Kyogle Council

Sewerage Services

Asset Management Plan

Version 2.01

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Institute of Public Works Engineering Australia

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1. EXECUTIVE SUMMARY

Context

Kyogle Council operates three sewerage systems servicing around four thousand people in the township of Kyogle and the villages of Bonalbo and Woodenbong, and the aboriginal community of Muli-Muli. Major new capital works have been completed for the sewerage service and the organisational focus is now shifting towards the ongoing operation, maintenance and renewal of sewerage assets.

The Sewerage Services Systems provided by Kyogle Council are used to support public health and the environment and are important to the communities of the region.

The Sewerage Service

The sewerage service network comprises of many individual assets grouped as:

- Sewer Network Assets (pits, pipes, rising mains)
- Waste Water Plant and Equipment

These infrastructure assets have a replacement value of $28.7M.

Relevant Asset Management Documents

- Strategic Business Plan for Water Supplies
- Developer Servicing Plan Water Sewer Stormwater
- Kyogle Integrated Water Cycle Management Strategy Study
- Sewerage System POEO Licenses for Kyogle, Bonalbo, and Woodenbong
- Bonalbo Long Term Water Supply Strategy and Drought Management Plan
- Northern Rivers Local Water Utilities Memorandum of Understanding
- Various operations and maintenance manuals and procedures

What does it Cost?

The projected cost to provide the services covered by this Asset Management Plan includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is $1,100,000 per year.

Council's estimated available funding for this period is $1,099,000 per year which is 100% (rounded) of the cost to provide the service. Projected and budgeted expenditure are shown in the following graph.

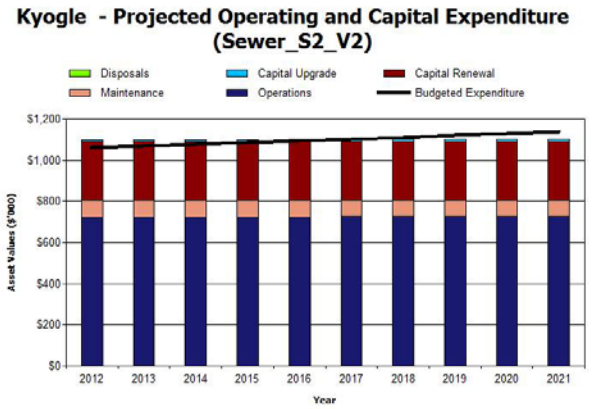
There is a relatively small backlog of renewal works. Councils' present funding levels are sufficient to continue to provide existing services at current levels in the medium term.

What we will do

Council plans to continue to provide Sewerage Services to the community. This will require continuation of funding to undertake:
Operation, maintenance, renewal and upgrades to meet service levels set by council in annual budgets.

What we cannot do

Council has close to the sufficient funding to provide for the existing services at the current service levels. The long term average sustainability ratio is 0.96 which indicates that the current funding is only 96% of the funds required.



Current service levels can be maintained in the medium (10 year) term.

Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- General deterioration of the network
- Surcharge due to blockages
- Pumping or treatment system failures

We will endeavour to manage these risks within available funding by:

- Monitor the condition of the network
- Monitor and review the cause of failures
- Regularly review the priorities for new works and ensure they meet corporate objectives

The Next Steps

The actions resulting from this asset management plan are:

- Maintain the current assets in safe condition
- Continue to monitor the condition of assets so that there is adequate planning time for periods of major renewals
- Provide additional sewerage service assets in a planned manner and only where agreed criteria are met.

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve the Kyogle Council Community's sewerage service needs. These assets include:

- Sewer Network Assets (pits, pipes, rising mains, pumping stations)
- Sewage Treatment Plant and Equipment

These assets have been provided throughout the Council area and contribute to good public health for the community and protection of the environment.

What is an Asset Management Plan?

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

An asset management plan details information about infrastructure assets including actions required to provide an agreed level of service in the most cost effective manner. The Plan defines the services to be provided, how the services are provided and what funds are required to provide the services.

Is there a funding shortfall?

Councils' present funding levels are sufficient to continue to provide existing services at current levels in the medium term.

These funding requirements should be monitored to ensure the renewal of the existing sewerage service infrastructure is provided when required and in a prioritised manner.

What options do we have?

Resolving the funding shortfall involves several steps:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Improving our efficiency in operating, maintaining, replacing existing and constructing new assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,
4. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs
6. Consulting with the community to ensure that transport services and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where available to provide services;
8. Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

What happens if we don't manage the shortfall?

Given the current funding level it is unlikely that council will have to reduce service levels for the existing sewerage services.

What can we do?

Council can continue to develop options and priorities for future sewerage services with costs of providing the services, consult with the community to plan future services to match the community services needs with ability to pay for services and maximise benefit to the community for costs to the community.

What can you do?

Council will be pleased to consider your thoughts on the issues raised in this asset management plan and suggestions on how Council may change or reduce its sewerage services mix to ensure that the appropriate level of service can be provided to the community within available funding.

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 needed to provide the required levels of service.

2.1.2 Relevant Asset Planning Documents

The asset management plan is to be read with Council's Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- Kyogle Council Management Plan 2011-2012
- Kyogle Council Annual Report 2009/2010
- Kyogle Council Financial Statements for the year ended 30 June 2010
- Strategic Business Plan for Water Supplies
- Developer Servicing Plan Water Sewer Stormwater
- Kyogle Integrated Water Cycle Management Strategy Study
- Sewerage System POEO Licenses for Kyogle, Bonalbo, and Woodenbong
- Bonalbo Long Term Water Supply Strategy and Drought Management Plan
- Northern Rivers Local Water Utilities Memorandum of Understanding
- Various operations and maintenance manuals and procedures

Kyogle Council operates three sewerage systems servicing around four thousand people in the township of Kyogle and the villages of Bonalbo and Woodenbong, and the aboriginal community of Muli Muli.

Kyogle sewerage system is a gravity reticulated system originally constructed in 1957, serving approximately 3,000 persons.

- 45km of gravity reticulation mains
- 5.2km rising mains
- 6 sewage pumping station
- Sewerage treatment works, 3200EP – trickling filters, chemical phosphorous removal, tertiary wetland, effluent reuse/stormwater detention dam, septic tank disposal and pre-treatment facility
- 1176 residential connections
- 154 non-residential connections
- 68 vacant properties

Bonalbo sewerage system is a gravity reticulated sewerage system originally constructed in 1968, serving approximately 400 persons.

- 6km of gravity reticulation mains0.8km rising mains
- 1 sewage pumping station

- Sewerage Treatment Works, 500EP – Pasveer Channel, sludge drying beds, oxidation ponds, and chlorination with effluent reuse scheme for school agricultural land and golf course
- 158 residential connections
- 29 non-residential connections
- 21 Vacant properties

Woodenbong/Muli Muli – sewerage system is a gravity reticulated sewerage system originally constructed in 1968, serving approximately 500 persons.

- 7km of gravity reticulation mains
- 4.2km rising mains
- 2 sewage pumping stations
- Sewerage Treatment Works, 640EP – Pasveer Channel, sludge drying beds, oxidation ponds, and chlorination with effluent reuse scheme for school agricultural land and golf course
- 176 residential connections
- 31 non-residential connections
- 10 vacant properties

The infrastructure assets covered by this asset management plan are shown in Table 2.1.

Table 2.1: Assets covered by this Plan

Asset Subcategory	Current Replacement Cost	Depreciated Replacement Cost
Sewer Network Assets	$20,959,665.27	$11,618,410.95
Waste Water Plant and Equipment	$7,721,692.05	$5,464,025.47
TOTAL	**$28,681,357.32**	**$17,082,436.42**

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 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]

The goal of this asset management plan is to:

- Document the services/service levels to be provided and the costs of providing the service,
- Communicate the consequences for service levels and risk, where desired funding is not available, and
- Provide information to assist decision makers in trading off service levels, costs and risks to provide services in a financially sustainable manner.

2.2.1 Council Values and Community Plan Priorities

This asset management plan is prepared under the direction of Council's vision, mission, goals and objectives.[2]

Community vision is:

Working together to balance Environment, Lifestyle, and Opportunity

Our mission is:

To meet the challenges of our unique and diverse region

Our values are:

Respect and respond to community needs
Improve the quality of our services
Be open and accessible
Act with honesty and integrity
Value people's contribution
Support the culture of teamwork, cooperation and safety

Relevant goals and objectives and how these are addressed in this asset management plan are shown in Table 2.2.

[1] IPWEA, 2006, *IIMM* Sec 1.1.3, p 1.3.
[2] Kyogle Council Management Plan 2011-2012

Table 2.2: Organisation Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in AMP
Participation and Communication	To encourage public participation and provide access opportunities for the recognition of community needs and expectations and develop appropriate lines of communications to ensure that the public is kept well informed as to Council activities.	Development of the service levels provided by infrastructure, and the balancing of this with the available funding and acceptable risk will require communication and consultation with the community A primary objective of the first asset management plans prepared by Council is to establish the position in relation to maintaining the current infrastructure at a level which will sustain the current standard of services. Once the current sustainability position is established community discussion can be sought to identify acceptable changes to services.
Management	To set the example in Local Government through efficient and effective management practices and provide an environment that fosters trust, encourages and rewards excellence in performance and which supports the implementation of Council's goals and policies.	Council has limited resources. Asset Management Planning provides a way in which the community can be engaged in setting the priorities and allocation of these resources. The Asset Management Plan in conjunction with Long Term Financial Plans are the tools by which Council assesses the long term financial sustainability of council's infrastructure assets Planning long term sustainable infrastructure is important to enable the appropriate resources to be identified and provided Planning long term sustainable infrastructure is important to enable Council to meet its statutory requirements
Quality of Life	To promote the physical, social, cultural and general well-being of the Community.	The provision and maintenance of public infrastructure is an important component contributing to the cultural and social needs of the community
Roads and Traffic	To provide an adequate and safe road system appropriate to present and future vehicular and pedestrian use.	Planning and long term management of these assets is one of the principle aims of the Asset Management Plans and is essential to the sustainability of these services.
Services	To provide and facilitate the provision of a broad range of services to a standard commensurate with the needs and resources of a rural council and provide equitable access for all residents	Infrastructure is provided to support services. Getting the correct infrastructure appropriate to the needs of the community is a primary goal of Asset Management Planning. A primary objective of the asset management plan is to develop a lifecycle approach to the provision of infrastructure. This aims to minimise the life cycle cost of assets while maximising the service that is delivered

Goal	Objective	How Goal and Objectives are addressed in AMP
Promotion and Development	To assist and coordinate the ongoing development of Kyogle Council area and enhance and market its capacity as a location for residential opportunities, primary production, industry, commerce, government services and tourism.	Economic sustainability and growth is linked to the services provided by infrastructure. The Asset Management Plans will provide guidance as to the assets required, and the long term sustainability of these services.
Environment	To achieve acceptable planning, development and building standards; to manage waste collection and disposal and to protect the environment in accordance with community expectations.	Infrastructure is provided to support services. Getting the correct infrastructure appropriate to the needs of the community is a primary goal of Asset Management Planning. Council has limited resources. Asset Management Planning provides a way in which the community can be engaged in setting the priorities and allocation of these resources. Provision of the appropriate infrastructure to support the natural environment will continue to be a long term consideration in Asset Management Planning
Health	To protect and promote the health and well-being of the Kyogle Council area Community by developing and applying environmental health and public safety measures.	The provision and maintenance of infrastructure is an important component contributing to the health and safety of the community

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 the organisation 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 the organisation's objectives.
- Asset management improvement plan

2.4 Core and Advanced Asset Management

This asset management plan is prepared as a first cut 'core' asset management plan in accordance with the International Infrastructure Management Manual[3]. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting.

[3] IPWEA, 2006.

Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

2.5 Community Consultation

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability to pay for the service.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

Council has carried out research on customer expectations during the process of developing the Council Community Strategic Plan. The integration of the Asset Management Plans with the Community Strategic Plan and the Long Term Financial Plan will continue to be developed in future revisions of the asset management plan.

3.2 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and State regulations. Relevant legislation is shown in Table 3.2.

Table 3.2: Legislative Requirements

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments. The purposes of this Act are as follows: (a) to provide the legal framework for an effective, efficient, environmentally responsible and open system of local government in New South Wales, (b) to regulate the relationships between the people and bodies comprising the system of local government in New South Wales, (c) to encourage and assist the effective participation of local communities in the affairs of local government, (d) to give councils: • the ability to provide goods, services and facilities, and to carry out activities, appropriate to the current and future needs of local communities and of the wider public • the responsibility for administering some regulatory systems under this Act • a role in the management, improvement and development of the resources of their areas, (e) to require councils, councillors and council employees to have regard to the principles of ecologically sustainable development in carrying out their responsibilities. The land management provisions of the Act require that Council prepare plans of management for all community land. The plan of management identifies the management objectives for the land category, performance indicators and performance measures to meet the objectives identified.
Local Government Amendment (Planning and Reporting) Act 2009	Local Government Amendment (Planning and Reporting) Act 2009 includes the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Disability Discriminations Act, 1992	The Federal *Disability Discrimination Act 1992* (D.D.A.) provides protection for everyone in Australia against discrimination based on disability. It encourages everyone to be involved in implementing the Act and to share in the overall benefits to the community and the economy that flow from participation by the widest range of people. (a) to eliminate, as far as possible, discrimination against persons on the ground of disability in the areas of: (i) work, accommodation, education, access to premises, clubs and sport; and (ii) the provision of goods, facilities, services and land; and (iii) existing laws; and (iv) the administration of Commonwealth laws and programs; and (b) to ensure, as far as practicable, that persons with disabilities have the same rights to equality before the law as the rest of the community; and to promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights as the rest of the community.
Work Health & Safety Act 2011	Sets out roles and responsibilities to secure the health, safety and welfare of persons at work and covering injury management, emphasising rehabilitation of workers particularly for return to work. Council is to provide a safe working environment and supply equipment to ensure safety.

Legislation	Requirement
Environmental Planning and Assessment Act 1979	An Act to institute a system of environmental planning and assessment for the State of New South Wales. Among other requirements the Act outlines the requirement for the preparation of Local Environmental Plans (LEP), Development Control Plans (DCP), Environmental Impact Assessments (EIA) and Environmental Impact Statements.
Plant Protection Act 1989	This act sets out requirements in respect to Flora Protection
Environmental Protection Act 1994	This act sets out requirements in respect to environmental protection
Threatened Species Conservation Act, 1995	An Act to conserve threatened species, populations and ecological communities of animals and plants. Under the terms of this Act Council is required to ensure the long term survival of the species identified.
Rivers and Foreshores Improvements Act, 1948	An Act to provide for the carrying out of works for the removal of obstructions from and the improvement of rivers and foreshores and the prevention of erosion of lands by tidal and non-tidal waters
Protection of the Environment Operations Act 1997	Council is required to exercise due diligence to avoid environmental impact and among others are required to develop operations emergency plans and due diligence plans to ensure that procedures are in place to prevent or minimise pollution.
National Parks and Wildlife Act (1974)	An Act relating to the establishment, preservation and management of national parks, historic sites and certain other areas and the protection of certain fauna, native plants and Aboriginal objects
Native Vegetation Act 2003	This Act regulates the clearing of native vegetation on all land in NSW, except for excluded land listed in Schedule 1 of the Act. The Act outlines what landowners can and cannot do in clearing native vegetation.
Public Works Act 1912	Sets out the role of Council in the planning and construction of new assets.
Road Transport (General) Act 2005	Provides for the administration and enforcement of road transport legislation. It provides for the review of decisions made under road transport legislation. It makes provision for the use of vehicles on roads and road related areas and also with respect to written off and wrecked vehicles.
Road Transport (Safety and Traffic Management) Act 1999	Facilitates the adoption of nationally consistent road rules in NSW, the Australian Road Rules. It also makes provision for safety and traffic management on roads and road related areas including alcohol and other drug use, speeding and other dangerous driving, traffic control devices and vehicle safety accidents.
Roads Act 1993	Sets out rights of members of the public to pass along public roads, establishes procedures for opening and closing a public road, and provides for the classification of roads. It also provides for declaration of the RTA and other public authorities as roads authorities for both classified and unclassified roads, and confers certain functions (in particular, the function of carrying out roadwork) on the RTA and other roads authorities. Finally it provides for distribution of functions conferred by this Act between the RTA and other roads authorities, and regulates the carrying out of various activities on public roads.
Local Government (Highways) Act 1982	An Act to consolidate with amendments certain enactments concerning the functions of the corporations of municipalities with respect to highways and certain other ways and places open to the public.
NSW Road Rules 2008	A provision of road rules that are based on the Australian Road Rules so as to ensure that the road rules applicable in this State are substantially uniform with road rules applicable elsewhere in Australia.
Valuation of Land Act 1916	This act sets out requirements in respect Land Valuation

Legislation	Requirement
Crown Lands Act, 1989	An Act to provide for the administration and management of Crown land in the Eastern and Central Division of the State of NSW Council has large holdings of Crown land under it care, control and management.
Heritage Act, 1977	An Act to conserve the environmental heritage of the State. Several properties are listed under the terms of the Act and attract a high level of maintenance cost, approval and monitoring.
Building Code of Australia	The goal of the BCA is to enable the achievement of nationally consistent, minimum necessary standards of relevant, health, safety (including structural safety and safety from fire), amenity and sustainability objectives efficiently.
Building Fire and Safety Regulation 1991	This Act sets out the regulations for things such as means of escape, Limitation of people in buildings, Fire and evacuation plans and testing of special fire services and installations.
Electrical Safety Act 2002	This act sets out the installation, reporting and safe use with electricity
Building Regulation 2003	This act sets out requirements in respect to Building Requirements
Plumbing and Drainage Act 2002	This act sets out requirements in respect to Plumbing Requirements
Rural Fires Act, 1997	An Act to establish the NSW Rural Fire Service and define its functions; to make provision for the prevention, mitigation and suppression of rural fires. Under the terms of this Act Council is required to mitigate any fire that emanate from bushland.
Dangerous Goods Safety Management Act 2001	This act sets out the safe use, storage and disposal of dangerous goods
Fire and Rescue Service Act 1990	This act sets out requirements in respect to Emergency Services for Fire and Rescue
Public Records Act 2002	This act sets out requirements in respect maintaining Public Records
Surveillance Devices Act	This act sets out requirements in respect use of Surveillance Devices
Civil Liability Act, 2002	An Act to make provision in relation to the recovery of damages for death or personal injury caused by the fault of a person
Companion Animals Act, 1998	An Act to provide for the identification and registration of companion animals and for the duties and responsibilities of their owners. Under the terms of the Act Council is required to provide and maintain at least one off leash area. It currently has eleven areas identified as off leash.
Rural Fires Act, 1997	An Act to establish the NSW Rural Fire Service and define its functions; to make provision for the prevention, mitigation and suppression of rural fires. Under the terms of this Act Council is required to mitigate any fire that emanate from bushland.

3.3 Current Levels of Service

Council has defined service levels in two terms.

Community Levels of Service relate to the service outcomes that the community wants in terms of safety, quality, quantity, reliability, responsiveness, cost effectiveness and legislative compliance.

Community levels of service measures used in the asset management plan are:

Quality How good is the service?
Function Does it meet users' needs?

Capacity/Utilisation Does the service have sufficient capacity or is it used?

Technical Levels of Service - Supporting the community service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the council undertakes to best achieve the desired community outcomes.

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services such as opening hours, cleansing frequency, mowing frequency, etc.
- Maintenance – the activities necessary to retain an assets as near as practicable to its original condition (eg road patching, unsealed road grading, building and structure repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (eg frequency and cost of road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),
- Upgrade – the activities to provide an higher level of service (eg widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (eg a new library).

Council's current service levels are detailed in Table 3.3.

Table 3.3: Current Service Levels

COMMUNITY LEVELS OF SERVICE				
Theme	**Community Expectation**	**Measure**	**Current Service Level Response**	**Acceptable Level of Service Response**
Quality	Disposal has no impact on natural Watercourses or community	Customer surveys and Customer requests Community Planning Number of surcharges or overflows	To be provided from the Resident Survey and Community Plan research Frequent wet weather surcharges	Requests received should not increase annually No dry weather discharges and minimise wet weather discharges
Function	Connection available	Customer surveys and Customer requests Community Planning % of network that is poor or very poor	To be provided from the Resident Survey and Community Plan research Has not been fully assessed at this time	Requests received should not increase annually Further assessment required to inform future revisions of the Sewerage Services Asset Management Plan

Capacity/Utilisation	Meets health standards	Monitoring and reporting program % of network that is poor or very poor	Meets all health requirements Has not been fully assessed at this time	Meets health standards Further assessment required to inform future revisions of the Sewerage Services Asset Management Plan

TECHNICAL LEVELS OF SERVICE				
Budget Area	**Activities**	**Measure**	**Current Funded Level of Service**	**Optimal Level of Service**
Operations	Comply with environmental requirements	Monitoring and reporting program Regular inspection of key components	Meets all license requirements Inspections being undertaken	Meets all license requirements Inspections being undertaken
Operations Cost			$724,000 pa	Will need to increase to $727,000 pa over the next 10 years to maintain current funding levels due to some asset growth
Maintenance	Remove hazards Provide Maintenance	Respond to complaints Repairs undertaken	Reactive maintenance to limit of budget allocation. Repairs identified from inspections are scheduled and carried out	Planned Maintenance Repairs identified from inspections are scheduled and carried out
Maintenance Cost			$80,000 pa	Will need to increase to $81,000 pa over the next 10 years to maintain current funding levels due to some asset growth

Budget Area	Activities	Measure	Current Funded Level of Service	Optimal Level of Service
Renewal	Replacement of active assets, pipe networks and treatment facilities.	Frequency Identified renewal works can be completed	The works program and long term financial plan have been developed to deliver a satisfactory service standard. Identified capital works have been included in the long term financial plan Verification and improvement of the useful lives used for valuation purposes, matching these actual services standards will assist to improve financial reporting and planning	**Sewerage System Average Useful Lives** Sewer Mains 80 to 100 years Sewer Vents 80 years Waste Water Plant and Equipment 25 to 150 years Residential Services 150 years
Renewal Cost			Works identified and funded in LTFP $2.8 M over 10 years	Works identified and funded in LTFP $2.8 M over 10 years
Upgrade/New			Identified works required to meet community and corporate planning objectives	Included in LTFP and Asset Management Plan
Upgrade/New Cost			$118,000 in the LTFP	$118,000 in the LTFP

3.4 Desired Levels of Service

At present, indications of desired levels of service are obtained from various sources including residents' feedback to Councillors and staff, service requests and correspondence. Council has yet to quantify desired levels of service. This will be done in future revisions of this asset management plan.

4. FUTURE DEMAND

4.1 Demand Forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, agricultural practices, environmental awareness, etc.

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	Present position	Projection	Impact on services
Development	Population increase and higher density development is not significant	No significant change anticipated	Minimal increase in demand due to development
Increasing Costs	The cost to construct, maintain and renew infrastructure is increasing at a rate greater than council's revenue	Anticipated to continue Cost of renewing sewerage service systems is increasing	The need to carefully target and plan infrastructure is increasing in importance as maximising the service that can be delivered within the funding limitations will be under pressure.
Treatment Standards	Standards for treatment of sewer are high	Requirements are only likely to ever increase	Increased treatment cost. Redundancy of existing plant High cost of replacement plant
Climate Change	Higher frequency of extreme weather events	Unknown, but changes likely.	Potential damage to sewerage service infrastructure. Cannot be anticipated or planned for. Availability of disaster relief funding to assist council will be important. Addition costs may be imposed to fund environmental initiatives e.g. carbon tax

4.2 Changes in Technology

Technology changes forecast to have minimal impact on the delivery of services covered by this plan. See Table 4.2.

Table 4.2: Changes in Technology and Forecast effect on Service Delivery

Technology Change	Effect on Service Delivery
Construction methods and the materials used	May increase the life of sewer system components, reducing the susceptibility to damage, or by reducing the cost of construction or maintenance

4.3 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and managing failures.

Non-asset solutions focus on providing the required service without the need for the council to own the assets. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another council area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this asset management plan.

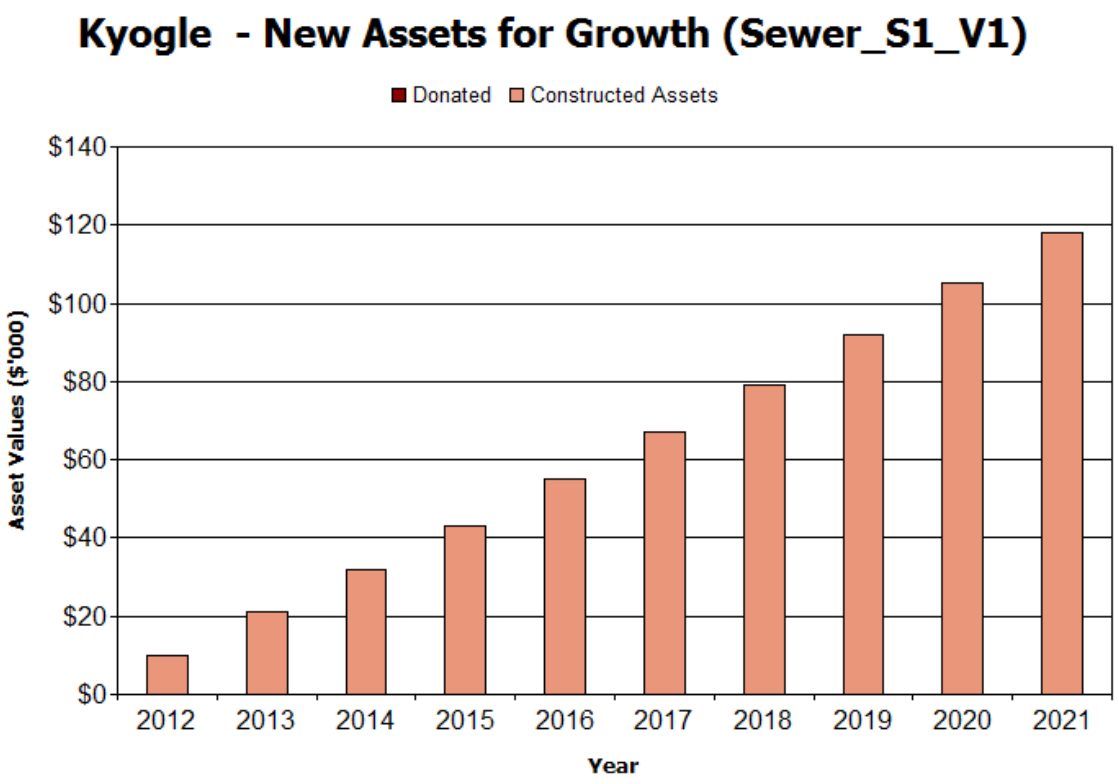
Table 4.3: Demand Management Plan Summary

Service Activity	Demand Management Plan
Communicate options and capacity to fund Sewerage Services Infrastructure with the community	Monitor community expectations and communicate service levels and financial capacity with the community to balance priorities for infrastructure with what the community is prepared to pay for
Funding priority works	Continue to seek grant funding for projects identified in the Kyogle Community Plan and Asset Management Plans
Improve understanding of costs and capacity to maintain current service levels	Continue to analyse the cost of providing service and the capacity to fund at the current level of service

4.4 New Assets for Growth

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by Council. The new contributed and constructed asset values are summarised in Figure 1.

Figure 1: New Assets for Growth (Cumulative)



$118,000 of additional sewer service assets has been forecast in the long term financial plan.

Acquiring these new assets will commit council to fund ongoing operations and maintenance costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations 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.

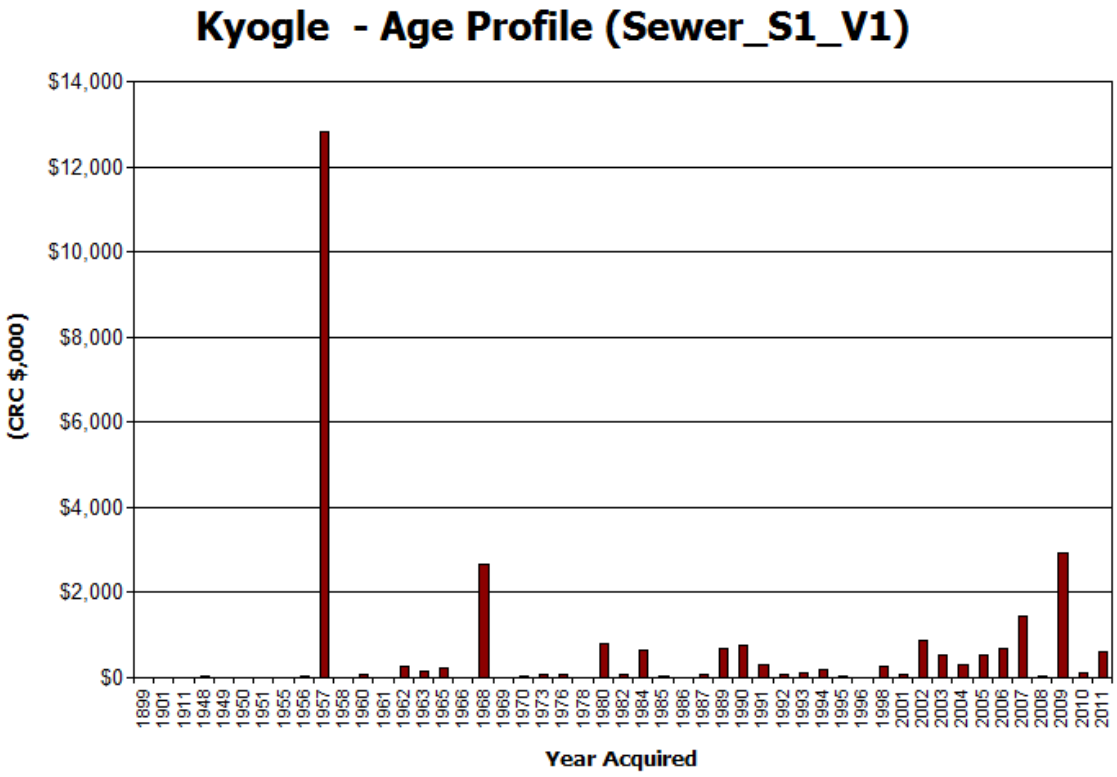
5.1 Background Data

5.1.1 Physical parameters

The assets covered by this asset management plan are shown in Table 2.1.

The age profile of the assets include in this AM Plan is shown in Figure 2.

Figure 2: Asset Age Profile



Note: Good information on the age of the network assets is available and the age profile reliably reflects the staged construction of the network over time.

Plans showing the Sewerage Services Assets are:

- Financial Valuations
- Technical Inventory
- Maintenance and Renewal Plans

5.1.2 Asset capacity and performance

Council's services are generally provided to meet design standards where these are available.

Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

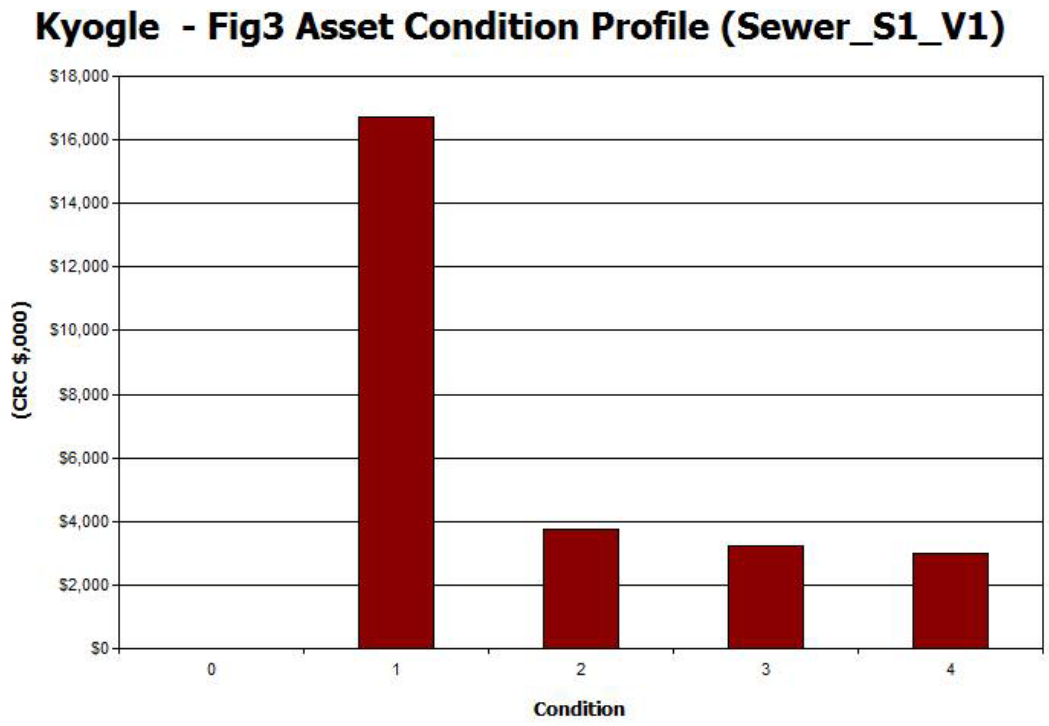
Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
In this first Asset Management Plan detailed performance deficiencies have not been identified	In the development of next asset management plans, and in particular as these plans are developed and integrated along with the Long Term Financial Plans and Community Plans service deficiencies will be identified

5.1.3 Asset condition

The condition profile of assets included within this AM Plan is shown in Figure 3.

Figure 3: Asset Condition Profile



Note: A detailed condition assessment of reticulation assets has been undertaken by means of CCTV inspections. The condition profile shown is considered representative of the actual asset condition.

Condition is measured using a 1 – 5 rating system[4] as detailed in Table 5.1.3.

[4] IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned', 'average' changed to 'fair'')

Table 5.1.3: IIMM Description of Condition

Condition Rating	Description
1	Excellent condition: Only planned maintenance required.
2	Very good: Minor maintenance required plus planned maintenance.
3	Good: Significant maintenance required.
4	Fair: Significant renewal/upgrade required.
5	Poor: Unserviceable.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 2011 covered by this asset management plan is shown below.

Current Replacement Cost	$28,681,357.32
Depreciable Amount	$28,681,357.32
Depreciated Replacement Cost	$17,082,436.42
Annual Depreciation Expense	$332,586.47

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

Asset Consumption (Depreciation/Depreciable Amount)	1.20%
Asset renewal (Capital renewal exp/Depreciable amount)	0.90%
Annual Upgrade/New (Capital upgrade exp/Depreciable amount)	0%
Annual Upgrade/New (Including contributed assets)	0%

Council is currently renewing assets at 74.20% of the rate they are being consumed and increasing its asset stock by 0% each year.

To provide services in a financially sustainable manner, Council will need to ensure that it is renewing assets at the rate they are being consumed over the medium-long term and funding the life cycle costs for all new assets and services in its long term financial plan.

5.1.5 Asset hierarchy

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The hierarchy includes the asset class and component used for asset planning and financial reporting and service level hierarchy used for service planning and delivery.

Council's service hierarchy is shown is Table 5.1.5.

Table 5.1.5: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Treatment works	Treatment of effluent to a standard suitable for disposal in compliance with regulatory health standards.
Sewer pipelines	Conveyance of effluent from source to treatment and disposal locations.
Sewer service equipment assets eg pumping stations	Conveyance of effluent from source to treatment and disposal locations.

5.2 Risk Management Plan

An assessment of risks[5] associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. 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

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Associated Costs
Deterioration of sewerage supply system	Blockages	High	Continue to improve data by carrying out sample inspections on a regular basis Required renewal of sewer system components is being achieved in the short to medium term Future planning improvements can be made by further documented service level risks and utilisation of these in establishing future renewal priorities	Within existing
Deterioration of sewerage supply system asset components	Structural failures, increased maintenance	High	Continue to undertake CCTV inspections to assess the condition of the reticulation assets to identify sections of main at risk of failure	Within existing
Deterioration of sewerage supply system asset components	Failure of pump stations or treatment process	High	Implement inspection and preventative maintenance program for pumping stations and treatment works and associated mechanical and electrical components	Within Existing

[5] Kyogle Council Core Infrastructure Risk Management Plan

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Associated Costs
Sewer system not available	Public health or environmental issues	High	Investigate un-sewered areas and assess sewerage system requirements and land use planning requirements so that future needs can be anticipated	Within existing

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 specific 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.

Specific 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 but may require a specific budget allocation. Proposed maintenance expenditure is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

Year	Maintenance Expenditure
2011	$80,000
2012	$80,000
2013	$80,000

Maintenance expenditure is planned to remain constant in real terms over the period covered by this asset management plan. Current maintenance expenditure levels are considered to be adequate to meet current service levels. Future revision of this asset management plan will include closer linking of the maintenance expenditures with required service levels.

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

5.3.2 Standards and specifications

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

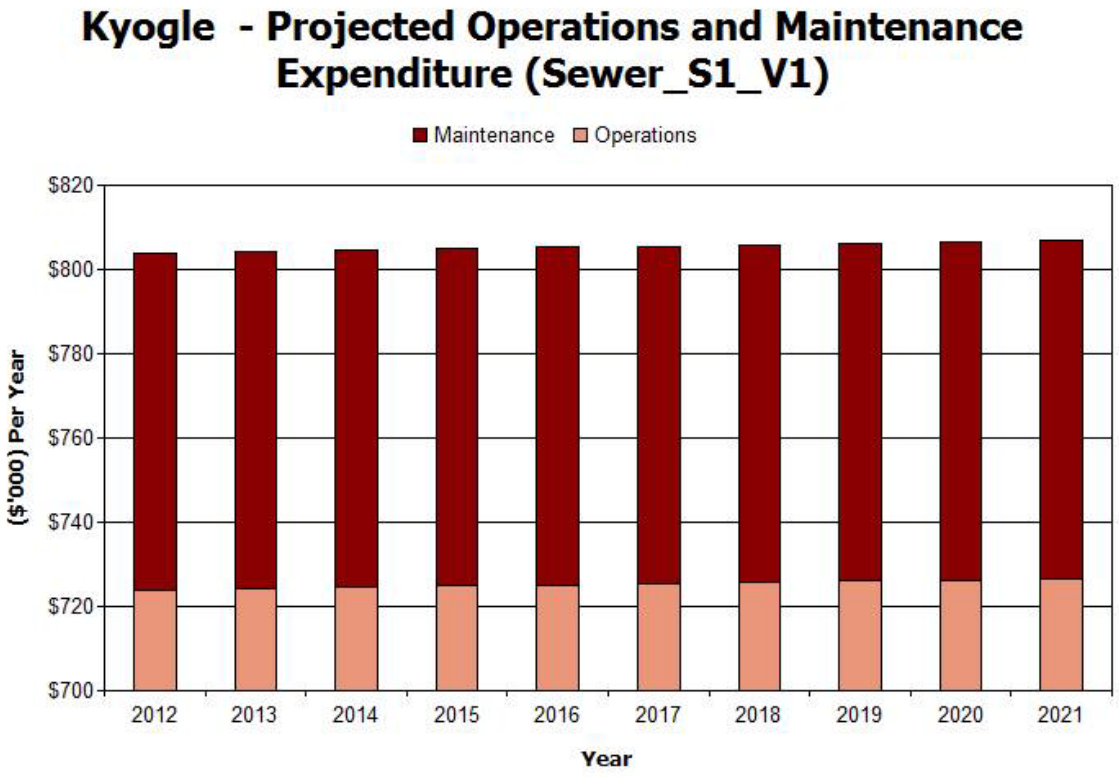
- Relevant engineering Australian Standards
- Relevant standards and specifications for public health, sewer drainage and works
- Northern Rivers Local Government Development and Design Specifications

- NRLG Construction Specifications

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4. Note that all costs are shown in 2011 dollar values.

Figure 4: Projected Operations and Maintenance Expenditure



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment process in the infrastructure risk management plan.

Maintenance is funded from the operating budget and grants where available. 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 upgrade/expansion or new works expenditure.

5.4.1 Renewal plan

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.4.1.

Table 5.4.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Available budget	No weighting criteria adopted

Sewer block/failure history	No weighting criteria adopted
Condition	No weighting criteria adopted
Risk	No weighting criteria adopted
Regulatory Standards	No weighting criteria adopted
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 pipeline relining.

5.4.2 Renewal standards

Assets requiring renewal are identified comparing 3 Scenarios.

- Scenario 1 uses the Asset Register valuation data to project the renewal costs for renewal years using acquisition year and useful life, or
- Scenario 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or a combination of average network renewals plus defect repairs.
- Scenario 3 balances capital renewal expenditure with the Long Term Financial Plan.

It is common that the valuation registers used in Scenario 1 are not developed to a level of maturity where they are reliable for producing a realistic renewal forecast. Ideally when this asset register is sorted by remaining life from 1 to 10 years this should be consistent with the capital renewal program. For Kyogle Council the refinement of the asset register to achieve this situation should become an important part of the asset management improvement plan.

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

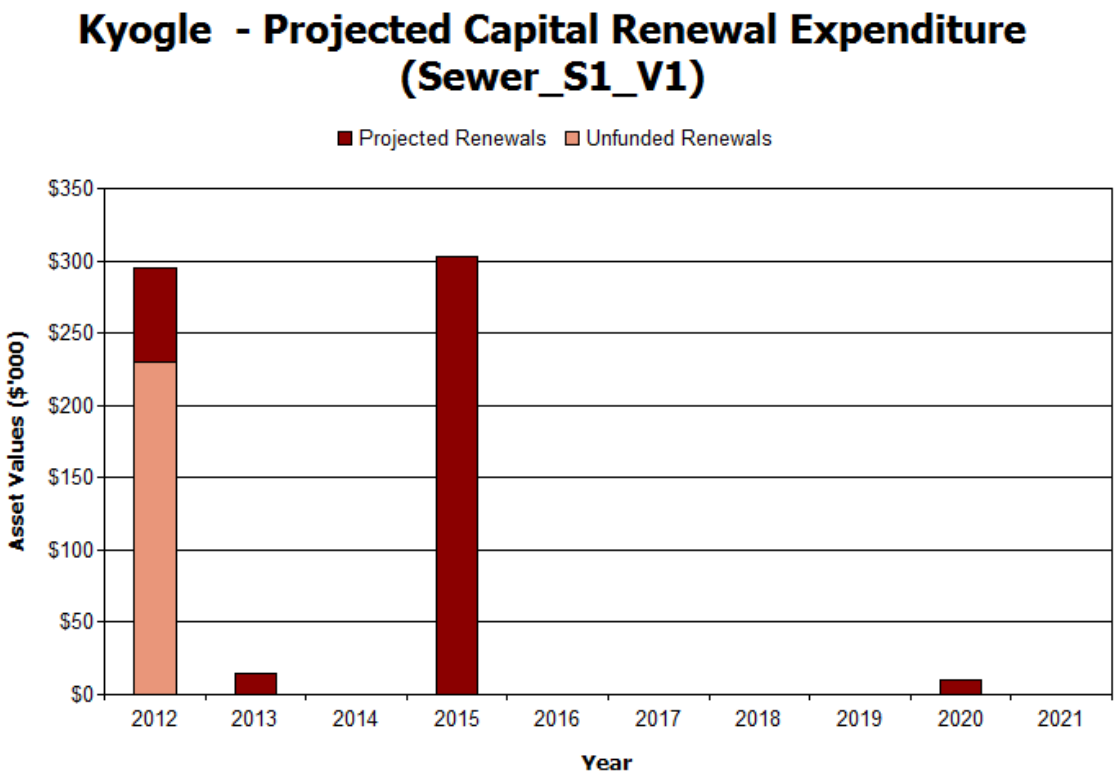
- Relevant engineering Australian Standards
- Relevant standards and specifications for public health, sewer drainage and works
- Northern Rivers Local Government Development and Design Specifications
- NRLG Construction Specifications

5.4.3 Summary of projected renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Figure 5. Note that all costs are shown in 2011 dollar values.

The projected capital renewal program is shown in Appendix B.

Figure 5.1: Projected Capital Renewal Expenditure (Scenario 1 - from Asset Register)



The renewal projection (forecast) in Scenario 1 (Using the asset/valuation register) generates a highly variable renewal profile. Whilst the long term averages and total values from this register are sound, the shorter term renewal forecast are not, and are inconsistent with the known capital renewal plans. This indicates that further refinement of the asset register is required before it is valuable as a capital renewal planning tool. This should be given a high priority in the asset management improvement plan.

Figure 5.2: Projected Capital Renewal Expenditure (Scenario 2 - from Average Network Renewal Estimates)

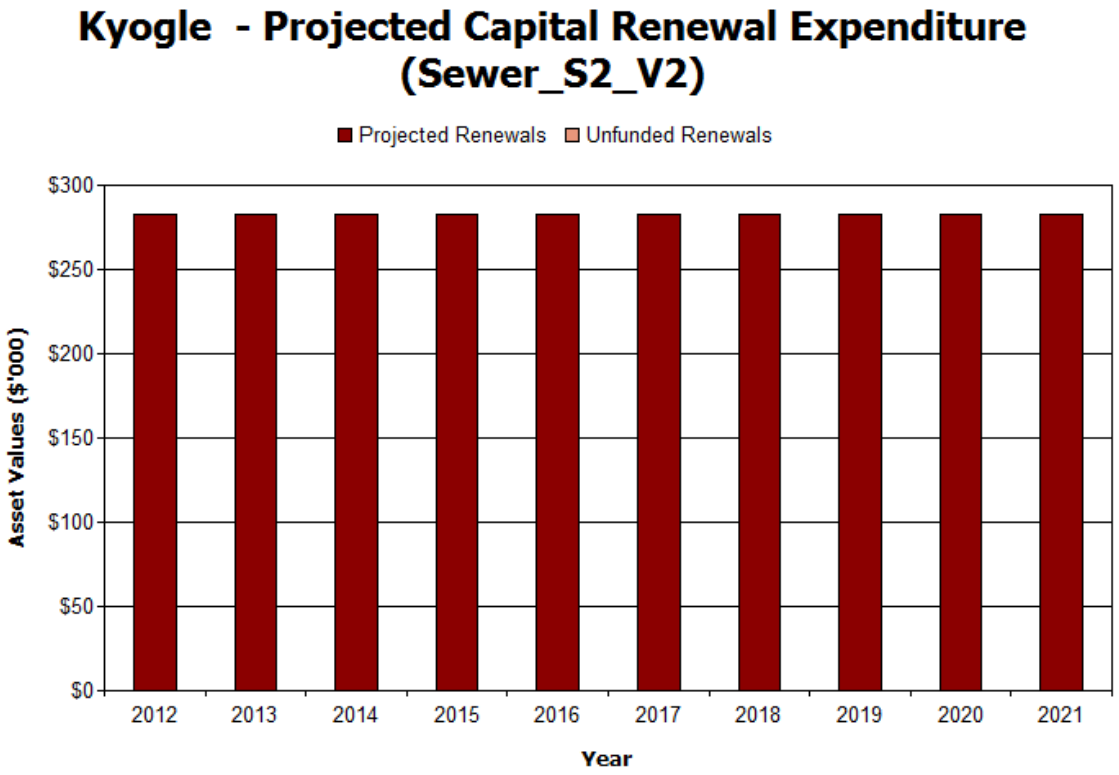
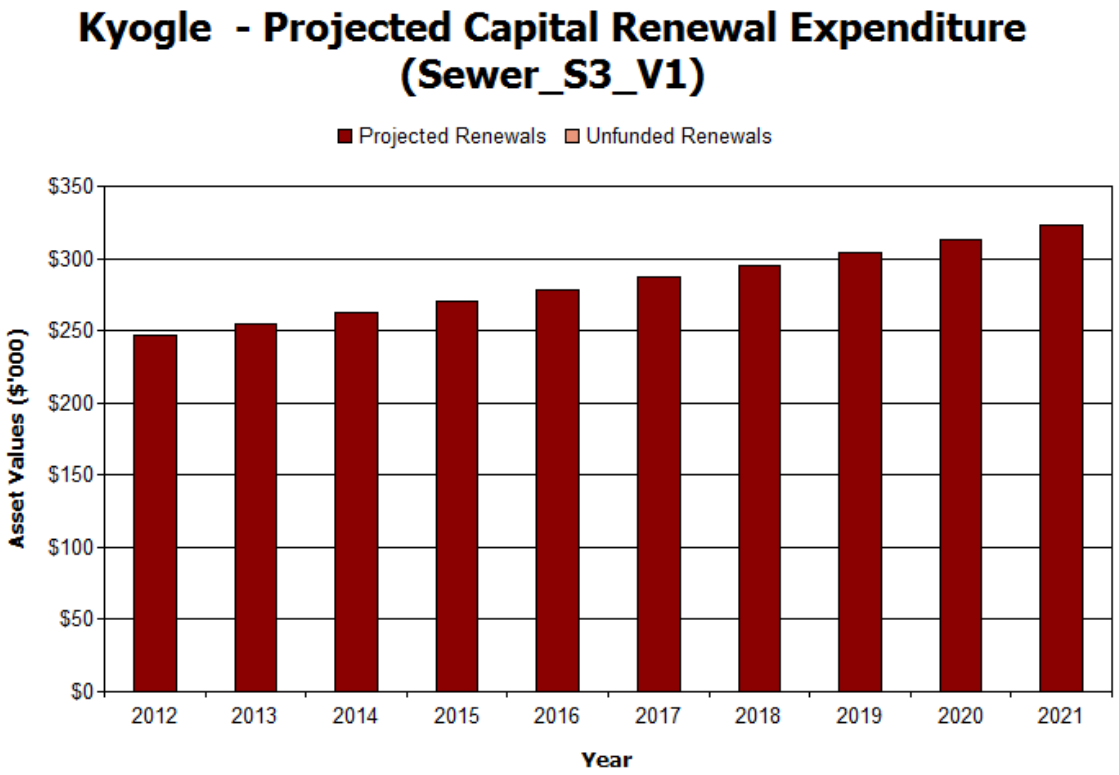


Figure 5.3: Projected Capital Renewal Expenditure (Scenario 3 – Balanced with Long Term Financial Plan)



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 capital works programs 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 existing 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 4.4.

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.5.1.

Table 5.5.1: Upgrade/New Assets Priority Ranking Criteria

Criteria	Weighting
Available budget	No weighting criteria adopted
Land use planning priorities	No weighting criteria adopted
Public health needs	No weighting criteria adopted
Regulatory standards	No weighting criteria adopted
Total	**100%**

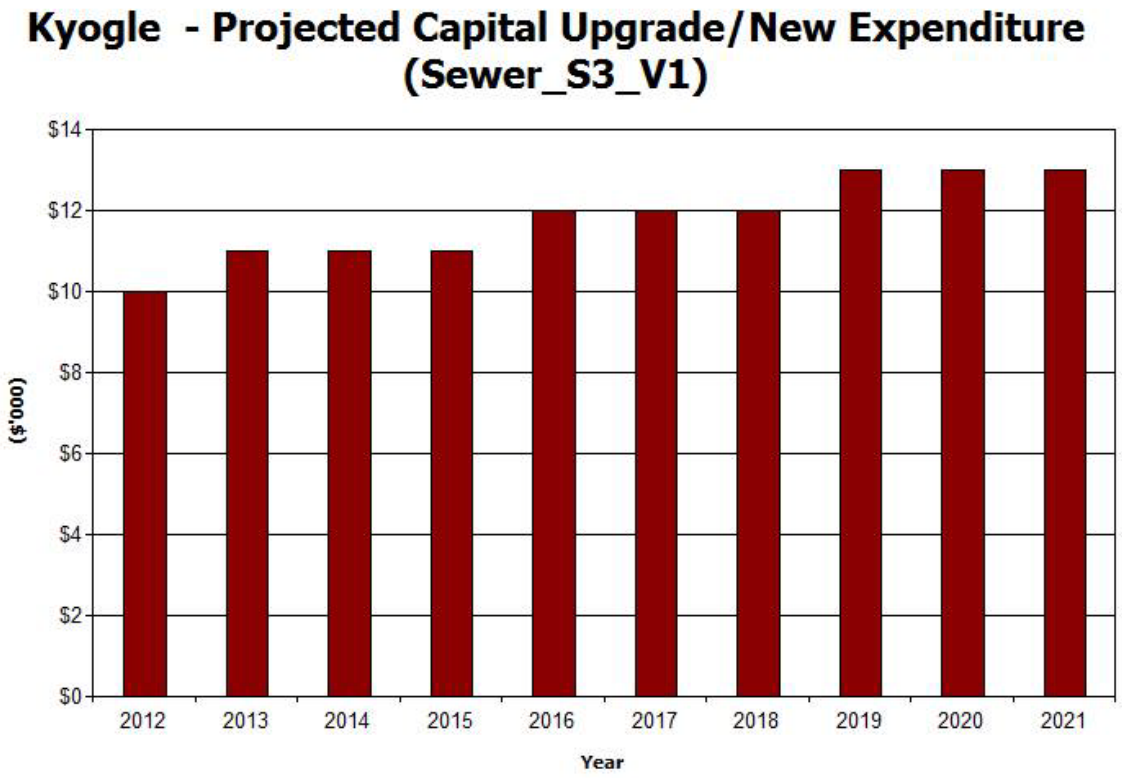
5.5.2 Standards and specifications

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 projected upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Figure 6. The projected upgrade/new capital works program is shown in Appendix C. All costs are shown in current 2011 dollar values.

Figure 6: Projected Capital Upgrade/New Asset Expenditure



New sewerage services infrastructure estimated at a total cost of $118,000 has been included in this asset management plan and Council's Long Term Financial Plan.

New assets and services are to be funded from capital works program and grants where available. These are listed in total in Appendix C, and have been identified in the long term financial plan.

Funding 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. Assets identified for possible decommissioning and disposal are shown in Table 5.6, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any.

Where cash flow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

Table 5.6: Assets identified for Disposal

Asset	Reason for Disposal	Timing	Net Disposal Expenditure (Expend +ve, Revenue –ve)	Operations & Maintenance Annual Savings
No assets identified for disposal in this asset management plan				

6. FINANCIAL SUMMARY

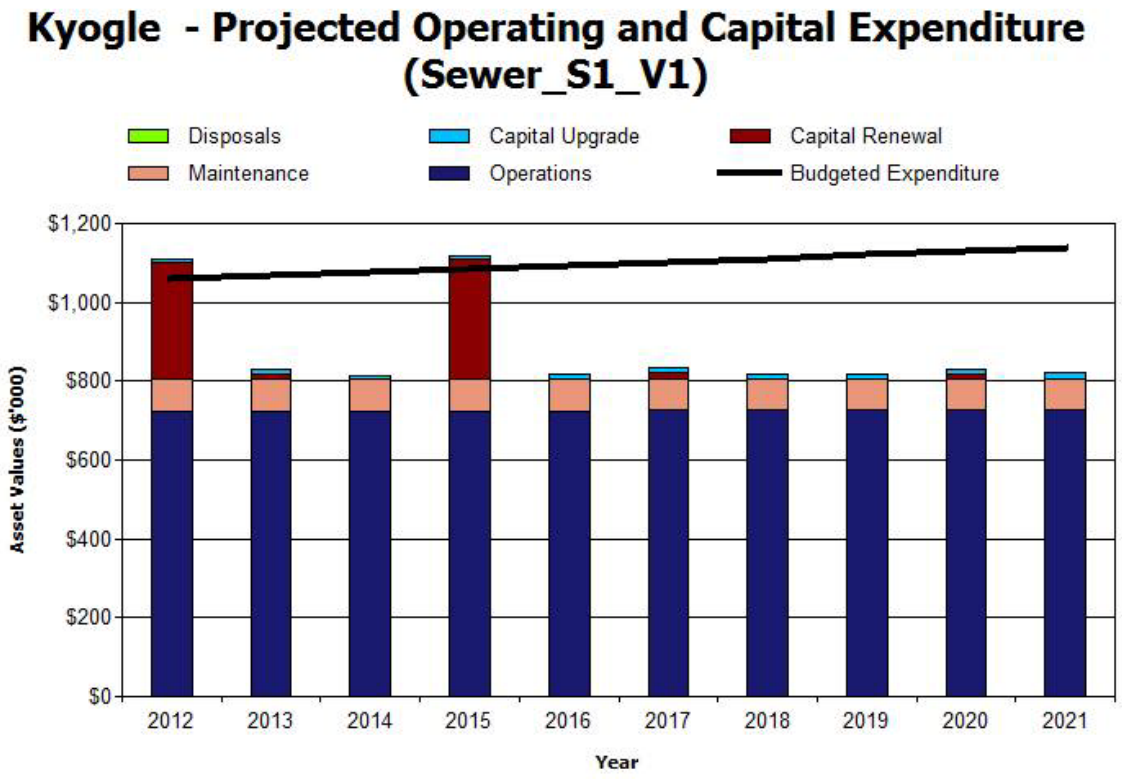
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset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

6.1 Financial Statements and Projections

The financial projections are shown in Figure 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets), net disposal expenditure and estimated budget funding.

Note that all costs are shown in 2011 dollar values.

Figure 7.1: Projected Operating and Capital Expenditure and Budget (Scenario 1 - from Asset Register)



As discussed in Section 5.3 the expenditure projection (forecast) in Scenario 1 (Using the asset/valuation register) is not consistent with the required works program or the long term financial plan, and is indicative of the continuing work required to improve the asset register.

Figure 7.2: Projected Operating and Capital Expenditure and Budget (Scenario 2 - from Average Network Renewal Estimates)

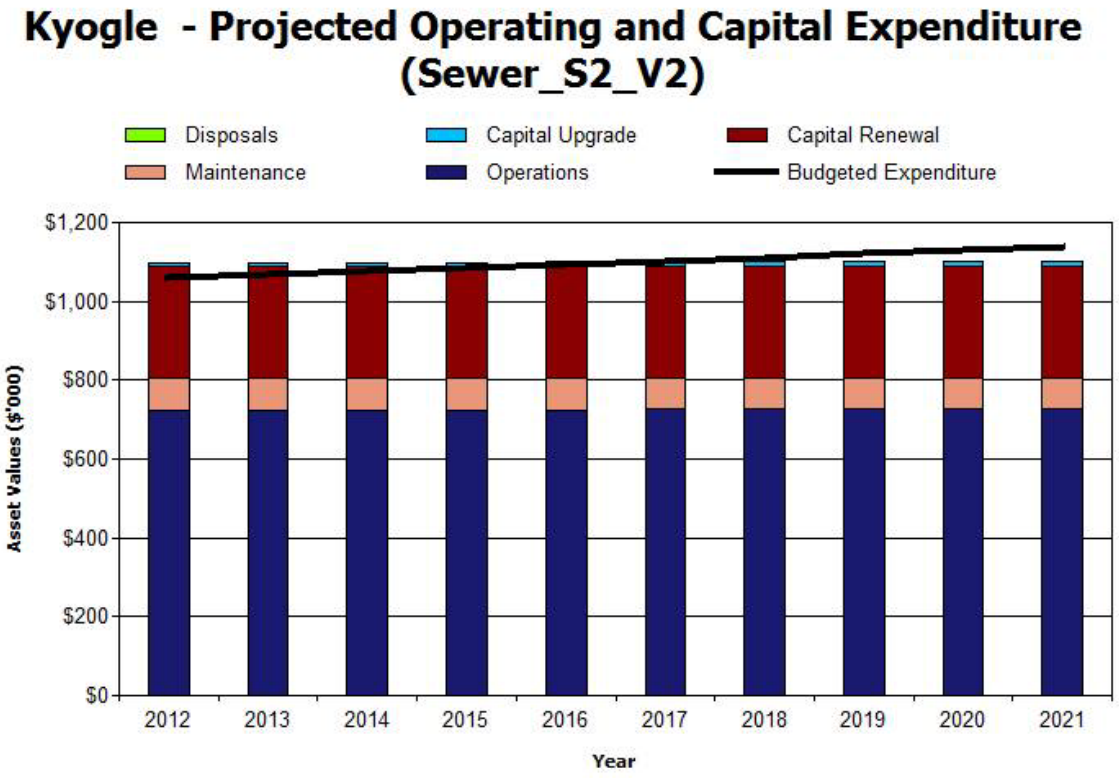
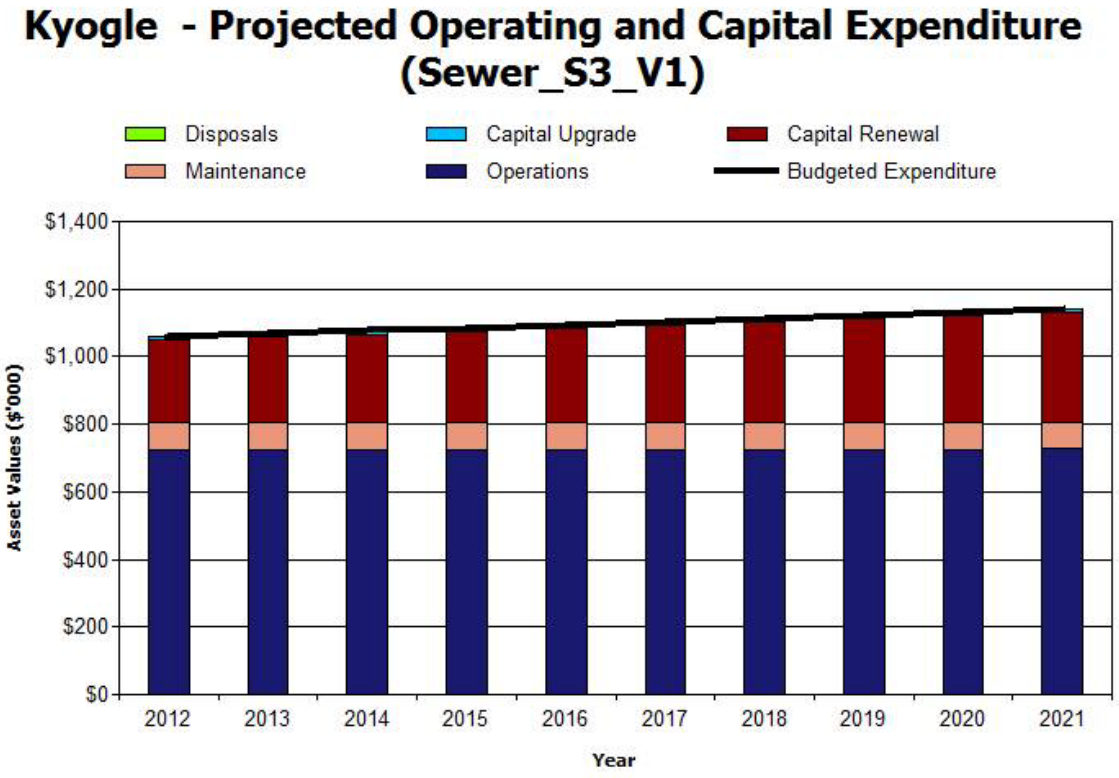


Figure 7.3: Projected Operating and Capital Expenditure and Budget (Scenario 3 – Balanced with Long Term Financial Plan)



6.1.1 Financial sustainability in service delivery

There are three 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/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

Table 6.1.2 shows the projected (forecast) expenditures for the Long Term Financial Plan, with the assessment being made for the 3 scenarios used in this asset management plan.

The 3 Scenarios are summarised in the following table 6.0

Table 6.0: Sustainability Indicators Summary

Kyogle Council Sustainability of Service Delivery for Sewerage Services	**Kyogle Sewerage S1_V1 Asset Register ($000)**	**Kyogle Sewerage S2_V1 Optimal Renewal ($000)**	**Kyogle Sewerage S3_V1 Balanced with LTFP ($000)**
Summary - What does it cost?			
Cost over 10 years	$8,813	$11,002	$11,006
Cost per year	$881	$1,100	$1,101
Available funding over 10 years	$10,992	$10,992	$10,992
Funding per year	$1,099	$1,099	$1,099
Funding shortfall	-$218	$1	$1
Percentage of cost	**125%**	**100%**	**100%**
Life Cycle Cost (long term)			
Life Cycle Cost = depreciation + operations + maintenance + upgrade (10 year average]	$11,502	$11,502	$11,502
Life Cycle Exp. =capital renewal expenditure. + operations + maintenance + upgrade expenditure. 10 year average]	$10,992	$10,992	$10,992
Life Cycle Gap [life cycle expenditure - life cycle cost [-ve = gap]	-$510	-$510	-$510
Life Cycle Sustainability Indicator [life cycle expenditure / LCC]	**96%**	**96%**	**96%**

Medium Term (10 yrs) Sustainability			
10 yr Ops, Maintenance & Renewal & Upgrade Projected Expenditure	$8,813	$11,002	$11,006
10 yr Ops, Maintenance & Renewal & Upgrade Planned (Budget) Expenditure	$10,992	$10,992	$10,992
10 yr Funding Shortfall [10 yr proj. exp. - planned (Budget) exp.]	$2,179	-$10	-$14
10 yr Sustainability Indicator [10 yr planned exp. / proj. exp.]	**125%**	**100%**	**100%**
Short Term (5 yrs) Sustainability			
5 yr Ops, Maint & Renewal & Upgrade Projected Expenditure	$4,690	$5,493	$5,390
5 yr Ops, Maint & Renewal & Upgrade Planned (Budget) Exp	$5,387	$5,387	$5,387
5 yr Funding Shortfall [5 yr proj. exp. - planned (budget) exp.]	$697	-$106	-$3
5 yr Sustainability Indicator [5 yr planned exp. / proj. exp.]	**115%**	**98%**	**100%**

Summary of Table 6.0

Scenario	Long Term	Medium Term	
	Lifecycle	**5 Year**	**10 Year**
Scenario 1 Sewerage Services **S1_V1 Asset Register**	96% Sustainability Ratio (Target is 100%) Based on the comparison of current expenditures (10 Year Average) to the Projected (Forecast Expenditures) using depreciation as the long term renewal requirement.	115% Sustainability Ratio (Target is 100%) Based on the comparison of current expenditures (5 years) to the Projected (Forecast Expenditures) using the renewals due from the asset register. A second calculation 115%. In isolation this ratio of >100% would indicate that renewals are being over funded. Scenarios 2 & 3 have been undertaken to validate the real position. The apparent surplus reflects that the asset register requires further development to reliably reflect the medium term position	125% Sustainability Ratio (Target is 100%) Based on the comparison of current expenditures (10 years) to the Projected (Forecast Expenditures) using the renewals due from the asset register. A second calculation 125%. In isolation this ratio of >100% would indicate that renewals are being over funded. Scenarios 2 & 3 have been undertaken to validate the real position. The apparent surplus reflects that the asset register requires further development to reliably reflect the medium term position.
Scenario 2 Sewerage Services **S2_V1 Optimal Renewal**	96% Sustainability Ratio (Target is 100%) Same calculation for Scenario 1, 2 & 3	100% Sustainability Ratio (Target is 100%) Based on the comparison of current expenditures to the Projected (Forecast Expenditures) using the works program to assess the renewal requirements.	100% Sustainability Ratio (Target is 100%) Based on the comparison of current expenditures to the Projected (Forecast Expenditures) using the Long Term Financial Plan funding for the renewal requirements.
Scenario 3 Sewerage Services **S3_V1 Balanced with LTFP**	96% Sustainability Ratio (Target is 100%) Same calculation for Scenario 1, 2 & 3	98% Sustainability Ratio Same calculation for Scenario 2	100% Sustainability Ratio Same calculation for Scenario 2

For the overall assessments used in this asset management plan (including the Executive Summary) the assessment made under Scenario 3 is used.

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 operations and maintenance expenditure and asset consumption (depreciation expense). The average annual life cycle cost for the services covered in this asset management plan is $1,150,200.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes annual average of operations, maintenance and capital renewal expenditure (10 year average). Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is $1,099,200. A shortfall between life cycle cost and life cycle expenditure is the life cycle gap.

The life cycle gap for services covered by this asset management plan is $51,400 per year.

Life cycle expenditure is 96% of life cycle costs giving a life cycle sustainability index of 0.96

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. If the life cycle expenditure is less than that life cycle cost, it is most likely that outlays will need to be increased or cuts in services made in the future.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

For the medium term assessment used in this asset management plan Scenario 2 is used. This Scenario uses the medium term requirements to maintain service levels for this period.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is $1,100,000 per year.

Estimated (budget) operations, maintenance and capital renewal funding is $1,099,000 per year giving a funding shortfall of $0 (Rounded) per year and a 10 year sustainability indicator of 1.0. This indicates that Council has 100% of the projected expenditures needed to provide the services documented in the asset management plan.

Short Term – 5 year financial planning period

For the short term assessment used in this asset management plan Scenario 2 is used. This Scenario uses the short term requirements to maintain service levels for this period.

For this period 98% of projected expenditures is funded giving a 5 year sustainability indicator of 0.98

Financial Sustainability Indicators

Figure 7A shows the financial sustainability indicators over the 10 year planning period and for the long term life cycle.(including Upgrade/New).

Figure 7A.1: Financial Sustainability Indicators (Scenario 1 - from Asset Register)

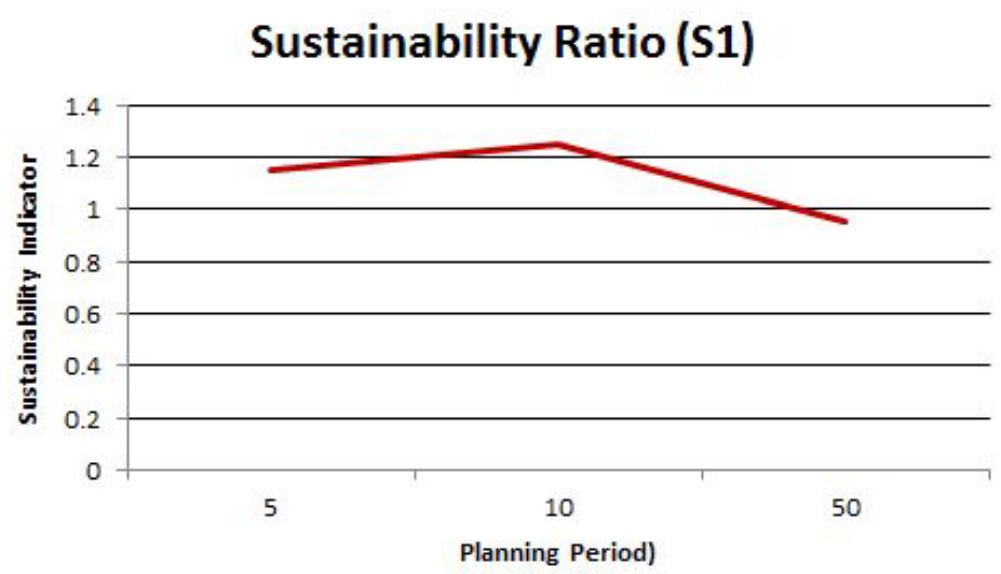


Figure 7A.2: Financial Sustainability Indicators (Scenario 2 - from Average Network Renewal Estimates)

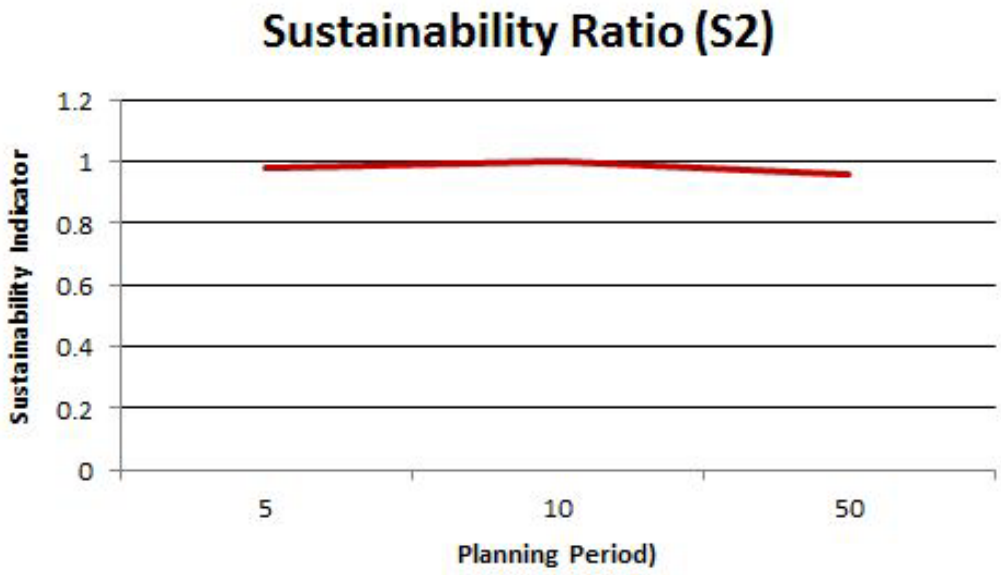
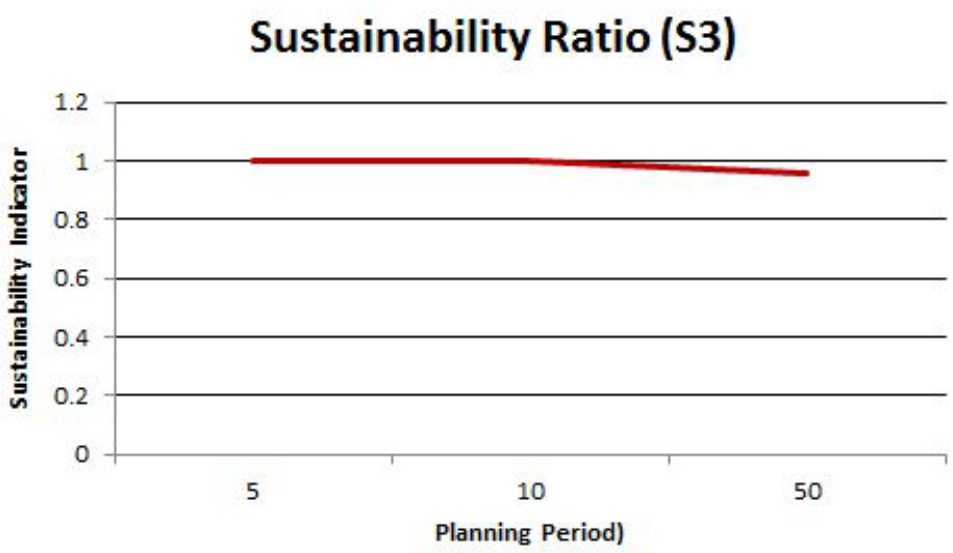


Figure 7A.3: Financial Sustainability Indicators (Scenario 3 – Balanced with Long Term Financial Plan)



Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and funding to achieve a financial sustainability indicator of 1.0 for the first years of the asset management plan and ideally over the 10 year life of the AM Plan.

Figure 8 shows the projected asset renewals in the 10 year planning period from Appendix B. The projected asset renewals are compared to budgeted renewal expenditure in the capital works program and capital renewal expenditure in year 1 of the planning period in Figure 8.

Figure 8.1: Projected and Budgeted Renewal Expenditure (Scenario 1 - from Asset Register)

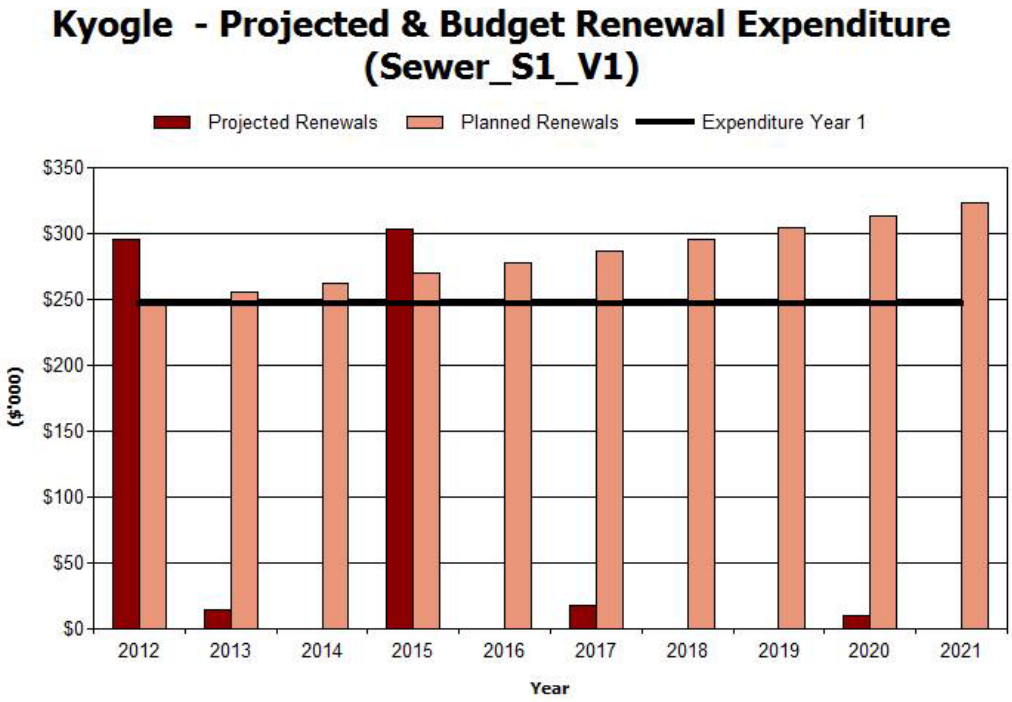


Table 6.1.1.S1 shows the shortfall between projected and budgeted renewals for Scenario 1

Table 6.1.1.S1: Projected and Budgeted Renewals and Expenditure Shortfall (Scenario 1 - from Asset Register) Kyogle

Year	Projected Renewals ($000)	Planned Renewal Budget ($000)	Renewal Funding Shortfall ($000) (-ve Gap, +ve Surplus)	Cumulative Shortfall ($000) (-ve Gap, +ve Surplus)
2012	$295.59	$247.00	-$48.59	-$48.59
2013	$14.03	$255.00	$240.97	$192.38
2014	$0.00	$262.00	$262.00	$454.38
2015	$302.82	$270.00	-$32.82	$421.56
2016	$0.00	$278.00	$278.00	$699.56
2017	$18.24	$287.00	$268.76	$968.32
2018	$0.00	$295.00	$295.00	$1,263.32
2019	$0.00	$304.00	$304.00	$1,567.32
2020	$9.96	$313.00	$303.04	$1,870.36
2021	$0.00	$323.00	$323.00	$2,193.36

Figure 8.2: Projected and Budgeted Renewal Expenditure (Scenario 2 - from Average Network Renewal Estimates)

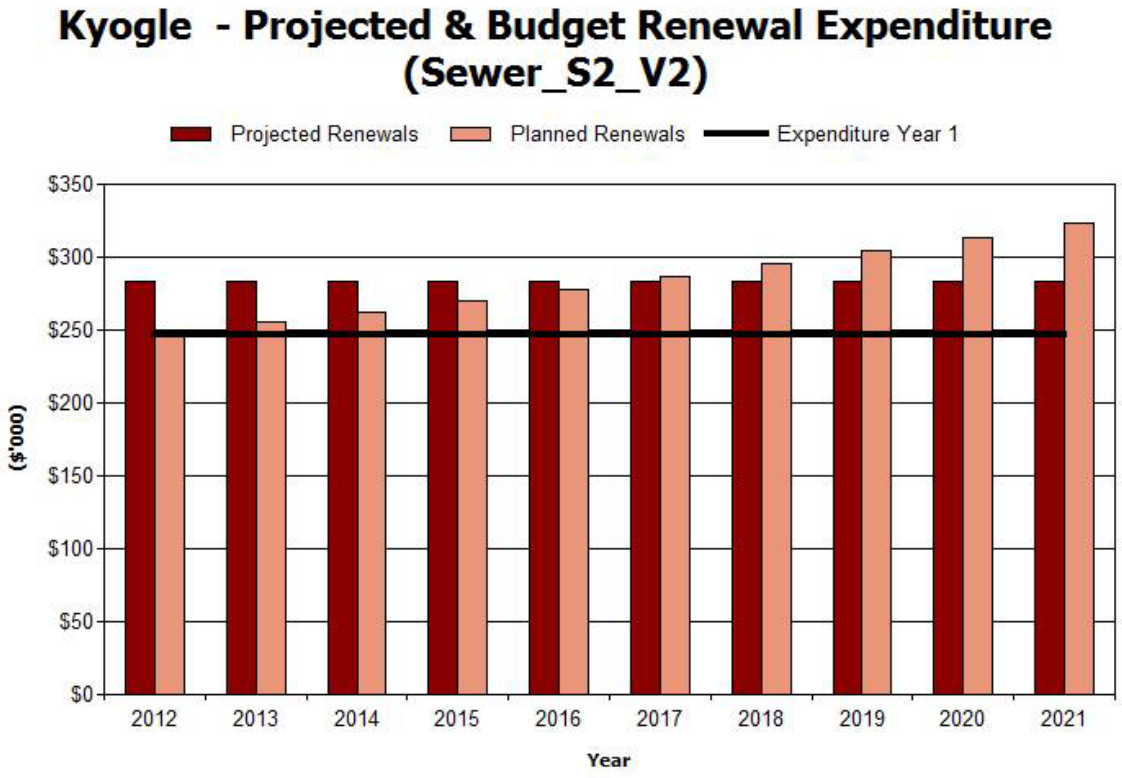


Table 6.1.1.S2 shows the shortfall between projected and budgeted renewals for Scenario 1

Table 6.1.1.S2: Projected and Budgeted Renewals and Expenditure Shortfall (Scenario 2 - from Average Network Renewal Estimates) – Kyogle

Year	Projected Renewals ($000)	Planned Renewal Budget ($000)	Renewal Funding Shortfall ($000) (-ve Gap, +ve Surplus)	Cumulative Shortfall ($000) (-ve Gap, +ve Surplus)
2012	$283.00	$247.00	-$36.00	-$36.00
2013	$283.00	$255.00	-$28.00	-$64.00
2014	$283.00	$262.00	-$21.00	-$85.00
2015	$283.00	$270.00	-$13.00	-$98.00
2016	$283.00	$278.00	-$5.00	-$103.00
2017	$283.00	$287.00	$4.00	-$99.00
2018	$283.00	$295.00	$12.00	-$87.00
2019	$283.00	$304.00	$21.00	-$66.00
2020	$283.00	$313.00	$30.00	-$36.00
2021	$283.00	$323.00	$40.00	$4.00

Figure 8.3: Projected and Budgeted Renewal Expenditure (Scenario 3 – Balanced with Long Term Financial Plan)

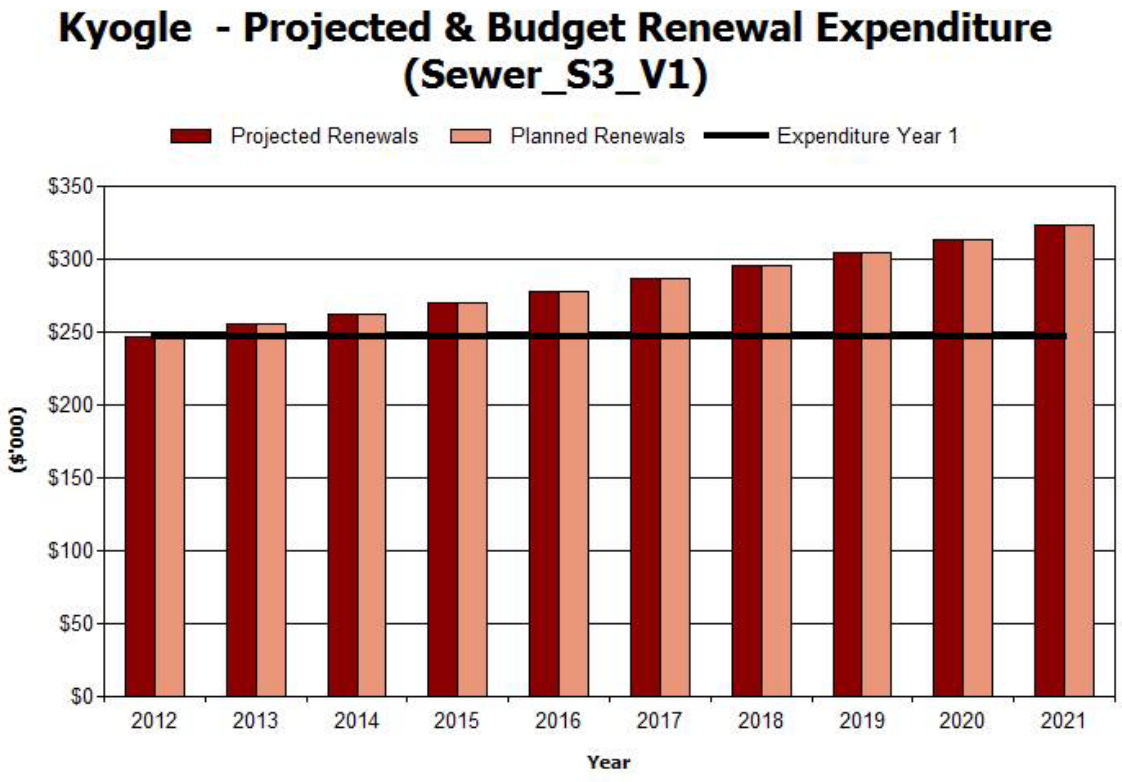


Table 6.1.1.S3 shows the shortfall between projected and budgeted renewals for Scenario

Table 6.1.1.S3: Projected and Budgeted Renewals and Expenditure Shortfall (Scenario 3 – Balanced with Long Term Financial Plan) Kyogle

Year	Projected Renewals ($000)	Planned Renewal Budget ($000)	Renewal Funding Shortfall ($000) (-ve Gap, +ve Surplus)	Cumulative Shortfall ($000) (-ve Gap, +ve Surplus)
2012	$247.00	$247.00	$0.00	$0.00
2013	$255.00	$255.00	$0.00	$0.00
2014	$262.00	$262.00	$0.00	$0.00
2015	$270.00	$270.00	$0.00	$0.00
2016	$278.00	$278.00	$0.00	$0.00
2017	$287.00	$287.00	$0.00	$0.00
2018	$295.00	$295.00	$0.00	$0.00
2019	$304.00	$304.00	$0.00	$0.00
2020	$313.00	$313.00	$0.00	$0.00
2021	$323.00	$323.00	$0.00	$0.00

Note: A negative shortfall indicates a funding gap, a positive shortfall indicates a surplus for that year.

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.

We 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 review future services, service levels and costs with the community.

6.1.2 Expenditure projections for long term financial plan

Table 6.1.2 shows the projected expenditures for the 10 year long term financial plan.

Expenditure projections are in current (non-inflated) values. Disposals are shown as net expenditures (revenues are negative).

Table 6.1.2: Expenditure Projections for Long Term Financial Plan ($000)
(Scenario 3 – Balanced with Long Term Financial Plan)

Year	Operations ($000)	Maintenance ($000)	Projected Capital Renewal ($000)	Capital Upgrade/ New ($000)	Disposals ($000)
2012	$724.00	$80.00	$247.00	$10.00	$0.00
2013	$724.25	$80.03	$255.00	$11.00	$0.00
2014	$724.53	$80.06	$262.00	$11.00	$0.00
2015	$724.81	$80.09	$270.00	$11.00	$0.00
2016	$725.09	$80.12	$278.00	$12.00	$0.00
2017	$725.39	$80.15	$287.00	$12.00	$0.00
2018	$725.69	$80.19	$295.00	$12.00	$0.00
2019	$725.99	$80.22	$304.00	$13.00	$0.00
2020	$726.32	$80.26	$313.00	$13.00	$0.00
2021	$726.65	$80.29	$323.00	$13.00	$0.00

Note: All projected expenditures are in 2011 values

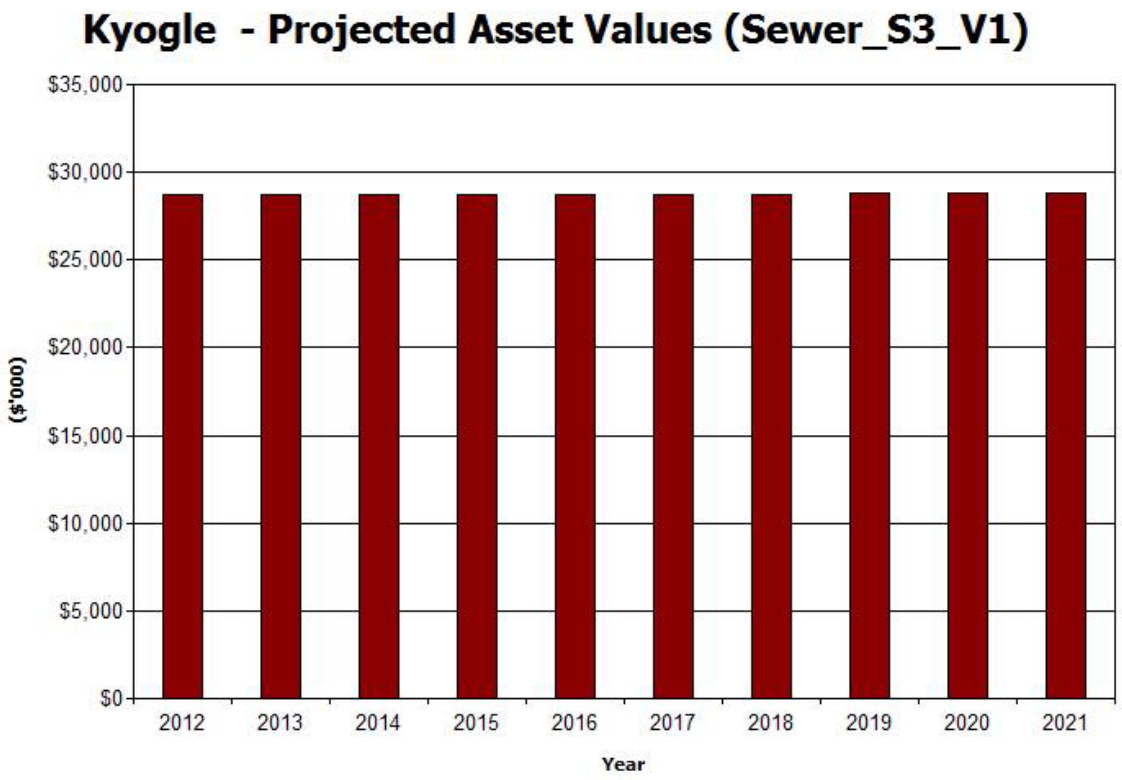
6.2 Funding Strategy

Projected expenditure identified in Section 6.1 is to be funded from future operating and capital budgets. The funding strategy is detailed in the organisation's 10 year long term financial plan. The long term financial plan funds these projections with the exception of the increase in operations and maintenance over the 10 years of the asset management plan. These increases are due to the need to operate and maintain the additional assets being created. This variance is not substantial, but should be monitored and considered in the next update of the asset management plan and long term financial plan.

6.3 Valuation Forecasts

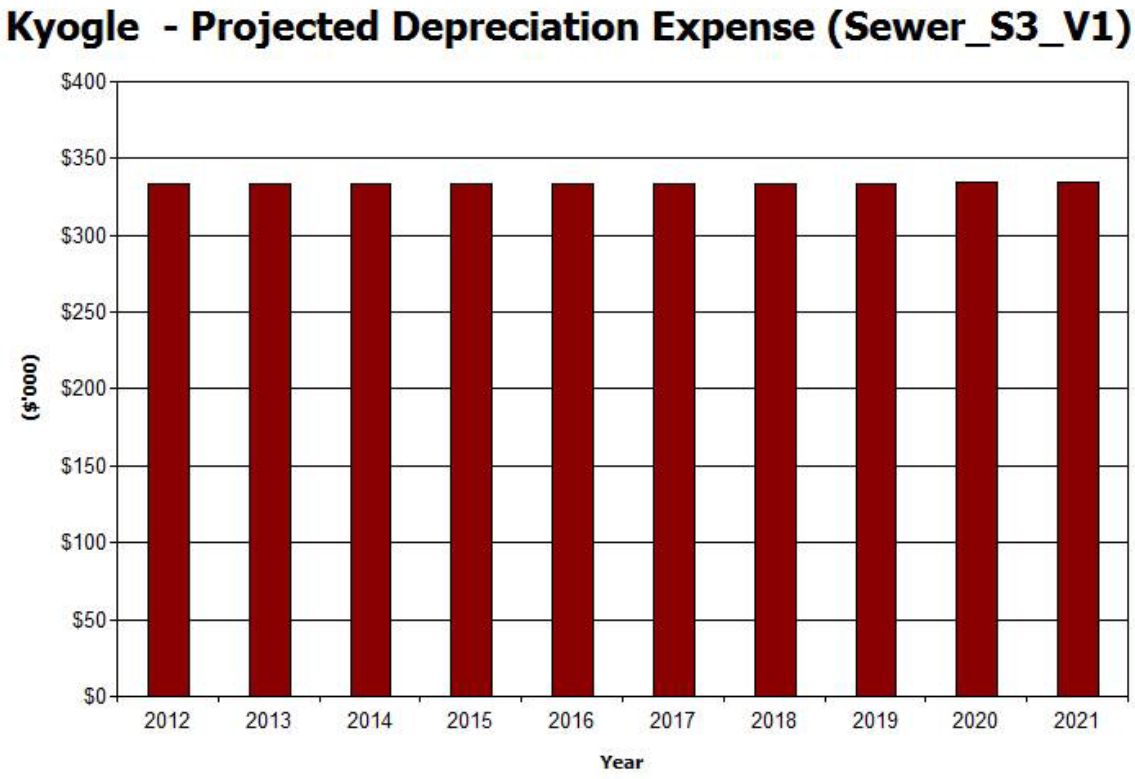
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in 2011 dollar values.

Figure 9: Projected Asset Values



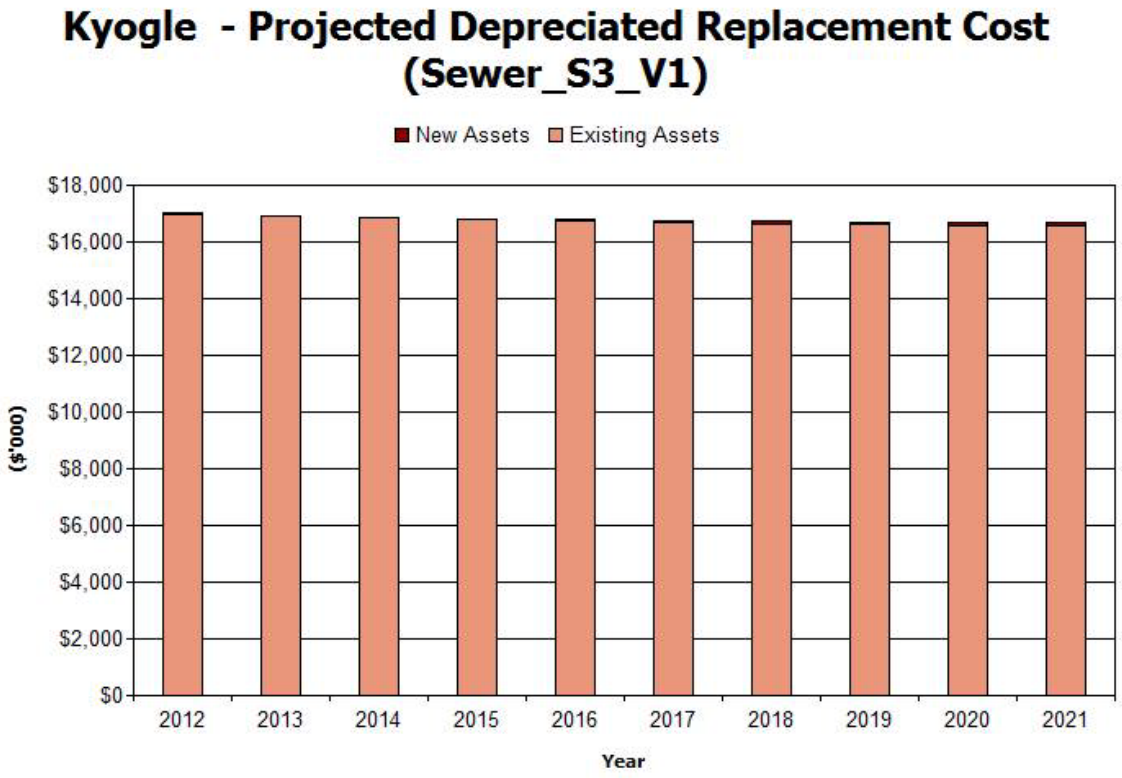
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

Figure 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 Figure 11. The effect of contributed and new assets on the depreciated replacement cost is shown in the darker colour.

Figure 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 asset management plan are:

- Use of the existing inventory data
- Use of existing valuations, useful lives and remaining lives determined from the condition rating
- Use of current expenditure information as best as this can be determined
- That the current expenditures are not resulting in a decline in the service levels provided in the medium term

Accuracy of future financial forecasts may be improved in future revisions of this asset management plan by the following actions.

- Full Implementation of a single Asset Register
- Maintaining the Asset Register

- Reviewing useful lives for assets in conjunction with developing suitable hierarchies within the asset categories.
- Higher detail and definition in relation to the current expenditures by type e.g. operating, maintenance, renewal, upgrade/new

7. ASSET MANAGEMENT PRACTICES

7.1 Accounting/Financial Systems

7.1.1 Accounting and financial systems

Kyogle Council uses the Civica PCS software solution for asset accounting.

This is managed by the Corporate and Community Services.

7.1.2 Accountabilities for financial systems

The financial systems are managed by the Corporate and Community Services section

7.1.3 Accounting standards and regulations

Council works under Australian Accounting Standards and NSW State Legislation/Regulations and Directives issued by the Division of Local Government

NSW Local Government Act 1993

Local Government Amendment (Planning and Reporting) Act 2009

NSW Local Government Code of Accounting Practice and Financial Reporting

Australian Accounting Standards Board AASB116

7.1.4 Capital/maintenance threshold

- Plant and Equipment — Capitalise if value >$1,000
- Office Equipment — Capitalise if value >$1,000
- Furniture and Fittings — Capitalise if value >$1,000
- Land and Open Space — Capitalise
- Roads, bridges, footpaths
    - Construction/reconstruction — Capitalise
    - Resel/resheet/major repairs — Capitalise if value >$20,000

7.1.5 Required changes to accounting financial systems arising from this AM Plan

Changes to asset management systems identified as a result of preparation of this asset management plan are:

- Develop identification and reporting on expenditures, with of separate cost for operations, maintenance and capture capital expenditures as renewal or upgrade/new,
- Development of a single corporate asset register, in which financial calculations including calculation of annual depreciation can be undertaken by council.

- Linking of the customer service system to the corporate asset register to link requests to asset records,
- Improved project cost accounting to record costs against the asset component and develop valuation unit rates.

7.2 Asset Management Systems

7.2.1 Asset management system

- BizeAsset

7.2.2 Asset registers

- BizeAsset

7.2.3 Linkage from asset management to financial system

Linkage from the asset management system to the financial systems is a manual process.

7.2.4 Accountabilities for asset management system and data

- Technical Services

7.2.5 Required changes to asset management system arising from this AM Plan

- Review of accuracy and currency of asset data,
- Development of a single technical asset register as the corporate asset register, in which financial calculations including calculation of annual depreciation can be undertaken by council.
- Development of a works costing and maintenance management system to improve works planning and cost recording
- Improved project cost accounting to record costs against the asset component and develop valuation unit rates.

7.3 Information Flow Requirements and Processes

The key information flows *into* this asset management plan are:

- Council strategic and operational plans,
- Service requests from the community,
- Network assets information,
- The unit rates for categories of work/materials,
- Current levels of service, expenditures, service deficiencies and service risks,
- Projections of various factors affecting future demand for services and new assets acquired by Council,
- Future capital works programs,
- Financial asset values.

The key information flows *from* this asset management plan are:

- The projected Works Program and trends,
- The resulting budget and long term financial plan expenditure projections,
- Financial sustainability indicators.

These will impact the Long Term Financial Plan, Strategic Longer-Term Plan, annual budget and departmental business plans and budgets.

7.4 Standards and Guidelines

Standards, guidelines and policy documents referenced in this asset management plan are:

- Local Government Act (NSW) 1993
- Local Government Amendment (Planning and Reporting) Act 2009
- Local Government (Finance Plans and Reporting) Regulation 2010
- AASB116

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 cash flows identified in this asset management plan are incorporated into the organisation's long term financial plan and Community/Strategic Planning processes and documents,
- 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 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task No	Task	Responsibility	Resources Required	Timeline
1	Record and report on expenditures, with separate costs for operations, maintenance and capture capital expenditures as renewal or upgrade/new	Corporate (Technical & Financial)	Staff Time	December 2012
2	Continue the development of the corporate asset register, in which financial calculations including calculation of annual depreciation are undertaken by council.	Corporate (Technical & Financial)	Staff Time	December 2012
3	Linking of the customer service system to the corporate asset register to link requests to asset records	Corporate	Staff Time	June 2013
4	Continue to Improve project cost accounting to record costs against the asset component and develop valuation unit rates	Corporate (Technical & Financial)	Staff Time	December 2012
5	Review the accuracy and currency of asset data	Technical	Staff Time	December 2012
6	Review methodology for determining remaining life, with detail assessment for assets requiring renewal in the medium term (next 10-20 years) An outcome should be that the remaining lives from the asset register will generate a renewal scenario aligning with the Works Program and Long Term Financial Plan. (Scenario 1 described in this asset management plan will match Scenario 3)	Corporate (Technical & Financial)	Staff Time	June 2013
8	Continue to review the procedures for maintaining the Asset and Financial Registers	Corporate (Technical & Financial)	Staff Time	Ongoing

8.3 Monitoring and Review Procedures

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

The Plan has a maximum life of 4 years.

REFERENCES

Kyogle Council, Management Plan 2011-2012

Kyogle Council, Financial Statements for the year ended 30 June 2011

DVC, 2006, *Asset Investment Guidelines*, Glossary, Department for Victorian Communities, Local Government Victoria, Melbourne, http://www.dpcd.vic.gov.au/localgovernment/publications-and-research/asset-management-and-financial.

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IPWEA, 2011, *Asset Management for Small, Rural or Remote Communities* Practice Note, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/AM4SRRC.

APPENDICES

Appendix A1 Planned Expenditures used in Forecast Modelling

Appendix A2 Kyogle Council 10 Year Budget

Appendix B Projected 10 year Capital Renewal Works Program

Appendix C Planned Upgrade/Exp/New 10 year Capital Works Program A

Appendix D Abbreviations

Appendix E Glossary

Appendix A1 Planned Expenditures used in Forecast Modelling

IPWEA Asset Management for Small, Rural or Remote Communities

Kyogle
Sewer_S3_V1 Asset Management Plan

Planned Expenditures

First year of expenditure projections **2012** (yr ending 30 June)

Asset values as at 30 June 2011			Form 2 CRC values
Current replacement cost	$28,681	(000)	$0 (000)
Depreciable amount	$28,681	(000)	as check for you
Depreciated replacement cost	$17,082	(000)	60% of CRC
Annual depreciation expense	$333	(000)	1% of D Amt

Operations and Maintenance Costs from New Assets	% of asset value	Existing %ages calculated from data in worksheet
Additional operations costs	2.52%	2.52% of CRC
Additional maintenance	0.28%	0.28% of CRC
Additional depreciation	1.16%	1.16% of D Amt
Planned renewals (information only)		0.86% of CRC

You may use these values calculated from your data or overwrite the links.

Projected Expenditures

10 Year Expenditure Projections Note: Enter all values in current **2012** values

Year ending June	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
	$000	$000	$000	$000	$000	$000	$000	$000	$000	$000
Operations (Budget or LTFP)										
Operations	$724	$724	$724	$724	$724	$724	$724	$724	$724	$724
Management		$0	$0	$0	$0	$0	$0	$0	$0	$0
AM systems		$0	$0	$0	$0	$0	$0	$0	$0	$0
Total operations	$724	$724	$724	$724	$724	$724	$724	$724	$724	$724
Maintenance (Budget or LTFP)										
Reactive maintenance	$80	$80	$80	$80	$80	$80	$80	$80	$80	$80
Planned maintenance		$0	$0	$0	$0	$0	$0	$0	$0	$0
Specific maintenance items		$0	$0	$0	$0	$0	$0	$0	$0	$0
Total maintenance	$80	$80	$80	$80	$80	$80	$80	$80	$80	$80
Capital										
Planned renewal budget	$247	$255	$262	$270	$278	$287	$295	$304	$313	$323
Planned upgrade/new (from Form 2C)	$10	$11	$11	$11	$12	$12	$12	$13	$13	$13
Non-growth contributed asset value	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Disposal Expenditure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
User Comments #1										

INFRASTRUCTURE RISK MANAGEMENT PLAN ACTIONS

From Infrastructure Risk Management Plan and where not included above	2012 $000	2013 $000	2014 $000	2015 $000	2016 $000	2017 $000	2018 $000	2019 $000	2020 $000	2021 $000
Operations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital Renewal	to be incorporated into Form 2 (where Method 1 is used) OR Form 2B (where Method 2 or 3 is used)									
Capital Upgrade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Disposal Expenditure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
User Comments #2										

Appendix A2 Kyogle Council 10 Year Budget

AMPS - 1 AMP for Sewer

LTFP Operating Incl Depr	1,127,362	1,143,733	1,164,375	1,206,293	1,229,131	1,272,162	1,296,661	1,325,355	1,351,027	1,354,493
Deprn	322,995	332,685	342,666	352,946	363,534	374,440	385,673	397,243	409,160	421,435
Operating and Maintenance	804,367	811,048	821,709	853,347	865,597	897,722	910,988	928,112	941,867	933,058
Operating - assume 90%	723,930	729,943	739,538	768,012	779,037	807,950	819,889	835,301	847,680	839,752
Maint -assume 10%	80,437	81,105	82,171	85,335	86,560	89,772	91,099	92,811	94,187	93,306
Capital Total	257,500	265,225	273,181	281,377	289,819	298,514	307,469	316,693	326,194	335,979
Renewal	247,200	254,616	262,254	270,122	278,226	286,573	295,170	304,025	313,146	322,540
Upgrade/New	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439
CheckTotal Cap Balancing	0	0	0	0	0	0	0	0	0	0

0

Capital Activities -Sewer

56044-091 MAINS EXTENSION	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439
UNSUBSIDISED WORKS	247,200	254,616	262,254	270,122	278,226	286,573	295,170	304,025	313,146	322,540
SUBSIDISED WORKS	0	0	0	0	0	0	0	0	0	0

NOTE: CPI increases were removed for modelling

Appendix B Projected 10 year Capital Renewal Works Program

Projected Capital Renewal Works Program - Sewer_S3_V1

Year	Item	Description	Estimate
2012		**Network Renewals**	
	1	Long Term Financial Plan - Actual Works Program	$247
2012		**Total**	**$247**

2013		**Network Renewals**	
	1	Long Term Financial Plan - Actual Works Program	$255
2013		**Total**	**$255**

($000)

2014		**Network Renewals**	
	1	Long Term Financial Plan - Actual Works Program	$262
2014		**Total**	**$262**

2015		**Network Renewals**	Estimate
	1	Long Term Financial Plan - Actual Works Program	$270
2015		**Total**	**$270**

($000)

2016		**Network Renewals**	
	1	Long Term Financial Plan - Actual Works Program	$278
2016		**Total**	**$278**

2017		**Network Renewals**	
	1	Long Term Financial Plan - Actual Works Program	$287
2017		**Total**	**$287**

($000)

2018		**Network Renewals**	
	1	Long Term Financial Plan - Actual Works Program	$295
2018		**Total**	**$295**

2019		**Network Renewals**	
	1	Long Term Financial Plan - Actual Works Program	$304
2019		**Total**	**$304**

($000)

2020		**Network Renewals**	
	1	Long Term Financial Plan - Actual Works Program	$313
2020		**Total**	**$313**

2021		**Network Renewals**	
	1	Long Term Financial Plan - Actual Works Program	$323
2021		**Total**	**$323**

Appendix C Planned Upgrade/Exp/New 10 year Capital Works Program

Projected Capital Upgrade/New Works Program - Sewer_S3_V1

Year	Item	Description	Estimate
2012	1	Long Term Financial Plan	$10
2012		Total	$10
2013	1	Long Term Financial Plan	$11
2013		Total	$11
2014	1	Long Term Financial Plan	$11
2014		Total	$11
2015	1	Long Term Financial Plan	$11
2015		Total	$11
2016	1	Long Term Financial Plan	$12
2016		Total	$12
2017	1	Long Term Financial Plan	$12
2017		Total	$12
2018	1	Long Term Financial Plan	$12
2018		Total	$12
2019	1	Long Term Financial Plan	$13
2019		Total	$13
2020	1	Long Term Financial Plan	$13
2020		Total	$13
2021	1	Long Term Financial Plan	$13
2021		Total	$13

Appendix D 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

EF Earthworks/formation

IRMP Infrastructure risk management plan

LCC Life Cycle cost

LCE Life cycle expenditure

MMS Maintenance management system

PCI Pavement condition index

RV Residual value

SS Suspended solids

vph Vehicles per hour

Appendix E Glossary

Annual service cost (ASC)

1) Reporting actual cost
   The annual (accrual) cost of providing a service including operations, maintenance, depreciation, finance/opportunity and disposal costs less revenue.
2) For investment analysis and budgeting
   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 operations, maintenance, depreciation, finance/ opportunity and disposal costs, less revenue.

Asset

A resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity. Infrastructure assets are a sub-class of property, plant and equipment which are non-current assets with a life greater than 12 months and enable services to be provided.

Asset class

A group of assets having a similar nature or function in the operations of an entity, and which, for purposes of disclosure, is shown as a single item without supplementary disclosure.

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 (AM)

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.

Average annual asset consumption (AAAC)*

The amount of an organisation's asset base consumed during a reporting period (generally a year). This may be calculated by dividing the depreciable amount by the useful life (or total future economic benefits/service potential) and totalled for each and every asset OR by dividing the carrying amount (depreciated replacement cost) by the remaining useful life (or remaining future economic benefits/service potential) and totalled for each and every asset in an asset category or class.

Borrowings

A borrowing or loan is a contractual obligation of the borrowing entity to deliver cash or another financial asset to the lending entity over a specified period of time or at a specified point in time, to cover both the initial capital provided and the cost of the interest incurred for providing this capital. A borrowing or loan provides the means for the borrowing entity to finance outlays (typically physical assets) when it has insufficient funds of its own to do so, and for the lending entity to make a financial return, normally in the form of interest revenue, on the funding provided**.**

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 expenditure - expansion

Expenditure that extends the capacity of an existing asset to provide benefits, at the same standard as is currently enjoyed by existing beneficiaries, to a new group of users. It is discretionary expenditure, which increases future operations and maintenance costs, because it increases the organisation'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 - new

Expenditure which creates a new asset providing a new service/output that did not exist beforehand. As it increases service potential it may impact revenue and will increase future operations and maintenance expenditure.

Capital expenditure - renewal

Expenditure on an existing asset or on replacing an existing asset, which returns the service capability 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 generally has no impact on revenue, but may reduce future operations 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.

Capital expenditure - upgrade
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 discretionary and often does not result in additional revenue unless direct user charges apply. It will increase operations and maintenance expenditure in the future because of the increase in the organisation'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.

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

Capitalisation threshold
The value of expenditure on non-current assets above which the expenditure is recognised as capital expenditure and below which the expenditure is charged as an expense in the year of acquisition.

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
Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

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, including 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.

Depreciable amount
The cost of an asset, or other amount substituted for its cost, less its residual value.

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.

Funding gap
A funding gap exists whenever an entity has insufficient capacity to fund asset renewal and other expenditure necessary to be able to appropriately maintain the range and level of services its existing asset stock was originally designed and intended to deliver. The service capability of the existing asset stock should be determined assuming no additional operating revenue, productivity improvements, or net financial liabilities above levels currently planned or projected. A current funding gap means service levels have already or are currently falling. A projected funding gap if not addressed will result in a future diminution of existing service levels**.**

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 that contribute to meeting the needs of organisations or the 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 are often have no separate 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.

Key performance indicator
A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

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

Life Cycle Cost
1. **Total LCC** The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
2. **Average LCC** The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises annual operations, 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 operations, maintenance and capital renewal expenditure incurred in providing the service in a particular year. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of life cycle sustainability.

Loans / borrowings
See borrowings.

Maintenance
All actions necessary for retaining an asset as near as practicable to its original condition, including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. It is operating expenditure required to ensure that the asset reaches its expected useful life.

- **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.
- **Reactive maintenance**
  Unplanned repair work that is carried out in response to service requests and management/supervisory directions.
- **Significant maintenance**
  Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.
- **Unplanned maintenance**
  Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.

Maintenance and renewal gap
Difference between estimated budgets and projected required expenditures for maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 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
The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

Modern equivalent asset
Assets that replicate what is in existence with the most cost-effective asset performing the same level of service. It is the most cost efficient, currently available asset which will provide the same stream of services as the existing asset is capable of producing. It allows for technology changes and, improvements and efficiencies in production and installation techniques

Net present value (NPV)
The value to the organisation of the cash flows associated with an asset, liability, activity or event calculated using a discount rate to reflect the time value of money. It is the net amount of discounted total cash inflows after deducting the value of the discounted total cash outflows arising from eg the continued use and subsequent disposal of the asset after deducting the value of the discounted total cash outflows.

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.

Operations expenditure
Recurrent expenditure, which is continuously required to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in operating expenses.

Operating expense
The gross outflow of economic benefits, being cash and non cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

Pavement management system
A systematic process for measuring and predicting the condition of road pavements and wearing surfaces over time and recommending corrective actions.

PMS Score
A measure of condition of a road segment determined from a Pavement Management System.

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).

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 operations and maintenance expenditure.

Recurrent funding
Funding to pay for recurrent expenditure.

Rehabilitation
See capital renewal expenditure definition above.

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

Renewal
See capital renewal expenditure definition above.

Residual value
The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already

of the age and in the condition expected at the end of its useful life.

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 total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

Service potential remaining
A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. 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 (Depreciated Replacement Cost/Depreciable Amount).

Strategic Longer-Term Plan
A plan covering the term of office of councillors (4 years minimum) reflecting the needs of the community for the foreseeable future. It brings together the detailed requirements in the council's longer-term plans such as the asset management plan and the long-term financial plan. The plan is prepared in consultation with the community and details where the council is at that point in time, where it wants to go, how it is going to get there, mechanisms for monitoring the achievement of the outcomes and how the plan will be resourced.

Specific Maintenance
Replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, cycle, 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.

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.

Value in Use
The present value of future cash flows expected to be derived from an asset or cash generating unit. 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 net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.
Source: IPWEA, 2009, Glossary