Sewer

ASSET MANAGEMENT PLAN

Version 1.0 - DRAFT

January 2010

Document Control	

Document ID: SewerAMP_NAMS PLUSVersion.docx					
Rev No	Date	Revision Details	Author	Reviewer	Approver
1.0	01/10/2009	Original Draft	GP		GB

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ABBREVIATIONS

AAAC Average annual asset consumption

AMP Asset management plan

ARI Average recurrence interval

BOD Biochemical (biological) oxygen demand

CRC Current replacement cost

CWMS Community wastewater management systems

DA Depreciable amount

DoH Department of Health

EF Earthworks/formation

EP Equivalent Population

IRMP Infrastructure risk management plan

LCC Life cycle cost

LCE Life cycle expenditure

MMS Maintenance management system

RV Residual value

SS Suspended solids

STP Sewerage Treatment Plant

GLOSSARY

Annual service cost (ASC)
An estimate of the cost that would be tendered, per annum, if tenders were called for the supply of a service to a performance specification for a fixed term. The Annual Service Cost includes operating, maintenance, depreciation, finance/ opportunity and disposal costs, less revenue.

Asset class
Grouping of assets of a similar nature and use in an entity's operations (AASB 166.37).

Asset condition assessment
The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific asset so as to determine the need for some preventative or remedial action.

Asset management
The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

Assets
Future economic benefits controlled by the entity as a result of past transactions or other past events.

Property, plant and equipment including infrastructure and other assets (such as furniture and fittings) with benefits expected to last more than 12 month.

Average annual asset consumption (AAAC)*
The amount of a local government's asset base consumed during a year. This may be calculated by dividing the Depreciable Amount (DA) by the Useful Life and totalled for each and every asset OR by dividing the Fair Value (Depreciated Replacement Cost) by the Remaining Life and totalled for each and every asset in an asset category or class.

Brownfield asset values**
Asset (re)valuation values based on the cost to replace the asset including demolition and restoration costs.

Capital expansion expenditure
Expenditure that extends an existing asset, at the same standard as is currently enjoyed by residents, to a new group of users. It is discretional expenditure, which increases future operating, and maintenance costs, because it increases Council's asset base, but may be associated with additional revenue from the new user group, eg. extending a drainage or road network, the provision of an oval or park in a new suburb for new residents.

Capital expenditure
Relatively large (material) expenditure, which has benefits, expected to last for more than 12 months. Capital expenditure includes renewal, expansion and upgrade. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capital funding
Funding to pay for capital expenditure.

Capital grants
Monies received generally tied to the specific projects for which they are granted, which are often upgrade and/or expansion or new investment proposals.

Capital investment expenditure
See capital expenditure definition.

Capital new expenditure
Expenditure which creates a new asset providing a new service to the community that did not exist beforehand. As it increases service potential it may impact revenue and will increase future operating and maintenance expenditure.

Capital renewal expenditure
Expenditure on an existing asset, which returns the service potential or the life of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. As it reinstates existing service potential, it has no impact on revenue, but may reduce future operating and maintenance expenditure if completed at the optimum time, eg. resurfacing or resheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capital upgrade expenditure
Expenditure, which enhances an existing asset to provide a higher level of service or expenditure that will increase the life of the asset beyond that which it had originally. Upgrade expenditure is discretional and often does not result in additional revenue unless direct user charges apply. It will increase operating and maintenance expenditure in the future because of the increase in the Council's asset base, eg. widening the sealed area of an existing road, replacing drainage pipes with pipes of a greater capacity, enlarging a grandstand at a sporting facility. Where capital projects involve a combination of renewal, expansion and/or upgrade

expenditures, the total project cost needs to be allocated accordingly.

Carrying amount
The amount at which an asset is recognised after deducting any accumulated depreciation / amortisation and accumulated impairment losses thereon.

Class of assets
See asset class definition.

Component
An individual part of an asset which contributes to the composition of the whole asset and can be separated from or attached to an asset or a system.

Cost of an asset
The amount of cash or cash equivalents paid or the fair value of the consideration given to acquire an asset at the time of its acquisition or construction, plus any costs necessary to place the asset into service. This includes one-off design and project management costs.

Current replacement cost (CRC)
The cost the entity would incur to acquire the asset on the reporting date. The cost is measured by reference to the lowest cost at which the gross future economic benefits could be obtained in the normal course of business or the minimum it would cost, to replace the existing asset with a technologically modern equivalent new asset (not a second hand one) with the same economic benefits (gross service potential) allowing for any differences in the quantity and quality of output and in operating costs.

Current replacement cost "As New" (CRC)
The current cost of replacing the original service potential of an existing asset, with a similar modern equivalent asset, i.e. the total cost of replacing an existing asset with an as NEW or similar asset expressed in current dollar values.

Cyclic Maintenance**
Replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, replacement of air conditioning equipment, etc. This work generally falls below the capital / maintenance threshold and needs to be identified in a specific maintenance budget allocation.

Depreciable amount (DA)
The cost of an asset, or other amount substituted for its cost, less its residual value (AASB 116.6)

Depreciated replacement cost (DRC)
The current replacement cost (CRC) of an asset less, where applicable, accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset

Depreciation / amortisation
The systematic allocation of the depreciable amount (service potential) of an asset over its useful life.

Economic life
See useful life definition.

Expenditure
The spending of money on goods and services. Expenditure includes recurrent and capital.

Fair value
The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties, in an arms length transaction.

Greenfield asset values **
Asset (re)valuation values based on the cost to initially acquire the asset.

Heritage asset
An asset with historic, artistic, scientific, technological, geographical or environmental qualities that is held and maintained principally for its contribution to knowledge and culture and this purpose is central to the objectives of the entity holding it.

Impairment Loss
The amount by which the carrying amount of an asset exceeds its recoverable amount.

Infrastructure assets
Physical assets of the entity or of another entity that contribute to meeting the public's need for access to major economic and social facilities and services, eg. roads, drainage, footpaths and cycleways. These are typically large, interconnected networks or portfolios of composite assets The components of these assets may be separately maintained, renewed or replaced individually so that the required level and standard of service from the network of assets is continuously sustained. Generally the components and hence the assets have long lives. They are fixed in place and often have no market value.

Investment property
Property held to earn rentals or for capital appreciation or both, rather than for:
(a) use in the production or supply of goods or services or for administrative purposes; or
(b) sale in the ordinary course of business (AASB 140.5)

Level of service
The defined service quality for a particular service against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental, acceptability and cost.

Life Cycle Cost **
The life cycle cost (LCC) is the average cost to provide the service over the longest asset life cycle. It comprises annual maintenance and asset consumption expense, represented by depreciation expense. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

Life Cycle Expenditure **
The Life Cycle Expenditure (LCE) is the actual or planned annual maintenance and capital renewal expenditure incurred in providing the service in a particular year. Life Cycle Cost may be compared to Life Cycle Expenditure to give an initial indicator of life cycle sustainability.

Loans / borrowings
Loans result in funds being received which are then repaid over a period of time with interest (an additional cost). Their primary benefit is in 'spreading the burden' of capital expenditure over time. Although loans enable works to be completed sooner, they are only ultimately cost effective where the capital works funded (generally renewals) result in operating and maintenance cost savings, which are greater than the cost of the loan (interest and charges).

Maintenance and renewal gap
Difference between estimated budgets and projected expenditures for maintenance and renewal of assets, totalled over a defined time (eg 5, 10 and 15 years).

Maintenance and renewal sustainability index
Ratio of estimated budget to projected expenditure for maintenance and renewal of assets over a defined time (eg 5, 10 and 15 years).

Maintenance expenditure
Recurrent expenditure, which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the asset achieves its useful life and provides the required level of service. It is expenditure, which was anticipated in determining the asset's useful life.

Materiality
An item is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial report. Materiality depends on the size and nature of the omission or misstatement judged in the surrounding circumstances.

Modern equivalent asset.
A structure similar to an existing structure and having the equivalent productive capacity, which could be built using modern materials, techniques and design. Replacement cost is the basis used to estimate the cost of constructing a modern equivalent asset.

Non-revenue generating investments
Investments for the provision of goods and services to sustain or improve services to the community that are not expected to generate any savings or revenue to the Council, eg. parks and playgrounds, footpaths, roads and bridges, libraries, etc.

Operating expenditure
Recurrent expenditure, which is continuously required excluding maintenance and depreciation, eg power, fuel, staff, plant equipment, on-costs and overheads.

Planned Maintenance**
Repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown criteria/experience, prioritising scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Rate of annual asset consumption*
A measure of average annual consumption of assets (AAAC) expressed as a percentage of the depreciable amount (AAAC/DA). Depreciation may be used for AAAC.

Rate of annual asset renewal*
A measure of the rate at which assets are being renewed per annum expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

Rate of annual asset upgrade*
A measure of the rate at which assets are being upgraded and expanded per annum expressed as a percentage of depreciable amount (capital upgrade/expansion expenditure/DA).

Reactive maintenance
Unplanned repair work that is carried out in response to service requests and management/supervisory directions.

Recoverable amount
The higher of an asset's fair value, less costs to sell and its value in use.

Recurrent expenditure
Relatively small (immaterial) expenditure or that which has benefits expected to last less than 12 months. Recurrent expenditure includes operating and maintenance expenditure.

Recurrent funding
Funding to pay for recurrent expenditure.

Rehabilitation
See capital renewal expenditure definition.

Remaining life
The time remaining until an asset ceases to provide the required service level or economic usefulness. Age plus remaining life is economic life.

Renewal
See capital renewal expenditure definition.

Residual value
The net amount which an entity expects to obtain for an asset at the end of its useful life after deducting the expected costs of disposal.

Revenue generating investments
Investments for the provision of goods and services to sustain or improve services to the community that are expected to generate some savings or revenue to offset operating costs, eg public halls and theatres, childcare centres, sporting and recreation facilities, tourist information centres, etc.

Risk management
The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.

Section or segment
A self-contained part or piece of an infrastructure asset.

Service potential
The capacity to provide goods and services in accordance with the entity's objectives, whether those objectives are the generation of net cash inflows or the provision of goods and services of a particular volume and quantity to the beneficiaries thereof.

Service potential remaining*
A measure of the remaining life of assets expressed as a percentage of economic life. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (DRC/DA).

Strategic Management Plan (SA)**
Documents Council's objectives for a specified period (3-5 yrs), the principle activities to achieve the objectives, the means by which that will be carried out, estimated income and expenditure, measures to assess performance and how rating policy relates to the Council's objectives and activities.

Sub-component
Smaller individual parts that make up a component part.

Useful life
Either:
(a) the period over which an asset is expected to be available for use by an entity, or
(b) the number of production or similar units expected to be obtained from the asset by the entity.

It is estimated or expected time between placing the asset into service and removing it from service, or the estimated period of time over which the future economic benefits embodied in a depreciable asset, are expected to be consumed by the Council. It is the same as the economic life.

Value in Use
The present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. It is deemed to be depreciated replacement cost (DRC) for those assets whose future economic benefits are not primarily dependent on the asset's ability to generate new cash flows, where if deprived of the asset its future economic benefits would be replaced.

Source: DVC 2006, Glossary
Note: Items shown * modified to use DA instead of CRC
Additional glossary items shown **

1. EXECUTIVE SUMMARY

What Council Provides

Council provides a sewer reticulation service incorporating the town of Blayney and the village of Millthorpe. The sewerage from both of these centres is treated at the Blayney Sewerage Treatment Plant (STP). All other villages within Blayney Shire have no sewer infrastructure and as such are not covered by this plan.

What does it Cost?

There are two key indicators of cost to provide the sewerage service.

- The life cycle cost being the average cost over the life cycle of the asset, and
- The total maintenance and capital renewal expenditure required to deliver existing service levels in the next 20 years covered by Council's ***Strategic Business Plan for Sewerage Services***.

The life cycle cost to provide the sewerage service is estimated at $636,367 per annum. Council's planned life cycle expenditure for year 1 of the asset management plan is $297,000 which gives a life cycle sustainability index of 0.47.

The total maintenance and capital renewal expenditure required to provide the sewerage service the in the next 10 years is estimated at $3,460,800. This is an average of $346,080 per annum.

Council's maintenance and capital renewal expenditure for year 1 of the asset management plan of $247,000, giving a 10 year sustainability index of 0.71.

Plans for the Future

Council plans to operate and maintain the sewer network to achieve the following strategic objectives.

1. To maintain a long-term financial plan to provide full cost recovery for scheme operation and asset replacement at an affordable level of cost to customers.
2. To provide resources for the continuing maintenance of the sewer network and to meet development demands on the system.
3. To manage the sewer system in a manner which is consistent with the preservation of the natural environment and the sustainable management of resources.

Measuring our Performance

Quality
Sewer assets will be maintained in a working condition. Defects found or reported that are outside our service standard will be repaired.

Function
Our intent is that an appropriate sewer network is maintained to provide a safe and efficient network.

Sewer asset attributes will be maintained at a safe and functional level and associated equipment be provided as needed to ensure public safety. Council needs to ensure key functional objectives are met:

- Maintain sewer in a functional and safe condition
- Prolong life of assets through effective maintenance

Safety
Council officers inspect sewer mains in accordance with our Inspection Schedule. Repairs are prioritised and carried out in accordance with Council's maintenance strategy and available funding.

The Next Steps

The actions resulting from this asset management plan are:

- Improve the Council's customer request system to more accurately record the nature, extent, severity and location of defects within the sewer network.
- Maintain a longitudinal database on sewer network conditions
- Improve the collection of physical data pertinent to the maintenance of the sewer network
- Improve financial data collection
- Improve valuation and depreciation projections

2. INTRODUCTION

2.1 Background

This Asset Management Plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding required to provide the required levels of service.

The asset management plan is to be read with the following associated planning documents:

Councils; Blayney Shire Management Plan, Strategic Business Plan for Sewerage Services, 2025 Strategic Vision, On-site Sewerage Management Plan (May 2007), Liquid Trade Waste Policy (May 2007), Section 94 Plan, Acceptance of Septic Tank and Pan Waste to the Sewerage System Policy (May 2007).

This Asset Management Plan is for all sewerage related assets and services for the township of Blayney and the village of Millthorpe. These assets include all Rising Mains, Gravity Mains, Pump Stations, Manholes, Inspection Shafts, Blayney STP, Telemetry System and all Plant and Equipment.

Table 2.1. Assets covered by this Plan

Asset category	Length (m) / Item (ea)	Replacement Value ($)
Rising Main 50mm	1,670	137,574
Rising main 100mm	421	41,651
Rising main 150mm	15,326	1,973,225
Rising main 200mm	3,115	449,125
Rising main 250mm	1,593	303,591
Rising main 300mm	1,183	260,659
Gravity Main 100mm	70	8,984
Gravity Main 150mm	49,042	7,403,590
Gravity Main 225mm	1,283	272,184
Gravity Main 250mm	166	42,676
Gravity main 300mm	2,435	739,800
Pump Stations	9	656,522
Manholes	869	1,951,026
Blayney Sewerage Treatment Plant (includes Telemetry system & other equipment)	1	5,635,645
Total		**19,874,432**

Key stakeholders in the preparation and implementation of this Asset Management Plan are:

Blayney Shire Councillors	Formulate policy for the allocation of resources to maximise benefit to the community whilst minimising the Council's exposure to financial and other risk.
Blayney Shire Council	Maintenance and construction of Council owned Sewerage System for Blayney and Millthorpe.
Department of Water and Energy	Responsible for setting standards, guidelines and assessing applications for the provision of financial assistance under the *Country Towns Water Supply and Sewerage* (CTWS&S) Program.
Environment Protection Authority	Regulates environmental protection, issues licenses to discharge effluent and administers various pollution control acts.
Independent Pricing and Regulatory Tribunal (IPART)	Responsible for urging councils to adopt the pricing principles outlined in Pricing Principles for Local Water Authorities.
Department of Local Government	Responsible for setting guidelines and ensuring accountability and financial stability of Council's service delivery.
Blayney and Millthorpe residents	Users of the sewerage system.
Cadia Valley Operations	Users of treated sewer from the Blayney Sewerage Treatment Plant.
Carcoar, Mandurama and Lyndhurst village residents	Potential future users of the sewerage system.

2.2 Goals and Objectives of Asset Management

The Council exists to provide services to its community. Some of these services are provided by infrastructure assets. Council has acquired infrastructure assets by 'purchase', by contract, construction by Council staff and by donation of assets constructed by developers and others to meet increased levels of service.

Council's goal in managing infrastructure assets is to meet the required level of service in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Taking a whole of life cycle approach,
- Developing cost-effective management strategies for the long term,
- Providing a defined level of service and monitoring performance,
- Understanding and meeting the demands of growth through demand management and infrastructure investment,
- Managing risks associated with asset failures,
- Sustainable use of physical resources,
- Continuous improvement in asset management practices.[1]

[1] IIMM 2006 Sec 1.1.3, p 1.3

This Asset Management Plan is prepared under the direction of Council's vision, mission, goals and objectives.

Blayney Shire Council's Vision is:

To ensure that Blayney Shire Council is an active participant in the growth of the Central NSW Region whilst developing Council's area as an innovative, inspirational and enjoyable environment for its current residents and those wanting to settle in the area.

Blayney Shire Council's Objective for its sewerage services is:

To provide sewerage services in an efficient manner to the agreed and currently recognised health, environmental and other community standards and needs with flexibility to promote and meet development demands within the Region.

Relevant Council goals and objectives and how these are addressed in this Asset Management Plan are:

Table 2.2. Council Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in AMP
To provide a safe, reliable and cost effective sewerage service in a cost effective manner.	To meet the needs of residential, commercial and industrial clients and to cater for economic growth in Blayney and Millthorpe in the most cost effective manner.	Implementing programs to ensure compliance with the Department of Water and Energy Best Practice Guidelines.
To achieve a position of leadership in the sewer utility industry.	To have all Council owned sewer assets at, or above industry standards.	Sewer assets accurately recorded, valued and managed / maintained at, or above industry standard.

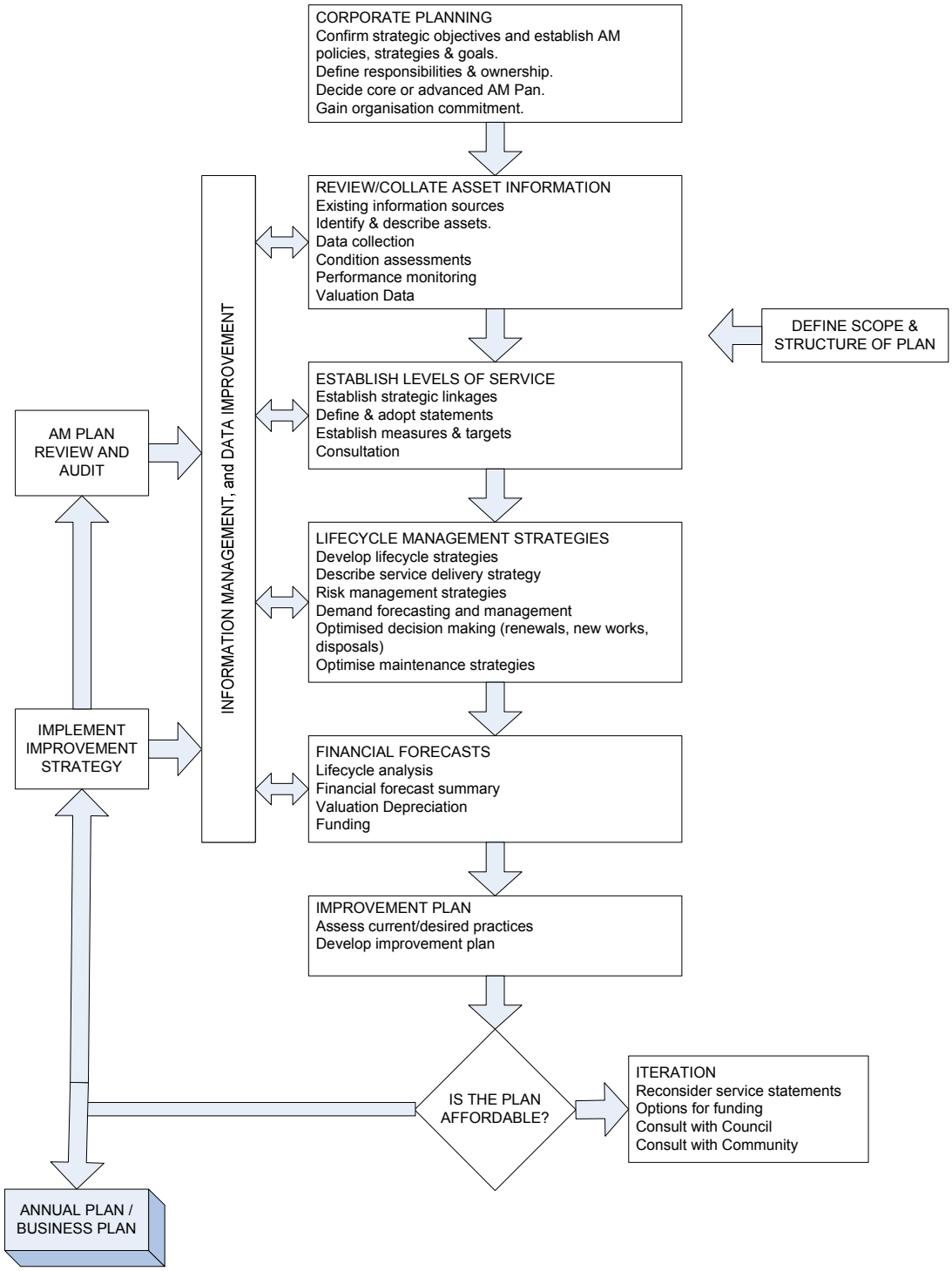
2.3 Plan Framework

Key elements of the plan are

- Levels of service – specifies the services and levels of service to be provided by Council.
- Future demand – how this will impact on future service delivery and how this is to be met.
- Life cycle management – how Council will manage its existing and future assets to provide the required services
- Financial summary – what funds are required to provide the required services.
- Asset management practices
- Monitoring – how the plan will be monitored to ensure it is meeting Council's objectives.
- Asset management improvement plan

A road map for preparing an asset management plan is shown below.

Road Map for preparing an Asset Management Plan
Source: IIMM Fig 1.5.1, p 1.11



2.4 Core and Advanced Asset Management

This Asset Management Plan is prepared as a 'core' asset management plan in accordance with the International Infrastructure Management Manual (IIMM). It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

Future revisions of this Asset Management Plan will move towards 'advanced' asset management using a 'bottom up' approach for gathering asset information for individual assets to support the optimisation of activities and programs to meet agreed service levels.

3. LEVELS OF SERVICE

3.1 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and regulations. These include:

Table 3.2. Legislative Requirements

Legislation	Requirement
Local Government Act 1993	Provide a legal framework for an effective, efficient, environmentally responsible, and open system of Local Government in NSW.
Pollution Control Act 1970 Clear Air Act 1961 The Clean Water Act 1970 The Noise Control Act 1975 The Environmentally Hazardous Chemical Acts 1985	These acts give the Environment Protection Authority the power to control pollution and the disposal of waste; to protect the environment; and to avoid chemical contamination from both Government and private developments or works.
Environmental Planning and Assessment Act 1979 Environmental Planning and Assessment Amendment Act 2008	Specifies the environmental considerations required in all development activities.
Protection of the Environment Operations Act 1997	To protect, restore and enhance the quality of the environment having regard to the need to maintain ecologically sustainable development.
Soil Conservation Act 1938	The objective of this Act is the conservation of soil resources and farm water resources and the mitigation of erosion and land degradation.
Catchment Management Authorities Act 1989	To co-ordinate policies, programs and activities as they relate to total catchment management.
Public Health Act 1991	Consolidates Acts relating to Public Health and provides for the prevention of the spread of disease.
Occupational Health & Safety Act 2002	This Act details Council's responsibilities to ensure the health, safety and welfare of employees and others at places of work.
Independent Pricing and Regulatory Tribunal Regulation Act 2007	This Act enables the Tribunal to determine and advise on process and pricing policy for Government monopoly services.

3.2 Current Levels of Service

This section details the current levels of service provided by Council, dividing them into *customer* and *technically* related groups, and the assets covered by those levels of service. This section also details where/how the levels of service have been derived.

The service levels are divided into two types:

- Customer related
- Technically related

Customer related levels of service relate to the function of the service provided and how the customer receives the service in terms of:

Level of Service	***How the level of service was derived***
Appearance	Customer feedback – letters, phone calls etc
Reliability	Customer expectations, quality of materials
Maintenance	Customer feedback and expectations
Responsiveness	Customer expectations, availability of resources
Availability	Customer expectation, assumption based on local knowledge
Comfort (no smell)	Customer expectation and feedback, legislation
Safety	Legislative requirements, customer expectation
Affordability	Customer expectation, budgetary constraints
Empathy (understanding, individual attention)	Customer feedback, assumption based on local knowledge
Assurance/customer/community satisfaction	Customer expectations and feedback

Technically related levels of service relate to the technical measures and the outputs the customer receives in terms of:

Level of Service	***How the level of service was derived***
Quality	Legislation, customer expectation
Maintainability	Availability/quality of resources
Capacity	Size of asset, design constraints
Legislative requirements	Relevant Authorities
Cost Efficiency	Available resources, management of asset

Council's current service levels are detailed in Table 3.1.

Table 3.1. Current Service Levels

Community Levels of Service

Key Performance Indicator	Level of Service	Performance Measurement Process	Target Performance	Current Performance	Actions to meet performance target	Resources Required
Appearance	Appropriately located sites for STP and pumping stations Minimal intrusion upon surrounding environment	Number of related complaints	99% customer satisfaction	95% customer satisfaction	Community consultation	Public forum
Reliability	Safe working system with minimal blockages	Number of complaints and/or number of blockages	26 per year	36 per year	Regular inspections and maintenance of assets	Labour Sewer Camera Past data/history Monitoring system
Responsiveness	Problem rectified within response time acceptable to customer	Number of problems rectified within acceptable response time	90%	80%	Improve lines of communication between BSC and customer Up to date equipment	Labour Plant and Equipment Monitoring system
Availability	Provision for all residential, commercial and industrial sites within Blayney and Millthorpe	Number of sites connected	99%	98%	Provision of further infrastructure	Additional Funding Labour Plant Equipment
Empathy (understanding, individual attention)	Appreciation of customer requests, complaints and enquiries by BSC staff	Number of complaints or compliments Service requests in BizeAsset Customer Request System	< 5 complaints per year	< 5 complaints per year	Continue current practices	Training

Key Performance Indicator	Level of Service	Performance Measurement Process	Target Performance	Current Performance	Actions to meet performance target	Resources Required
Affordability	Economical service at an acceptable rate to the customer	Number of complaints	< 5 complaints per year	Insufficient data for accurate measurement	Comparison with other local authorities of similar size User pays system	Department of Energy Utility and services (DEUS) Other local authorities BSC records
Comfort	Odour at an acceptable level to the customer	Number of complaints	< 5 complaints per year	< 5 complaints per year	Continue current practices with regular inspection and monitoring of problem areas	Labour
Assurance (knowledge, courtesy, trust, confidence)	Customer satisfaction/faith in Council's ability to run and maintain system	Number of complaints	< 5 complaints per year	< 5 complaints per year	Continue current practice Employment of appropriately trained/ accredited staff	Training
Safety	Compliance with OH&S Act 2000 and OH&S regulation 2000	Number of accidents/incidents	< 5 accidents/incidents per year	< 5 accidents/incidents per year	Completion of hazard identification and risk assessment form Compliance with BSC policy and procedures	Training Labour

Technical Levels of Service

Key Performance Indicator	Level of Service	Performance Measurement Process	Target Performance	Current Performance	Actions to meet performance target	Resources Required
Maintainability	To provide a low maintenance service	Number of service breaks	< 1 service break per week	2 service breaks per week	Asset Replacement program Regular inspections	Funds Labour
Quality	To provide a high quality, long lasting asset	Durability	Design life of asset components	Exceeds design life	Regular inspection and maintenance	Funds Labour
Capacity	To cope with input from Blayney, Millthorpe and average stormwater infiltration	To handle input from Blayney and Millthorpe	0	0	Follow current procedures	Funds and Labour
Legislative Compliance	To comply with all relevant legislation and regulatory authorities	Number of non-conformances issued	0	0	Implementation of relevant guidelines and best practices	Liaison with regulatory bodies Relevant literature
Cost efficiency	Low cost, high efficiency	Comparable to similar sized local authorities Costs within budget allocations	Within Budget allocations	Within Budget allocations	Regular review budgetary constraints and processes and procedures	Funds

4. FUTURE DEMAND

4.1 Demand Forecast

Factors affecting demand include population change, technological developments, seasonal factors and residential, commercial and industrial growth. The other potential key driver of demand for Blayney sewer infrastructure is the possible extension of the network to selected villages.

The Australian Bureau of Statistics 2004 NSW Regional Profile estimates the resident population of Blayney Shire at 30 June 2002 as 6,618. Further, the Australian Bureau of Statistics states populations within the postcodes of the shire, as follows:

- Blayney/Barry (2799) 3540
- Lyndhurst area (2797) 399
- Millthorpe area (2798) 1415
- Mandurama area (2792) 469
- Carcoar (2791) 381

Note: Postcodes and local government areas do not necessarily correspond.

The Blayney Shire Council's sewer infrastructure networks extends only to Blayney and Millthorpe as such it is reasonable to assume that the effect of population on demand would amount to an approximate total of 4555 people (being Blayney plus Millthorpe populations minus an estimated 400 population from within and around the Barry area).

Development within the Blayney local government area is summarised below, based on the number and type of development applications received by Council.

Type	2006	2007	2008	2009
Dwellings	52	47	40	39
Minor buildings / additions	119	101	105	69
Industrial / commercial	15	33	7	16
Subdivision	19	12	16	6
Other (eg. pool, sign)	18	12	28	16
Total number	**223**	**205**	**196**	**146**
Total value (building work)	**$12,998,244**	**$28,235,956**	**$23,892,510**	**$21,560,781**

As shown in the table above, the number of approvals tends to fluctuate from year to year, as well as the total value of works. The industrial/commercial sector developments peaked in 2007 at 33 and have since declined to 16 in 2009. The number of dwelling applications have been consistently around the 40 to 50 per annum over the period.

Subdivision

One of the major impacts with regard to subdivisions being experienced both in Blayney and throughout NSW is the increasing fragmentation of rural land from urban sprawl and increasing rural-residential subdivision. A significant component of the *Blayney LEP 1998* was the introduction of new subdivision controls, particularly in rural areas. This change was brought about as a result of policy direction by NSW Agriculture and the Department of Urban Affairs and Planning (now DIPNR).

The bulk of rural-residential subdivision in Blayney Shire does not impact on the sewer infrastructure. It will only be developments that are in close proximity to either Millthorpe or Blayney that may have an impact. This will, of course, depend on whether or not the developer is required to connect into the existing sewer infrastructure.

A major driver for residential subdivisions is the ever increasing cost of land in the regional cities of Orange and Bathurst, resulting in people wanting to get into the housing market, choosing to relocate to Blayney for the cheaper land and to commute to the two regional centres which are both approximately 30 minutes from Blayney.

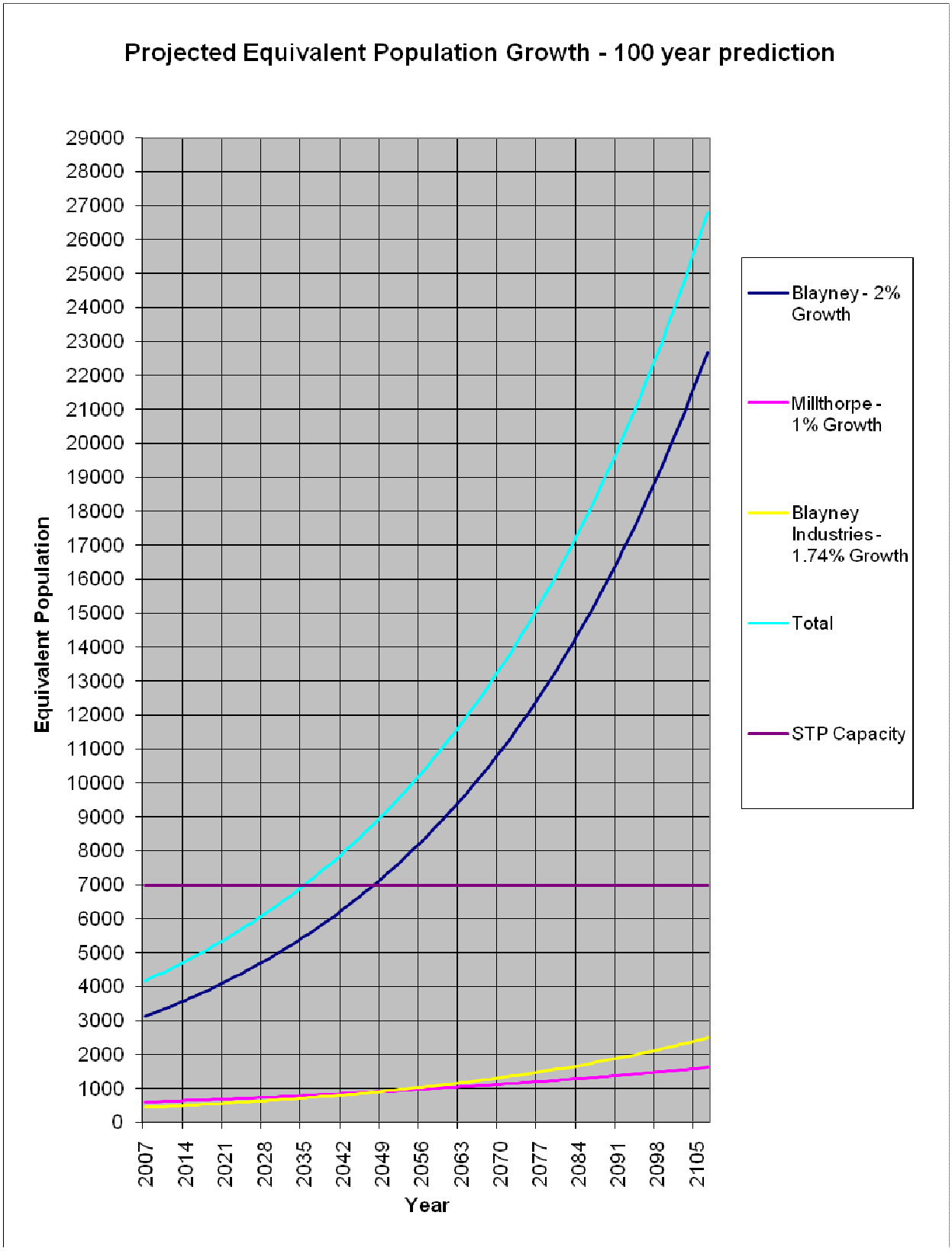
There has also been a notable increase in retirees moving into the Shire from Sydney which enables them to buy/build a home and still have a comfortable sum of money left over from selling their city residence to enable a more comfortable retirement.

Hydraulic design of a sewage scheme is based on the contributing equivalent population (ep). One person in a residential house is counted as being one ep and the amount of waste or sewage generated by other sources are converted to the relevant number of ep's in comparison to this benchmark. The hydraulic load per ep is based on a unit-loading rate of 210 L/ep.d. This has been used in lieu of the standard long term average unit hydraulic loadings of 240 L/ep.d due to the reduced water consumption due to prevailing drought conditions.

The assessment of current ep loading was for 2007. Current ep loads were calculated by dividing the daily pump discharge rate for each catchment by the hydraulic unit-loading rate per ep. Calculated ep numbers were compared to Council's population count to check for accuracy of this assessment.

The following graph presents the current ep and future ep projections for the Blayney Sewerage Scheme over the next 100 years. Council has confirmed that the projected annual growth rates are 2% for Blayney, 1% for Millthorpe and 1.74% for the Blayney industrial area. These rates are as per Blayney Sewage Treatment Plant Augmentation - Concept Development Report, DPWS (Reference 2).

It can be seen from the graph that the current capacity of the Blayney Sewerage Treatment Plant will be adequate until 2035 based on current population growth rates. Therefore, the Blayney STP will require upgrading within the next 28 years.



4.2 Demand Management Strategies

Demand management strategies provide alternatives to the creation of new assets in order to meet demand and look at ways of modifying customer demands in order that the utilisation of existing assets is maximised and the need for new assets is deferred or reduced.

For sewer services there are limited opportunities to achieve significant extensions to asset capacity from demand management strategies. There is some scope for reducing demand on the network from encouraging the adoption of dual flush cisterns, through community education / awareness campaigns.

Demand factor trends and impacts on service delivery are summarised in Table 4.1.

Table 4.1. Demand Factors, Projections and Impact on Services

Demand factor (equivalent population)[2]	Present (2007)	Projected (2021)	Impact on services
Millthorpe	600	690	Increased equivalent population means increased demand on sewer infrastructure.
Blayney Residential	3,130	4,131	
Blayney Industrial	444	565	
Total ep	4,174	5,386	

Council considers the following as the issues regarding the future direction for the Shire that may have some impact on the operation of the sewerage services for the next 20 years.

ISSUE	IMPLICATION
Continued development of industry within Blayney Shire	Need to expand the sewerage treatment works
Continued residential development (subdivision) in Millthorpe and Blayney	Need to expand the sewerage treatment works
Development of the Cadia Mine	Potential increase in population at Millthorpe and Blayney
Environmental sensitivity of Carcoar Dam	Requirement by EPA to ensure any effluent disposal to the river is to sensitive water standard
Increase in Tourism	Potential increase in use of Millthorpe Sewerage system. Need to size the Millthorpe scheme and the Blayney STW to cater for this growth

The effluent discharge from Blayney STP currently meets EPA Licence conditions, and it is planned to upgrade the effluent to *sensitive water standard* within the next 10 years.

4.3 Changes in Technology

Technology changes are forecast to affect the delivery of services covered by this plan in the following areas.

[2] Blayney Sewerage Scheme; Sewer Overflow Investigations Report, Wastewater Services Section of Department of Commerce, June 2007.

Technology Change	Effect on Service Delivery
Trenchless Pipeline Techniques	Should reduce the cost of pipeline maintenance and renewal Will reduce the impact of works on the community and environment.

4.4 New Assets from Growth

The new sewer mains required to meet growth will be acquired through development of land by Council and other developers. The predicted mains lengths have been determined from values of previous years. On average Council has acquired 855 metres of sewer mains, each year for the past four years. This average has been added to the existing network to estimate the growth length of sewer mains and the number of manholes over the next 20 years. The results are summarised in Fig 1.

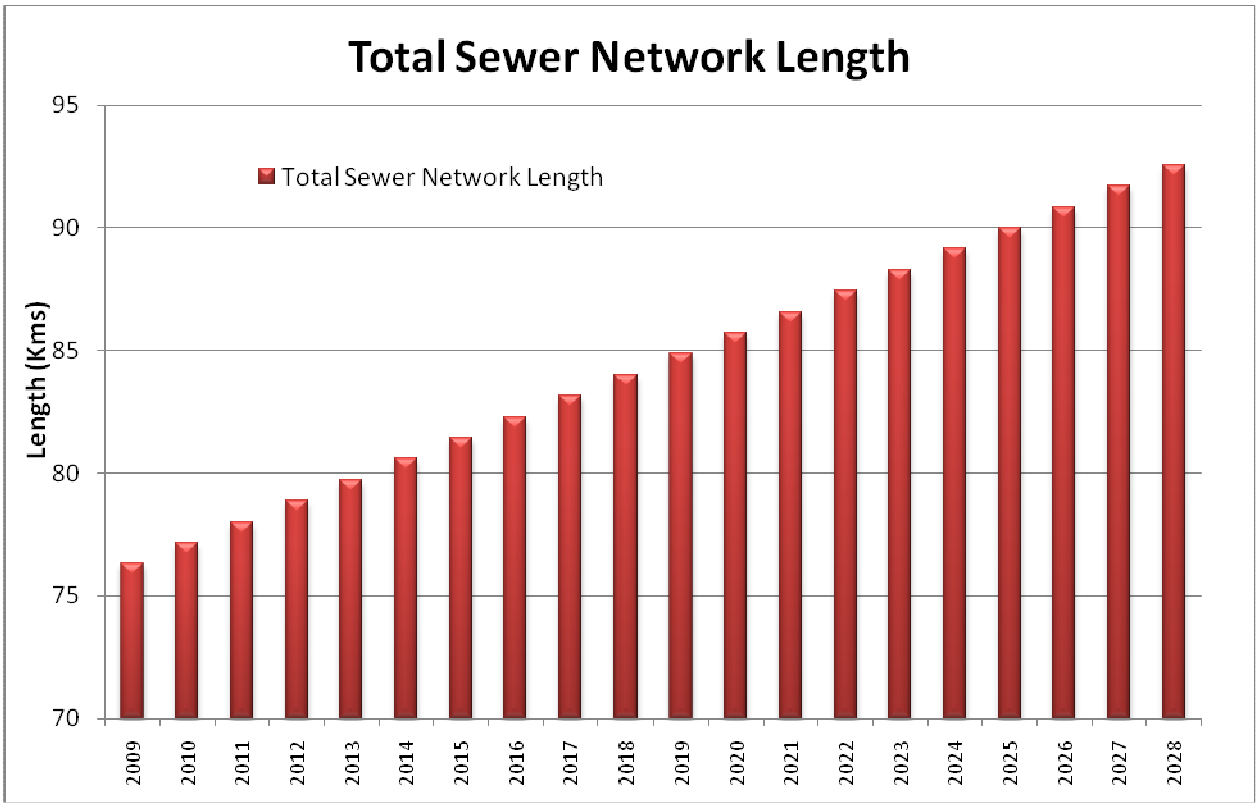


Fig 1. New Assets from Growth

Acquiring these new assets will commit Council to fund ongoing operations and maintenance costs. The future costs are identified and considered in developing forecasts of future operating and maintenance costs.

5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in section 3) while optimising life cycle costs.

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this Asset Management Plan are shown below.

Asset category	Length (m) / Item (ea)
Rising Main 50mm	1,670
Rising Main 100mm	421
Rising Main 150mm	15,326
Rising Main 200mm	3,115
Rising Main 250mm	1,593
Rising Main 300mm	1,183
Gravity Main 100mm	70
Gravity Main 150mm	49,042
Gravity Main 225mm	1,283
Gravity Main 250mm	166
Gravity Main 300mm	2,435
Pump Stations	9
Manholes	869
Blayney Sewerage Treatment Plant and Telemetry system	1

The age profile of Council's sewer network has been determined by using various sources of information.

Predominately the information has been gathered from Junction Sheets that detail the location and depth of connections. They also indicate lengths between manholes, which have been GPS logged. Other sources have been historic maps and other Council records.

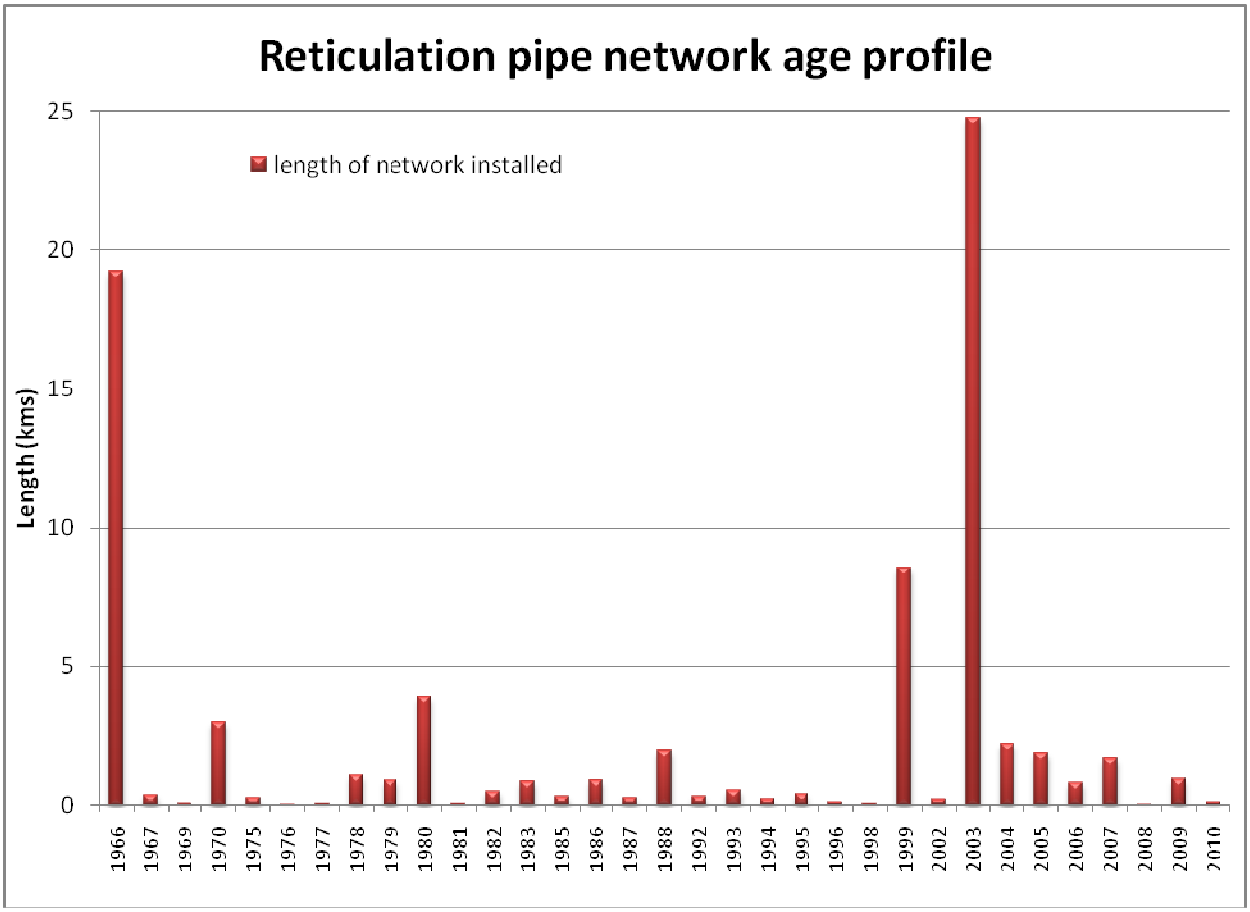


Fig 2. Asset Age Profile

5.1.2 Asset condition

Considering the "go / no go" nature of the sewer network, there is little additional benefit gained by conducting a full condition assessment, which is limited in its capacity to accurately assess pipe condition. For the purposes of this Asset Management Plan, the entire reticulation network has been given a condition rating of '1'.

Condition is measured using a 1 – 5 rating system.

Rating	Description of Condition
1	**Excellent**: Sound condition, well maintained, no defects.
2	**Good:** Minor deterioration, no significant impact on sewer network integrity or safety. Minor maintenance required (5%).
3	**Average:** Functionally sound, deterioration beginning to impact on sewer network integrity or safety. Significant maintenance is required (10 – 20%)
4	**Poor:** Significant defects, marked deterioration in asset integrity and safety. Significant renewal/upgrade required (20 – 40%).
5	**Very Poor:** Failure or near failure. Over 50% of the sewer network component requires replacement.

5.1.3 Asset valuations

The value of assets as at 30 June 2009 covered by this Asset Management Plan is summarised below. Assets were last revalued at 2007. Assets are valued at greenfield rates.

Current Replacement Cost	**$19,876,252**
Depreciable Amount	**$19,876,252**

Depreciated Replacement Cost **$15,203,714**

Annual Depreciation Expense **$263,410**

Council's sustainability reporting states the rate of annual asset consumption and compares this to asset renewal and asset upgrade and expansion.

Asset Consumption **1.73%**

Asset renewal **0.25%**

Annual Upgrade/expansion **1.94%**

5.2 Risk Management Plan

An assessment of risks associated with service delivery from infrastructure assets has identified critical risks to Council. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' – requiring prioritised corrective action identified in the infrastructure risk management plan are summarised in Table 5.2.

Table 5.2. Critical Risks and Treatment Plans

Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan
Reticulation Systems	Collapse of pipes or manholes	H	Carry out CCTV inspections of older sewer reticulation network and replace or reline as required.
Reticulation Systems	Tree root invasion	VH	Carry out CCTV inspections in known 'problem areas'. Long-term encourage suitable plantings in road reserves and sewer easements.
Reticulation Systems	Damage by excavation	H	Dial before you dig service.

5.3 Routine Maintenance Plan

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again.

5.3.1 Maintenance plan

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

Maintenance expenditure trends are shown in Table 5.3.1

Table 5.3.1. Maintenance Expenditure Trends

Year	Maintenance Expenditure		
	Reactive	**Planned**	**Cyclic**
2006/07	$81,000	$4,000	$161,000
2007/08	$81,000	$4,000	$161,000
2008/09	$35,000	$1,000	$172,000

Planned maintenance work is 83% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet required service levels. Future revision of this Asset Management Plan will include linking required maintenance expenditures with required service levels.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement.

5.3.2 Standards and specifications

Maintenance work is carried out in accordance with the following Standards and Specifications.

Blayney Shire Council, Sewer Strategic Asset Management Plan, 2010.

WBC Strategic Alliance, Guidelines for Engineering Works, December 2008.

5.3.3 Summary of future maintenance expenditures

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Fig 4. There are two significant ‘steps’ in the planned maintenance expenditure over the period, which arise from the possible expansion of the Sewerage Scheme to Carcoar and Mandurama, then Lyndhurst.

Note that all costs are shown in current 2007 dollar values.

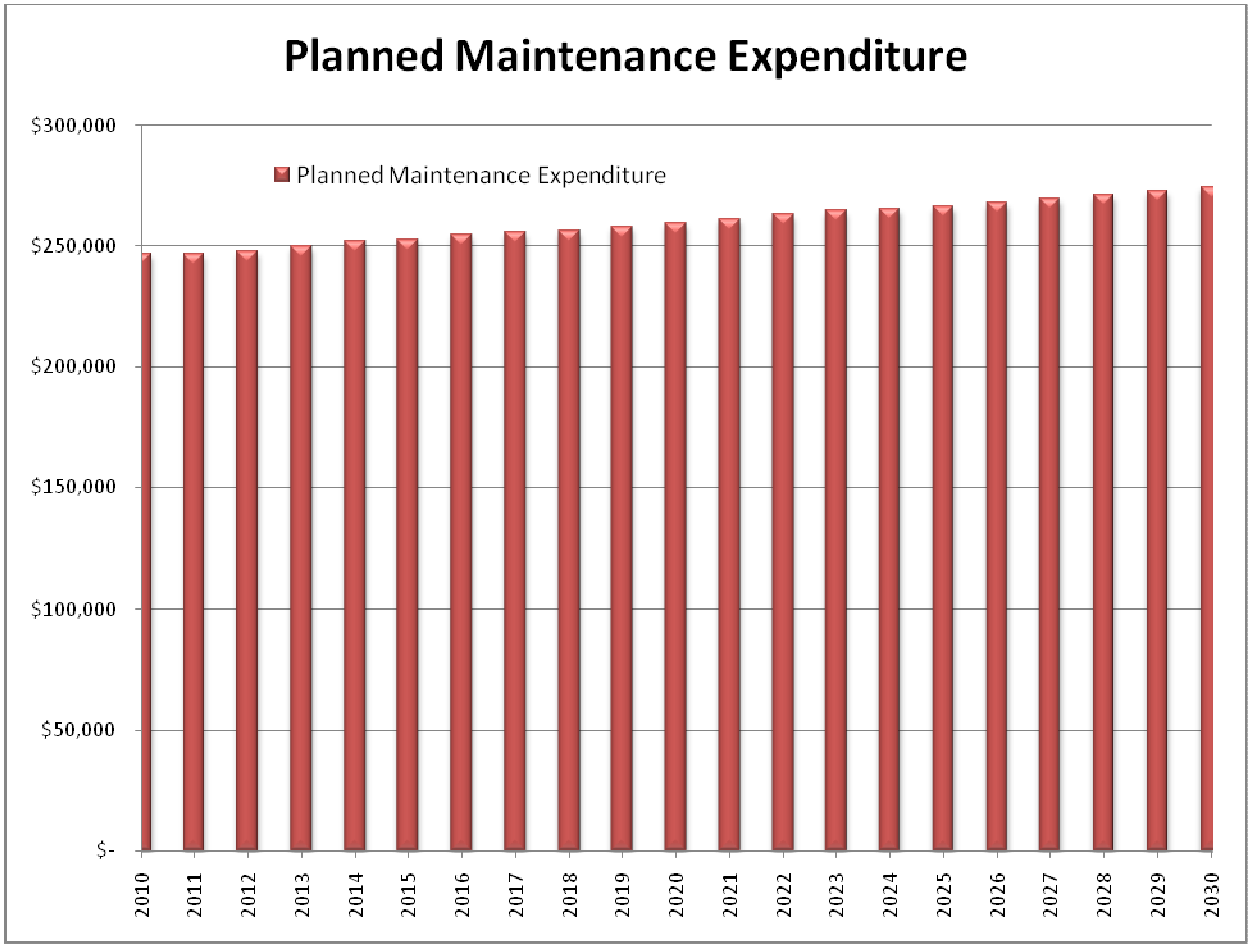


Fig 4. Planned Maintenance Expenditure

Maintenance is funded from Council's Sewerage Scheme operating budget. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

Renewal expenditure is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is an upgrade/expansion or new works expenditure.

5.4.1 Renewal plan

Assets requiring renewal are identified from estimates of remaining life obtained from the asset register and from recommendations made by Council's waste water staff. Candidate proposals are inspected by remote camera to verify accuracy of remaining life estimate and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds are scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1 Renewal Priority Ranking Criteria

Criteria	Weighting
Structural Integrity	30%
Function	30%
Safety	20%
Level of Maintenance	20%
Total	**100%**

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

Examples of low cost renewal include trenchless technology such as in-situ relining of sewer pipes and manholes. Where a pipe cannot be relined, it is necessary to excavate the old pipe and replace it.

5.4.2 Renewal standards

Renewal work is carried out in accordance with NSW Department of Water and Energy Code of Practice for Plumbing and Drainage, 2006. Manufacturers' requirements for the installation of propriety and precast / prefabricated products are also adhered too.

5.4.3 Summary of future renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Fig 5. Note that all costs are shown in current 2007 dollar values.

The projected capital renewal program is shown in Appendix A.

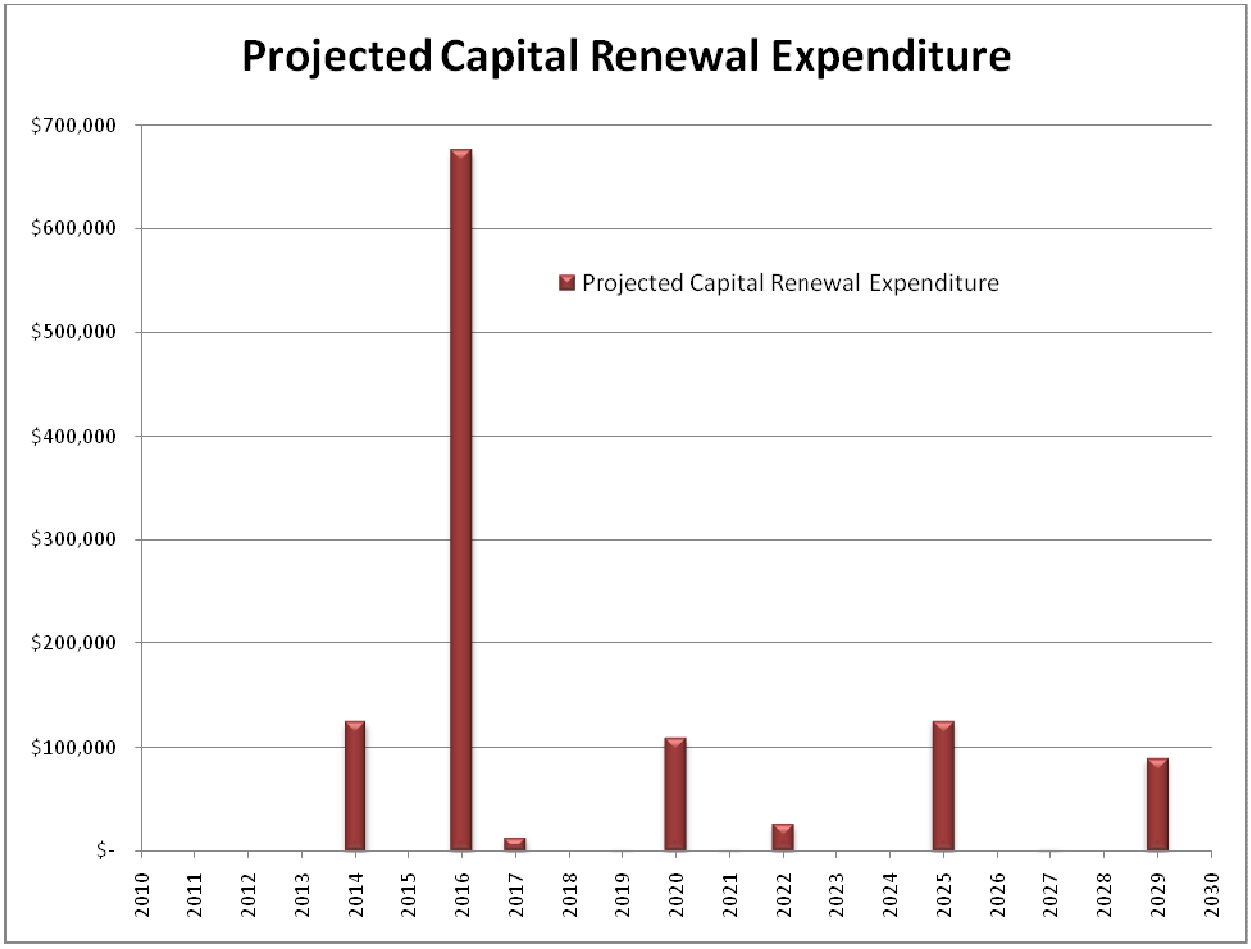


Fig 5. Projected Capital Renewal Expenditure

Deferred renewal, ie those assets identified for renewal and not scheduled for renewal in capital works programs are to be included in the risk assessment process in the risk management plan.

Renewals are to be funded from Council's capital works program and grants where available. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

New works are those works that create a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its current capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development. These assets from growth are considered in Section 4.3.

5.5.1 Selection criteria

New sewer reticulation assets (pipes, manholes and pump stations) are constructed as new growth dictates. It is projected that the majority of new reticulation assets will be provided to Council by private land developers, through sub-divisions. Other sewer assets are identified from various sources such as Councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed below.

Table 5.5.1 New Assets Priority Ranking Criteria

Criteria	Weighting
Inadequate capacity	50%
Improved environmental performance	30%
Changes in re-use requirements	20%
Total	**100%**

5.5.2 Standards and specifications

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 Summary of future upgrade/new assets expenditure

Planned upgrade/new asset expenditures are summarised in Fig 6. The planned upgrade/new capital works program is shown in Appendix A. As previously stated (Section 5.5.1) the majority of increases in the sewer reticulation network will be funded by / provided to Council via private land developments and are therefore not included in the analysis of New Asset Expenditure. There is no estimate of these values in the Asset Management Plan.

All costs are shown in current 2007 dollar values, unless otherwise stated.

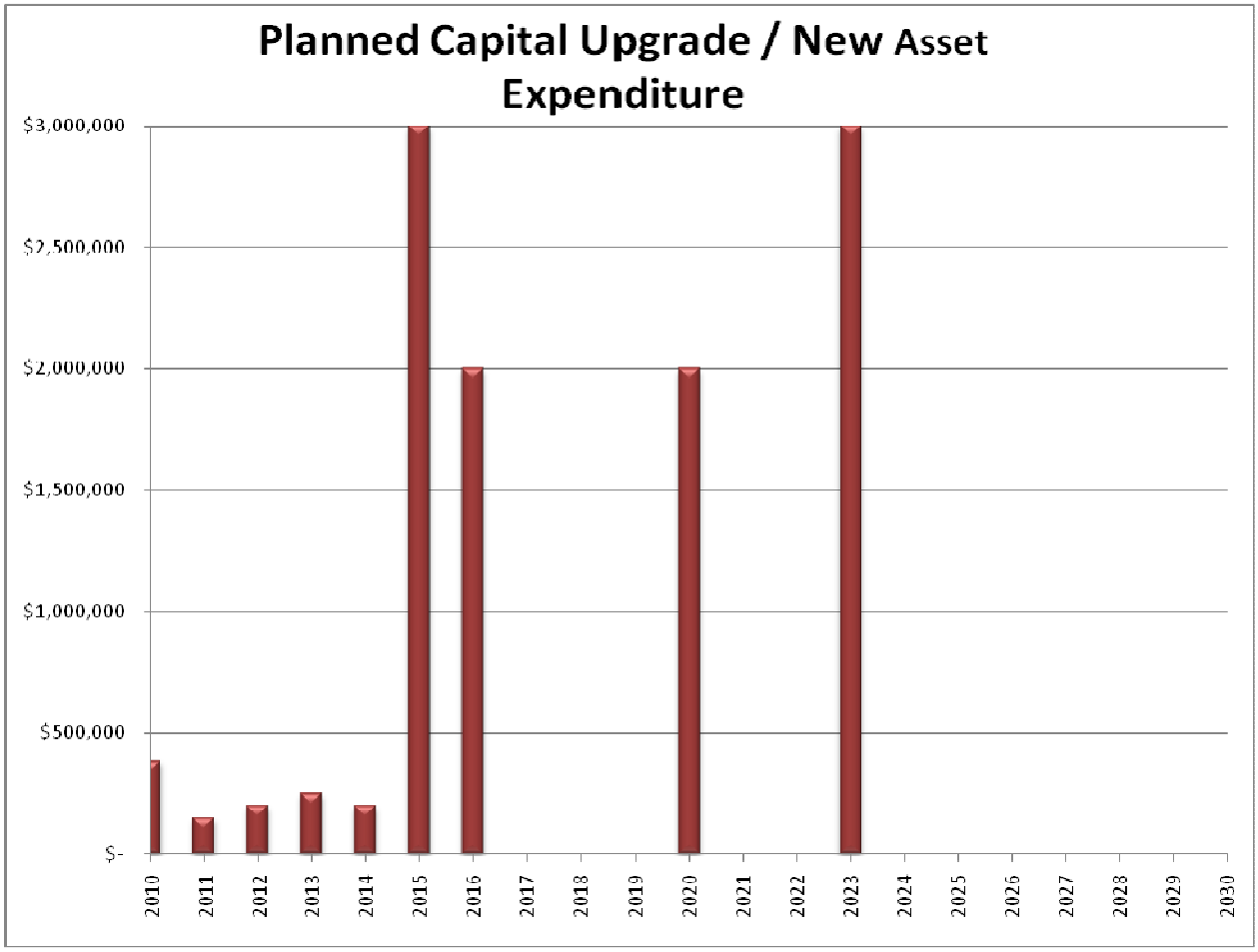


Fig 6. Planned Capital Upgrade/New Asset Expenditure

New assets and services are to be funded from Council's capital works program and grants where available. The substantial expenditures projected in 2015 and 2016 relate to the possible expansion of the sewer scheme to the villages of Carcoar and Mandurama; the expenditure in 2020 relates to the possible expansion of the scheme to the village of Lyndhurst; and the expenditure of $3M in 2023 relates to the augmentation of the Blayney Sewerage Treatment Plant to sensitive water standards. This is further discussed in Section 6.2.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation.

There are no plans/intensions to dispose of any sewer assets in the next 20 years. The only reason for disposal would be a need to relocate sewer mains to address a surcharge issues. However, the system has been analysed and there are no known deficiencies that would require relocation of any sewer assets.

Any cashflow projections from asset disposals will be developed if and when required in future revisions of this asset management plan.

6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this Asset Management Plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 Financial Statements and Projections

The financial projections are shown in Fig 7 for planned operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets).

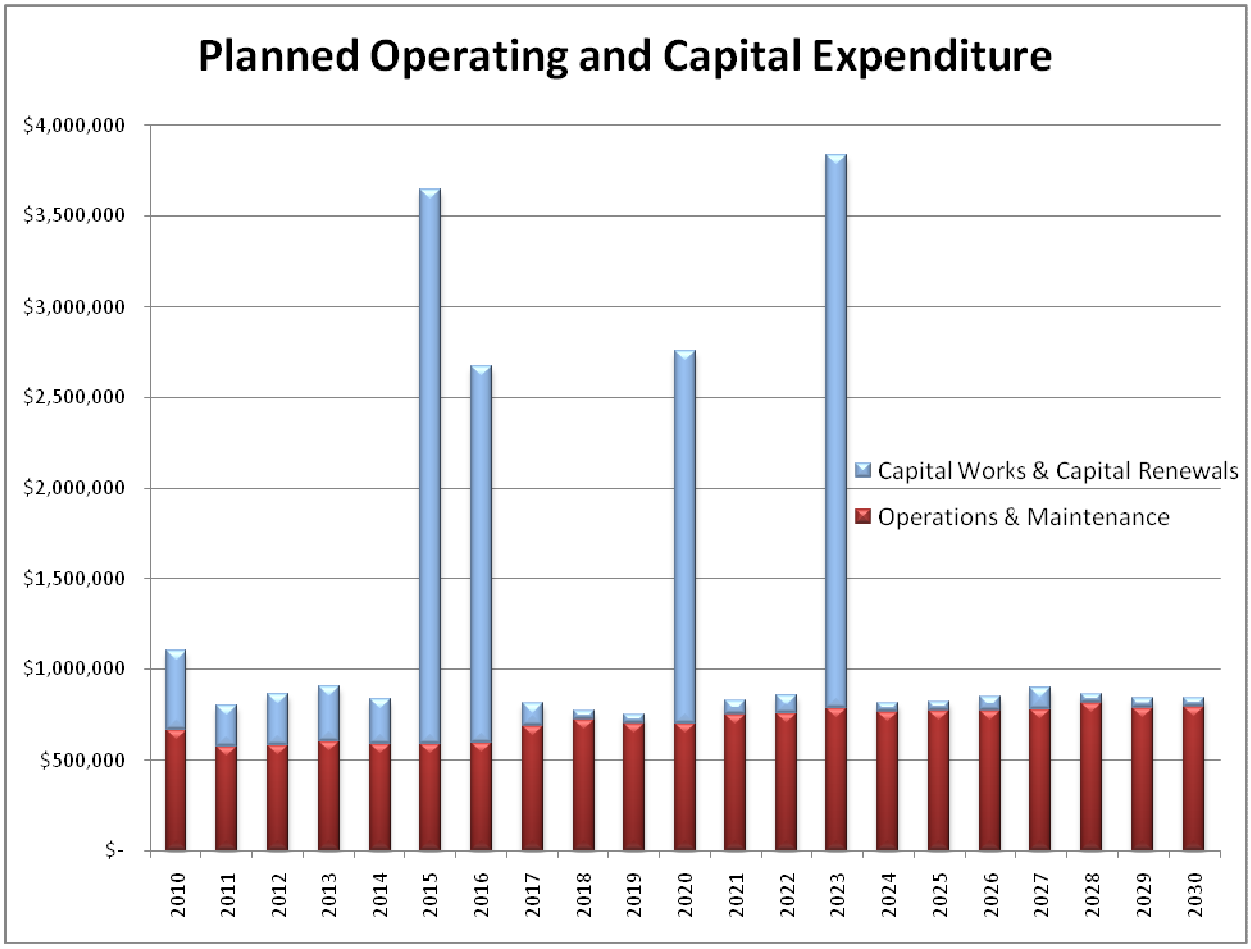


Fig 7. Planned Operating and Capital Expenditure

Note that all costs are shown in current 2007 dollar values.

6.1.1 Sustainability of service delivery

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium term costs over the 10 year financial planning period.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset consumption (depreciation expense). The annual average life cycle cost for the services covered in this Asset Management Plan is $636,367.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is $297,000.

A gap between life cycle costs and life cycle expenditure gives an indication as to whether present consumers are paying their share of the assets they are consuming each year. The purpose of this Sewer Asset Management Plan is to identify levels of service that the community needs and can afford and develop the necessary long term financial plans to provide the service in a sustainable manner.

The life cycle gap for services covered by this Asset Management Plan is $339,367 per annum. The life cycle sustainability index is 0.47.

Medium term – 10 year financial planning period

This asset management plan identifies the estimated maintenance and capital expenditures required to provide an agreed level of service to the community over a 20 year period for input into a 10 year financial plan and funding plan to provide the service in a sustainable manner.

This may be compared to existing or planned expenditures in the 20 year period to identify any gap. In a core asset management plan, a gap is generally due to increasing asset renewals.

Fig 8 shows the projected asset renewals in the 20 year planning period from the asset register. The projected asset renewals are compared to planned renewal expenditure in the capital works program and capital renewal expenditure in year 1 of the planning period as shown in Fig 8. Table 6.1.1 shows the annual and cumulative funding gap between projected and planned renewals.

Fig 8. Projected and Planned Renewals and Current Renewal Expenditure

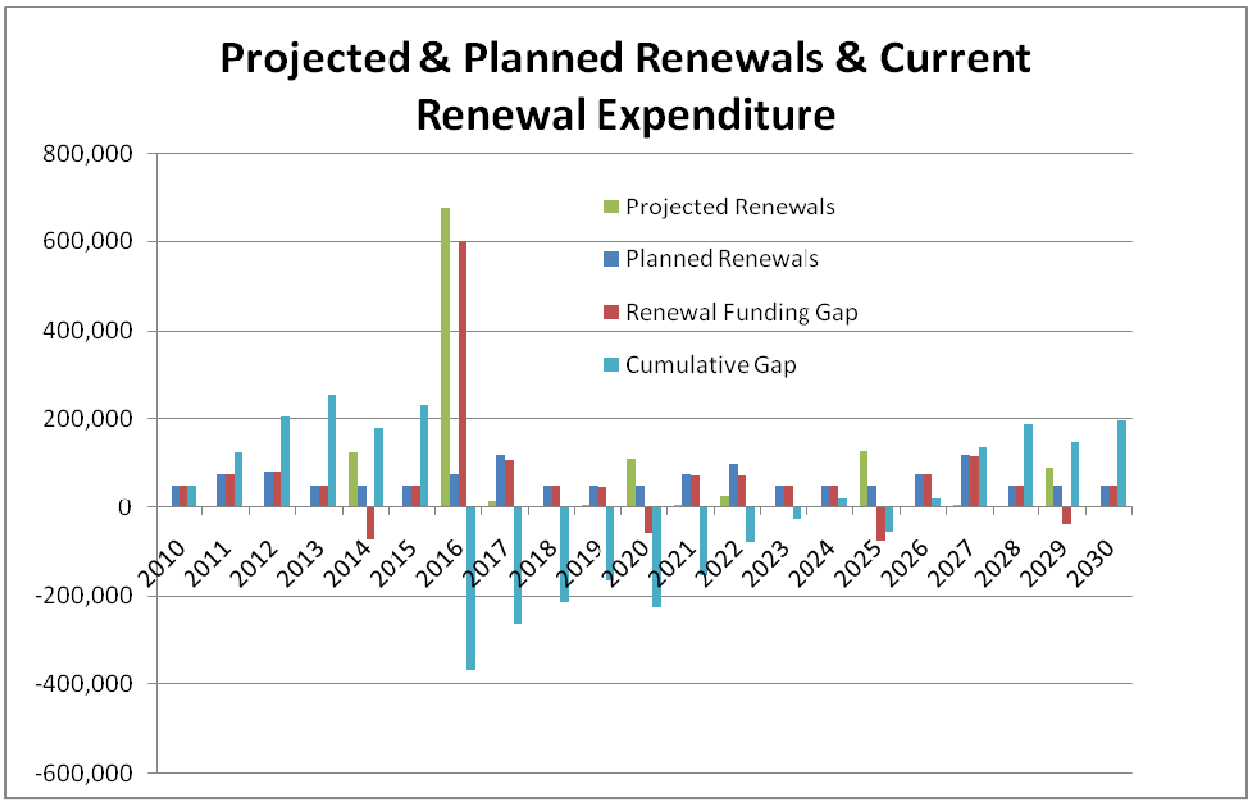


Table 6.1.1 shows the gap between projected and planned renewals.

Table 6.1.1 Projected and Planned Renewals and Expenditure Gap

Year	Projected Renewals	Planned Renewals	Renewal Funding Gap	Cumulative Gap
2010	0	50,000	50,000	50,000
2011	0	75,000	75,000	125,000
2012	0	80,000	80,000	205,000
2013	0	50,000	50,000	255,000
2014	125,000	50,000	-75,000	180,000
2015	0	50,000	50,000	230,000
2016	675,400	75,000	-600,400	-370,400
2017	13,200	120,000	106,800	-263,600
2018	0	50,000	50,000	-213,600
2019	2,200	50,000	47,800	-165,800
2020	110,000	50,000	-60,000	-225,800
2021	2,200	75,000	72,800	-153,000
2022	26,000	100,000	74,000	-79,000
2023	0	50,000	50,000	-29,000
2024	0	50,000	50,000	21,000
2025	126,000	50,000	-76,000	-55,000
2026	0	75,000	75,000	20,000
2027	3,000	120,000	117,000	137,000
2028	0	50,000	50,000	187,000
2029	90,000	50,000	-40,000	147,000
2030	0	50,000	50,000	197,000

Providing services in a sustainable manner will require matching of projected asset renewals to meet agreed service levels with planned capital works programs and available revenue.

A gap between projected asset renewals, planned asset renewals and funding indicates that further work is required to manage required service levels and funding to eliminate any funding gap.

Council will manage the ‘gap’ by developing this Asset Management Plan to provide guidance on future service levels and resources required to provide these services, and by inspecting the reticulation pipe network to better estimate useful life of these assets. When complete it will be necessary to review this plan.

Council’s long term financial plan covers the first 10 years of the 20 year planning period. The total maintenance and capital renewal expenditure required over the 10 years is $3,460,800.

This is an average expenditure of $346,080. Estimated maintenance and capital renewal expenditure in year 1 is $247,000. The 10 year sustainability index is 0.71

6.2 Funding Strategy

Projected expenditure identified in Section 6.1 is to be funded from Council’s operating and capital budgets. The funding strategy is detailed in the Council’s 10 year long term financial plan.

The nature of a subterranean sewer network makes condition inspections expensive and they do not necessarily give a definitive reading. Considering the ‘go / no go’ nature of the sewer network, the benefits of an extensive condition assessment program in terms of improved service levels are minimal. Council’s program is therefore focussed on periodic inspections based on the age of the network and areas known to generate problems.

Council funds all work to the sewer reticulation service through income raised by the Blayney and the Millthorpe Sewerage Service Connected and Vacant / Unmetered Access charges and the Non-Residential variable (by size of connection) Access and Usage charges.

The current levels of funding are proving adequate for the short and long term. Additional funding through grants and increased charges will need to be considered if the Sewer system is expanded to incorporate the villages of Carcoar, Mandurama and Lyndhurst.

6.3 Valuation Forecasts

Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others donated to Council. Fig 9 shows the projected replacement cost asset values over the planning period in current 2010 dollar values.

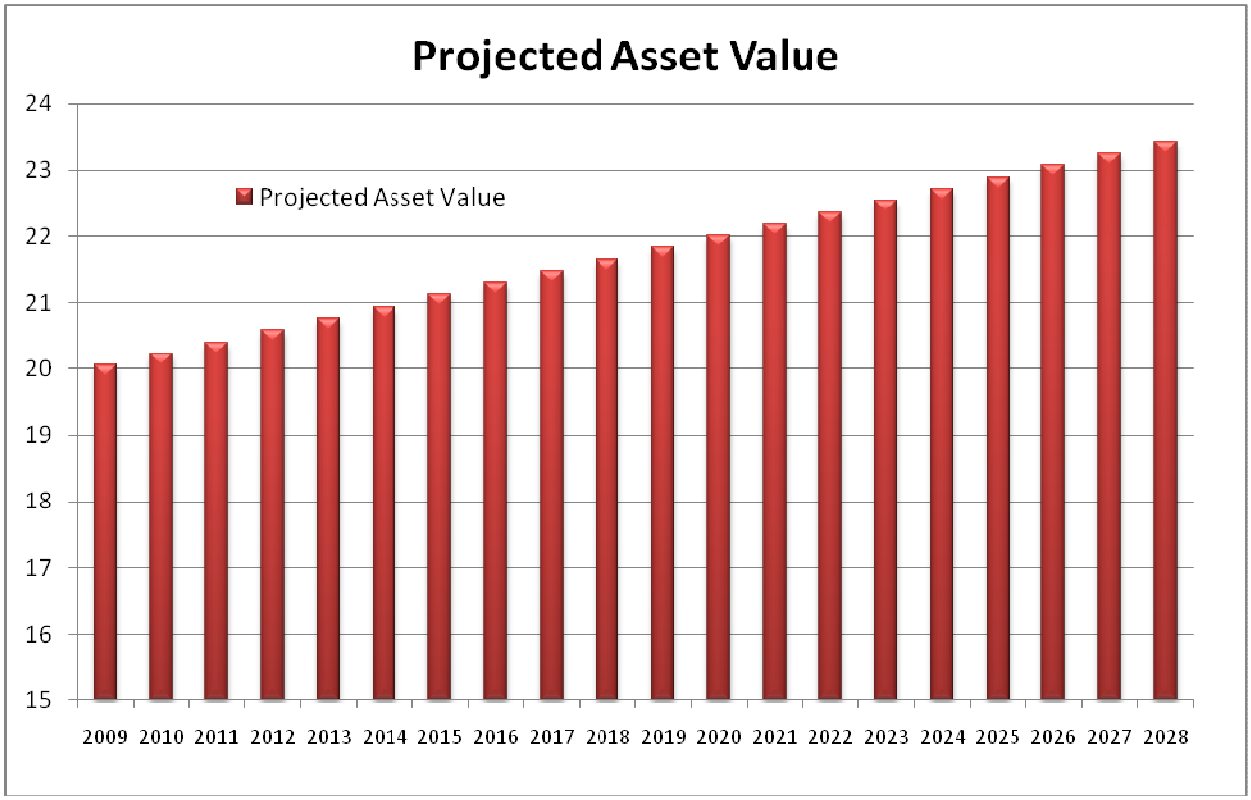


Fig 9. Projected Asset Values

Depreciation expense values are forecast in line with asset values as shown in Fig 10.

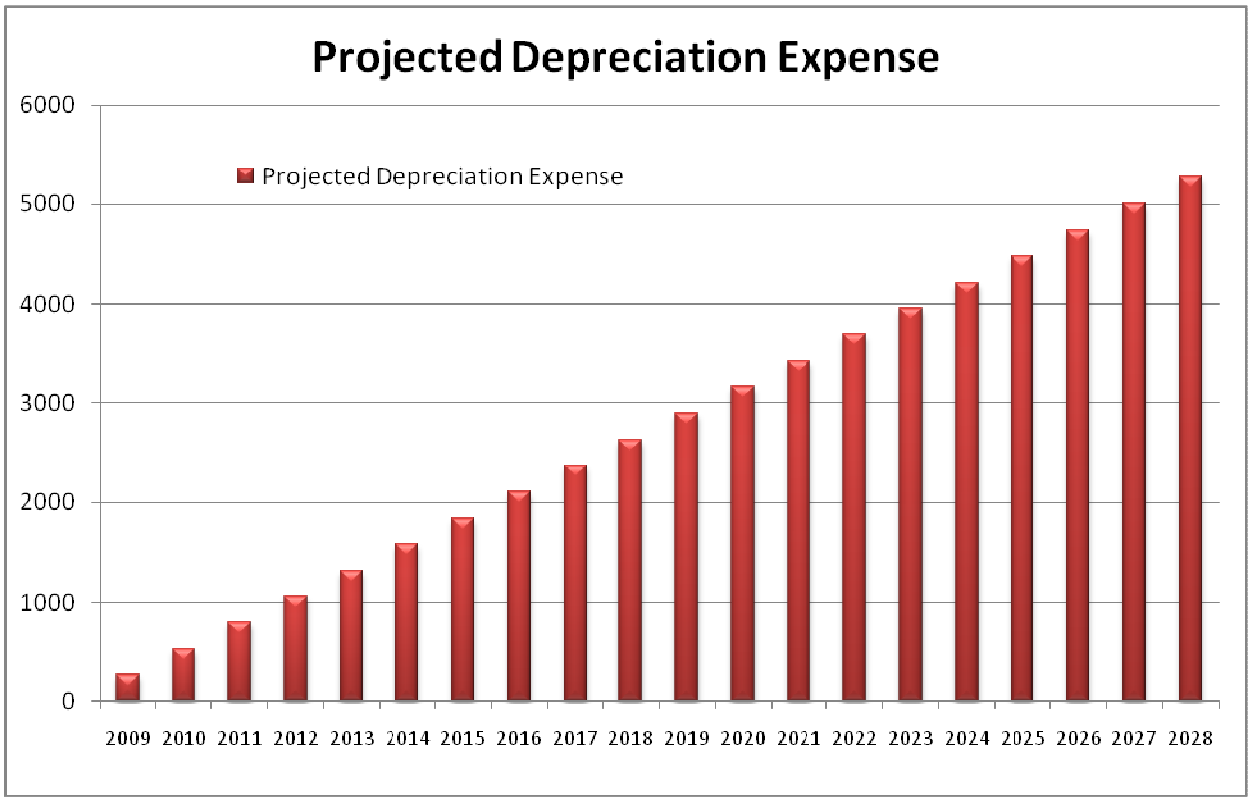


Fig 10. Projected Depreciation Expense

The depreciated replacement cost (current replacement cost less accumulated depreciation) will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Fig 11.

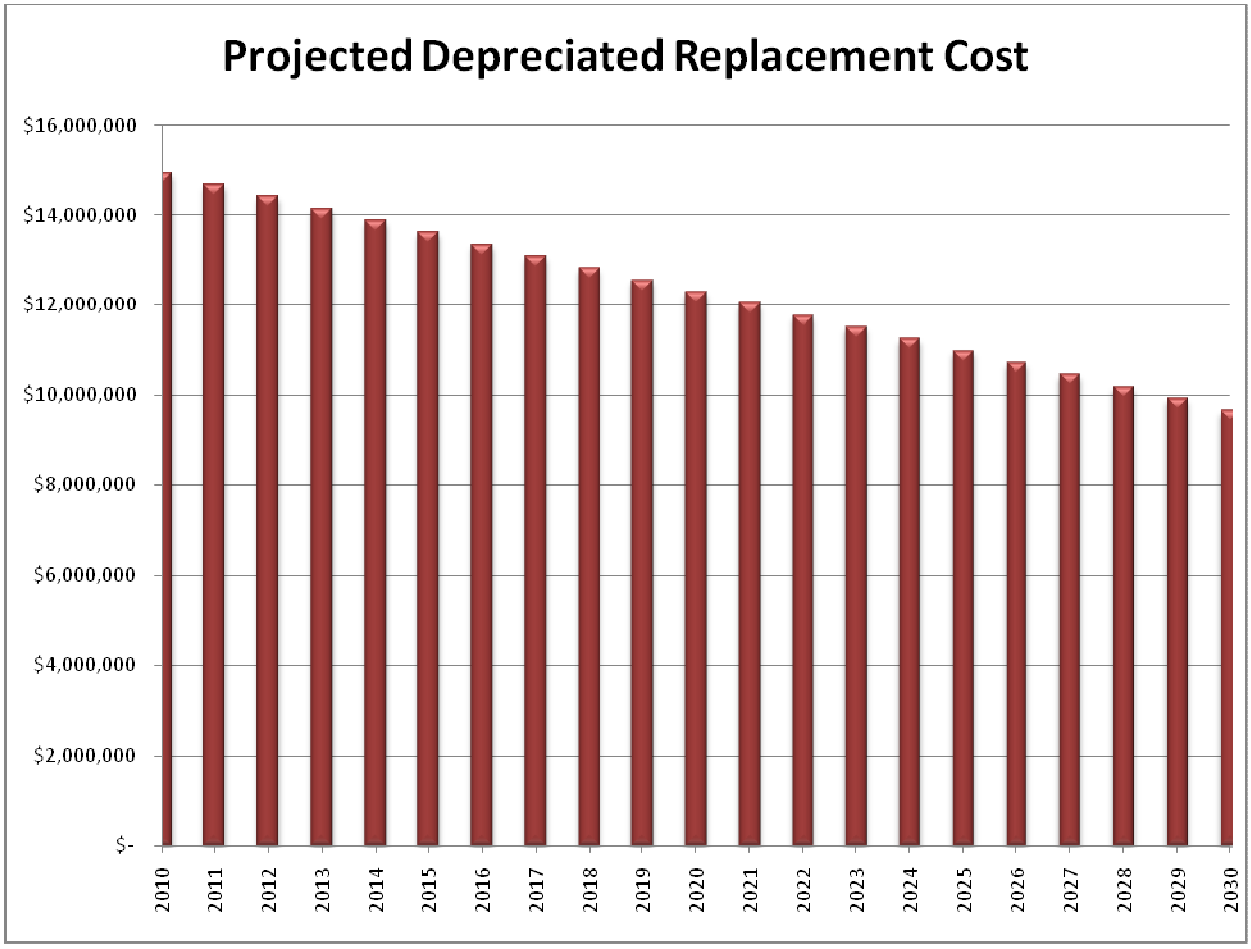


Fig 11. Projected Depreciated Replacement Cost

6.4 Key Assumptions made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this Asset Management Plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this Sewer Asset Management Plan are:

- Financial projections based on past financial performance
- A long term average connection growth of 0.6% per annum
- Average long term inflation rate of 2.5%
- Useful life and value of assets are calculated using the NSW Reference Rates Manual for Valuation of Water Supply, Sewerage and Stormwater Assets published by the Ministry for Energy and Utility in 2003. Updates on rate changes are published annually to keep valuations current.

Accuracy of future financial forecasts may be improved in future revisions of this Sewer Asset Management Plan by the following actions.

- Revision of key financial assumptions such as interest borrowing rate; inflation rate and average connection growth rate.
- Improving capture of maintenance and operating cost details in the financial system to provide an improved understanding of routine, planned and cyclic maintenance costs.

- Improving the detail of financial information collected to provide more accurate unit rates for comparison and adjustment of unit rates derived from Department of Water and Energy unit rates.

7. ASSET MANAGEMENT PRACTICES

7.1 Accounting/Financial Systems

The accounting and financial system used by Blayney Shire Council is the Fujitsu 2000+ operating system.

Accountabilities and responsibilities for Council's financial system rest with the Responsible Accounting Officer (RAO), as per Local Government Regulations 2005. Specific responsibilities of the RAO include:

- The maintenance of a system of Budgetary Control.
- Preparation of Budgetary Statements to Council and the certification as to whether Council's Financial Position is satisfactorily.
- Responsibility for the Council's accounting records including specific requirements on debtors, banking; banking; assets and liabilities; and
- The Monthly reporting of Council's Financial Investments and certification that they are in accordance with the Act, Code and Regulations and Investment Policy of Council.

Council is required to comply with the following accounting standards and guidelines:

- The Local Government Act 1993 (as amended) and the Regulations made thereunder,
- The Australian Accounting Standards and professional pronouncements, and
- The Local Government Code of Accounting Practice and Financial Reporting.

Council's capitalisation threshold policy states that items of infrastructure, property, plant and equipment are not capitalised unless their cost of acquisition exceeds the following:

Category	Item	Threshold
Land	Council land	100% Capitalised
	Open space	100% Capitalised
Plant and Equipment	Office Furniture	> $1,000
	Office Equipment	> $1,000
	Other Plant and Equipment	> $1,000
Buildings and Land Improvements	Park Furniture and Equipment	> $2,000
	Building construction / extension	100% Capitalised
	Building renovations	> $5,000
	Other structures	> $2,000
Sewer Assets	Reticulation extensions	> $5,000
	Other	> $5,000

Stormwater Assets	Drains and Culverts Other	> $5,000 > $5,000
Transport Assets	Road construction and reconstruction Reseal / Re-sheet and major roads Bridge construction and reconstruction	100% Capitalised > $10,000 100 % Capitalised

There are no changes to Council's accounting / financial systems resulting from this Plan.

7.2 Asset Management Systems

Council uses BizeAsset asset management software, which is an 'ad-on' to Mapinfo (Version 10.0) GIS system. The current version of BizeAsset is Version 2.

The Asset Management System will be informed of maintenance and construction unit rates from an improved financial system. It will provide valuation / depreciation information for Council's annual financial reporting.

The Asset Management System accountabilities and responsibilities for Council are:

Function	**Responsibilities**	**Major accountabilities**
Director of Engineering	Overseeing Asset Management System. Budgetary control. Overseeing Works Program.	Reporting to Council. Reporting to Department of Local Government. Works Program performance.
Assets Manager	Owner Asset Management System. Development of Asset Registers; GIS information and Asset Management Plans.	Development of Asset systems. Ensuring system components in place. Day-to-day management of system.
Assets Officer	Collection and collation of Asset Registers. Construction / data entry of GIS layers.	Accurate and timely collation of asset information. Accurate and timely development of GIS data layers.
Manager Financial Services	Financial reporting to Department of Local Government to satisfaction of Auditors.	Running Depreciation processes in the Asset Management System.
Works Manager	Development and management of Engineering Works Program.	Financial; safety and quality of works carried out by Council staff and contractors.

As a result of this Plan it is intended to improve the Asset Management System by ascertaining more accurate unit rates for work performed on the sewer reticulation network.

7.3 Information Flow Requirements and Processes

The key information flows *into* this Asset Management Plan are:

- The asset register data on size, age, value, remaining life of the network;
- The unit rates for categories of work/material;
- The adopted service levels;
- Projections of various factors affecting future demand for services;
- Correlations between maintenance and renewal, including decay models;
- Data on new assets acquired by Council.

The key information flows *from* this Asset Management Plan are:

- The assumed Works Program and trends;
- The resulting budget, valuation and depreciation projections;
- The useful life analysis.

These will impact the Long Term Financial Plan, Strategic Business Plan, annual budget and departmental budgets.

The financial reports generated by BizeAsset including valuations and depreciation calculations are provided to the Manager Financial Services for input into Council's annual financial reporting. Actual costs for capital works are provided by the finance department to the Assets Officer for input into BizeAsset.

New assets gifted to Council by developers are captured by the Assets Officer and inputted into BizeAsset.

8. PLAN IMPROVEMENT AND MONITORING

8.1 Performance Measures

The effectiveness of the Asset Management Plan can be measured in the following ways:

- The degree to which the required cashflows identified in this Asset Management Plan are incorporated into Council's long term financial plan and Strategic Management Plan;
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the Asset Management Plan;

8.2 Monitoring and Review ProceduresWQ

This Asset Management Plan will be reviewed during annual budget preparation and amended to recognise any changes in service levels and/or resources available to provide those services as a result of the budget decision process.

The Plan has a life of 4 years and is due for revision and updating within 2 years of each Council election.

REFERENCES

Blayney Shire Council, '2009 – 2014 Management Plan',

Blayney Shire Council; June 2007, 'Blayney Sewerage Scheme Sewer Overflow Investigations Report', Wastewater Services Section of NSW Department of Commerce.

Blayney Shire Council, June 2008, 'Strategic Business Plan for Sewerage Services', Blayney Shire Council with assistance from the Strategic Water Management Unit of NSW Water Solutions, NSW Department of Commerce.

Blayney Shire Council, Annual Plan and Budget, various

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au

APPENDICES

Appendix A Projected 30 year Capital Renewal Works Program and Planned Operations and Maintenance 30 year Works Program

Appendix A

SEWERAGE - OPERATIONS, MAINT, ADMIN & REVENUE OVERRIDES <INCREASES IN RECURRENT EXPENDITURE> (2007/2008 $000)

	30 YEAR TOTAL	2007 2005/06	0 2006/07	1 2007/08	2 2008/09	3 2009/10	4 2010/11	5 2011/12	6 2012/13	7 2013/14	8 2014/15	9 2015/16	10 2016/17	11 2017/18	12 2018/19	13 2019/20	14 2020/21	15 2021/22	16 2022/23	17 2023/24	18 2024/25	19 2025/26	20 2026/27	21 2027/28	22 2028/29	23 2029/30	24 2030/31	25 2031/32	26 2032/33	27 2033/34	28 2034/35	29 2035/36	30 2036/37
Administration																																	
	0																																
Strategic Business Plan (net of grant)	120			20					20					20					20					20					20				
Best Practice Audit	5					5																											
Liquid Tradewaste Awareness Campaign	3			3																													
DC Calcualtion & Development Servicing Plan	10			10																													
Best Practise Pricing Review	10			10																													
Customer Education and Community Consultation Plan	90			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
IWCM Plan (net of grant)	60			20	40																												
Energy Audit and Implementing Recommendations	10				10																												
New Staff Recruitment - Operator	2320				80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Total Adjustment	2620																																
Override (Inflated to 03/04$ and pro rata adjustment for growth)	11,140	196	200	273	342	288	296	297	320	301	303	304	364	381	358	360	386	387	417	392	394	397	399	429	404	408	409	411	443	416	418	421	424
Engineering and Supervision																																	
Total Adjustment	0																																
Override (Inflated to 03/04$ and pro rata adjustment for growth)	980	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
Operations Expenses																																	
Operations Plan	0																																
Smoke Testing	15				15																												
Biosolids Management Plan	15				15																												
Flow Gauging	50					50																											
CCTV Inspections	80				40	40																											
Desludging Aeration Tank (Blayney STP)	30				30																												
Total Adjustment	190				100	90																											
Override (Inflated to 03/04$ and pro rata adjustment for growth)	9,370	231	236	242	346	337	247	248	250	252	253	255	298	288	299	301	322	324	326	328	330	332	334	336	338	340	342	344	348	348	360	362	366
Maintenance Expenses																																	
Included in Operations Expenses																																	
Total Adjustment	0																																
Override (Inflated to 03/04$ and pro rata adjustment for growth)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Energy Costs																																	
Total Adjustment	0																																
Override (Inflated to 03/04$ and pro rata adjustment for growth)	1,211	31	31	32	32	32	33	33	33	33	33	34	39	39	40	40	42	43	43	43	44	44	44	44	45	45	45	45	46	46	46	46	47
Chemical Costs																																	
Total Adjustment	0																																
Override (Inflated to 03/04$ and pro rata adjustment for growth)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Expenses																																	
Total Adjustment	0																																
Override (Inflated to 03/04$ and pro rata adjustment for growth)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Revenue																																	
Total Adjustment	0																																
Override (Inflated to 03/04$ and pro rata adjustment for growth)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Grants																																	
Total Adjustment	0																																
Override (Inflated to 03/04$ and pro rata adjustment for growth)	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Contributions																																	
Total Adjustment	0																																
Override (Inflated to 03/04$ and pro rata adjustment for growth)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix A

SEWERAGE - CAPITAL WORKS PROGRAM (2007/2008 $000)

	30 YEAR TOTAL	2007 2006/08	0 2006/07	1 2007/08	2 2008/09	3 2009/10	4 2010/11	5 2011/12	6 2012/13	7 2013/14	8 2014/15	9 2015/16	10 2016/17	11 2017/18	12 2018/19	13 2019/20	14 2020/21	15 2021/22	16 2022/23	17 2023/24	18 2024/25	19 2025/26	20 2026/27	21 2027/28	22 2028/29	23 2029/30	24 2030/31	25 2031/32	26 2032/33	27 2033/34	28 2034/35	29 2035/36	30 2036/37
Subsidised Scheme (for improved levels of service)																																
Augment Blayney STP for sensitive waters standards	3,000																	3,000														
Sewerage scheme for Carcoar and Mandurama	5,250								50	200	3,000	2,000																				
Sewerage scheme for Lyndhurst (Provisional)	2,000															2,000																
	-																															
Total Subsidised Scheme	**10,250**	**-**	**-**						**50**	**200**	**3,000**	**2,000**				**2,000**			**3,000**														
Other New Systems Assets																																
New Works - Growth																																
STP - Lab and Amenities Building	400					300	100																									
Minor New Works																																
Septic tank discharge bay																																
Raising/sealing manholes near river	15					15																										
Discretionary Capital Works	-																															
Emergency SPS storage capacity, Millthorpe	35					35																										
Emergency SPS storage capacity, Blayney	30					30																										
Millthorpe Transfer Main investigation & Augmentation	450						50	200	200																							
	-																															
Total Other New Systems Assets	**930**	**184**	**-**	**-**	**-**	**380**	**150**	**200**	**200**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Renewals																																
Telemtry Upgrade	180							30					30					30					30					30					30
Lining/Replacement of sewer mains	1,400					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
Replacement of pumps in SPS	150						25					25					25				25					25					25	
P&E Replacements	25			25																												
Electrical Replacements	120												40									40										40
Millthorpe - Pump Replacement	40																	20														20
	-																															
Total Renewals	**1,916**	**-**	**-**	**25**	**-**	**40**	**75**	**80**	**50**	**50**	**50**	**75**	**120**	**50**	**50**	**50**	**75**	**100**	**50**	**50**	**50**	**75**	**120**	**50**	**50**	**50**	**75**	**80**	**50**	**50**	**50**	**75**	**140**
TOTAL CAPITAL WORKS	**13,096**	**184**	**-**	**25**	**-**	**430**	**225**	**280**	**300**	**250**	**3,050**	**2,075**	**120**	**50**	**50**	**2,050**	**75**	**100**	**3,050**	**50**	**50**	**75**	**120**	**50**	**50**	**50**	**75**	**80**	**50**	**50**	**50**	**75**	**140**
Expected Grant for Acquisition of Assets																																
Total Grant for Acquisition of Assets	-	-	-	-	-	-	-	-																								