37 (state medians)

Description	Unit	Level of Service	
		Current	Future
<b>Response Times for Service Interruptions*</b> (Time to have staff on-site commence work after notification) <b>Priority 1</b> (Failure to maintain continuity or quality of supply to a large number of customers or to a critical user at a critical time) All Customers - 90% of times - 100% of times	Minutes Minutes	30 120	30 120
<b>Priority 2</b> (Failure to maintain continuity or quality of supply to a small number of customers or to a non-critical user at a non-critical time) All Customers - 90% of times - 100% of times	Minutes Minutes	60 120	60 120
<b>Priority 3</b> (Failure to maintain continuity or quality of supply to a single customer) All Customers - 90% of times - 100% of times	Minutes Minutes	180 180	180 180
<b>CUSTOMER FEEDBACK/ COMPLAINTS<sup>@</sup></b> (identified in the CRM system)			
<b>Complaints Received</b> - Water quality complaints - Service complaints - Billing and account complaints	No./ 1000 connections	< 1 3 0	< 1 3 0
<b>Response Times for Feedback/ Complaints*</b> % calls answered by an operator within 30 seconds <sup>@*</sup> General complaints and inquiries: - Written/Email Complaints* - Personal/ oral complaints*	% Working Days Working Days	100% 5 2	100% 3 1
<b>ENVIRONMENT</b>			
Net greenhouse gas emissions (for Water services and Sewerage) <sup>@</sup>	Tonnes CO2 equivalent/ year	560	400
<b>WATER QUALITY (POTABLE WATER)</b> (Compliance with ADWG, NHMRC & NRMMC, 2011)			
<b>Microbial Parameters</b> Total coliforms E-coli form Sampling frequency	CFU/100ml CFU/100ml Samples/month	0 0 In accordance with NSW Health Requirements	0 0 In accordance with NSW Health Requirements

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current	Future
Physico-chemical Parameters*#			
pH	pH	8.1	6.5-8.5
Colour	HU	2	<15
Turbidity	NTU	0.9	<5.0
Fluoride	mg/L	1.12	0.5-1.5
Free available chlorine (WTP)	mg/L	1.5	<3.0
Free available chlorine (Reticulation)	mg/L	2.17	0.5-3.0
Iron	mg/L	0.04	<0.3
Manganese	mg/L	0.014	<0.1
Sampling and analysis frequency	No./year	In accordance with NSW Health Requirements	In accordance with NSW Health Requirements
Percentage Compliance			
Zones achieving compliance with			
- Physical parameters	No./ Total No. of Zones	1	1
- Chemical Parameters <sup>@</sup>		1	1
- Microbiological parameters <sup>@</sup>		1	1

<sup>@</sup> - NWI Performance Indicators; \* - Times apply for 95% of incidents;

<sup>^</sup> - FSC Water Conservation Strategy and Demand Management Modelling 2010

<sup>#</sup> - FSC Risk Based Drinking Water Management System

Note: The Levels of Service are the targets, which Council aims to meet; they are not intended as a formal customer contract.

**Table 4-2: Levels of Service – Sewerage**

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current Target	Future Target
SERVICE AVAILABILITY			
Extent of area serviced	% Service area	98	100
Time to provide a domestic individual connection to sewer in serviced area (95% of times)	Working days	14	7
SYSTEM FAILURES (OVERFLOWS TO THE ENVIRONMENT)			
Category One			
Failure due to rainfall and deficient capacity®	No./100 km/Year	0.5	0.2
Category Two			
Failure due to pump or other breakdown including power failure	No./100 km/Year	0	0
Category Three			
Failure due to main blockages and collapses®	No./100 km/Year	91	38
RESPONSE TIMES FOR SYSTEM FAILURES			
Time to have staff on-site commence work after notification			
Priority One			
Failure due to rainfall and deficient capacity®			
All Customers			
- 90% of times	Minutes	60	60
- 100% of times	Minutes	90	90
Priority Two			
Failure due to pump or other breakdown including power failure			
All Customers			
- 90% of times	Minutes	60	60
- 100% of times	Minutes	120	120
Priority Three			
Failure due to main blockages and collapses®			
All Customers			
- 90% of times	Minutes	120	120
- 100% of times	Minutes	120	120
CUSTOMER FEEDBACK/ COMPLAINTS®			
(identified in the CRM system)			
Complaints received	No./ 1000 properties/ year		
Service complaints		3	3
Odour Complaints			
- Treatment works (outside designated buffer zone)		0	0
- Pumping Stations		0	0

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current Target	Future Target
- Reticulation system		0	0
Billing and account complaints		<1	0
<b>Response Times for Feedback/ Complaints</b>			
% calls answered by an operator within 30 seconds	%	98%	98%
General complaints and inquiries:			
- Written/Email Complaints*	Working Days	5	3
- Personal/ oral complaints*	Working Days	1-2	1
<b>ENVIRONMENT<sup>@</sup></b>			
Net greenhouse gas emissions (for Water services and Sewerage) <sup>@</sup>	Tonnes CO2 equivalent/ year	560	400
Sewage treated to:	% of total volume of sewage treated		
- Primary level only		0	0
- Up to secondary level		0	0
- Up to tertiary or advanced level		100	100
Effluent discharge compliance with licence limits	% of samples/year	100	100
Net greenhouse gas emissions <sup>@</sup>	Tonnes CO2 equivalent/ year	764	700

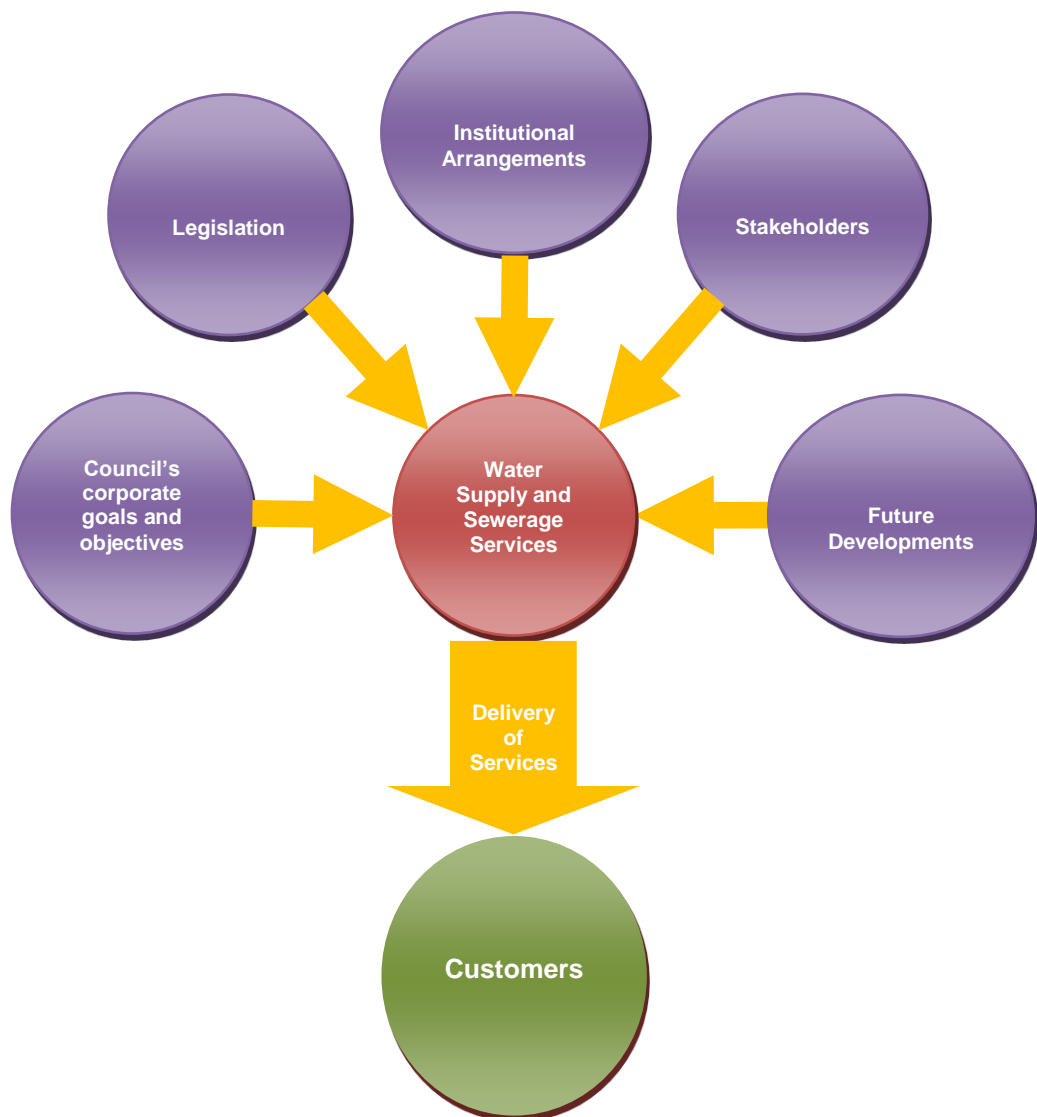
<sup>@</sup> - NWI Performance Indicators; \* - Times apply for 95% of incidents

Note: The Levels of Service are the targets, which Council aims to meet; they are not intended as a formal customer contract.

## 5 Operating Environment Review

The delivery of water supply and sewerage services to the schemes' customers is subject to a large number of constraints, requirements, guidelines and other factors, which collectively are referred to as the operating environment. The five major elements of the operating environment (refer to the figure below) are reviewed in this section.

**Figure 6 – Operating Environment**



## 5.1 Institutional Arrangements

There are several institutional arrangements available to Forbes Shire Council as potential structures for providing water supply and sewerage services. These include institutional models such as Amalgamation, County Councils, Commercialisation, Strategic Alliances, Corporatisation, Regional Corporation and Privatisation.

These models have been suggested in the options paper issued by the LGSA and the NSW Water Directorate to assist Councils in making a submission to the NSW Government Inquiry into Local Water Utilities.

In October 2013, the Independent Local Government Review Panel released a report that discusses the possibility for the amalgamation of many local government areas in NSW, including the amalgamation of Wedding Council with Forbes Shire Council. Although the outcome of the current local government review is uncertain, it is worth noting that an amalgamation of this kind would have a significant impact on Forbes Shire Council's water and sewerage operations.

Council recognises the Strategic Alliance model and is part of the Centroc Water Utility Alliance (CWUA), as well as delivering services as a local water utility (LWU) under the provisions of the Local Government Act 1993 and running its water supply and sewerage services in accordance with the NOW Best Practice Management Guidelines.

The CWUA facilitates a unified approach to water management in the central NSW region and includes the member councils of Bathurst, Blayney, Young, Cabonne, Cowra, Forbes, Harden, Lachlan, Lithgow, Oberon, Orange, Parkes, Upper Lachlan, Weddin, Wellington, Young and Central Tablelands Water. The definition of the Strategic Alliance and Commercialisation models are given below.

- Commercialisation: Where a Council operates on a commercial basis, i.e. each aspect of the Council's operations are self-sustaining. This arrangement is believed to be able to reflect the true cost to customers, be more efficient and provide better service choices. Note that there is some concern this model can lead to some valuable services being abandoned, based on an economic and commercial basis.
- Strategic Alliance: Where a Council joins other participating Councils in the region/catchment through a Memorandum of Understanding, in order to pool in available staff and other resources to provide water supply and sewerage services. This arrangement aims to help provide crucial pooled professional and technical resources for efficient delivery of services. The major concern regarding this sort of alliance is that if not mandatory, it may risk falling apart in the face of difficulties, agreed scope of pooled activities or lack of interest.

Council would like to continue with the current arrangements for the foreseeable future.

## 5.2 Legislative Framework

Numerous Acts influence the way in which Council can provide water supply and sewerage services to the community. Appendix B provides a discussion of the relevant legislation and the specific implications it has for Council's operations.

In general, more regulation, stringent enforcement and fewer subsidies from Government is imposing heavy burden on Council's management responsibilities and hence on its finances.

Additionally, latest Government policies tend to transfer more regulatory responsibilities to Local Government that further burdens the Council's limited resources.

Detailed and careful assessment of possible impacts on water supply and sewerage services and the environment will be needed if there are major changes to the amount of water allocation amount arising out of the Lachlan Regulated River Water Sharing Plan.

## 5.3 Corporate Policy

Forbes Shire Council has a number of policies relevant to the operation of water supply and sewerage business. These are summarised in the following Table.

**Table 5-1: Council Policies and Procedures**

Corporate Policies and Practices	Objectives/ Impacts
Asset Management Plans	<ul style="list-style-type: none"><li>– Provision of required service infrastructure in a sustainable manner</li><li>– Meeting legislative requirements</li></ul>
Community Consultation Principles Policy and Customer Service Policy	<ul style="list-style-type: none"><li>– Improved levels of service</li><li>– Better customer relations</li><li>– Equitable treatment of service faults</li></ul>
Growth Management Strategy	<ul style="list-style-type: none"><li>– Demand management</li></ul>
Liquid Trade Waste to Sewers Policy	<ul style="list-style-type: none"><li>– Equitable distribution of infrastructure costs</li></ul>
Sewer Service Pricing Policy	<ul style="list-style-type: none"><li>– Economic systems fully utilising available capacity</li></ul>
Water Charges for Home Dialysis Systems	<ul style="list-style-type: none"><li>– Socially responsible</li></ul>
Water Service Administration Policy	<ul style="list-style-type: none"><li>– Economic systems fully utilising available capacity</li></ul>
Work Health Safety Policy	<ul style="list-style-type: none"><li>– Health</li></ul>

## 5.4 Situation Analysis

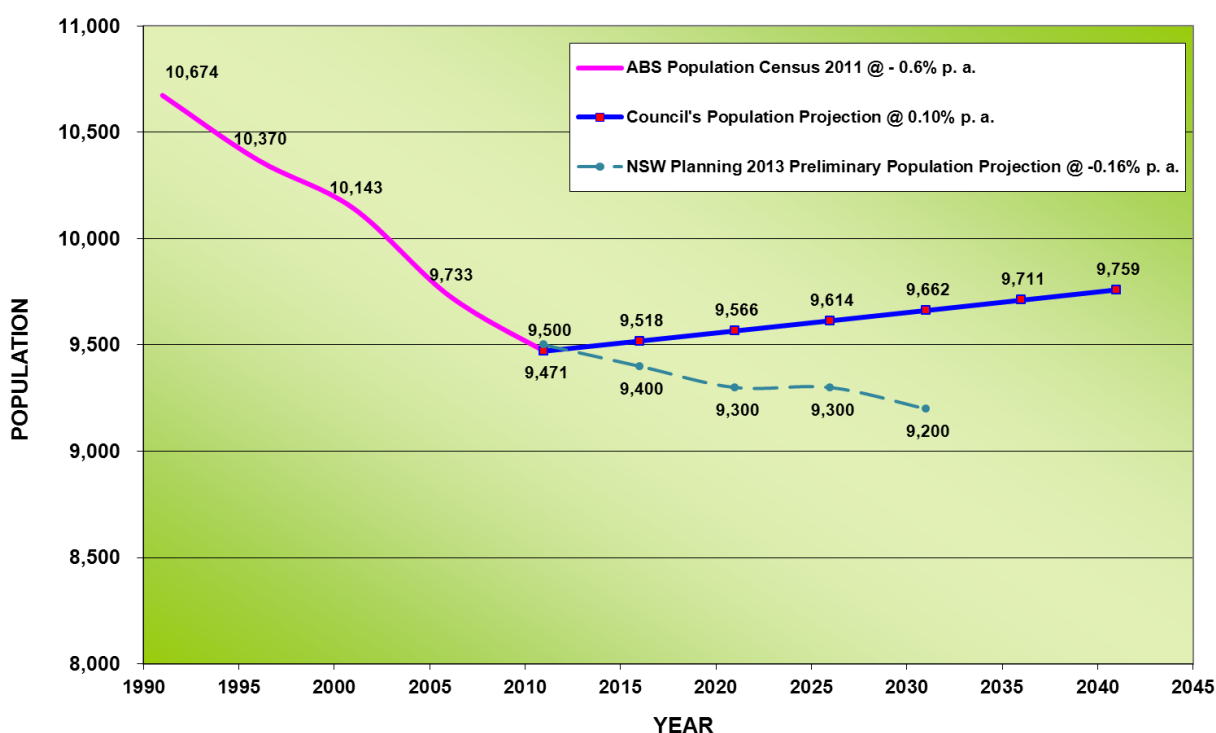
Council considered their vision over a 30-year planning horizon for the water supply and sewerage services and reflected on the changing operating environment due to future growth and developments that in turn influence the service required. A situation analysis identified the internal strengths and weaknesses along with the external opportunities and threats faced by the Council for the long term viability of the water supply and sewerage businesses. The outcomes of the analysis are shown in Appendix C. The results of this SWOT analysis were used to identify the principal issues for the water supply and sewerage services provided by Council.

## 5.5 Population Growth

Forbes Shire Council has had a compounding population decrease of 0.6 % p.a. during the 20-year period between 1991 and 2011 (Reference: ABS data – Regional Population Growth, Local Government Areas, NSW - 1991 – 2011, April 2013, Ref. 3218.0). The ABS Census data and the 2013 NSW Planning Preliminary Forecasts are shown graphically in the Figure below.

Whereas the Council already possesses water supply infrastructure capacity to service high population growth, it is realistic about the prospect of future growth in the Council area and has adopted a growth rate of 0.1% for future planning process (Reference: Water Conservation Strategy and Demand Management Modelling 2010 - Draft). This growth rate has been adopted in this Strategic Business Plan and for financial modelling for the financial projections during the 30-year forecast period.

**Figure 7 – Forbes Shire Council Population Growth Projections**



For water supply, the projected number of assessments for financial modelling purposes is based on the 3,592 (Residential: 3,202; Non-residential: 390) assessments in June 2013 (Reference: Forbes Shire Council *Special Schedule 3 for the year 2012/13*) and factored up on a pro-rata basis in line with the above forecasts.

For sewerage, the projected number of assessments for financial modelling purposes is based on the 3,208 (Residential: 2,815; Non-residential: 393) assessments in June 2013 (Reference: Forbes Shire Council *Special Schedule 5 for the year 2012/13*) and factored up on a pro-rata basis in line with the above forecasts.

## 5.6 Service Provision

Council's future growth projections indicate that the water supply and sewerage schemes will need to be maintained to cope with ageing assets, increasing demand and legislative requirements. Council plans to extend potable water supply services to urban growth areas and some rural customers as approved by Council.

Council's response to the forecast of likely future demands and changes to service provision are summarised in the table below.

**Table 5-2: Council's Response to Forecast Demand and Service Area Changes**

Changes	Council Actions
Customer Growth Rate	Available water allocation/ sewerage capacity is adequate to meet future demand
Commercial Growth	Addressing the water quality needs of existing and future commercial operations
Environmental Changes	Maintain the focus on environmental issues in line with community expectations
Customer Service	Continuously improve services and meet increasing customer expectations
Technology Changes	Take advantage of new technologies to achieve cost effective operations Council staff development
Government Policy	Keep abreast of changes in Government policies and Acts Apply for grants and subsidies

## 5.7 Service Delivery

The Federal Industry Commission Report on the Australian Water Industry indicated that there should be an efficient use of resources in the water industry – natural, physical and financial. Their 1992 recommendations were wide-ranging and covered matters such as pricing and structural reforms. This has been followed up by the NSW Government's Competition Policy and the Independent Pricing and Regulatory Tribunal's Pricing Principles for Local Water Authorities. In addition, the Local Government Association has issued a guideline to self-regulation, which suggests ways Councils can improve their service delivery.

Council has considered the advantages and disadvantages of various methods of service delivery including full service contract, part-service contract, BOOT (Build, Own, Operate and Transfer), resource/ service sharing, and in-house resourcing.

Currently, the majority of Council's operation and maintenance works are carried out by in-house staff, with tasks such as laboratory testing, meter reading, mains replacement, mains cleaning etc. carried out by Council staff. Council contracts out a number of services operations such as meter reading, Quality Assurance and EPA license testing, electrical repairs, mechanical repairs, pipeline relining work, security contractor, reservoir cleaning, and vacuum truck for non-destructive excavation for water main and service repair work and leak detection.

Council undertakes more routine capital works such as water and sewer mains construction however most capital works related tasks such as engineering and environmental studies, detailed design, contract documentation and construction and will continue to contract out work where in-house expertise and resources are limited and where more economical solutions are available.

Resource sharing, shared services (e.g. trade waste and road safety), borrowing of staff, knowledge/information sharing, etc. are of interest to Council and across the region. Considerations include rates, hire agreements, qualifications, skills, shared service

agreements, panel contracts, long-term contracts, buying power, etc. Key advantages of resource sharing are listed below.

As mentioned earlier, Council is part of the Centroc Water Utility Alliance (CWUA) and is planning to identify areas of co-operating with neighbouring Councils. Currently, some share arrangements are in place in the area of community education and awareness with a combined waterwise campaign and regional management of catchments. Other combined projects include Best Practice Management Compliance and sewer relining and smoke testing.

### Key Advantages of Resource Sharing

- There would be a reduction in the number of resources required by Council as these would be shared with the other organisations.
- By sharing the resources associated with the provision of water supply and sewerage services with other organisations, economies of scale would be achieved.
- May enable specialist expert teams to be established and used on a regional basis.

### Conclusion

The various service delivery arrangements were rated on a scale of +1 (very possible) to -1 (very unlikely) with the following ranks:

**Table 5-3: Ranking of Service Delivery Options**

Option	Ranking
Full Service Contract	-1
Outsourcing /Part Service Contract	+1
BOOT	-1
Resource/Service Share	+1
Fully In-house	-1

Council believes that under the current operating environment only part service contract options and resource sharing options will hold any real advantages in the foreseeable future. Therefore, the present service delivery strategy is to continue with a combination of in-house delivery and part service contract.

Council will continue to work together with surrounding Councils via CENTROC Water Utilities Alliance to identify other areas where to improve efficiency and cost effectiveness by regional collaboration.

## 6 Best Practice Management

### 6.1 Compliance Status

The NSW Office of Water (NOW) has prepared *Guidelines for Best-Practice of Water Supply and Sewerage* pursuant to section 409(6) of the Local Government Act 1993. A summary of Forbes Shire Council's current compliance status of the guidelines is listed in Table 6-1.

**Table 6-1: Best Practice compliance**

Best Practice Requirement	Status
Strategic Business Plan (including Financial Plan)	This document
Water Supply Service Pricing	
- Full cost recovery without significant cross subsidies	Compliant
- Complying residential charges with pay-for-use water pricing, independent of land value	Compliant
- Complying non-residential charges	Compliant
- Development servicing plan and adoption of developer charges	Compliant
Sewerage Service Pricing	
- Full cost recovery without significant cross subsidies	Compliant
- Complying residential charges, independent of land value	Compliant
- Complying non-residential charges	Compliant
- Development service plan including commercial developer charges	Compliant
- Complying liquid trade waste fees and charges	Compliant
- Complying liquid trade waste policy and approval for all discharges	Compliant
Water Conservation	Compliant
Drought Management	Compliant
Performance Reporting	Compliant
Integrated Water Cycle Management	Compliant
Asset Management*	
- 30-year capital works plan	Compliant
- Operations and Maintenance Plans	Compliant

\* Note: development of an AMP (asset management plan) is not currently a requirement of NOW Best Practice Guidelines; however, it is required to comply with the Division of Local Government regulations.

## 6.2 Principal Issues

A number of issues have been identified as important to the future operation of the water supply and sewerage schemes. Table 6-2 presents a list of major issues and where they have been addressed in this Strategic Business Plan.

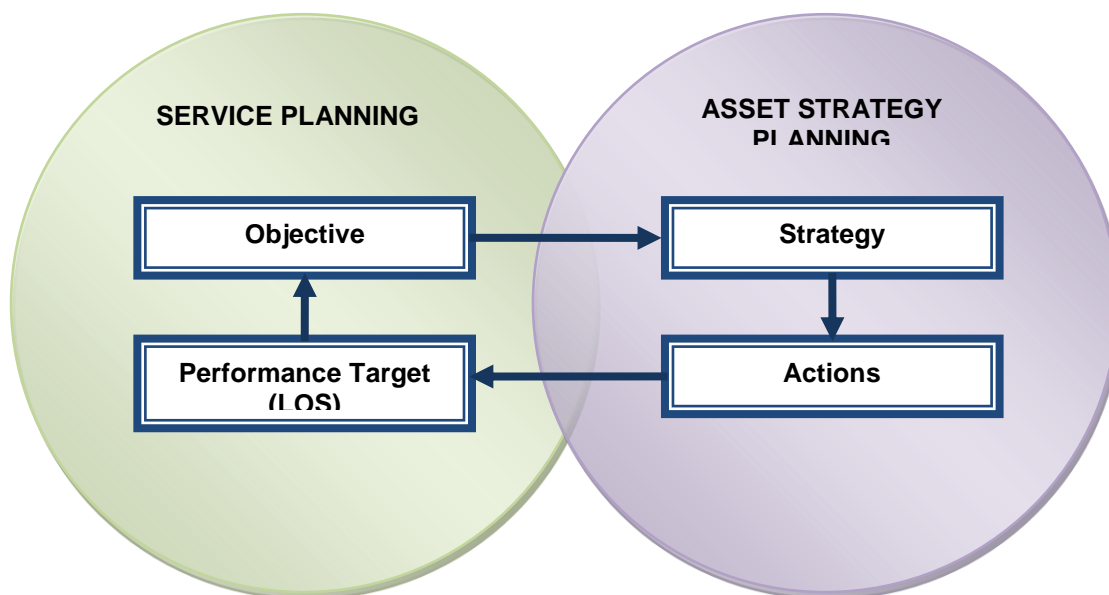
**Table 6-2: Principal Issues**

Issue	Section where this is addressed
Meeting NOW Best Practice Management Guidelines and the adopted levels of service	- Levels of Service Review (Section 8.1)
Equitable pricing and full cost recovery	- Service Pricing (Section 8.5) - Financial Planning (Section 12.1)
Reticulation asset upgrades for extension of services to residential growth areas to avoid likely drops in levels of service in the existing service areas	- Areas to be Serviced (Section 8.2) - Capital Works (Section 10.3)
Meeting Australian Drinking Water Quality Guidelines	- Levels of Service Review (Section 8.1)
Community education and awareness	- Customer Relations (Section 8.6) - Community Involvement Relations (Section 8.7)
Ageing infrastructure and asset renewal	- Operations and Maintenance (Section 10.1 and 10.2) - Capital Works (Section 10.3)
Maintaining adequate levels of appropriately skilled staff and succession planning	- Workforce Planning (Section 11)

## 7 Strategic Action Plans - Overview

The relationship between “Service Planning” and “Asset Strategy Planning” is represented in Figure 8.

**Figure 8 – Relationship between Service Planning and Asset Strategy Planning**



In order to achieve the levels of service, a number of objectives were defined along with the actions that are expected to aid Council in achieving these targets. An “Objectives and Actions” table has been created for each area of the Action Plan. The definitions for each of the key terms used in these tables is summarised in Table 7-1.

**Table 7-1: Key Terms in Objectives & Action Tables**

Section	Description of Contents
Objective (Goal)	Defines how key result areas contribute to service goals
Performance Targets	Expected Outcomes
Strategies	The plan for achieving the objective(s), expressed in general terms rather than specifics
Actions	Specific tasks to implement strategies and achieve objective(s)
Responsibility	Person in charge of task completion
Cost	Implementation (Implement) – One off cost Ongoing - Cost incurred annually over a number of years or at regular intervals NAE – No Additional Expenditure (over and above current level of expenditure)

The acronym NAE has been entered where No Additional Expenditure is required where current levels of expenditure are considered sufficient to cover the required activities.

The responsibility for ensuring that each of the actions are undertaken has been assigned to a member of Council’s management team. Staff identified responsible are referred to by their position acronym. The list of abbreviations for staff positions used in this section is presented in Table 7-2.

**Table 7-2: Staff Position Abbreviations**

Abbreviation	Position
GM	General Manager
DETS	Director Engineering & Technical Services
DESP	Director Environmental Services and Planning
DTCCD	Director Tourism, Community and Cultural Development
MTS	Manager Technical Services
WSSE	Water, Sewer and Stormwater Engineer
AO	Assets Officer
WFPTL	Water Filtration Plant Team Leader
STPTL	Sewage Treatment Plant Team Leader
FM	Finance Manager
SHRA	Senior Human Resources Advisor

## 7.1 Service Planning

There is a relationship between the Levels of Service (LOS) to be provided to consumers and the actions that will be undertaken by Council. The following table shows how the Levels of Service map into the key result area action-planning framework. As such, it would be expected that any changes to current LOS would be addressed in the indicated objectives.

**Table 7-3: Relationship between Objectives and Levels of Service**

Objective	Levels of Service
Service Performance Management	Sustainability
Area Served	Availability of Service
Water Conservation	Demand Management Restrictions
Availability	Quantity
Sewer Load Management	Discharge – Trade Wastes Failures (Inflow/Infiltration)
Pricing	Availability – user pays Rebates – pensioners
Customer Relations	Water Restrictions Interruption advice Complaints/Enquiries
Community Consultation	Service pricing Environmental Impacts
Environment	Sewage overflows/ treatment Effluent and sludge disposal/ reuse
Operations	Water quality – compliance Service Interruptions/ sewer blockages Response times
Maintenance	Water quality – compliance Failure – breakdowns Interruptions – planned and unplanned
Capital Works	Water quality – compliance Availability – capacity Fire fighting – pressure Delivery pressure Failures/ service interruptions – asset renewal Effluent disposal - compliance
Work Force	Interruptions – staff on call Customer complaints/ requests Response times
Finance	Financial sustainability/ Business continuity Affordability - model

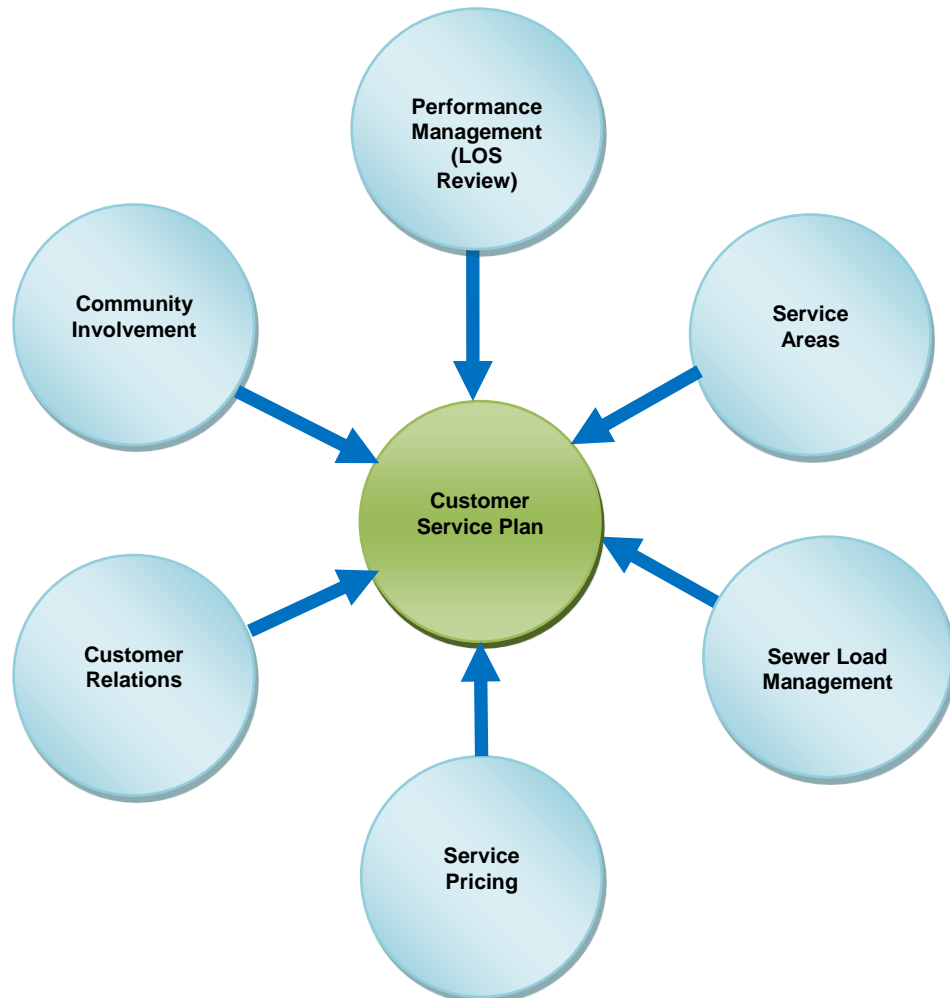
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## 8 Customer Service Plan

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The Customer Service Plan covers activities, which involve interaction between Council, its customers and the wider community as illustrated in Figure 9.

**Figure 9 – Components of the Customer Service Plan**



## 8.1 Performance Management (Levels of Service Review)

The Levels of Service discussed in Section 4, are designed to reflect an optimisation of the desired service provision, what is affordable, and the system's capability. These considerations take into account legislative requirements, industry standards and customer demands.

This section reviews the services currently provided by the Council's water supply and sewerage schemes. In addition to identifying areas where improvements are necessary, the review also refers to aspects of the operation that are being performed well.

The Levels of Service Review objective should enable the community to be aware of, and endorse the Levels of Service provided. As a public document, this report provides the necessary background information.

To demonstrate continuous improvement, Council will seek to provide the target Levels of Service in the most efficient manner. A number of items are of particular importance and these will be addressed under the relevant key result areas.

Under the NOW Best Practice Management Guidelines, a performance review is required to demonstrate that Council is either achieving the Level of Service or progressing towards achieving the target levels. Monitoring and benchmarking are needed to help Council determine if the methods are appropriate or more effective than other Councils. Performance data is forwarded to NOW in September each year.

A benchmarking exercise is then conducted to ensure Levels of Service are comparable to others in the industry at present. The outcome of the benchmarking exercise is provided as a feedback from NOW to the Councils as a 2-page Triple Bottom Line (TBL) report. The TBL report should be reviewed and an action plan to address areas of under-performance prepared by the Council.

Generally Council has been performing well in respect of the Levels of Service. Maintaining the levels of service is Council's current priority.

**Table 8-1: Objectives & Actions - Levels of Service Review**

<b>Objective 1: Levels of Service Review</b>					
To meet adopted levels of service for water supply/ sewerage					
<b>Performance Target</b>					
95% compliance with levels of service and action planning					
<b>Strategies</b>					
Continually monitor and compare services provided with the adopted LOS					
Action	Start	End	Responsible	Cost (\$'000)	
				Implement	Ongoing
Monitor achieved levels of service and compare with adopted levels of service		Ongoing	MTS/ WSSE		NAE
Report key performance indicators to Council	Quarterly	Ongoing	MTS		NAE
Review and update Strategic Business Plan	2013	4 yearly	MTS	25	25 every 4 years
Monitor implementation SBP Action Plans		Ongoing	DETS		Ongoing
Report performance data to NOW	Annually	Ongoing	WSSE		NAE
Report key performance indicators to NOW and TBL reports to Council	Annually	Ongoing	WSSE		NAE
Implement Water Quality Management Plan to address ADWG requirements		Ongoing	MTS		NAE
Input and review of special schedules for Div. of Local Govt. in the financial statements	Annually	Ongoing	FM/ MTS		NAE
EPA compliance reporting for licence renewal	Annually	Ongoing	WSSE		NAE
Review and input to annual report including SOE	Annually	Ongoing	MTS		NAE
Dangerous goods licence return to Work Cover	Annually	Ongoing	WSSE		NAE
Fluoride concentration reporting to NSW Health	Monthly	Ongoing	WSSE		NAE

## 8.2 Areas Serviced

This section of the Customer Service Plan addresses Council's intentions in the provision of water supply and sewerage services for the next thirty years.

The extension of water supply and sewerage services to new areas dependent on a range of factors, the most important of which are:

- The growth in rural settlements
- The impact on levels of service to existing customers
- The environmental impact of the works
- Cost to customers associated with extending services
- Within the new Local Environment Plan (LEP) release areas, development will be dependent upon availability of sewerage services

When extending services, Council will:

- Treat all residents as equal for the provision of services
- Consider residents expectation of service
- Consult community when considering new development areas or backlog programs
- Compete with neighbouring Councils in attracting commercial and industrial developments;

In addition to the infill developments within the currently serviced areas, Council plans to extend water supply or sewerage services to potential growth areas within Forbes Township as identified in the land zoning map for the serviced communities adopted as part of the Local Environmental Plan, 2012. These include:

- River Road; and
- Morton Street

Council currently has no plans to extend water supply or sewerage services to any other villages or rural communities.

**Table 8-2: Areas Serviced – Water**

TOWNS	Current Service		Future Service (30 years)	
	Availability	Population	Availability	Population
Forbes	Potable and raw water supply	7700	Potable and raw water supply	10400
Calarie/ Alcaringa	Potable water supply	200	Potable water supply	300
Daroobalgie	Potable water supply	10	Potable water supply	20
Ootha	Non - potable water supply	50	Non - potable water supply	50
Bedgerebong	Rainwater	150	Rainwater	150
Corinella	Rainwater	100	Rainwater	100
Wirrinya, Garema, Warroo	Rainwater	200	Rainwater	200

**Table 8-3: Areas Serviced – Sewerage**

TOWNS	Current Service		Future Service (30 years)	
	Availability	No. of Service connections	Availability	No. of Service connections
Forbes	Reticulated sewerage	7700	Reticulated sewerage	10400
Calarie/ Alcaringa	Septic tanks	200	Septic tanks	300
Daroobalgie	Septic tanks	10	Septic tanks	20
Ootha	Septic tanks	50	Septic tanks	50
Bedgerebong	Septic tanks	150	Septic tanks	150
Corinella	Septic tanks	100	Septic tanks	100
Wirrinya, Garema, Warroo	Septic tanks	200	Septic tanks	200

**Table 8-4: Objectives & Actions – Areas to be serviced**

<b>Objective 2: Areas to be Serviced</b>					
Services to extend to all remaining un-serviced urban areas where economically feasible and other areas in accordance with LEP on a user pay basis					
<b>Performance Target</b>					
Options study to extend service to un-serviced areas and future service areas completed by June 2015					
<b>Strategies</b>					
Investigate and implement services appropriate for remaining un-serviced areas					
<b>Action</b>	<b>Start</b>	<b>End</b>	<b>Responsible</b>	<b>Cost (\$'000)</b>	
				<b>Implement</b>	<b>Ongoing</b>
Review designated service area as marked in LEP	Jan 2014	Jun 2014	MTS		NAE
Undertake options study to extend service to unserved areas and future service areas	July 2014	June 2015	MTS		NAE
Implement identified options for extension of services	As needed		MTS	80	

## 8.3 Sewer Load Management

This section of the Plan outlines Council's intention in the management of loadings on the sewerage systems. While the impacts and management practices are of concern to the Customer Service Plan, the solutions must be an integrated part of the Asset Management Plan since they involve long-term system maintenance strategies.

Reducing hydraulic and biochemical loading on the system can:

- Effectively prolong the life of the existing assets;
- Defer new works programs;
- Make treatment processes more effective;
- Reduce siltation in the system and reduce pump wear;
- Reduce operation costs; and
- Improve environmental performance.

Problems of load management may occur due to changing development patterns affecting design capacity, trade waste discharges, stormwater, or ground water.

### Inflow and Infiltration Management

Although water demand management can reduce the hydraulic load on the treatment works, the major factor is usually the ingress of water into the system. The challenge is to control and reduce any significant inflow and infiltration (I/I). The main reference for the management of Inflow and Infiltration was written by the Department of Land and Water Conservation (DLWC) in 1996. The section responsible for this study is currently part of NOW. The definitions used were:

- Inflow is stormwater that entered the sewerage system through direct ingress from illegal connections of roof drains, back yards and low gullies, manhole covers, surface water drain connections etc.
- Infiltration is stormwater that entered the sewerage system as a result of damage to the sewers due to cracking, breakage, open joints and broken junctions etc. Infiltration can occur in dry weather as well as wet weather if the pipes are below the water table, or adjacent to a streambed

The main issues identified with regards to inflow and infiltration are:

- Wet weather inflow and infiltration (I/I) caused by a combination of stormwater/sewer cross connections, illegal connections, defective pipes and defective access chambers; and
- Wet weather hydraulic loads and associated operational impacts on STPs.

The primary strategies for reducing I/I are:

- Education of plumbers and general public regarding illegal connections;
- Inspection of sewers to find damaged areas;
- Smoke testing and CCTV to find and remove illegal connections and faulty plumbing;
- Sewer re-lining.

## Liquid Trade Waste Management

The treatment system functions can also be jeopardised by high biological shocks or toxic chemical loading exerted by liquid trade wastes. Therefore, the Council needs to assess the current levels of liquid trade waste discharges by non-residential customers into the town sewer system.

Council has already developed and adopted a trade waste policy to control commercial/industrial discharges into the system. Council is planning to review and update the liquid trade waste policy and the liquid trade waste regulatory framework for full implementation in accordance with NOW guidelines by June 2014.

Further, as industry develops, trade waste policy will be reviewed to outline service expectations to developers, targeting in particular, chemicals, fuels, oils and hospital discharges and would start with a survey to determine the contributors.

Council plans to address the following main issues in this regard by updating the trade waste register and implementing trade waste policy to protect the sewers and STP from the impacts of high strength waste discharges.

**Table 8-5: Objectives & Actions – Sewer Load Management**

<b>Objective 3: Sewer Load Management</b>					
Reduce wet weather hydraulic sewage loading to its economic limit and manage the biochemical load due to liquid trade wastes					
<b>Performance Target</b>					
Implement LTW Pricing by June 2014					
<b>Strategies</b>					
Implement I/I reduction program					
Fully implement Liquid Trade Waste Policy					
<b>Action</b>	<b>Start</b>	<b>End</b>	<b>Responsible</b>	<b>Cost (\$'000)</b>	
				<b>Implement</b>	<b>Ongoing</b>
Completion of sewer reticulation model	October 2014	June 2015	WSSE	NAE	
Develop and implement I/I program: - Illegal connections (smoke testing)	July 2014	June 2020	MTS/ WSSE	Refer to CWP	
Send out notices and enforce removal of illegal connections	Started	Ongoing	AO	NAE	
Implement sewer/ manhole rehabilitation/ relining program		Ongoing	MTS	CWP	
Implement LTW Pricing	March 2014	June 2014	MTS	NAE	
Maintain trade waste register and report to NOW	Annually	Ongoing	WSSE		NAE
Recruit a part-time Trade Waste Officer	As identified	Ongoing	SHRA/ DETS	Refer to Workforce Planning	

## 8.4 Water Conservation, Demand and Drought Management

This section of the Plan outlines Council's intention in the management of water demands. Water conservation falls partly in the Customer Service Plan and partly in the Asset Management Plan.

Water conservation is aimed at reducing the water consumption, through elimination of waste and improved efficiency. It is not Council's intention that customers ration their water use as Council's policy to provide unrestricted supplies of water still stands. Rather, Council aims to educate customers to use water wisely and take necessary steps to avoid wasteful practices.

Conserving water through demand management has the potential to:

- Reduce the operating costs of the system; and
- Defer the need to augment the system and to develop new water sources.

In addition to saving money and reducing the charges to customers, water conservation provides environmental benefits by efficient use of valuable water resource.

Council plans to undertake water conservation initiatives with a dual objective of meeting current and future demand through planning, and influencing customer usage through education and information.

Current and future water conservation initiatives and measures are described in Council's Demand Management Plan, which has been approved by NOW.

The options in the Demand Management Plan have been considered in the Centroc Regional Demand Management Plan (CRDMP) and implementation options for Council include the added benefit of a regional approach, bringing economies of scale as well as capacity building for Council water managers and operators.

Drought management aims to ensure that town water supplies with significant storage do not fail in times of drought. Drought management planning includes:

- Documenting basic data on:
  - communities served/ not served by reticulated water supply;
  - water demand;
  - records of average rainfall;
  - evaporation rates;
  - records of past droughts;
  - the existing water supply system and its water sources; and
  - historical performance of rivers, dams, weirs and bores in previous droughts.
- Strategies to achieve the objective of having sufficient water to satisfy the basic needs of the community;
- Consultation with stakeholders including government agencies;
- Agreed procedure for progressive implementation of water restrictions; and
- Human resource requirements.

The Centroc's Water Security Study (August 2009) determined that the probability of Level 1 restrictions is 10% and that for the total system failure is 0.4%. Council plans to review and update the current Drought Management Plan by December 2014, to accommodate the changing patterns of drought cycles in the region.

**Table 8-6: Objectives & Actions – Water Conservation, Demand and Drought Management**

<b>Objective 4: Water Conservation, Demand and Drought Management</b>					
To provide, maintain and operate effective urban and rural water supplies and minimise wastage					
<b>Performance Target</b>					
Implement WTP backwash water reuse for irrigating botanical garden sporting complex by January 2014 Review and update the Drought Management Plan by December 2014					
<b>Strategies</b>					
Implement Demand Management Plan					
Action	Start	End	Responsible	Cost (\$'000)	
				Implement	Ongoing
Implement Demand Management Plan Rebates for water saving showerheads Free mulch	Started	Ongoing		NAE	
Continue membership with Save Water Alliance Community awareness campaigns Water Week		Ongoing	WSSE		NAE
Implement reuse of backwash water from WTP for irrigating botanical garden sporting complex	Jan 2014	Ongoing	MTS		NAE
Implementing Best practice pricing		Ongoing	FM		NAE
implement Water Loss Management Program to address non-revenue water issues such as - Leak detection - Monitoring minimum night flows		Ongoing	WSSE		NAE
Implement water meter replacement program	Started	Ongoing	WSSE		CWP
Review and update the Drought Management Plan	July 2014	Dec 2014	MTS	NAE	
Implement water security options as identified in the IWCM and Drought Management Plan	As required		MTS	CWP	

## 8.5 Pricing

This section of the Plan outlines Council's intentions regarding the pricing of water supply services.

Council's pricing policy will conform to the following general principles:

**Equity** - adoption of user pays principles. Residential and non-residential revenue to be collected via a two-part tariff which reflects the level of water used and hence the load on the sewer system. (It is considered equitable that people pay for the cost of the services they use).

**Financial** - provision of adequate cash flows to meet operating costs and to fund future capital works (as determined in the financial plans).

**Customers** - provision of a service of desired quality and reliability at a fair and affordable price.

**Cross subsidies** - should be fully disclosed in Council's reporting.

**Community service obligations** - provision of services to pensioners, disadvantaged groups and general community amenities, to be recognised.

**Other** - simplicity of pricing structure for ease of understanding by customers and stability of income.

### Water Charges

Council has already adopted a two-part inclining block water supply tariff structure comprising an access charge and a usage charge for all types of customers, including a step increase in usage charge for higher consumption by residential customers. Council's current water charges are shown below.

**Table 8-7: Charges for Water Supply**

Charge	2013 - 2014		
	Forbes Potable	Ootha Non-Potable Water	Non-Potable
Access/Availability charge (20mm):	\$201/year	\$237/year	-
Usage charge (\$/KL):			
For residential customers:			
First step volume (up to 600kL)	\$0.77	\$0.77	
Second step volume (600kL plus)	\$1.13	\$1.13	
For non-residential customers (all consumption)	\$0.77	-	\$0.34

Council plans to review the water supply tariffs in view of the recent advice from NOW regarding inclining block tariff for residential water usage. Council intends to phase out the second step usage charge for residential customers over time, while maintaining the required access to usage charge revenue from residential charges.

## Sewerage Charges

Best Practice Pricing Guidelines for sewerage services recommend adoption of two-part tariff structure for non-residential customers that has features such as:

- Uniform annual charges for residential customers
- A two-part, access and usage charges for non-residential customers;
- Trade waste charges for identified commercial and industrial customers; and
- Assessment and adoption of appropriate sewage discharge factors for commercial and industrial customers

The best practice tariff structure provides revenue stability and sustainability for the sewerage services and sends signals to business and industrial customers to conserve water as a resource. Council's sewerage charges are shown below.

**Table 8-8: Charges for Sewerage Services**

Charge - Forbes	2013-14
Residential:	
- General (20mm water service)	\$618.00
- Unit/flat	\$618.00
- Usage charge (\$/kL)	\$1.41
Non-Residential:	
- Access charge (20mm water service)	\$618.00

## Developer charges

Developer Charges are up-front charges levied under Section 64 of the Local Government Act to recover part of the infrastructure costs incurred in servicing new developments or additions/changes to existing developments. Developer charges serve two related functions:

- They provide a source of funding for infrastructure required for new urban development.
- They impact on the costs of urban development and thus encourage less costly forms and areas of development.

Council's current Development Servicing Plan (DSP) and developer charge calculations are in need of updating in accordance with NOW Developer Charges Guidelines, 2012 (Consultation Draft).

Current developer charges for the Council are shown below.

**Table 8-9: Developer Charges for 2013/2014**

Service Area	Developer Charges for 2013-14	
	Water	Sewerage
Forbes (per lot/ residence)	\$6,464	\$3,975
Calarie or Alcheringa Subdivision	\$6,905	-

**Table 8-10: Objectives & Actions – Service Pricing**

Objective 6: Service Pricing					
Pricing which is equitable and allows the water and sewerage systems to provide for operations and future infrastructure needs					
Performance Target					
Review tariffs in-line with NOW guidelines to achieve full cost recovery by June 2014					
Strategies					
Comply with NOW Best Practice Management Guidelines and review tariff structure every 4 years to meet financial planning revenue goals					
Action	Start	End	Responsible	Cost (\$'000)	
				Implement	Ongoing
Review and update developer charge calculations and the Development Servicing Plan	Jan 2014	June 2014	MTS	30	
Review tariffs in-line with NOW guidelines to achieve full cost recovery	Started	March 2014	FM		NAE
Adjust tariffs for CPI	Annually	Ongoing	FM		NAE
Adjust developer charges for CPI	Annually	Ongoing	FM		NAE

## 8.6 Customer Relations

Council aims to maintain good customer relations through the:

- provision of a quality service,
- keeping customers informed of Council's intentions,
- responding to customer and community needs

Council believes it operates a service that is reliable, has a good level of service and provides a quick response to problems.

Customer satisfaction is measured in a variety of ways to suit the circumstances and to give a valid indication of the extent to which customers feel satisfied with the type, quality, cost and performance of service provided.

Council has adopted a 'Customer Service Policy' detailing procedures for handling customer feedback. It also maintains requests and complaints register that classifies and generates work orders to address customer requests.

Council promotes a customer focussed, socially responsive communications culture for service provision issues. Keeping customers informed is agreed by Council to be important for good customer relationship.

Methods employed by Council for customer communication include:

- Media (newspaper, local radio, television, social media)
- Customer contact – phone, front desk, email, written responses, direct on-site contact
- Councillors' feedback
- Annual Reports/Business Plans, IPR documents on display
- Information brochures and flyers (with rates notices)
- Letterbox drop
- Customer Surveys or Community reference groups
- Council Website

Adherence to the published levels of service is important and notification of any planned failure to comply should be given wherever possible. Performance monitoring and reporting is very important for updating and review of the Strategic Business Plan.

In order to carry out Council's mission to focus on the community expectations, a level of communication is required so that the community is satisfied that the Council's decisions are responsive to their needs.

**Table 8-11: Objectives & Actions – Customer Relations**

<b>Objective 7: Customer Relations</b>					
Provide services in a professional and efficient manner and achieve high level of customer satisfaction					
<b>Performance Target</b>					
All customers informed of service pricing rationalisation by October 2014					
<b>Strategies</b>					
Keep the community informed of issues relating to the water supply /sewerage services					
Keep staff well trained in providing good customer relations					
<b>Action</b>	<b>Start</b>	<b>End</b>	<b>Responsible</b>	<b>Cost (\$'000)</b>	
				<b>Implement</b>	<b>Ongoing</b>
Inform customers regarding proposed service pricing rationalisation <ul style="list-style-type: none"> <li>- Community group meetings</li> <li>- Newsletters</li> <li>- Brochures</li> <li>- Media articles (newspaper, website)</li> </ul>	April 2014	October 2014	MTS	NAE	
Provide media releases when appropriate (such as advising of sewer relining program, WTF upgrades, LOS).		Ongoing	DETS		NAE
Staff training on customer relations		Ongoing	SHRA		NAE
Implement corporate customer complaints handling policy		Ongoing	DCS		NAE
Participate in Council customer surveys	July 2015	December 2015	DETS/ DTCCD		NAE
Analyse and monitor feedback reports <ul style="list-style-type: none"> <li>- Monthly call back to a customer service caller</li> </ul>		Ongoing	DETS		NAE

## 8.7 Community Involvement

This section of the Plan outlines Council's intentions in involving the community in decision-making during the development of major infrastructure schemes. Community consultation is not only highly desirable in terms of major capital works, but there are requirements under the Environmental Planning and Assessment Act and the Local Government Act, which need to be satisfied. The aims of community consultation are to:

- Develop ownership of the service delivery issues by the community, and to gain agreement that action is required;
- Ensure that the concerns of the community, particularly social and environmental concerns, are taken into account;
- Allow the community to propose options it wants evaluated and ensure that the costs associated with decisions are acceptable; and
- Demonstrate to the community that Council is making the best decisions after the proper evaluation of all the issues.

Development and review of the Local Environmental Plan, new water supplies and storages, water treatment process improvements, revision of tariff structure and developer charges, water reuse strategies all benefit from direct involvement of the community. Periods of public display, public comment and notices to ratepayers and business groups to advertise the opportunity to comment are typical consultation processes.

Methods that Council uses to consult the community include:

- Project specific advisory/ steering committees
- Community meetings
- Public meetings and village tours (as required)
- Community opinion surveys
- Public attendance at Council meetings
- Councillors' feedback
- Newsletters/ Media

Following aspects are considered when undertaking community consultation:

- Members of community who are not directly affected by a project may also have concerns;
- There must be a balance between due process and risks in order that a satisfactory level of progress can be maintained; and
- While community consultation on projects is highly desirable, it can be a lengthy and costly process. Project lead times and budgets need to be programmed to take account of this.

Council intends to maintain the existing methods of consultation as identified in Council's Community Engagement Policy for all major capital works or decisions.

**Table 8-12: Objectives & Actions – Community Involvement**

Objective 8: Community Involvement					
Seek community consultation with regard to service targets and prior to any major decisions regarding changes in service levels.					
Performance Target					
Media releases as appropriate to advertise all significant actions					
Strategies					
Implement Community Consultation Principles Policy					
Action	Start	End	Responsible	Cost (\$'000)	
				Implement	Ongoing
Media releases as appropriate to advertise all significant actions.	As required		DTCCD (Director of Tourism, Community and Cultural Development)		NAE
Implement community consultation policy	Ongoing		DTCCD		NAE

## 9 Environmental Protection and Sustainable Development

The Environment objective addresses Council's intentions in managing the water supply and sewerage schemes to minimise the impact on the environment, protect environmentally sensitive areas and promote ecological sustainability.

It is recognised by Council that a responsible, region-wide approach to environmental protection and sustainable development is needed. Council's vision is to conserve and enhance the natural environment through sustainable management practices. Council's program will focus on identifying sensitive areas and undesirable outcomes. The driver is simply the need for the improvement of existing practices. As part of Council's due diligence, the following will be considered:

- People want water quality suitable for a diverse range of water uses;
- Achieving environmental objectives should strengthen, not threaten the local economy; and
- Local knowledge and enthusiasm for sustainability should be harnessed.

The table below summarises the 'state of the environment' with regard to water supply and sewerage operations.

**Table 9-1: State of the Environment - Water Supply and Sewerage Operations**

Receiving Environment	Location	Activities impacting on the environment	Response of the Council/ Government/ Community
Land	Waste disposal sites	Disposal of detritus, screenings and sludge from STP and WTP	<ul style="list-style-type: none"> <li>• Landfill</li> </ul>
		Effluent reuse on land	<ul style="list-style-type: none"> <li>• Stringent environmental impact monitoring protocols</li> </ul>
Air	Sewage pump stations and treatment plant	Bacterial breakdown of organic compounds during the transport and treatment of wastewater creates odours	<ul style="list-style-type: none"> <li>• Ongoing maintenance of pumping stations</li> <li>• Buffer zones around facilities</li> <li>• Monitoring and control of liquid trade waste contributors through trade waste policy</li> <li>• Monitoring and control of septic tank wastes received at STP</li> </ul>
Surface Water	Access/Extraction	Potential for contamination	<ul style="list-style-type: none"> <li>• Riparian zone management</li> <li>• Development planning control</li> <li>• Fencing, signboards, community education</li> </ul>
	Agricultural run-off	Contamination of water source by harmful chemicals including pesticides	<ul style="list-style-type: none"> <li>• Liaising with Local Land Services</li> </ul>
	Receiving water quality	Downstream pollution	<ul style="list-style-type: none"> <li>• Minimise discharge through effluent reuse</li> </ul>

Receiving Environment	Location	Activities impacting on the environment	Response of the Council/ Government/ Community
			<ul style="list-style-type: none"> <li>• Meet EPA licence conditions</li> </ul>
Ground Water	Bores	Groundwater extraction	<ul style="list-style-type: none"> <li>• Extraction within licensed capacity</li> </ul>
	Rising water tables	Excessive irrigation	<ul style="list-style-type: none"> <li>• Control of pollutant loading on soil</li> <li>• Improved soil drainage</li> </ul>

The following are the key aspects of environmental management with regard to Council's water supply and sewerage services:

- Maintaining environmental flows in Lachlan River
- Safe disposal of water filtration plant sludge
- Education regarding maintenance of rainwater tanks
- Integrated Water Cycle Management

Council has carried out an IWCM evaluation study (currently under review by NOW) and has developed strategies that are being implemented. The IWCM measures seek to minimise the impact of water supply and sewerage systems on the environment.

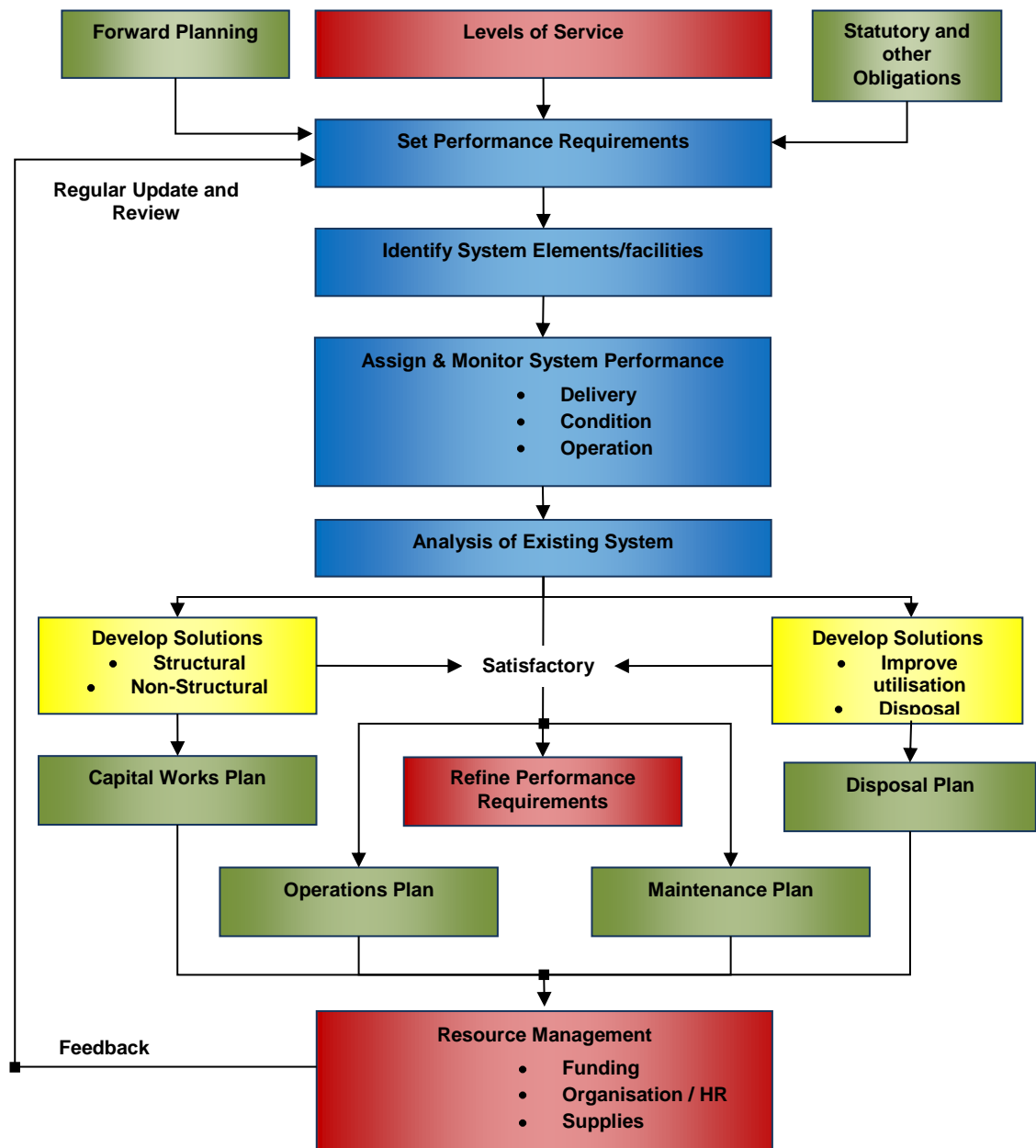
**Table 9-2: Objectives & Actions – Environment & Sustainability**

<b>Objective 9: Environment &amp; Sustainability</b>					
Manage the system to prevent adverse environmental impacts and where possible use waste for beneficial purposes					
<b>Performance Target</b>					
Prepare and implement bio-solids management plan by October 2014					
Investigate odour and corrosion issues in sewer network by December 2015					
Undertake energy audit and review energy usage by water supply and sewerage assets by December 2015					
<b>Strategies</b>					
Identify and manage potential risk to the environment					
Action	Start	End	Responsible	Cost (\$'000)	
				Implement	Ongoing
Implementation of On-site Sewage Management Plan - Inspection of on-site sewage systems within the bore fields and catchment area upstream of Councils river extraction point	Annually	Ongoing	DESP		NAE
Implement Pollution Incident Response Management Plan	Ongoing		WSSE		NAE
Prepare and implement bio-solids management plan	March 2014	October 2014	WSSE		NAE
Monitor implementation of trade waste policy	Ongoing		WSSE		NAE
Meet legislative requirements including EPA licence conditions, NOW and NSW Health guidelines	Ongoing		MTS		NAE
Investigate odour and corrosion issues in sewer network	July 2015	Dec 2015	MTS	15	
Investigate odour and corrosion issues management	2014	Ongoing	MTS	40	5
Energy Audit - Review energy usage (WFP, STP, pumping stations) - Install VSD for WFP	July 2015	Dec 2015	MTS	NAE	

## 10 Total Asset Management Plan

This section contains information that Council will use in managing its water supply and sewerage assets throughout their whole life cycle. This includes asset creation, operation, maintenance, replacement and disposal. The Best Practice approach to asset management is outlined in Figure 10.

**Figure 10 – Best Practice Asset Management Approach**



Current Government policy is directed towards lifecycle asset management. Solutions in the past have often been capital intensive so there is potential generally to reduce capital works costs for councils over the long term. The 'best practice' flow chart describes a methodology for improving asset management planning. This model is not intended to reflect the structure of the Asset Management Plan but rather provides a guide for continuous improvement. Some of the benefits of implementing this model are:

- Appropriate asset solutions;
- Optimal balance of capital works and maintenance;
- Maximisation of asset life and utility; and
- Cost effective and sustainable asset management.

The type of asset portfolio involved in the water supply and sewerage services warrants significant investment of resources for its management. Council intends to adopt a Total Asset Management (TAM) approach for the schemes' management to ensure that assets are managed as effectively as possible i.e. optimisation of the whole of the asset lifecycle rather than focusing on asset creation alone. Following the TAM Approach, this section of the business plan reviews and develops objectives and strategies for the management of:

- Operations;
- Maintenance; and
- Capital Works.

Each of these components of the Plan deals with separate issues relating to the Scheme, but since they are interlinked several combinations of structured and non-structured solutions could result in providing the same level of service.

The implementation of an asset management system by Council will provide a vital repository for Council's asset related information such as: asset location, aerial photographs, financial and asset costs, construction and acquisition details and other asset attributes such dimensions. Key functions of the system include:

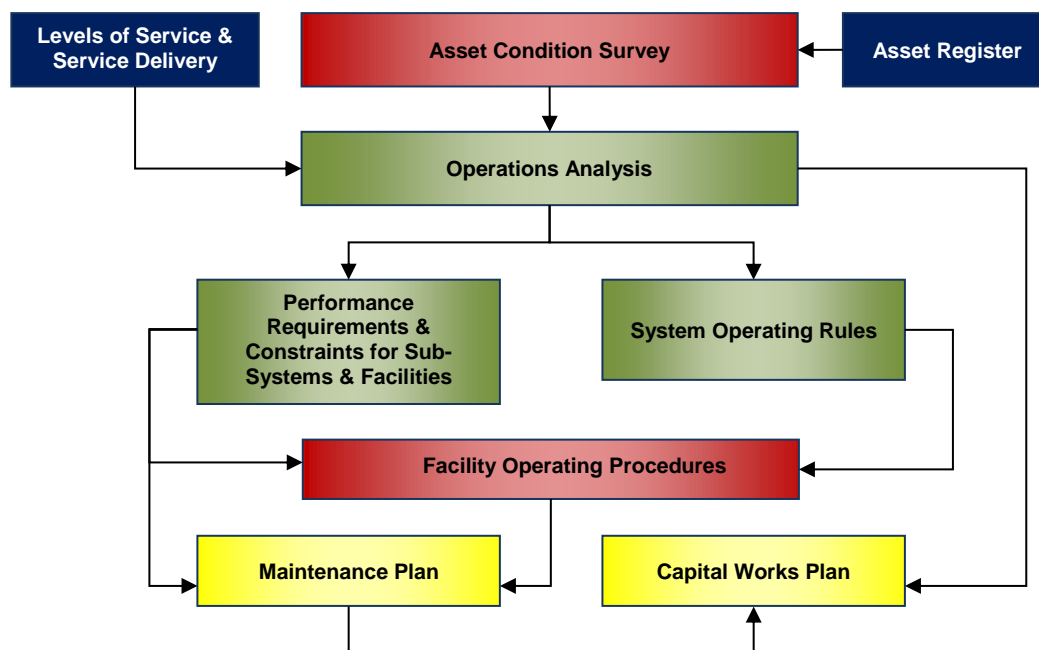
- Maintenance history;
- Maintenance planning;
- Operations management;
- Asset condition rating and values;
- Capital works planning;
- Asset disposals; and
- Customised reporting.

Anticipating the need for asset replacement is vital given the significant investment of resources involved and the need to ensure funds are available. Under the Total Asset Management approach a schedule of expected capital works is estimated into the future. Both current and projected capital works to satisfy future demands in terms of growth, improved Levels of Service and replacement of existing assets are identified. Appropriate operation and maintenance activities also are identified, to suit the desired level of service delivery. This includes documentation of the rules and procedures at system and facility level. All these details are used in the financial plan to ensure that required funds are available when needed.

## 10.1 Operations Plan

This section of the Plan outlines Council's strategy for operation of the water supply and sewerage schemes in the future. The function of an operations plan is to ensure that the service objectives are achieved at the least cost, with minimal interruptions to services. This may be achieved through the process illustrated in Figure 11.

**Figure 11 – Operations Flowchart**



Provision of the agreed Levels of Service to customers is dependent on the efficient and effective running of operations. An operations analysis will interface the operations and capital works plans by identifying what level of service the existing assets can provide and what additional works are needed to bridge any gap between existing and desired service levels.

The operations plan is based on knowledge of the system assets and as such there are ongoing requirements for maintaining an appropriate asset register and for investigating the condition of key elements of the systems that affect the ability to deliver the desired Levels of Service. Contingency operations plans (emergency response plans) should be developed where the impact of failure is significant. The existing inspection and maintenance procedures are appropriate, however the utilisation of improved technology need to be investigated.

Asset condition surveys required include inspection for main breaks in the water supply system and CCTV spot check inspection of sewer lines in the reticulation system. The Asset Register should be updated as an integral part of this recording process.

There are various documentation requirements for water supply and sewerage operations. Operating rules and procedures for both normal condition and breakdown contingencies need to be established. These should include system performance requirements and constraints, and cross reference to specific plant operations manuals (Water Directorate). Council recognises that a monitoring telemetry/ SCADA system leads to best operating efficiency and improves resource utilisation.

Further operations planning requirements for the Council are:

- Completion of documenting system operating rules and performance requirements for all subsystems and facilities;
- Improving the Assets Management System to enable identification of conditions of assets from assets register and maintenance reports; and
- Compliance with Work Health and Safety (WHS) requirements.

Existing operational systems, processes and procedures routinely deliver services that comply with levels of service and regulatory requirements.

Rapid changes in the operating environment in terms of customer expectations, improved environmental outcomes, resource conservation, higher regulatory standards etc. will require commensurate improvements in operations.

Key operational issues include the following:

- Asset condition audit and monitoring program
- Monitoring of operational performance
- High operational costs
- Rising energy cost
- Review and documentation of operating procedures
- Compliance with WHS regulations

Council has developed a WHS Policy outlining the roles and responsibilities of all employees within the Council. As part of Council's ongoing commitment to Work Health and Safety requirements, all staff have been familiarised with the latest amendments to the WHS Act, Local Government Act 1993 and the Protection of the Environment (Operations) Act 1997.

Work health and safety hazards in the water supply and sewerage operations include:

- Bacterial contamination
- Falling into storages/ reservoirs
- Falling off structures
- Moving heavy mechanical parts
- Chemical exposure and handling
- Injuries due to sharps
- Electrical injuries
- Confined spaces

As part of Council's ongoing commitment to Work Health and Safety requirements, all staff have been trained in the relevant amendments to the WHS Act 2011, Local Government Act 1993 and the Protection of the Environment (Operations) Act 1997. The following table summarises Council's WH&S performance during last 3 years.

**Table 10-1: WHS Performance**

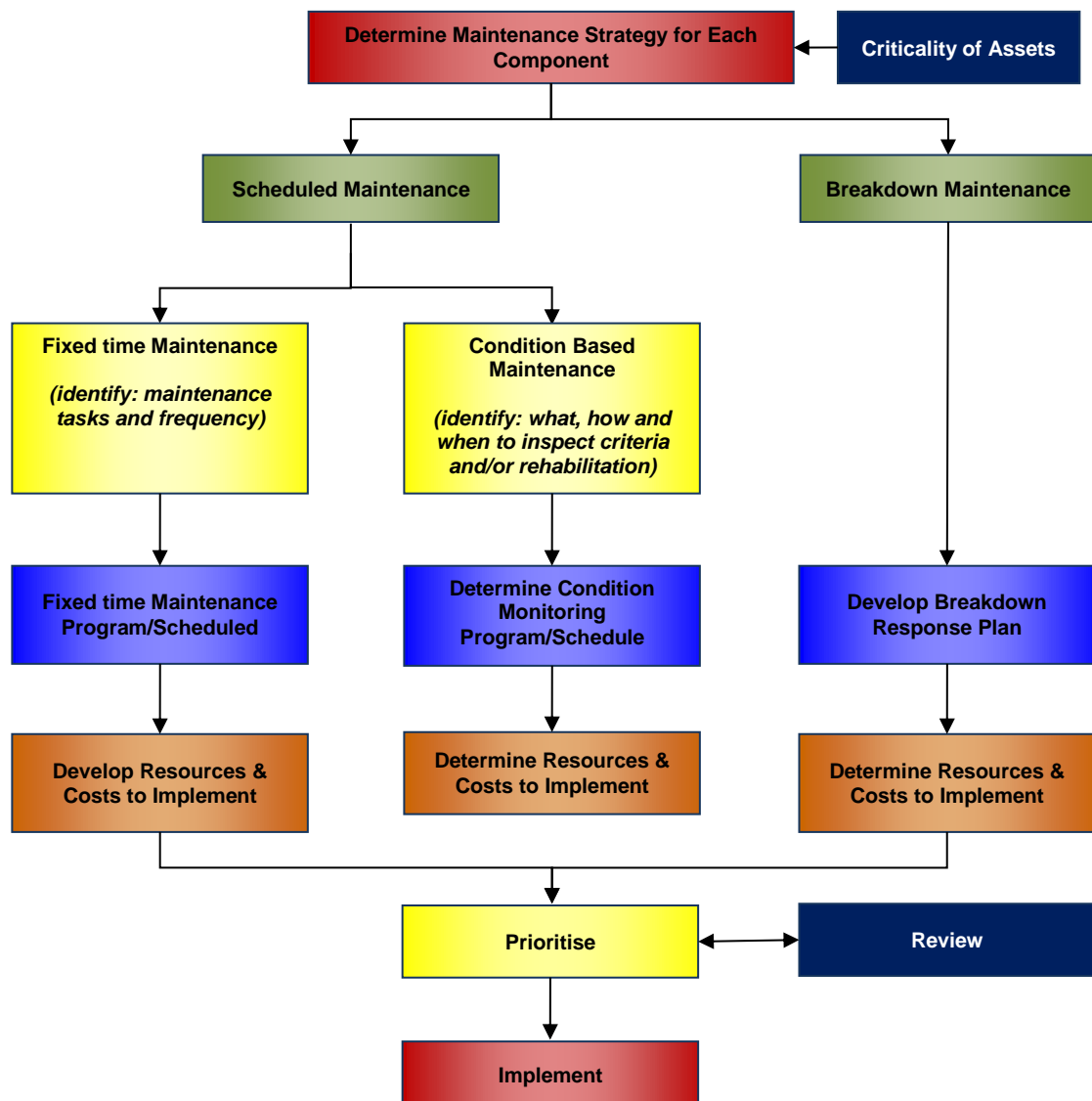
Performance Indicator	2010/11	2011/12	2012/13
Lost time due to injury (hours)	0	0	0
No. of Workers compensation claims	0	0	0

## 10.2 Maintenance Plan

The Maintenance Plan is to ensure that the Operations Plan's outputs, reliability and availability of the sub-systems, facilities and components are achieved in the most cost effective manner. The most important factor is identification of the risk to system performance from failure of each asset. This leads to a minimum performance standard for each asset.

The thrust of the Government's total asset management guidelines is to make the best use of existing assets by implementing systematic maintenance and rehabilitation plans. It could therefore be that increased maintenance costs will result from a critical review of the maintenance area. This in turn would be expected to be more than compensated for by a reduction in the need for capital works.

**Figure 12 – Maintenance Flowchart**



A complete assessment of the system is needed for the development of sound strategies to ensure the Levels of Service are not jeopardised by failure to address maintenance problems. Records should be kept of maintenance and operations requirements. The aim is to:

- Reduce delays or periods of reduced service
- Determine the limit of acceptable substandard operation
- Determine the cost effective breakeven point.

These records help identify the cost effective strategy for each asset (either by class or individually depending on the type of asset) as either:

- Scheduled maintenance - fixed time or condition based;
- Reactive maintenance - failure based

A maintenance plan incorporates appropriate maintenance schedules and procedures based on the adopted maintenance strategy. The Plan includes references to specific plant maintenance manuals and considers the following information and issues on the existing system:

- Criticality analysis of systems to identify components of high risk and refine the maintenance strategy;
- Condition monitoring and audit of condition of assets including power supplies, mechanical and electrical components, and spare parts; and
- Need for refresher training of key staff dealing with mission critical functions;

Council currently has an Operations and Maintenance Plan which is planned to be reviewed and updated by June 2015.

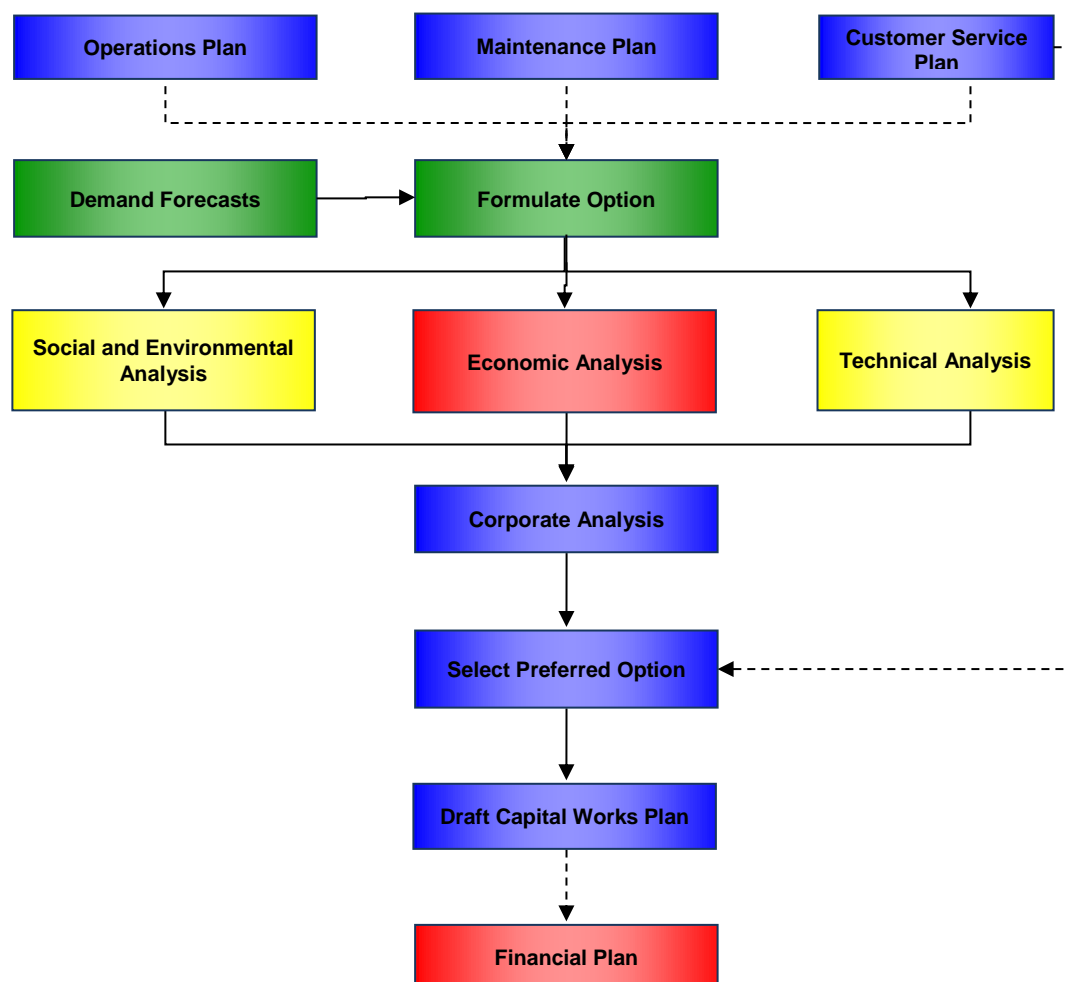
**Table 10-2: Objectives & Actions –Operations and Maintenance**

<b>Objective 10: Operations and Maintenance</b>					
Operate and maintain the water supply/ sewerage scheme to meet the adopted levels of service at least life cycle cost					
<b>Performance Target</b>					
Acquire technology for asset condition monitoring by June 2014					
Review and update Operations and Maintenance Plan by June 2015					
<b>Strategies</b>					
Operate and maintain the schemes at all times in accordance with documented system operating and maintenance procedures. Maintain and enhance the asset management system					
Action	Start	End	Responsible	Cost (\$'000)	
				Implement	Ongoing
Maintain asset management system - Updating asset register (enhancing asset component level details) - Asset condition monitoring and recording		Ongoing	MTS/ WSSE/ AO		NAE
Asset revaluation	2016	4 yearly	AO		Ongoing
Acquire technology/ software for asset condition monitoring and recording	Started	June 2014	WSSE	10 (a part of sewer relining program)	
Review and update Operations and Maintenance Plan - Operations analysis - Updating operating rules, procedures and practices manuals - Asset criticality analysis - Criticality based maintenance schedules	July 2014	June 2015	MTS/ WSSE	NAE	
Reservoirs cleaning and painting program - Sand blasting (internal) - Internal Epoxy recoating - External repainting	2014	5 yearly	MTS		120 every 5 years (included in CWP)
SPS Wells – relining/ repair SPS 14, SPS 11 and SPS 1	July 2013	June 2016	MTS	Included in CWP	
Review and action operational procedures for water quality assurance and WH&S risks	Started	Sept 2014 (Ongoing)	MTS	20	3
Undertake sewer mains cleaning/ root cutting program		Ongoing	MTS		NAE
Undertake water mains flushing/ air scouring program	Jan 2014	Annually (ongoing)	MTS	50	50

## 10.3 Capital Works Plan

The capital works plan should make an assessment of scheduled work for growth, non-growth, and rehabilitation works over a 30-year period.

**Figure 13 – Capital Works Flowchart**



The Capital Works Plan is of crucial importance because water supply and sewerage infrastructure is capital intensive and the construction and renewal of facilities can have a significant impact on Council's overall finances.

In the process of preparing the Capital Works Plan, the following points have been considered:

- The development of water supply and sewerage schemes is a long-term investment, and must be integrated with Council planning policies.
- The capital works strategy needs to be regularly updated to take account of changing conditions.
- Consideration of the costs and benefits of alternative options.
- Acceptance by the community of the development proposals and costs.

A summary of the 30-year capital expenditure program is shown in Section 12. On the forward budget for the water supply and sewerage schemes, the following specific capital works needs have been addressed:

- Development of bore no. 3 and pipe line (375 mm) from bore no 3
- WTP components and electrical controls upgrade/replacement
- Decommissioning Camp Hill reservoir
- Mains replacement/renewal as per Water Asset Management Plan
- Telemetry renewal and upgrade
- Repair and repainting of sand filters
- Sewage pump station (SPS 18) replacement
- Odour and corrosion control works for SPS (1,4 and 11) and vent shafts
- Sewer relining / replacement and manhole refurbishment
- Renewal of rising main from Fitzgerald Bridge (SPS 5) to STP
- Replacement/ upgrade of pumps, switchboards and electrical components including PLC and SCADA at STP

Further work is required to develop the capital works projections however the level of cost based on the current short term program and estimates for renewals in line with depreciation, provide an acceptable order of costs for the purposes of this Plan.

**Table 10-3: Objectives & Actions – Capital Works**

Objective 11: Capital Works					
Provide capital works to meet levels of service for existing and future customers at least life cycle cost					
Performance Target					
Implement planned capital works on time and budget					
Strategies					
Develop and implement a long-term capital works plan in line with Council's AMP and LEP					
Action	Start	End	Responsible	Cost (\$'000)	
				Implement	Ongoing
Review long term (30 year) capital works plan		Annually	MTS		NAE
Develop a long-term (30-years) capital works plan	Started	Dec 2013	MTS		NAE
<ul style="list-style-type: none"> <li>- For improved levels of service</li> <li>- For growth</li> <li>- For renewal/ replacement</li> </ul>					
Implement a long-term capital works plan	As identified	Ongoing	WSSE		Refer to CWP
Monitor capital works program implemented within time and budget		Ongoing	MTS		NAE

## 11 Workforce Plan

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The aim of the Workforce Plan is to ensure that Council has the appropriate staff numbers with the necessary skills to meet current and future requirements. If these are in order, Council's Levels of Service can be met.

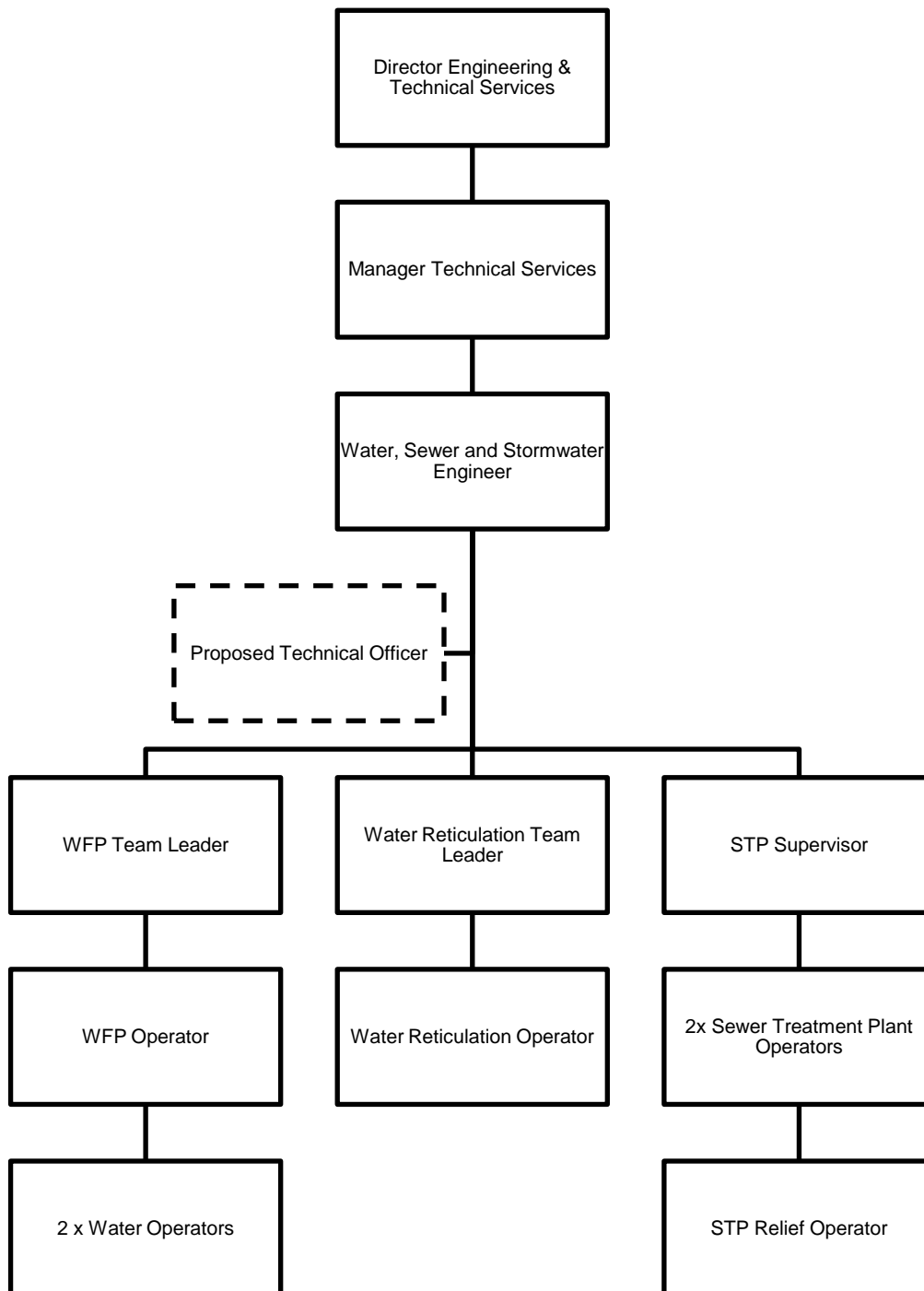
As part of the Work Force Plan, Council will ensure the following:

- Operators are familiar with all current practices including WHS requirements;
- An up to date training program is in place for all staff (in particular training the treatment plant operators). Field team staff to be trained to Certificate III in water industry operations. Technical services team staff to be trained to be able to competently service existing and emerging technologies. Professional staff to be supported in ongoing professional development;
- Succession planning for key roles including provision of apprenticeships and cadetships
- Review of effectiveness of Employee Performance Review (EPR) process

The staff structure of Engineering and Technical Services division of the Council is shown in the following page. The water and sewer section has 11 staff, who together operate and maintain the water supply and sewerage schemes. The number of employees matches with the State average for the number of properties serviced. Council considers that there is a need to improve staffing at the field level so adequate maintenance and monitoring of assets is undertaken to provide the agreed levels of service.

Council's corporate level Workforce Strategy is currently under review. As part of this review, the workforce needs and positions for water and sewerage services section will be reviewed and updated by June 2014. The review will take into consideration the compliance requirements identified in the Drinking Water Quality Management Plan and the national training framework.

**Figure 14 – Structure of Engineering and Technical Services Division**



**Table 11-1: Objectives & Actions – Workforce Planning**

<b>Objective 12: Workforce Planning</b>					
To maintain adequate levels of appropriately skilled staff resources within a safe working environment to achieve the adopted level of service and promote job satisfaction					
<b>Performance Target</b>					
Complete Needs Analysis and Position Analysis by June 2014					
<b>Strategies</b>					
Review and implement corporate workforce strategy					
<b>Action</b>	<b>Start</b>	<b>End</b>	<b>Responsible</b>	<b>Cost (\$'000)</b>	
				<b>Implement</b>	<b>Ongoing</b>
Conduct Needs Analysis and Position Analysis to contribute to Corporate Workforce Management Strategy review	Feb 2014	June 2014	SHRA/ DETS	NAE	
Recruit new staff as identified in the Corporate Workforce strategy	As identified	Ongoing	SHRA/ DETS		
- Technical Officer					80
- Part time Trade Waste Officer					50
Carry out staff appraisals and performance review	Ongoing		WSSE/ MTS/ DETS		NAE
Implement Corporate Work Force Management Plan as applicable to water and sewer operations	As identified	Ongoing	SHRA/ DETS		NAE
- Succession training					
- Technical training					
- Staff development					

## 12 Financial Plan

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### 12.1 Overview of Financial Planning

The purpose of the Financial Plan is to enable Council to determine the revenues needed to meet the Levels of Service over the long term and effectively manage the cash flow.

Legislation requires separate accounting for water supply and sewerage services and the elimination of cross subsidies from Council's General Fund or other areas. Any cross subsidy deemed necessary by Council should be explicitly noted.

Council's commitment to provide the Levels of Service described in this document requires collection of revenues of the order shown in the detailed tables and graphs in Appendix I. Estimates of the cost of activities in the action plan have been modelled using the NSW Financial Model (FINMOD) issued by the NSW Office of Water (NOW) and represent the best projection of future costs possible at this time. Actual billings will depend on the levels of developer charges and pricing structure adopted.

Generally, recurrent operating costs should be covered by the annual water supply and sewerage charges. Capital funds are drawn from the following four sources:

- Developer charges;
- Government grants;
- Annual water supply charges / cash; and
- Borrowing.

In accordance with the NOW Financial Planning Guidelines, Council will develop its long-term financial models and establish a steady price path. This will be used to set the pricing structure in accordance with the NOW August 2007 Best Practice Management Guidelines.

**Table 12-1: Objectives & Actions – Financial Planning**

<b>Objective 13: Financial Planning</b>					
Sound financial plan which allows for current and future service delivery at an affordable and sustainable price path for water supply/ sewerage infrastructure					
<b>Performance Target</b>					
Review and update long-term financial plans annually					
<b>Strategies</b>					
Implement a financial plan recognising all current and future asset management requirements					
<b>Action</b>	<b>Start</b>	<b>End</b>	<b>Responsible</b>	<b>Cost (\$'000)</b>	
				<b>Implement</b>	<b>Ongoing</b>
Develop long term financial plans for water and sewer funds	Started	Dec 2013	MTS/ DCS/ FM	Included in SBP	
Review and update long-term financial plans	Annually	Ongoing	MTS/ DCS/ FM		NAE
Establish a price path for setting the tariff in accordance with the NOW guidelines	Started	Dec 2013	MTS/ DCS/ FM	Included in SBP	

## 12.2 Financial Planning Process

The objective of financial planning is to develop full cost recovery models based on life cycle management. It models appropriate funding strategies for the preferred service planning option and projects a price path for residential charges against which to assess affordability in the long term.

By taking a long-term view, financial peaks and troughs can be smoothed to provide the basis for a consistent charging policy and to highlight any current impact of future actions. The new NSW Financial Planning Model (FINMOD Version 4.0), issued by the NSW Office of Water (NOW) in November 2003, has been used for this modelling. A 30-year planning horizon has been adopted as recommended in the NOW Best Practice Guidelines. It is assumed that any government grants will be available as expected by the Council.

In establishing the financial plan a number of scenarios are explored in order to determine the best funding strategy for both water supply and sewerage. A minimum level of available cash is modelled to reflect risk of variable annual revenues to ensure the robustness of the price path for at least 4 years.

AAS27 reporting for the financial statements requires that all funds be declared as assets under cash and investments in the statement of financial position. Also, assets are valued on the basis of current replacement cost and depreciated according to their remaining lives compared with their expected lives.

All capital works estimates in the text are quoted in real (2013/14) dollars unless specified otherwise. The output data is quoted in real and inflated dollars.

When assessing affordability, note that a \$1 charge now will be equivalent to \$1.80 in 20 years' time, assuming a 3% annual inflation rate.

A summary of the input data and results are included in the following pages. Detailed financial input data and output financial projections are available in the Appendices.

## 12.3 The Financial Model

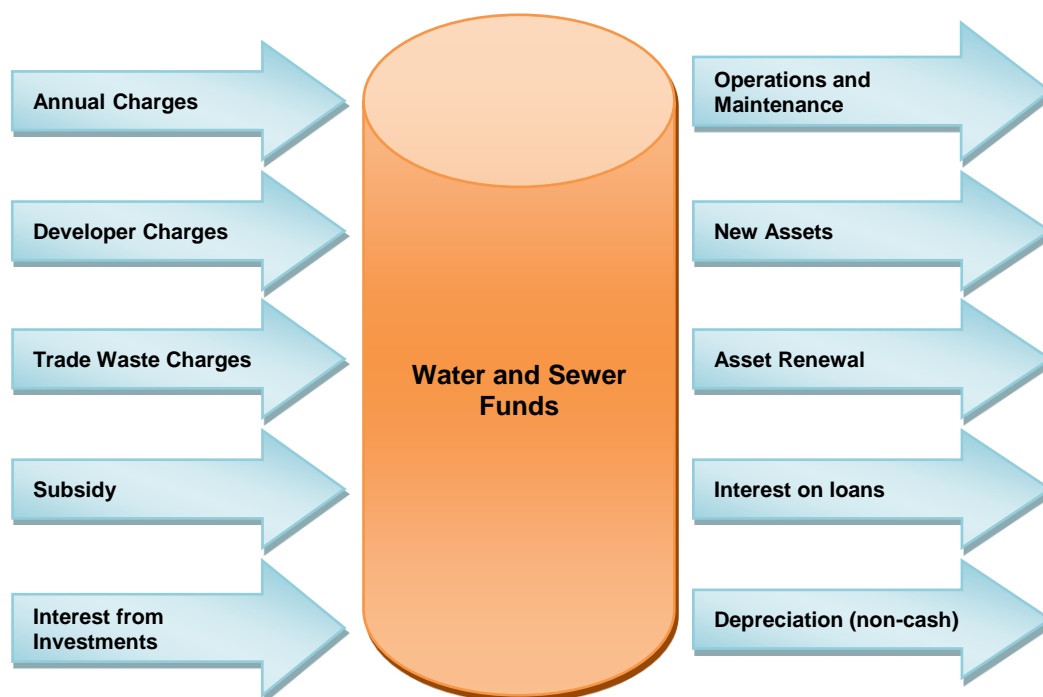
### 12.3.1 Inputs to the Financial Model

The financial model forecasts income streams to match projected expenditure. The diagram next page illustrates the main elements, which affect the financial plan.

The financial modelling undertaken in this plan aims to:

- optimise the long term funding strategy,
- meet the demands of the capital works program and other life cycle costs of the system assets,
- ensure a minimum level of cash liquidity, and
- provide a forecast of the typical residential annual charges over the long term.

**Figure 15 – Elements of the Financial Model**



Input data for the model is sourced from three main areas:

- AAS27 special schedules for past financial performance of the water and sewerage funds
- Estimates for uncontrollable variables e.g. interest rates, growth, inflation
- Projected capital works, and operations and management expenses

All other criteria being met, the financial plan seeks, after an initial adjustment, to model, in real dollars, the lowest steady level of charging possible. Actual bills will depend on Council's pricing structure but this is indicative of the affordability of the services and shows the performance requirements for long-term stability.

A number of variables and assumptions have to be entered into the model and these are first agreed to by Council. They include:

### Opening Balances

Council's special accounting schedules are used to establish opening balances and baseline costs for the model. Financial statements for the last two years are compared to try to eliminate 'one off' occurrences from being incorporated as part of a normal trend.

### Developer Charges

Council plans to adopt a revised level of developer charges calculated in accordance with the latest NOW Best Practice Management Guidelines during the 2014/15 financial year. For the modelling purposes, an average Sec.64 charges revenues of \$15K/year and \$10K/year for water and sewer funds, respectively has been considered.

### Growth Projections

A long-term average customer growth rate of 0.1% p.a. and has been adopted for the financial projections.

### Inflation

Average long-term inflation has been assumed as 2.5% per annum.

## Interest Rates

A borrowing rate of 6.5% p.a. and investment rate of 5.5% p.a. have been used in this analysis

## Annual Revenue Splits

For water supply services, residential charges currently account for 68% of the water supply revenue through annual charges. Remaining 32% revenue is contributed by non-residential water customers.

For sewerage services, residential charges currently account for 78.6% of the sewerage revenue through annual charges. Remaining 21.4% revenue is contributed by non-residential customers.

The same level of revenue split has been used for all the forecast years.

## Performance Measures

Council's minimum service criteria will have an impact on the level of charges required e.g. minimum cash level is generally assumed to be between 10-20% of annual revenues (excluding restricted revenues). For the financial models, \$ 1,000K (2013/14\$) for water fund, and \$600K for sewer fund has been considered as minimum cash level.

## Expected Lives of Assets

The default average life of system assets is based on the weighted average of long-lived structures and shorter-lived mechanical plant. The average life of water and sewerage assets is currently estimated to be approximately 70 years. The life of assets controls the depreciation, which is a non-cash expense. It directly affects the need for future asset renewal works planned, which is part of the capital works program.

## Grants and Subsidy for Capital Works

The State Government provides financial assistance to local government water supply and sewerage schemes through the Country Towns Water Supply and Sewerage Program. Councils can apply for funding of up to 50% of Improved Level of Service (ILOS) capital works. These days allocation of grant funds works on a priority scoring carried out by NSW Office of Water.

Preferred financial modelling scenario for the water fund considered that the development of Bore no.3 and the pipeline for conveying water from this bore will be fully grant funded; and, the sewer fund considered no subsidy or grant for any of the planned capital works program.

## Ongoing Recurrent Costs: Management, Operations and Maintenance

By default, the model increases historical operation and maintenance expenses on a pro rata basis with respect to growth. This has been overridden where Council provided revised estimates i.e. where the action plan requires new initiatives or where new works require additional operating resources.

The capital works plan and projected operations and management expenses also form a significant component of the inputs. These are shown in the section 'Projected Cost Schedules'.

## Assumptions and Limitations

The projections of the financial plans are based on past financial performance. Allowance is made for new initiatives, future rate forecasts, and maintenance of sustainable levels of service as identified in the strategic planning process.

The depreciation is shown in the operating statement but this is not a cash item. The financial planning model manages the cash flow but keeps a running tally of cumulative depreciation so that Council can appreciate the potential future liability for maintaining the value in the system and levels of service. By planning ahead and making optimum use of existing assets, a more cost-effective and efficient service should result.

Typical annual residential charge is used as the performance measure representing overall revenue requirements from residential customers. This should not be confused with pricing. Pricing, i.e. distribution of the charges according to consumption or special customer groups, is the subject of a separate revenue planning exercise.

The financial model is not a substitute for normal budgeting (that is, short-term financial planning). The model assumes that all expenses and income occur at the beginning of the year and is therefore not appropriate to track cash flow throughout the year. It is important, however, that the budgeting process is carried out within the framework of the long-term financial plan.

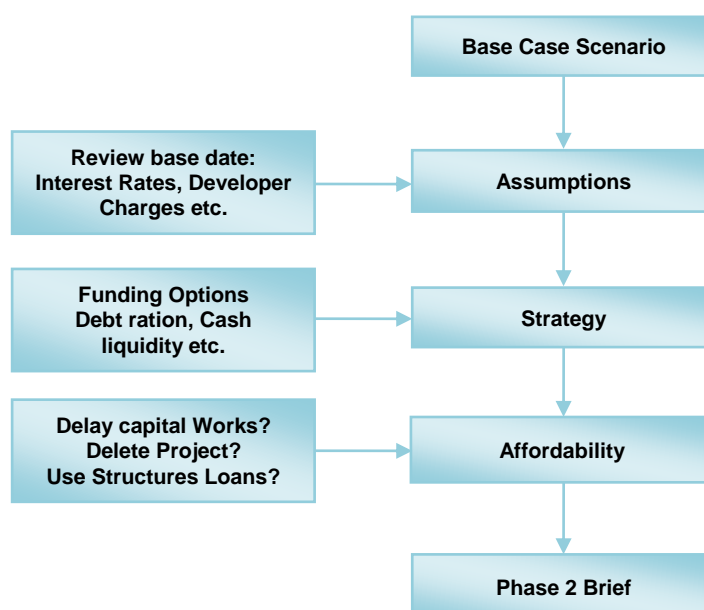
The Capital Works Plan provides a guide for estimation of long-term operation and maintenance costs. It is accepted that the level of confidence in these projections reduces with time but it is important to identify as many future commitments and liabilities as possible.

### 12.3.2 The Modelling Process

#### Phase 1 – Initial Runs

The objective of Phase 1 development is to present a first cut model of options for future service provision. Comparison of outcomes enables Council to make decisions as to the preferred model and the most beneficial and practical funding solution for the proposed asset management programs.

**Figure 16 – Phase 1 Review of the Financial Model**



## Funding

In considering funding for future options there are three basic options:

- Fund all capital works from revenues.
- Borrow to fund all capital works.
- Fund capital works from a mix of borrowing and revenue

To establish the lowest level of steady rate of typical residential bills in real terms a combination of cash management and borrowing will usually be required. The model outputs demonstrate the required financial management required to keep the plan 'on track'.

Where capital works costs are low and cash levels are high it may be possible to avoid borrowing but this may also suggest that current charges are too high. Longer period loans spread the cost of works over a longer period, eliminating early peaks in annual charges. Often there may be no choice except to borrow for major projects because collecting sufficient cash in advance is impracticable and would require an unacceptably high level of charges. In the Phase 1 runs of the model, the default loan period used was twenty years.

## Phase 2 – Preferred Model and Sensitivity

After consideration of Phase 1 issues preferred modelling options for each of the Water Supply and Sewerage funds has been adopted.

While the preferred model reflects the expected performance of the systems, it does not give any indication of the sensitivity of the proposed solution to the basic assumptions used, for example if the conditions prove significantly different in practice, there will be no information about the implications of the difference.

Sensitivity analysis has been carried out if it is perceived that a model variable may change significantly in the future. The value of a sensitivity analysis is that it shows:

- The sensitivity of the results to assumptions (uncontrollable variables); and
- The impact of changing controllable variables.

The guidelines suggest that a number of sensitivities be carried out to test the robustness of the plan. In regard to controllable variables such as type of loan structure, level of developer charges etc. the model enables Council to make decisions to establish the right management policies.

It is important to demonstrate the impact of the 'no subsidy' scenario, which shows the potential benefits of government assistance. Council's expectations for receiving subsidy are included in the final preferred model as being the most realistic future scenario.

With uncontrollable variables, Council is at the mercy of change. The downside risk of an increase in interest rates, or declining growth rates, or rise in energy costs, may be considerable. Increasingly the impact of water demand management may be felt in the future and expected water savings although resulting in loss of revenues, should be more than compensated for by deferment of capital works and lower operational costs.

## On-going Review

Over time, changes in model variables can have a significant impact on the model's accuracy and this has implications for Council's forward planning. As recommended by the financial modelling guidelines, Council will revisit the models annually to ensure that they retain their currency.

### 12.3.3 Model Inputs

#### Projected Costs

Projected capital costs are split into three categories as outlined in Table 12-2. Projected recurrent costs include management, operation and maintenance costs as described in Table 12-3.

**Table 12-2: Categories of Projected Capital Works**

Category	Description
Growth Works	Work required to increase the capacity of facilities, to service new subdivision.
Improved Level of Service Works (backlog works)	Works to provide better public health and environmental standards, better service, higher reliability, or an extension of services to unserved existing development. Works in this category may be eligible for Government grants.
Asset Renewal Works	Renewal/replacement of existing assets, which have aged and reached the end of their useful life.

**Table 12-3: Categories of Projected Recurrent Costs**

Category	Description
Management	Reflects true overheads associated with providing this service. Any cross subsidies with General Fund should be eliminated or explicitly disclosed in the Annual Accounts.
Operations and Maintenance	It is assumed that the current level of costs shown in the Financial Statements reflects a realistic level of expenditure for the current schemes. The projections assume costs increased in proportion to the growth.
Model Cost Overrides	Additional costs are included where specific activities have been identified in future years. This includes new initiatives plus additional costs associated with new Capital Works.

The expected capital and recurrent cost expenditures are presented in Appendix E, as both tables and graphs. A summary of capital works program including subsidies/grants, if any, is presented in the following pages. Projections are in real (2013/14) dollars.

Historical and additional input data used for financial forecasts are shown in Appendix H.

**Table 12-4: 30-year Capital Works Program – Water Supply**

<b>2013/14 \$ ('000)</b>	<b>Growth and Minor Works</b>	<b>Improved Levels of Service</b>	<b>Asset Renewals</b>	<b>Total Capital Works</b>	<b>Expected Subsidy</b>	<b>Cost to Council</b>
2013/14	21	911	217	1,149	0	1,149
2014/15	11	2,046	899	2,956	2,035	921
2015/16	21	11	705	737	0	737
2016/17	11	11	533	555	0	555
2017/18	21	11	419	451	0	451
2018/19	11	11	281	303	0	303
2019/20	71	11	428	510	0	510
2020/21	11	36	652	699	0	699
2021/22	21	11	432	464	0	464
2022/23	11	11	592	614	0	614
2023/24	71	11	627	709	0	709
2024/25	11	11	587	609	0	609
2025/26	21	11	397	429	0	429
2026/27	11	11	397	419	0	419
2027/28	21	11	667	699	0	699
2028/29	61	11	632	704	0	704
2029/30	21	11	657	689	0	689
2030/31	11	11	577	599	0	599
2031/32	21	11	3,507	3,539	0	3,539
2032/33	11	11	3,547	3,569	0	3,569
2033/34	71	11	767	849	0	849
2034/35	11	511	1,087	1,609	0	1,609
2035/36	21	883	1,755	2,659	0	2,659
2036/37	11	11	1,577	1,599	0	1,599
2037/38	21	11	557	589	0	589
2038/39	61	11	557	629	0	629
2039/40	21	11	657	689	0	689
2040/41	11	11	407	429	0	429
2041/42	21	11	507	539	0	539
2042/43	11	11	407	429	0	429
<b>Total</b>	<b>730</b>	<b>4,662</b>	<b>25,031</b>	<b>30,423</b>	<b>2,035</b>	<b>28,388</b>

**Table 12-5: 30-year Capital Works Program – Sewerage**

2013/14 \$ (000)	Growth and Minor Works	Improved Levels of Service	Asset Renewals	Total Capital Works	Expected Subsidy	Cost to Council
2013/14	10	20	780	810	0	810
2014/15	438	153	1,035	1,626	0	1,626
2015/16	10	45	775	830	0	830
2016/17	10	35	760	805	0	805
2017/18	10	82	760	852	0	852
2018/19	10	30	760	800	0	800
2019/20	10	30	760	800	0	800
2020/21	10	80	525	615	0	615
2021/22	10	30	225	265	0	265
2022/23	10	30	225	265	0	265
2023/24	10	80	225	315	0	315
2024/25	10	1,130	235	1,375	0	1,375
2025/26	10	30	535	575	0	575
2026/27	10	30	235	275	0	275
2027/28	10	82	235	327	0	327
2028/29	10	30	235	275	0	275
2029/30	10	30	225	265	0	265
2030/31	10	30	525	565	0	565
2031/32	10	80	225	315	0	315
2032/33	10	32	210	252	0	252
2033/34	10	30	210	250	0	250
2034/35	10	30	210	250	0	250
2035/36	10	80	510	600	0	600
2036/37	10	30	225	265	0	265
2037/38	10	32	210	252	0	252
2038/39	10	30	210	250	0	250
2039/40	10	85	210	305	0	305
2040/41	10	30	560	600	0	600
2041/42	10	30	210	250	0	250
2042/43	10	32	220	262	0	262
<b>Total</b>	<b>728</b>	<b>2,498</b>	<b>12,265</b>	<b>15,491</b>	<b>0</b>	<b>15,491</b>

## 12.4 Outcomes of Financial Modelling

In line with current NOW guidelines, the financial models for water supply and sewerage identify the lowest stable typical residential bills required with maximum utilisation of existing cash reserves. A number of scenarios have been analysed before Council adopting a 'preferred' price paths for water supply and sewerage services. Modelling outcomes of the preferred scenarios and the sensitivity of the model forecasts for the financial parameters identified as important are presented in this section.

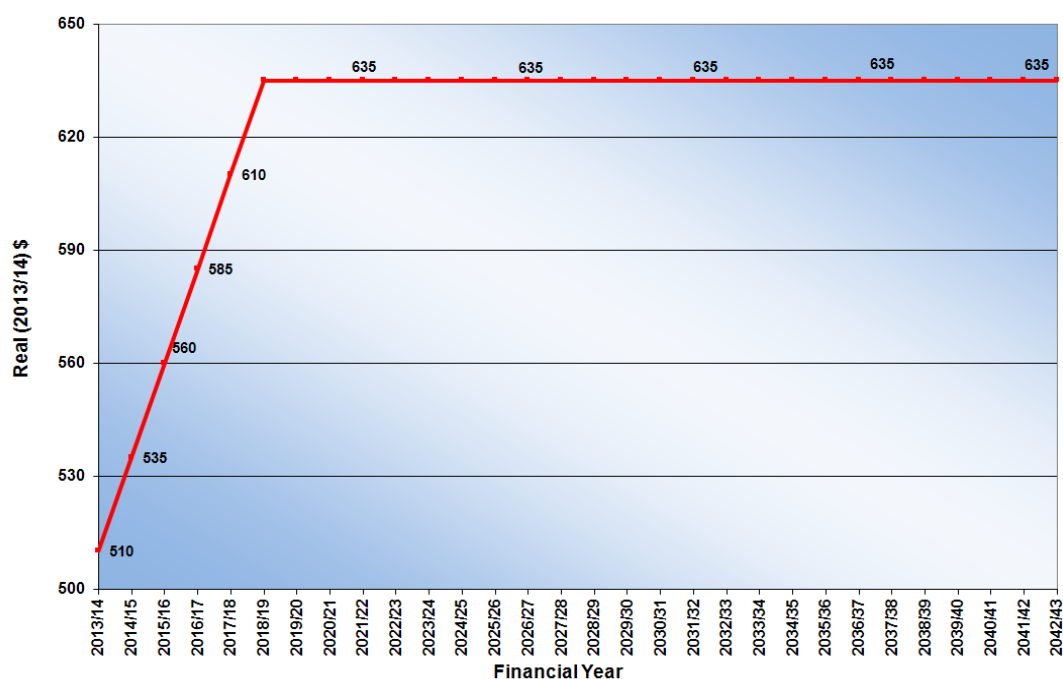
### 12.4.1 Water Supply

Financial modelling has demonstrated that the current (2013/14) typical residential bill (TRB) for water supply services of \$510 p.a. has to be increased by \$25/year for the next five years to a TRB of \$ 635 p.a. in 2018/19. Thereafter, the TRB can be maintained at that level for the remainder of the 30-year forecast period (see Figure below).

As discussed in the previous section, the preferred scenario of the financial model assumes that government subsidy/ grant will be available for the development of Bore No.3 and the pipeline from this bore.

Note the forecast TRBs need to be adjusted annually for CPI/inflation and the financial model will be reviewed and the forecasts updated every 3 years in accordance with Best Practice Guidelines.

**Figure 17 – Typical Residential Water Bill**

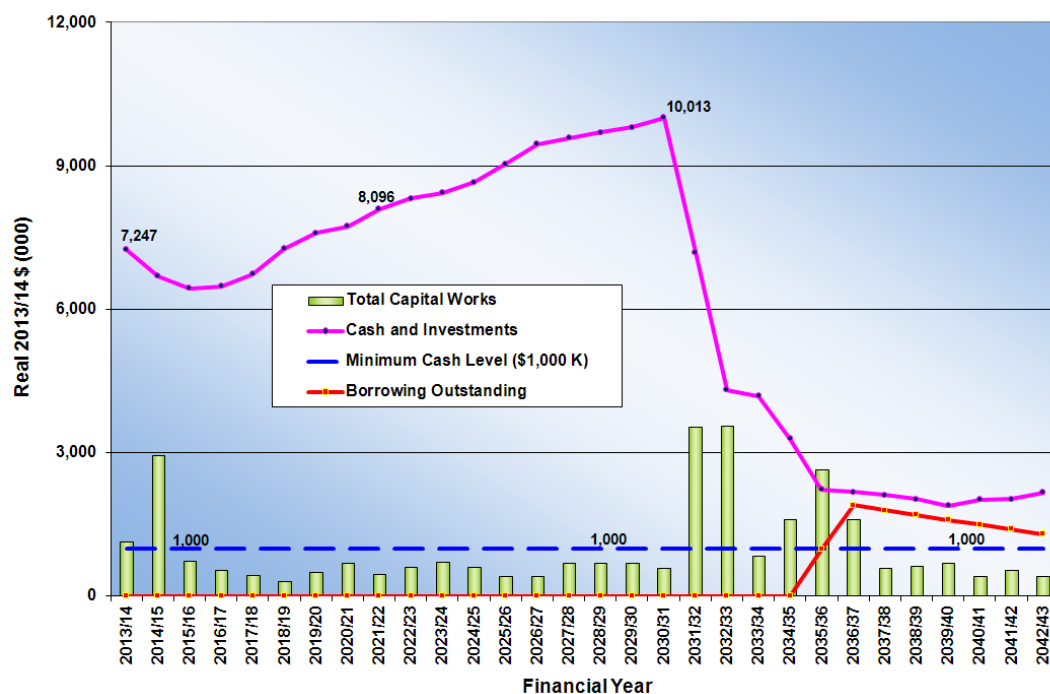


This level of TRBs for water supply is sufficient to maintain liquidity with a minimum of \$1.0 Million of cash in hand over the forecast period.

Water fund has no existing loan to be serviced. The financial model demonstrates that for the next 20 years, all the planned capital works can be internally funded from available cash and investments and annual revenue without any external borrowing. New borrowings will be required for capital works only after this period.

The levels of cash and borrowing outstanding as the planned capital works program is implemented during the forecast period are depicted in the following Figure. A summary of projected financial results is presented in the Table next page.

**Figure 18 – Cash and Borrowing Projections - Water Supply**



**Table 12-6: Projected Financial Results - Water Supply**

2013/14 \$ ('000)	Revenue and Expenses			Capital Transactions		Financial Position					System Assets			
Financial Year	Total Revenue	Total Expenses	Operating Result (Before Grants)	Acquisition of Assets	Principal Loan Payments	Cash and Investments	Borrowings	Total Assets	Total Liabilities	Net Assets Committed	Current Replacement Cost	Less: Accumulated Depreciation	Written Down Current Cost	Typical Residential Bills
2013/14	2,722	3,241	-519	1,149	0	7,247	0	41,585	23	41,562	72,591	38,363	34,228	510
2014/15	4,837	3,298	1,540	2,955	0	6,695	0	42,783	23	42,760	74,648	38,506	36,141	535
2015/16	2,892	3,284	-392	738	0	6,442	0	42,079	24	42,055	74,680	38,844	35,837	560
2016/17	3,000	3,285	-285	555	0	6,484	0	41,482	24	41,458	74,703	39,352	35,351	585
2017/18	3,118	3,301	-183	450	0	6,733	0	40,970	24	40,946	74,735	39,975	34,760	610
2018/19	3,250	3,290	-40	302	0	7,267	0	40,553	25	40,528	74,756	40,736	34,020	635
2019/20	3,265	3,290	-25	510	0	7,596	0	40,147	25	40,122	74,837	41,351	33,486	635
2020/21	3,274	3,293	-19	699	0	7,735	0	39,760	25	39,735	74,884	41,742	33,142	635
2021/22	3,281	3,310	-29	464	0	8,096	0	39,317	25	39,292	74,916	42,354	32,562	635
2022/23	3,289	3,297	-9	614	0	8,317	0	38,903	26	38,877	74,939	42,805	32,133	635
2023/24	3,291	3,300	-9	709	0	8,438	0	38,501	26	38,475	75,021	43,221	31,799	635
2024/25	3,293	3,300	-7	608	0	8,658	0	38,074	26	38,048	75,042	43,678	31,365	635
2025/26	3,302	3,316	-13	429	0	9,046	0	37,587	26	37,561	75,075	44,325	30,750	635
2026/27	3,313	3,304	9	419	0	9,457	0	37,096	26	37,070	75,096	44,972	30,125	635
2027/28	3,316	3,307	10	699	0	9,579	0	36,670	26	36,644	75,129	45,349	29,780	635
2028/29	3,318	3,308	10	704	0	9,695	0	36,244	26	36,218	75,201	45,762	29,439	635
2029/30	3,318	3,326	-9	688	0	9,805	0	35,798	26	35,772	75,232	46,151	29,082	635
2030/31	3,318	3,314	3	599	0	10,013	0	35,327	26	35,301	75,255	46,619	28,635	635
2031/32	3,239	3,316	-78	3,539	0	7,196	0	35,853	26	35,827	75,287	44,158	31,129	635
2032/33	3,137	3,319	-182	3,569	0	4,315	0	36,461	26	36,435	75,310	41,659	33,651	635
2033/34	3,114	3,335	-220	849	0	4,186	0	36,117	26	36,091	75,392	41,940	33,451	635
2034/35	3,089	3,331	-241	1,609	0	3,288	0	36,073	26	36,047	75,913	41,909	34,004	635
2035/36	3,055	3,411	-357	2,659	26	2,233	974	37,002	1,000	36,002	76,817	41,223	35,594	635
2036/37	3,052	3,473	-422	1,599	52	2,174	1,898	37,467	1,925	35,542	76,838	40,715	36,123	635
2037/38	3,052	3,481	-430	589	54	2,116	1,798	36,924	1,824	35,100	76,871	41,228	35,642	635
2038/39	3,050	3,468	-419	629	56	2,029	1,698	36,407	1,724	34,683	76,942	41,742	35,201	635
2039/40	3,050	3,463	-413	689	59	1,888	1,598	35,923	1,623	34,300	76,974	42,156	34,818	635
2040/41	3,054	3,458	-404	429	61	2,017	1,498	35,323	1,523	33,800	76,996	42,820	34,176	635
2041/42	3,057	3,466	-409	539	63	2,026	1,398	34,769	1,423	33,346	77,028	43,385	33,643	635
2042/43	3,061	3,450	-388	430	66	2,163	1,298	34,169	1,323	32,846	77,051	44,050	33,000	635

## Sensitivity Analysis

In accordance with the NOW Financial Guidelines, the following sensitivities have been modelled to determine the impact of various scenarios on typical residential bill for water supply:

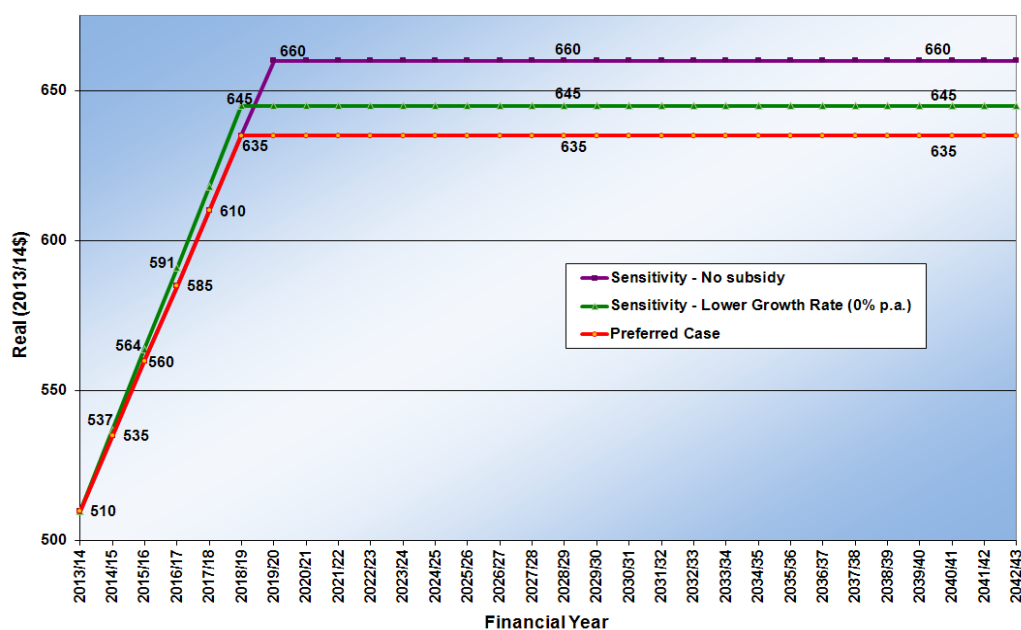
**Table 12-7: Sensitivity Analysis Parameters - Water Supply**

Criteria	Preferred Case	Sensitivity
Assessment growth rate	0.1% p.a.	0.0% p.a.
Subsidy	As expected by council	No subsidy

Sensitivity analysis indicates that the typical residential bill for water supply is slightly sensitive to assessment growth rate and is moderately sensitive to the level of expected subsidy.

The results of modelling are presented as graphs in the following pages.

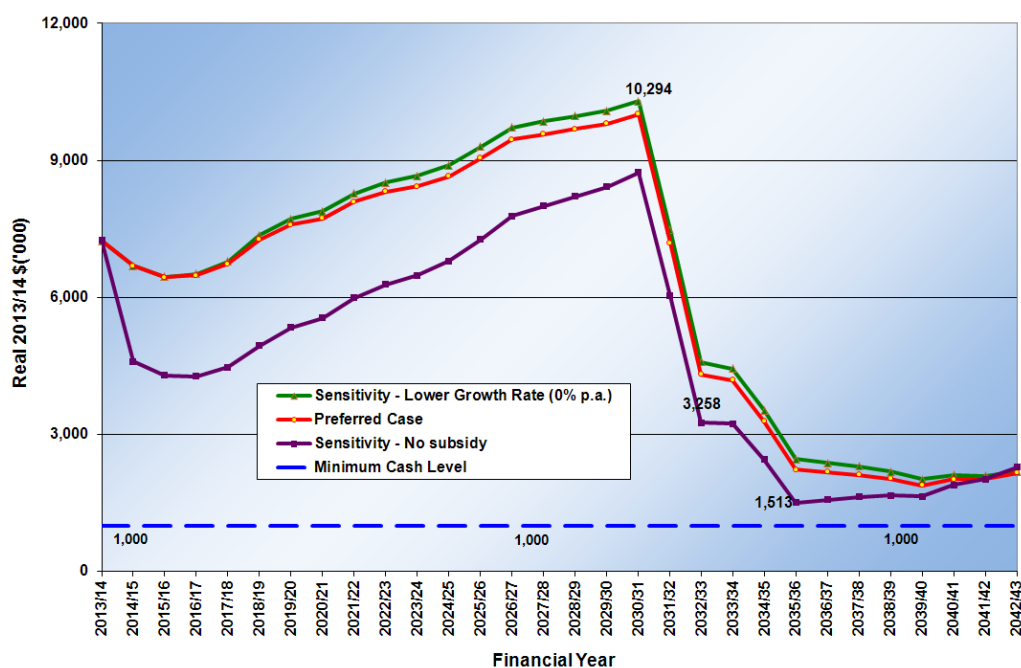
**Figure 19 – Sensitivity of Typical Residential Bill - Water Supply**



**Table 12-8: TRBs for Sensitivity Scenarios - Water Supply**

Scenario	2013/14 TRB (\$/year)	Annual increase in TRB from 2014/15 (\$)	TRB for the remaining forecast period
Preferred Case	510	25 for 5 years	635
Lower Assessment Growth Rate (0.0% p.a.)	510	27 for 5 years	645
No subsidy for Bore No.3 and the pipeline	510	25 for 6 years	660

**Figure 20 – Sensitivity of Cash and Investments – Water Supply**



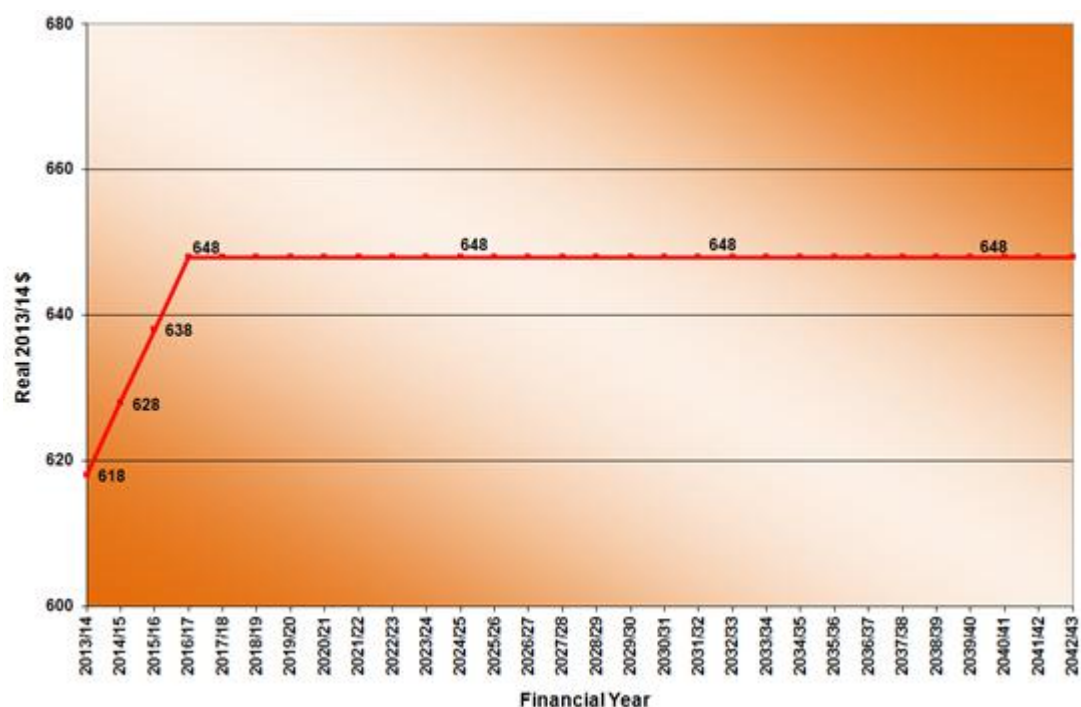
## 12.4.2 Sewerage

Financial projections for the sewer fund have been made considering that no subsidy will be available for the planned capital works during the forecast period.

The model has demonstrated that the current (2013/14) typical residential bill (TRB) for sewerage services of \$618 p.a. has to be increased by \$10/year for the next three years to a TRB of \$648 p.a. in 2016/17. Thereafter, the TRB can be maintained at that level for the remainder of the forecast period (see Figure below).

Note the forecast TRBs need to be adjusted annually for CPI/inflation and the financial model will be reviewed and the forecasts updated every 3 years in accordance with Best Practice Guidelines.

**Figure 21 – Typical Residential Sewerage Bill**

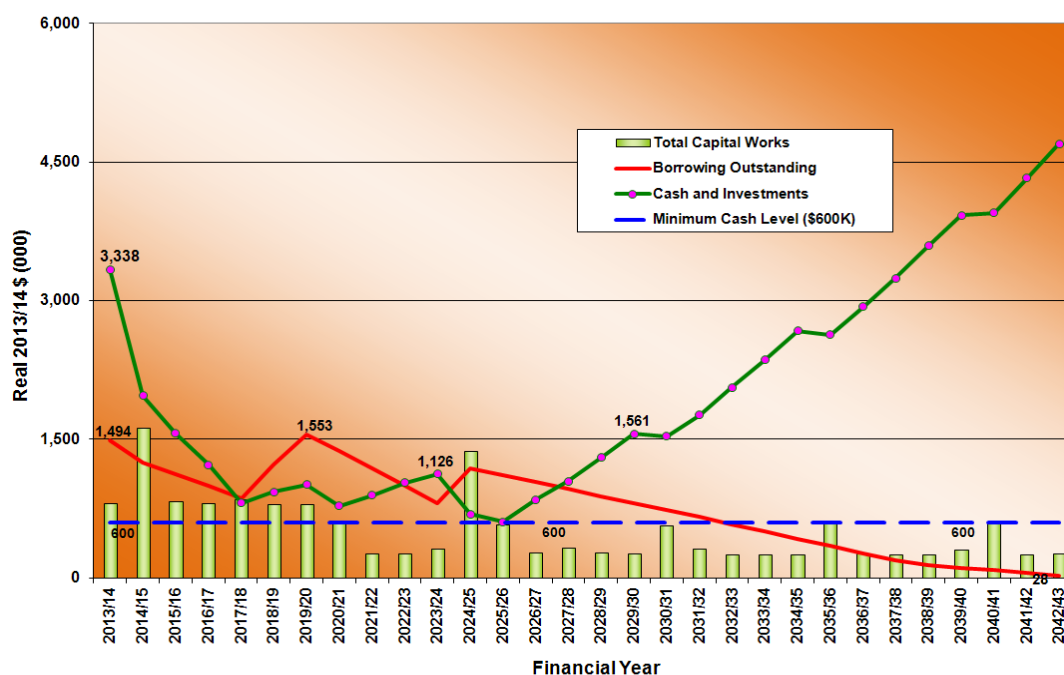


This level of TRBs for sewerage services will be sufficient to maintain liquidity with a minimum of \$ 600 K of cash in hand over the forecast period.

All the planned capital works will be funded through a mix of available cash and investments, annual revenue and external borrowings. New external borrowing will be required to fund planned renewal works from 2017/18 onwards. The outstanding borrowing will be at a maximum of \$1,553 K in 2019/20 and will be fully retired at the end of the forecast period (2042/43).

The levels of cash and borrowing outstanding as the planned capital works program is implemented during the forecast period are depicted in the Figure below. A summary of projected financial results is presented in Table 12-9.

**Figure 22 – Cash and Borrowing Projections – Sewerage**



**Table 12-9: Projected Financial Results - Sewerage**

2013/14 (\$000)	Revenue and Expenses			Capital Transactions		Financial Position					System Assets			
Financial Year	Total Revenue	Total Expenses	Operating Result (Before Grants)	Acquisition of Assets	Principal Loan Payments	Cash and Investments	Borrowings	Total Assets	Total Liabilities	Net Assets Committed	Current Replacement Cost	Less: Accumulated Depreciation	Written Down Current Cost	Typical Residential Bills
2013/14	2,331	2,380	(49)	810	243	3,338	1,494	34,698	1,494	33,204	45,194	14,054	31,140	618
2014/15	2,319	2,414	(95)	1,626	214	1,973	1,244	34,303	1,244	33,059	45,785	13,675	32,110	628
2015/16	2,307	2,395	(88)	830	95	1,564	1,118	34,067	1,118	32,949	45,840	13,558	32,283	638
2016/17	2,326	2,377	(51)	805	99	1,224	993	33,874	993	32,881	45,886	13,456	32,429	648
2017/18	2,307	2,385	(79)	852	104	812	864	33,656	864	32,792	45,978	13,355	32,623	648
2018/19	2,304	2,400	(95)	800	121	930	1,222	33,914	1,222	32,692	46,018	13,254	32,764	648
2019/20	2,311	2,422	(111)	800	140	1,011	1,553	34,136	1,553	32,583	46,059	13,154	32,904	648
2020/21	2,309	2,412	(103)	615	146	778	1,370	33,858	1,370	32,488	46,148	13,290	32,858	648
2021/22	2,311	2,415	(104)	265	152	894	1,184	33,577	1,184	32,393	46,188	13,727	32,461	648
2022/23	2,317	2,390	(74)	264	158	1,033	998	33,318	998	32,320	46,228	14,164	32,064	648
2023/24	2,324	2,384	(60)	315	165	1,126	809	33,063	809	32,254	46,317	14,602	31,715	648
2024/25	2,316	2,421	(105)	1,375	101	691	1,187	33,323	1,187	32,136	47,457	15,046	32,411	648
2025/26	2,309	2,428	(120)	575	46	607	1,112	33,135	1,112	32,023	47,497	15,191	32,306	648
2026/27	2,318	2,414	(96)	275	48	848	1,037	32,971	1,037	31,934	47,537	15,636	31,900	648
2027/28	2,331	2,412	(81)	327	50	1,045	962	32,813	962	31,851	47,629	16,083	31,546	648
2028/29	2,340	2,409	(69)	274	52	1,301	887	32,661	887	31,774	47,668	16,530	31,137	648
2029/30	2,353	2,419	(66)	265	54	1,561	811	32,504	811	31,693	47,708	16,988	30,720	648
2030/31	2,356	2,404	(48)	565	56	1,531	735	32,357	735	31,622	47,749	17,146	30,603	648
2031/32	2,365	2,400	(35)	315	58	1,763	659	32,221	659	31,562	47,839	17,604	30,234	648
2032/33	2,375	2,398	(23)	252	61	2,063	582	32,089	582	31,507	47,880	18,078	29,802	648
2033/34	2,389	2,406	(18)	250	63	2,361	505	31,952	505	31,447	47,920	18,553	29,367	648
2034/35	2,398	2,391	7	250	66	2,674	426	31,830	426	31,404	47,960	19,029	28,931	648
2035/36	2,401	2,391	10	600	69	2,632	347	31,701	347	31,354	48,050	19,206	28,844	648
2036/37	2,409	2,388	21	265	71	2,935	268	31,581	268	31,313	48,090	19,669	28,421	648
2037/38	2,419	2,398	22	252	74	3,243	187	31,452	187	31,265	48,133	20,148	27,984	648
2038/39	2,430	2,381	49	250	49	3,597	134	31,368	134	31,234	48,173	20,628	27,545	648
2039/40	2,441	2,382	59	305	23	3,926	108	31,311	108	31,203	48,268	21,109	27,160	648
2040/41	2,443	2,383	60	600	24	3,953	82	31,246	82	31,164	48,308	21,240	27,067	648
2041/42	2,454	2,395	60	250	25	4,328	55	31,179	55	31,124	48,348	21,723	26,625	648
2042/43	2,464	2,384	80	261	26	4,701	28	31,122	28	31,094	48,389	22,195	26,194	648

## Sensitivity Analysis

In accordance with the NOW Financial Guidelines, the following sensitivities have been modelled to determine the impact of various scenarios on typical residential bill for sewerage services.

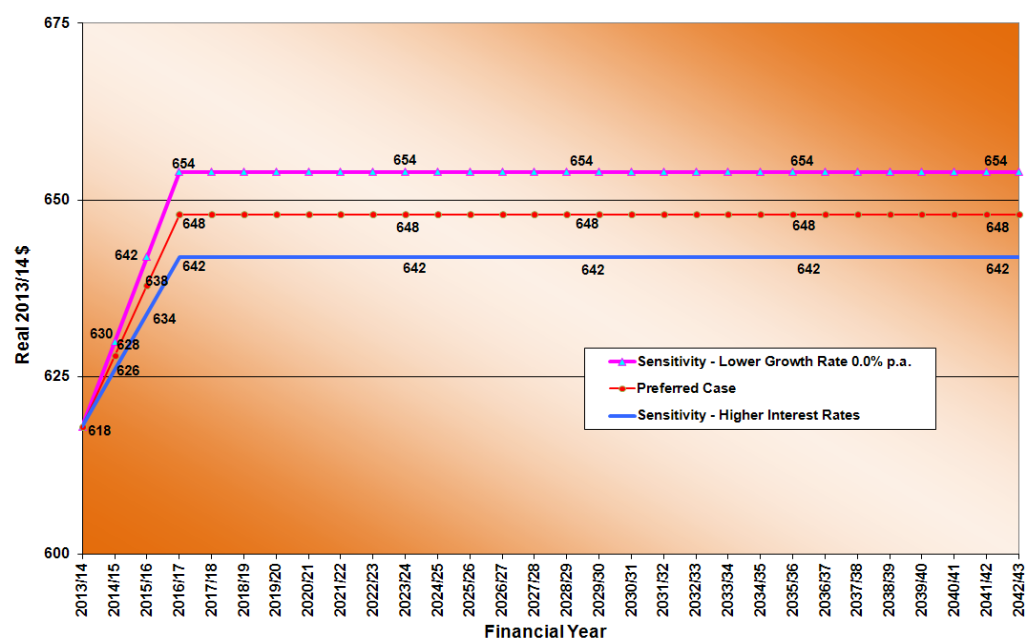
**Table 12-10: Sensitivity Analysis Parameters - Sewerage**

Criteria	Preferred Case	Sensitivity
Assessment growth rate	0.1% p.a.	0.0% p.a.
Borrowing Interest Rate	6.5% p.a.	9.0% p.a.

Sensitivity analysis indicates that the typical residential bill for sewerage service is slightly sensitive to lower growth rate. However, it is highly susceptible to any cost increase to planned capital works.

The results of modelling are presented as graphs in the following pages.

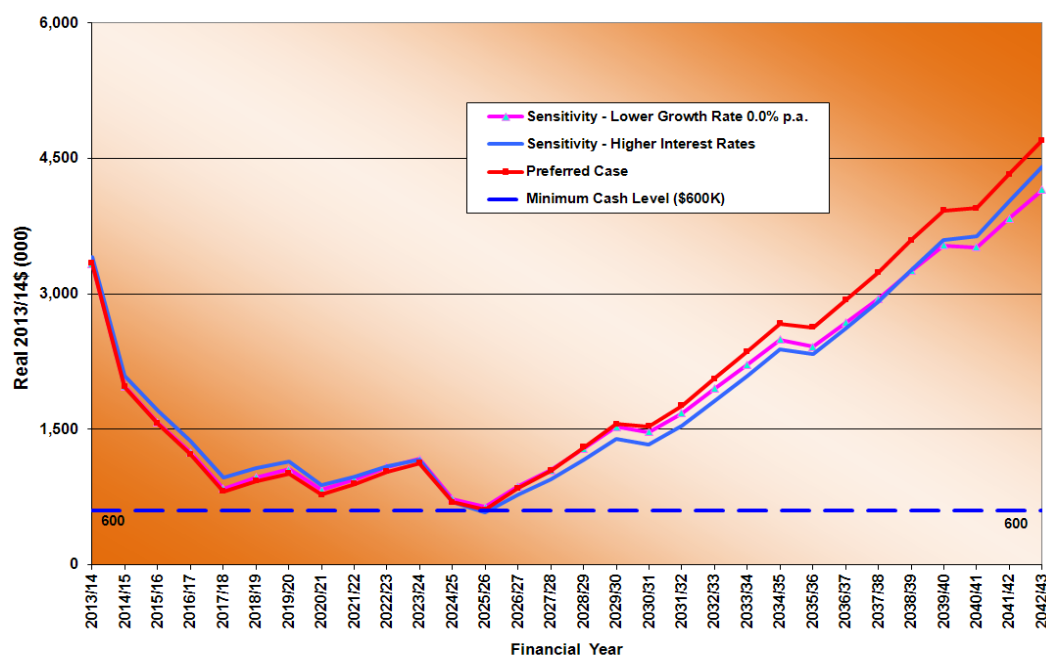
**Figure 23 – Sensitivity of Typical Residential Bill - Sewerage**



**Table 12-11: TRBs for Sensitivity Scenarios - Sewerage**

Scenario	2013/14 TRB (\$/year)	Annual increase in TRB from 2014/15 (\$)	TRB for the remaining forecast period
Preferred Case	618	10 for 3 years	648
Lower Assessment Growth Rate (0.0% p.a.)	618	12 for 3 years	654
Higher Borrowing Interest Rate	618	8 for 3 years	642

**Figure 24 – Sensitivity of Cash Levels – Sewerage**



## References

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Australian Bureau of Statistics 2012, 2011 Census Community Profiles, Cat. no. 2001.0, Australian Bureau of Statistics, Canberra.

Department of Land and Water Conservation, 1996, Sewerage inflow and infiltration management study, Department of Land and Water Conservation, Sydney

Forbes Shire Council 2010, IWCM Evaluation Study: Volume 1: Report, Forbes Shire Council, Forbes NSW

National Water Commission 2012, 2012-13 National Performance Framework: urban performance reporting indicators and definitions handbook (online copy), National Water Commission, Commonwealth of Australia, Canberra.

NRMMC 2011, Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy. (online copy), National Health and Medical Research Council, National Resource Management Ministerial Council, Commonwealth of Australia, Canberra.

NSW Department of Water and Energy 2007, Guidelines for Best-Practice Management of Water Supply and Sewerage, NSW Department of Water and Energy, NSW

NSW Planning and Infrastructure 2013, New South Wales State and Local Government Area Population Projections: 2013 preliminary revision, Demography Unit, NSW Planning and Infrastructure, Sydney.

## Appendices

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## Appendix A Inputs for Reporting under IPR Framework

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The main requirements of the Local Government Integrated Planning and Reporting Framework 2010 for the 10-year Community Strategic Plan, 4-year Delivery Program, Annual Operational Plan and Annual Report are summarised below. Inputs for water supply and sewerage services for inclusion in each of these reports are also presented alongside the summaries.

## A.1 Community Strategic Plan

The requirements for the Community Strategic Plan in the IPR framework include:

- To be revised at least every 10 years.
- Give due regard to the State Plan and other relevant state and regional plans.
- Include a community vision statement.

The planning process is generally used to:

- Identify main priorities and aspirations for the future.
- Enable community input on the identification of social, environmental, economic and civic leadership issues.
- Establish strategic objectives and proposed strategies to achieve those objectives that address issues identified above.
- Establish expected levels of service.

### Input to Community Strategic Plan

“For sustainable water supply services the Strategic Business Plan (SBP) for Water Supply and Sewerage will be reviewed and implemented in accordance with the NSW Government’s Best Practice Management of Water Supply and Sewerage Guidelines, August 2007.

Major water supply and sewerage capital works identified in the current Strategic Business Plan for completion over the next 10 years are shown in the Table next page. The justifications for why these works have been planned also are presented in the Table below.

Proposed Capital Work	Year	Justification
Development of bore no.3 and pipe line (375mm) from the bore	2014-2015	Improved Levels of Service
WTP components and electrical controls upgrade/replacement including telemetry	2014-2019	Asset renewal and upgrade for improved levels of service and to cater for growth
Decommissioning of Camp Hill reservoir	2014-2015	Improved Levels of Service
Repair and epoxy coating of WTP sand filters	2014-2024	Refurbishment of ageing assets
Mains replacement/renewal as per the Water AMP	Ongoing	Renewal of ageing assets
Sewage pump station (SPS 18) replacement	2014-15	Replacement of ageing asset
Replacement of rising main from Fitzgerald Bridge (SPS 5) to STP	2014	Renewal and upgrade for improved levels of service
Sewer relining / replacement and manhole refurbishment	2014 onwards	Repair and refurbishment of ageing assets
Odour and corrosion control for SPS (1, 4 and 11) and vent shafts	2014 onwards	Increased Levels of Service
Replacement/upgrade of pumps, switchboards and electrical components including PLC and SCADA at STP	2014 onwards	Renewal of ageing assets

## A.2 Resourcing Strategy

Sets out what Council will do over the next 10 years to address the community's main priorities in the Community Strategic Plan. Council determines its Resourcing strategy from the following:

- Total Asset Management Planning;
- Work Force Planning; and
- Long-term Financial Planning.

### Input to Resourcing Strategy

"The SBP for Water Supply and Sewerage is the Council's resourcing strategy for the water and sewerage services in which the strategies for Asset Management Planning (AMP), Work Force Planning (WFP) and the Long-term Financial Planning are presented in detail".

Note regarding the AMP and WFP, the SBP details the current status and key outcomes and detailed reference is from the individual planning documents

## A.3 Delivery Program

- Directly addresses the objectives and strategies of the Community Strategic Plan.
- Identifies principal activities council will undertake.
- Identifies principal activities be undertaken within available resources.
- Provides financial estimates for the 4 year period.
- Considers priorities and expected level of service in the Community Strategic Plan.

### Input to Delivery Program

"The SBP for Water Supply and Sewerage (Sections 8 to 11) is the Council's delivery program for water and sewerage services wherein the objectives, strategies, activities planned for the next 4 - 5 years including the costs, start and end dates and responsible officer are presented in detail. The financial estimates for the next 4 year period are presented as part of the 30-year financial projections of the Long-term Financial Plan".

## A.4 Operational Plan and Annual Report

- Operational Plan outlines the activities to be undertaken for the year as part of the Delivery Program and is prepared as a sub-plan of the Delivery Program
- Operational Plan includes Statement of Revenue Policy – fees and charges, pricing methodology, proposed borrowings, and detailed budget for activities to be undertaken in the year.
- Annual Report is a report to the community which outlines council's achievements in implementing the Delivery Program as planned in the Operational Plan.
- Annual Report outlines the effectiveness of the principal activities undertaken in achieving the objectives in the Community Strategic Plan.

### Input to Operational Plan

"The SBP for Water Supply and Sewerage (Sections 8 to 11) is the Council's operational plan for water and sewerage services in which all the planned activities for delivery program are presented in detail".



## Appendix B Legislative Framework

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## B.1 Legislative Framework

Forbes Shire Council delivers potable water supply and reticulated sewerage services to the community under the authority of the Local Government Act, 1993. Council has embraced the principles underlying this Act as being of benefit to the community it serves. Community consultation and involvement in decision-making has been increased in line with the Act in the last few years.

Several other Acts also affect Council's scheme. These generally fall into three main categories as follows:

Act	General Implications for Council
<b>PRICING</b>	
Local Government Act 1993 Esp. Sections 64 and 428	<ul style="list-style-type: none"> <li>- Determining developer charges: <ul style="list-style-type: none"> <li>o provide a source of funding for infrastructure required for new urban development</li> <li>o provide signals regarding costs of urban development and encourage less costly forms</li> </ul> </li> <li>- Need to be more accountable.</li> <li>- Need for better asset management.</li> </ul>
Environmental Planning and Assessment Act 1979	<ul style="list-style-type: none"> <li>- Determining developer charges.</li> <li>- Requirement for LEP and DCPs</li> <li>- Council control of service approvals.</li> </ul>
Water Management Act 2000 Progressively replaces the previous Water Act 1912, Water Authorities Act 1987 and 10 others including irrigation, rivers and foreshores Acts)	<ul style="list-style-type: none"> <li>- Determining developer charges</li> <li>- Water rights, licences, allocations.</li> </ul>
Local Government Regulation 2005 (Savings and Transitional)	<ul style="list-style-type: none"> <li>- Determining developer charges.</li> <li>- Gives powers to the Independent Pricing and Regulatory Tribunal to inquire into and regulate prices.</li> </ul>
Independent Pricing and Regulatory Tribunal Act 1992	<ul style="list-style-type: none"> <li>- IPART has developed a set of consistent pricing principles to be adopted by local government authorities.</li> <li>- Guidelines for 'user pays' charging system in the water and wastewater industry.</li> </ul>
Water Industry Competition Act 2006	<ul style="list-style-type: none"> <li>- Establishment of third-party access regime for water and sewerage infrastructure to encourage competition</li> <li>- Authorisation of IPART to regulate licensed private network operators to ensure services are delivered in a safe and reliable manner</li> </ul>
<b>ENVIRONMENTAL PROTECTION</b>	
Protection of the Environment Operations Act 1997	<ul style="list-style-type: none"> <li>- Regulating pollution activities and issue of licenses as well as the monitoring of and reporting on waste output.</li> <li>- Council is required to be "duly diligent" in undertaking the scheme operations</li> </ul>
Soil Conservation Act 1938	<ul style="list-style-type: none"> <li>- Conserves soil resources and farm water resources and the mitigation of erosion and land degradation.</li> <li>- Preservation of watercourse environments</li> </ul>
Environmental Planning and Assessment Act 1979	<ul style="list-style-type: none"> <li>- Encourages the proper management of natural and man-made resources, the orderly use of land, the provision of services and protection of the environment.</li> </ul>
Catchment Management Act	<ul style="list-style-type: none"> <li>- Promotes the coordination of activities within catchment</li> </ul>

Act	General Implications for Council
1989	<p>areas. Council believes this Act has implications for the management of river water quality and quantity.</p> <ul style="list-style-type: none"> <li>- Requirement for ongoing management plan.</li> <li>- Requirement of Capital Works Plan under Sydney Catchment Authority Regulations.</li> </ul>
Water Management Act 2000	<ul style="list-style-type: none"> <li>- The Act provides for sustainable and integrated management of State's water sources.</li> <li>- Water rights, licences, allocations.</li> </ul>
<b>HEALTH AND SAFETY</b>	
Public Health Act 2010	<ul style="list-style-type: none"> <li>- Prevention of the spread of disease.</li> <li>- Effluent disposal methods.</li> <li>- Delivery of quality water.</li> </ul>
Fluoridation of Public Water Supplies Act 1957	Addition of fluoride in public water supply by water utilities
Work Health and Safety Act 2011 (and Regulations 2011)	<ul style="list-style-type: none"> <li>- Council's responsibility to ensure health, safety and welfare of employees and others at places of work.</li> <li>- Likely be cost implications</li> <li>- Impacts all operations.</li> <li>- Note public safety – insurance.</li> </ul>
Dam Safety Act 1978	Obligations and responsibility for local water utilities for the safety of dams under their jurisdiction

## Local Government Act 1993

The main purpose of the Local Government Act 1993 is to provide the legal framework for an effective, efficient, environmentally responsible, and open system of Local Government in NSW.

The Act is, in the main, administered by the Minister for Local Government, but the Minister for Water has significant powers under the Act for water, sewerage and drainage.

The Act confers service functions on Councils. These include the provision, management and operation of water supply and sewerage works and facilities. The Act provides Councils with broad power to carry out their functions, and a "Council may do all such things as are supplemented or incidental to, or consequential on, the exercise of its functions" (section 23 of the Act).

Some particular parts of the Act relating to water supply and sewerage are:

- Section 64 - developer charges (Under this section of the new Act, a Council may use the relevant provisions of the Water Management Act 2000 to obtain water supply and sewerage developer charges. The provisions of Section 94 of the Environmental Planning and Assessment Act are no longer available to Councils for obtaining water supply and sewerage developer contributions.);
- Section 68 - Council approval of plumbing works;
- Sections 634-651 - water supply, sewerage and drainage offences; and
- Water, Sewerage and Drainage Regulation which cover matters from the "old" ordinance 4.5 and 4.6.

The role of the Minister for Water in regard to water supply, sewerage and drainage is covered in Sections 56-66. The Minister's role is generally along the lines of Part XIV of the 1919 Act, and it includes matters such as construction of works, hand over and vesting of work, approval of dams and treatment works, directions to Councils concerning

dams and treatment works, action during emergencies, and the appointment of an administrator.

The NSW Office of Water provides section 60 approvals to council proposals to construct a dam, water or sewage treatment works and for effluent and biosolids reuse.

The NSW Office of Water carries out section 61 inspections of LWU dams and water and sewage treatment works.

The NSW Office of Water provides concurrence to Council liquid trade waste approvals under section 90(2) of the Act.

Councils issue approval to applications to discharge trade waste to their sewerage system under section 68 of the Local Government Act. Conditions of approval are imposed under clause 32 of the Local Government Regulation 2005.

## Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment (EP&A) Act was enacted in 1979, and amended by the Environmental Planning and Assessment (Amendment) Act (1985). The Act is the principal planning instrument in NSW, and it specifies the environmental considerations required in all development activities. It also governs the procedures of all proposals that have an effect on the environment. Its objectives are to encourage the proper management of natural and man-made resources, the orderly use of land, the provision of services, and the protection of the environment.

The Act is administered by the Minister for Planning.

The Act requires that all proposals, activities, and functions which are investigated, designed, planned, constructed, and operated by Councils should be studied during all stages for their environmental impact on the basis of scale, location, and performance.

Environmental studies are to be undertaken concurrently with the technical or planning investigations. The findings of environmental studies should be reported initially in Reviews of Environmental Factors (REF), which indicate the need for further studies, their extent and depth, and the degree of public or other involvement required. The REF can often be used for consents or approvals. A Council can give consents for a development as prescribed in Local Environmental Plans (LEP) when the Council are the consent authorities (Part IV of the EP&A Act).

An Environmental Impact Statement (EIS) is a comprehensive report compiled from extensive studies. An EIS is required for:

- designated developments (Part IV of the EP&A Act);
- projects which affect the environment significantly (Part V of the EP&A Act); and
- when designated by a State Environmental Planning Policy or in an LEP.

## Catchment Management Act 1989

The objectives of this Act are:

- To coordinate policies, programs and activities as they relate to total catchment management;
- To achieve active community participation in natural resource management;
- To identify and rectify natural resource degradation;
- To promote the sustainable use of natural resources; and
- To provide stable and productive soil, high quality water and protective and productive soil and vegetation cover within each of the State's water catchments.

The Act is administered by the Minister for Land and Water Conservation.

## Soil Conservation Act 1938

The objective of the Soil Conservation Act is the conservation of soil resources and farm water resources and the mitigation of erosion and land degradation.

The Act is administered by the Minister for Land and Water Conservation.

Under Section 21C of the Act, a Council is required to protect land along prescribed streams and to prevent any destruction of trees and soil erosion on protected land. The same section of the Act specifies the rules for any person or occupier or any protected land from ringbarking, cutting down, felling, poisoning of, or otherwise destroying, vegetation or trees.

Section 21D of the Act requires that the land owner or occupier must obtain an authority before damaging or destroying trees between the banks or within 20 metres of banks of a prescribed stream. Public Works is responsible for preparing inspection reports for sites downstream of the tidal limit.

Section 22 of the Act outlines requirements for preservation of proclaimed works and catchment areas.

## Public Health Act 2010

The Public Health Act 2010 replaced the Public Health Act 1991. The main objectives of the Public Health Act 2010 are:

- to promote, protect and improve public health;
- to control the risks to public health;
- to promote the control of infectious diseases; and
- to prevent the spread of infectious diseases.

The Act recognises the role of local government in protecting public health. Under the Act, a local government authority has the responsibility to take appropriate measures to ensure compliance with the requirements of this Act in relation to public swimming pools and spa pools, regulated systems and premises on which skin penetration procedures are carried out. A local government authority has the responsibility of appointing authorised officers to enable it to exercise its functions under this Act and ensuring that its authorised officers duly exercise their functions under this Act.

Part 3 Division 1 of the Act includes the provisions in respect to safety measures for drinking water.

The Minister for Health has the power to take actions and to issue directions, as the Minister considers necessary:

- to restrict or prevent the use of unsafe water, potable or otherwise, that is likely to be a risk to public health; and
- to bring unsafe water to such a condition that it is no longer unsafe water.

The Director General has the power to direct a supplier of drinking water to carry out testing and produce information in relation to the treatment and quality of drinking water.

The Chief Health Officer has the responsibility for determining the necessity for a boil water advice and additional information or correction or re-traction of such advice, by a supplier of drinking water for the drinking water it supplies. The Chief Health Officer may also prepare advice concerning public health risks or boil water advice, and provide the advice to the drinking water supplier.

According to the Clause 25 of the Act a supplier of drinking water must establish and adhere to a quality assurance program that complies with the requirements prescribe by the regulations. The regulations are yet to be enacted.

## Fluoridation of Public Water Supplies Act 1957

This Act covers addition of fluoride to a public water supply by a water utility.

The Act is administered by the Minister for Health.

Under the Act, approval of NSW Health is required in order that a Council can add fluoride to a water supply.

The NSW Office of Water provides assistance to NSW Health in the training of authorised officers to operate fluoridation plants and conducts pre-commissioning inspections of fluoridation plants to confirm they have met the requirement of the NSW Fluoridation Code of Practice.

## Dam Safety Act 1978

The Dams Safety Act constitutes the Dams Safety Committee and imposes, on the Committee, functions relating to the safety of certain dams. The functions of the Committee include the following:

- Maintain a surveillance of prescribed dams;
- Investigate the location, design, and construction of prescribed dams;
- Obtain information and keep records on matters relating to the safety of dams;
- Formulate measures to ensure the safety of dams; and
- Report to the Minister in relation to the safety of prescribed dams,

The Act is administered by the Minister for Primary Industries.

Under the Act, the Dams Safety Committee may require the owner of a prescribed dam to:

- Make observations, take measurements and keep records in regard to such dams; and
- Furnish the committee with such information;

Local water utilities have obligations and responsibility for the safety of dams under their jurisdiction. Among other matters, local water utilities are required to prepare a five-yearly Dam Surveillance Report for their dams.

## Water Act 1912

This Act is being progressively phased out and replaced by the Water Management Act 2000, but some provisions are still in force.

The Water Act covers matters such as water rights, licences and water allocations.

It is necessary under this Act for the Council to obtain a licence for a work for the purpose of:

- Water conservation, irrigation, water supply or drainage;
- Prevention of inundation of land and overflow of water thereon; and
- Changing the course of the river.

## Water Management Act 2000

The Water Management Act 2000 is the key NSW water legislation for the sustainable management of water. The Act promotes the sharing of responsibility for the sustainable and efficient use of water between the NSW Government and water users.

The Act provides a legal basis for water planning, the allocation of water resources and water access entitlements.

The main tool the Act provides for managing the NSW water resources are water sharing plans. The plans for each catchment set out the rules for the sharing of water between water users and the environment and rules for the trading of water.

Chapter 6 of the Act provides for the constitution, construction, operation and charging regimes for major water utilities and local water utilities.

Section 305 of the Act provides water utilities with a mechanism to control development in relation to water services through the provision of a “certificate of compliance”.

Section 306 of the Act enables water supply authorities and local water utilities, through a cross reference to section 64 of the Local Government Act 1993, to levy developer charges towards the cost of water infrastructure required for serving development.

The Act is administered by the Minister for Primary Industries and the Minister for Finance and Services.

## Independent Pricing and Regulatory Tribunal Act 1992

The Independent Pricing and Regulatory Tribunal Act establishes the Independent Pricing and Regulatory Tribunal and enables the Tribunal to determine and advise on prices and pricing policy for government monopoly services. A government monopoly service is a service supplied by a government agency (which may include a local government council) and declared by the regulations, or the Minister, to be a government monopoly service.

The Tribunal conducts investigations and makes reports to the Minister on the determination of the maximum price and on a periodic review of pricing policies for services applied by these agencies specified in Schedule 1 to the Act. Schedule 1 presently includes Sydney Water Corporation, Hunter Water Corporation, Water Supply Authorities, including Gosford City Council, Wyong Shire Council, State Water (Fish River Water Supply) and Essential Energy (Broken Hill).

The Tribunal may also conduct investigations and make reports for any government monopoly service, at the request of the Minister, whether or not it is supplied by a government agency specified in Schedule 1.

## Work Health and Safety Act 2011

This revised Act details Council's responsibilities to ensure health, safety and welfare of employees and others at places of work. All of the scheme's operational activities are impacted on by this Act. This act is administered by the Work Cover Authority.

## Protection of the Environment (Operations) Act 1997

This Act came into effect in July 1998 and consolidated existing legislation to eradicate the duplication of powers and overlapping use of resources. The Act brought together what used to be five separate pieces of legislation:

- Clean Air Act 1961;
- Clean Waters Act 1970;
- Pollution Control Act 1970;
- Noise Control Act 1975; and
- Environmental Offences and Penalties Act 1989.

The POEO Act introduces a holistic approach to protecting the environment, changing from pollution control legislation to environment protection legislation.

The Act enables the NSW Government to set out explicit protection of the environment policies (PEPs) involving environmental standards, goals, protocols and guidelines.

Key features of the Act are as follows:

- Single licensing arrangement relating to air pollution, water pollution, noise pollution and waste management;
- EPA issues licences and is the regulatory authority for scheduled activities specified in Schedule 1 of the Act;
- Local councils are the regulatory authorities for non-scheduled activities except activities undertaken by a public authorities;

- EPA can issue licences to regulate water pollution from a non-scheduled activity therefore becomes the regulating authority;
- Environment protection notices that can be issued by appropriate regulatory authorities;
- The Act includes an offence regime and may involve heavy penalties and or gaol.
- The Act includes civil enforcement provisions for third parties.

The Act is administered by Office of Environment and Heritage.

The POEO Act is a powerful tool for regulation of sewerage and trade waste by local water utilities and facilitating compliance with the utility's conditions of approval for liquid trade waste discharges to the sewerage system.

Councils may issue a penalty notice under section 222 of the Act to a discharger who fails to obtain an approval to discharge trade waste to the council's sewerage system or who fails to comply with the conditions of the council's approval. In addition, section 123 of the Act may be used to sue a discharger causing major damage to the council's sewerage system or to the environment

The legislation also incorporates major regulatory provisions of the Waste Minimisation and Management Act.

### Water Industry Competition Act 2006

The objectives of the Act and supporting regulations are to encourage competition in the water industry and to foster innovative recycling projects and dynamic efficiency in the provision of water and wastewater services.

Increasing competition in the metropolitan water market and water recycling are key actions in the NSW Government's Metropolitan Water Plan and State Plan.

The Act provides for the matters such as:

- the establishment of a new licensing regime for private sector providers of reticulated drinking water, recycled water and sewerage services;
- the establishment of a third-party access regime for water and sewerage infrastructure;
- provisions for a licensed network operator to construct or remove water industry infrastructure; and
- provisions to authorise IPART to undertake regulatory functions in certain parts of the Act.

Key aspects of General Regulation include:

- ensuring new entrants and the public water utilities face similar obligations, where like services are provided;
- strict licensing rules to ensure that drinking water meets Australian standards, that recycled water is 'fit for purpose' and that all services are delivered in a safe, reliable manner with minimal environmental impacts; and
- provisions to prevent retailers from disconnecting small customers for non-payment of debt and to require the implementation of NSW Government social policies, such as pensioner rebates.

## B.2 Other Government Initiatives

Initiative	Purpose
Efficient Operation	The Department of Local Government is concerned that councils generally are well managed.
Efficient Resource Use	The Federal Industry Commission Report on the Australian Water Industry is concerned to ensure efficient use of resources - natural, physical and financial. Its 1992 Report's recommendations were wide-ranging and covered matters such as pricing reforms and structural reforms (e.g. amalgamation of authorities).
Competition Policy	<p>In 1995 the Council of Australian Governments (COAG) ratified the National Competition Policy. Of particular significance to the water and sewerage functions of Council is the application of competitive neutrality to operations. The purpose of this is to have councils <i>"operate under similar competitive pressures to those experienced by the private sector"</i>.</p> <p>The NSW Government has embraced these principles and set in motion a number of policies to increase the efficiency and the competitiveness of this type of business area. (Refer to the <a href="#"><u>NSW Government Policy Statement on the Application of National Competition Policy to Local Government</u></a>).</p>
Asset Management	The NSW Government, which has ultimate responsibility for water and sewerage in the State, is concerned to ensure that the \$7 billion asset base in water supply and sewerage schemes of country towns under the care of Local Governments is well managed.
Financial Assistance	<p>The NSW Government has been providing grants for the development and improvement of water supply and sewerage schemes in country areas, under the Country Towns Water, Sewerage and Drainage Program, which is now administered by the NSW Office of Water.</p> <p>The Minister responsible for water has made changes to the subsidy provisions. The main changes are the requirement to implement best industry management practices and the withdrawal of subsidies for growth related capital works. These changes are outlined in the publication <a href="#"><u>Country Towns Water Supply and Sewerage Program: Technical and Financial Assistance</u></a> available to Councils.</p>
Best Practice Management	<p>The NSW Government encourages best practice for all LWUs. The purpose of best practice management is:</p> <ul style="list-style-type: none"> <li>- To encourage the effective and efficient delivery of water supply and sewerage services; and</li> <li>- To promote sustainable water conservation practices and water demand management throughout NSW.</li> </ul> <p>From 1 July 2004, compliance with the six best practice criteria is mandatory for payment of a dividend from the surplus of an LWU's water supply and sewerage businesses and future financial assistance under the Country Towns Water Supply &amp; Sewerage program.</p>



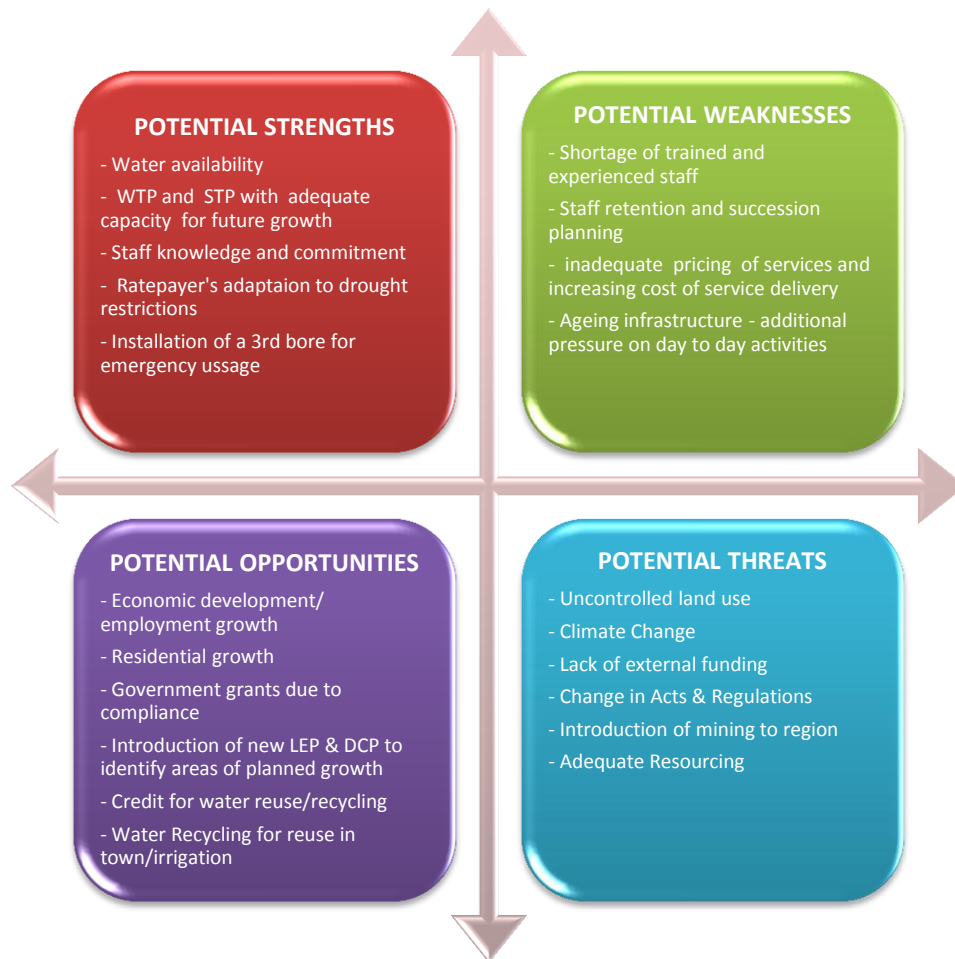
## Appendix C Situation Analysis

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## C.1 Situation Analysis

A situation analysis was carried out to help identify emerging issues within the operating environment. The participants of the Strategic Business Planning Workshop identified the internal strengths and weaknesses along with the external opportunities and threats faced by Council. The outcomes of the analysis are shown below.

**Figure 25 – Situation Analysis**



## Appendix D Performance Indicators

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## D.1 NOW TBL Report 2011-12 - Water Supply

### Forbes Shire Council TBL Water Supply Performance 2011-12

**WATER SUPPLY SYSTEM** - Forbes Shire Council serves a population of 7,900 (3,670 connected properties). Water is drawn from the Lachlan River and 2 bores (7.3 ML/d) to supply Forbes and Cotha. The water supply network comprises 1 rapid sand filter treatment works (26 ML/d), 4 service reservoirs (30 ML), 6 pumping stations, 26 ML/d delivery capacity into the distribution system, 30 km of transfer and trunk mains and 118 km of reticulation. Forbes has a dual supply with fully treated potable supply for indoor use (94%) and an untreated non-potable supply for outdoor uses (6%).

**PERFORMANCE** - Forbes Shire Council achieved 100% compliance with Best Practice requirements. The 2012-13 typical residential bill was \$362 which was less than the statewide median of \$400 (Indicator 14). However, the economic real rate of return was negative (Indicator 43). The operating cost (OMA) per property was \$479 which was above the statewide median of \$380 (Indicator 40). Water quality complaints were less than the statewide median of 3 (Indicator 25). Compliance was achieved for microbiological water quality (1 of 1 zones compliant), chemical water quality (1 of 1 zones compliant) and physical water quality. There were no failures of the chlorination system or the treatment system. Forbes Shire Council reported no water supply public health incidents. Current replacement cost of system assets was \$67M (\$18,400 per assessment). Cash and investments were \$8.6M, debt was nil and revenue was \$1.8M (excluding capital works grants).

#### IMPLEMENTATION OF REQUIREMENTS OF BEST-PRACTICE MANAGEMENT FRAMEWORK

(1) Complete Current Strategic Business Plan & Financial Plan	YES	(3) Sound water conservation implemented	YES
(2) (2a) Pricing - Full Cost Recovery, without significant cross subsidies	Yes	(4) Sound drought management implemented	YES
(2b,2c) Pricing - Aseparate Residential Charge	Yes	(5) Complete performance reporting (by 15 September)	YES
(2d) Pricing - Aseparate Non-residential Charge	Yes	(6) Integrated water cycle management strategy	YES
(2e) Pricing - DGP with Commercial Developer Charge	Yes		100%

#### TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS

Category	Indicator	Metric	Result	Ranking		Medians	
				Col 1	Col 2	Col 3	Col 4
UTILITY CHARACTERISTICS	C1	Population served:	7900				
	C2	Number of connected properties:	3670				
	C3	Residential connected properties (% of total)					
	C4	New residences connected to water supply (%)					
	A3	Properties served per kilometre of water main					
	C5	Rainfall (% of median annual rainfall)					
	W11	Total urban water supplied at master meters (ML)					
	C6	Peak week to average consumption (%)					
	C7	Renewals expenditure (% of current replacement cost of system assets)					
	C10	Employees per 1000 properties					
SOCIAL CHARGES & BILLS	P1	Residential tariff structure for 2012-13: inclining block, independent of land value; access charge \$175					
	P13	Residential water usage charge for 2011-12 for usage <600 kL (p/kL)					
	C12	Residential water usage charge for 2012-13 for usage <600 kL (p/kL)					
	P14	Typical residential bill for 2011-12 (\$/assessment)					
	C14	Typical residential bill for 2012-13 (\$/assessment)					
	C15	Typical developer charge for 2012-13 (\$/equivalent lotment)					
	P16	Residential revenue from usage charges (% of residential bills)					
	F17	Revenue per property - water (\$)					
	C18	Urban population without reticulated water supply (%)					
	H6	Risk based drinking water quality plan?					
SOCIAL HEALTH	C19	Physical compliance achieved? Note 18					
	C19a	Chemical compliance achieved? Note 18					
	C19b	Number of zones with chemical compliance					
	C20	Microbiological (E. coli) compliance achieved? Note 18					
	C20a	% population with microbiological compliance					
SERVICE LEVELS	C26	Water quality complaints per 1000 properties					
	C28	Water service complaints per 1000 properties					
	C17	Average frequency of unplanned interruptions per 1000 properties					
	C15	Average duration of interruption (min)					
	A8	Number of water main breaks per 100 km of water main					
	C31	Drought water restrictions (% of time)					
	C32	Total days lost (%)					
ENVIRONMENTAL	W12	Average annual residential water supplied per property (kL)					
	C33a	Average annual residential water supplied - COASTAL (kL/property)					
	C33b	Average annual residential water supplied - INLAND (kL/property)					
	A10	Real losses (leakage) (L/service connection/day)					
	C35	Energy consumption per Megalitre (kiloWatt hours)					
	C36	Renewable energy consumption (% of total energy consumption)					
	C39a	Net greenhouse gas emissions - WIS & Sge (net tonnes CO2 - equivalents per 1000 properties)					
ECONOMIC	F17	Economic real rate of return - Water (%)					
	C44	Return on assets - Water (%)					
	F22	Net Debt to equity - WIS&Sge (%)					
	F23	Interest cover - WIS&Sge					
	C47	Loan payment per property - Water (\$)					
	F24	Net profit after tax - WIS & Sge (\$'000)					
	C48	Operating cost (OMA) per 100km of main (\$'000)					
	C49	Operating cost (OMA) per property (\$)					
	C50	Operating cost (OMA) per kilolitre (cents)					
	C51	Management cost per property (\$)					
EFFICIENCY	C52	Treatment cost per property (\$)					
	C53	Pumping cost per property (\$)					
	C54	Energy cost per property (\$)					
	C55	Water main cost per property (\$)					
	F20	Capital Expenditure per property (\$)					

#### NOTES:

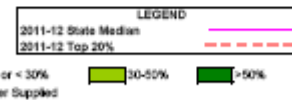
- Col 2 rankings are on a % of LWUs basis - best reveals performance compared to similar sized LWUs (ie. Col 1 is compared with LWUs with 3,001 to 10,000).
- Col 3 rankings are on a % of LWUs basis - best reveals performance compared to all LWUs (ie. Col 1 is compared with all LWUs).
- Col 4 (Statewide Median) is on a % of connected properties basis - best reveals statewide performance (gives due weight to larger LWUs & reduces effect of smaller LWUs).
- Col 5 (National Median) is the median value for the 87 utilities reporting water supply performance in the National Performance Report 2011-12 ([www.nwc.gov.au](http://www.nwc.gov.au)).
- LWUs are required to annually review key projections & actions in their Strategic Business Plan and annually update their financial plan. The SBP should be updated after 4 years.
- 2012-13 Non-residential Tariff: Access Charge based on Service Connection Size\* (40mm: \$700), Two Part Tariff; Usage Charge 75c/kL.
- Non-residential water supplied was 33% of potable water supplied excluding non-revenue water.
- Non-residential revenue was 23% of annual rates and charges, indicating fair pricing of services between the residential and non-residential sectors.
- The operating cost (OMA) per property was \$479. Components were: management (\$110), operation (\$117), maintenance (\$178) and chemical (\$57).
- Forbes Shire Council rehabilitations included 1.85% of its service connections.
- Compliance with ADWG 2011 for drinking water quality is shown as "Yes" if compliance has been achieved (Indicators 19, 19a & 20), otherwise the % of samples complying is shown.

(Results shown for 10 years together with 2011-12 Statewide Median and Top 20%)



## NOTES:

- Costs are in Jan 2012\$ except for graphs 12 and 14, which are in Jan 2013\$.
- Microbiological water quality compliance 1999-00 to 2003-04 was on the basis of 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines for E. coli, from 2004-05 to 2010-11 compliance was on the basis of the 2004 NHMRC/NRMMC Australian Drinking Water Guidelines (ADWG) and for 2011-12 compliance was on the basis of the 2011 ADWG.
- Indicators 33 and 33a - Green shading shows % of Time Drought Water Restrictions applied in each year.
- Indicator 33a - Yellow bars show Peak Week Water Supplied for comparison with Peak Day Water Supplied.



## D.2 NOW TBL Report 2011-12 - Sewerage

Forbes Shire Council		TBL Sewerage Performance				2011-12				
SEWERAGE SYSTEM - Forbes Council has 1 sewage treatment works providing tertiary treatment. The system comprises 12,000 EP treatment capacity (Intermittent Extended Aeration (Activated Sludge)), 17 pumping stations (20 ML/d), 13 km of rising mains and 76 km of gravity trunk mains and reticulation. 82% of effluent was recycled and treated effluent is discharged to land and river.										
PERFORMANCE - Residential growth for 2011-12 was 1% which is similar to the statewide median. Forbes Shire Council achieved 100% implementation of Best-Practice requirements. The 2012-13 typical residential bill was \$452 which was less than the statewide median of \$600 (Indicator 12). The economic real rate of return was similar to the statewide median (indicator 46). The operating cost per property (OMA) was \$447 which was above the statewide median of \$410 (Indicator 50). Sewage odour complaints were less than the statewide median of 0.5 (Indicator 21). Forbes Council reported no public health incidents. Council complied with the requirements of the environmental regulator for effluent discharge. The current replacement cost of system assets was \$43M (\$13,400 per assessment), cash and investments were \$4M, debt was \$2M and revenue was \$2.1M (excluding capital works grants).										
IMPLEMENTATION OF REQUIREMENTS OF BEST-PRACTICE MANAGEMENT FRAMEWORK										
(1) Complete current strategic business plan & financial plan		YES	(2a) Pricing - DGP with commercial developer charges		YES					
(2) (2a) Pricing - Full Cost Recovery without significant cross subsidies		Yes	(2b) Pricing - Liquid trade waste approvals & policy		Yes					
(2b) Pricing - Apportionate Residential Charges		Yes	(3) Complete performance reporting (for 13 September)		YES					
(2c) Pricing - Apportionate Non-Residential Charges		Yes	(4) Integrated water cycle management strategy		YES					
(2d) Pricing - Apportionate Trade Waste Fees and Charges		Yes	IMPLEMENTATION OF ALL REQUIREMENTS		100%					
TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS										
UNIT		No.	LWU RESULT		RANKING		MEDIAN			
					3,001 to 10,000		Statewide National			
UTILITY	CHARACTERISTICS	C5	1 Population served: 7,900							
		C6	2 Number of connected properties: 3,170	Number of assessments: 3,170						
		C6	3 Number of residential connected properties: 2,810							
		A6	4 New residences connected to sewerage (%)		Col 1	Col 2	Col 3	Col 4		
		W16	5 Properties served per kilometre of main	Properties	1.0	2	2	0.8		
			6 Volume of sewage collected (ML)	ML	36			40		
			7 Renewals expenditure (% of current replacement cost of system assets)		810			5,400		
			8 Employees per 1000 properties	per 1,000 prop	0.0	5	4	0.3		
SOCIAL	CHARGES & BILLS	F4	Description of residential tariff structure: access charge/prop; independent of land value		1.9	5	4	1.6		
		F4.1	11a Residential access charge for 2011-12 (\$/assessment)	\$	2011-12	439	2	2	570	537
			11b Residential access charge for 2012-13 (\$/assessment)	\$	2012-13	452	2	2	598	
		P6	12a Typical residential bill for 2011-12 (\$/assessment)	\$	2011-12	439	2	2	574	595
			12b Typical residential bill for 2012-13 (\$/assessment)	\$	2012-13	452	2	2	600	
			13 Typical developer charge for 2012-13 (\$/equivalent tenement)	\$	2012-13	3,850	4	3	4,500	
			14 Non-residential sewer usage charge (c/dL)	c/dL	136	3	3	125		
		F8	15 Revenue per property - Sge (\$)	\$	660	3	3	713	791	
			16 Urban properties without reticulated sewerage service (%)	%	17.3	5	5	3.8		
			E3	17 Percent of sewage treated to a tertiary level (%)	%	100	1	1	94	92
HEALTH		E4	18 Percent of sewage volume treated that was compliant (%)	%	100	1	1	100	99	
		E5	19 Number of sewage treatment works compliant at all times		1 of 1					
			21 Odour complaints per 1000 properties	per 1,000 prop	0.0	1	1	0.5		
		C11	22 Service complaints - sewerage per 1000 properties	per 1,000 prop	9	2	2	11	1	
		C16	23a Average sewerage interruption (minutes)	min	60	1	1	102	116	
			25 Total days lost (%)	%	20.3	5	5	2.0		
		W19	26 Volume of sewage collected per property (ML)	ML	256	4	4	250	236	
		W26	26a Total recycled water supplied (ML)	ML	670	1	1	450	1362	
		W27	27 Recycled water (% of effluent recycled)	%	82	1	1	5	14	
			E8	28 Biosolids reuse (%)	%				100	100
ENVIRONMENTAL	WATER RESOURCES MANAGEMENT		30 Energy consumption - sewerage (kWh/ML)	kWh	991	5	5	790		
			31 Renewable energy consumption (% of total energy consumption)	%	0	1	1	0		
		E12	32 Net greenhouse gas emissions - WS & Sge (net tonnes CO2 equivalents per 1000 properties)		460	5	5	370	390	
			33 90 <sup>th</sup> Percentile licence limits for effluent discharge: BOD 10 mg/L; SS 15 mg/L; Total N 10 mg/L; Total P 0.3 mg/L							
			34 Compliance with BOD in licence (%)	%	100	1	1	100		
			35 Compliance with SS in licence (%)	%	100	1	1	100		
		A14	36 Sewer main breaks and chokes (per 100 km of main)	per 100km main	93	4	5	33	21	
			37a Sewer overflows (per 100 km of main)	per 100km main	2	1	2	15		
		E13	37b Sewer overflows reported to environmental regulator (per 100km of main)		1.1	4	4	0.3	0.4	
			39 Non res & trade waste % of total sge volume	%	33	1	1	17		
ECONOMIC	FINANCE		43 Revenue from non-residential plus trade waste charges (% of total revenue)	%	16	4	4	17		
			44 Revenue from trade waste charges (% of total revenue)	%				2.4		
		F16	46 Economic real rate of return - Sge (%)	%	0.9	3	2	1.0	1.6	
			46a Return on assets - Sge (%)	%	1.1	3	2	0.5		
			46b Loan payment per property - Sge (\$)	\$	46	2	2	87		
		F24	48b Net profit after tax - WS & Sge (\$'000)	\$'000	30	4	3	73	2591	
			49 Operating cost (OMA) per 100 km of main (\$'000)	\$'000	1,590	3	4	1,570		
		F12	50 Operating cost (OMA) per property (\$ (Note 9))	\$	447	3	4	410	398	
			51 Operating cost (OMA) per kilolitre (cents)	c/dL	175	3	4	162		
		EFFICIENCY			52 Management cost per property (\$)	\$	20	1	1	140
	53 Treatment cost per property (\$)			\$	311	5	5	137		
	54 Pumping cost per property (\$)			\$	36	2	2	70		
	55 Energy cost per property (\$)			\$	51	5	5	36		
	56 Sewer main cost per property (\$)			\$	81	5	5	45		
	F29	57 Capital Expenditure per property - Sewerage (\$)	\$				244	236		

### NOTES:

- Col 2 rankings are on a % of LWUs basis - best reveals performance compared to similar sized LWUs (ie. Col 1 is compared with LWUs with 3,001 to 10,000).
- Col 3 rankings are on a % of LWUs basis - best reveals performance compared to all LWUs (ie. Col 1 is compared with all LWUs) - see attachment.
- Col 4 (Statewide Median) is on a % of connected properties basis - best reveals statewide performance (gives due weight to larger LWUs & reduces effect of smaller).
- Col 5 (National Median) is the median value for the 66 utilities reporting sewerage performance in the National Performance Report 2011-12 ([www.npr.gov.au](http://www.npr.gov.au)).
- LWUs are required to annually review key projections & actions in their Strategic Business Plan and annually update their financial plan. The SBP should be updated after 4 years.
- Non-residential access charge - \$452, proportional to square of size of service connection. Sewer usage charge - 136 c/dL.
- Non-residential and trade waste volume was 33% of total sewage collected.
- Non-residential revenue was 16% of revenue from access, usage & trade waste charges, indicating fair pricing of services between the residential and non-residential sectors.
- Compliance with Total N in Licence was 100%. Compliance with Total P in Licence was 100%.
- Operating cost (OMA)/property was \$447. Components were: management (\$20), operation (\$266), maintenance (\$84), energy (\$51) and chemical (\$27).
- Forbes Shire Council rehabilitations included 0.1% of its sewerage mains and 0.2% of its service connections.

(Results shown for 10 years together with 2011-12 Statewide Median and Top 20%)



## NOTES:

- Costs are in Jan 2012\$ except for graphs 12 and 14, which are in Jan 2013\$.
- Microbiological water quality compliance 1999-00 to 2003-04 was on the basis of 1995 NHMRC/ARMCANZ Australian Drinking Water Guidelines for E. coli; from 2004-05 to 2010-11 compliance was on the basis of the 2004 NHMRC/NRMMC Australian Drinking Water Guidelines (ADWG) and for 2011-12 compliance was on the basis of the 2011 ADWG.
- Indicators 33 and 33a - Green shading shows % of Time Drought Water Restrictions applied in each year.
- Indicator 33a - Yellow bars show Peak Week Water Supplied for comparison with Peak Day Water Supplied.

**LEGEND**  
 2011-12 State Median  
 2011-12 Top 20%

Nil or < 30% 30-50% >50%  
 Peak Week Water Supplied



## Appendix E Projected Cost Schedules

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## E.1 30-year Capital Works Program- Water Supply

FORBES SHIRE COUNCIL - STRATEGIC ACTION PLANNING																																			
WATER - 30-Year Capital Works Program					Current Year		2013 /14																												
CAPITAL WORKS IN 2013\$('000)					0	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
	SUBSIDY	ILOS	GROWTH	ASSET RENEWAL	Project Total																														
						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	2042/43
FORBES:																																			
Develop Bore No 3	100%	100%			495		495																												
Pipe Line from Bore No 3 (375mm Dia)	100%	100%			1540		1540																												
Bore No 1 - Renew Electrical Controls				100%	100		100																												
Mains replacement/renewal				100%	9053	141	252	153	91	102	114	311	315	315	320	320	340	340	340	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	
Minor New Works		50%	50%		645	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	
Service Replacement				100%	1710	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	
Reservoir Repainting - Internal Works (maintenance)				100%	630								120			170							170						170						
Treatment Plant Epoxy Coat Filters (one per year)				100%	350		35	35	35	35	35	35	35	35	35	35																			
Treatment Plant Repair Sand Filters (one per year)				100%	250		25	25	25	25	25	25	25	25	25	25																			
Treatment Plant Major/Minor Refurbishments				100%	450																	150					150					150			
Telemetry Renewal				100%	120			120																											
Soda Ash , Chlorine & Fluoride Plant Upgrade		20%		80%	125							125																							
Daroobaldie Industrial Area - Capacity Upgrade				100%	1375																														
Town Network Distribution Capacity Upgrade		50%		50%	2745																	150					150					150			
Pump & Pump motor Renewals				100%	1010		10							140	140					160	160				140	160		1000	1745		50	50			
Replace air dryers and air reciever				100%	20		20																												
Replace Compressors				100%	15			15																											
Replace Blowers				100%	25				25																										
Mixer Motors & Gearboxes / Flocculators				100%	329	19					50					50				50						80					80				
New WTW - (half cost)				100%	6000																			3000	3000										
Reticulation Provided by Developers			100%		150	10		10		10		10		10		10		10		10		10			10			10			10		10		
Council sponsored new growth			100%		250						50					50				50						50				50					
Electrical switchgear upgrade/replacement - WFP		0%		100%	800		200	200	200	200																									
WTP Backwash Waste & Sludge Treatment Plant		100%			900	900																													
Upgrade SCA's at WTP				100%	300		100	100	100																										
VILLAGES:																																			
Raw water/water reuse scheme (Dual reticulation)																																			
Mains replacement/renewal				100%	800											100		100				100			100		100		100		100		100		
Camp Hill Reservoir Decommissioning/Replacement				100%	100		100																												
Reservoir refurbishments				100%	50											20											30								
Pump Renewals				100%	70									15							15					20					20				
GRAND TOTAL					30406	1148	2956	736	554	450	303	509	699	464	614	709	609	429	419	699	704	689	599	3539	3569	849	1609	2659	1599	589	629	689	429	539	429

E.3 30-year Capital Works Program – Sewerage

FORBES SHIRE COUNCIL - STRATEGIC ACTION PLANNING																																				
SEWER - 30-Year Capital Works Program		Current Year			2013 /14																															
CAPITAL WORKS IN 2013\$('000)					0	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	
	SUBSIDY	ILOS	GROWTH	ASSET RENEW	Total	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	2042/43	
Forbes:																																				
STP Upgrade		40%	20%	40%	0																															
New Filters		100%			1100												1100																			
Pump Station Reconstructions (SPS 18 and SPS 11&14)				100%	1630		80						300				300						300					300					350			
Pipe Relining / Renewal & MH maintenance				100%	9850	750	750	750	750	750	750	750	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Pump Replacements				100%	310	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	20
Switchboard Replacements / Electrical Upgrades				100%	295	20	15	15	0	0	0	0	15	15	15	15	25	25	25	25	25	25	15	15	15				15							
PLC & SCADA Replacement at STP				100%	70		70																													
Minor Main Extensions			100%		300	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
New Works - Council sponsored		100%			405		50			50			50			50				50				50				50				55				
Odour Control -Vent shafts		100%			745	20	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
Odour control works		100%			180		30	15	5		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Miscellaneous Lab & Operational Equipments		100%			10					2											2				2					2					2	
Rising Main Upgrade SPS5		90%		10%	25		25																													
Replacement SPS 18			80%	20%	535		535																													
Well Washers to pump stations		100%			15		5		5	5																										
Cover Catch Balance Pond		100%			20		20																													
GRAND TOTAL					15490	810	1625	830	805	852	800	800	615	265	265	315	1375	575	275	327	275	265	565	315	252	250	250	600	265	252	250	305	600	250	262	

#### E.4 30-year Recurrent Cost Schedule – Water Supply

[illegible]

E.5 30-year Recurrent Cost Schedule – Sewerage

SEWERAGE - OPERATIONS, MAINT, ADMIN AND REVENUE OVERRIDES <INCREASES IN RECURRENT EXPENDITURE> (2013/14 \$000)																																	
	30 YEAR	2013	0	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
	TOTAL	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43
Administration																																	
Obj. Action																																	
Review and update Strategic Business Plan	96			12				12				12				12				12				12				12				12	
Best Practice Compliance Audit	0																																
Feasibility study to extend services	0																																
Liquid trade waste awareness campaign	0																																
Best Practice Sewerage Pricing	0																																
Review and update of Sec.64 developer charges	15				15																												
Conduct customer survey	0																																
Community consultation	0																																
IWCM - Evaluation Study (net of grant)	0																																
IWCM- Strategy Implementation (provisional)	0																																
Sewer Reticulation - odour and corrosion investigation	10					10																											
Due Diligence Plans (Emergency Response, Risk Management etc)	0																																
Adjustment for average admin. Expenses	5,850			195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195
Total Adjustment	5,971			207	210	205	195	207	195	195	195	207	195	195	195	207	195	195	195	207	195	195	195	207	195	195	195	207	195	195	195	207	195
Override (Inflated to 13/14\$ and pro-rata adjustment for growth)	10,510	3	142	354	357	352	343	355	343	343	344	356	344	345	345	358	346	346	346	359	347	347	348	360	348	349	349	362	350	350	350	363	351
Engineering and Supervision																																	
Recruit new staff - Technical Officer	1,160				40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Adjustment for average Engg & Supvn. Expenses	0			90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Total Adjustment	3,860			90	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Override (Inflated to 13/14\$ and pro-rata adjustment for growth)	5,641	56	55	147	187	187	187	188	188	188	188	188	188	189	189	189	189	189	190	190	190	190	190	190	190	191	191	191	191	191	192	192	192
Operations Expenses																																	
Adjustment for average operation expenses	-17,310			-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	
Total Adjustment	-17,310			-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577	-577
Override (Inflated to 13/14\$ and pro-rata adjustment for growth)	10,589	843	898	348	349	349	349	350	350	350	351	351	351	352	352	352	352	353	353	353	354	354	354	355	355	355	356	356	356	357	357	357	358
Maintenance Expenses																																	
Adjustment for average maintenance expenses	-9,870			-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329
Total Adjustment	-9,870			-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329	-329
Override (Inflated to 13/14\$ and pro-rata adjustment for growth)	13,969	266	765	459	460	460	461	461	462	462	462	463	463	464	464	465	465	465	466	466	467	467	468	468	468	469	469	470	470	471	471	471	472
Energy Costs																																	
Adjustment for average energy expenses	1,500			50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Total Adjustment	1,500			50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Override (Inflated to 13/14\$ and pro-rata adjustment for growth)	6,100	163	146	201	201	201	201	201	202	202	202	202	202	202	203	203	203	203	203	204	204	204	204	204	205	205	205	205	205	205	206	206	206
Chemical Costs																																	
Adjustment for average chemical expenses	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Adjustment	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override (Inflated to 13/14\$ and pro-rata adjustment for growth)	3,323	84	106	109	109	109	110	110	110	110	110	110	110	110	111	111	111	111	111	111	111	111	111	111	111	112	112	112	112	112	112	112	112
Other Expenses																																	
Total Adjustment	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override (Inflated to 13/14\$ and pro-rata adjustment for growth)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Revenue																																	
Total Adjustment	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override (Inflated to 13/14\$ and pro-rata adjustment for growth)	120	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Other Grants																																	
Total Adjustment	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override (Inflated to 13/14\$ and pro-rata adjustment for growth)	0	0	0	0																													

## Appendix F Financial Input Data – Water Supply

# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Historical Operating Statement

FINMOD  
DEPARTMENT OF  
COMMERCE

	2011/12*	2012/13*
<b>EXPENSES</b>		
Management Expenses	402	653
Administration	256	547
Engineering and Supervision	146	106
Operation and Maintenance Expenses	1357	1523
Operation Expenses	429	345
Maintenance Expenses	652	844
Energy Costs	1	1
Chemical Costs	209	228
Purchase of Water	66	105
Depreciation	691	545
System Assets	691	545
Plant & Equipment		
Interest Expenses		
Other Expenses		
<b>TOTAL EXPENSES</b>	<b>2450</b>	<b>2721</b>
<b>REVENUES</b>		
Rates & Service Availability Charges	639	717
Residential	639	435
Non-Residential	0	282
User Charges	767	1552
Sales of Water : Residential	440	1156
Sales of Water : Non-Residential	327	396
Extra Charges		
Interest Income	407	349
Other Revenues		
Grants	152	130
Grants for Acquisition of Assets	103	50
Pensioner Rebate Subsidy	34	35
Other Grants	15	45
Contributions	305	0
Developer Charges	305	
Developer Provided Assets		
Other Contributions		
<b>TOTAL REVENUES</b>	<b>2270</b>	<b>2748</b>
<b>OPERATING RESULT</b>	<b>-180</b>	<b>27</b>
<b>OPERATING RESULT (less Grants for Acq of Assets)</b>	<b>-283</b>	<b>-23</b>

# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Historical Statement of Financial Position

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	2011/12*	2012/13*
Cash and Investments	8879	7904
Receivables	138	107
Inventories		
Property, Plant & Equipment	31537	33260
System Assets (1)	31537	33260
Plant & Equipment		
Other Assets		
<b>TOTAL ASSETS</b>	<b>40554</b>	<b>41271</b>
<b>LIABILITIES</b>		
Bank Overdraft		
Creditors		
Borrowings		
Provisions	22	22
<b>TOTAL LIABILITIES</b>	<b>22</b>	<b>22</b>
<b>NET ASSETS COMMITTED</b>	<b>40532</b>	<b>41249</b>
<b>EQUITY</b>		
Accumulated Operating Result	15291	15315
Asset Revaluation Reserve	25241	25934
<b>TOTAL EQUITY</b>	<b>40532</b>	<b>41249</b>
<b>(1) Notes to System Assets</b>		
Current Replacement Cost	66748	69911
Less: Accumulated Depreciation	35211	36651
Written Down Current Cost	31537	33260

**FINMOD**  
DEPARTMENT OF  
COMMERCE

Printed 8/05/2014 Values in \$'000 Page 3

# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Base Forecast Data

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	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
<b><u>Existing Loan Payments (Values in Inflated \$'000)</u></b>																									
Existing Loan Payments : Principal (Total:0)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Loan Payments : Interest (Total:0)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b><u>Capital Works Program (Values in 2013/14 \$'000)</u></b>																									
Subsidised Scheme (Total:4662)	911	2046	11	11	11	11	11	36	11	11	11	11	11	11	11	11	11	11	11	11	11	511	883	11	11
Other New System Assets (Total:730)	21	11	21	11	21	11	71	11	21	11	71	11	21	11	21	61	21	11	21	11	71	11	21	11	21
Renewals (Total:25031)	217	899	705	533	419	281	428	652	432	592	627	587	397	397	667	632	657	577	3507	3547	767	1087	1755	1577	557
Total Capital Works (Total:30423)	1149	2956	737	555	451	303	510	699	464	614	709	609	429	419	699	704	689	599	3539	3569	849	1609	2659	1599	589
Grant For Acquisition of Assets (% of Subsidised Scheme)	0.00	99.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grant For Acquisition of Assets (\$) (Total:2035)	0	2035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Developer Provided Assets (Total:0)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b><u>Plant and Equipment Expenditure / Asset Disposal (Values in 2013/14 \$'000)</u></b>																									
Plant and Equipment Expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proceeds from Disposal of Plant and Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Written Down Value of Plant and Equipment Disposed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gain/Loss on Disposal of Plant and Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proceeds from Disposal of Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Written Down Value of Assets Disposed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gain/Loss on Disposal of System Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Revised/Additional Forecast Data

FINMOD  
DEPARTMENT OF  
COMMERCE

	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
<b><u>OMA / Revenue Overrides (Values in 2013/14 \$'000)</u></b>																									
Administration	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561
Override	163	165	150	150	163	150	150	150	164	151	151	151	164	151	151	151	165	152	152	152	165	152	152	152	166
Engineering and Supervision	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
Override	255	296	296	296	296	297	297	297	297	298	298	298	298	299	299	299	299	300	300	300	300	301	301	301	301
Operating Expenses	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354
Override	601	584	585	585	586	586	587	587	588	588	589	589	590	590	591	591	592	592	593	593	594	594	595	595	596
Maintenance Expenses	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890
Override	438	438	438	439	439	440	440	440	441	441	441	442	442	442	443	443	444	444	444	445	445	445	446	446	446
Energy Costs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Override	398	399	399	399	400	400	400	401	401	401	402	402	402	403	403	403	404	404	404	405	405	405	406	406	406
Chemical Costs	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234	234
Override	265	265	266	266	266	266	266	267	267	267	267	267	268	268	268	268	269	269	269	269	269	270	270	270	270
Purchase of Water	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
Override																									
Other Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override																									
Other Revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override																									
Other Grants	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Override	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Contributions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override																									
<b><u>Developer Charges Overrides (Values in 2013/14 \$'000)</u></b>																									
Calculated from Scheme Data	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Override	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
<b><u>Pensioner Rebate (Values in Inflated \$)</u></b>																									
Pensioner Rebate per Pensioner (\$)	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50
Override																									
Pensioner Rebate Subsidy (%)	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Override																									
Number of Pensioner Assessments	728	728	729	730	730	731	732	732	733	734	734	735	736	736	737	738	738	739	740	740	741	742	743	743	744
Override																									
Percentage of Pensioners (%)	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70	22.70
Override																									
Pensioner Rebate	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	65	65	65	65	65	65	65	65	65	65
Pensioner Rebate Subsidy	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	36	36	36	36	36	36	36	36	36	36
<b><u>Revenue Split (%)</u></b>																									
Residential Rates	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22
Override	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22	27.22
Non-Residential Rates	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67
Override																									
Sales of Water: Residential	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44	43.44
Override	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78	40.78
Sales of Water: Non-Residential	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67	19.67
Override	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33	24.33
Extra Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Override																									
Total Non-Residential Revenue (%)	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34
Total Residential Revenue (%)	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66	72.66
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Revised/Additional Forecast Data

FINMOD  
DEPARTMENT OF  
COMMERCE

	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	
New Loan Payment Overrides (Values in Inflated \$'000)																										
Standard Loan Payments: Principal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	92	98	
Standard Loan Payments: Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111	223	216	
Structured Loan Payments: Principal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Structured Loan Payments: Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Capitalised Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total New Loan Payments: Principal Override	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	92	98	
Total New Loan Payments: Interest Override	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111	223	216	
Capitalised Interest Override	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



## Appendix G Detailed Financial Statements –Water Supply

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# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Operating Statement

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	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
<b>EXPENSES</b>																									
Management Expenses	418	460	446	447	459	447	447	447	461	449	448	449	462	450	449	450	464	451	452	452	465	453	453	453	467
Administration	163	165	150	150	163	150	150	150	164	151	151	151	164	151	151	151	165	152	152	152	165	152	152	152	166
Engineering and Supervision	255	296	296	296	296	297	297	297	297	298	298	298	298	299	299	299	299	300	300	300	300	301	301	301	301
Operation and Maintenance Expenses	1810	1795	1795	1797	1800	1800	1800	1803	1805	1805	1808	1808	1809	1811	1813	1813	1817	1817	1818	1820	1821	1821	1825	1825	1826
Operation Expenses	601	584	585	585	586	586	587	587	588	588	589	589	590	590	591	591	592	592	593	593	594	594	595	595	596
Maintenance Expenses	438	438	438	439	439	440	440	440	441	441	441	442	442	442	443	443	444	444	444	445	445	445	446	446	446
Energy Costs	398	399	399	399	400	400	400	401	401	401	402	402	402	403	403	403	404	404	404	405	405	405	406	406	406
Chemical Costs	265	265	266	266	266	266	266	267	267	267	267	267	268	268	268	268	269	269	269	269	269	270	270	270	270
Purchase of Water	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
Depreciation	1013	1042	1042	1042	1042	1042	1043	1043	1044	1043	1044	1043	1044	1044	1044	1045	1045	1046	1046	1047	1048	1056	1069	1069	1070
System Assets	1013	1042	1042	1042	1042	1042	1043	1043	1044	1043	1044	1043	1044	1044	1044	1045	1045	1046	1046	1047	1048	1056	1069	1069	1070
Plant & Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	126	119
Other Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL EXPENSES</b>	<b>3241</b>	<b>3298</b>	<b>3284</b>	<b>3285</b>	<b>3301</b>	<b>3290</b>	<b>3290</b>	<b>3293</b>	<b>3310</b>	<b>3297</b>	<b>3300</b>	<b>3300</b>	<b>3316</b>	<b>3304</b>	<b>3307</b>	<b>3308</b>	<b>3326</b>	<b>3314</b>	<b>3316</b>	<b>3319</b>	<b>3335</b>	<b>3331</b>	<b>3411</b>	<b>3473</b>	<b>3481</b>
<b>REVENUES</b>																									
Rates & Service Availability Charges	791	831	874	917	958	1001	1001	1004	1005	1006	1009	1010	1012	1013	1015	1017	1019	1019	1021	1022	1025	1026	1027	1029	1031
Residential	617	649	681	715	747	780	781	783	785	786	787	788	790	791	792	793	795	795	796	798	799	801	801	803	804
Non-Residential	174	182	192	202	210	220	220	220	221	222	222	222	222	223	223	224	224	224	224	225	225	226	226	226	227
User Charges	1475	1553	1630	1710	1788	1866	1869	1875	1878	1879	1883	1886	1889	1890	1894	1898	1901	1903	1905	1908	1912	1915	1916	1920	1922
Sales of Water : Residential	924	973	1021	1072	1121	1168	1171	1174	1176	1177	1180	1181	1183	1184	1186	1189	1191	1191	1193	1195	1197	1199	1199	1203	1204
Sales of Water : Non-Residential	551	580	609	639	668	697	698	701	702	702	704	704	706	707	708	709	710	711	712	713	715	716	716	717	718
Extra Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Income	406	369	339	326	325	338	349	351	355	358	356	356	361	369	368	363	359	357	275	169	140	112	76	67	64
Other Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grants	35	2069	33	33	32	31	30	29	29	28	27	27	26	25	25	25	24	24	23	23	22	21	21	20	20
Grants for Acquisition of Assets	0	2035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pensioner Rebate Subsidy	35	34	33	33	32	31	30	29	29	28	27	27	26	25	25	25	24	24	23	23	22	21	21	20	20
Other Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contributions	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Developer Charges	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Developer Provided Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Contributions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL REVENUES</b>	<b>2722</b>	<b>4837</b>	<b>2892</b>	<b>3000</b>	<b>3118</b>	<b>3250</b>	<b>3265</b>	<b>3274</b>	<b>3281</b>	<b>3289</b>	<b>3291</b>	<b>3293</b>	<b>3302</b>	<b>3313</b>	<b>3316</b>	<b>3318</b>	<b>3318</b>	<b>3318</b>	<b>3239</b>	<b>3137</b>	<b>3114</b>	<b>3089</b>	<b>3055</b>	<b>3052</b>	<b>3052</b>
<b>OPERATING RESULT</b>	<b>-519</b>	<b>1540</b>	<b>-392</b>	<b>-285</b>	<b>-183</b>	<b>-40</b>	<b>-25</b>	<b>-19</b>	<b>-29</b>	<b>-9</b>	<b>-9</b>	<b>-7</b>	<b>-13</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>-9</b>	<b>3</b>	<b>-78</b>	<b>-182</b>	<b>-220</b>	<b>-241</b>	<b>-357</b>	<b>-422</b>	<b>-430</b>
<b>OPERATING RESULT (less Grants for Acq of Assets)</b>	<b>-519</b>	<b>-496</b>	<b>-392</b>	<b>-285</b>	<b>-183</b>	<b>-40</b>	<b>-25</b>	<b>-19</b>	<b>-29</b>	<b>-9</b>	<b>-9</b>	<b>-7</b>	<b>-13</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>-9</b>	<b>3</b>	<b>-78</b>	<b>-182</b>	<b>-220</b>	<b>-241</b>	<b>-357</b>	<b>-422</b>	<b>-430</b>

# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Cashflow Statement

FINMOD  
DEPARTMENT OF  
COMMERCE

	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
<b>Cashflow From Operating Activities</b>																									
<b>Receipts</b>																									
Rates and Charges	2266	2384	2504	2627	2746	2866	2871	2879	2883	2887	2893	2895	2901	2904	2909	2915	2919	2922	2926	2931	2937	2941	2943	2949	2953
Interest Income	406	369	339	326	325	338	349	351	355	358	356	356	361	369	368	363	359	357	275	169	140	112	76	67	64
Other Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grants	35	2069	33	33	32	31	30	29	29	28	27	27	26	25	25	25	24	24	23	23	22	21	21	20	20
Contributions	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Total Receipts from Operations	2722	4837	2892	3000	3118	3250	3265	3274	3281	3289	3291	3293	3302	3313	3316	3318	3318	3318	3239	3137	3114	3089	3055	3052	3052
<b>Payments</b>																									
Management	418	460	446	447	459	447	447	447	461	449	448	449	462	450	449	450	464	451	452	452	465	453	453	453	467
Operations (plus WC Inc)	1812	1797	1797	1799	1802	1802	1802	1805	1806	1806	1810	1810	1811	1813	1815	1815	1819	1819	1820	1822	1823	1824	1827	1827	1828
Interest Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	126	119	
Other Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Payments from Operations	2230	2258	2243	2245	2261	2249	2249	2251	2268	2256	2258	2259	2274	2263	2265	2265	2283	2271	2272	2274	2289	2277	2345	2406	2414
Net Cash from Operations	492	2580	648	755	857	1001	1016	1023	1014	1033	1033	1034	1028	1050	1052	1053	1035	1047	967	863	826	813	710	645	638
<b>Cashflow from Capital Activities</b>																									
<b>Receipts</b>																									
Proceeds from Disposal of Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Payments</b>																									
Acquisition of Assets	1149	2955	738	555	450	302	510	699	464	614	709	608	429	419	699	704	688	599	3539	3569	849	1609	2659	1599	589
Net Cash from Capital Activities	-1149	-2955	-738	-555	-450	-302	-510	-699	-464	-614	-709	-608	-429	-419	-699	-704	-688	-599	-3539	-3569	-849	-1609	-2659	-1599	-589
<b>CashFlow from Financing Activities</b>																									
<b>Receipts</b>																									
New Loans Required	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1000	1000	0
<b>Payments</b>																									
Principal Loan Payments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	52	54
Net Cash from Financing Activities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	974	948	-54
TOTAL NET CASH	-657	-376	-89	200	407	698	506	324	550	419	323	426	599	632	352	349	346	448	-2572	-2706	-23	-796	-975	-5	-5
Current Year Cash	-657	-377	-89	200	407	697	506	324	550	420	323	425	599	632	353	349	346	448	-2572	-2705	-23	-797	-975	-6	-5
Cash & Investments @Year Start	7904	7070	6530	6284	6325	6568	7088	7409	7544	7897	8114	8231	8445	8824	9225	9345	9458	9564	9768	7020	4210	4084	3208	2178	2120
Cash & Investments @Year End	7247	6694	6441	6483	6732	7265	7594	7733	8094	8316	8437	8656	9045	9456	9578	9694	9803	10012	7196	4315	4186	3288	2233	2173	2115
<b>Capital Works Funding:</b>																									
Internal Funding for New Works (\$'000)	932	22	32	22	32	22	82	47	32	22	82	22	32	22	32	72	32	22	32	22	82	522	904	22	32
Internal Funding for Renewals	217	899	705	533	419	281	428	652	432	592	627	587	397	397	667	632	657	577	3507	3547	767	1087	755	577	557
New Loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1000	1000	0	0
Grants	0	2035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Capital Works	1149	2956	738	555	450	303	510	699	464	613	709	609	429	419	699	704	689	599	3539	3569	849	1609	2659	1599	589

# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Statement of Financial Position

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	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	
Cash and Investments	7247	6532	6132	6021	6100	6423	6550	6507	6645	6660	6592	6599	6726	6860	6779	6694	6605	6580	4614	2699	2555	1958	1297	1232	1170	
Receivables	110	110	110	111	111	110	110	110	110	110	110	111	111	111	111	111	111	111	111	111	111	111	112	112	112	
Inventories	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Property, Plant & Equipment	34228	36141	35837	35351	34760	34020	33486	33142	32562	32133	31799	31365	30750	30125	29780	29439	29082	28635	31129	33651	33451	34004	35594	36123	35642	
System Assets (1)	34228	36141	35837	35351	34760	34020	33486	33142	32562	32133	31799	31365	30750	30125	29780	29439	29082	28635	31129	33651	33451	34004	35594	36123	35642	
Plant & Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL ASSETS	41585	42783	42079	41482	40970	40553	40147	39760	39317	38903	38501	38074	37587	37096	36670	36244	35798	35327	35853	36461	36117	36073	37002	37467	36924	
LIABILITIES																										
Bank Overdraft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Creditors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Borrowings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	974	1898	1798	1798	
Provisions	23	23	24	24	24	25	25	25	25	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
TOTAL LIABILITIES	23	23	24	24	24	25	25	25	25	26	26	26	26	26	26	26	26	26	26	26	26	26	1000	1925	1824	
NET ASSETS COMMITTED	41562	42760	42055	41458	40945	40528	40122	39735	39292	38877	38476	38048	37561	37070	36644	36218	35772	35301	35827	36434	36091	36046	36002	35542	35100	
EQUITY																										
Accumulated Operating Result	14796	15975	15193	14537	14000	13618	13261	12919	12575	12260	11952	11654	11356	11088	10828	10574	10307	10059	9736	9317	8869	8412	7850	7237	6631	
Asset Revaluation Reserve	26766	27622	28548	29490	30442	31401	32363	33334	34319	35311	36315	37333	38362	39396	40434	41486	42552	43631	44721	45935	47280	48650	50078	51610	53204	
TOTAL EQUITY	41562	42923	42365	41922	41579	41372	41168	40962	40743	40534	40322	40107	39881	39667	39444	39218	38971	38733	38410	38050	37723	37377	36938	36484	36046	
(1) Notes to System Assets																										
Current Replacement Cost	72591	74648	74680	74703	74735	74756	74837	74884	74916	74939	75021	75042	75075	75096	75129	75201	75232	75255	75287	75310	75392	75913	76817	76838	76871	
Less: Accumulated Depreciation	38363	38506	38844	39352	39975	40736	41351	41742	42354	42805	43221	43678	44325	44972	45349	45762	46151	46619	44158	41659	41940	41909	41223	40715	41228	
Written Down Current Cost	34228	36141	35837	35351	34760	34020	33486	33142	32562	32133	31799	31365	30750	30125	29780	29439	29082	28635	31129	33651	33451	34004	35594	36123	35642	

# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Performance Indicators

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	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
Typical Residential Bills	510	535	560	585	610	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635
Average Residential Bills (2013/14\$)	481	505	530	556	581	605	605	607	607	608	608	608	609	609	609	610	610	610	610	611	611	612	612	613	613
Mgmnt Cost / Assessment (2013/14\$)	116	128	124	124	128	124	123	124	127	124	123	123	127	124	124	124	127	124	124	124	127	124	124	124	127
OMA Cost per Assessment (2013/14\$)	590	597	593	592	596	593	592	592	596	593	593	592	596	592	592	592	597	593	592	592	596	592	592	592	595
Operating Sales Margin (%)	-39.94	-35.53	-28.64	-22.85	-18.20	-12.96	-12.84	-12.63	-13.10	-12.51	-12.43	-12.35	-12.71	-12.22	-12.15	-11.94	-12.43	-11.94	-11.90	-11.82	-12.13	-11.86	-12.36	-12.15	-12.53
Economic Real Rate of Return (%)	-2.70	-2.39	-2.04	-1.73	-1.46	-1.11	-1.12	-1.11	-1.18	-1.14	-1.15	-1.16	-1.22	-1.19	-1.20	-1.20	-1.26	-1.23	-1.13	-1.04	-1.08	-1.04	-1.03	-1.00	-1.05
Debt Service Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.06
Debt/Equity Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.05
Interest Cover	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-4.53	-2.34	-2.60
Return on capital (%)	-1.25	-1.04	-0.93	-0.69	-0.45	-0.10	-0.06	-0.05	-0.07	-0.02	-0.02	-0.02	-0.04	0.02	0.03	0.03	-0.02	0.01	-0.22	-0.50	-0.61	-0.67	-0.79	-0.79	-0.84
Cash and Investments (2013/14\$'000)	7247	6695	6442	6484	6733	7267	7596	7735	8096	8317	8438	8658	9046	9457	9579	9695	9805	10013	7196	4315	4186	3288	2233	2174	2116
Debt outstanding (2013/14\$'000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	974	1898	1798
Net Debt (2013/14\$'000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Forbes Water Fund Financial Model 2012/13 : Preferred Case

STANDARD LOAN PAYMENT SCHEDULE

FINMOD  
DEPARTMENT OF  
COMMERCE

Drawdown		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
2035/36	Principal 1721																							44	47	50
	Interest																							111	109	105
2036/37	Principal 1765																								45	48
	Interest																								114	111
Total Principal	3486	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	92	98
Total Interest		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111	223	216

# Forbes Water Fund Financial Model 2012/13 : Preferred Case

## Summary Report of Assumptions and Results

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	2013/14	2017/18	2022/23	2027/28	2032/33	2037/38	2042/43
Inflation Rates - General (%)	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Inflation Rates - Capital Works (%)	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Borrowing Interest Rate (%)	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Term of New Loans (years)	20	20	20	20	20	20	20
Investment Interest Rate (%)	5.50	5.50	5.50	5.50	5.50	5.50	5.50
Growth Rate - Residential (%)	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Developer Charges per Assessment - Residential (2013/14 \$)	6464	6464	6464	6464	6464	6464	6464
Subsidised Scheme Capital Works (\$m)	0.91	0.01	0.01	0.01	0.01	0.01	0.01
Grants on Acquisition of Assets (\$m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Renewals (\$m)	0.22	0.42	0.59	0.67	3.55	0.56	0.41
Renewals (%)	0.30	0.56	0.79	0.89	4.71	0.72	0.53
Cash and Investments (\$m)	7.25	6.10	6.66	6.78	2.70	1.17	1.06
Borrowing Outstanding (\$m)	0.00	0.00	0.00	0.00	0.00	1.80	1.30
Mgmnt Cost / Assessment	116	128	124	124	124	127	124
Debt Equity Ratio	0.00	0.00	0.00	0.00	0.00	0.03	0.02
OMA Cost Per Assessment	590	596	593	592	592	595	592
Economic Real Rate of Return (%)	-2.70	-1.46	-1.14	-1.20	-1.04	-1.05	-1.09
Return on Capital (%)	-1.25	-0.45	-0.02	0.03	-0.50	-0.84	-0.88
Net Debt (\$m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Debt Service Ratio	0.00	0.00	0.00	0.00	0.00	0.06	0.05
Average Residential Bills	481	581	608	609	611	613	614
Typical Residential Bills (2013/14\$)	510	610	635	635	635	635	635



## Appendix H Financial Input Data – Sewerage

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# Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

## Historical Operating Statement

FINMOD  
DEPARTMENT OF  
COMMERCE

	2011/12*	2012/13*
<b>EXPENSES</b>		
Management Expenses	59	197
Administration	3	142
Engineering and Supervision	56	55
Operation and Maintenance Expenses	1356	1915
Operation Expenses	843	898
Maintenance Expenses	266	765
Energy Costs	163	146
Chemical Costs	84	106
Depreciation	430	525
System Assets	430	525
Plant & Equipment		
Interest Expenses	146	130
Other Expenses		
<b>TOTAL EXPENSES</b>	<b>1991</b>	<b>2767</b>
<b>REVENUES</b>		
Rates & Service Availability Charges	2041	2072
Residential	1409	1368
Non-Residential	632	704
Trade Waste Charges	1	
Other Sales and Charges		
Extra Charges		
Interest Income	189	187
Other Revenues	2	4
Grants	31	32
Grants for Acquisition of Assets		
Pensioner Rebate Subsidy	31	32
Other Grants		
Contributions	38	0
Developer Charges	38	
Developer Provided Assets		
Other Contributions		
<b>TOTAL REVENUES</b>	<b>2302</b>	<b>2295</b>
<b>OPERATING RESULT</b>	<b>311</b>	<b>-472</b>
<b>OPERATING RESULT (less Grants for Acq of Assets)</b>	<b>311</b>	<b>-472</b>

# Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

## Historical Statement of Financial Position

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	2011/12*	2012/13*
Cash and Investments	4424	3798
Receivables	244	214
Inventories		
Property, Plant & Equipment	29525	30222
System Assets (1)	29525	30222
Plant & Equipment		
Other Assets		
<b>TOTAL ASSETS</b>	<b>34193</b>	<b>34234</b>
<b>LIABILITIES</b>		
Bank Overdraft		
Creditors		
Borrowings	1962	1737
Provisions		
<b>TOTAL LIABILITIES</b>	<b>1962</b>	<b>1737</b>
<b>NET ASSETS COMMITTED</b>	<b>32231</b>	<b>32497</b>
<b>EQUITY</b>		
Accumulated Operating Result	14859	14387
Asset Revaluation Reserve	17372	18110
<b>TOTAL EQUITY</b>	<b>32231</b>	<b>32497</b>
<b>(1) Notes to System Assets</b>		
Current Replacement Cost	42503	44062
Less: Accumulated Depreciation	12978	13840
Written Down Current Cost	29525	30222

Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

Base Forecast Data

FINMOD

DEPARTMENT OF

COMMERCE

	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
<b>Financial Data</b>																									
Inflation Rate - General (%)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Inflation Rate - Capital Works (%)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Borrowing Interest Rate for New Loans (%)	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Investment Interest Rate (%)	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
<b>Number of Assessments</b>																									
Growth Rate (%)																									
Residential Assessments	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Non-Residential Assessments	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Total Assessments	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
<b>Number of New Assessments</b>																									
Residential	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Non-Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Assessments	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
<b>Projected Number of Assessments</b>																									
Residential	2818	2821	2824	2827	2830	2833	2836	2839	2842	2845	2848	2851	2854	2857	2860	2863	2866	2869	2872	2875	2878	2881	2884	2887	2890
Non-Residential	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393	393
Total Projected Assessments	3211	3214	3217	3220	3223	3226	3229	3232	3235	3238	3241	3244	3247	3250	3253	3256	3259	3262	3265	3268	3271	3274	3277	3280	3283
<b>Backlog Assessments</b>																									
Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Residential	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Backlog Assessments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Developer Charges / Vacant Assessments (Values in 2013/14 \$)</b>																									
<b>Developer Charges \$/Assessment</b>																									
Residential	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975
Non-Residential	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975	3975
Number of Vacant Residential Assessments	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
Average Charge of Vacant Assessments	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
% of Occupied Assessments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Depreciation of Existing Plant and Equipment (Values in 2013/14 \$'000)</b>																									
Current Replacement Cost of System Assets	45164																								
Override																									
Written Down Current Cost of System Assets	30978																								
Override																									
Annual Depreciation of Existing System Assets	538																								
Override	648																								
Written Down Value of Plant and Equipment	0																								
Override																									
Annual Depreciation of Existing Plant and Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

Base Forecast Data

FINMOD  
DEPARTMENT OF  
COMMERCE

	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	
<b><u>Existing Loan Payments (Values in Inflated \$'000)</u></b>																										
Existing Loan Payments : Principal (Total:1737)	243	219	100	107	115	123	131	141	150	161	172	75	0	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Loan Payments : Interest (Total:661)	114	95	83	76	69	61	52	43	33	23	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b><u>Capital Works Program (Values in 2013/14 \$'000)</u></b>																										
Subsidised Scheme (Total:2498)	20	153	45	35	82	30	30	80	30	30	80	1130	30	30	82	30	30	30	80	32	30	30	80	30	32	
Other New System Assets (Total:728)	10	438	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Renewals (Total:12265)	780	1035	775	760	760	760	760	525	225	225	225	235	535	235	235	235	225	525	225	210	210	210	510	225	210	
Total Capital Works (Total:15491)	810	1626	830	805	852	800	800	615	265	265	315	1375	575	275	327	275	265	565	315	252	250	250	600	265	252	
Grant For Acquisition of Assets (% of Subsidised Scheme)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Grant For Acquisition of Assets (\$) (Total:0)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Developer Provided Assets (Total:0)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b><u>Plant and Equipment Expenditure / Asset Disposal (Values in 2013/14 \$'000)</u></b>																										
Plant and Equipment Expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Proceeds from Disposal of Plant and Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Written Down Value of Plant and Equipment Disposed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gain/Loss on Disposal of Plant and Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Proceeds from Disposal of Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Written Down Value of Assets Disposed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gain/Loss on Disposal of System Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

# Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

## Revised/Additional Forecast Data

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	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
<b><u>OMA / Revenue Overrides (Values in 2013/14 \$'000)</u></b>																									
Administration	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146
Override	354	357	352	343	355	343	343	344	356	344	345	345	358	346	346	346	359	347	347	348	360	348	349	349	362
Engineering and Supervision	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Override	147	187	187	187	188	188	188	188	188	188	189	189	189	189	189	189	190	190	190	190	190	190	191	191	191
Operating Expenses	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945
Override	348	349	349	349	350	350	350	351	351	351	352	352	352	352	353	353	353	354	354	354	355	355	355	356	356
Maintenance Expenses	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809
Override	459	460	460	461	461	462	462	462	463	463	464	464	465	465	465	466	466	467	467	468	468	468	469	469	470
Energy Costs	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Override	201	201	201	201	201	202	202	202	202	202	203	203	203	203	203	203	204	204	204	204	204	205	205	205	205
Chemical Costs	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
Override																									
Other Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override																									
Other Revenue	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Override																									
Other Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override																									
Other Contributions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override																									
<b><u>Developer Charges Overrides (Values in 2013/14 \$'000)</u></b>																									
Calculated from Scheme Data	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Override	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
<b><u>Pensioner Rebate (Values in Inflated \$)</u></b>																									
Pensioner Rebate per Pensioner (\$)	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50
Override																									
Pensioner Rebate Subsidy (%)	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00	55.00
Override																									
Number of Pensioner Assessments	666	666	667	668	668	669	670	671	671	672	673	673	674	675	676	676	677	678	678	679	680	680	681	682	683
Override																									
Percentage of Pensioners (%)	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62	23.62
Override																									
Pensioner Rebate	58	58	58	58	58	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	60	60	60	60	60
Pensioner Rebate Subsidy	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	33	33	33	33	33
<b><u>Revenue Split (%)</u></b>																									
Residential Rates	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51
Override	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60	78.60
Non-Residential Rates	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47	32.47
Override	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38	21.38
Trade Waste Charges	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Override	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Other Sales and charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Override																									
Extra Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Override																									
Total Non-Residential Revenue (%)	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49
<b><u>Total</u></b>																									
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<b><u>Total Residential Revenue (%)</u></b>																									
Total Residential Revenue (%)	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51	67.51

# Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

## Revised/Additional Forecast Data

FINMOD  
DEPARTMENT OF  
COMMERCE

	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
<u>New Loan Payment Overrides (Values in Inflated \$'000)</u>																									
Standard Loan Payments: Principal	0	0	0	0	0	14	31	32	35	36	39	57	62	66	71	75	80	85	91	97	104	111	118	125	134
Standard Loan Payments: Interest	0	0	0	0	0	36	74	70	70	66	64	104	99	96	92	88	82	76	71	65	58	52	44	37	29
Structured Loan Payments: Principal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Structured Loan Payments: Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capitalised Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Loan Payments: Principal	0	0	0	0	0	14	31	32	35	36	39	57	62	66	71	75	80	85	91	97	104	111	118	125	134
Override																									
Total New Loan Payments: Interest	0	0	0	0	0	36	74	70	70	66	64	104	99	96	92	88	82	76	71	65	58	52	44	37	29
Override																									
Capitalised Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override																									



## Appendix I Detailed Financial Statements – Sewerage

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# Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

## Operating Statement

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	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
<b>EXPENSES</b>																									
Management Expenses	501	544	539	529	544	531	531	532	544	532	534	534	547	535	535	535	549	537	537	538	550	538	540	540	553
Administration	354	357	352	343	355	343	343	344	356	344	345	345	358	346	346	346	359	347	347	348	360	348	349	349	362
Engineering and Supervision	147	187	187	187	188	188	188	188	188	188	189	189	189	189	189	189	190	190	190	190	190	190	191	191	191
Operation and Maintenance Expenses	1117	1120	1119	1119	1121	1123	1123	1124	1125	1124	1128	1128	1129	1129	1130	1131	1132	1134	1134	1135	1136	1137	1138	1139	1140
Operation Expenses	348	349	349	349	350	350	350	351	351	351	352	352	352	352	353	353	353	354	354	354	355	355	355	356	356
Maintenance Expenses	459	460	460	461	461	462	462	462	463	463	464	464	465	465	466	466	466	467	467	468	468	469	469	470	470
Energy Costs	201	201	201	201	201	202	202	202	202	202	202	203	203	203	203	203	204	204	204	204	204	205	205	205	205
Chemical Costs	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
Depreciation	648	657	658	658	659	659	660	661	662	662	663	679	680	680	682	682	682	683	684	684	685	686	687	688	689
System Assets	648	657	658	658	659	659	660	661	662	662	663	679	680	680	682	682	682	683	684	684	685	686	687	688	689
Plant & Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Expenses	114	93	79	71	63	86	109	95	85	71	59	80	74	70	65	61	55	50	46	41	35	31	26	21	16
Other Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL EXPENSES</b>	<b>2380</b>	<b>2414</b>	<b>2395</b>	<b>2377</b>	<b>2385</b>	<b>2400</b>	<b>2422</b>	<b>2412</b>	<b>2415</b>	<b>2390</b>	<b>2384</b>	<b>2421</b>	<b>2428</b>	<b>2414</b>	<b>2412</b>	<b>2409</b>	<b>2419</b>	<b>2404</b>	<b>2400</b>	<b>2398</b>	<b>2406</b>	<b>2391</b>	<b>2391</b>	<b>2388</b>	<b>2398</b>
<b>REVENUES</b>																									
Rates & Service Availability Charges	2094	2134	2171	2213	2215	2218	2222	2227	2232	2234	2237	2242	2245	2250	2255	2257	2262	2265	2270	2273	2277	2279	2284	2285	2289
Residential	1646	1677	1707	1740	1741	1744	1747	1751	1755	1756	1758	1763	1764	1769	1773	1774	1778	1781	1784	1787	1790	1792	1795	1797	1800
Non-Residential	448	457	464	473	474	475	475	476	478	478	479	479	480	481	482	483	484	484	485	486	487	487	489	488	490
Trade Waste Charges	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Other Sales and Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extra Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Income	191	140	91	70	49	42	46	40	38	42	47	35	26	30	38	46	55	55	60	68	77	85	84	90	97
Other Revenues	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grants	32	31	30	30	29	28	28	27	26	26	25	24	24	23	23	22	22	21	21	20	20	19	19	18	18
Grants for Acquisition of Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pensioner Rebate Subsidy	32	31	30	30	29	28	28	27	26	26	25	24	24	23	23	22	22	21	21	20	20	19	19	18	18
Other Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contributions	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Developer Charges	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Developer Provided Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Contributions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL REVENUES</b>	<b>2331</b>	<b>2319</b>	<b>2307</b>	<b>2326</b>	<b>2307</b>	<b>2304</b>	<b>2311</b>	<b>2309</b>	<b>2311</b>	<b>2317</b>	<b>2324</b>	<b>2316</b>	<b>2309</b>	<b>2318</b>	<b>2331</b>	<b>2340</b>	<b>2353</b>	<b>2356</b>	<b>2365</b>	<b>2375</b>	<b>2389</b>	<b>2398</b>	<b>2401</b>	<b>2409</b>	<b>2419</b>
<b>OPERATING RESULT</b>	<b>-49</b>	<b>-95</b>	<b>-88</b>	<b>-51</b>	<b>-79</b>	<b>-95</b>	<b>-111</b>	<b>-103</b>	<b>-104</b>	<b>-74</b>	<b>-60</b>	<b>-105</b>	<b>-120</b>	<b>-96</b>	<b>-81</b>	<b>-69</b>	<b>-66</b>	<b>-48</b>	<b>-35</b>	<b>-23</b>	<b>-18</b>	<b>7</b>	<b>10</b>	<b>21</b>	<b>22</b>
<b>OPERATING RESULT (less Grants for Acq of Assets)</b>	<b>-49</b>	<b>-95</b>	<b>-88</b>	<b>-51</b>	<b>-79</b>	<b>-95</b>	<b>-111</b>	<b>-103</b>	<b>-104</b>	<b>-74</b>	<b>-60</b>	<b>-105</b>	<b>-120</b>	<b>-96</b>	<b>-81</b>	<b>-69</b>	<b>-66</b>	<b>-48</b>	<b>-35</b>	<b>-23</b>	<b>-18</b>	<b>7</b>	<b>10</b>	<b>21</b>	<b>22</b>

# Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

## Cashflow Statement

FINMOD  
DEPARTMENT OF  
COMMERCE

	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
<b>Cashflow From Operating Activities</b>																									
<b>Receipts</b>																									
Rates and Charges	2094	2134	2171	2213	2215	2219	2223	2228	2233	2235	2238	2243	2246	2250	2256	2258	2263	2266	2270	2273	2278	2279	2285	2286	2290
Interest Income	191	140	91	70	49	42	46	40	38	42	47	35	26	30	38	46	55	55	60	68	77	85	84	90	97
Other Revenues	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Grants	32	31	30	30	29	28	28	27	26	26	25	24	24	23	23	22	22	21	21	20	20	19	19	19	18
Contributions	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Total Receipts from Operations	2331	2319	2307	2326	2307	2304	2311	2309	2311	2317	2324	2316	2309	2318	2331	2340	2353	2356	2365	2375	2389	2398	2401	2409	2419
<b>Payments</b>																									
Management	501	544	539	529	544	531	531	532	544	532	534	534	547	535	535	535	549	537	537	538	550	538	540	540	553
Operations (plus WC Inc)	1123	1126	1125	1125	1126	1129	1128	1130	1131	1130	1134	1133	1135	1135	1136	1137	1138	1140	1139	1140	1142	1143	1144	1145	1146
Interest Expenses	114	93	79	71	63	86	109	95	85	71	59	80	74	70	65	61	55	50	46	41	35	31	26	21	16
Other Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Payments from Operations	1738	1763	1743	1724	1732	1746	1768	1757	1760	1734	1726	1748	1755	1740	1736	1732	1742	1727	1722	1719	1727	1711	1709	1706	1714
Net Cash from Operations	593	556	564	602	574	559	543	553	552	583	598	569	554	579	594	608	611	629	643	656	662	687	692	703	705
<b>Cashflow from Capital Activities</b>																									
<b>Receipts</b>																									
Proceeds from Disposal of Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Payments</b>																									
Acquisition of Assets	810	1626	830	805	852	800	800	615	265	264	315	1375	575	275	327	274	265	565	315	252	250	250	600	265	252
Net Cash from Capital Activities	-810	-1626	-830	-805	-852	-800	-800	-615	-265	-264	-315	-1375	-575	-275	-327	-274	-265	-565	-315	-252	-250	-250	-600	-265	-252
<b>CashFlow from Financing Activities</b>																									
<b>Receipts</b>																									
New Loans Required	0	0	0	1	0	500	500	0	0	0	0	499	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Payments</b>																									
Principal Loan Payments	243	214	95	99	104	121	140	146	152	158	165	101	46	48	50	52	54	56	58	61	63	66	69	71	74
Net Cash from Financing Activities	-243	-214	-95	-98	-104	379	360	-146	-152	-158	-165	399	-46	-48	-50	-52	-54	-56	-58	-61	-63	-66	-69	-71	-74
TOTAL NET CASH	-460	-1284	-361	-302	-382	138	103	-208	135	161	118	-408	-67	256	217	282	292	8	269	343	348	371	23	367	379
Current Year Cash	-460	-1284	-361	-302	-382	138	103	-208	135	160	118	-407	-68	256	217	281	292	8	270	343	348	371	23	367	379
Cash & Investments @Year Start	3798	3257	1925	1526	1194	792	907	986	759	872	1007	1097	674	591	827	1018	1268	1522	1493	1720	2013	2303	2609	2568	2863
Cash & Investments @Year End	3338	1973	1564	1224	812	930	1011	778	894	1032	1125	691	606	847	1044	1299	1560	1530	1763	2063	2361	2674	2632	2935	3242
<b>Capital Works Funding:</b>																									
Internal Funding for New Works (\$'000)	30	591	55	45	92	40	40	90	40	40	90	640	40	40	92	40	40	40	90	42	40	40	90	40	42
Internal Funding for Renewals	780	1035	775	760	760	260	260	525	225	225	225	235	535	235	235	235	225	525	225	210	210	210	510	225	210
New Loans	0	0	0	1	0	500	500	0	0	0	0	499	0	0	0	0	0	0	0	0	0	0	0	0	0
Grants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Capital Works	810	1626	830	805	852	800	800	615	265	265	315	1374	576	275	327	275	265	565	315	252	250	250	600	265	252

# Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

## Statement of Financial Position

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	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	
Cash and Investments	3338	1973	1564	1224	812	930	1011	778	894	1033	1126	691	607	848	1045	1301	1561	1531	1763	2063	2361	2674	2632	2935	3243	
Receivables	220	220	221	221	221	221	221	221	222	222	222	222	222	223	223	223	223	223	224	224	224	224	225	225	225	
Inventories	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Property, Plant & Equipment	31140	32110	32283	32429	32623	32764	32904	32858	32461	32064	31715	32411	32306	31900	31546	31137	30720	30603	30234	29802	29367	28931	28844	28421	27984	
System Assets (1)	31140	32110	32283	32429	32623	32764	32904	32858	32461	32064	31715	32411	32306	31900	31546	31137	30720	30603	30234	29802	29367	28931	28844	28421	27984	
Plant & Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL ASSETS	34698	34303	34067	33874	33656	33914	34136	33858	33577	33318	33063	33323	33135	32971	32813	32661	32504	32357	32221	32089	31952	31830	31701	31581	31452	
LIABILITIES																										
Bank Overdraft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Creditors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Borrowings	1494	1244	1118	993	864	1222	1553	1370	1184	998	809	1187	1112	1037	962	887	811	735	659	582	505	426	347	268	187	
Provisions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL LIABILITIES	1494	1244	1118	993	864	1222	1553	1370	1184	998	809	1187	1112	1037	962	887	811	735	659	582	505	426	347	268	187	
NET ASSETS COMMITTED	33204	33060	32949	32882	32792	32692	32583	32488	32392	32321	32254	32136	32023	31934	31851	31775	31693	31622	31561	31507	31447	31404	31354	31313	31265	
EQUITY																										
Accumulated Operating Result	14338	13894	13467	13088	12690	12285	11874	11482	11097	10753	10431	10071	9706	9373	9063	8773	8493	8238	8002	7784	7577	7399	7229	7074	6923	
Asset Revaluation Reserve	18866	19166	19482	19794	20102	20407	20709	21006	21295	21568	21824	22065	22317	22561	22788	23001	23200	23384	23560	23723	23871	24005	24125	24240	24342	
TOTAL EQUITY	33204	33060	32949	32882	32792	32692	32583	32488	32392	32321	32254	32136	32023	31934	31851	31775	31693	31622	31561	31507	31447	31404	31354	31313	31265	
(1) Notes to System Assets																										
Current Replacement Cost	45194	45785	45840	45886	45978	46018	46059	46148	46188	46228	46317	47457	47497	47537	47629	47668	47708	47749	47839	47880	47920	47960	48050	48090	48133	
Less: Accumulated Depreciation	14054	13675	13558	13456	13355	13254	13154	13290	13727	14164	14602	15046	15191	15636	16083	16530	16988	17146	17604	18078	18553	19029	19206	19669	20148	
Written Down Current Cost	31140	32110	32283	32429	32623	32764	32904	32858	32461	32064	31715	32411	32306	31900	31546	31137	30720	30603	30234	29802	29367	28931	28844	28421	27984	

# Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

## Performance Indicators

**FINMOD**  
DEPARTMENT OF  
COMMERCE

	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
Typical Residential Bills	618	628	638	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648
Average Residential Bills (2013/14\$)	584	594	604	616	615	615	616	617	617	617	617	618	618	619	620	620	620	621	621	621	622	622	623	622	623
Mgmnt Cost / Assessment (2013/14\$)	156	170	168	164	169	164	165	165	168	164	165	165	168	165	164	164	168	164	164	165	168	164	165	165	169
OMA Cost per Assessment (2013/14\$)	504	518	515	512	516	513	512	512	516	512	513	512	516	512	512	512	516	513	512	512	516	511	512	512	516
Operating Sales Margin (%)	-5.89	-6.54	-4.51	-2.22	-2.89	-2.31	-2.13	-2.11	-2.53	-1.97	-2.13	-2.64	-3.16	-2.47	-2.38	-2.38	-2.84	-2.31	-2.14	-2.17	-2.56	-2.03	-2.06	-2.08	-2.57
Economic Real Rate of Return (%)	-0.40	-0.44	-0.31	-0.15	-0.20	-0.16	-0.15	-0.15	-0.18	-0.14	-0.15	-0.19	-0.22	-0.18	-0.17	-0.18	-0.21	-0.17	-0.16	-0.17	-0.20	-0.16	-0.17	-0.17	-0.21
Debt Service Ratio	0.15	0.13	0.08	0.07	0.07	0.09	0.11	0.10	0.10	0.10	0.10	0.08	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Debt/Equity Ratio	0.04	0.04	0.03	0.03	0.03	0.04	0.05	0.04	0.04	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Interest Cover	0.57	-0.02	-0.11	0.28	-0.26	-0.11	-0.02	-0.08	-0.23	-0.03	-0.03	-0.31	-0.63	-0.38	-0.25	-0.14	-0.20	0.04	0.23	0.45	0.50	1.23	1.41	2.00	2.34
Return on capital (%)	0.19	-0.01	-0.03	0.06	-0.05	-0.03	-0.01	-0.02	-0.06	-0.01	0.00	-0.08	-0.14	-0.08	-0.05	-0.03	-0.03	0.01	0.03	0.06	0.06	0.12	0.11	0.13	0.12
Cash and Investments (2013/14\$'000)	3338	1973	1564	1224	812	930	1011	778	894	1033	1126	691	607	848	1045	1301	1561	1531	1763	2063	2361	2674	2632	2935	3243
Debt outstanding (2013/14\$'000)	1494	1244	1118	993	864	1222	1553	1370	1184	998	809	1187	1112	1037	962	887	811	735	659	582	505	426	347	268	187
Net Debt (2013/14\$'000)	0	0	0	0	52	292	542	592	290	0	0	496	505	189	0	0	0	0	0	0	0	0	0	0	0

Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

STANDARD LOAN PAYMENT SCHEDULE

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Drawdown		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
2016/17	Principal 1				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Interest				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2018/19	Principal 566						14	16	16	18	18	20	21	22	24	26	27	29	31	33	35	38	40	43	45	49
	Interest						36	36	34	34	32	31	30	28	27	25	24	22	20	18	16	13	11	8	5	3
2019/20	Principal 580							15	16	17	18	19	20	22	23	25	26	28	30	32	34	36	39	41	44	47
	Interest							38	36	36	34	33	32	30	29	28	26	24	22	20	18	16	14	11	9	5
2024/25	Principal 655												16	18	19	20	22	23	24	26	28	30	32	34	36	38
	Interest												42	41	40	39	38	36	34	33	31	29	27	25	23	21
Total Principal	1802	0	0	0	0	0	14	31	32	35	36	39	57	62	66	71	75	80	85	91	97	104	111	118	125	134
Total Interest		0	0	0	0	0	36	74	70	70	66	64	104	99	96	92	88	82	76	71	65	58	52	44	37	29

# Forbes Council Sewer Fund Financial Model 2012/13 : Preferred Case

## Summary Report of Assumptions and Results

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	2013/14	2017/18	2022/23	2027/28	2032/33	2037/38	2042/43
Inflation Rates - General (%)	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Inflation Rates - Capital Works (%)	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Borrowing Interest Rate (%)	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Term of New Loans (years)	20	20	20	20	20	20	20
Investment Interest Rate (%)	5.50	5.50	5.50	5.50	5.50	5.50	5.50
Growth Rate - Residential (%)	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Developer Charges per Assessment - Residential (2013/14 \$)	3975	3975	3975	3975	3975	3975	3975
Subsidised Scheme Capital Works (\$m)	0.02	0.08	0.03	0.08	0.03	0.03	0.03
Grants on Acquisition of Assets (\$m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Renewals (\$m)	0.78	0.76	0.23	0.24	0.21	0.21	0.22
Renewals (%)	1.73	1.65	0.49	0.49	0.44	0.44	0.45
Cash and Investments (\$m)	3.34	0.81	1.03	1.04	2.06	3.24	4.70
Borrowing Outstanding (\$m)	1.49	0.86	1.00	0.96	0.58	0.19	0.03
Mgmnt Cost / Assessment	156	169	164	164	165	169	165
Debt Equity Ratio	0.04	0.02	0.02	0.02	0.01	0.00	0.00
OMA Cost Per Assessment	504	516	512	512	512	516	512
Economic Real Rate of Return (%)	-0.40	-0.20	-0.14	-0.17	-0.17	-0.21	-0.16
Return on Capital (%)	0.19	-0.05	-0.01	-0.05	0.06	0.12	0.27
Net Debt (\$m)	0.00	0.05	0.00	0.00	0.00	0.00	0.00
Debt Service Ratio	0.15	0.07	0.10	0.05	0.04	0.04	0.01
Average Residential Bills	584	615	617	620	621	623	625
Typical Residential Bills	618	648	648	648	648	648	648

