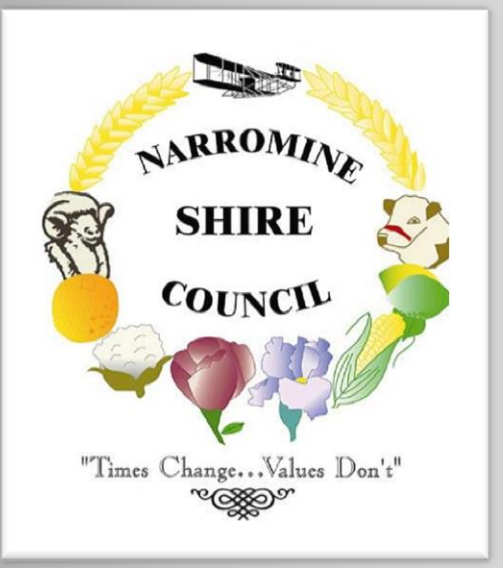

Narromine Shire Council

Strategic Business Plan:

Water Supply and Sewerage Businesses

Final Report Version 2.3

November 2013

CPE Associates Pty Ltd
PO Box 3009
Nowra North NSW 2541
http://www.cpeassociates.com.au
info@cpeassociates.com.au
tel: (02) 4402-9392
ABN 58 142 425 992

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Executive Summary

This document is the water supply and sewerage business plan (the plan) for the Narromine Shire Council water supply and sewerage systems. The plan recognises that the water supply and sewerage systems in Narromine and Trangie and the water supply in Tomingley are currently operational and deliver valuable services to the respective communities

A platform onto which to build the future of the water and sewerage businesses is provided though the integration and refinement of existing policies, systems and procedures into the plan.

The plan develops the financial component that will achieve the funding considered essential for sustainable service provision.

The plan identifies the following key operational issues that need to be evaluated and resolved promptly if Council and senior officers are to fulfil their statutory obligations and responsibilities under various Acts and regulations and to keep both the water and sewerage businesses functioning as strong and viable entities:

- Review gravity sewer service life through a programme of targetted CCTV inspections, sleeve suitable near life-expired sewers and develop and implement a replacement programme for those that can't be sleeved – to be commenced by 30 June 2013.
- Explore further opportunities for using raw water and other demand management strategies.
- Investigate effluent reuse to reduce demand on borefields and the sewerage system
- Investigate potential for additional bores.
- The Trangie Water Supply system requires upgrades to allow it to deliver the target level of service in the medium term. A comprehensive investigation study has been completed in 2013 that recommends improvements to the performance of the Trangie sewerage system. This has been included in the capital works plan.
- The Trangie Sewage Treatment Plant requires upgrades to allow it to deliver the target level of service in the medium term. A comprehensive investigation study has been completed in 2013 that recommends improvements to the performance of the Trangie sewerage system. This has been included in the capital works plan.
- $650,000 has been allocated to decommission the old Narromine Sewage Treatment Plant. It is recommended that investigation studies be undertaken in order to define the scope of works.
- Ensure staff are equipped to operate water and sewage treatment plants at or near best practice and in accordance with legislative and licence requirements

- Increase the typical residential bill for water supply services to $585 over a two-year period. This represents a 10% increase in the typical residential bill (excluding inflation) over a two-year period (5% per year excluding inflation).
- Adjust the typical residential bill for sewerage services to $510 per annum from 1 July 2014. Following the completion of the majority of capital works in 2026/27, there is the opportunity to reduce the typical residential bill to $450 in 2013/14 dollars. In lieu of a reduction of the typical residential bill, the typical residential bills could be progressively reduced in real terms through tariff freezes, adjusting for inflation and any unplanned variations highlighted in the sensitivity analysis.

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1. Introduction

1.1 Purpose of this Plan

Strategic Business Plans are intended to govern the long term operation of business entities within local councils. These plans form a companion to a council's Operations Plan, which details the proposed activities of the council over the relatively short timeframe of three years.

This plan is designed to assist in the operation of Narromine Shire Council's water supply and sewerage businesses.

Strategic business plans are a particularly useful tool for water supply and sewerage businesses for the following reasons:

- Water supply and sewerage businesses are very capital intensive. Assets are created and renewed over timeframes of 25 years to a century. The business needs be able to supply the required services and at the same time accumulate funds and service debt in a way that, as far as possible, minimises costs borne by the community and preserves intergenerational equity.
- Water supply and sewerage businesses provide an essential service which reduces risks to public health, but utilises a limited natural resource. The business needs to be able to respond to changes to the standards set by regulators in a way that reflects the financial realities of a business dependent on high cost, long life assets.
- The NSW Office of Water requires such plans be created to demonstrate the long-term viability of the business. Once this has been achieved, the business may qualify to issue dividends to the business owner, and/or qualify for financial support for new capital works.

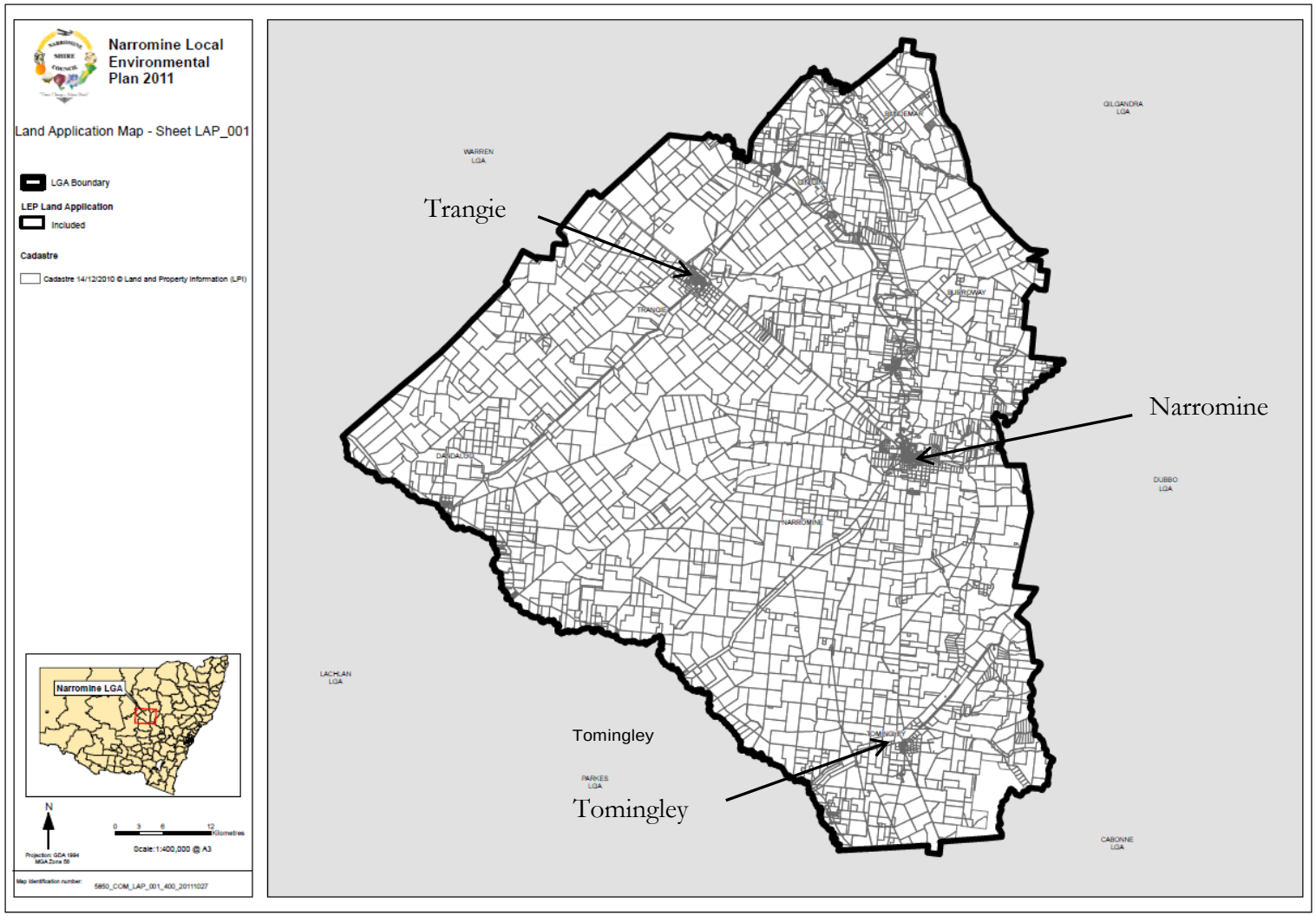
This strategic business plan addresses the long-term operation of the business by:

- Considering the current operating environment of the business (**section** 2)
- Reviewing the current capability of the business to provide services to the community, and proposing a future level of service (**sections** 4**,** 5 **and** 6)
- Reviewing the adequacy of the current asset base to provide the current and proposed future levels of service, and identify upgrades necessary to achieve or maintain the future level of service (**section** 7).
- Reviewing the human and financial resources required for the business to perform (**sections** 8 **and** 9)
- Identifying performance indicators to track progress against the objectives of the business.

It is the responsibility of Narromine Shire Council to implement this plan, progressively updating and modifying it as knowledge improves and stakeholder requirements change.

A map of the Shire is provided below.

Figure 1: Narromine Shire Locality Map



1.2 Acknowledgements

This plan has been prepared by Mike Brearley and Phil Hawley, directors of Collaborative Planning and Engineering Associates (CPEa), consultants engaged by Narromine Shire Council to assist them in this process.

The development of this plan has extensively relied on knowledge and input of the staff of Narromine Shire Council, particularly the Director Engineering Services, Ms Kerrie Murphy, and the former Director of Finance & Corporate Strategy, Ms Kathleen Pizzi.

1.3 Disclaimer

This document has been prepared for a particular purpose, using information made available by the client in accordance with the client's instructions. Users of this document should note the assumptions and approximations used. Any use of the document outside of the stated purpose is at the user's risk.

2. Operating Environment Review

This chapter reviews the environment in which the businesses operate, being the circumstances of the Council they are part of and the community they serve.

2.1 Institutional arrangements, legislative framework and statutory/regulatory obligations

The Narromine water supply and sewerage businesses are constituted as part of Narromine Shire Council (NSC) constituted under the Local Government Act 1993. Council reports to the NSW Office of Water (NOW, part of the Department of Primary Industries), on matters of utility performance. This performance includes operation, maintenance, pricing and customer satisfaction.

NSC is a member of the NSW Water Directorate. The Directorate provides technical assistance, best practice manuals and representation to Government for the member utilities.

NSC is a member of the Lower Macquarie Water Utilities Alliance (LMWUA). The Alliance was created in response to the NSW Government's *Inquiry into secure and sustainable urban water supply and sewerage services for non-metropolitan NSW* conducted during 2008 and reporting in early 2009.

The voluntary alliance seeks to improve the effectiveness of the member councils' water and sewerage businesses through:

- Resource sharing, including staff
- Mentoring
- Peer reviews of statutory reports

The Alliance retains the ownership of assets at local Council level.

The management of water and sewerage services within NSC is primarily the responsibility of the Director of Engineering Services. A Water and Sewerage Section has been created within the Directorate that is responsible for day to day management of the businesses. Routine activities are conducted in-house with specialist services procured either through the LMWUA or external service providers as appropriate. The Water & Sewerage Section is supported by NSC's administration section to field public enquiries, manage billing and finances and other administrative functions such as records.

Regulatory agencies

Operation and treatment performance of the water and sewage treatment plant is monitored by NOW with regular inspections.

The water supply business also reports to NSW Health on matters of drinking water quality.

The sewerage business holds Environmental Protection Licence No 11715 for the Narromine Sewage Treatment Plant (STP) and must report against this to the NSW Environment Protection Authority. The Trangie STP is unlicensed.

NOW administers the Country Water Supply and Sewerage Programme subsidy scheme, and is consulted regarding any significant upgrade or system augmentation works. Ministerial approval is required under the provisions of the Local Government Act for new water treatment, sewage treatment or effluent reuse systems.

NSC sources it water from the Macquarie River and underground aquifers. The extraction of water from these sources is controlled using licences issued under the Water Management Act 2000.

The utilisation of the Macquarie River source is governed by the Water Sharing Plan for the Macquarie and Cudgegong Regulated Rivers Water Source 2003, and the Available Water Determinations issued under that plan. The Plan was last revised in 2006, although it was suspended from 27 July 2007 to 16 September 2011. The plan is scheduled to be extended or replaced in 2014.

The Western Catchment Management Authority commenced operations in July 2004. Some responsibilities of state government devolve to the Authority.

Legislative framework

In managing its water supply and sewerage services, Council must work within a complex legislative framework. It is not the intention for this business plan to describe the Council's responsibilities under the various Acts and Regulations, but to list the legislation. It is the responsibility of the Councillors and the staff to inform themselves of the requirements of the legislation and their relevant responsibilities.

The major Acts that control the water supply and/or sewerage obligations include:

- Local Government Act 1993, in particular Sections 56 to 66.
- Independent Pricing and Regulatory Tribunal Act 1992
- Protection of the Environment Operations Act 1997
- Environmental Planning & Assessment Act 1979
- Catchment Management Authorities Act 2003
- Soil Conservation Act 1938
- Public Health Act 2010
- Fluoridation of Public Works Supplies Act 1957
- Water Act 1912 (largely rescinded)
- Water Management Act 2000
- Water Industry Competition Act 2006
- Work Health & Safety Act 2011

2.2 Situation analysis and growth projections

The following are other factors which may impact on either the demand for services and facilities in Narromine Shire or on Council's capacity to deliver the services demanded:

2.2.1 *Compliance with Best-Practice Requirements*

Local water utilities are strongly encouraged by the NSW Office of Water to move toward full compliance with "Best Practice Management of Water Supply and Sewerage Guidelines" as issued by the NSW Office of Water in 2007. Compliance with the Best Practice Guidelines is required to qualify for funding under the Country Towns Water Supply and Sewerage Program, or for Council to pay dividends to its General Fund.

These guidelines specify 6 criteria being:

- Strategic Business Planning;
- Pricing;
- Water Conservation;
- Drought Management;
- Performance Monitoring; and
- Integrated Water Cycle Management (IWCM).

Table 1 &
Table 2 below describe NSC's level of compliance with these requirements.

Table 1: Compliance with Best Practice Requirements for Water Supply

Best Practice Requirement - Water	Status
1. Strategic Business Planning	This document
2. Pricing	
• Full cost recovery without significant cross subsidies	Comply
• Complying residential charges with pay-for-use water pricing, independent of land values	Comply
• Complying non-residential charges	Comply
• Development servicing plan, commercial developer charges	Comply
• At least 75% of residential revenue from usage charges	Comply
3. Water Conservation	Demand Management Plan completed in 2010 as part of a regional LMWUA project.

Best Practice Requirement - Water	Status
4. Drought Management	Drought Management Plan completed in 2010 as part of a regional LMWUA project.
5. Performance Monitoring	Comply annually
6. Integrated Water Cycle Management	IWCM adopted by Council.

Table 2: Compliance with Best Practice Requirements for Sewerage

Best Practice Requirement - Sewerage	Status
1. Strategic Business Planning	This document
2. Pricing	
• Full cost recovery without significant cross subsidies	Comply
• Complying residential charges with pay-for-use water pricing, independent of land values	Comply
• Complying non-residential charges	Comply
• Development servicing plan, commercial developer charges	Comply
• Complying trade waste fees and charges	Comply
• Complying trade waste policy and approval for all dischargers	Comply
5. Performance Monitoring	Comply annually
6. Integrated Water Cycle Management	IWCM adopted by Council.

2.2.2 *Significant unscheduled capital asset replacement*

NSC's Community Strategic Plan is accompanied by an asset management strategy for the Shire. The asset management strategy shows the annual asset upgrade/replacement requirements that can be currently identified over the next ten years. The financial plan will reflect those known or planned asset needs. Accidents or natural disasters (floods, fires) may impact on key assets such as roads, bridges, water and sewerage services, buildings, sporting facilities and aerodromes. While, by definition, such events are not planned for, from a strategic planning point of view, Council must have in place risk assessment and risk management plans for all of its asset areas as part of its overall asset management strategy.

2.2.3 *Services provided*

NSC provides potable water supply services to the urban areas of Narromine and Trangie and a raw water supply to the village of Tomingley.

Sewerage services are provided to the urban areas of Narromine and Trangie only.

The current water treatment and reticulation infrastructure and sewerage infrastructure is considered adequate to cope with current and projected demand throughout the life of this plan.

The town of Narromine is mostly reliant on underground water sources which are showing signs of decreasing reliability. Investigations are required to secure additional sources to meet long term demand.

2.2.4 *Population growth*

There has been a population reduction in the Shire of approximately 3% over the past ten years – a smaller reduction than many similar inland shires. NSC's Community Service Plan notes that the Australian population is forecast to grow by 1.4% per year over the next decade and further assumes that the shire population will grow by 0.5 to 0.7% per year – meaning that the shire population will be approximately 7,300 (an increase of up to 500) by the end of this 30-year strategic planning period. The NSW Department of Planning (DoP) "NSW Statistical Local Area Population Projections 2006 – 2036" suggest that the shire will suffer a projected annual population decline of between 0.4 – 0.7% per year.

However, the number of dwellings in the shire is reported to have increased by 57 dwellings between the years of 1996 to 2006. Assuming that most of these are within the serviced area and based on 2100 connected properties, this represents an annual increase of 0.27%. **A growth rate of 0.25% is adopted as the base case for the financial modelling.**

2.2.5 *Demographic Change*

14.7% of the current Narromine Shire population is aged 65 and older (compared to 13% nationally). The DoP forecasts this age group to grow at 1.8% annually, which is greater than the overall projected population growth rate. This is largely due to a continuing trend for Narromine Shire to attract retirees from western NSW because of proximity to Dubbo and good medical facilities. This will result in an additional 500 residents in the shire in this age group over the next twenty-five years. With this ageing population comes the possibility of an increasing number of special customers for water supply.

2.2.6 *Industry Change*

Agriculture is expected to continue to dominate the economy over the next ten years. In the irrigated agriculture sector, it is likely there will be some trend away from broadacre irrigated cropping to more intensive, higher value irrigated crops. A sign of this development is that in the past twelve months two new 40ha drip-irrigated citrus orchards (for juice production) have been established that were formerly broadacre cropping enterprises.

Apart from the potential to increase the economic value of production, this trend towards more intensive higher value crops has the potential to increase employment and stimulate the development of related packaging and processing facilities in the shire (which could also attract products from nearby shires as well).

Significant changes in grain marketing and handling are already occurring. These changes include the emergence of independent commercial grain exporters, less consignment via decentralised

bulk terminals on branch rail lines, containerised packaging for delivery to niche markets (two such facilities are operating in the shire), increased storage on-farm and delivery to handlers/exporters spread throughout the year.

Narromine has the potential to develop as a significant node for receival of bulk grain delivered by road transport from not only Narromine Shire producers, but also producers from western and north western shires, to packagers / exporters based here – who then utilise the rail network for transport to port.

Historically mining has not had a major presence in the Shire. However at the time of writing a gold mine in the Tomingley area has been approved for development. When it proceeds, the mine will have a significant positive impact on employment and demand for business services in Tomingley and Narromine.

2.2.7 *Community Involvement*

The only known issues relating to the water and sewerage businesses of community concern are the presence or E. Coli in the water supply in Trangie. To a much lesser degree this concern also exists at Narromine. The community is being consulted in the finalisation of the SBP and is also consulted whenever any substantive changes to either the water supply or sewerage systems are contemplated.

2.2.8 *Environmental protection*

There are no issues of immediate environmental concern in the operation of either the water or sewerage businesses.

As part of it asset management strategy, NSC is constantly seeking more energy efficient ways of providing the services. It also considers environmental sustainability in the selection of materials and treatment processes. There are no areas known to be environmentally sensitive that are impacted by the schemes.

Discharge from the Narromine sewage treatment plan is in accordance with the Environmental Protection Licence.

2.2.9 *Asset Management*

Integrated Water Cycle Managements Strategy

Council participated in a joint Integrated Water Cycle Management Evaluation Study (IWCM) and Regional Drought Management Plan through the Lower Macquarie Water Utilities Alliance (LMWUA). An IWCM strategy is being completed in 2012/13 as part of the regional LMWUA project.

Operation

Council maintains a comprehensive asset register for its water supply and sewerage assets. A valuation of the water supply and sewerage assets as of 30 June 2012 notes that all systems are typically in the last half of their useful life, indicating that significant asset renewals will be necessary in the medium term. There are a number of high-risk issues surrounding the reliability of water supply and the importance of renewing water and sewerage mains.

Maintenance

Council has a number of documented work procedures for maintenance activities. Fixed-time maintenance is to be undertaken for critical system components such as pumps and measuring equipment, and condition-based maintenance for pipeline and reservoir assets in accordance with condition assessments.

Capital Works

Council's Asset Management Plans for Water and Sewerage include a 10 year capital works plan. This plan has been extensively reviewed and expanded into a 30 year plan as part of the Strategic Business Planning process. The Asset Management Plans will need to be updated following adoption of the Strategic Business Plan.

2.2.10 *Workforce*

NSC retains a core of staff dedicated to the maintenance and operations of the water supply and sewerage systems. Specialist services and major maintenance or capital works are provided by skilled contractors or the LMWUA as appropriate.

Council's staff hold qualifications appropriate to the functions that they perform. Current staffing levels are under review to ensure that adequate personnel are available for current and immediately foreseen demands. Learning plans are being established to ensure that employees acquire and maintain the requisite skill sets to adequately and safely perform their duties.

Future capital works are progressively evaluated to determine whether NSC should acquire and train additional staff resources to undertake these works and also provide skilled employees for the future, or whether the work should be undertaken by contract or LMWUA resources. This is particularly relevant for the forecast renewals of gravity sewer mains.

2.2.11 *Finance*

Narromine's Water Supply business had $4,220,000 in cash and investments as of 30 June 2013, and no outstanding loans. In the 2012/13 financial year, the business accrued an operating surplus of $334,000. The business utilises fixed assets valued at $6.4 million, having replacement cost of $16 million and depreciating at a rate of $207,000 per year.

Narromine's Sewerage business had $5,109,000 in cash and investments as of 30 June 2013, and no outstanding loans. In the 2012/13 financial year, the business accrued an operating surplus of

$136,000. The business utilises fixed assets valued at $16.6 million, having a replacement cost of $26 million and depreciating at a rate of $397,000 per year.

Both businesses are characterised by a high level of cash and investments with a low expenditure on asset renewals and replacements. This Strategic Business Plan presents a financial plan that utilises both cash and investments, borrowings and a higher water and sewer rate to fund a works program to provide the desired level of service.

3. Mission Statement

The water supply and sewerage business units form part of the broader Narromine Shire Council. As a provider of essential services to the urban parts of Narromine Shire's community, the water supply and sewerage businesses adopt the vision and mission of the Council.

Council's vision is:
In 2020, Narromine Shire will be: A highly desirable place to live, work and conduct business, and where shire residents care for one another and the natural environment.

Council's mission is:
To enhance our Shire's image, lifestyle and environment through effective leadership, community involvement and commitment to service.

In addition, the Mission Statement for the provision of water and sewerage services is:
To provide cost effective water supply and sewerage services to the serviced areas of Narromine Shire that meet the Levels of Service to which customers have agreed, and for which they are prepared to pay, and which satisfy all statutory requirements. The services will be provided equitably and in a commercial manner, taking into account the values of the broader community as articulated in Council's Vision and Mission. The services will be environmentally sensitive, promote ecological sustainability within the areas of operations, protect public health and make best use of regional resources.

Relevant goals and objectives and how these are addressed in the management of the water supply and sewerage businesses are shown in **Table 3**.

Table 3: Organisation Goals and how these are addressed

Goal	Objective	How Goals and Objectives are addressed in the Asset Management Plan
To provide a safe, cost-effective, environmentally sensitive and ecologically sustainable water supply service to Narromine Shire.	To provide an acceptable quantity and quality of water for health, livelihoods and production, coupled with an acceptable level of water-related risks at the following locations: - Narromine - Trangie - Tomingley	Water supply infrastructure is maintained at each of these centres such that water can continue to be delivered in accordance with the agreed levels of service
	Best Practice quality standards met (Lower Macquarie Water Utilities benchmark)	100% Best Practice Standards met.
To provide a safe, cost-	Ensure that sewerage is	Sewerage infrastructure is

Goal	Objective	How Goals and Objectives are addressed in the Asset Management Plan
effective, environmentally sensitive and ecologically sustainable sewerage service to Narromine Shire.	available and that sewage treatment meets specific standards at the following locations: - Narromine - Trangie	maintained at each of these centres such that sewerage services can continue to be delivered in accordance with the agreed levels of service
	Best Practice quality standards met (Environmental Protection Authority Licence)	100% Best Practice Standards met.

THE VALUES AND PRINCIPLES that guide Council are:

- Council will practice and display civic leadership, integrity, a willingness to consult with shire residents, accountability and transparency.
- Council services will be accessible and affordable for all shire residents.
- Council services will not compete with commercial service providers or duplicate services from other organisations.
- Council will be supportive of volunteers, service clubs and other groups who wish to contribute to public use facilities, services and community wellbeing.
- Council places high value on the proper management, protection and where required, restoration, of the natural environment.
- Council will encourage new business development in the shire which contributes to the social and economic strength of the shire community, and which will not impact negatively on the natural environment.

3.1.1 *Policies*

Council has adopted a number of policies that are particularly relevant to the management of the water supply and sewerage businesses. These are summarised in **Table 4**.

Table 4: Key Narromine Shire Council Policies

Policy	Description
Water & Sewer Policy Best Practice Procedures	Collates all Water and Sewer specific policies in accordance with Best Practice Procedures and into a single document. Adopted by Council 15 November 2011. Resolution No 2011/551
Development Servicing Plan 2007	Provides the basis upon which developers are expected to contribute towards water and sewerage capital works resulting from development.

Policy	Description
Liquid Trade Waste Policy	Controls the discharge of liquid trade wastes into sewers including volume and strength parameters and establishes the basis for charges for liquid trade wastes. Adopted by Council 17 October 2006. Resolution No EV 34
Asset Management	Provides a framework to create, construct, manage, supervise, control, inspect, maintain, repair, replace and dispose of assets to a safe standard and condition.
Complaints	Outlines processes for handling various classes of complaint including appeal
Purchasing	Describes procedures to purchase goods and services including tendering and quotations.
Records	Outlines the requirements for the creation, storage and disposal of corporate information.
Work Health and Safety	Defines obligations and responsibilities to ensure the health and safety of council staff, contractors and the public entering onto council work sites.
Risk Management	Dedicates Council to utilising the risk management principles in its operations as per AS4360(2004)

4. Levels of Service

This section of the Strategic Business Plan details the current and the target levels of service with respect to both the water supply and sewerage services provided by Narromine Shire Council. The levels of service are from the perspective of an individual customer and are, in effect, an expansion of the Mission Statement. Attainment of the target levels of service is the primary driver for the balance of this Strategic Business Plan.

The Levels of Service are only finalised once the financial plan has demonstrated their affordability and the community has been consulted on them.

4.1 Levels of Service - Water Supply

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current*	Target
AVAILABILITY OF SUPPLY			
Quantity Available			
Domestic Peak Day	L/tenement/ day	4,895	<5,000
Domestic Annual	kL/tenement /yr	298	<215
Total Annual Average Consumption	ML/yr	916	<660
Total Peak Daily Consumption	L/tenement/ day	5,165	<5,000
Water for Fire Fighting: Availability from hydrants at minimum flow rates as determined by LG Regulations and NSW Fire Brigade	% Urban Area Serviced	100%	100%
Pressure			
• Min pressure at the water meter when delivering 0.1L/sec	Metres head	Narromine	Narromine >12 for 90% of properties
		Trangie	Trangie >12 for 90% of properties
		Tomingley	Tomingley >12 for 90% of properties

* it should be noted that "Current" levels of service are based on the 2011/12 TBL data. 2011/12 was a wet year and so not necessarily indicative of long term averages.

Consumption Restrictions in Droughts:			
• Long run proportion of time with water restrictions applied	%	<5%	<5%
• Average frequency of restriction events		<1 event per 10 years	<1 event per 10 years
• Supply capacity during worst recorded drought	% of normal demand	100%	90%
WATER QUALITY (POTABLE WATER) (Should meet Australian Drinking Water Guidelines NHMRC & NRMMC 2011)†			
Compliance with 2011 NHMRC & NRMMC Australian Drinking Water Quality Guidelines			
Physical parameters	%	100	100
Chemical parameters	%	100	100
Faecal coliforms	%	Narromine –98 Trangie - 94	100
Microbiological Parameters:			
E-coliforms	Mean CFU/100ml	Narromine – 0.02 Trangie – 2.4	0
Sampling frequency	Samples/wk/ zone	Narromine – 1 Trangie – 1.2	1
Physico-chemical Parameters:			
pH	Unit	Narromine – 7.3 Trangie – 8.25	6.5 – 8.5
Colour	HU	Narromine – <1 Trangie - <1	<15
Turbidity	NTU	Narromine – 0.075 Trangie - 0.075	<5
Fluoride	mg/L	Narromine – 0.175 Trangie - 0.615	<1.5
Free available chlorine (WTP)	mg/L	Narromine – N/A Trangie - N/A	4.1
Free available chlorine (Reticulation)	mg/L	Narromine – N/A Trangie - 0.74	0.6 – 4.1
Iron	mg/L	Narromine – 0.17 Trangie – 0.06	<0.3
Manganese	mg/L	Narromine – <.005 Trangie – <.005	<0.5

† the current NSW Water & Sewerage Strategic Planning Guidelines require health related aspects of water quality such as chemical and microbiological water quality compliance to meet Australian Drinking Water Guidelines 2004 (ADWG). Council has elected to meet the more recent 2011 ADWG on the basis that they are likely to be incorporated into the requirements at some time in the near future.

Consumption Restrictions in Droughts:

RESPONSE TIME TO CUSTOMER COMPLAINTS OF SUPPLY FAILURE

(Defined as the elapsed time to have staff on site to commence rectification of the problem)

Priority 1: (failure to maintain continuity or quality of supply to a large number of customers or to a critical use at a critical time)

All Customers: • during working hours • out of working hours	Hours	60	60 120
Priority 2: (failure to maintain continuity or quality of supply to a small number of customers or to a critical use at a non-critical time)			
All Customers: • during working hours • out of working hours	Minutes	60	180 240
Priority 3: (failure to maintain continuity or quality of supply to a single customer)			
All Customers:	Working Days	1	1
Priority 4: (a minor problem or complaint that can be dealt with at a mutually convenient time)			
All Customers:	Working Days	14	14
Catastrophe			
		Immediate Action	Immediate Action

CUSTOMER COMPLAINTS & GENERAL INQUIRIES

(i.e. complaints other than a supply failure)

Written complaints or enquiries: 95% response time	Working Days	10	10
Personal complaints or enquiries: 95% response time	Working Days	1	1

SPECIAL CUSTOMERS

Specific service levels and associated charges will be negotiated with special customers on an individual basis.

As at December 2012 there were no special customers.

4.2 Levels of Service - Sewerage

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current‡	Target
AVAILABILITY OF SERVICE			
Connections for Domestic Sewage		Available to all houses, units or business in the defined service area	Available to all houses, units or business in the defined service area
Trade Waste Acceptance		In accordance with approval conditions for each discharger	In accordance with approval conditions for each discharger
AVERAGE SYSTEM FAILURES			
Controlled, expected (overflows)	Frequency	0	<2 per year
Controlled, unexpected (flow relief)	Frequency	0	<1 per 5 years
Uncontrolled, unexpected:			
• Private Property	No/ 1000 allotments/yr	NA	<1 per 200 allotments/ year
• Public Property – sensitive areas e.g. main street	Frequency	0	<1 per 5 years
• Public Property – other areas	Frequency	0	<1 per 10km main per year
95th PERCENTILE RESPONSE TIMES TO SYSTEM FAULTS (Defined as the elapsed time to have staff on site to commence rectification of the problem)			
Priority 1: (failure to contain sewage within the sewer system or any problem affecting a critical user at a critical time)			
Response time:			
• Working hours	Minutes	60	60
• After hours		60	120
Priority 2: (minor failure to contain sewage within the sewer system or any problem affecting a critical user at a non-critical time)			
Response time:			
• Working hours	Minutes	60	180
• After hours		60	240
Priority 3: (minor failure to contain sewage affecting a single property or as bad odours)			
Response time	Days	Next working day	Next working day

‡ it should be noted that "Current" levels of service are based on the 2011/12 TBL data. 2011/12 was a wet year and so not necessarily indicative of long term averages.

DESCRIPTION	UNIT	LEVEL OF SERVICE	
RESPONSE TIMES TO CUSTOMER COMPLAINTS & INQUIRIES OF A GENERAL NATURE (Defined as a minor operational problem, complaint or enquiry, which can be dealt with at a mutually convenient time)			
Time to advise customer of intended action.	Working Days	Respond to 95% of written complaints within 10 working days Respond to 95% of personal complaints within 2 working days	Respond to 95% of written complaints within 10 working days Respond to 95% of personal complaints within 2 working days
ODOURS / VECTORS			
No of incidents annually that result in complaints		2	<2
IMPACT OF STP ON SURROUNDING RESIDENTS			
Max noise level above background noise	dB	0	<5
Odour not detectable outside the utility's buffer zone around the STP	Yes / No	Yes	Yes
EFFLUENT DISCHARGE / BIOSOLIDS MANAGEMENT			
Meets statutory requirements	Yes / No	Yes	Yes

4.3 Action Plan

Table 5: Action Plan for Service Delivery

Business	Objectives	Proposed measures	Provider, cost	Target date
Water	Maintain potable water quality to ADWG standards	• Review effectiveness of chlorination to supply at both Narromine and Trangie due to reported presence of E-coliforms and low levels of free Chlorine in potable supplies • Give consideration to fluoridating the supplies due to very low fluorine levels in potable supplies	NSC	30 June 2014

5. Service Delivery

5.1 Current service delivery regime

The combined Water Supply and Sewerage businesses employ 6 Full Time Equivalent (FTE) staff on a permanent basis. They are supplemented on a part time basis from other Narromine Shire Council staff on an as-needs basis. In extreme situations, other general fund staff share duties to provide a response service as needed. Administration, management, IT and engineering services are supplied to the businesses by Narromine Shire Council.

Specialist services are provided by contract. These include electrical maintenance, mechanical maintenance, radio telemetry, reservoir internal inspection and other preventative maintenance programmes on instrumentation and equipment.

5.2 Options for alternate delivery

5.2.1 *Contracting*

Where the requisite skills or other resources are not available within Council, services can be contracted. This applies not only to capital works but also to ongoing or non-routine maintenance activities such as electrical work, works requiring a licensed plumber or mechanical overhauls e.g. pumps, motors or aerators and specialised activities such as diving in reservoirs for internal condition assessment.

Contracting is a reasonable option that enables Council to buy in services where it doesn't have the requisite resources or expertise in house. This particularly applies to one-off or major projects where the necessary resources may not even be available in the local area.

When Council chooses to purchase services by contract, it needs to ensure it is capable of adequately procuring, supervising and managing the contract.

In the case of all contracts, Council needs to be mindful of the requirements of the Local Government tendering regulations. For routine minor contracts Council may choose to publicly invite registrations of interest with the objective of establishing a list of approved contractors e.g. electricians or plumbers that can provide services at short notice. For more major or one off projects Council may have to seek quotations or go through a formal tendering process (depending on the value of the work) on a project specific basis. For some services Council can utilise panels established by the State Contracts Control Board or LG Procurement (an arm of the Local Government and Shires Association).

5.2.2 *Sharing of resources with other LMWUA members*

The LMWUA provides the opportunity for Council to access skilled resources and equipment that it doesn't otherwise have available to it. In many instances the greater economies of scale

mean that purchasing these services from other member councils will be cheaper than trying to complete the task internally.

A major advantage of the LMWUA is that it gives Council ready access to skills and specialised equipment that are already in the region and that, subject to availability, can be procured without NSC having to go through a formal tendering process.

The LMWUA is also starting to enter into regional service contracts, such as for the cleaning of reservoirs and chemicals supply. This will give Council access to more competitively priced services and reduce Council's procurement overheads.

Wherever possible, Council should utilise the resources and services provided by the LWMUA. On some occasions it is also possible that NSC will be in a position to lend or hire its resources to other member councils.

Council has much to gain from the LMWUA and wherever possible will seek to support and to foster the aims of the alliance.

5.3 Action plan

Table 6: Action Plan for Service Delivery

Business	Objectives	Proposed measures	Provider, cost	Target date
Water & Sewerage	System Operation meets the currently adopted Levels of Service	• Maintain in-house staffing and equipment resources	NSC	Ongoing
		• Maintain a register of prequalified external service providers e.g. plumbing that can be called upon as required	NSC	
		• Provision of specialist services for one-off maintenance or capital works – Invite tenders as required	NSC	
Water		• Reservoir cleaning - Utilise LMWUA contract	LMWUA	As required
Water		• Supply of treatment chemicals - Utilise LMWUA contract	LMWUA	As required

6. Customer Service Plan

This Customer Service Plan relates to those activities that involve interaction between Narromine Shire Council, its water and sewerage customers and the wider community.

Specifically, it addresses:

- The Levels of Service provided to customers;
- The current and future areas of the shire to which water and sewerage services are provided;
- The management of demand for water, including during times of drought;
- The pricing and regulation of water supply and sewerage trade waste services;
- Contributions from developers towards the provision of new or upgraded assets;
- How NSC goes about consulting with customers and the community in making decisions; and
- Protection of the environment and sustainable development.

6.1 Objective

The objective of this plan is to provide water supply and sewerage services in a sustainable manner consistent with the standards adopted by the community.

6.2 Level of service review

The Levels of Service discussed in **Section** 4 relate to the performance of Council's water supply and sewerage businesses against targets that achieve at least the minimum standards identified in the *NSW Water and Sewerage Strategic Business Planning Guidelines.*

This section reviews the actual services provided by NSC and seeks to identify areas for improvement.

NSC participates in NSW Office of Water's performance monitoring programme of Local Water Utilities. Participation in such a programme is a requirement of National Competition Policy and the National Water Initiative.

The NSW Office of Water provides three products from the data provided by the Local Water Utilities:

- A publicly available performance monitoring report which provides a suite of indicators for each Local Water Utilities for a given financial year.
- A publicly available benchmarking report containing broader data, but organised to facilitate the identification of trends over time for a given utility, and allowing for performance to be compared between utilities.
- A customised 'report card' issued to each local water utility, highlighting significant deviations in indicators compared to statewide medians and showing detailed trends for a

number of key indicators. The latest triple-bottom-line (TBL) report for the Narromine Water and Sewerage Utilities is provided in **section 10**.

NSC has generally performed well and meets all of the NOW Best Practice Guideline criteria. Ageing infrastructure, particularly water mains and gravity sewerage mains, means there is a risk that performance will decline in the medium term unless these assets are maintained and renewed in an appropriate manner.

6.3 Areas serviced

Water Supply services are provided in the three major population centres of Narromine, Trangie and Tomingley. Sewerage services are provided to the two larger centres of Narromine and Trangie. NSC proposes to maintain services to these centres, and expand services to new development areas within these centres where economically feasible.

There are no other recognised urban localities in the local government area. Outside of urban areas it is not economically feasible or environmentally desirable to provide reticulated water supply and/or sewerage services. These areas are best managed using on-site water and wastewater management systems. There are no systemic issues with the management of on-site water and wastewater management systems.

The current and proposed servicing arrangements for water supply are shown in **Table 7**

Table 7: Servicing arrangements – water supply and sewerage

Town Population 2011 census	Services Provided	
	Current	Future
Narromine 3,789 persons; 1,606 dwellings	Potable water supply (1708 connections) Raw water supply to some civic facilities Reticulated sewerage	Potable water supply and Raw water supply to some civic and possibly some private facilities Reticulated sewerage
Trangie 849 persons; 409 dwellings	Potable water supply (509 connections) Reticulated sewerage	Potable water supply Reticulated sewerage
Tomingley 330 persons; 181 dwellings (for the gazetted locality[§]). Some sources cite the population of the urbanised area as 233 persons	Raw water supply (29 connections) Private wastewater management	Raw water supply Private wastewater management

[§] The Tomingley gazetted locality is substantially larger than the urbanised area. More detailed data is not available.

Town	Services Provided	
Balance of local government area 1617 persons; 733 dwellings	Private water supply and wastewater management	Private water supply and wastewater management

Growth in demand for these services will depend on a number of factors, including:

- Growth in urban and rural populations;
- Industrial development including agriculture;
- Environmental impacts including security of supply;
- Affordability.

Key principles to follow in the delivery of expanded services include:

- Treating all residential customers equally
- No cross-subsidy between residential and non-residential customers
- Community consultation and input into the determination of service standards, in conjunction with the cost of providing the service.

Based on current projections, there will be little immediate demand for expanded services. Other issues such as security of water supply will drive the development of alternative water supply sources and potentially increased use of raw or recycled water, particularly in Narromine.

6.4 Demand management

6.4.1 *Water Supply*

NSC prepared a Demand Management Plan (DMP) during 2010 as part of a regional LMWUA project. The plan is due for review during 2013/14.

At the time of the DMP's preparation, average annual residential water supplied per residential property was 490 kL whereas the state median for inland towns was 215 kL and the 80th percentile was 260kL. In the time since this NSC's use has reduced to 340 kL average annual residential water supplied per residential property although this has no doubt been assisted by the breaking of the drought in 2011/12. Although consumption within NSC is still unacceptably high, the reduction (30.6%) indicates the effectiveness of the measures so far implemented.

Following are the key actions for NSC emanating from the DMP. These actions will be reviewed and extended as appropriate during the 2012/14 revision of the DMP.

Table 8: Demand Management Plan Actions source LMWUA Narromine Shire Council Demand Management Plan (2010)

Action	Method	Potential Water Savings	Potential Costs
Reduce	Water Loss Management	To be determined by	Preliminary estimate

Action	Method	Potential Water Savings	Potential Costs
leakage	Programme	programme. Preliminary estimates for another LMWUA Council with a similar length of water supply mains (Bogan) suggest savings of 80 ML/yr (11% of production) are possible through active leak detection and repair. The same level of expenditure and water savings has been assumed for Narromine (40 ML/a saved by 2012 and 80ML/a saved by 2014).	from the Water Loss Program is $35,000 with 33% subsidy expected
Reduce External Consumption	Development controls - Introduce a WSUD DCP following implementation of education program or as part of Council planning review.	Savings not expected over short term but represents sustainable development initiatives.	Included in NSC planning budget
Reduce evaporative air conditioner consumption	To be addressed through education programs. Provide information to residents regarding sustainable house cooling.	It is assumed that 20% of outdoor use is for evaporative coolers and 75% of households use evaporative coolers (15% of total outdoor use in evaporative cooling). Assume potential savings of 20% (3% of total external use) with improved practices. Assume savings realised by 2012.	Included in regional education programme
Best-Practice Pricing	Implement Best-Practice Pricing	Assume 10% reduction in internal use and 30% reduction in external use. Assume savings realised by 2012.	Completed
	Introduce charges for	Assuming other actions	No additional cost

Action	Method	Potential Water Savings	Potential Costs
	Council use of water (potable and non-potable)	are implemented, additional water savings are not expected but this action is necessary to provide appropriate signals regarding the value of water.	
Rainwater tanks	Included as BASIX measure for new development and as source substitution measure for open space irrigation.	To be considered as part of Irrigation Strategy and Recycled Water Use Strategy.	No additional cost to Council.

In addition to the initiatives listed above, NSC may want to review the potential to develop a reuse scheme to further limit demand on potable water supplies and also demand on the sewerage systems.

6.4.2 *Sewerage*

The objective of demand management for the sewerage system is to reduce wet weather hydraulic loading to the economic limit.

This is achieved through eliminating illegal connections and ensuring the integrity of the gravity reticulation system.

Strategy:

- Institute a system of education, routine inspections and smoke testing to locate and eliminate illegal connections
- In conjunction with the asset management strategy, identify and rectify reticulation pipes that are failing and allowing infiltration into the sewerage system.

Actions:

- Measure and monitor peak wet weather flow/connection – commencing immediately
- Plan and implement complementary community information and a smoke testing programme – by December 2013
- Review gravity sewer service life through a programme of targeted CCTV inspections, sleeve suitable near life-expired sewers and develop and implement a replacement programme for those that can't be sleeved – to be commenced by 30 June 2014

Performance Indicators

- Peak wet weather flow/connection
- Actions meet target dates

6.5 Pricing and regulation of services

Council in 2011 adopted (Resolution 2011/551) a far reaching policy document titled *Narromine Shire Council Water & Sewer Policy Best Practice Procedures* with respect to the provision of water and sewerage services within the Shire.

This policy contains, in part:

"BEST-PRACTICE PRICING – WATER SUPPLY, SEWERAGE AND TRADE WASTE
"The introduction of best-practice pricing is essential for the effective and sustainable provision of Council's water supply and sewerage services. Council should ensure that its water supply and sewerage tariffs:

- Provide appropriate pricing signals that enable customers to balance the benefits and costs of using the water supply and sewerage services and promote efficient use of resources;
- Distribute costs equitably among its customers and eliminate significant cross-subsidies; and
- Reflect the cost of providing the service and raise the annual income required for the long-term financial sustainability of Council's water supply and sewerage services, including investment in new and replacement infrastructure."

The policy also contains provision for the levying of development servicing charges.

The policy has been fully implemented.

6.5.1 *Access charges*

Council's access charging regime is based on the size of the water service provided to the property, to conform to NSW Office of Water requirements.

6.5.2 *User charges*

Council currently levies user charges within the Shire as a two-part tariff in accordance with the Best Practice Management Guidelines.

Property water meters are provided across the shire system for potable water and are currently migrating to electronic meter reading.

Council is installing meters on properties within Narromine that access the raw water supply. These are mostly parks and other civic facilities.

6.5.3 *Development contributions*

NSC has adopted a Development Servicing Plan which defines the level of contributions payable by when development takes place.

In August 2012 The NSW Office of Water released *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater, 2012 – Consultation Draft*. The draft Guidelines propose changes to some of the calculation methods, and presentation of Development Servicing Plans. If adopted, the new Guidelines will affect future revisions of NSC's Plan.

6.6 Community consultation

Narromine Shire Council, as a local government is an entity governed by Councillors elected by the community to represent the community's interests. The Integrated Planning and Reporting framework facilitates the Council in its role through the development of Community Strategic Plans, undergirded by subordinate plans intended to demonstrate how the needs and aspirations of the community will be addressed in the long term.

Council regularly reports to the community through mechanisms such as its website and local media outlets.

This Strategic Business Plan will be placed on public exhibition. This allows the community to provide feedback on the proposed service arrangements and corresponding costs of the service, prior to the Council considering adoption of the Plan.

Council also solicits feedback on projected capital works and maintenance expenditure and other resources through the public exhibition of its annual Operations Plan. Planned maintenance or capital installation activities that will impact on service delivery to the community will be advertised in local media.

6.7 Environmental protection and sustainable development

NSC has an obligation to operate its water and sewerage businesses in such a way as to minimise pollution of the environment, protect ecologically sensitive areas and to promote ecological sustainability.

To demonstrate this NSC will continue to operate is licensed facilities in accordance with the licences and other statutory obligations. Unlicensed facilities, such as the Trangie STP, will be operated in accordance with any statutory requirements and generally in accordance with Best Practice, subject to physical and financial resources.

The community will be involved in assisting in identifying any issues of concern and advising NSC on providing services that meet the environmental aspirations of the community.

Council already uses raw water in Narromine for watering parks and sporting facilities. Further opportunities for using raw water should be explored.

6.7.1 *Due Diligence*

Council should demonstrate due diligence in the operation of its facilities. In particular it is appropriate to show that potential hazards have been thought about, identified and controls developed. This is the best defence for Council in the event that an environmental incident does occur (refer to Section 118 of the *Protection of the Environment Operations Act 1997* (POEO)).

In response to this NSC is developing its Due Diligence Programme, which is addressing the matters listed in Section 241 of the POEO, namely:

- the water supply and sewerage activities that have potential to cause harm to the environment and the potential extent of that harm;
- practical measures to prevent, control or mitigate that harm;
- the extent to which the person committing the offence could reasonably have foreseen the harm caused to the environment;
- the extent to which the person had control of the causes of the offence, and
- whether, in committing the offence, the person was complying with orders from an employer or supervising employee.

NSC has a formal Pollution Incident Response Management Plan (PIRMP) for the Narromine STP. Council is developing due diligence processes within its Operations Plan framework, undertaking Hazard Analysis and Critical Control Points (HACCP) analysis, and funding additional capital works where risk assessment determines this is necessary.

6.7.2 *Management of sources and sinks*

Fulfilling the best practice criteria means that Council must continue to embrace the holistic suite of water and sewerage management strategies. These include IWCM, demand management and drought management for water supply, and trade waste management and effluent reuse for the sewerage system, all of which are in place for NSC (except IWCM which as at early 2013 is in course of preparation through the LMWUA).

The Shire relies heavily on bore-water for the provision of potable supplies to both Narromine and Trangie. The borefields are currently capable of supplying greater than the peak day demand. However, there is concern that this may not be sustainable in the medium to long term, particularly for Narromine.

NSC is yet to investigate effluent reuse. This should be undertaken as part of the effort to guarantee future water security and reduce reliance on the borefield supplying Narromine. Implementation of effluent reuse is likely to delay the need to provide new bores.

In the longer term, NSC should still investigate alternative sources of water such as bores into aquifers different to those currently in use.

6.8 Action Plan

Table 9: Customer Service Action Plan

Business	Objectives	Proposed measures	Provider, cost	Target date
Water & Sewerage	Wastage of water reduced	• Review and update Policy 2011/551	NSC Cost absorbed in administration	Within 6 months of the adoption of each revised Strategic Business Plan
Water & Sewerage	An environmentally sustainable system whose environmental impacts, especially in sensitive areas, are acceptable to the community	• Form a local environmental advisory committee from the community to help identify issues of concern and suggest solutions • Undertake assessment of environmental impacts of the activities of the systems on borefields and effluent discharge areas. If not environmentally sustainable then examine the requirements to make them sustainable • Establish a Due Diligence strategy to identify and respond to environmental risks. • Consider programmes to minimise environmental risks and impacts of the water supply and sewerage systems	NSC / Community	30 June 2014

Business	Objectives	Proposed measures	Provider, cost	Target date
		• Undertake detailed investigation of preferred programmes and alternatives		
Sewerage	Control discharge of liquid trade waste into sewers	• Review and update Policy EV34	NSC / Consultant	30 June 2014

7. Asset Management Plan

This plan has the primary objective of developing sustainable asset management processes to allow the continued delivery of the water supply and sewerage services to the serviced communities of Narromine Shire.

The provision of reticulated water supply and sewerage systems is primarily a function of commissioning and operating physical assets intended to achieve design standards of performance over rated service lives. Effective asset management and maintenance is fundamental to the assets achieving the intended design life, and in turn, delivering the services within the financial constraints of the Shire.

Narromine Shire Council has the following current asset management documents:

- Asset Management Policy – July 2012
- Asset Management Strategy – May 2012
- Water Supply Asset Management Plan – January 2012
- Sewerage Asset Management Plan – January 2012

7.1 Operation Plan

7.1.1 *Asset Registers*

Council maintains a comprehensive asset register for its water supply and sewerage assets. The key attributes of the Council water supply and sewerage systems are presented in **Table 10** and **Table 11**.

Table 10: Water Supply asset attributes (raw and filtered supplies)

Parameter	2011/12 results
Residences connected	2167
Annual consumption	965 ML
Peak week demand	77 ML
Total storage capacity	64
Potable supply plants	2
Length of reticulation and distribution pipelines	60 km
Pumping stations	3

Table 11: Sewerage asset attributes

Parameter	2011/12 results
Residences connected	2088
Sewage collected	340 ML
Recycled water produced	0

Parameter	2011/12 results
Treatment plants	2
Length of reticulation and distribution pipelines	49 km
Pumping stations (owned by Council)	13

7.1.2 *Assessment of Asset Condition*

Narromine Shire Council Asset Management Strategy

Council's Asset Management Strategy describes the current situation as follows:

> ***Water Supplies***
> *The current situation of the water supply for Narromine Shire looks relatively good. The present programme of asset replacement will need to accelerate in the next few years as near life-expired assets need replacement.*
>
> *Whilst Council has significant funds reserved for this, it is noted that these reserves were being called on in 2011/2012 for maintenance. If this continues there will not be sufficient funding for renewals as they arise. An increase of 5% annual/access charges and a 10 ¢/kL increase in user charges have been applied in 2012/13.*
>
> *Condition assessments are currently been undertaken and may impact the outcomes of this Asset Management Plan once completed"*
>
> ***Sewerage Services***
> *The position of the sewerage system looks reasonably good. The lower sustainability (than water) reflects lower need to replace assets at present. It is forecast this will change in the next few years and significant mains replacement will be required. The cost of this is offset, to a large extent, by the current reserves. It is noted that these reserves are being called on in 2011/2012 for maintenance. If this continues there will not be sufficient funding for renewals as they arise. An increase of 5% annual/access charges and the usage charge has been increased to $1.85/kL for 2012/13. Condition assessments are currently being undertaken and may impact the outcomes of this Asset Management Plan once completed."*

It is recommended that following adoption of this Strategic Business Plan, the Asset Management Strategy be reviewed to align with this Plan.

CPEa Condition Assessment and Valuation of Water & Sewer Assets September 2012

CPE Associates completed a condition assessment and valuation of all water supply and sewerage assets dated September 2012. The Executive Summary from the valuation report is reproduced below:

> "This report documents the valuation of the water supply and sewerage assets under the custodianship of Council and used to provide water supply and sewerage services to its

community. This revaluation of assets has been completed based on the recognised assets associated with water supply and sewerage as of 30 June 2012.

The valuation has been completed in accordance with "Fair Valuation" principles. For these classes of assets, the principles lead to valuations being made on the basis of a depreciated replacement cost, using standard unit rates.

The valuation considers:

- The nature of the assets;
- The current condition of the assets; and
- Strategic considerations which could influence asset life."

Table 12 summarises the valuation of the water supply and sewerage assets as of 30 June 2012. The important matter to note is that all systems are typically in the last half of their useful life, indicating that significant asset renewals will be necessary in the medium term.

Table 12: Summary of assets by service

System Type	Current Replacement Cost	Annual Depreciation	Written Down Current Cost	End of life value	Mean Useful Life	Mean Residual Life
Sewer	$25,000,000	$390,000	$16,000,000	$8,800,000	59	25
Water Potable	$13,000,000	$180,000	$5,300,000	$810,000	75	27
Water Raw	$1,400,000	$18,000	$400,000	$52,000	81	23

Specific comments from the revaluation report on the condition of assets are reproduced in Appendix C.

7.1.3 *Operation Analysis*

A workshop held with NSC management on 11 October 2012 identified the following high-risk issues associated with the water and sewerage businesses:

Water

- Water security is the highest priority issue. In Narromine, there is a dependence on bore water, which became stressed during times of drought. Additional studies are underway to assess the long term sustainability of the aquifers.
- The Financial Plan includes a new water treatment plant and river extraction should it be found that the borefield does not have long term capacity to supply potable water.
- The developer for a new mine at Tomingley has secured a ground water licence and will construct a water supply main from this bore to the proposed mine. There is an

opportunity for an agreement with the mine regarding the use of this water supply following the closure of the mine

- The Asset Management Plan identifies that the age profile of many water mains is reaching life-expiry and that the water main renewals program needs to be accelerated.
- The water supply at Tomingley is non-potable. Council is not proposing to increase the level of service provided at Tomingley.
- The Trangie Water Supply system requires upgrades to allow it to deliver the target level of service in the medium term. A comprehensive investigation study has been completed in 2013 that recommends improvements to the Trangie water supply system. This has been included in the capital works plan.

Sewer

- There are many Condition 5 mains. The CCTV survey undertaken for the valuation report identified that 11% of mains were graded at Condition 5. Extrapolating this across the network, a significant length of mains may be condition graded 5, requiring replacement. There is a high cost to excavate & replace. It is recommended that CCTV be undertaken of the full network to confirm the scope of renewals and replacements required.
- Trangie Sewage Treatment Plant is under-performing. A comprehensive investigation study has been completed in 2013 that recommends improvements to the Trangie sewerage system, to allow it to deliver the target level of service in the medium term. This has been included in the capital works plan.
- $650,000 has been allocated to decommission the old Narromine Sewage Treatment Plant. It is recommended that investigation studies be undertaken in order to define the scope of works.

Financial modelling has shown that the funding of capital works renewals is a critical issue affecting financial sustainability.

7.2 Maintenance Plan

Water supply and sewerage assets require routine maintenance, without which an asset can prematurely fail and be life expired. Routine maintenance enables assets to be checked by visual assessment and by a simple assessment of the operating record to enable early detection of emerging service defects.

Council has a number of documented work procedures for maintenance activities. There appears to be a tendency to rely on breakdown maintenance, and there is a need to implement fixed-time maintenance practices for critical system components such as pumps and measuring equipment.

Many water supply and sewerage assets are supplied with detailed maintenance service manuals. Some assets such as gas chlorinators must only be serviced by accredited service providers. Council will utilise maintenance schedules for equipment such as pumps and insert them into the

maintenance plan to ensure that all procedures are completed by suitably qualified employees or contractors.

Council will maintain pipeline assets and reservoir assets based on their condition. Council undertakes assessments of reservoirs using contract divers, and will undertake CCTV inspections to assess the condition of gravity pipeline assets.

Through the LMWUA, Council is participating in regional grouping initiatives for contracted provision of maintenance services such as pump inspection and overhaul, chlorinator/dosing pump maintenance, sewer cleaning and CCTV inspection, environmental monitoring, sampling, analysis and reporting.

Council will upgrade remote monitoring systems to record system performance, abnormal operation, and failures to more closely monitor system function and total hours run.

7.3 Capital Works Plan

The Capital Works Plan was developed during the workshop held 11 October 2012, and has been further modified to meet the objectives of financial modelling (refer Section 9). The Capital Works Plan is included as Appendix D.

7.3.1 *Renewal Plan*

Renewal Plan

The valuation report for the year ending 30th June 2012 provides the best available information on an asset renewal plan for the long term sustainable operation of the systems.

Council has noted the advice of its specialist advisers that timely identification of critical asset condition will enable assets such as gravity sewers to be rehabilitated at the optimum life-cycle point prior to physical collapse. If collapse occurs, this leads to a service failure and an expensive emergency replacement of assets to restore service.

Renewal Standards

Council intends to utilise asset renewal systems utilising the most cost-effective systems that are currently available for use in regional locations such as Narromine.

Council will investigate system design for both water supply and sewerage services given the limited prospects for system growth. Council intends to operate and maintain the existing systems to the practical life cycle limit based in the example of gravity sewers on extensive use of CCTV inspection equipment, by programmed pressure jetting to remove sulphide slimes from asbestos cement gravity sewers, and by eliminating points of sulphide gas release and slime colonisation.

During the preparation of the 2012 asset valuations, CCTV inspection was undertaken on 16% of the Narromine gravity sewerage network (11.5% of the shire-wide network). This indicated that 9.4% of the surveyed length was condition graded at 5, indicating that the pipe has completely failed and that replacement is required. An additional 12.1% was condition graded at 4, which means that total failure is imminent and so this pipe likely requires either major rehabilitation or replacement. If this is extrapolated across the whole Shire network, 8.45 km of pipe requires intervention, at an indicative cost of $330,000 per km. This highlights the need to implement strategies to extend the life of the sewers. In order to better define this works program, it is recommended that further CCTV survey of higher risk areas be undertaken to firstly identify pipes which can be internally sleeved to prevent total failure and extend asset life and others which require immediate replacement.

Features of the Renewal Plan

Council's financial returns for 2012/13 indicate that the water supply and sewerage businesses are depreciating at a rate of $207,000 and $397,000 per annum respectively.

A rule of thumb is that Council needs to spend or set aside this amount each year to fund replacements and maintain the level of service. The capital works plans have been developed on this basis. The Financial Plan provides a more sophisticated analysis of replacement requirements based on phased programmes.

Table 13 – Water Supply Fund Renewals Plan

Item	Amount Allocated	Year
Water mains replacement/ rehabilitation	$140,000	Annually
Pumps replacement/ rehabilitation	$15,000	Annually
Narromine Valve Replacement	$35,000	Annually
Water Meter Replacement Program	$35,000	Annually
Water Mains Replacement – Tomingley White PVC	$20,000	Biennially – Alternate years to reservoir rehabilitation
Replace House Services	$40,000	Biennially for Years 1 to 10
Reservoir Rehabilitation	$75,000	Biennially – alternate years to Tomingley mains replacement

Table 14 – Sewerage Fund Renewals Plan

Item	Amount Allocated	Year
Sewer mains replacement/ rehabilitation with priority to Condition graded 5 mains	$500,000	Annually for 11 years from 2013/14 to 2023/24
Sewer mains replacement/ rehabilitation	$110,000	Annually from 2024/25 onwards
Pumps replacement/ rehabilitation	$20,000	Annually
Narromine STP minor upgrades	$50,000	Annually for 5 years from 2012/13 to 2016/17
Narromine Resurfacing/ relining of manholes	$25,000	Annually
Narromine – Rehabilitation of old STP – Investigate requirements to demolish of re-use for other purposes	$60,000	2012/13
Narromine – Rehabilitation of old STP – Funds required may be substantially less, subject to investigation	$650,000	2015/16

Item	Amount Allocated	Year
Trangie Pumping Stations WHS Upgrades	$25,000	2014/15

7.3.2 *New Works Plan*

Selection Criteria

Assets will be selected based on the following criteria:

- Suitability to meet the target level of service (capacity, quality of treatment, reliability);
- Capable of being operated in a manner that doesn't pose significant work health and safety risks;
- Meets all legal and licensing requirements;
- Provides the lowest life cycle cost.

Standards and Specifications

Council is committed to operating the water supply and sewerage systems to relevant National, State, industry, and manufacturer standards and specifications.

Council intends to achieve cost-effective, suitable asset systems by effectively integrating its system specifications into the agreed or majority approach within the LMWUA to ensure that any particular asset system is common to any regional standard and specification such that operation, maintenance, repairs and replacements will be possible on a regional basis.

Council recognises that water supply and sewerage asset systems in regional communities may not correlate to those assets best suited to the requirements of major urban communities, though is committed to the design solution best suited to semi-arid small community requirements. Such systems may include innovative solutions with reduced service lifespans yet offer the best solution of low initial capital cost, low-to-moderate operating costs, and equivalent minimal maintenance costs.

Council intends to confront the reality of potential population shift and reduced demand in some urban communities in favour of surrounding urban centres, and therefore reduced total asset service life cycle.

Trangie Water Supply and Sewerage Investigations

A review of the performance of the Trangie Water Supply system is nearing completion at the time of writing in October 2013. This review identified the following works were necessary to economically provide the target level of service:

- Construction of rising mains to transfer water from each bore to a common collection point upstream of the existing reservoir;
- Construction of a partial treatment plant at the common collection point to provide centralised chlorine dosing, ion exchange to reduce hardness, and pH correction;

- Installation of water meters upstream and downstream of the reservoir and provide a SCADA system to monitor operations:
- Prepare a systems operations manual: and
- Renew and re-drill bores.

A review of the performance of the Trangie Sewerage system was completed in July 2013. This identified the following works were necessary to economically provide the target level of service:

- Work Health and Safety improvements at sewage pumping stations;
- Operational improvements at the sewage treatment plant;
- Inflow and Infiltration monitoring;
- Condition assessment of the pipe network using risk-based approach CCTV inspections and renewals;
- Monitoring of the Sewage Treatment Plant and the re-use scheme;
- Prepare a systems operations manual;
- SCADA system improvements.

These items are included in the new works plan. The detailed capital works plans for Trangie water supply and sewerage systems are included in Appendix D.

Table 15 – Water Supply Fund New Works Plan

Item	Amount Allocated	Year
Water security Narromine – additional bore and investigations	$100,000	2012/13, 2013/14, 2019/20
Allowance for water treatment plant for possible future river extraction	$1,500,000	2023/24
Water conditioning system – Narromine	$60,000	2011/12 then every 10 years
Water conditioning system – Trangie	$40,000	Two years from 2012/13 then every 10 years
Settling Tanks - Tomingley	$20,000	2012/13 then every 5 years
Reservoir Capacity Augmentation - Tomingley	$150,000	2012/13
Additional Reservoir – Narromine NE side of town	$680,000	2015/16
Water Main Extensions - Narromine	$50,000	Annually
Fluoridation - Narromine	$100,000	2023/24
Fluoridation – Trangie	$70,000	2024/25, 2025/26
Telemetry Upgrade	$100,000	2012/13 then $60,000 in 2013/14 and every 5 years
Trangie – Bore flow recorders	$25,000	2012/13 then every 4 years
Minor capital upgrades	$15,000	Annually
Backflow prevention devices	$50,000	2012/13, followed by $40,000 in 2013/14, $30,000 in 2014/15 and 2015/16, $20,000 in 2016/17 and2017/18, then $10,000 annually until 2012/13
Electronic water meter reading equipment	$50,000	2012/13 then every 5 years
Trangie Rising Main– New Main from Bore to common	$500,000	2014/15

Item	Amount Allocated	Year
collection point upstream of existing reservoir.		
Trangie - Construction of a partial treatment plant at the common collection point to include centralised chlorine dosing, ion exchange to reduce harness, and pH correction.	$500,000	2021/22
Trangie - Renew and re-drill bores	$120,000	2015 and 2023
Trangie – Operational Improvements	$367,000	Implementation from 2014 to 2021
Narromine – Reline Aeration Tank	$70,000	2013/14
Narromine – Extension of water to IGA	$40,000	2013/14

Table 16 – Sewerage Fund New Works Plan

Item	Amount Allocated	Year
Trangie STP Investigation - $100,000 total	$50,000	2012/13 and 2013/14
Trangie STP Improvement work	$620,000	Implementation from 2014 to 2016
Telemetry Upgrade	$60,000	2012/13 then every 5 years
Narromine – new pump stations and rising mains required by rural residential growth.	$200,000 spread over three years	Commencing 2012/13 repeated every 10 years
Minor capital works	$15,000	Annually
Rags/ filters and wet well washers	$50,000	2012/13 then biennially
Rags/ filters and wet well washers	$25,000	2013/14 then biennially
Narromine – sewer extension for IGA	$65,000	2013/14

7.3.3 *Disposal Plan*

Council has no disposal plan for its assets that must remain in service until life-expired or no longer required for provision of service by users. The nature of the assets means that there is almost no sale value in the assets once they reach life expiry as the cost of recovery exceeds the potential revenue.

7.4 Asset Management Action Plan

Table 17 – Asset Management Action Plan

Business	Objectives	Proposed measures	Provider, cost	Target date
Water supply & sewerage	System operation ensures facilities deliver quality, capacity, and reliability to design requirements at the minimum long term cost.	• Integration of asset management documentation following adoption of this Strategic Business Plan. • Addressing high-risk issues through adoption of this Strategic Business Plan.	Council and Contract.	Commencing 2013/14.
Water supply &	System maintenance ensures facilities can	• Fixed-time maintenance	Council and	Commencing 2013/14.

Business	Objectives	Proposed measures	Provider, cost	Target date
sewerage	deliver design quality, capacity, and reliability requirements at the minimum long term cost.	recommended for critical system components such as pumps and measuring equipment, in accordance with technical manuals. • Condition-based maintenance recommended in accordance with condition assessments.	Contract.	
Water supply & sewerage	Capital works program provides facilities to deliver quality, capacity, and reliability requirements at the minimum long term cost.	• Implementation of Capital Works Plan following adoption of this strategic business plan.	Council and Contract.	Defined in Capital Works Plan, commencing 2013/14.

8. Workforce Plan

8.1 Introduction

This plan has the primary objective of ensuring that NSC has appropriate numbers of staff in the correct positions and with the necessary qualifications, experience and skills to provide sustainable water supply and sewerage services to those parts of the Shire where Council provides these services.

8.2 Overview

Council has an approach to Human Resources that identifies which employees have responsibility for water supply and sewerage functions.

Position descriptions have been developed for those current positions dedicated to the provision of water and sewerage services and learning plans are in place for all staff members. The learning plans were developed resulting from an audit of the available skills against the requirements of the organisation as defined by these position descriptions.

The broad range of services that the Council provides means that many employees possess a range of skills to cover many functions.

The operational water and sewerage staffing consists of:

- Manager Water & Sewerage
- Team Leader Water & Sewerage
- 3½ FTE operational staff (Narromine & Tomingley) dedicated to water & sewerage, including 1 trainee water operator
- 1 operational staff (Trangie – currently under review)

The structure, shown in **Figure 2**, is also currently under review.

These front-line staff are supported by administration staff who provide customer service, accountancy, rates and billing services. A copy of the council's organisation chart showing positions that are involved in the delivery of water supply and sewerage services is at **Figure 3**.

Between them, the operations staff hold a broad range of qualifications which are adequate for the operations of the water and sewerage businesses.

Figure 2 – Operational Water and Sewerage Staff Structure

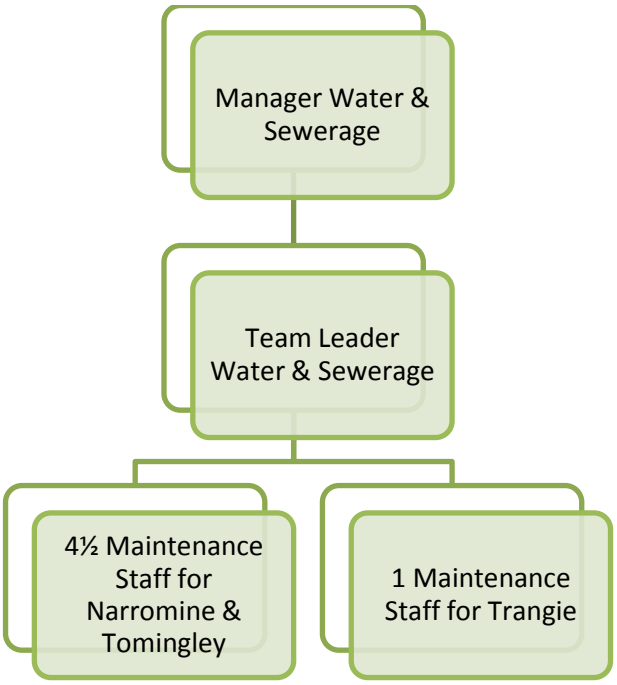
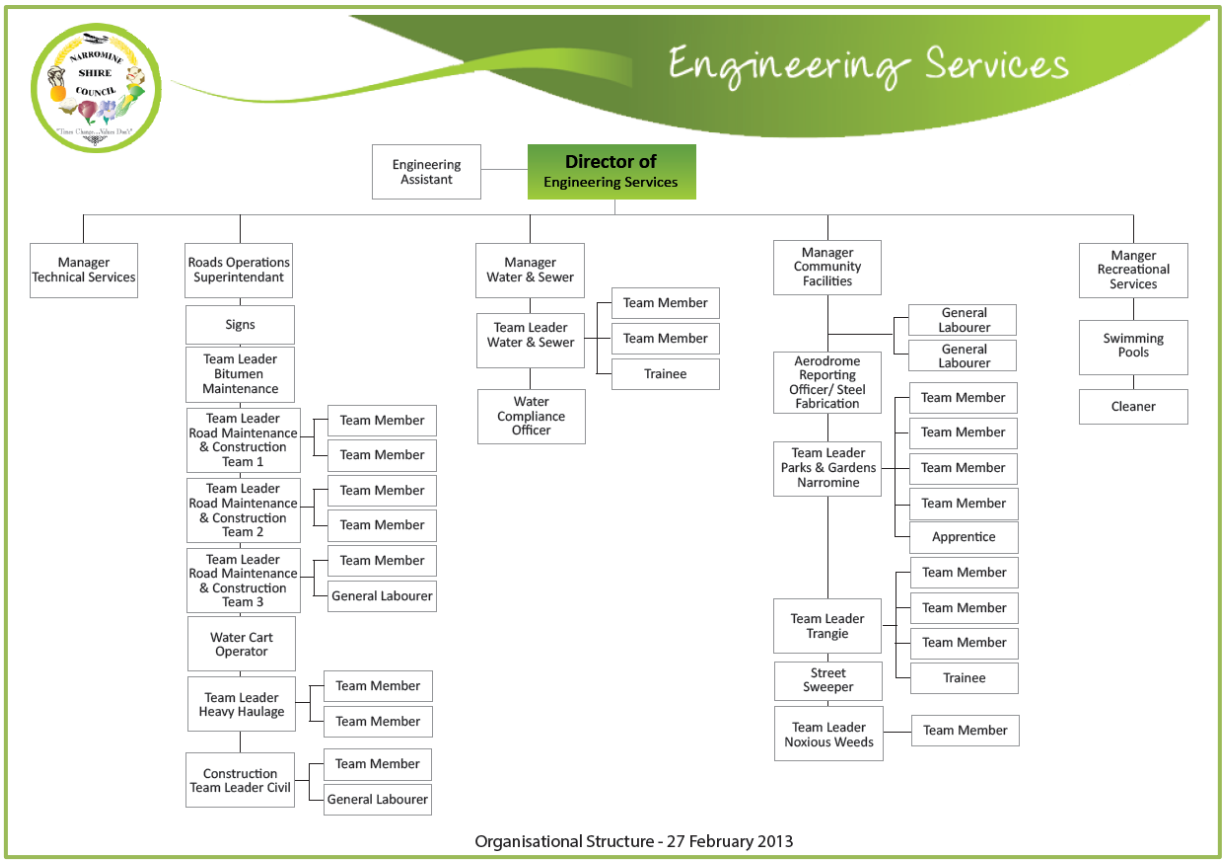


Figure 3: Total Organisational Structure for Water and Sewerage



The trainee is enrolled in a Certificate II course in Water Operations. All other staff are qualified as follows:

Table 18: Qualifications of Operations Staff

	Operations Staff Member				
Qualification	#1	#2	#3	#4	#5
First Aid	✓	✓	✓	✓	✓
Asbestos Awareness	✓	✓	✓	✓	✓
Manual Handling	✓	✓	✓	✓	✓
Traffic Control Ticket	✓	✓	✓	✓	✓
Confined Space	✓	✓	✓	✓	
Cert III Plumbing (Trade Course)				✓	✓
Plumbing Licence					✓
Plumbing & Gasfitting Licence (enrolled)				✓	
Cert III Water Operations	✓				
Wastewater Treatment Operator	✓			✓	
Filtration Plant Certificate		✓			
Activated Sludge and Aeration Lagoons			✓		

In addition, operations staff regularly attend water industry trade conferences.

Council is a member of the LMWUA. The alliance not only satisfies the objective of the NSW Government for collaboration between councils, but also provides a range of expertise and resources to those member councils that don't otherwise have ready access to them. An additional benefit of this alliance is the opportunity for networking and the capacity building that this provides for Narromine Shire.

8.3 Provision and equipping of personnel

Council staff are available for after-hours call outs. The Council's web site states as follows: *"After Hours Contact. To contact Council after hours please call on 6889 9999. A special after hours message is played with options to transfer callers to the correct after hours contact."*

8.3.1 *Resourcing the Capital Works Plan*

One impact of the Capital Works Plan is that an extensive sewer mains renewals programme will be required in the very near future. This programme will extend over about the next ten years. The options open to NSC to deliver this programme include:

i. Contract the work;
ii. Engage and train temporary or contracted employees to undertake the work; and
iii. Create an additional day labour works crew to undertake the renewals, with the objective of transitioning this crew into the current operations positions as other existing staff members retire

Given the mean age of the current team leaders and works crews (the team leaders are in their 50's); it would seem prudent for Council to create an additional work crew to undertake the mains renewals programme. This has the following advantages:

- Management of the renewals programme is brought largely in-house. Although this may take more management effort, it also means that NSC has more control over the programme and the outcomes;
- The overall cost of the renewals should be lower as there is no requirement to pay the contractor's margin or to go through a protracted procurement process;
- Council builds up better corporate knowledge of the renewed sewerage network, which will assist with ongoing planning and field operations;
- Operations staff are trained up in the sewerage system and also in council's operational systems; and
- Trained staff will be available to be appointed to routine operations crews as current crew members transfer out of the crews or retire.

However, further investigation of the likely methods of pipe replacement is first warranted as if the replacements are to be by re-lining or pipe-cracking, specialist contract resources will likely be required.

8.3.2 *Position Descriptions/Learning Plans*

The NSW Local Government Award, the award under which Council's staff are employed, is a skills-based award that requires councils to develop a salary system that provides incentives for staff to acquire and use additional skills.

The current position descriptions consider and document the key tasks, duties and specialist knowledge required to adequately perform the requirements for each position. Council should ensure that they also where relevant include the skills and competencies that have been established as industry standards for water and sewerage authorities throughout Australia, and should certainly reflect those adopted by the LMWUA.

Learning plans should be maintained and regularly updated for each employee with responsibilities for the water supply and sewerage businesses. This should include not only the operational staff but also professional and administrative support staff. They should take the form of a contract between the Council and the employee that will reward the employee for acquiring mutually agreed skills over a pre-defined and agreed time period. Council should arrange for any necessary training at no cost to the employee.

Council should also be aware that training needs are ongoing and should allow a minimum of 5 days per annum on combined water and sewerage operations for training purposes for each of its professional and operational staff and up to 2 days per annum for customer service staff.

It should be noted that for a multi-purpose council such as NSC, many staff are engaged in activities for both the water and sewerage funds and in some cases also the general fund. In such cases, the learning plans should be negotiated with each employee to suit their individual circumstances and may contain elements pertaining to skills required for work in each of these funds.

It is essential that the learning plans remain confidential between the Council and the employee.

8.3.3 *Human Resources Audit*

A key part of human resources management is to match the staffing numbers, qualifications and skills against the defined workload and human resources need that is derived from the operation of the water supply and sewerage systems and their associated administration for the Council to provide best practice water and sewerage facilities. NSC has done this and continues to monitor staffing numbers and skills and to adjust them as circumstances change.

A key component of the ongoing human resources audit is ensuring that the qualifications of staff are kept up to date, are renewed as necessary and their currency is documented e.g. confined space entry accreditation requires that the employee undergoes annual refresher training. NSC has a system in place that ensures the currency of confined space and other WHS related training.

8.3.4 *Succession Planning*

A key to providing sustainable services into the future is to ensure that there continues to be trained and skilled staff available to take over from staff that may leave the organisation or who take extended leave. It is preferable that where practicable these replacement staff can be sourced from within the organisation so that the store of corporate and local knowledge is retained.

In this respect it would be prudent to develop a succession plan that identifies any staff members with the potential or the skills to occupy higher classifications and establishes a career development programme for them. The career development programme should be written into individual learning plans. It is noted that Council's Corporate Human Resources plan addresses the issue of succession planning in the broad context but not down to the individual level.

The learning needs of the organisation should be reviewed annually and if necessary this chapter of the business plan revised accordingly.

8.3.5 *Work Practices*

Work practices should reflect NSC's standard operating procedures and externally imposed restraints. Where necessary, staff should be provided with additional training to ensure that they operate NSC infrastructure in accordance with best practice and statutory requirements.

Failure to operate plants at or near best practice potentially puts NSC at risk of attracting the attention of the environmental regulators.

8.4 Work health and safety

The provision of water and sewerage services carries many potential health and safety risks to both employees and contractors and to a lesser degree to the public. These risks include but are not limited to handling chemicals, biological hazards, contact with aerosols, electrical hazards, hazards associated with excavations, working in traffic, exposure to the elements and working in confined spaces. Council is responsible under the provisions of the Work Health and Safety Act 2011 not only for the actions and welfare of its employees but also for those of contractors working on council sites or undertaking work on council's behalf.

Council has developed and will maintain an effective Work Health and Safety (WHS) system in conformity with the Work Health and Safety Act.

This system is integrated into the day to day operations of water and sewerage employees, with staff trained to assess and manage risks and all field staff, with the exception of the trainee, accredited in Confined Space Entry. The risks associated with chemical handling are assessed and staff are trained to manage these risks accordingly.

Detailed records are maintained of the training provided to each employee. These records also flag when reaccreditation or other routine training is due.

Council has a detailed Contractor Management Policy. Contractors are required to demonstrate through the system operated by Statewide Mutual (NSC's insurer) that they have adequate insurances and WHS systems. Contractors then receive an "Authority to Work" permit, which is a precondition of working for NSC.

Local contractors working regularly with NSC staff are inducted to work under Council's WHS system. Contractors from outside the area are also able to do this with adequate induction, or to utilise their own WHS system where possible.

Council will continue to monitor and improve its WHS system.

8.5 Workforce action plan

Table 19 – Workforce Action Plan

Business	Objectives	Proposed measures	Provider, cost	Target date
Water supply & sewerage	Have the appropriate staff numbers in the correct positions with the necessary skills to meet	• Review proposed capital works for suitability day labour works. Where suitable recruit and train required staff • Develop a succession	NSC. Adjust budgets as necessary	31 December 2014 and ongoing

Business	Objectives	Proposed measures	Provider, cost	Target date
	the operational requirements of the Asset Management Plan.	plan and recruit and train ahead of requirements to ensure sufficient trained staff available for projected needs		
	Total productivity of staff is improved.	• Develop learning plans for each staff member. Provide required training at no cost to employee	NSC and external providers	31 March 2014 and review annually thereafter

9. Financial plan

9.1 The purpose of financial planning

Water supply and sewerage businesses are characterised by large variations in annual expenditure as capital assets are progressively purchased, maintained, rehabilitated and replaced. The long life cycle of these assets inevitably means that most water supply businesses will need to go through cycles of funds accumulation, spending and debt servicing.

From the customer's perspective, it is important that the cost of service is kept as stable as possible. If the cost of service is consistent (in real terms) over the life cycle of the asset base, both current and future customers are treated in an equitable manner.

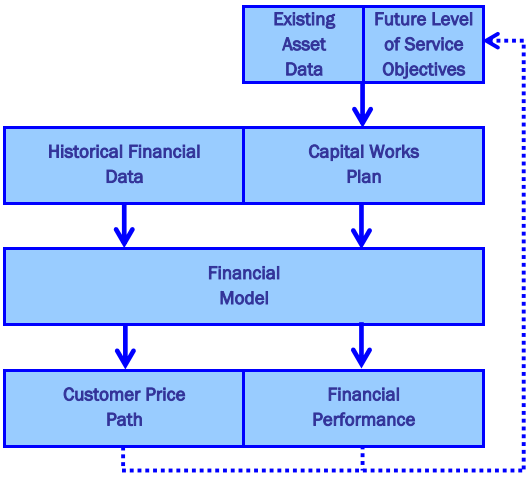
This Financial Plan seeks to meet the following objectives to support the Narromine Shire water supply and sewerage businesses:

- The business is capable of funding new and replacement assets needed to provide a satisfactory level of service to its customers and the broader community.
- Over the long term, customer charges are kept as low and as stable as possible.

This version of the Financial Plan should be considered indicative of a future price path. The actual price path will vary in response to any future changes in the regulatory and economic environment. All costs are expressed in 2012/2013 prices.

9.2 Planning approach

This Financial Plan has been developed using 'FINMOD' modelling software provided by the NSW Office of Water. This software uses historical operating cost information and combines it with forecasts of growth and future capital works to prepare financial forecasts, including cash, loans required and asset valuation estimates.



9.3 Current Position

The following discussion is based on NSC's Financial Statements for the year ended 30 June 2013.

Narromine's Water Supply business had $4,220,000 in net cash as of 30 June 2013, and no outstanding loans. As of 30 June 2013, the business accrued an operating surplus of $334,000. The business utilises fixed assets valued at $6.4 million, having replacement cost of $16 million and depreciating at a rate of $207,000 per year.

Narromine's Sewerage business had $5,109,000 in net cash as of 30 June 2013, and no outstanding loans. As of 30 June 2013, the business accrued an operating surplus of $136,000. The business utilises fixed assets valued at $16.6 million, having a replacement cost of $26 million and depreciating at a rate of $397,000 per year.

Both businesses are characterised by a high level of cash and investments with a low expenditure on asset renewals and replacements. The Asset Management Plan has identified that remaining life of assets is decreasing and both businesses need to accelerate a programme of condition assessment and replacement to ensure that the businesses are capable of meeting target levels of service in the future.

The obvious conclusion from this review is that the businesses need to accelerate their asset renewals and replacement. As there are currently no borrowings, there is the capacity to borrow limited funds to accelerate this program.

9.4 Planning timeframe

These plans have been developed over a thirty year planning timeframe, from the 2013/14 financial year through to 2043/44. This timeframe is recommended by the NSW Office of Water, and represents slightly less than half of the life cycle of most major assets in the water supply system.

9.4.1 *Growth forecasts*

There is a considerable degree of uncertainty involved when forecasting growth for smaller centres such as Narromine. The Narromine Community Strategic Plan comments:

> ***"b) Population growth***
> *There has been a population reduction in the Shire of approximately 3% over the past ten years – a smaller reduction than many similar inland shires. It is noted that the Australian population is forecast to grow by 1.4% per year over the next decade. In the absence of specific growth suggestions for Narromine Shire, using this benchmark, it is proposed that the shire population will grow by 0.5 to 0.7% per year – meaning that the shire population will be approximately 7,300 (an increase of up to 500) by the end of this strategic planning period.*
>
> ***c) Demographic Change***
> *14.7% of the current Narromine Shire population is aged 65 and older (compared to 13% nationally). ABS is forecasting this demographic group to increase by 3.5% per year nationally (over twice the national population growth rate). Given the likely continuing trend for Narromine Shire to attract retirees from western NSW because of proximity to Dubbo and good medical facilities, it seems conservative to assume 3.5% annual growth in our 65 years + age group. This will result in an additional 400 residents in the shire in this age group over the next ten years."*

The Council has suggested a growth rate of between 0.5% and 0.7%. A check on the actual number of connections suggests the growth in connections may be closer to 0.25%. This is

considered the most accurate figure and adopted for the purposes of financial modelling. There is also a possibility of zero growth in connections. A sensitivity analysis is modelled with growth rates of 0.5% and 0%.

9.5 Future operating costs

The capital works proposed consist of infrastructure rehabilitation and replacement. There are no proposals for major new infrastructure; therefore operating costs per assessment are unlikely to significantly change due to these factors. Some plant replacements may lead to a reduction in total staff hours due to increased automation. The Workforce Plan comments on options to resource the capital works plan.

9.6 Financial modelling

9.6.1 *Recommended Strategy for Financial Modelling of Narromine Shire's Water and Sewerage Business*

The projections in Section 9.4 reflect that of a "low growth" Council. The NSW Water and Sewerage Strategic Business Planning Guidelines comment on this category of Council:

- *The major financing requirements in these areas are normally the replacement and maintenance of existing assets together with the potential of asset surpluses if the population is falling. This situation would be typical of some of the smaller rural inland Councils.*
- *As these Councils have a relatively static, or possibly falling, income base, it is inappropriate to borrow significant funds, since it would be difficult to repay these loans.*
- *The replacement of existing assets will need to be analysed carefully to see if the future facilities that are required to replace existing assets can be streamlined.*
- *Given the small customer bases of these Councils, it is likely that the funding for these works will have to be financed primarily through accumulated cash and investments.*
- *Councils may find it difficult to accumulate significant cash and investments, especially if their population is falling."*

The situation for Narromine is better than portrayed for a low growth council. Narromine Shire is in the enviable position of having healthy cash and investment reserves and no borrowings.

The same guidelines comment on a number of strategies for financial modelling on the footnotes to Page 87:

- *"About 10% of your current annual income is generally a satisfactory minimum level of Cash and Investments for your financial planning.*
- *Minimising the Typical Residential Bill while maintaining an acceptable minimum level of cash and investments each year is the principal criterion for a sound financial plan.*
- *You should be undeterred from taking 20-year loans for your capital expenditure where needed as generally, the asset would nevertheless be debt-free for over 70% of its economic life."*

- *It is important to note that most NSW LWUs have relatively little borrowings at present. In 2009-10 the Statewide median net debt/equity for LWU water and sewerage was -7% (range -75% to 30%)….. Providing you have a soundly based asset management plan and financial plan (including sensitivity analysis), debt/equity of up to 50% when financing a major capital works program for growth and/or improved levels of service, would be satisfactory for NSW LWUs.*

The financial modelling has been undertaken with a view to accelerate the investment in asset renewals and replacement without significant increases in the typical residential bill. As there are currently no borrowings, there is the capacity to borrow limited funds to accelerate this program.

9.6.2 *Key assumptions*

All models require a number of key assumptions. These assumptions can have a significant impact on the model results. Because of this, the modelling process includes various sensitivity tests to identify which assumptions have a significant impact on the outcomes for the business. Key assumptions and sensitivity tests for the businesses are provided.

Table 20: Key assumptions and sensitivity tests, Narromine

Parameter	Assumed value 2012-2042	Sensitivity tests at
Inflation (general)	2.5%pa	2.5% pa
Inflation (capital works)	2.5%pa	3.5% pa
Interest rate for new borrowings	8%pa	6.5% pa
Interest rate for investments	4.5%pa	3.5%pa
Capital works programme	As per plan	-
Mean useful life of assets	70 years	-
Growth in assessments	0.25% pa	0%, 0.5% pa
Developer charges income	$4,240 per ET (water fund) $4,010 per ET (sewer fund) As little income has been received from developer contributions in recent years, **the financial modelling excludes income from developer contributions**	-
Number of assessments	As per Special Schedules 3 & 5	-
Vacant assessments	Vacancy rate is constant	-

9.6.3 *Modelling scenarios and constraints*

The modelling process used the following constraints during model development:

- The minimum cash and investments balance is to be at least 20% of total revenue for each fund (i.e. a minimum of $1 million in both funds). As the cash and investments for both funds are well above the desired minimum levels, it is proposed to draw these down to fund initial improvements.
- The Economic Real Rate of Return (ERR) is to be generally positive during the model period.

The financial models were developed to consider two key scenarios:

1. Base Case – Maintaining the current typical residential bill throughout the life of the plan and adopting the Capital Works Plan shown in Section 7.3
2. Increasing the typical residential bill to ensure that cash and investments are maintained around 20% of annual income.
3. Scenarios to reflect the characteristic of each fund.

9.6.4 *Water Supply business financial modelling*

The financial models confirm that even though there is a high level of cash and investments, there is insufficient income to sustain the capital works plan. For Narromine, water security is the principal issue, and sufficient funds need to be allocated to ensure long-term water security.

In particular, the capital works plan includes provision for water extraction from the Macquarie River and construction of a new water treatment plant in 2023/24. At this point, significant borrowings are required, and cash and investments will be drawn down by the close of the 30 year modelling period.

In 2011/12, the Typical Residential Bill (TRB) was $489 and in 2012/13, the TRB was $534. In order to support the capital works plan, the TRB will need to be in the order of $585.

A summary of the performance of the various scenarios is provided in Table 21 below.

Table 21: Summary of financial performance of funding options (2013/14 dollars)

	Scenario	Median Typical Residential Bill (2013/14 $)	Median ERR	2042/43 Net Cash ($'000)	2042/43 Total Equity ($'000)
1	Maintain TRB at 2012/13 amount	$534		Cash and Investments exhausted in 2024	
2	**Increase TRB to $585 over a two-year period and maintain in 2013/4 dollars (inflation increases only)**	**$585**	**1.5%**	**$1,034**	**$14,000**

The recommended scenario is Scenario 2 – increase the typical residential bill to $585 over a two-year period. This represents a 10% increase in the typical residential bill (excluding inflation) over a two-year period (5% per year excluding inflation).

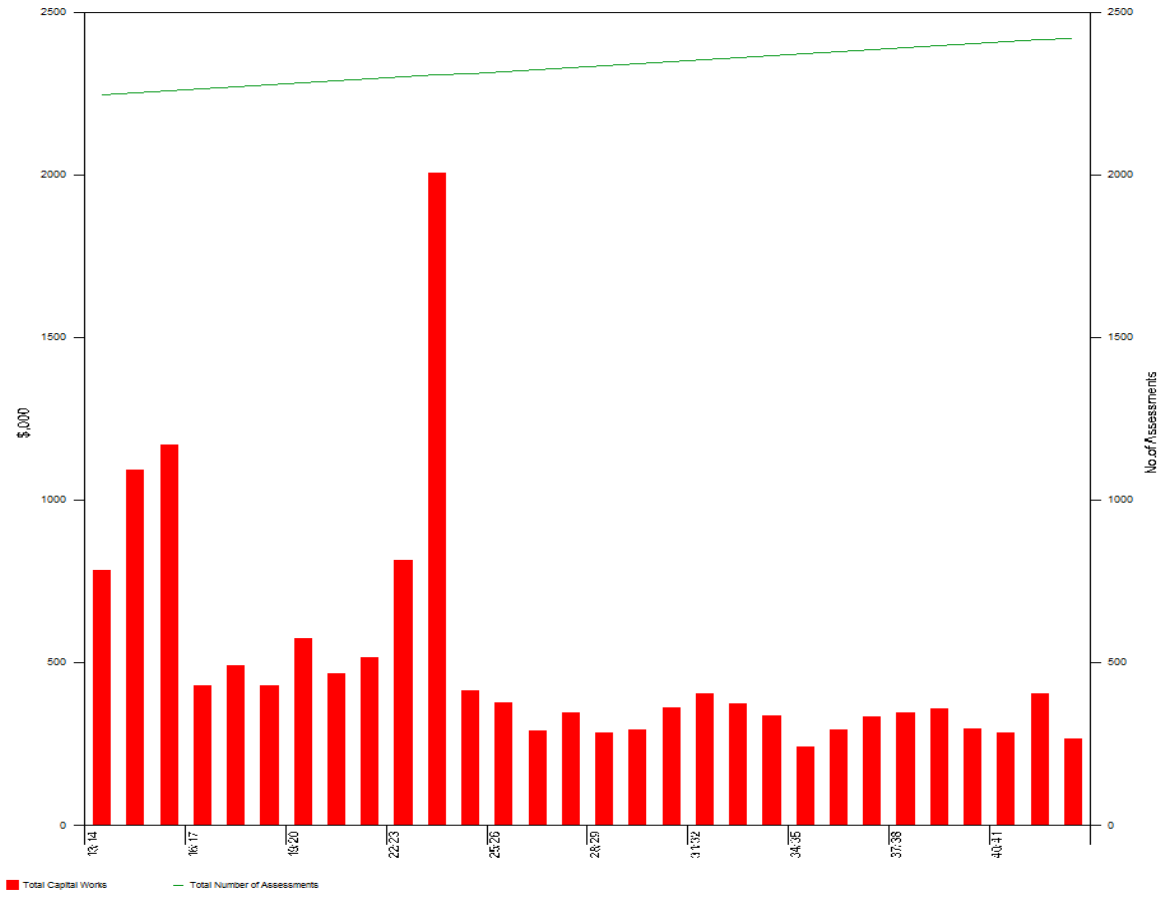
The strategy is to use internal funding as far as practicable until the major installation of a water treatment facility for river extraction in 2023/24. Loans will be required from this time onwards.

There may be the capacity to reduce the typical residential bill should Council secure sufficient groundwater sources and decide not to source water extraction from the river. A figure of $1.5

million has been included in the capital works plan is for a water treatment facility associated with river extraction.

Figure 4 – Recommended Scenario for Water Supply Fund

	Case 20
Average Growth Rate (%)	0.3
Inflation Rate (%)	2.5
Borrowing Interest Rate (%)	8.0
Investment Interest Rate (%)	4.5
Typical Developer Charges ($)	4240
Total Capital Works (2013/14 $M)	15.2
Grants for Capital Works (2013/14 $M)	0.0
Minimum Cash and Investment (2013/14 $M)	1.0
Cash and Investments at Final Year (2013/14 $M)	1.0
Borrowings Outstanding at Final Year (2013/14 $M)	0.7



Sensitivity analysis

The results of the sensitivity analysis are summarised in Table 22. Scenario 2 is adopted as the base case for the sensitivity analysis. The sensitivity analysis shows that the performance of the business is most significantly affected by variations in capital works costs and the growth rate.

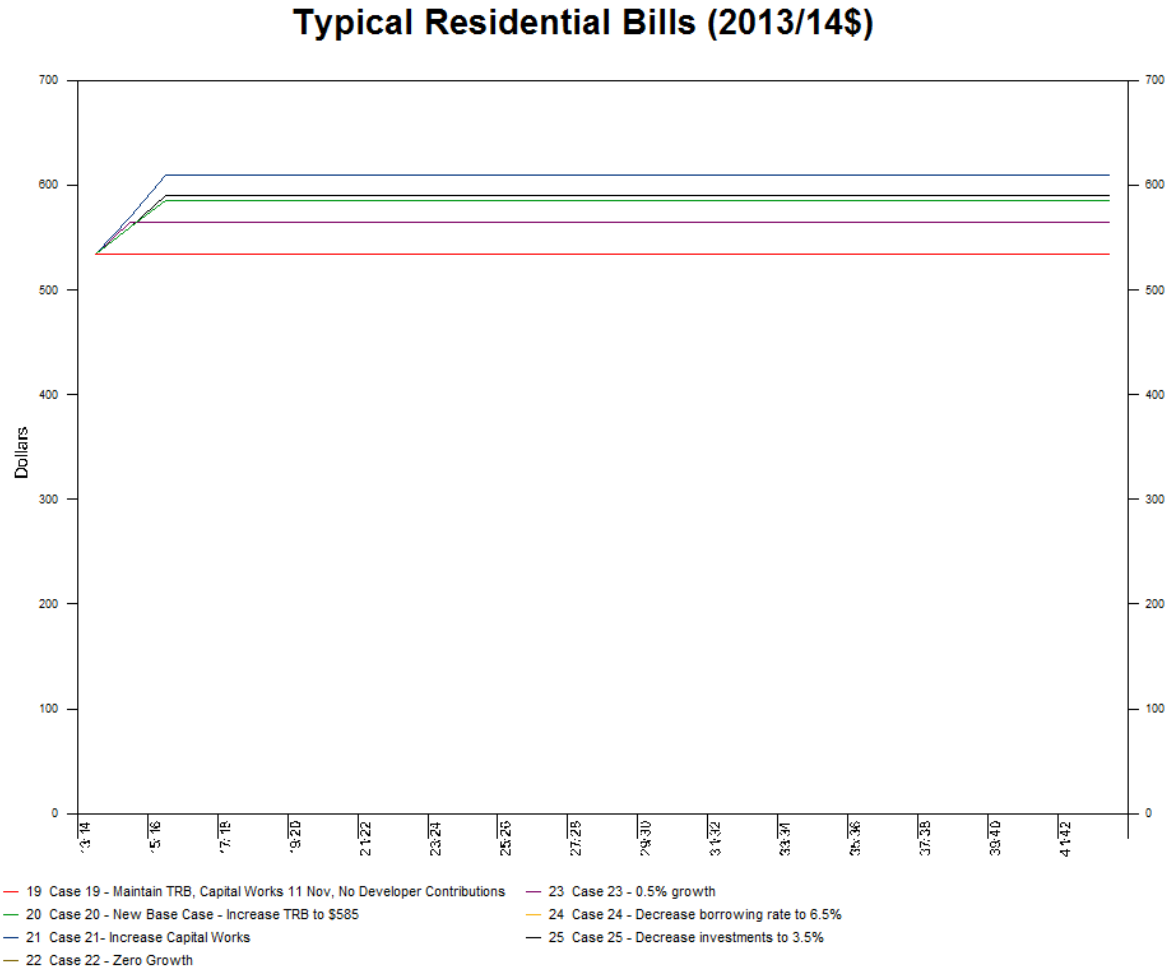
The sensitivity analysis below provides information on the recommended price path for the Typical Residential Bill for each situation.

Table 22: Sensitivity analysis results

	Sensitivity	Typical Residential Bill (2013/14 $)	2042/43 Net Cash ($'000)	Comment
1	**Base Case (Scenario 2)**	**$585**	**$1,034**	
2	Sensitivity: Increase Inflation for Capital Works 1%pa above general inflation rate	$610	$1,284	An increase in the cost of capital works above inflation (such as happened in the 2000s) will increase the TRB.
3	Sensitivity: Growth @ 0%	$610	$1,247	Zero growth is a significant impact.

	Sensitivity	Typical Residential Bill (2013/14 $)	2042/43 Net Cash ($'000)	Comment
4	Sensitivity: Growth @ 0.5%pa	$565	$1,302	Higher growth rates will reduce the TRB
5	Sensitivity: Borrowing rate 6.5%pa	$585	$1,439	Minor impact.
6	Sensitivity: Investments -3.5%pa	$590	$1,058	Lower investment rate marginally increases the TRB

Figure 5 – Results of Sensitivity Analysis for Water Fund



	Case 19	Case 20	Case 21	Case 22	Case 23
Average Growth Rate (%)	0.3	0.3	0.3	0.0	0.5
Inflation Rate (%)	2.5	2.5	2.5	2.5	2.5
Borrowing Interest Rate (%)	8.0	8.0	8.0	8.0	8.0
Investment Interest Rate (%)	4.5	4.5	4.5	4.5	4.5
Typical Developer Charges ($)	4240	4240	4240	4240	4240
Total Capital Works (2013/14 $M)	15.1	15.1	15.1	15.1	15.1
Grants for Capital Works (2013/14 $M)	0.0	0.0	0.0	0.0	0.0
Minimum Cash and Investment (2013/14 $M)	-3.9	1.0	1.2	1.2	0.9
Cash and Investments at Final Year (2013/14 $M)	-3.9	1.1	1.3	1.2	1.3
Borrowings Outstanding at Final Year (2013/14 $M)	4.2	0.6	1.4	0.6	0.6

The impact of a reduced growth rate is significant and it is recommended that Council monitor the growth rate and adjust the typical residential bill in accordance with the above recommendations if the target growth rate of 0.25% is not achieved. In particular, zero growth rate in connections in a real possibility and adjustments to the typical residential bill are essential if no growth occurs.

The majority of the scenarios result in an increase in the typical residential bill. As many of these scenarios are quite feasible, Council may need to adjust the price path should any of these scenarios come to pass.

9.6.5 *Sewerage business financial modelling*

The financial models confirm that there is capacity to undertake the capital works plan if the typical residential bill is increased and limited borrowings are undertaken.

A summary of the performance of the various scenarios is provided in Table 23.

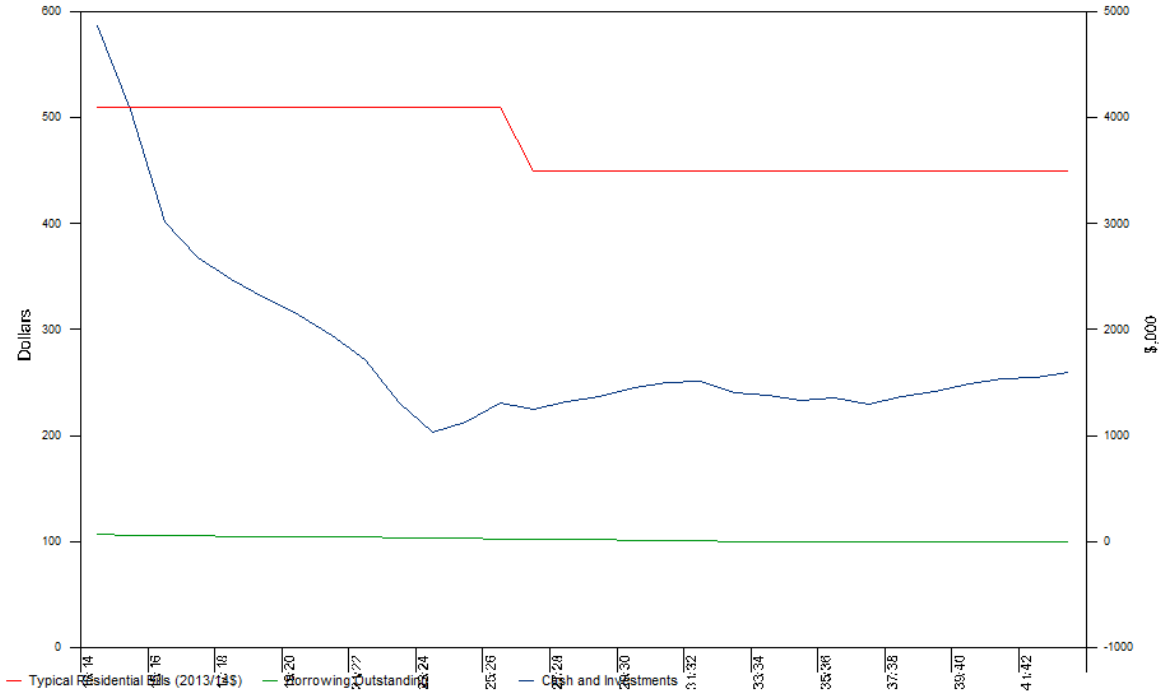
Table 23: Summary of financial performance of funding options (2013/14 dollars)

	Scenario	Median Typical Residential Bill (2013/14 $)	Median ERR	2042/43 Net Cash ($'000)	2042/43 Total Equity ($'000)
1	Maintain TRB at 2012/13 amount	$508	0.1%	$4,912	$24,000
2	**Adjust TRB to $510 with the opportunity to reduce the TRB to $450 in 2026/27**	**$510**	**0.4%**	**$1,590**	**$20,000**

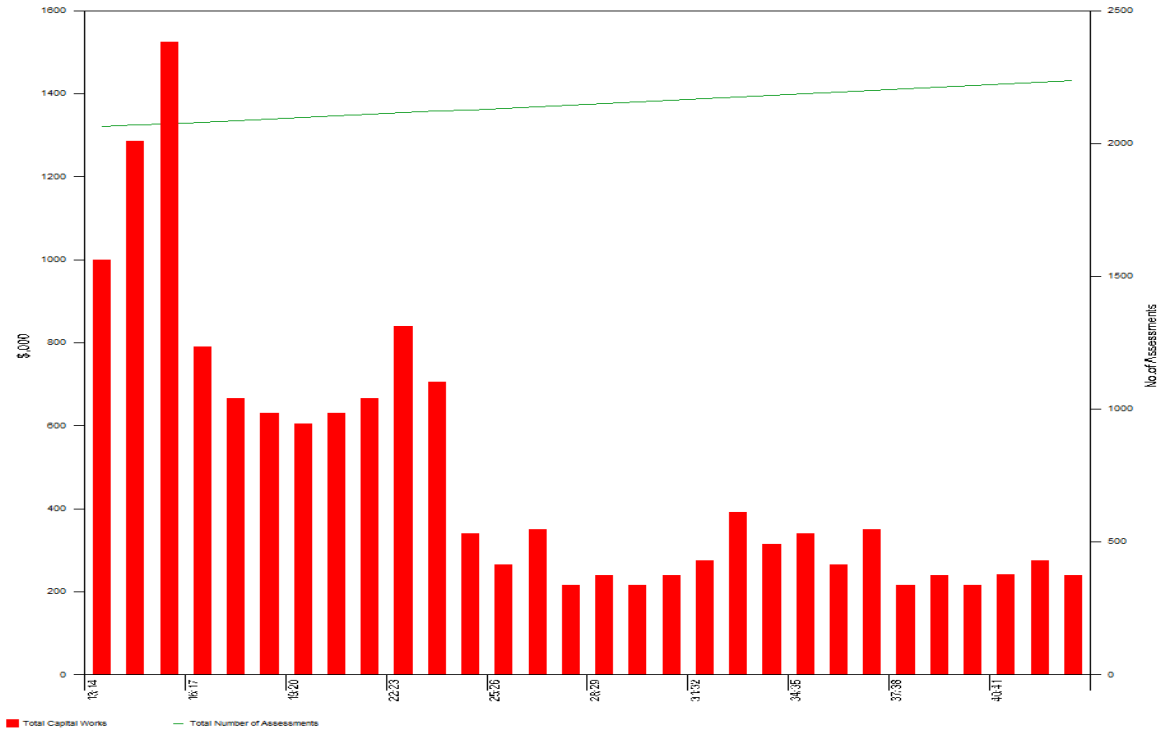
The recommended scenario is Scenario 2 – adjust the typical residential to $510. There is the opportunity to reduce the TRB to $450 in 2026/27. This reduction reflects the completion of major capital upgrades and renewals. No loans are required.

In lieu of a reduction of the typical residential bill, the typical residential bills could be progressively reduced in real terms through tariff freezes, adjusting for inflation and any unplanned variations highlighted in the sensitivity analysis.

Figure 6 – Recommended Scenario for Sewer Fund



	Case 20
Average Growth Rate (%)	0.3
Inflation Rate (%)	2.5
Borrowing Interest Rate (%)	7.5
Investment Interest Rate (%)	4.5
Typical Developer Charges ($)	4010
Total Capital Works (2013/14 $M)	14.6
Grants for Capital Works (2013/14 $M)	0.0
Minimum Cash and Investment (2013/14 $M)	1.0
Cash and Investments at Final Year (2013/14 $M)	1.6
Borrowings Outstanding at Final Year (2013/14 $M)	0.0



Sensitivity analysis

The results of the sensitivity analysis are summarised in Table 24. Scenario 2, being the recommended scenario above is adopted as the base case for the sensitivity analysis.

The sensitivity analysis on the preferred option shows that s the performance of the business is most severely affected by variations in capital works expenses and the growth rate.

The sensitivity analysis below provides information on the recommended price path for the Typical Residential Bill for each situation.

Table 24: Sensitivity analysis results

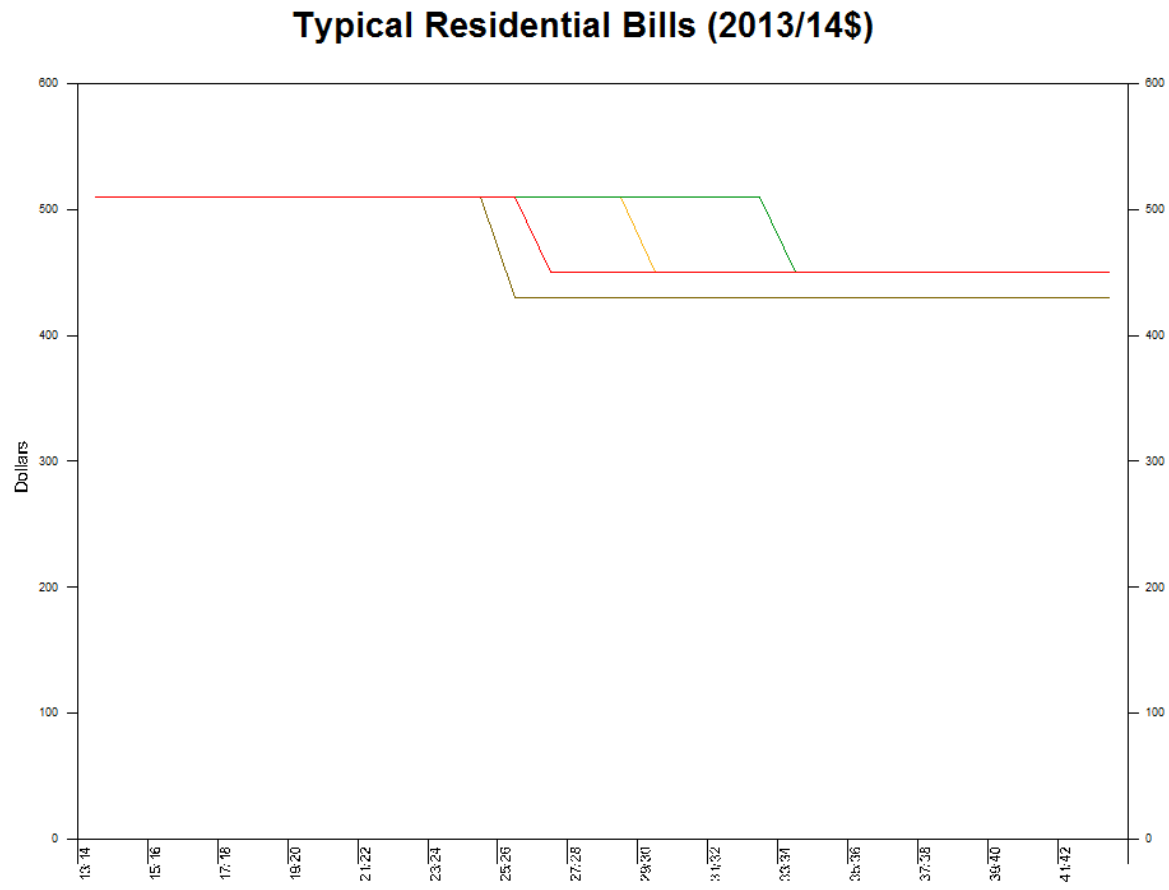
	Sensitivity	Median Typical Residential Bill (2012/13 $)	2041/42 Net Cash ($'000)	Comment
	Base Case (Scenario 2)			
1	**Maintain TRB at 2013/14 amount (rounded to $510) and reduce the TRB to $450 in 2026/27**	**$510**	**$1,590**	
2	Sensitivity: Increase Inflation for Capital Works 1%pa above general inflation rate	$510	$1,162	Can be reduced to $450 in 2033/34 rather than 2026/27
3	Sensitivity: Growth @ 0%	$510	$1,399	Can be reduced to $450 in 2033/34 rather than 2026/27
4	Sensitivity: Growth @ 0.5%pa	$510	$1,778	Can be reduced to $430 in 2025/26
5	Sensitivity: Borrowing rate 6.5%pa	$510	$1,597	Can be reduced to $450 in 2026/27. Negligible impact because there are few borrowings.
6	Sensitivity: Investments -3.5%pa	$510	$1,595	Can be reduced to $450 in 2029/30 rather than 2026/27

The impact of a reduced growth rate is significant and it is recommended that Council monitor the growth rate and adjust the typical residential bill in accordance with the above recommendations if the target growth rate of 0.25% is not achieved. In particular, a zero growth rate in connections in a real possibility and the typical residential bill will need to be maintained at $510 in 2013/14 dollars for a longer period.

Likewise, if the cost of capital works increases above the inflation rate (as it did so in the 2000s), the typical residential bill will need to be maintained at $510 in 2013 dollars for a longer period.

The majority of the scenarios result in an increase in the typical residential bill. As many of these scenarios are quite feasible, Council may need to adjust the price path should any of these scenarios come to pass.

Figure 7 – Sensitivity Analysis for Sewer Fund



	Case 20	Case 21	Case 22	Case 23	Case 24
Average Growth Rate (%)	0.3	0.3	0.0	0.5	0.3
Inflation Rate (%)	2.5	2.5	2.5	2.5	2.5
Borrowing Interest Rate (%)	7.5	7.5	7.5	7.5	6.5
Investment Interest Rate (%)	4.5	4.5	4.5	4.5	4.5
Typical Developer Charges ($)	4010	4010	4010	4010	4010
Total Capital Works (2013/14 $M)	14.6	14.6	14.6	14.6	14.6
Grants for Capital Works (2013/14 $M)	0.0	0.0	0.0	0.0	0.0
Minimum Cash and Investment (2013/14 $M)	1.0	0.9	0.8	1.2	1.0
Cash and Investments at Final Year (2013/14 $M)	1.6	1.2	1.3	1.8	1.6
Borrowings Outstanding at Final Year (2013/14 $M)	0.0	0.7	0.0	0.0	0.0

9.7 Proposed price path

The recommendations of this plan will place NSC's water and sewerage businesses in a sustainable position in regards to long term financial sustainability. With moderate increases to the typical residential bill, the Shire can implement the necessary capital works and renewals to remain sustainable, and to improve the level of service currently provided to the community.

There are a number of vulnerabilities in the business. The sensitivity analysis shows that if growth rates are not achieved or if interest rates are significantly higher than forecast, the forecast

typical residential bill will not be adequate to fund the works program. The assumptions will need to be checked throughout the life of the plan.

Based on the model results, the proposed price path is summarised below:

Water Fund

The price for water supply services needs to increase so that the typical residential bill increases to $585 over a two-year period. This represents a 10% increase in the typical residential bill (excluding inflation) over a two-year period (5% per year excluding inflation).

Sewerage Fund

The price for sewerage services needs to be adjusted so that the typical residential bill is $510. Following the completion of the majority of capital works in 2026/27, there is the opportunity to reduce the typical residential bill to $450.

In lieu of a reduction of the typical residential bill, the typical residential bills could be progressively reduced in real terms through tariff freezes, adjusting for inflation and any unplanned variations highlighted in the sensitivity analysis.

9.8 Action plan

Table 25 – Recommended Price Path for Typical Residential Bill

Business	Objectives	Proposed measures (in 2011/12 dollars)	Provider, cost	Target date
Water supply	Business is financially sustainable while keeping bills as low as possible	• Increase the typical residential bill for water supply services to $585 over a two-year period. This represents a 10% increase in the typical residential bill (excluding inflation) over a two-year period (5% per year excluding inflation).	Council, no additional cost	2014/15 budget
Sewerage		• Adjust the TRB to $510 and reduce the TRB to $450 in 2026/27. Alternative strategy to progressively reduce typical residential bills in real terms through tariff freezes, adjusting for inflation and any unplanned variations highlighted in the sensitivity analysis.		

A number of scenarios have been modelled for each fund, resulting in adjustments to the price path. As many of these scenarios are quite feasible, Council may need to adjust the price path should any of these scenarios come to pass.

10. Annual Performance Monitoring

The most recent annual performance reports from NOW and the action plan are shown no the following pages.

10.1 TBL performance report [from NSW office of water]

Narromine Shire Council — TBL Water Supply Performance — 2011-12

WATER SUPPLY SYSTEM - Narromine Shire Council serves a population of 4,900 (2,120 connected properties). Water is drawn from 15 bores (18 ML/d) to supply Narromine and Trangie and from an offstream storage to supply Tomingley. Council has 2 storage dams (total capacity 52 ML). The water supply network comprises 5 service reservoirs (12 ML), 3 pumping stations, 8.1 ML/d delivery capacity into the distribution system, 10 km of transfer and trunk mains and 55 km of reticulation. The water supply is unfiltered.

PERFORMANCE - Narromine Shire Council achieved 100% compliance with Best Practice requirements. The 2012-13 typical residential bill was $534 which was close to the statewide median of $490 (Indicator 14). However, the economic real rate of return was negative (Indicator 43). The operating cost (OMA) per property was $422 which was above the statewide median of $380 (Indicator 49). 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. Narromine Shire Council reported no water supply public health incidents. Current replacement cost of system assets was $16M ($7,000 per assessment). Cash and investments were $4M, debt was nil and revenue was $1.1M (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 - Appropriate Residential Charges	Yes	**(5) Complete performance reporting (by 15 September)**		YES
	(2d) Pricing - Appropriate Non-residential Charges	Yes	**(6) Integrated water cycle management strategy**		YESE
	(2e) Pricing - DSP with Commercial Developer Charges	Yes	**IMPLEMENTATION OF ALL REQUIREMENTS**		100%

TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS

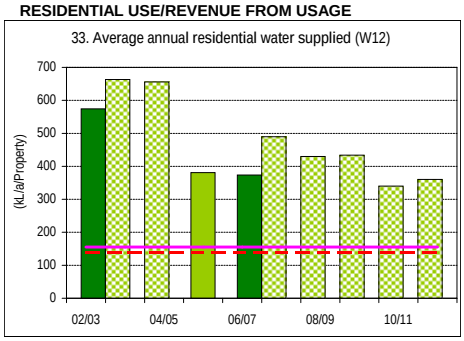
	NWI	No.			LWU RESULT	RANKING 1,501 to 3,000	RANKING All LWUs	MEDIANS Statewide	MEDIANS National
						Note 1	Note 2	Note 3	Note 4
					Col 1	Col 2	Col 3	Col 4	Col 5
UTILITY / CHARACTERISTICS	C1	1	**Population served:** 4900						
	C4	2	**Number of connected properties:** 2120	Number of assessments: 2230					
		3	**Residential connected properties** (% of total)	%	88			91	
		4	**New residences connected to water supply** (%)	%	0.3	4	5	0.9	
	A3	5	**Properties served per kilometre of water main**	Prop/km	35			32	35
		6	**Rainfall** (% of median annual rainfall)	%	131	2	3	138	
	W11	7	**Total urban water supplied at master meters** (ML)	ML	970			6,100	8,610
		8	**Peak week to average consumption** (%)	%	435	5	5	130	
		9	**Renewals expenditure** (% of current replacement cost of system assets)	%	0.7	3	2	0.4	
		10	**Employees per 1000 properties**	per 1,000 prop	2.1	3	4	1.5	
SOCIAL / CHARGES & BILLS	P1		**Residential tariff structure for 2012-13:** two part; independent of land value; access charge $174						
	P1.3	12a	**Residential water usage charge for 2011-12all usage (c/kL)**	c/kL (2011-12)	90	5	5	179	167
		12	**Residential water usage charge for 2012-13all usage (c/kL)**	c/kL (2012-13)	100	4	4	185	
	P3	14a	**Typical residential bill for 2011-12** ($/assessment)	$ (2011-12)	489	2	3	457	474
		14	**Typical residential bill for 2012-13** ($/assessment)	$ (2012-13)	534	2	3	490	
		15	**Typical developer charge for 2012-13** ($/equivalent tenement)	$ (2012-13)	4,240	2	3	5,200	
	F4	16	**Residential revenue from usage charges** (% of residential bills)	%	66	2	3	69	65
	F5	17	**Revenue per property** - water ($)	$	510	1	1	659	691
HEALTH		18	**Urban population without reticulated water supply** (%)	%				0.8	
	H6	18a	**Risk based drinking water quality plan?**		Yes				
		19	**Physical compliance achieved? Note 11**		Yes	1	1		
		19a	**Chemical compliance achieved? Note11**		Yes	1	1		
	H4	19b	**Number of zones with chemical compliance**		1 of 1				
		20	**Microbiological (E. coli) compliance achieved? Note 11**		Yes	1	1		
	H3	20a	**% population with microbiological compliance**	%	100	1	1	100	100
SERVICE LEVELS	C9	25	**Water quality complaints per 1000 properties**	per 1,000 prop	0.0	1	1	3	3
	C10	26	**Water service complaints per 1000 properties**	per 1,000 prop	143.5	5	5	4	1
	C17	27	**Average frequency of unplanned interruptions per 1000 properties**	per 1,000 prop	1	1	1	37	69
	C15	28	**Average duration of interruption** (min)	min	60	1	1	168	119
	A8	30	**Number of water main breaks per 100 km of water main**	per 100km	23	5	5	9	13
		31	**Drought water restrictions** (% of time)	%	0	1	1	0	
		32	**Total days lost** (%)	%				2.0	
ENVIRONMENTAL / NATURAL RESOURCE MANAGEMENT	W12	33	**Average annual residential water supplied per property** (kL)	kL	360	4	4	155	167
		33a	**Average annual residential water supplied - COASTAL** (kL/property)	kL				140	
		33b	**Average annual residential water supplied - INLAND** (kL/property)	kL	360	3	4	203	
	A10	34	**Real losses** (leakage) (L/service connection/day)	L/connection/day	140	5	5	65	73
		35	**Energy consumption per Megalitre** (kiloWatt hours)	kWh	398	1	2	650	
		36	**Renewable energy consumption** (% of total energy consumption)	%				0	
	E12	36a	**Net greenhouse gas emissions - WS & Sge** (net tonnes CO2 - equivalents per 1000 properties)	t CO2	290	3	3	370	390
ECONOMIC / FINANCE	F17	43	**Economic real rate of return** - Water (%)	%	-0.1	3	3	0.5	0.6
		44	**Return on assets** - Water (%)	%	2.4	2	1	0.0	
	F22	45	**Net Debt to equity** - WS&Sge (%)	%	-35	5	5	2	11
	F23	46	**Interest cover** - WS&Sge		0	5	5	1	2
		47	**Loan payment per property** - Water ($)	$	0	3	4	60	
	F24	47b	**Net profit after tax** - WS & Sge ($'000)	$'000	240	2	2	73	2591
EFFICIENCY		48	**Operating cost (OMA) per 100km of main** ($'000)	$'000	1,490	5	4	1,280	
	F11	49	**Operating cost (OMA) per property ($) Note 9**	$	422	2	2	380	393
		50	**Operating cost (OMA) per kilolitre** (cents)	c/kL	93	2	1	131	
		51	**Management cost per property** ($)	$	150	4	3	130	
		52	**Treatment cost per property** ($)	$	17	1	1	49	
		53	**Pumping cost per property** ($)	$	104	5	5	28	
		54	**Energy cost per property** ($)	$	47	4	4	18	
		55	**Water main cost per property** ($)	$	129	5	5	59	
	F28	56	**Capital Expenditure per property** ($)	$	97	4	4	189	213

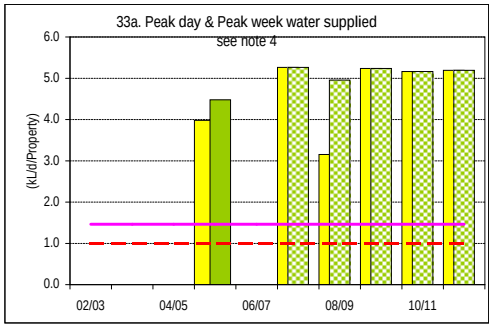
NOTES :

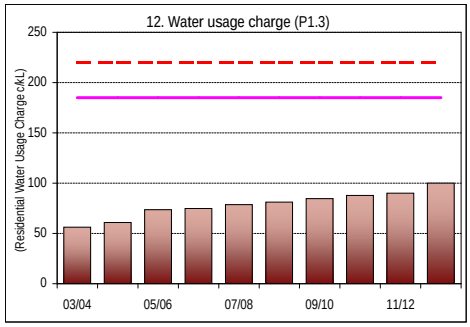
1 Col 2 rankings are on a % of LWUs basis - best reveals performance compared to similar sized LWUs (ie. Col 1 is compared with LWUs with 1,501 to 3,000).
2 Col 3 rankings are on a % of LWUs basis - best reveals performance compared to all LWUs (ie. Col 1 is compared with all LWUs).
3 Col 4 (Statewide Median) is on a % of connected properties basis- best reveals statewide performance (gives due weight to larger LWUs & reduces effect of smaller LWUs).
4 Col 5 (National Median) is the median value for the 67 utilities reporting water supply performance in the National Performance Report 2011-12 (www.nwc.gov.au).
5 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.
6 Narromine Shire Council has a good quality unfiltered groundwater supply.
7 2012-13 Non-residential Tariff: Access Charge based on Service Connection Size* (eg. 40mm $693), Two Part Tariff; Usage Charge 100c/kL.
8 Non-residential water supplied was 25% of potable water supplied excluding non-revenue water.
Non-residential revenue was 15% of annual rates and charges, indicating fair pricing of services between the residential and non-residential sectors.
9 The operating cost (OMA) per property was $422. Components were: management ($150), operation ($112), maintenance ($114), energy ($47) and chemical ($0).
10 Narromine Shire Council rehabilitations included 2.3% of its water mains and 7.03% of its service connections. Renewals expenditure was $168,000/100km of main.
11 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%)

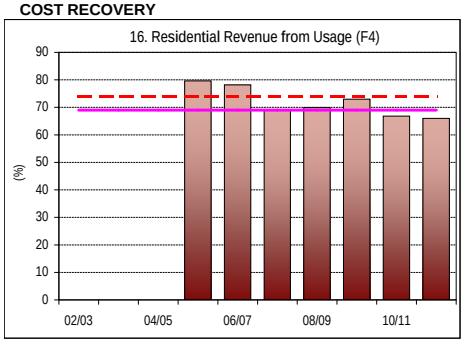
RESIDENTIAL USE/REVENUE FROM USAGE

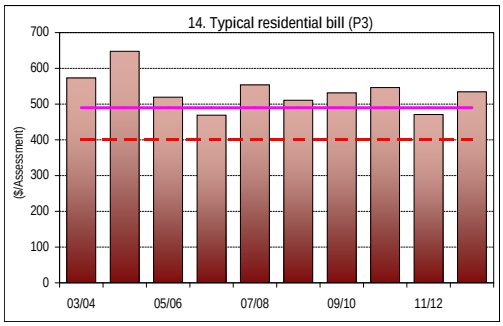


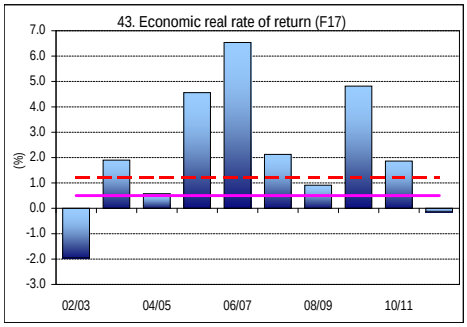




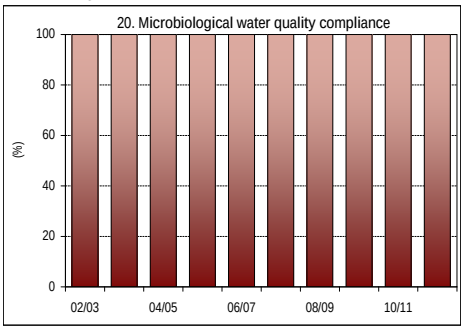
COST RECOVERY

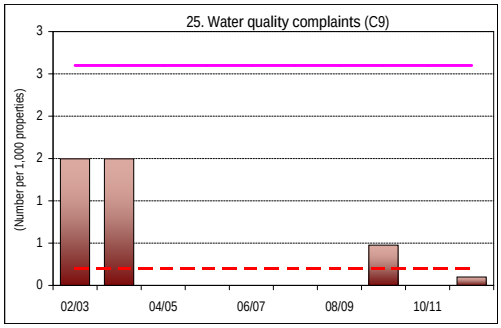


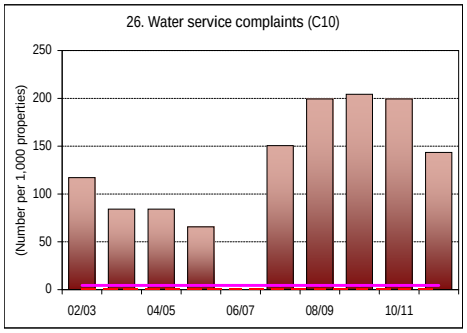




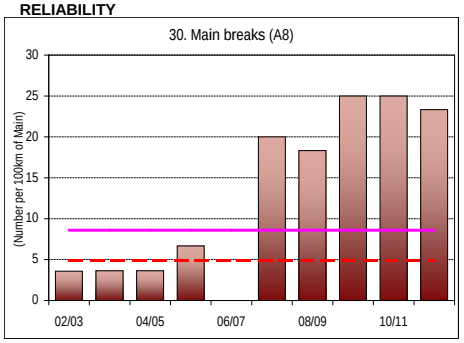
WATER QUALITY/CUSTOMER SERVICE

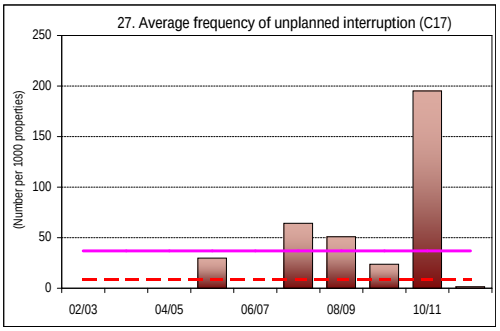


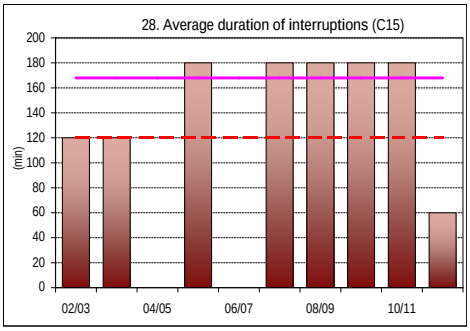




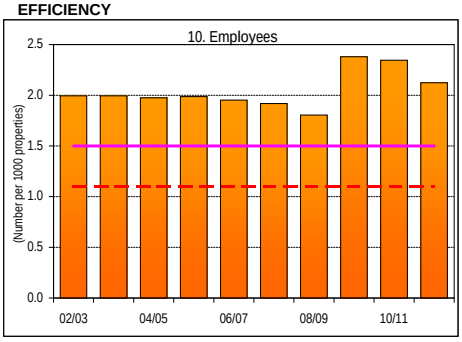
RELIABILITY

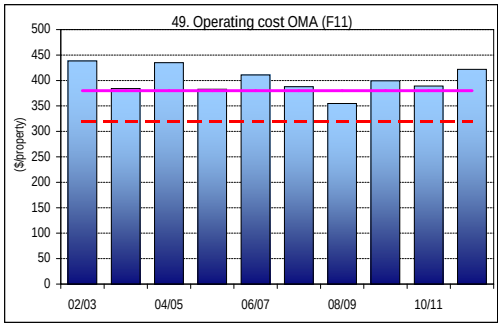


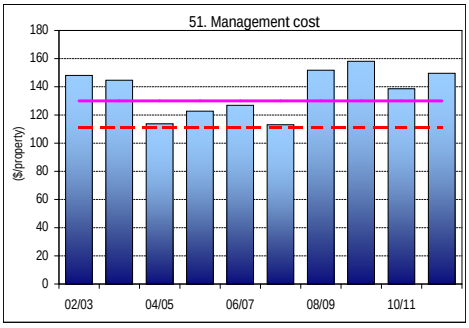




EFFICIENCY







NOTES:

1. Costs are in Jan 2012$ except for graphs 12 and 14, which are in Jan 2013$.
2. 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.
3. Indicators 33 and 33a - Green shading shows % of Time Drought Water Restrictions applied in each year: Nil or < 30% 30-50% >50%
4. Indicator 33a - Yellow bars show Peak Week Water Supplied for comparison with Peak Day Water Supplied: Peak Week Water Supplied

LEGEND

2011-12 State Median

2011-12 Top 20%

Narromine Shire Council — TBL Sewerage Performance — 2011-12

SEWERAGE SYSTEM - Narromine Council has 2 sewage treatment works providing secondary and advanced secondary treatment. The system comprises 6,000 EP treatment capacity (Oxidation Ponds), 13 pumping stations , 12 km of rising mains and 37 km of gravity trunk mains and reticulation. 5% of effluent was recycled and treated effluent is discharged to land.

PERFORMANCE - Residential growth for 2011-12 was minimal. Narromine Shire Council achieved 100% implementation of Best-Practice requirements. The 2012-13 typical residential bill was $508 which was less than the statewide median of $600 (Indicator 12). However, the economic real rate of return was negative (Indicator 46). The operating cost per property (OMA) was $371 which was less than the statewide median of $410 (Indicator 50). Sewage odour complaints were less than the statewide median of 0.5 (Indicator 21). Narromine 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 $26M ($12,700 per assessment), cash and investments were $4M, debt was nil and revenue was $1.1M (excluding capital works grants).

IMPLEMENTATION OF REQUIREMENTS OF BEST-PRACTICE MANAGEMENT FRAMEWORK

(1) Complete current strategic business plan & financial plan	**YES**	**(2e) Pricing** - DSP with commercial developer charges	Yes
(2) (2a) Pricing - Full Cost Recovery without significant cross subsidies	Yes	**(2f) Pricing** - Liquid trade waste approvals & policy	Yes
(2b) Pricing - Appropriate Residential Charges	Yes	**(3) Complete performance reporting** (by 15 September)	**YES**
(2c) Pricing - Appropriate Non-Residential Charges	Yes	**(4) Integrated water cycle management strategy**	**YESE**
(2d) Pricing - Appropriate Trade Waste Fees and Charges	Yes	**IMPLEMENTATION OF ALL REQUIREMENTS**	**100%**

TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS

		NWI	No.			LWU RESULT	RANKING 1,500 to 3,000	RANKING All LWUs	MEDIANS Statewide	MEDIANS National
							Note 1	Note 2	Note 3	Note 4
						Col 1	Col 2	Col 3	Col 4	Col 5
UTILITY	CHARACTERISTICS	C5	1	**Population served: 5,000**						
		C8	2	**Number of connected properties: 1,960**	Number of assessments: 2,060					
		C6	3	**Number of residential connected properties: 1,690**						
			4	**New residences connected to sewerage** (%)	%	0.0	5	5	0.8	
		A6	5	**Properties served per kilometre of main**	*Prop/km*	40			40	**42**
		W18	6	**Volume of sewage collected** (ML)	*ML*	570			5,400	**6,630**
			7	**Renewals expenditure** (% of current replacement cost of system assets)	%	0.1	4	4	0.3	
			8	**Employees per 1000 properties**	*per 1,000 prop*	2.3	4	4	1.6	
SOCIAL	CHARGES & BILLS	P4		**Description of residential tariff structure:**	access charge/prop; independent of land value					
		P4.1	11a	**Residential access charge for 2011-12 ($/assessment)**	$ *2011-12*	483	4	3	570	**537**
			11	**Residential access charge for 2012-13 ($/assessment)**	$ *2012-13*	508	4	3	598	
		P6	12a	**Typical residential bill for 2011-12 ($/assessment)**	$ *2011-12*	483	4	3	574	**595**
			12	**Typical residential bill for 2012-13 ($/assessment)**	$ *2012-13*	508	4	3	600	
			13	**Typical developer charge for 2012-13 ($/equivalent tenement)**	$ *2012-13*	4,010	2	3	4,500	
			14	**Non-residential sewer usage charge** (c/kL)	*c/kL*	185	2	2	125	
		F6	15	**Revenue per property** - Sge ($)	$	560	3	4	713	**791**
	HEALTH		16	**Urban properties without reticulated sewerage service** (%)	%	0.5	1	1	3.8	
		E3	17	**Percent of sewage treated to a tertiary level** (%)	%				94	**92**
		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**		2 of 2				
	SERVICE LEVELS		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*	16	3	3	11	**1**
		C16	23a	**Average sewerage interruption** (minutes)	*min*	60	2	1	102	**116**
			25	**Total days lost** (%)	%	0.0	1	1	2.0	
ENVIRONMENTAL	NATURAL RESOURCE MANAGEMENT	W19	26	**Volume of sewage collected per property** (kL)	*kL*	292	5	4	250	**236**
		W26	26a	**Total recycled water supplied** (ML)	*ML*	30	**5**	**5**	450	**1362**
		W27	27	**Recycled water** (% of effluent recycled)	%	5	4	4	5	**14**
		E8	28	**Biosolids reuse** (%)	%				100	**100**
			30	**Energy consumption - sewerage** (kWh/ML)	*kWh*	321	1	2	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)		290	3	3	370	**390**
	ENVIRONMENTAL PERFORMANCE		33	**90th Percentile licence limits for effluent discharge:**						
			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*	6	1	1	33	**21**
			37a	**Sewer overflows** (per 100 km of main)	*per 100km main*	0	1	1	15	
		E13	37b	**Sewer overflows reported to environmental regulator** (per 100km of main)		0.0	1	1	0.3	**0.4**
			39	**Non res & trade waste % of total sge volume**	%				17	
ECONOMIC	FINANCE		43	**Revenue from non-residential plus trade waste charges** (% of total revenue)	%	22	1	2	17	
			44	**Revenue from trade waste charges** (% of total revenue)	%	1.3	1	2	2.4	
		F18	46	**Economic real rate of return** - Sge (%)	%	-0.2	4	4	1.0	**1.6**
			46a	**Return on assets** - Sge (%)	%	0.5	3	3	0.5	
			48a	**Loan payment per property** - Sge ($)	$				87	
		F24	48b	**Net profit after tax** - WS & Sge ($'000)	*$'000*	240	2	2	73	**2591**
	EFFICIENCY		49	**Operating cost (OMA) per 100 km of main** ($'000)	*$'000*	1,490	**5**	4	1,570	
		F12	50	**Operating cost (OMA) per property ($) (Note 9)**	$	371	4	3	410	**398**
			51	**Operating cost (OMA) per kilolitre** (cents)	*c/kL*	127	3	2	152	
			52	**Management cost per property** ($)	$	156	**5**	4	140	
			53	**Treatment cost per property** ($)	$	144	3	3	137	
			54	**Pumping cost per property** ($)	$	47	3	3	70	
			55	**Energy cost per property** ($)	$	28	2	2	36	
			56	**Sewer main cost per property** ($)	$	25	2	1	45	
		F29	57	**Capital Expenditure per property -** Sewerage ($)	$	10	**5**	**5**	244	**236**

NOTES :

1 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 1,500 to 3,000).

2 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.

3 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

4 Col 5 (National Median) is the median value for the 66 utilities reporting sewerage performance in the National Performance Report 2011-12 (www.nwc.gov.au).

5 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.

6 Non-residential access charge - $182, proportional to square of size of service connection. Sewer usage charge - 185 c/kl.

7 Non-residential revenue was 22% of revenue from access, usage & trade waste charges. The sewage collected (residential, non-residential & trade waste) was not reported.

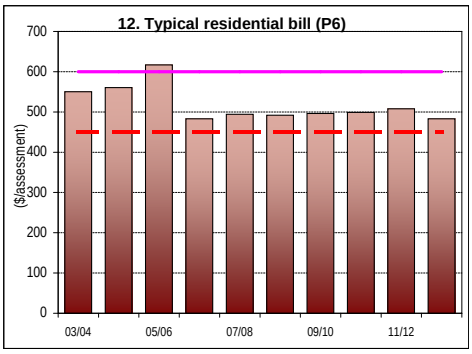
8 Compliance with Total N in Licence was 100%. Compliance with Total P in Licence was 100%.

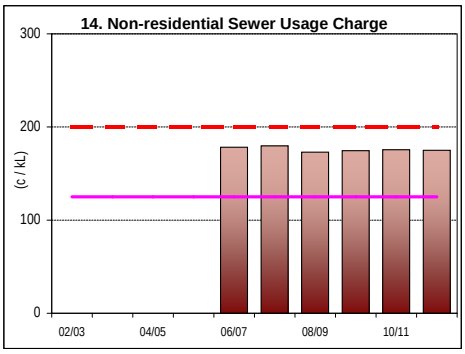
9 Operating cost (OMA)/property was $371. Components were: management ($156), operation ($174), maintenance ($13) and energy ($28).

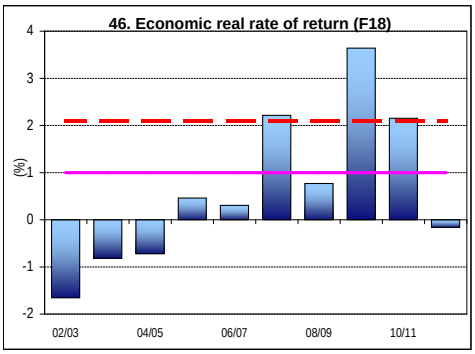
10 Renewals expenditure was $35,000/100km of main.

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

COST RECOVERY







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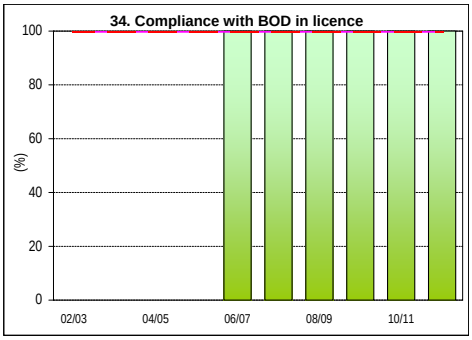
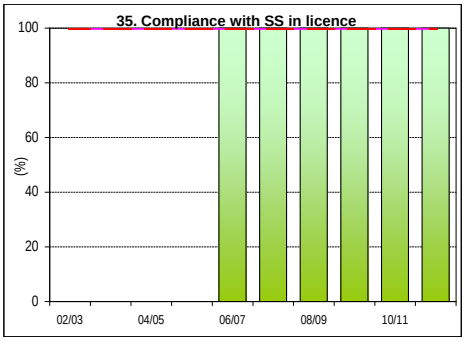
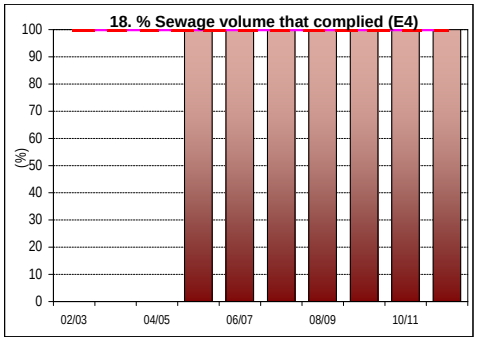
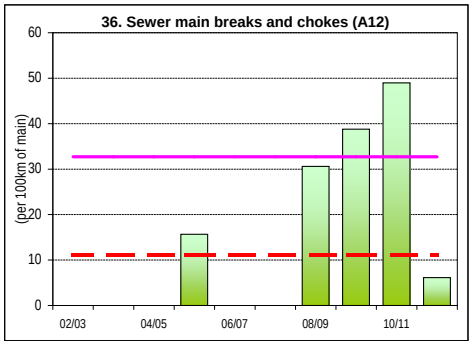
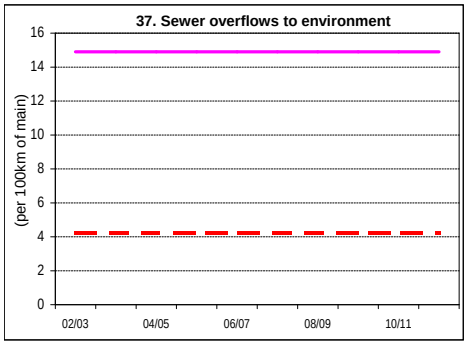


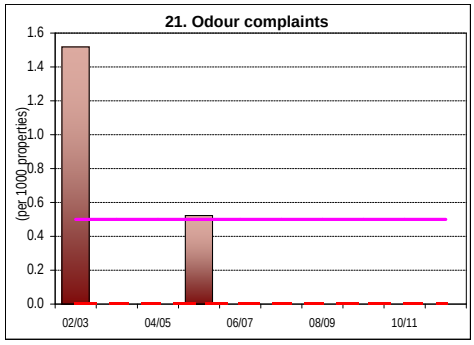




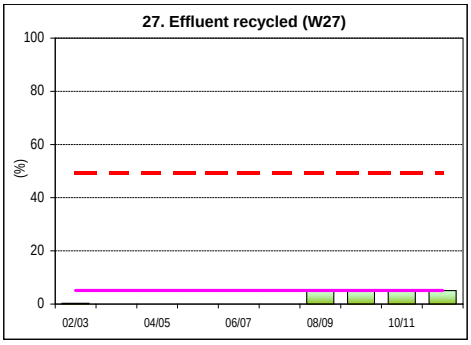
CUSTOMER SERVICE/RELIABILITY

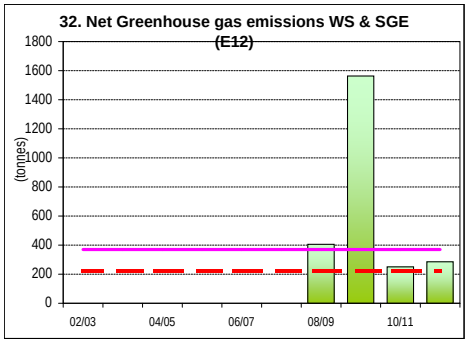


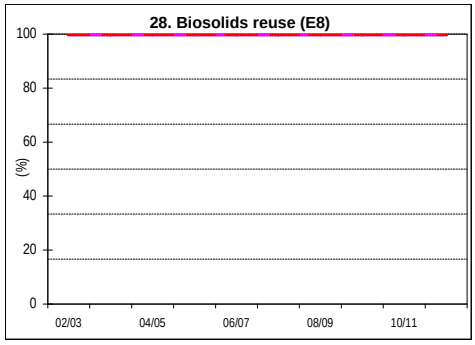




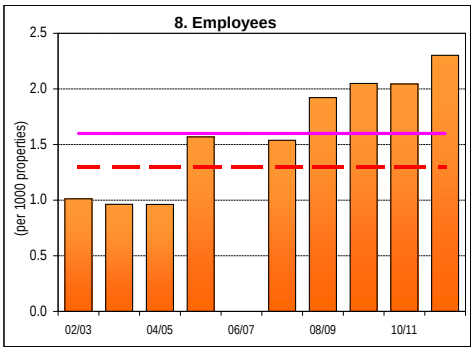
ENVIRONMENT

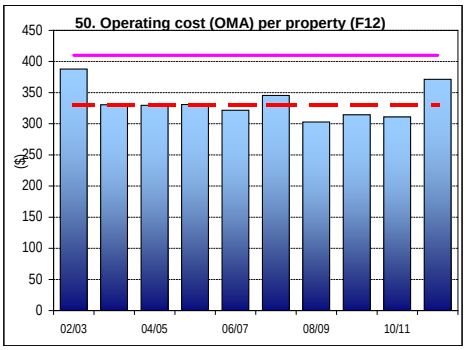


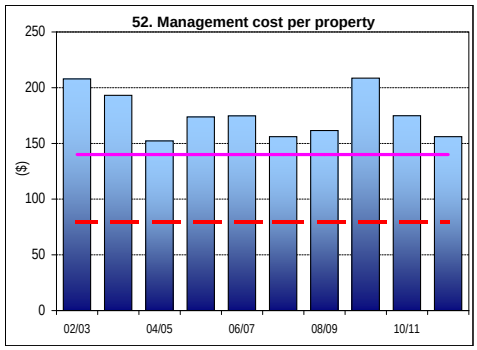




EFFICIENCY







NOTES:

1. Costs are in Jan 2012$ except for graph 12, which is in Jan 2013$.

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

10.2 Action Plan to Council

Narromine Shire Council Water Supply – Action Plan

	INDICATOR	RESULT[2]		COMMENT/DRIVERS	ACTION
	Best-Practice Management Guidelines	Complied with all the Best Practice Requirements[1]	Very good	Compliance demonstrates effectiveness and sustainability of water supply business. 100% compliance is required for eligibility to pay an 'efficiency dividend'.	
CHARACTERISTICS					
5	Connected property density	36 per km of main Highest ranking (1, 1)		A connected property density below 30 can significantly increase the cost per property of providing services, as will also a high number of small discrete water supply schemes.	
9	Renewals expenditure		Not reported	Adequate funds must be programmed for works outlined in the Asset Management Plan – page 3 of the 2010-11 NSW Performance Monitoring Report.	This Strategic Business Plan includes a works program and financial plan that sets out renewals expenditure
10	Employees	2.3 per 1,000 props Low ranking (4, 4)	May require review		
SOCIAL - CHARGES					
12	Residential water usage charge	90 c/kL Lowest ranking (5, 5)	Good	Benefits of strong pricing signals are shown on page 5 of the 2010-11 NSW Performance Monitoring Report.	
13	Residential access charges	$165 per assessment Highest ranking (1, 2)	Good		See 16.
14	Typical residential bill[3] (TRB)	$471 per assessment High ranking (2, 2)	Good	TRB should be consistent with projection in the financial plan. Drivers – OMA Management Cost and Capital Expenditure.	This Strategic Business Plan sets a new price path for the typical residential bill
15	Typical developer charges	$4210 per ET High ranking (2, 3)			
16	Residential revenue from usage charges	64% of residential bills High ranking (2, 3)	Good	≥ 50% of residential revenue should be generated through usage charges.	
SOCIAL – HEALTH					
19	Physical quality compliance	100% Highest ranking (1, 1)	Very good		
19 a	Chemical quality compliance	100% Highest ranking (1, 1)	Very good		
20	Microbiological compliance[4]	100% Highest ranking (1, 1)	Very good	Critical indicator. LWUs should develop a risk based water quality management plan.	

	INDICATOR	RESULT		COMMENT/DRIVERS	ACTION
SOCIAL – LEVELS OF SERVICE					
25	Water quality complaints	0 per 1,000 props Highest ranking (1, 1)	Very good	Critical indicator of customer service.	
26	Service complaints	199 per 1,000 props Lowest ranking (5, 5)	May require review	Key indicator of customer service.	
27	Average frequency of unplanned	195 per 1,000 props Lowest ranking (5, 5)	May require review	Key indicator of customer service, condition of network and effectiveness	
30	Number of main breaks	25 per 100km of main Lowest ranking (5, 5)	May require review	Drivers – condition and age of water mains, ground	Monitor breaks, including past
32	Total Days Lost		Not reported		
ENVIRONMENTAL					
33	Average annual residential water supplied	340 kL per prop Low ranking (4, 4)		Drivers – available water supply, climate, location (Inland or coastal), pricing signals (Indicator 3), restrictions.	
34	Real losses (leakage)	100 L/c/d Low ranking (4, 4)	May require review	Loss reduction is important where an LWU is facing drought water restrictions or the need to augment its water supply system.	
ECONOMIC					
43	Economic Real Rate of Return (ERRR)	1.9% Highest ranking (1, 1)	Good	Reflects the rate of return generated from operating activities (excluding interest income and grants). An ERRR or ROA of ≥ 0% is required for full cost recovery.	
44	Return on assets (ROA)	4.9% Highest ranking (1, 1)		See 43.	
45	Net debt to equity	-44% Lowest ranking (5, 5)		LWUs facing significant capital investment are encouraged to make greater use of borrowings – page 13 of the 2010-11 NSW Performance Monitoring Report.	
46	Interest cover	>100 Highest ranking (1, 1)	Very good	Drivers – in general, an interest cover > 2 is satisfactory.	
47	Loan payment	$0 per prop Low ranking (4, 4)		The component of TRB required to meet debt payments. Drivers – expenditure on capital works, short term loans.	
49	Operating cost (OMA)	$377 per prop High ranking (2, 2)	Good	Prime indicator of the financial performance of an LWU. Drivers – development density, level of treatment, management cost, topography, number of discrete schemes and economies of scale.	Review components carefully to ensure efficient operating cost.
51	Management cost	$134 per prop Low ranking (4, 3)	May require review	Typically about 40% of the OMA. Drivers – No. of employees. No. of small discrete water schemes.	
52	Treatment cost	$4 per prop Highest ranking (1, 1)	Very good	Drivers – type and quality of water source. Size of treatment works	
53	Pumping cost	$99 per prop	May require	Drivers – topography,	

		Low ranking (4, 4)	*review*	*development density and location of water source.*
55	*Water main cost*	*$108 per prop* *Low ranking (4, 4)*	*May require review*	*Drivers – age and condition of mains. Ground conditions. Development density.*
56	*Capital expenditure*		*Not reported*	*An indicator of the level of investment in the business. Drivers – age and condition of assets, asset life cycle and water source.*

*1. Review of Council's TBL Performance Report and Preparation of an **Action Plan** to Council required annually.*
__Strategic Business Plan__ review and update required after 4 years. __Financial Plan__ update and report to Council required annually.
New __IWCM Strategy__ required after 8 years. __Development Servicing Plan__ review and updating is required after 5 years.
__Liquid Trade Waste Regulation Policy__ in accordance with the 'NSW Liquid Trade Waste Regulation Guidelines, 2009' required by June 2011.

2. The ranking relative to similar size LWUs is shown first (Col. 2 of TBL Report) followed by the ranking relative to all LWUs (Col. 3 of TBL Report).

3. Review and comparison of the 2011-12 __Typical Residential Bill (Indicator 14)__ with the projection in your Strategic Business Plan is __mandatory__.
In addition, if both indicators 43 and 44 are negative, you must report your proposed 2012-13 typical residential bill to achieve full cost recovery.

4. __Microbiological compliance (Indicator 20)__ is a high priority for each NSW LWU. Corrective action for non-compliance (≤97%), or any 'boil water
alerts' must be reported in your Action Plan.

Narromine Shire Council Sewerage – Action Plan

	INDICATOR	RESULT[2]		COMMENT/DRIVERS	ACTION
	Best-Practice Management Guidelines	Complied with all the Best Practice Requirements[1]	Very good	Compliance demonstrates effectiveness and sustainability of water supply and sewerage business. 100% compliance is required for eligibility to pay an 'efficiency dividend'.	
CHARACTERISTICS					
5	Connected property density	40 per km of main	Similar to the statewide median of 40	A connected property density below about 30 can significantly increase the cost per property of providing services.	
7	Renewals expenditure	0% Median ranking (3, 3)	Satisfactory	Adequate funds must be programmed for works outlined in the Asset Management Plan – page 3 of the 2010-11 NSW Performance Monitoring Report.	This Strategic Business Plan includes a works program and financial plan that sets out renewals expenditure
8	Employees	2 per 1,000 props Low ranking (4, 4)	May require review		
SOCIAL – CHARGES					
12	Typical residential bill[3] (TRB)	$483 per assessment Low ranking (4, 3)		TRB should be consistent with projection in the financial plan. Drivers – OMA Management Cost and Capital Expenditure.	This Strategic Business Plan sets a new price path for the typical residential bill
13	Typical Developer Charges	$3920 per ET High ranking (2, 3)			
14	Non-residential sewer usage charge	175c/kL High ranking (2, 2)	Good		
SOCIAL - HEALTH					
16	Urban Properties without reticulated sewerage service	0.7% Highest ranking (1, 1)	Very good		
17	Percent sewage treated to tertiary level		Not reported		
18	Percent of sewage volume that complied	100% Highest ranking (1, 1)	Very good	Key indicator of compliance with regulator.	
19	Sewage treatment works compliant at all times	2 of 2		Key indicator of compliance with regulator.	
SOCIAL – LEVELS OF SERVICE					
21	Odour Complaints	0 per 1,000 props Highest ranking (1, 1)	Very good	Critical indicator of customer service and operation of treatment works.	
22	Service complaints	12 per 1,000 props High ranking (2, 3)	Good	Key indicator of customer service.	
23	Average	90 minutes	Satisfactor	Key indicator of customer service,	

a	*Duration of Interruption*	*Median ranking (3, 2)*	*y*	*condition of network and effectiveness of operation.*
25	*Total Days Lost*	*0%* *Highest ranking (1, 1)*	*Very good*	
26	*Volume of sewage collected per property*	*291 kL* *Highest ranking (1, 2)*		*Compare sewage collected to water supplied.*
27	*Percentage effluent recycled*	*5%* *Median ranking (3, 4)*	*Satisfactory*	*Key environmental indicator. Drivers – availability of potable water, demand, proximity to customers, environment.*
28	*Biosolids reuse*		*Not reported*	*Key environmental indicator.*
32	*Net Greenhouse gas emissions (WS & Sge)*	*250 t CO2/1000 props* *High ranking (2, 2)*	*Good*	*Drivers – gravity vs pumped networks, topography, extent of treatment.*
34	*Compliance with BOD in licence*	*100%* *Highest ranking (1, 1)*	*Very good*	*Key indicator of compliance with regulator requirements.*
35	*Compliance with SS in licence*	*100%* *Highest ranking (1, 1)*	*Very good*	*Drivers – algae in maturation ponds, impact of drought.*
36	*Sewer main breaks and chokes*	*49 per 100km of main* *Median ranking (3, 3)*	*Satisfactory*	*Drivers – condition and age of assets, ground conditions.*
37	*Sewer overflows to the environment*	*0 per 100km of main* *Highest ranking (1, 1)*	*Very good*	*Drivers – condition of assets, wet weather and flooding.*
39	*Non-residential percentage of sewage collected*			*For non-residential, compare % of sewage collected to indicator 43 (% of revenue).*
ECONOMIC				
43	*Non-residential revenue*	*24%* *Highest ranking (1, 2)*	*Very good*	*See 39 above.*
46	*Economic Real Rate of Return (ERRR)*	*2.2%* *Highest ranking (1, 1)*	*Good*	*Reflects the rate of return generated from operating activities (excluding interest income and grants). An ERRR or ROA of ≥ 0% is required for full cost recovery.*
46a	*Return on assets*	*3.9%* *Highest ranking (1, 1)*		*See 46.*
47	*Net debt to equity*	*-42%* *Lowest ranking (5, 5)*		*LWUs facing significant capital investment are encouraged to make greater use of borrowings – page 13 of the 2010-11 NSW Performance Monitoring Report.*
48	*Interest cover*	*>100* *Highest ranking (1, 1)*	*Very good*	*Drivers – in general, an interest cover of > 2 is satisfactory.*
48a	*Loan payment*			*The component of TRB required to meet debt payments.*

				Drivers – expenditure on capital works, short term loans.	
50	*Operating cost (OMA)*	*$301 per prop* *High ranking (2, 2)*	*Good*	*Prime indicator of the financial performance of an LWU.* *Drivers – development density, level of treatment, management cost, topography, number of discrete schemes and economies of scale.*	*Review carefully to ensure efficient operating cost.*
52	*Management cost*	*$169 per prop* *Lowest ranking (5, 5)*	*May require review*	*Drivers –number of discrete schemes, number of employees. Typically about 40% of OMA.*	
53	*Treatment cost*	*$80 per prop* *High ranking (2, 1)*	*Good*	*Drivers – type and level of treatment, economies of scale.*	
54	*Pumping cost*	*$46 per prop* *Median ranking (3, 3)*	*Satisfactory*	*Drivers – topography, development density, effluent recycling.*	
56	*Sewer main cost*	*$6 per prop* *Highest ranking (1, 1)*	*Very good*	*Drivers – topography, development density, effluent recycling.*	
57	*Capital expenditure*			*An indicator of the level of investment in the business.* *Drivers – age and condition of assets, asset life cycle.*	

*1. Review of Council's TBL Performance Report and Preparation of an **Action Plan** to Council required annually.*
__Strategic Business Plan__ review and update required after 4 years. __Financial Plan__ update required annually.
__IWCM Strategy__ review and update required after 8 years. __Liquid Trade Waste Regulation Policy__ in accordance with the 'NSW Liquid Trade Waste
Regulation Guidelines, 2009' required. __Development Servicing Plan__ review and updating is required after 5 years.
2. The ranking relative to similar size LWUs is shown first (Col. 2 of TBL Report) followed by the ranking relative to all LWUs (Col. 3 of TBL Report).
3. Review and comparison of the 2011-12 Typical Residential Bill (Indicator 12) with the projection in your Strategic Business Plan is mandatory.
In addition, if both indicators 46 and 46a are negative, you must report your proposed 2012-13 typical residential bill to achieve full cost recovery.

11. References

Collaborative Planning and Engineering Associates (2012) *Narromine Shire Council: Valuation of Water Supply and Sewerage Assets.*

Collaborative Planning and Engineering Associates (2013) *Review of the Performance of the Trangie Sewerage System.*

Collaborative Planning and Engineering Associates (2013) *Review of the Performance of the Trangie Water Supply System.*

Narromine Shire Council IRP Documents, available at http://www.narromine.nsw.gov.au

Department of Land and Water Conservation (2002) *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, New South Wales.

NSW Office of Water (August 2012) *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater, 2012 – Consultation Draft*

National Health and Medical Research Council (2011) *Australian Drinking Water Guidelines 6 2011*, available at http://www.nhmrc.gov.au

NSW Office of Water (2011) *NSW Water and Sewerage Strategic Business Planning Guidelines*

Appendix A. Inputs to Council's Community Strategic Plan, Delivery Program and Operational Plan

When this Strategic Business Plan is adopted by Council, the Integrated Reporting and Planning documents will need to be amended in places. Table 26 – Inputs to Community Strategic Plan, Delivery Program and Operational Plan, lists a number of items in the Strategic Business Plan and their corresponding reference to the sections of the relevant Council documents.

Table 26 – Inputs to Community Strategic Plan, Delivery Program and Operational Plan

Item	Reference in Strategic Business Plan	Reference in Council Integrated Planning and Reporting documents
Population Projections	Section 2.2.3 – Population Growth and Section 9.4.1 – Growth Forecasts	Page 15 of the Community Strategic Plan – Narromine Shire 2022
Renewals Plan	Section 7.3.1 - Tables 14 and 15	Pages 73, 74 of 2012/13 Operational Plan Pages 15, 23 of Long Term Financial Plan
New Works Plan	Section 7.3.2 – Tables 16 and 17	Pages 73, 74 of 2012/13 Operational Plan Pages 15, 23 of Long Term Financial Plan
Workforce Plan	Section 5.3.1 – Resourcing the Capital Works Plan	Resource Strategy – Workforce Plan
Recommended Price Path for Typical Residential Bill	Sections 9.7 and 9.8	Operational Plan – Fees and Charges Operational Plan – Statement of Revenue Policy

Appendix B. Key Actions & Targets Summary

The table below summarises and collates the key actions and targets contained throughout this SBP.

Business	Objectives	Proposed measures	Provider, cost	Target date
Water	Maintain potable water quality to ADWG standards	• Review effectiveness of chlorination to supply at both Narromine and Trangie • Give consideration to fluoridating the supplies	NSC	30 June 2014
Water & Sewerage	System Operation meets the currently adopted Levels of Service	• Maintain in-house staffing and equipment resources	NSC	Ongoing
		• Maintain a register of prequalified external service providers e.g. plumbing that can be called upon as required	NSC	
		• Provision of specialist services for one-off maintenance or capital works – Invite tenders as required	NSC	
Water		• Reservoir cleaning - Utilise LMWUA contract	LMWUA	As required
Water		• Supply of treatment chemicals - Utilise LMWUA contract	LMWUA	As required
Water & Sewerage	Wastage of water reduced	• Review and update Policy 2011/551	NSC Cost absorbed in administration	Within 6 months of the adoption of each revised Strategic Business Plan
Water & Sewerage	An environment	• Form a local environmental advisory	NSC / Community	30 June 2014

Business	Objectives	Proposed measures	Provider, cost	Target date
	ally sustainable system whose environmental impacts, especially in sensitive areas, are acceptable to the community	committee from the community to help identify issues of concern and suggest solutions • Undertake assessment of environmental impacts of the activities of the systems on borefields and effluent discharge areas. If not environmentally sustainable then examine the requirements to make them sustainable • Establish a Due Diligence strategy to identify and respond to environmental risks. • Consider programmes to minimise environmental risks and impacts of the water supply and sewerage systems • Undertake detailed investigation of preferred programmes and alternatives		
Sewerage	Control discharge of liquid trade waste into sewers	• Review and update Policy EV34	NSC / Consultant	30 June 2014
Water supply	Business is financially sustainable while keeping bills as low as possible	Increase the typical residential bill for water supply services to $585 over a two-year period. This represents a 10% increase in the typical residential bill (excluding inflation) over a two-year period (5% per year excluding inflation).	Council, no additional cost	2014/15 budget

In addition, the SBP makes the following recommendations:

- There are a high number of Condition 5 mains. The CCTV survey undertaken for the CPEa valuation report identified that 11 % of mains were graded at Condition 5. Extrapolating this across the network, a significant length of mains may be condition graded 5, requiring replacement. There is a high cost to excavate & replace. It is recommended that CCTV be undertaken of the full network on a prioritised basis to confirm the scope of renewals and replacements required.
- Improvements are required to the Trangie Water supply system. A comprehensive investigation study has been completed in 2013 that recommends improvements to the performance of the Trangie sewerage system. This has been included in the capital works plan.
- Improvements are required to the Trangie Sewage Treatment system. A comprehensive investigation study has been completed in 2013 that recommends improvements to the performance of the Trangie sewerage system. This has been included in the capital works plan.
- $650,000 has been allocated to decommission the old Narromine Sewage Treatment Plant. It is recommended that investigation studies be undertaken in order to define the scope of works.

Appendix C. Comments on Asset Condition from Asset Revaluation 2012

Specific Comments on the Condition of the Water Supply Assets are reprinted below:

Water Supply Systems

The Narromine potable water supply is sourced from bores, with the extracted water aerated to remove iron, chlorinated, and pumped into the reticulation system.

Bore No. 3 pumps directly to the standpipe at Duffy Street, while the other bores pump to aeration at the treatment plant and then to the reticulation system.

The Narromine raw water supply is sourced from the Macquarie River suction point, is pumped to the original elevated water tank, and then solely to recreational sites on the northern urban area.

Trangie also has bores with the difference being that the raw water is cooler with no requirement for iron removal. The bores pump straight into the reticulation system after chlorination. The standpipe is connected to the reticulation system.

Tomingley is a raw water supply only, with limited treatment for colour.

Water Storages

The clear water storage tank at the Narromine water treatment plant appears to have joint leakage, and internal ladder and roof corrosion problems. These are programmed for repair within the next few years.

Some mild steel water storages are due for cleaning, repairs and repainting. The Duffy and Nymagee street standpipes display evidence of gaps that leave both open to bird contamination, and both tanks appear to need cleaning and repainting. Funds have been committed to undertake these works in the next few years.

The original elevated reinforced concrete water supply tank in Nymagee Street, now utilised for raw water supply purposes, is displaying signs of construction joint leakage, but could not be inspected at close proximity due to a lack of legally-compliant safe access.

The original Trangie water standpipe in Dandaloo Street appears to be in stable condition, while the mild steel standpipe appears to be in need of cleaning and repainting.

Water Reticulation

The three systems are displaying typical ageing patterns in AC and CI pipes. Both classes of pipe are failing in longitudinal splitting.

Issues arising/items of concern

- Programmed replacement of ageing water reticulation pipelines;
- Cleaning and repainting of water storages;
- Reinstatement of safe access to the raw water elevated tank.

Specific Comments on the Condition of the Sewer Assets are reprinted below:

"Sewerage Treatment Plants
Narromine is a 1950s-era system where the original treatment plant has been decommissioned, and the function now provided by an oxidation lagoon system that is in good condition.

Trangie has a Pasveer ditch plant with polishing lagoons. The ditch is overloaded, is in poor structural condition, and has been programmed for replacement with oxidation lagoons within 5 years.

Sewer Pump Stations & Rising Mains
All rising mains are reported to be in a stable operating condition with no current pattern of failures.

The main outfall pressure sewer/rising main is a 250 mm uPVC pipe of 7 km. It has no history of pipe failures.

There are nine straight lift rising mains, 2 * 100 PVC, 2 * 150 PVC, and 5 * 150 AC pipelines. None have any history of pipe failures.

Trangie has 4 straight lift rising mains, 3 * 150 AC, and 1 outfall pipeline 200 mm AC of 1.4 km length. There is no history of failures with any of these mains.

Some sewer pump stations are displaying evidence of corrosion of metal fittings and some concrete corrosion. While most wet well walls appear to be in good condition, Council should remain vigilant to sulphide attack on concrete walls that can rapidly degrade a pump station structure."

Gravity Sewers
"Most of the concrete and AC pipes inspected have a roughened wall lining with, in the concrete pipes, the aggregate exposed, symptomatic of sulphide slime attack. The sulphide slimes can colonise the inner pipeline walls, and corrode the pipe wall by removing calcium from cement matrix. In the case of steel reinforced concrete pipes this will lead to exposure and corrosion of the reinforcement, with total pipe failure not long after. In unreinforced pipes the pipe wall will decay until such time as it loses structural

integrity and collapses. There are a few instances in the Narromine system where collapses were observed to be starting to occur.

Quarterly light jetting of the concrete and AC pipes to remove sulphide slimes may slow the rate of sulphide attack.

Most of the earthenware (VC) pipes surveyed exhibited cracking and in some cases with pieces falling out of the pipe walls. Once the pipes crack tree root ingress accelerates the process until such time as the pipes collapse in on themselves. Cracking also encourages ground water infiltration/exfiltration and hence increased loading on the sewage treatment plant.

Council should be planning now for the replacement of the gravity sewer main network in Narromine. Extensive CCTV based condition assessment over the bulk of the network, if carried out quickly, should identify many pipes suitable to be internally lined thus deferring total replacement for some time and spreading capital expenditure over a longer period.

As noted above none of the sewers within Trangie were surveyed. They are all listed as AC pipes laid in 1980. Give the condition of the AC pipes in Narromine and our experience in other locations; it is quite likely that these pipes are similarly suffering sulphide slime attack. Urgent inspection is recommended to verify this and if necessary identify pipes that are suitable for internal lining to extend their service life."

Appendix D. Capital Works Plan

Capital Works Plan

NARROMINE SHIRE COUNCIL

WATER - Capital Works Program

CAPITAL WORKS ($000)	0	1	2	3	4	5	6	7	8	9	10	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	40/41	41/42	42/43
New Works - ILOS / Backlog																																
Narromine - Install water meters on Reservoirs																																
Narromine - Water Security Improvement (additional bore	520																															
Narromine - Install water conditioning system	60										60										60										60	
Trangie - Install water conditioning system		40	40									40	40									40	40									40
Tomingley - Settling Tanks		20				20				20				20				20				20				20				20		
Tomingley - Supply augmentation	90																															
Tomingley - Reservoir capacity augmentation		150																														
Narromine - Additional Reservoir storage tank (Town growth - NE side of Town)					680																											
Narromine - Secure additional Town Water Supply source		100	100						100				1500																			
Trangie Rising Main -Install Main to connect Bore to Reservoir				500																												
Trangie - Construction of Partial Treatment Plant									50	50	40	353																				
Trangie - Operational Improvements				80	102	80	25	20	20	20	10			50																		
Trangie - Renew and Re-drill bores				120								120								120								120				
	670	**310**	**140**	**700**	**782**	**100**	**25**	**20**	**170**	**90**	**110**	**513**	**1540**	**70**	**0**	**0**	**0**	**20**	**0**	**120**	**60**	**60**	**40**	**0**	**0**	**20**	**0**	**120**	**0**	**20**	**60**	**40**
New Works - Growth																																
Narromine - Extension to Water Mains	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	50	50
Narromine - Extension to water for IGA			40																													
Narromine - Fluoridisation													100																			
Trangie - Fluoridisation														70	70																	
Sub Total	**50**	**50**	**90**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**150**	**120**	**120**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**
Minor New Works																																
Telemetry upgrade		100	60					60					60																			
Trangie - Bore flow recorders		25				25				25				25				25				25				25				25		
Minor Capital Works	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Back flow prevention devices	77	50	40	30	30	20	20	10	10	10	10					50					50					50					50		
Narromine - Electronic water meter reading equipment		50					50					50					50					50						50				50
Sub Total	**107**	**240**	**115**	**45**	**45**	**60**	**85**	**85**	**25**	**50**	**25**	**65**	**75**	**40**	**15**	**65**	**65**	**40**	**15**	**15**	**65**	**90**	**15**	**15**	**15**	**90**	**65**	**15**	**15**	**40**	**65**	**65**
Total New System Assets (FINMOD INPUT)	**157**	**290**	**205**	**95**	**95**	**110**	**135**	**135**	**75**	**100**	**75**	**115**	**225**	**160**	**135**	**115**	**115**	**90**	**65**	**65**	**115**	**140**	**65**	**65**	**65**	**140**	**115**	**65**	**65**	**90**	**115**	**115**
Renewals																																
Water mains replacement/ rehabilitation	130	130	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
Pumps replacement/ rehabilitation	10	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Narromine - Valve Replacement	35	35	35	35	35	35	35	35	35	35	35	5	5	5	5																	
Water Meter Replacement Program	25	25	25	25	25	25	25	25	25	25	25	5	5	5	5																	
Tomingley - Main upgrades		20		20		20		20		20		20		20		20		20		20		20		20		20		20		20		20
Replace House Services	40	40	40	40	40	40	40	40	40	40	40																					
Reservoir Rehabilitation			75		75		75		75		75		75		75		75		75		75		75		75		75		75			
Reline Aeration Tank			70																													
Sub Total	**240**	**265**	**400**	**275**	**330**	**275**	**330**	**275**	**330**	**275**	**330**	**185**	**240**	**185**	**240**	**175**	**230**	**175**	**230**	**175**	**230**	**175**	**230**	**175**	**230**	**175**	**230**	**175**	**230**	**175**	**230**	**175**
WORKS TOTAL	**1067**	**865**	**745**	**1070**	**1207**	**485**	**490**	**430**	**575**	**465**	**515**	**813**	**2005**	**415**	**375**	**290**	**345**	**285**	**295**	**360**	**405**	**375**	**335**	**240**	**295**	**335**	**345**	**360**	**295**	**285**	**405**	**330**
Expected Subsidy / Contribution on Projects																																
GRAND TOTAL COUNCIL	**1067**	**865**	**745**	**1070**	**1207**	**485**	**490**	**430**	**575**	**465**	**515**	**813**	**2005**	**415**	**375**	**290**	**345**	**285**	**295**	**360**	**405**	**375**	**335**	**240**	**295**	**335**	**345**	**360**	**295**	**285**	**405**	**330**

NARROMINE SHIRE COUNCIL

SEWERAGE - Capital Works Program

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
CAPITAL WORKS ($000)	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	40/41	41/42	42/43
New Works - ILOS / Backlog (Subsidised Schemes)																																
Sub 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	0	0	0	0	0	0
New Works - Growth																																
Trangie - STP Investigation		50	50																													
Trangie - STP Capital Works				350	220	50																										
Telemetry upgrade (Narromine and Trangie)		60					60					60																				
Narromine - New PS and Rising Main		100	50	50								100	50	50								100	50	50								100
Narromine - Extension to sewer for IGA			65																													
Sub Total	0	210	165	400	220	50	60	0	0	0	0	160	50	50	0	0	0	0	0	0	0	100	50	50	0	0	0	0	0	0	0	100
Minor New Works																																
Minor capital works	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
CCTV investigations	80	20	200	200	20	80	20	20	20	20	80	20	20	20	20	80	20	20	20	20	80	20	20	20	20	80	20	20	20	20	80	
Rags/Filters and Wet Well Washers		50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
Sub Total	95	85	240	265	60	145	60	85	60	85	120	85	60	85	60	145	60	85	60	85	120	85	60	85	60	145	60	85	60	85	120	65
Total New System Assets (FINMOD INPUT)	95	295	405	665	280	195	120	85	60	85	120	245	110	135	60	145	60	85	60	85	120	185	110	135	60	145	60	85	60	85	120	165
Renewals																																
Sewer mains replacement/ rehabilitation	80	80	500	500	500	500	500	500	500	500	500	500	500	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
Pumps replacement																																
- Narromine	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
- Trangie	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	5	5	5	5	5	5
Narromine STP - Upgrades		50	50	50	50	50						50	50	50	50	50						50	50	50	50	50						50
Narromine - Resurfacing/Relining of Manholes		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	25	25
Narromine Rehabilitation of Old Sewage Treatment Plant		60			650																											
Trangie Pumps Stations WHS Upgrades				25																												
Sub Total	100	235	595	620	1245	595	545	545	545	545	545	595	595	205	205	205	155	155	155	155	155	205	205	205	205	205	155	155	155	155	155	205
GRAND TOTAL	195	530	1000	1285	1525	790	665	630	605	630	665	840	705	340	265	350	215	240	215	240	275	390	315	340	265	350	215	240	215	240	275	370
Expected Subsidy / Contribution on Projects	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

TRANGIE WATER SUPPLY CAPITAL WORKS PROGRAM

Category for Capex Program	Description	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Operational Improvements	Flow meter	$10											
Operational Improvements	Analyse Flow data		$12										
Operational Improvements	Pressure & Flow analysis			$20									
Operational Improvements	Water Quality Testing	$15	$15	$10	$10	$10	$10	$10	$10				
Operational Improvements	Unaccounted water		$5	$5	$5								
Operational Improvements	O&M Manual		$20										
Borefield Upgrade	Borefield upgrade		$120								$120		
Operational Improvements	Enclose bores	$55	$20	$20									
Rising Mains	Connection of Mains to common collection point		$500										
Water Treatment Plant	Water Treatment Plant - REF						$50						
Water Treatment Plant	WTP - Select and Purchase Site							$50					
Water Treatment Plant	WTP - Concept Design								$40				
Water Treatment Plant	WTP - Construct Plant									$350			
Operational Improvements	Install SCADA		$30	$10	$10	$10	$10	$10	$10	$10			
Water Treatment Plant	Relocate inflow meter to inlet of WTP									$3			
Operational Improvements	Repaint Reservoir												$50
Operational Improvements	Fit new floats					$5							
	TOTALS	$80	$722	$65	$25	$25	$70	$70	$60	$363	$120	$0	$50

TRANGIE SEWER TREATMENT PLANT CAPITAL WORKS PROGRAM

Description	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/22	2021/22	2022/23	2023/24	2024/25	2025/26
Additional Water Quality Testing with Optimisation of the STP (1)	$33											
Expert Review of the Optimisation Process (2)	$34											
Additional Testing Overall (3)	$20											
Purchase of 24 hour auto sampler but could be used for all of Narromine	$27											
Construction of Balance Storage (5)		$120										
Repairs to the Current Screens Structure	$7											
Provision of Pressure Hose for Facility	$7											
Addition of Mechanical Rake for the Screens (6)		$13										
Purchase and Installation of a Flow Meter	$27											
Purchase and Install New Rotors		$67										
Provision for Additional Disinfection (7)			$33									
Additional SCADA Provisions (8)	$27											
Addition of Kick Board around the Pasveer Cannel	$16											
Replace Sealant Between Slabs(9)	$28											
Inspection of Base of Pasveer Channel (10)	$20											
Purchase and Install a New Waste Sludge Pump (11)			$13									
Prepare New O and M Manual for STP		$13										
Power Modifications On Site	$27											
Additional Pipework on Site	$27											
Miscellaneous Allowances	$40											
TOTALS	**$340**	**$213**	**$46**									

Appendix E. Cashflow Statements for Base Case

Narromine Water : Case 20 - New Base Case - Increase TRB to $585

FINMOD
Narromine Shire Council

Cashflow Statement

	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
Cashflow From Operating Activities																									
Receipts																									
Rates and Charges	1339	1412	1483	1488	1492	1497	1500	1506	1512	1517	1521	1527	1531	1534	1540	1544	1547	1554	1557	1562	1568	1572	1576	1581	1586
Interest Income	180	156	122	104	101	96	91	85	80	76	64	53	47	44	40	38	36	37	33	31	30	30	28	29	27
Other Revenues	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Grants	20	20	19	19	18	18	17	17	16	16	16	16	16	15	15	14	14	14	13	13	13	13	12	12	12
Contributions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Receipts from Operations	**1546**	**1594**	**1630**	**1618**	**1618**	**1618**	**1615**	**1614**	**1616**	**1616**	**1608**	**1602**	**1600**	**1600**	**1602**	**1603**	**1604**	**1611**	**1611**	**1613**	**1617**	**1622**	**1623**	**1628**	**1631**
Payments																									
Management	389	391	393	396	397	398	398	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417
Operations (plus WC Inc)	680	682	683	686	689	689	692	695	697	698	701	703	705	707	708	710	713	714	717	718	721	723	725	727	729
Interest Expenses	0	0	4	7	5	5	5	5	5	37	139	132	126	120	112	106	99	107	99	99	99	91	83	86	77
Other Expenses	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Total Payments from Operations	**1082**	**1086**	**1094**	**1102**	**1103**	**1106**	**1109**	**1113**	**1115**	**1150**	**1256**	**1251**	**1249**	**1246**	**1240**	**1237**	**1233**	**1245**	**1241**	**1243**	**1246**	**1241**	**1235**	**1242**	**1237**
Net Cash from Operations	**464**	**508**	**537**	**515**	**515**	**513**	**506**	**501**	**501**	**466**	**352**	**351**	**351**	**355**	**362**	**366**	**370**	**367**	**370**	**370**	**371**	**380**	**387**	**386**	**394**
Cashflow from Capital Activities																									
Receipts																									
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
Payments																									
Acquisition of Assets	768	1094	1231	508	513	453	598	488	538	837	2027	438	399	313	367	307	317	383	428	398	359	263	318	358	368
Net Cash from Capital Activities	**-768**	**-1094**	**-1231**	**-508**	**-513**	**-453**	**-598**	**-488**	**-538**	**-837**	**-2027**	**-438**	**-399**	**-313**	**-367**	**-307**	**-317**	**-383**	**-428**	**-398**	**-359**	**-263**	**-318**	**-358**	**-368**
CashFlow from Financing Activities																									
Receipts																									
New Loans Required	0	0	37	55	0	1	0	0	0	400	1300	0	0	0	0	0	0	185	0	100	106	0	0	160	0
Payments																									
Principal Loan Payments	0	0	0	2	2	4	3	3	3	11	41	42	44	46	50	52	55	62	65	72	78	82	84	88	93
Net Cash from Financing Activities	**0**	**0**	**37**	**53**	**-2**	**-3**	**-3**	**-3**	**-3**	**389**	**1259**	**-42**	**-44**	**-46**	**-50**	**-52**	**-55**	**124**	**-65**	**28**	**28**	**-82**	**-84**	**72**	**-93**
TOTAL NET CASH	**-304**	**-585**	**-657**	**60**	**0**	**57**	**-96**	**10**	**-40**	**18**	**-416**	**-130**	**-91**	**-4**	**-55**	**6**	**-1**	**107**	**-123**	**-1**	**40**	**36**	**-15**	**100**	**-68**
Current Year Cash	-304	-585	-657	60	0	57	-96	10	-40	18	-416	-130	-91	-4	-55	6	-1	107	-123	-1	40	36	-15	100	-68
Cash & Investments @Year Start	4220	3820	3156	2439	2438	2378	2376	2224	2180	2087	2055	1598	1433	1309	1272	1188	1165	1135	1212	1062	1036	1050	1059	1018	1091
Cash & Investments @Year End	3916	3235	2499	2499	2438	2435	2280	2234	2140	2106	1638	1469	1341	1304	1217	1194	1163	1242	1089	1062	1076	1085	1044	1118	1023
Capital Works Funding:																									
Internal Funding for New Works ($'000)	345	795	840	155	160	155	245	190	185	228	465	230	135	115	115	110	65	0	175	100	0	65	65	0	115
Internal Funding for Renewals	400	275	330	275	330	275	330	275	330	185	240	185	240	175	230	175	230	175	230	175	230	175	230	175	230
New Loans	0	0	37	55	0	1	0	0	0	400	1300	0	0	0	0	0	0	185	0	100	106	0	0	160	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	**745**	**1070**	**1208**	**485**	**490**	**430**	**575**	**465**	**515**	**814**	**2005**	**415**	**375**	**290**	**345**	**284**	**294**	**360**	**405**	**375**	**336**	**240**	**295**	**335**	**345**

Narromine Sewer : Case 20 - New Base Case, no Developer contributions, Capit

FINMOD
Narromine Shire Council

Cashflow Statement

	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
Cashflow From Operating Activities																									
Receipts																									
Rates and Charges	1153	1158	1161	1164	1170	1173	1176	1181	1185	1191	1195	1198	1204	1061	1066	1069	1072	1076	1080	1083	1086	1091	1094	1098	1101
Interest Income	220	192	148	116	102	92	84	75	66	52	40	37	42	41	42	43	44	45	44	41	39	37	36	34	35
Other Revenues	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Grants	19	19	18	18	17	17	16	16	16	15	16	15	15	15	14	14	13	13	13	13	12	12	12	11	11
Contributions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Receipts from Operations	**1401**	**1378**	**1335**	**1307**	**1298**	**1290**	**1285**	**1281**	**1275**	**1267**	**1260**	**1260**	**1269**	**1125**	**1131**	**1134**	**1138**	**1144**	**1146**	**1145**	**1147**	**1149**	**1151**	**1153**	**1156**
Payments																									
Management	417	418	419	420	422	423	426	428	430	432	434	436	438	440	442	444	446	448	450	452	454	456	458	460	462
Operations (plus WC Inc)	327	330	329	331	332	331	334	335	336	336	338	339	340	340	341	343	344	345	347	347	348	349	350	351	352
Interest 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
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	**744**	**747**	**748**	**750**	**755**	**755**	**760**	**763**	**766**	**769**	**773**	**775**	**778**	**780**	**783**	**787**	**789**	**793**	**797**	**799**	**803**	**805**	**808**	**812**	**814**
Net Cash from Operations	**657**	**630**	**587**	**557**	**544**	**536**	**525**	**518**	**510**	**498**	**487**	**485**	**491**	**345**	**347**	**347**	**349**	**351**	**349**	**347**	**344**	**344**	**343**	**341**	**342**
Cashflow from Capital Activities																									
Receipts																									
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
Payments																									
Acquisition of Assets	1020	1306	1545	811	685	651	625	650	685	860	726	360	286	371	235	260	235	260	295	410	335	360	285	370	235
Net Cash from Capital Activities	**-1020**	**-1306**	**-1545**	**-811**	**-685**	**-651**	**-625**	**-650**	**-685**	**-860**	**-726**	**-360**	**-286**	**-371**	**-235**	**-260**	**-235**	**-260**	**-295**	**-410**	**-335**	**-360**	**-285**	**-370**	**-235**
CashFlow from Financing Activities																									
Receipts																									
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	0	0	0
Payments																									
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	0	0	0
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**	**0**	**0**	**0**
TOTAL NET CASH	**-363**	**-676**	**-958**	**-254**	**-141**	**-115**	**-100**	**-132**	**-175**	**-362**	**-238**	**125**	**206**	**-25**	**113**	**88**	**114**	**91**	**54**	**-64**	**9**	**-17**	**58**	**-29**	**107**
Current Year Cash	-363	-676	-958	-254	-141	-115	-100	-132	-175	-362	-238	125	206	-25	113	88	114	91	54	-64	9	-17	58	-29	107
Cash & Investments @Year Start	5175	4695	3921	2891	2573	2372	2202	2051	1872	1656	1262	999	1097	1271	1215	1295	1349	1427	1482	1498	1399	1374	1324	1349	1288
Cash & Investments @Year End	**4812**	**4019**	**2963**	**2637**	**2432**	**2257**	**2102**	**1919**	**1697**	**1294**	**1024**	**1124**	**1303**	**1246**	**1328**	**1383**	**1463**	**1519**	**1536**	**1434**	**1409**	**1357**	**1382**	**1320**	**1395**
Capital Works Funding:																									
Internal Funding for New Works ($'000)	405	665	280	195	120	85	60	85	120	245	110	135	60	145	60	85	60	85	120	185	110	135	60	145	60
Internal Funding for Renewals	595	620	1245	595	545	545	545	545	545	595	595	205	205	205	155	155	155	155	155	205	205	205	205	205	155
New Loans	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	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	**1000**	**1286**	**1525**	**790**	**665**	**630**	**605**	**630**	**665**	**840**	**705**	**340**	**265**	**350**	**215**	**240**	**215**	**240**	**275**	**390**	**315**	**340**	**265**	**350**	**215**