

LOCKHART SHIRE COUNCIL



Sewerage Services Asset Management Plan



Version 2 Draft

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Orange Sapphires
PO Box 41
Howlong NSW 2643
Mobile: 0478 604 678
Email: lwa25159@gmail.com

Orange Sapphires

ABN: 14 142 830 449

Prepared For : Lockhart Shire Council

Author: Leigh Ashford

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Asset Management for Small, Rural or Remote Communities Practice Note

The Institute of Public Works Engineering Australia.

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1. EXECUTIVE SUMMARY

Context

The Lockhart Shire covers an area of 2942.23 square kilometres and is located in the Southern Riverina area of New South Wales. With a population of 2998 (2011 Census) the Shire includes the major townships of Lockhart and The Rock and the smaller villages of Milbrulong, Yerong Creek and Pleasant Hills.

Lockhart Shire Council manages and operates three sewerage schemes and one effluent reuse scheme.

The schemes are:

Lockhart Sewerage Scheme.

The scheme was commenced in 1964 and has a design life of 70 years (2034). It is currently designed for 2000 Equivalent Tenements. (ET, equal to an average house). It consists of 11.2kms of gravity mains and 1.4kms of rising mains. There are 3 pump stations and a trickling filter sewerage treatment works.

The Rock Sewerage Scheme.

The scheme was commenced in 1980 and also has a design life of 70 years (2050). It is currently designed for 2000 ET. It consists of 9.1kms of gravity mains and 1.7kms of rising mains. There are 3 pump stations and Aeration ponds filter sewerage treatment works.

Yerong Creek Sewerage Scheme.

The scheme was commenced in 2001 as a pressure sewerage scheme. Currently 65 pumps on individual properties pump sewerage to the Sewerage Treatment Works. It has a design life of 70 years (2071). It is believed that the treatment works has been designed for 1500ET. The life of the 65 pumps is estimated at 25years. Council has agreed to repair and replace the pumps as part of the scheme's operating strategy. This commitment requires council to make a regular contribution to the renewal of the pumps.

These infrastructure assets have a replacement value of \$13,800,721.

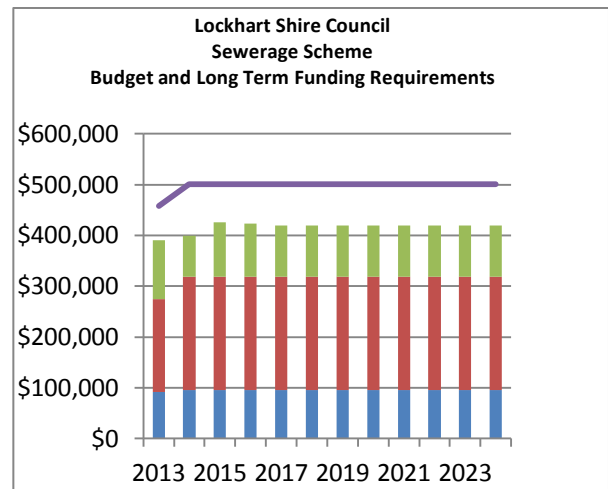
What does it Cost?

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 \$501,210 per year.

Council's estimated available funding for this period is \$418,726 per year which is 83.5% of the cost to provide the service. This is a funding shortfall of \$82,534 per

year. Projected and budgeted expenditure are shown in the graph below.

Council's present funding levels are insufficient to continue to provide existing services at current levels in the medium term.



What we will do

Council will continue to manage and operate the three sewerage schemes plans to provide Sewerage services to Lockhart, The Rock and Yerong Creek.

The schemes will continue to be operated within licence requirements and in a manner to maximise the life of the assets and continue to maintain the existing level of service to properties within the current sewerable area.

Council will improve its asset management knowledge of the schemes by identifying trends in operation and maintenance costs such as electricity and the number of unplanned repairs. It will introduce changes to operation where efficiency can be improved and the life of the assets can be extended.

Council will commence reducing the long term funding gap in the 2014/2015. This can be done by increasing fees and charges progressively to a long term sustainable level. Current modelling indicates that a 17.5% increase above inflation over 5 years will achieve this goal.

Council may consider developing models based on the 3 individual schemes and adjusting charges to customers separately within the three schemes.

What we cannot do

Council's Current level of income and reserves does not allow sufficient funds to provide Sewerage services all properties within the urban areas. Currently 10% of properties in Lockhart and The Rock are not serviced.

Council cannot fund the replacement of the schemes in the long term without obtaining loans. The impacts adversely impact on Council in 30 years when the Lockhart Sewerage plant will require renewal.

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:

- Spill into the environment
- Surcharge of pump station
- Loss of technical and operational knowledge
- Financial

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

- Identify potential failures and develop elimination or mitigation strategies.
- Review existing inspection and monitoring programs. Revise these programs if risks found are high or very high
- Initiate knowledge transfer from existing staff to other staff or to Council.
- Continue to develop knowledge of the schemes. Monitor changes in operational cost and maintenance. Develop a long term charging regime to improve the sustainability of the schemes.

The Next Steps

The actions resulting from this asset management plan are:

- Develop regular maintenance, monitoring and performance recording programs.
- Broaden operational knowledge and initiate knowledge transfer
- Develop charging models to be introduced in 2014/15 to improve the sustainability of Lockhart Shire Council Sewerage Schemes.

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve the Lockhart Shire Community's Sewerage needs

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.

Why is there a funding shortfall?

Most of the Council's sewerage schemes were constructed from government grants often provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

These assets will require a large amount of funds to renew. These funds will be required in large discrete portions at regular intervals in the future.

Council's present funding levels are insufficient to continue to provide renew existing services in the long term.

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 tradeoffs 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 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?

It is likely that Council will have to borrow funds to renew the existing sewerage treatment works. There will be a large increase in charges to service the loans.

What can we do?

Council can 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 provide the service to the community.

2. INTRODUCTION

2.1 Background

This asset management plan is to demonstrate responsive management of assets, compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service.

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

- Community Strategic Plan
- Operational Plan
- Delivery Plan
- Long Term financial Plan

Table 2.1: Assets covered by this Plan

Asset category	Dimension	Replacement Value
Gravity and rising mains including manholes and property connections	28585m	\$5,951,970
Pump Stations	71 (inc Yerong Creek Pumps)	\$2,395,000
Treatment Works	3	\$5,490,000
TOTAL		\$13,800,721

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.

The goal of this asset management plan is to:

- Document the services and service levels to be provided
- Document the costs of providing the service,
- Communicate the consequences if funding is not available to maintain the service level. Outline the risks involved.
- Provide information to assist Council in trading off service levels, costs and risks to provide services in a financially sustainable manner.

This asset management plan is prepared under the direction of Council’s vision, mission, goals and objectives.

Council’s vision is:

“Provide an environment where people may enjoy a quality of life which they aspire to.”

Council’s mission is:

“Provide leadership and meet the community’s needs in an equitable and inclusive way that enhances the area’s environment, social and economic qualities.”

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

Goal	Objective	How Goal and Objectives are addressed in AMP
Infrastructure that is planned and maintained for the long term needs of the community (D)	Vibrant Rural Planning and development (D3)	Provide and maintain efficient sewerage systems that allows for current and future community demands. (D3.1.1)

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 in accordance with the International Infrastructure Management Manual¹. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a ‘top down’ approach where analysis is applied at the ‘system’ or ‘network’ level.

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.

¹IPWEA, 2006.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

Council has not carried out any research on customer expectations. This will be investigated for future updates 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	<ul style="list-style-type: none"> – Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Environmental Planning & Assessment Act 1979 and Environmental Planning & Assessment Amendment Act 2008	<ul style="list-style-type: none"> – Local Environmental Plan – Development Control Plan – Provides for Council control of development of towns and approval of infrastructure expansion.
Protection of the Environment Operations Act 1997	<ul style="list-style-type: none"> – Need to control wastewater and stormwater disposal. – Control run-off or escape of contaminants entering water courses. – Regulating pollution activities and issue of licences. – Monitoring of and reporting on waste output. – Includes “Due Diligence” requirements, chemical and sludge disposal procedures. – Details penalties for causing environmental impacts.
Catchment Management Authorities Act 2003	<ul style="list-style-type: none"> – Requirement for ongoing management plan. – Promotes coordination of activities within catchment areas. – A provision of this Act is that local Catchment Management Authorities (Murrumbidgee and Murray) oversee this process in the region.
Soil Conservation Act 1938	<ul style="list-style-type: none"> – Preservation of water course environment.
Public Health Act 1991	<ul style="list-style-type: none"> – Protection of public health from handling and treatment of wastewater including effluent reuse.
Public Works Act 1912	<ul style="list-style-type: none"> – Provides authority for the Department of Water and Energy to construct sewerage works within the Council’s area and regulates activities concerning the acquisition of land for sewerage works.
Water Act 1912, Water Management Act 2000 and Water Management Amendment Act 2008	<ul style="list-style-type: none"> – Water rights, licences, allocations and determination of developer charges.
Work Health and Safety Act 2011 (Occupational Health and Safety Act 2000)	<ul style="list-style-type: none"> – Impacts all operations in relation to safety of workers and the public. – Council’s responsibility to ensure the health, safety and welfare of employees, contractors and others at places of work.
Independent Pricing and Regulatory Tribunal Act 1992	<ul style="list-style-type: none"> – Gives power to the Independent Pricing and Regulatory Tribunal to inquire into and regulate prices.

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?
Safety	Is the service safe?

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 (e.g. 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 (e.g. frequency and cost of pump repairs/replacement and pipeline replacement)
- Upgrade – the activities to provide a higher level of service (e.g. replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. Sewer additional areas).

3.4 Desired Levels of Service.

Indications of desired levels of service are obtained from various sources including resident's feedback to Councillors and staff, service requests and correspondence.

Table 3.3: Current Service Levels

Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service
COMMUNITY LEVELS OF SERVICE				
Quality	Odour Free sewerage Scheme. Sewerage Scheme does not pollute the environment	Level of odour complaints Compliance with Licence requirements	0 pa 100% compliance	Occasional complaints from Yerong Creek re private pumps 100% compliance
Function	Sewerage Scheme collects and disposes of wastewater	Service requests for chokes and surcharging	<5 pa	5
Safety	Does not exposes community to health hazards	Incidence of substandard effluent being discharged to environment	0 pa	0
TECHNICAL LEVELS OF SERVICE				
Operations	Pump stations regular cleaning	Regular washing down and inspection	Weekly for each pump station	Weekly
	STWs inspected and cleaned	Regular inspections and cleaning Emptying grease traps	Weekly for each STP	Weekly
	Records of operations	Testing and recording of inflows and outflows Testing of effluent quality	Daily	Weekly
			Biannually	Weekly
		Budget		
Maintenance	Reactive maintenance is completed Programmed maintenance of pumps Programed maintenance of STWs	Compliance with agreed time frames	Response in less than 2hrs	
		Pumps checked and repaired	Annually	
		Maintenance program completed	Annually	
		Budget		
Renewal	Renewal of elements before unacceptable failure rate	Maintenance Costs	Maintenance costs remain static or decrease	Maintenance Costs remain static
		Budget		
Upgrade/New	Compliance with higher environmental and health requirements	Compliance with Environmental and health requirements	100% compliance	100% compliance
		Budget		

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 (Census 2011)	Projection	Impact on services
Population – Lockhart	800	Lockhart’s population has had an annual population decline of 1% per annum for the last 10 years. It is expected that this rate reduce to 0.5% for the next 10 years	There will be little impact on the service. There may be increased odour problems during dry weather due to insufficient flows in the sewers if population continues to decline
Population – The Rock	862	The Rock’s population has been static over the last 10 years	There will be very little impact on existing service levels
Population – Yerong Creek	149	Yerong Creeks population has remained static over the 10 year period	There will be very little impact on existing service levels

4.2 Changes in Technology

Technology changes are forecast to have little effect on the delivery of services covered by this plan.

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

Technology Change	Effect on Service Delivery
Trenchless pipe laying	Reduce costs in laying deep sewer mains
Improved pipe relining	Reduced costs in renewal of sewer pipes

4.3 Demand Management Plan

There is expected to be little addition demand on the service in the future. There is excess capacity in the schemes to allow for any growth that may occur.

Table 4.3: Demand Management Plan Summary

Service Activity	Demand Management Plan
New subdivisions	Connection to existing Sewerage System continue to be incorporated into conditions of Development Approval

4.4 New Assets for Growth

It is expected that new contributed and constructed asset values will not be required. Council has identified approximately 10% of Lockhart and The Rock which remain unsewered. These are currently outside the sewerable areas of each town. Currently there are no plans to sewer these areas. However future legislation or community demand may require Council to extend its sewerage schemes to service these areas.

This scenario has not been considered in this plan.

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

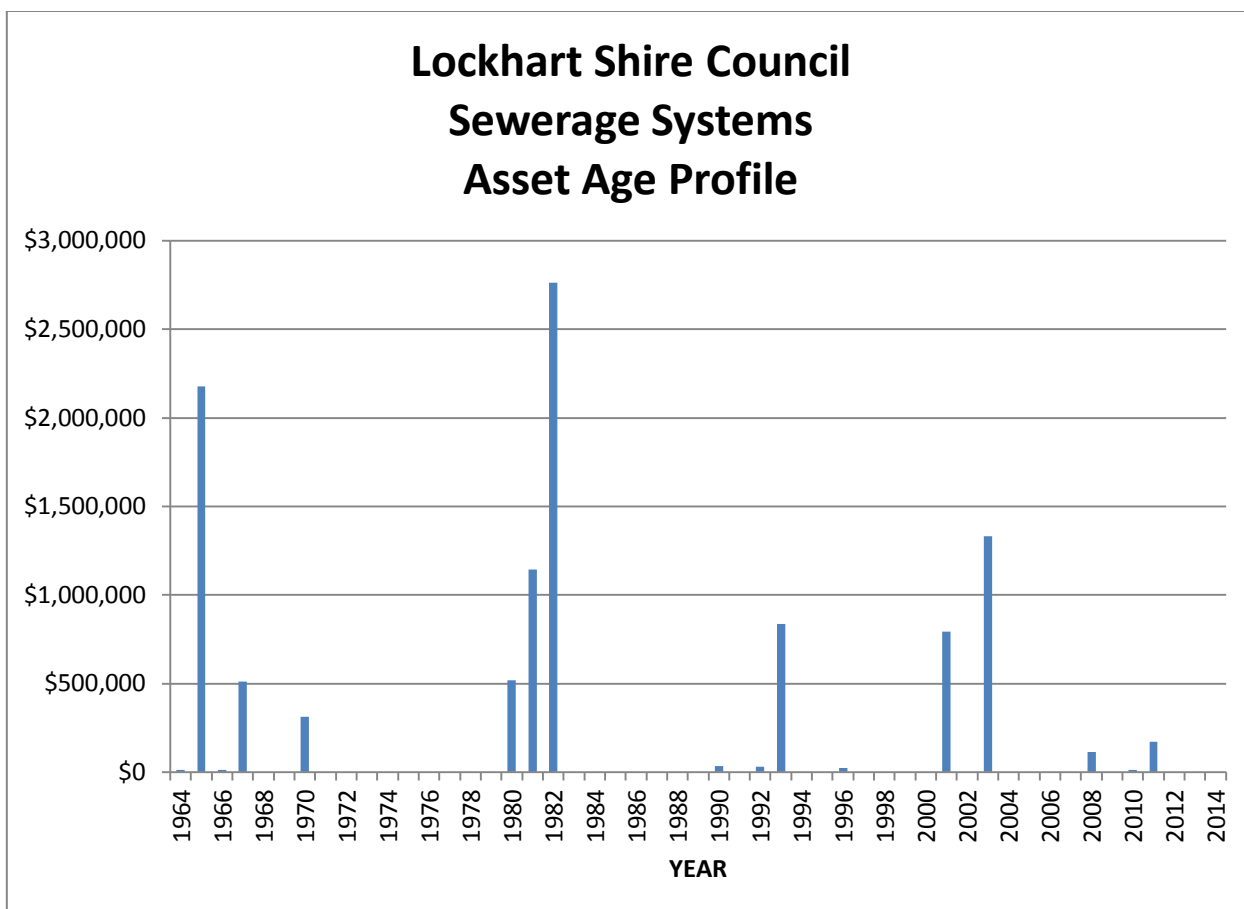
The assets covered by this asset management plan are shown in Table 2.1.

Gravity mains and manholes	20356m
Pressure mains	5068m
Rising mains	3161m
Pump stations	6
Private pump Stations	65 Yerong Creek. Council has agreed to maintain and replace pumps on private properties connected to the system.
Sewerage treatment works	3

Gravity mains in Lockhart and The Rock are of mixed construction, including Asbestos Cement, Vitreous Clay and UPVC. Rising mains in these areas are predominantly Asbestos Cement with newer sections of UPVC. An effluent reuse scheme at Lockhart has been constructed using Polythene pipes.

In Yerong Creek the pressure mains are constructed using Polythene pipes.

Figure 2: Asset Age Profile



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
Lockhart	Nil
The Rock	Nil
Yerong Creek	Nil

There are areas of Lockhart and The Rock which are outside the sewerable areas for the towns. Council has reported that this is approximately 10% of properties in the towns. There are no current plans to service these areas. The areas have not been considered in the Asset Management Plan.

Projects to extend sewerage to these areas need to be fully costed and funded independently to the existing sewerage schemes.

5.1.3 Asset condition

A comprehensive assessment of the asset conditions has not been carried out as part of this plan. Asset consumption is based on the age profile. Further revisions of the plan will move progressively from age profile to condition assessment. This will occur as knowledge of the scheme improves.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 2013 covered by this asset management plan is shown below. Assets were last revalued at 2012.

Current Replacement Cost	\$13,800,721
Depreciable Amount	\$ 9,243,708
Depreciated Replacement Cost	\$ 9,243,809
Annual Depreciation Expense	\$183,122

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)	1.98%
Asset renewal (Capital renewal exp/Depreciable amount)	0.549
Annual Upgrade/New (Capital upgrade exp/Depreciable amount)	0%
Annual Upgrade/New (including contributed assets)	0%

Council is currently renewing assets at 0% of the rate they are being consumed and increasing its asset stock by 0% each year. However Council is transferring to reserves \$100588 per year. Therefore the current asset renewal rate is 54.9%

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 in the long term.

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 in Table 5.1.5.

Table 5.1.5: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Sewer gravity mains	Mains operate efficiently moving sewerage
Sewer rising mains	Rising mains operate efficiently moving sewerage
Sewer pressure mains	Mains operate efficiently moving sewerage
Pump stations	Effectively transfer sewerage to STW
Sewerage treatment works	Treat sewerage to required standard

5.2 Risk Management Plan

An assessment of risks associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service or a 'financial shock'. The risk assessment process identifies credible risks and assess the likelihood and consequences of the risk event occurring. A risk treatment plan is prepared for unacceptable risks.

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
Environment	Effluent spill into Environment from STW	H	Identify potential failure regimes Develop strategies to Eliminate/mitigate regimes to acceptable risk level	Staff time Mitigation costs (Currently unknown)
Pump wells/ manholes	Surcharge of sewerage from pump stations and manholes	H	Review current inspection plan Develop strategies to eliminate/mitigate regimes to acceptable risk level Develop replacement plan of infrastructure near end of useful life Develop cleanup plan	Staff time Clean up cost Mitigation costs (currently unknown)
Sewerage system	Loss of critical operation knowledge	H	Review and update operational plan documents to reflect best practice Train additional staff to operate sewerage systems	Staff Time Training cost.
Financial	Council cannot fund renewal works	H	Improve asset knowledge and performance of the schemes Identify shortfalls and ensure adequate annual provision is made to reserves	Staff time Increase in annual charges

5.3 Routine Maintenance Plan

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

Table 5.3.1: Maintenance Expenditure Trends

Year	Maintenance Expenditure
2011/12 Annual Report SS7	\$159,695
2012/13 Budget	\$187,721
2013/2014	\$222,273

There appears to be a 40% increase in the sewerage scheme maintenance costs. These increases are impacting on the long term viability of the scheme. The increases will be investigated to determine the reasons for the increases. However the level of confidence is low. Improved separation of operational costs, planned maintenance costs and reactive maintenance will assist the future revision of this asset management plan.

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

5.3.2 Standards and specifications

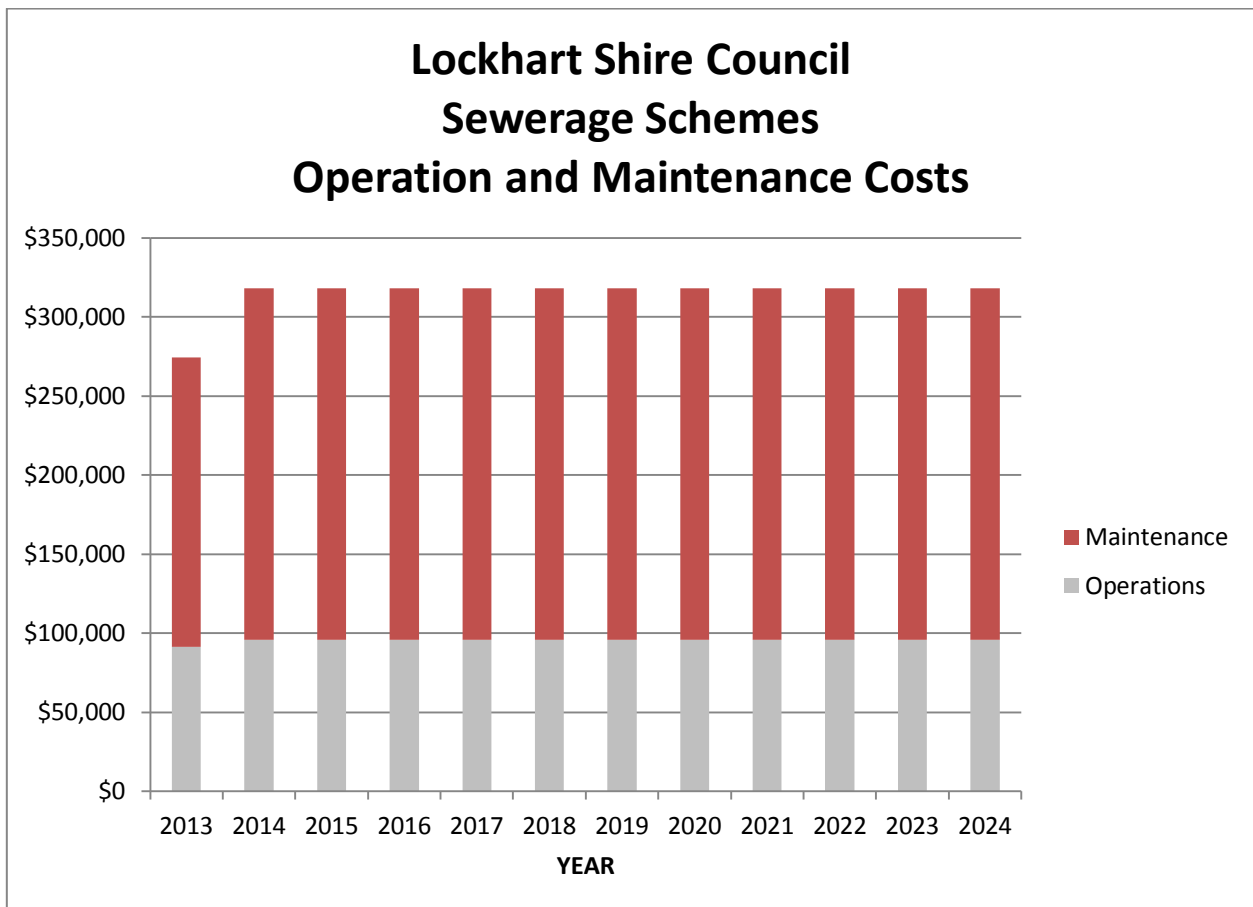
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Good industry practice
- Standards including AS3500 Plumbing and drainage
- Council’s standard operating procedures.

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 2013 dollar values.

Figure 4: Projected Operations and Maintenance Expenditure



Deferred maintenance, is work that are identified for maintenance and unable to be funded. It will be included in the risk assessment process in the infrastructure risk management plan. Currently there are no items identified as deferred maintenance

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.

5.4.1 Renewal plan

Assets requiring renewal are identified from one of three methods provided in the ‘Expenditure Template’.

- Method 1 uses Asset Register data to project the renewal costs for renewal years using acquisition year and useful life, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals* plus *defect repairs in the Renewal Plan* and *Defect Repair Plan* worksheets on the ‘Expenditure template’.

Method 1 was used for this asset management 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
Potential to fail	50%
Serviceability	20%
Health	15%
Legal compliance	15%
Total	100%

Renewal will be undertaken using ‘low-cost’ renewal methods where practical. Examples of low cost renewals include:

- Under boring of infrastructure
- Relining of sewer mains
- Modern Sewerage treatment processes

5.4.2 Renewal standards

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

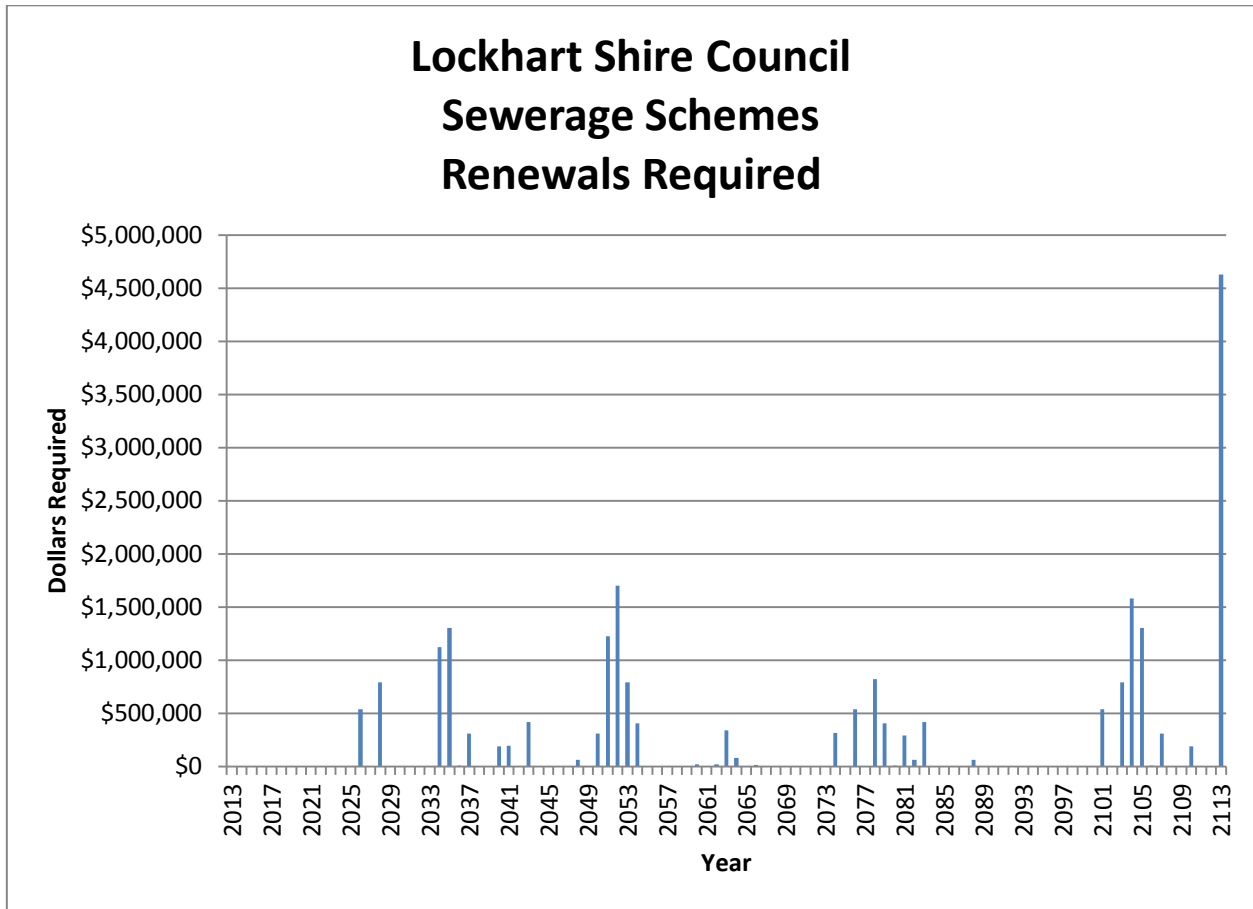
- NSW Office of Water Requirements
- AS 3500 Plumbing and drainage code

5.4.3 Summary of projected renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. Note that all costs are shown in 2013 dollar values.

The expenditure will be in discreet portions. It is not possible to spread the projects evenly to allow a consistent annual workflow. Council has recognised this issue and apportioned annual income to the sewerage fund reserve to allow works to progress as required. Currently council has \$1,978million in reserves for Sewerage Scheme renewals.

Figure 5: Projected Capital Renewal Expenditure



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 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.

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified and approved by Council. Expansion and upgrades projects 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. Approved proposals are ranked by priority and available funds and scheduled in future works programs. The priority ranking criteria is detailed in Table 5.5.1.

Table 5.5.1: Upgrade/New Assets Priority Ranking Criteria

Criteria	Weighting
Compliance with legislation	50%
Community requests	30%
Service capacity	20%
Total	100%

5.5.2 Standards and specifications

Standards and specifications for new assets and for upgrade/expansion of existing assets are:

- NSW Office of Water Requirements
- AS 3500 Plumbing and drainage Code

Any extension of sewerage will add capital costs for construction and corresponding increase in maintenance and operational costs. The depreciable amount will also increase. Council must ensure that the capital costs, operation and maintenance costs and the consumption of the asset are fully considered in the financial plan to proceed with these extensions.

New assets and services are to be funded from capital works program and grants where available.

5.6 Disposal Plan

There are no assets planned for disposal.

6. FINANCIAL SUMMARY

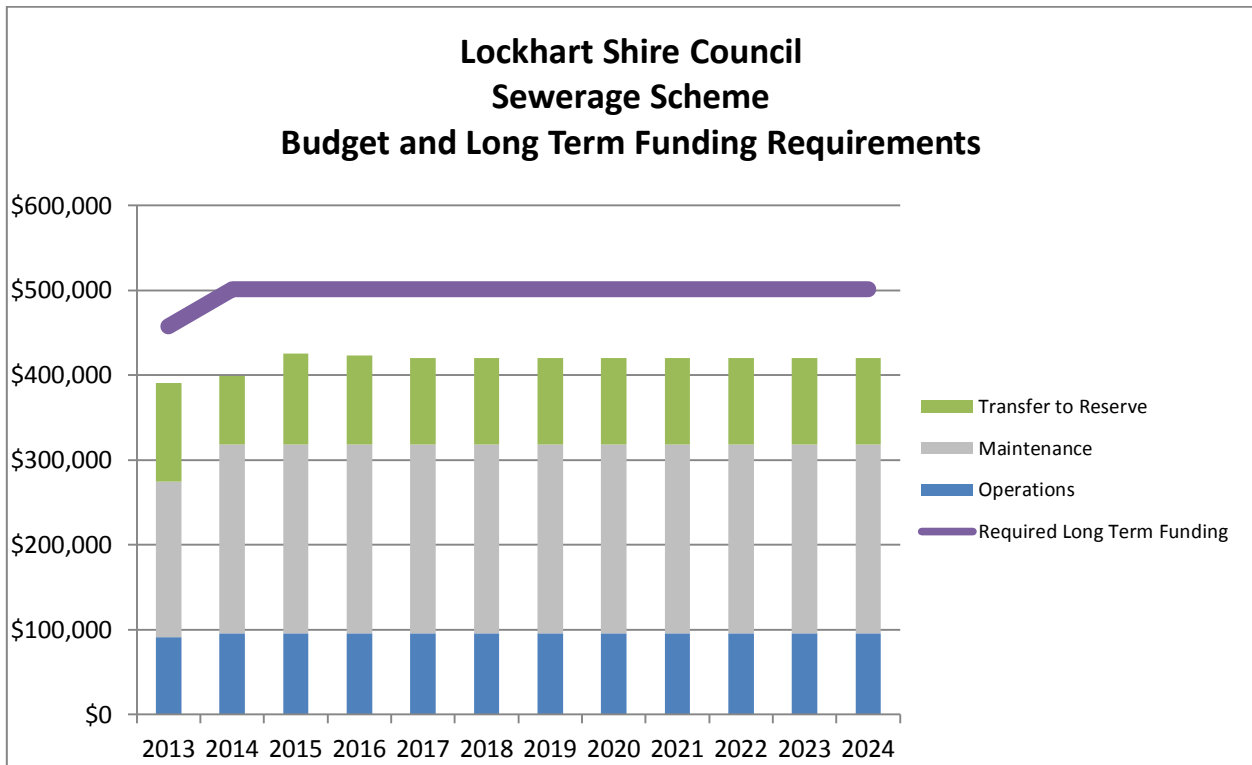
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset 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 2013 dollar values.

Figure 7: Projected Operating and Capital Expenditure and Budget



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.

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 life cycle cost for the services covered in this asset management plan is \$501,260 per year.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes operations, maintenance and capital renewal expenditure in year 1. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is \$390,638 per year.

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 -\$110,622 per year.

Life cycle expenditure is 94.06% life cycle costs giving a life cycle sustainability index of .779

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.

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 \$501,260 per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$418,726 per year giving a 10 year funding deficit of \$82,534 per year and a 10 year sustainability indicator of 0.835. This indicates that Council has 83.5% of the projected expenditures needed to provide the services documented in the asset management plan.

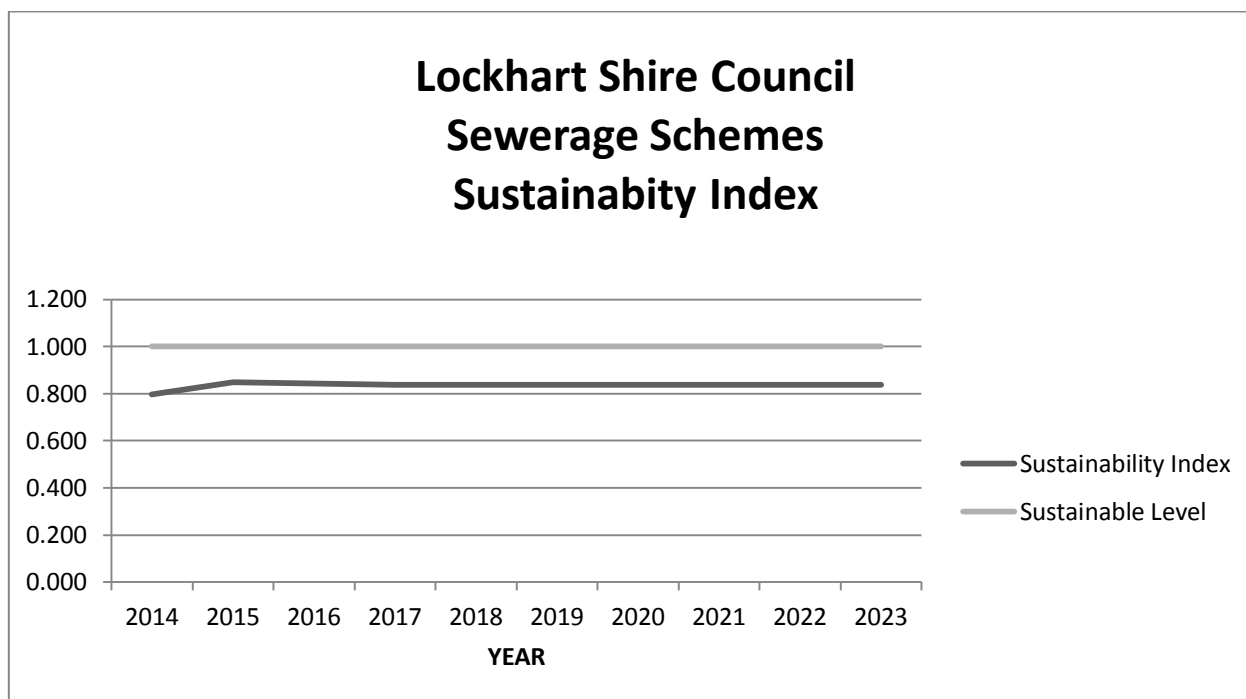
Medium Term – 5 year financial planning period

The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$501,260 per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$417,484 per year giving a 5 year funding shortfall of \$83,776. This is 83.3% of projected expenditures giving a 5 year sustainability indicator of 0.833.

Financial Sustainability Indicators

Figure 7A: Financial Sustainability Indicators



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 long term Asset Management Plan.

Figure 8 shows the projected asset renewals in the 40 year planning period from Appendix B

Figure 8: Projected and Budgeted Renewal Expenditure

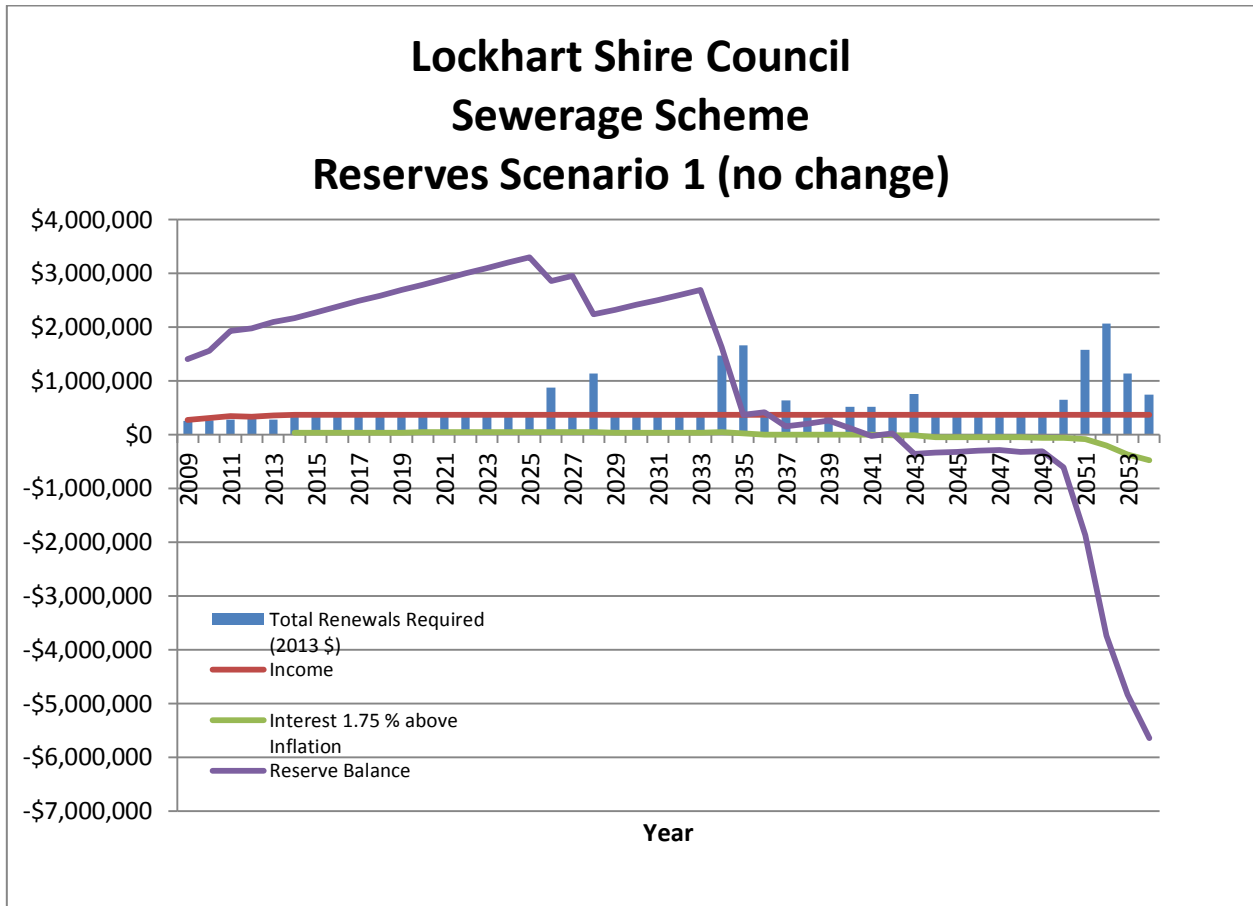


Table 6.1.1: Projected and Budgeted Renewals and Expenditure Shortfall

Year	Projected Renewals (\$000)	Planned Renewal Budget (\$000)	Renewal Funding Shortfall (\$000) (-ve Gap, +ve Surplus)	Cumulative Shortfall (\$000) (-ve Gap, +ve Surplus)
2014	\$183,122	\$80,700	-\$102,422	-\$102,422
2015	\$183,122	\$107,534	-\$75,588	-\$178,010
2016	\$183,122	\$104,836	-\$78,286	-\$256,296
2017	\$183,122	\$101,830	-\$81,292	-\$337,588
2018	\$183,122	\$101,830	-\$81,292	-\$418,880
2019	\$183,122	\$101,830	-\$81,292	-\$500,172
2020	\$183,122	\$101,830	-\$81,292	-\$581,464
2021	\$183,122	\$101,830	-\$81,292	-\$662,756
2022	\$183,122	\$101,830	-\$81,292	-\$744,048
2023	\$183,122	\$101,830	-\$81,292	-\$825,340

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.

6.1.2 Expenditure projections for 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)

Year	Operations (\$000)	Maintenance (\$000)	Projected Capital Renewal (\$000)	Capital Upgrade/ New (\$000)	Disposals (\$000)
2014	\$106,460	\$222,273	\$80,700	0	0
2015	\$106,460	\$192,512	\$107,534	0	0
2016	\$106,460	\$192,512	\$104,836	0	0
2017	\$106,460	\$192,512	\$101,830	0	0
2018	\$106,460	\$192,512	\$101,830	0	0
2019	\$106,460	\$192,512	\$101,830	0	0
2020	\$106,460	\$192,512	\$101,830	0	0
2021	\$106,460	\$192,512	\$101,830	0	0
2022	\$106,460	\$192,512	\$101,830	0	0
2023	\$106,460	\$192,512	\$101,830	0	0

Note: All projected expenditures are in 2013 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.

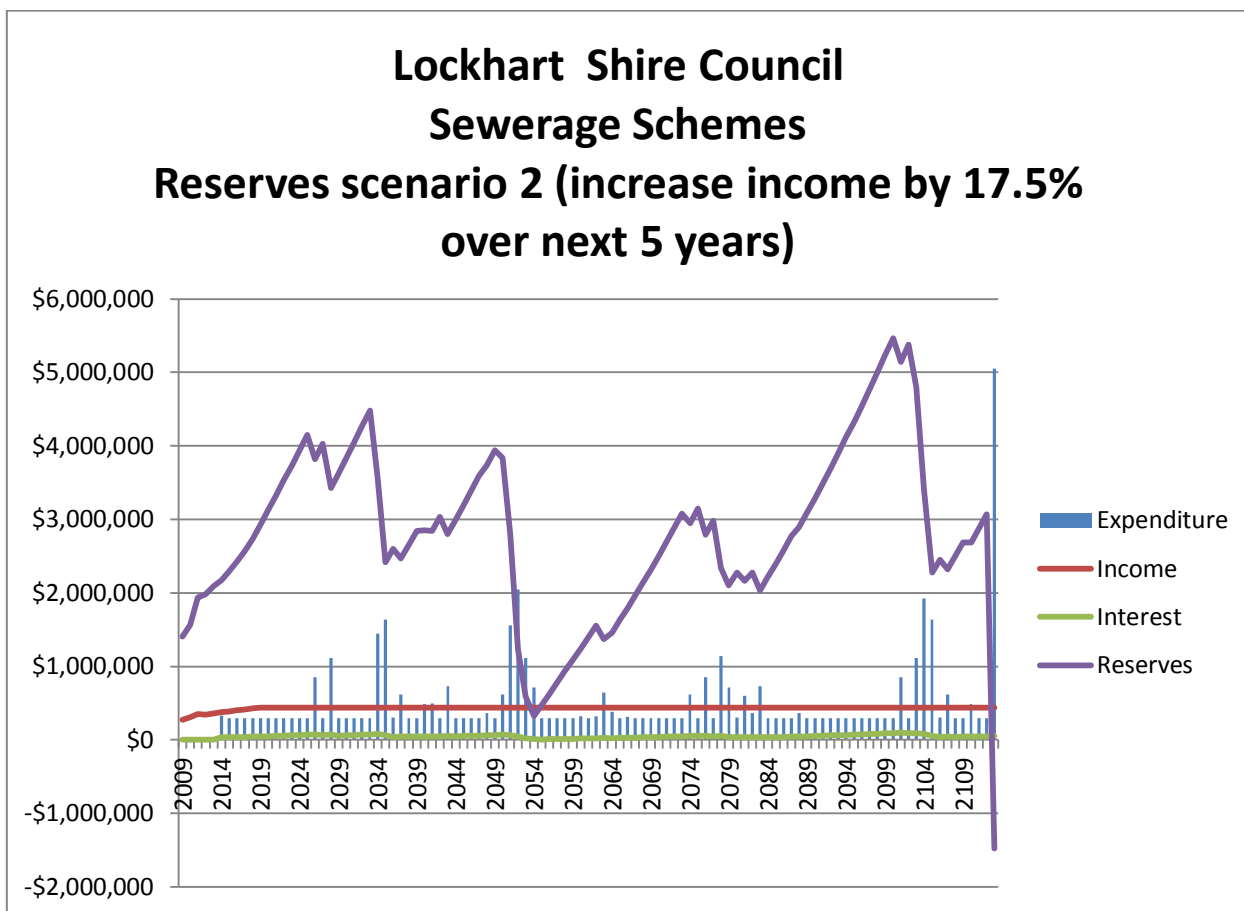
There is an identified shortfall in available income to sustainably manage and operate the Lockhart Sewerage Schemes in the long term (30 to 50years). An average fee increase of 17.5% spread over the next 5 will allow reserves to increase at a level which will sustain the schemes in long term without additional debt or subsidy.

These figures are based on the information available in the Asset Registers and that Council is able to obtain interest income of 1.75% above inflation level on its reserves. The level of confidence is considered currently to be only fair. Council needs to progressively improve its knowledge of renewal costs and changes in condition of the existing infrastructure.

Improvements in the knowledge of renewal cost, condition assessment and performance monitoring will assist improve the confidence level in the Asset Management Plan. This knowledge should be incorporated into the next revision of the Asset Management Plan.

A scenario based on increasing charges by 17.5% above inflation has been prepared for information.

A Figure 9: Projected and Budgeted Renewal Expenditure Scenario 2

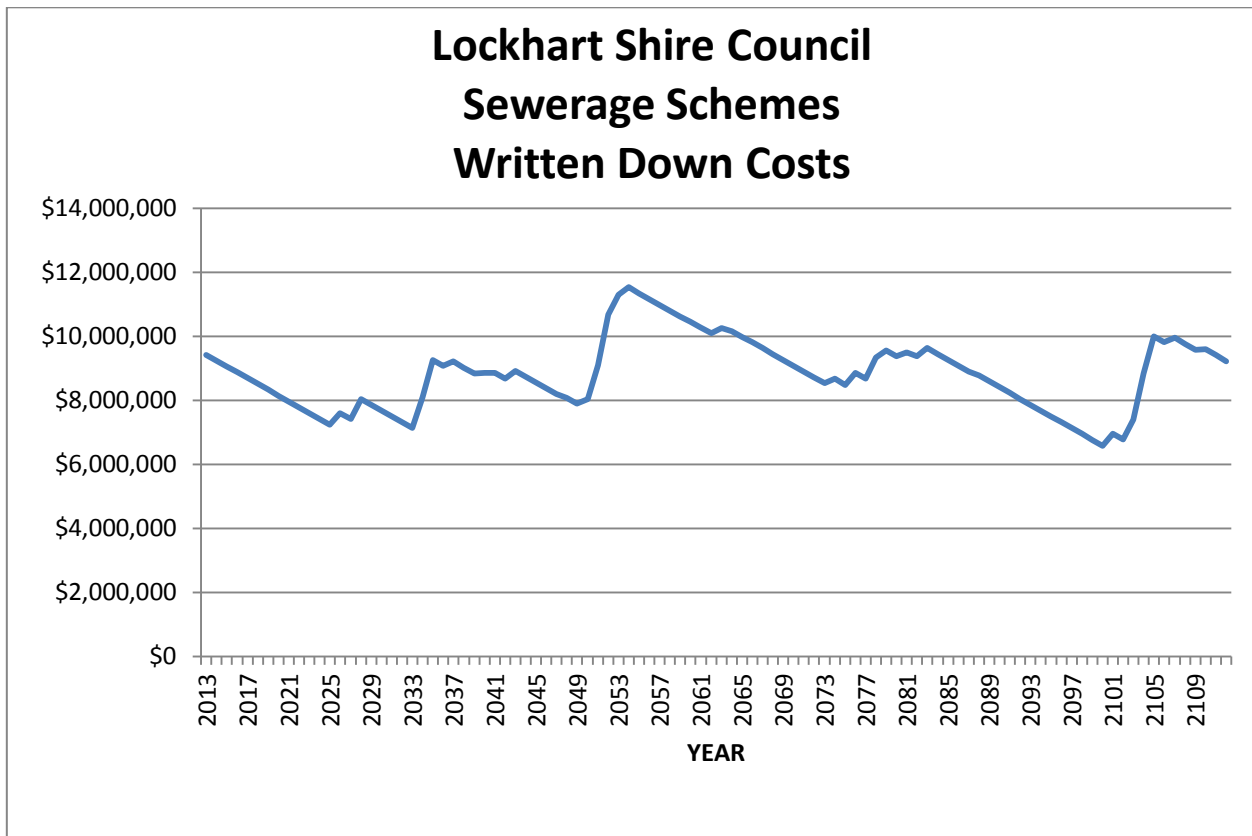


6.3 Valuation Forecasts

Asset values will increase if 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. These are estimated to be nil over the planning period.

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 light colour bar.

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:

- Sewerage scheme will remain in Council's ownership throughout the planning period and service levels will remain unchanged
- Asset lives and residuals are based on estimates from NSW Office of water and staff knowledge
- Maintenance and operations will remain at the current levels
- Depreciation is straight line
- Interest on investments is 1.75% higher than CPI

7. ASSET MANAGEMENT PRACTICES

7.1 Accounting/Financial Systems

7.1.1 Accounting and financial systems

Lockhart Shire Council uses Practical Plus by Civica for its accounting and financial systems.

7.1.2 Accountabilities for financial systems

Director of Corporate Services

7.1.3 Accounting standards and regulations

AASB116

7.1.4 Capital/maintenance threshold

\$5000

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

Asset registers to be kept on Bizeassets

Asset Renewals and Capital Improvements to be separated in the Financial Plan

Job allocations to ensure operational costs and maintenance costs are separated

7.2 Asset Management Systems

7.2.1 Asset management system

Council's sewer assets are managed using the Bizeasset system, a map-based system utilising MapInfo

7.2.2 Asset registers

Sewerage Asset register stored on Bizeassets

7.2.3 Linkage from asset management to financial system

Manual

7.2.4 Accountabilities for asset management system and data

Director Engineering

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

Further improvements to the data. Condition assets knowledge to be improved

Mains to be separated by type

Pump stations and STWs to identify pump and equipment component

Residuals to be reviewed as new information becomes available

Asset lives to be reviewed as new information becomes available

Maintenance costs to be split between regular maintenance and unplanned maintenance

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 1993
- Local Government Amendment (Planning and reporting)act 2009
- Local Government (financial Plans and reporting) Regulation 2010
- ASB116

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	Ensure renewals are planned well in advance	DE	Staff time	Ongoing
2	Further develop Asset Register to identify plant and equipment in pump stations and STWs.	DE	Staff time	Ongoing
3	Ensure investment on reserves are maximised	DCS	Staff time	Ongoing
4	Ensure adequate income to manage the long term renewal program	DCS	Staff Time	June 2014
5				
6				
7				
8				
9				
10				

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 life of 4 years and is due for revision and updating within 12 months of each Council election.

REFERENCES

Lockhart Shire Council - Strategic Community plan 2014-2024,

Lockhart Shire Council – Delivery and Operational Plan.

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APPENDICES

Appendix A	Current Financial Assessment
Appendix B	Base Assumptions
Appendix C	Assessment of 2012/13 Operations and Maintenance Budget
Appendix D	Assessment of 2013/14 Operations and Maintenance Budget
Appendix E	Long term Income and Expenditure Scenario 1
Appendix F	Long term Income and Expenditure Scenario 2
Appendix G	Abbreviations
Appendix H	Glossary

Appendix A Current Financial Assessment

	CRC	Annual Dep	Accum Dep	WDC	Dep Amount	CRC	Annual Dep	Accum Dep
Lockhart Gravity	\$2,296,293.97	\$19,682.52	\$833,819.26	\$1,462,474.71	\$1,377,776.38			
Lockhart Rising	\$276,673.00	\$2,371.48	\$112,238.36	\$164,434.64	\$166,003.80			
Lockhart Pressure	\$257,798.61	\$6,444.97	\$66,034.69	\$191,763.92	\$257,798.61			
The Rock Gravity	\$2,318,456.70	\$19,872.49	\$576,555.80	\$1,741,900.91	\$1,391,074.02			
The Rock Rising	\$316,945.28	\$2,716.67	\$83,716.38	\$233,228.90	\$190,167.17			
Yerong Creek Pressure	\$449,553.32	\$10,439.71	\$104,397.08	\$345,156.24	\$417,588.30	\$5,915,721	\$61,528	\$1,776,762
Lockhart Structure 10l	\$410,000.00	\$3,514.29	\$168,685.71	\$241,314.29	\$246,000.00			
Lockhart Elect/mech 10l	\$200,000.00	\$7,200.00	\$86,400.00	\$113,600.00	\$180,000.00			
Lockhart Structure 40l	\$305,000.00	\$2,614.29	\$120,257.14	\$184,742.86	\$183,000.00			
Lockhart Elect/Mech 40l	\$100,000.00	\$3,600.00	\$43,200.00	\$56,800.00	\$90,000.00			
The Rock Structure10l	\$205,000.00	\$1,757.15	\$54,471.43	\$150,528.57	\$123,000.00			
The Rock elect/mech 10l	\$100,000.00	\$3,600.00	\$43,200.00	\$56,800.00	\$90,000.00			
The Rock structure 30l/s	\$550,000.00	\$4,714.28	\$120,214.29	\$429,785.71	\$330,000.00			
The Rock elect/Mech 30l/s	\$200,000.00	\$7,200.00	\$86,400.00	\$113,600.00	\$180,000.00			
Yerong Creek	\$325,000.00	\$9,100.00	\$81,900.00	\$243,100.00	\$227,500.00	\$2,395,000	\$43,300	\$804,729
Lockhart Structure	\$1,600,000.00	\$16,000.00	\$784,000.00	\$816,000.00	\$1,120,000.00			
Lockhart Elect/Mech	\$385,000.00	\$13,860.00	\$138,600.00	\$246,400.00	\$346,500.00			
Lockhart Ponds	\$260,000.00	\$780.00	\$38,220.00	\$221,780.00	\$78,000.00			
The Rock Structure	\$1,700,000.00	\$17,000.00	\$527,000.00	\$1,173,000.00	\$1,190,000.00			
The Rock Elect/Mech	\$496,000.00	\$17,856.00	\$178,560.00	\$317,440.00	\$446,400.00			
The Rock Ponds	\$210,000.00	\$630.00	\$19,530.00	\$190,470.00	\$63,000.00			
Yerong Creek Structure	\$450,000.00	\$4,500.00	\$40,500.00	\$409,500.00	\$315,000.00			
Yerong Creek Elect/Mech	\$197,000.00	\$7,092.00	\$63,828.00	\$133,172.00	\$177,300.00			
Yerong Creek Ponds	\$192,000.00	\$576.00	\$5,184.00	\$186,816.00	\$57,600.00	\$5,490,000.00	\$78,294.00	\$1,795,422.00
						\$13,800,721	\$183,122	\$4,376,912

Appendix B Base Assumptions.

Lockhart Wastewater Asset Management Plans

Base Assumptions

April 2013

LIFE OF ASSETS.

Gravity Mains. All types

70 years with 40% residual. Source: NSW Reference Rates Manual NOW.

No consideration has been taken into account for different types of mains.

The residual allows for the sewer mains to be relined instead of replaced which is a common renewal technique.

Rising Mains. All types

70 years with 40% residual Source: NSW Reference Rates Manual NOW.

No consideration has been taken into account for different types of mains.

The residual allows for the sewer mains to be relined instead of replaced which is a common renewal technique.

Low Pressure Mains.

40 years with 0 residual Source: Local experience with PE Pipes

Pump Stations

Structure:

70 years with 40% residual Source: NSW Reference Rates Manual NOW.

The residual allows for the Concrete structure to be reused and refurbished instead of being replaced.

Elect/mech

25 years with 10% residual Source: NSW Reference Rates Manual NOW.

Pressure System Pumps

25 years with a 30% residual. Source: Local experience with pressure system pumps

Sewerage Treatment Plant

Structure:

70 Years with a 30% residual. Source: Local experience and condition assessment of the local Sewerage Treatment plants. The existing plants are over sized and the rate of consumption will be less than a plant operating at it's design capacity.

Elect/Mech.

25 years with a 10% residual. Source: NSW Reference Rates Manual NOW. Modified by local experience and condition assessment of the local Sewerage Treatment plants. The existing plants are over sized and the rate of consumption will be less than a plant operating at it's design capacity.

Ponds.

100 Years with a 70% residual. Source: Local experience is that a pond infrastructure is consumed slowly as long as adequate maintenance is carry out.

ASSET ELEMENTS.

Mains

Unit rates developed by staff using the NSW Office of Water's Reference Rates Manual and benchmarked against Berrigan Shire Council.

Type of Main	Material	Dia mm	Cost Per m
Gravity	Asbestos Cement	225	\$305.00
Gravity	Asbestos Cement	300	\$490.00
Gravity	Ductile Iron	150	\$235.00
Gravity	Ductile Iron	225	\$305.00
Gravity	Vitreous Clay	150	\$235.00
Gravity	Vitreous Clay	225	\$305.00
Gravity	UPVC	150	\$235.00
Gravity	UPVC	250	\$450.00
Rising	Asbestos Cement	300	\$375.00
Rising	Asbestos Cement	225	\$292.50
Rising	Asbestos Cement	150	\$150.00
Rising	Asbestos Cement	100	\$165.00
Rising	UPVC Class 12	150	\$200.00
Pressure	PE	40	\$50.00
Pressure	PE	50	\$63.00
Pressure	PE	63	\$79.00
Pressure	PE	90	\$113.00
Pressure	PE	200	\$165.00

Pump Stations.

The rates for pumps station a re: based on staff estimates taking into account the NSW Reference Rates Manual. NOW. Table 3.8 for 25m head pump stations. The values have been increased by 145% to allow for CPI to 2013.

The electrical and mechanical fittings will be replaced 3 times over the life of the pump station. The cost of this item in each pump station is valued at \$100,000.

The total cost of each pump station including the structure and excluding the Elect/mech is:

10 l/s Pump station	\$200,000
30 l/s pump station	\$275,000
40 l/s pump station	\$305,000

Yerong Creek Private Pumps

The Yerong Creek Sewerage scheme is a low pressure scheme. Individual landholders have their own storage tank and pump.

Lockhart Shire Council has accepted responsibility for the maintenance, repair and replacement costs of the pumps located on individual properties. To ensure that the pumps are accounted for they should be included in Wastewater Asset Management Plan. A value of \$5000 per pump has been allowed.

Sewerage Treatment Works.

Council has 3 sewerage treatment works. The Current Replacement Values of the Sewerage Treatment plants are based on staff estimates.

Lockhart Sewerage Treatment Works	2000EP currently operating at 500EP
The Rock Sewerage treatment Works	2000EP currently operating at 450 EP
Yerong Creek Sewerage Treatment Works	500EP currently operating at 100EP.

These STWs are operating at less than 50% of their design capacity. There is little or no growth in the towns and villages and it expected that will not require upgrading to a higher capacity or higher standard.

Two scenarios have been developed.

1. STW prices based on staff figures and consultation with Berrigan Shire Council.

Lockhart STW	Structure	\$1,050,000
	Elect/Mech	\$ 385,000
	Ponds	\$ 260,000
The Rock	Structure	\$1,160,000
	Elect/Mech	\$ 385,000
	Ponds	\$ 260,000
Yerong Creek	Structure	\$450,000
	Elect/Mech	\$197,000
	Ponds	\$192,000

2. STW prices based on NSW Office of Water Reference manual.

• Lockhart STW	Structure	\$1,600,000
	Elect/Mech	\$ 385,000

• The Rock	Ponds	\$ 260,000
	Structure	\$1,700,000
	Elect/Mech	\$ 385,000
• Yerong Creek	Ponds	\$ 260,000
	Structure	\$450,000
	Elect/Mech	\$197,000
	Ponds	\$192,000

Appendix C 2012/2013 Operation and Maintenance Budget

Lockhart Shire Council									
Sewerage Schemes									
Operations and Maintenance Breakup Budget 2012/13									
					Operations	R&M	Depreciation		
The Rock	Income		Charges	\$146,218.00					
			Rebates	-\$7,543.00	\$138,675.00				
	Expenditure	Mains	Operations		\$300.00				
			Admin/tech		\$4,000.00	\$4,300.00		\$28,204.00	
			R&M		\$11,691.00				
				Oncosts		\$1,000.00		\$12,691.00	
		Pump stations	Operations		\$500.00				
			Admin/tech		\$8,000.00	\$8,500.00			\$11,080.00
			R&M		\$21,115.00				
				oncosts		\$1,000.00		\$22,115.00	
		STW	Operations	Elect		\$11,880.00			
				Telephone		\$773.00			
				Insurance		\$1,206.00			
				rates					
				Sundries		\$435.00			
			Admin/Tech		\$10,500.00	\$24,794.00		\$49,358.00	
			R&M		\$32,960.00				
		Oncosts		\$1,040.00		\$34,000.00			
				\$37,594.00	\$68,806.00	\$88,000.00			
					Expenses	\$194,400.00			
					Profit/Loss	-\$55,725.00			
Yerong Creek	Income		Charges	\$38,530.00					
			Rebates	\$0.00	\$38,530.00				
	Expenditure	Mains	Operations		\$0.00				
			Admin/tech		\$3,500.00	\$3,500.00		\$6,245.00	
			R&M		\$3,502.00				
				Oncosts		\$0.00		\$3,502.00	
		Pump stations	Operations		\$0.00				
			Admin/tech		\$0.00	\$0.00			
			R&M		\$0.00				
				oncosts		\$0.00		\$0.00	
		STP	Operations	Elect		\$432.00			
				Work/Comp		\$154.00			
				Insurance		\$309.00			
				Misc		\$216.00			
				Admin/tech		\$3,500.00	\$4,611.00		\$8,663.00
			R&M		\$3,296.00				
				Oncosts		\$0.00		\$3,296.00	
		Dep		\$8,111.00	\$6,798.00	\$14,800.00			
					Expenses	\$29,709.00			
					Profit/Loss	\$8,821.00			
Lockhart	Income		Charges	\$219,734.00					
			Rebates	-\$2,744.00	\$216,990.00				
	Expenditure	Mains	Operations		\$0.00				
			Admin/tech		\$3,500.00	\$3,500.00		\$27,197.00	
			R&M		\$18,128.00				
				Oncosts		\$1,801.00		\$19,929.00	
		Pump stations	Operations						
			Admin/tech		\$2,000.00	\$2,000.00		\$7,857.00	
			R&M		\$9,270.00				
				oncosts		\$900.00		\$10,170.00	
		STP	Operations	Elect		\$22,680.00			
				Telephone		\$567.00			
				Insurance		\$994.00			
				Rates		\$1,048.00			
				Admin/tech		\$15,000.00	\$40,289.00		\$24,175.00
			R&M		\$56,135.00				
					Design		\$1,044.00		
		Effluent Scheme		\$12,360.00		\$2,115.00			
		Oncosts		\$7,000.00					
		Miscellaneous		\$901.00		\$77,440.00			
		Dep		\$45,789.00	\$107,539.00	\$58,800.00			
					Expenses	\$212,128.00			
					Profit/Loss	\$4,862.00			
Operations	\$91,494.00								
Maintenance	\$183,143.00								
Total	\$274,637.00								

Appendix D 2013/14 Operations and Maintenance Budget

Lockhart Shire Council								
Sewerage Schemes								
Operations and Maintenance Breakup Budget 2013/14								
					Operations	R&M	Depreciation	
The Rock	Income		Charges	\$148,299.00				
			Rebates	-\$7,769.00	\$140,530.00			
	Expenditure	Mains	Operations					
			Admin/tech	\$2,250.00	\$2,250.00		\$28,204.00	
			R&M	\$12,041.00				
			Oncosts	\$1,000.00		\$13,041.00		
		Pump stations	Operations					
			Admin/tech	\$4,500.00	\$4,500.00		\$11,080.00	
			R&M	\$19,748.00				
			oncosts	\$1,000.00		\$20,748.00		
		STW	Operations	Elect	\$12,593.00			
				Telephone	\$796.00			
				Insurance	\$1,242.00			
				rates	\$2,077.00			
				Sundries	\$1,273.00			
				Admin/Tech	\$15,750.00	\$33,731.00		\$49,358.00
			R&M	Oncosts	\$48,949.00			
				\$1,117.00		\$50,066.00		
					\$40,481.00	\$83,855.00	\$88,642.00	
						Expenses	\$212,978.00	
						Profit/Loss	-\$72,448.00	
Yerong Creek	Income		Charges	\$39,528.00				
			Rebates	\$0.00	\$39,528.00			
	Expenditure	Mains	Operations	\$0.00				
			Admin/tech	\$3,500.00	\$3,500.00		\$6,245.00	
			R&M	\$3,607.00				
			Oncosts	\$0.00		\$3,607.00		
		Pump stations	Operations	\$0.00				
			Admin/tech	\$0.00	\$0.00			
			R&M	\$0.00				
			oncosts	\$0.00		\$0.00		
		STP	Operations	Elect	\$458.00			
				Work/Comp	\$158.00			
				Insurance	\$318.00			
				Misc	\$223.00			
				Admin/tech	\$3,500.00	\$4,657.00		\$8,663.00
			R&M	Oncosts	\$5,895.00			
					\$0.00		\$5,895.00	
		Dep			\$8,157.00	\$9,502.00	\$14,908.00	
						Expenses	\$32,567.00	
						Profit/Loss	\$6,961.00	
Lockhart	Income		Charges	\$228,772.00				
			Rebates	-\$2,826.00	\$225,946.00			
	Expenditure	Mains	Operations	\$0.00				
			Admin/tech	\$3,500.00	\$3,500.00		\$27,197.00	
			R&M	\$18,672.00				
			Oncosts	\$1,942.00		\$20,614.00		
		Pump stations	Operations					
			Admin/tech	\$2,000.00	\$2,000.00		\$7,857.00	
			R&M	\$9,548.00				
			oncosts	\$1,000.00		\$10,548.00		
		STP	Operations	Elect	\$24,041.00			
				Telephone	\$583.00			
				Insurance	\$1,024.00			
				Rates	\$1,079.00			
				Admin/tech	\$15,000.00	\$41,727.00		\$24,175.00
			R&M	Oncosts	\$72,819.00			
				Design	\$1,076.00			
			Effluent Scheme	\$12,731.00			\$2,115.00	
			Oncosts	\$7,000.00				
			Miscellaneous	\$4,128.00				
						\$97,754.00		
		Dep			\$47,227.00	\$128,916.00	\$61,344.00	
						Expenses	\$237,487.00	
						Profit/Loss	-\$11,541.00	
Operations	\$95,865.00							
Maintenance	\$222,273.00							
Total	\$318,138.00							
	\$328,733.00							

Appendix E Long term Income and Expenditure Scenario 1

**Lockhart Shire Council
Sewerage Schemes
Long Term Funding Expenditure Scenario 1**

Year	Year Funds Required	Year Funds Required	Year Funds Required	Year Funds Required	Total Renewal Required (2012 \$)	Total Renewals Required (2013 \$)	Operational & Maintenance Expenditure	Total Annual Expenditure	Income	Interest 1.75 % above Inflation	Total Income	Surplus/loss	Reserve Balance
2008													
2009									\$274,000		\$274,000		\$1,408,000
2010									\$311,000		\$311,000		\$1,565,000
2011									\$348,000		\$348,000		\$1,933,000
2012									\$342,000		\$342,000		\$1,978,000
2013					\$0	\$0		\$0	\$363,000		\$363,000		\$2,094,000
2014					\$0	\$0	\$328,733	\$328,733	\$376,205	\$36,645	\$412,850	\$80,700	\$2,174,700
2015					\$0	\$0	\$298,972	\$298,972	\$376,205	\$38,057	\$414,262	\$107,534	\$2,282,234
2016					\$0	\$0	\$298,972	\$298,972	\$376,205	\$39,939	\$416,144	\$104,836	\$2,387,070
2017					\$0	\$0	\$298,972	\$298,972	\$376,205	\$41,774	\$417,979	\$101,830	\$2,488,900
2018					\$0	\$0	\$298,972	\$298,972	\$376,205	\$43,556	\$419,761	\$120,789	\$2,609,689
2019					\$0	\$0	\$298,972	\$298,972	\$376,205	\$45,670	\$421,875	\$122,903	\$2,732,591
2020					\$0	\$0	\$298,972	\$298,972	\$376,205	\$47,820	\$424,025	\$125,053	\$2,857,645
2021					\$0	\$0	\$298,972	\$298,972	\$376,205	\$50,009	\$426,214	\$127,242	\$2,984,886
2022					\$0	\$0	\$298,972	\$298,972	\$376,205	\$52,236	\$428,441	\$129,469	\$3,114,355
2023					\$0	\$0	\$298,972	\$298,972	\$376,205	\$54,501	\$430,706	\$131,734	\$3,246,089
2024					\$0	\$0	\$298,972	\$298,972	\$376,205	\$56,807	\$433,012	\$134,040	\$3,380,129
2025					\$0	\$0	\$298,972	\$298,972	\$376,205	\$59,152	\$435,357	\$136,385	\$3,516,514
2026	\$540,000				\$540,000	\$553,500	\$298,972	\$852,472	\$376,205	\$61,539	\$437,744	-\$414,728	\$3,101,786
2027					\$0	\$0	\$298,972	\$298,972	\$376,205	\$54,281	\$430,486	\$131,514	\$3,233,300
2028	\$792,900				\$792,900	\$812,723	\$298,972	\$1,111,695	\$376,205	\$56,583	\$432,788	-\$678,907	\$2,554,393
2029					\$0	\$0	\$298,972	\$298,972	\$376,205	\$44,702	\$420,907	\$121,935	\$2,676,328
2030					\$0	\$0	\$298,972	\$298,972	\$376,205	\$46,836	\$423,041	\$124,069	\$2,800,397
2031					\$0	\$0	\$298,972	\$298,972	\$376,205	\$49,007	\$425,212	\$126,240	\$2,926,637
2032					\$0	\$0	\$298,972	\$298,972	\$376,205	\$51,216	\$427,421	\$128,449	\$3,055,086
2033					\$0	\$0	\$298,972	\$298,972	\$376,205	\$53,464	\$429,669	\$130,697	\$3,185,783
2034	\$1,120,000				\$1,120,000	\$1,148,000	\$298,972	\$1,446,972	\$376,205	\$55,751	\$431,956	-\$1,015,016	\$2,170,767
2035	\$1,306,315				\$1,306,315	\$1,338,973	\$298,972	\$1,637,945	\$376,205	\$37,988	\$414,193	-\$1,223,751	\$947,016
2036	\$7,068				\$7,068	\$7,245	\$298,972	\$306,217	\$376,205	\$16,573	\$392,778	\$86,561	\$1,033,577
2037	\$307,568				\$307,568	\$315,257	\$298,972	\$614,229	\$376,205	\$18,088	\$394,293	-\$219,936	\$813,641
2038					\$0	\$0	\$298,972	\$298,972	\$376,205	\$14,239	\$390,444	\$91,472	\$905,112
2039					\$0	\$0	\$298,972	\$298,972	\$376,205	\$15,839	\$392,044	\$93,072	\$998,185
2040	\$187,404				\$187,404	\$192,089	\$298,972	\$491,061	\$376,205	\$17,468	\$393,673	-\$97,388	\$900,797
2041	\$193,199				\$193,199	\$198,029	\$298,972	\$497,001	\$376,205	\$81,072	\$457,277	-\$39,724	\$861,072
2042					\$0	\$0	\$298,972	\$298,972	\$376,205	\$77,497	\$453,702	\$154,730	\$1,015,802
2043	\$417,588				\$417,588	\$428,028	\$298,972	\$727,000	\$376,205	\$91,422	\$467,627	-\$259,373	\$756,429
2044					\$0	\$0	\$298,972	\$298,972	\$376,205	\$68,079	\$444,284	\$145,312	\$901,741
2045					\$0	\$0	\$298,972	\$298,972	\$376,205	\$81,157	\$457,362	\$158,390	\$1,060,130
2046					\$0	\$0	\$298,972	\$298,972	\$376,205	\$95,412	\$471,617	\$172,645	\$1,232,775
2047					\$0	\$0	\$298,972	\$298,972	\$376,205	\$110,950	\$487,155	\$188,183	\$1,420,958
2048	\$64,599				\$64,599	\$66,214	\$298,972	\$365,186	\$376,205	\$127,886	\$504,091	\$138,905	\$1,559,863
2049					\$0	\$0	\$298,972	\$298,972	\$376,205	\$140,388	\$516,593	\$217,621	\$1,777,483
2050	\$312,108				\$312,108	\$319,911	\$298,972	\$618,883	\$376,205	\$159,973	\$536,178	-\$82,704	\$1,694,779
2051	\$685,997	\$540,000			\$1,225,997	\$1,256,647	\$298,972	\$1,555,619	\$376,205	\$152,530	\$528,735	-\$1,026,884	\$667,895
2052	\$1,702,900				\$1,702,900	\$1,745,473	\$298,972	\$2,044,445	\$376,205	\$60,111	\$436,316	-\$1,608,129	-\$940,234
2053		\$792,900			\$792,900	\$812,723	\$298,972	\$1,111,695	\$376,205	-\$84,621	\$291,584	-\$820,111	-\$1,760,345
2054		\$404,800			\$404,800	\$414,920	\$298,972	\$713,892	\$376,205	-\$158,431	\$217,774	-\$496,118	-\$2,256,463
2055					\$0	\$0	\$298,972	\$298,972	\$376,205	-\$203,082	\$173,123	-\$125,849	-\$2,382,311
2056					\$0	\$0	\$298,972	\$298,972	\$376,205	-\$214,408	\$161,797	-\$137,175	-\$2,519,486
2057					\$0	\$0	\$298,972	\$298,972	\$376,205	-\$226,754	\$149,451	-\$149,521	-\$2,669,007
2058					\$0	\$0	\$298,972	\$298,972	\$376,205	-\$240,211	\$135,994	-\$162,978	-\$2,831,985
2059					\$0	\$0	\$298,972	\$298,972	\$376,205	-\$254,879	\$121,326	-\$177,646	-\$3,009,630
2060	\$21,390				\$21,390	\$21,924	\$298,972	\$320,896	\$376,205	-\$270,867	\$105,338	-\$215,558	-\$3,225,189
2061					\$0	\$0	\$298,972	\$298,972	\$376,205	-\$290,267	\$85,938	-\$213,034	-\$3,438,223

Appendix F Long term Income and Expenditure Scenario 2

**Lockhart Shire Council
Sewerage Schemes
Long Term Funding Expenditure Scenario 2**

Year	Year Funds Required	Year Funds Required	Year Funds Required	Year Funds Required	Total Renewal Required (2012 \$)	Total Renewals Required (2013 \$)	Operational & Maintenance Expenditure	Total Annual Expenditure	Income	Interest 1.75 % above Inflation	Total Income	Surplus/loss	Reserve Balance
2008													
2009									\$274,000		\$274,000		\$1,408,000
2010									\$311,000		\$311,000		\$1,565,000
2011									\$348,000		\$348,000		\$1,933,000
2012									\$342,000		\$342,000		\$1,978,000
2013					\$0	\$0		\$0	\$363,000		\$363,000		\$2,094,000
2014					\$0	\$0	\$328,733	\$328,733	\$376,205	\$36,645	\$412,850	\$80,700	\$2,174,700
2015					\$0	\$0	\$298,972	\$298,972	\$389,400	\$38,057	\$427,457	\$120,734	\$2,295,434
2016					\$0	\$0	\$298,972	\$298,972	\$402,600	\$40,170	\$442,770	\$130,236	\$2,425,670
2017					\$0	\$0	\$298,972	\$298,972	\$415,800	\$42,449	\$458,249	\$141,430	\$2,567,100
2018					\$0	\$0	\$298,972	\$298,972	\$429,000	\$44,924	\$473,924	\$174,952	\$2,742,052
2019					\$0	\$0	\$298,972	\$298,972	\$442,200	\$47,986	\$490,186	\$191,214	\$2,933,266
2020					\$0	\$0	\$298,972	\$298,972	\$442,200	\$51,332	\$493,532	\$194,560	\$3,127,826
2021					\$0	\$0	\$298,972	\$298,972	\$442,200	\$54,737	\$496,937	\$197,965	\$3,325,791
2022					\$0	\$0	\$298,972	\$298,972	\$442,200	\$58,201	\$500,401	\$201,429	\$3,527,221
2023					\$0	\$0	\$298,972	\$298,972	\$442,200	\$61,726	\$503,926	\$204,954	\$3,732,175
2024					\$0	\$0	\$298,972	\$298,972	\$442,200	\$65,313	\$507,513	\$208,541	\$3,940,716
2025					\$0	\$0	\$298,972	\$298,972	\$442,200	\$68,963	\$511,163	\$212,191	\$4,152,907
2026	\$540,000				\$540,000	\$553,500	\$298,972	\$852,472	\$442,200	\$72,676	\$514,876	-\$337,596	\$3,815,310
2027					\$0	\$0	\$298,972	\$298,972	\$442,200	\$66,768	\$508,968	\$209,996	\$4,025,306
2028	\$792,900				\$792,900	\$812,723	\$298,972	\$1,111,695	\$442,200	\$70,443	\$512,643	-\$599,052	\$3,426,255
2029					\$0	\$0	\$298,972	\$298,972	\$442,200	\$59,959	\$502,159	\$203,187	\$3,629,442
2030					\$0	\$0	\$298,972	\$298,972	\$442,200	\$63,515	\$505,715	\$206,743	\$3,836,185
2031					\$0	\$0	\$298,972	\$298,972	\$442,200	\$67,133	\$509,333	\$210,361	\$4,046,547
2032					\$0	\$0	\$298,972	\$298,972	\$442,200	\$70,815	\$513,015	\$214,043	\$4,260,589
2033					\$0	\$0	\$298,972	\$298,972	\$442,200	\$74,560	\$516,760	\$217,788	\$4,478,378
2034	\$1,120,000				\$1,120,000	\$1,148,000	\$298,972	\$1,446,972	\$442,200	\$78,372	\$520,572	-\$926,400	\$3,551,977
2035	\$1,306,315				\$1,306,315	\$1,338,973	\$298,972	\$1,637,945	\$442,200	\$62,160	\$504,360	-\$1,133,585	\$2,418,392
2036	\$7,068				\$7,068	\$7,245	\$298,972	\$306,217	\$442,200	\$42,322	\$484,522	\$178,305	\$2,596,697
2037	\$307,568				\$307,568	\$315,257	\$298,972	\$614,229	\$442,200	\$45,442	\$487,642	-\$126,587	\$2,470,110
2038					\$0	\$0	\$298,972	\$298,972	\$442,200	\$43,227	\$485,427	\$186,455	\$2,656,565
2039					\$0	\$0	\$298,972	\$298,972	\$442,200	\$46,490	\$488,690	\$189,718	\$2,846,283
2040	\$187,404				\$187,404	\$192,089	\$298,972	\$491,061	\$442,200	\$49,810	\$492,010	\$949	\$2,847,232
2041	\$193,199				\$193,199	\$198,029	\$298,972	\$497,001	\$442,200	\$49,827	\$492,027	-\$4,975	\$2,842,257
2042					\$0	\$0	\$298,972	\$298,972	\$442,200	\$49,740	\$491,940	\$192,968	\$3,035,225
2043	\$417,588				\$417,588	\$428,028	\$298,972	\$727,000	\$442,200	\$53,116	\$495,316	-\$231,684	\$2,803,541
2044					\$0	\$0	\$298,972	\$298,972	\$442,200	\$49,062	\$491,262	\$192,290	\$2,995,831
2045					\$0	\$0	\$298,972	\$298,972	\$442,200	\$52,427	\$494,627	\$195,655	\$3,191,486
2046					\$0	\$0	\$298,972	\$298,972	\$442,200	\$55,851	\$498,051	\$199,079	\$3,390,565
2047					\$0	\$0	\$298,972	\$298,972	\$442,200	\$59,335	\$501,535	\$202,563	\$3,593,128
2048	\$64,599				\$64,599	\$66,214	\$298,972	\$365,186	\$442,200	\$62,880	\$505,080	\$139,893	\$3,733,021
2049					\$0	\$0	\$298,972	\$298,972	\$442,200	\$65,328	\$507,528	\$208,556	\$3,941,577
2050	\$312,108				\$312,108	\$319,911	\$298,972	\$618,883	\$442,200	\$68,978	\$511,178	-\$107,705	\$3,833,872
2051	\$685,997	\$540,000			\$1,225,997	\$1,256,647	\$298,972	\$1,555,619	\$442,200	\$67,093	\$509,293	-\$1,046,326	\$2,787,546
2052	\$1,702,900				\$1,702,900	\$1,745,473	\$298,972	\$2,044,445	\$442,200	\$48,782	\$490,982	-\$1,553,463	\$1,234,083
2053		\$792,900			\$792,900	\$812,723	\$298,972	\$1,111,695	\$442,200	\$21,596	\$463,796	-\$647,898	\$586,185
2054		\$404,800			\$404,800	\$414,920	\$298,972	\$713,892	\$442,200	\$10,258	\$452,458	-\$261,434	\$324,751
2055					\$0	\$0	\$298,972	\$298,972	\$442,200	\$5,683	\$447,883	\$148,911	\$473,662
2056					\$0	\$0	\$298,972	\$298,972	\$442,200	\$8,289	\$450,489	\$151,517	\$625,180
2057					\$0	\$0	\$298,972	\$298,972	\$442,200	\$10,941	\$453,141	\$154,169	\$779,348
2058					\$0	\$0	\$298,972	\$298,972	\$442,200	\$13,639	\$455,839	\$156,867	\$936,215
2059					\$0	\$0	\$298,972	\$298,972	\$442,200	\$16,384	\$458,584	\$159,612	\$1,095,826
2060	\$21,390				\$21,390	\$21,924	\$298,972	\$320,896	\$442,200	\$19,177	\$461,377	\$140,481	\$1,236,307
2061					\$0	\$0	\$298,972	\$298,972	\$442,200	\$21,635	\$463,835	\$164,863	\$1,401,170

Lockhart Shire Council
Sewerage Schemes
Long Term Funding Expenditure Scenario 2

Year	Year Funds Required	Year Funds Required	Year Funds Required	Year Funds Required	Total Renewal Required (2012 \$)	Total Renewals Required (2013 \$)	Operational & Maintenance Expenditure	Total Annual Expenditure	Income	Interest 1.75 % above Inflation	Total Income	Surplus/loss	Reserve Balance
2062	\$18,138				\$18,138	\$18,592	\$298,972	\$317,564	\$442,200	\$24,520	\$466,720	\$149,157	\$1,550,327
2063	\$337,285				\$337,285	\$345,718	\$298,972	\$644,690	\$442,200	\$27,131	\$469,331	-\$175,359	\$1,374,968
2064	\$78,000				\$78,000	\$79,950	\$298,972	\$378,922	\$442,200	\$24,062	\$466,262	\$87,340	\$1,462,308
2065					\$0	\$0	\$298,972	\$298,972	\$442,200	\$25,590	\$467,790	\$168,818	\$1,631,127
2066	\$13,451				\$13,451	\$13,787	\$298,972	\$312,759	\$442,200	\$28,545	\$470,745	\$157,985	\$1,789,112
2067					\$0	\$0	\$298,972	\$298,972	\$442,200	\$31,309	\$473,509	\$174,537	\$1,963,649
2068					\$0	\$0	\$298,972	\$298,972	\$442,200	\$34,364	\$476,564	\$177,592	\$2,141,241
2069					\$0	\$0	\$298,972	\$298,972	\$442,200	\$37,472	\$479,672	\$180,700	\$2,321,941
2070					\$0	\$0	\$298,972	\$298,972	\$442,200	\$40,634	\$482,834	\$183,862	\$2,505,803
2071					\$0	\$0	\$298,972	\$298,972	\$442,200	\$43,852	\$486,052	\$187,080	\$2,692,883
2072					\$0	\$0	\$298,972	\$298,972	\$442,200	\$47,125	\$489,325	\$190,353	\$2,883,236
2073					\$0	\$0	\$298,972	\$298,972	\$442,200	\$50,457	\$492,657	\$193,685	\$3,076,921
2074	\$315,000				\$315,000	\$322,875	\$298,972	\$621,847	\$442,200	\$53,846	\$496,046	-\$125,801	\$2,951,120
2075					\$0	\$0	\$298,972	\$298,972	\$442,200	\$51,645	\$493,845	\$194,873	\$3,145,992
2076		\$540,000			\$540,000	\$553,500	\$298,972	\$852,472	\$442,200	\$55,055	\$497,255	-\$355,217	\$2,790,775
2077					\$0	\$0	\$298,972	\$298,972	\$442,200	\$48,839	\$491,039	\$192,067	\$2,982,842
2078	\$28,521	\$792,900			\$821,421	\$841,957	\$298,972	\$1,140,929	\$442,200	\$52,200	\$494,400	-\$646,529	\$2,336,313
2079		\$404,800			\$404,800	\$414,920	\$298,972	\$713,892	\$442,200	\$40,885	\$483,085	-\$230,807	\$2,105,506
2080	\$6,291				\$6,291	\$6,448	\$298,972	\$305,420	\$442,200	\$36,846	\$479,046	\$173,626	\$2,279,132
2081	\$97,584	\$193,199			\$290,783	\$298,053	\$298,972	\$597,025	\$442,200	\$39,885	\$482,085	-\$114,940	\$2,164,192
2082	\$63,000				\$63,000	\$64,575	\$298,972	\$363,547	\$442,200	\$37,873	\$480,073	\$116,526	\$2,280,718
2083		\$417,588			\$417,588	\$428,028	\$298,972	\$727,000	\$442,200	\$39,913	\$482,113	-\$244,887	\$2,035,831
2084					\$0	\$0	\$298,972	\$298,972	\$442,200	\$35,627	\$477,827	\$178,855	\$2,214,686
2085					\$0	\$0	\$298,972	\$298,972	\$442,200	\$38,757	\$480,957	\$181,985	\$2,396,671
2086					\$0	\$0	\$298,972	\$298,972	\$442,200	\$41,942	\$484,142	\$185,170	\$2,581,841
2087					\$0	\$0	\$298,972	\$298,972	\$442,200	\$45,182	\$487,382	\$188,410	\$2,770,251
2088		\$64,599			\$64,599	\$66,214	\$298,972	\$365,186	\$442,200	\$48,479	\$490,679	\$125,493	\$2,895,744
2089					\$0	\$0	\$298,972	\$298,972	\$442,200	\$50,676	\$492,876	\$193,904	\$3,089,647
2090					\$0	\$0	\$298,972	\$298,972	\$442,200	\$54,069	\$496,269	\$197,297	\$3,286,944
2091					\$0	\$0	\$298,972	\$298,972	\$442,200	\$57,522	\$499,722	\$200,750	\$3,487,694
2092					\$0	\$0	\$298,972	\$298,972	\$442,200	\$61,035	\$503,235	\$204,263	\$3,691,956
2093					\$0	\$0	\$298,972	\$298,972	\$442,200	\$64,609	\$506,809	\$207,837	\$3,899,794
2094					\$0	\$0	\$298,972	\$298,972	\$442,200	\$68,246	\$510,446	\$211,474	\$4,111,268
2095					\$0	\$0	\$298,972	\$298,972	\$442,200	\$71,947	\$514,147	\$215,175	\$4,326,443
2096					\$0	\$0	\$298,972	\$298,972	\$442,200	\$75,713	\$517,913	\$218,941	\$4,545,384
2097					\$0	\$0	\$298,972	\$298,972	\$442,200	\$79,544	\$521,744	\$222,772	\$4,768,156
2098					\$0	\$0	\$298,972	\$298,972	\$442,200	\$83,443	\$525,643	\$226,671	\$4,994,827
2099					\$0	\$0	\$298,972	\$298,972	\$442,200	\$87,409	\$529,609	\$230,637	\$5,225,464
2100					\$0	\$0	\$298,972	\$298,972	\$442,200	\$91,446	\$533,646	\$234,674	\$5,460,138
2101			\$540,000		\$540,000	\$553,500	\$298,972	\$852,472	\$442,200	\$95,552	\$537,752	-\$314,720	\$5,145,419
2102					\$0	\$0	\$298,972	\$298,972	\$442,200	\$90,045	\$532,245	\$233,273	\$5,378,691
2103			\$792,900		\$792,900	\$812,723	\$298,972	\$1,111,695	\$442,200	\$94,127	\$536,327	-\$575,367	\$4,803,324
2104	\$57,600	\$1,120,000	\$404,800		\$1,582,400	\$1,621,960	\$298,972	\$1,920,932	\$442,200	\$84,058	\$526,258	-\$1,394,674	\$3,408,650
2105		\$1,306,315			\$1,306,315	\$1,338,973	\$298,972	\$1,637,945	\$442,200	\$59,651	\$501,851	-\$1,136,093	\$2,272,557
2106		\$7,068			\$7,068	\$7,245	\$298,972	\$306,217	\$442,200	\$39,770	\$481,970	\$175,753	\$2,448,310
2107		\$307,568			\$307,568	\$315,257	\$298,972	\$614,229	\$442,200	\$42,845	\$485,045	-\$129,184	\$2,319,126
2108					\$0	\$0	\$298,972	\$298,972	\$442,200	\$40,585	\$482,785	\$183,813	\$2,502,939
2109					\$0	\$0	\$298,972	\$298,972	\$442,200	\$43,801	\$486,001	\$187,029	\$2,689,968
2110		\$187,404			\$187,404	\$192,089	\$298,972	\$491,061	\$442,200	\$47,074	\$489,274	-\$1,787	\$2,688,181
2111					\$0	\$0	\$298,972	\$298,972	\$442,200	\$47,043	\$489,243	\$190,271	\$2,878,453
2112					\$0	\$0	\$298,972	\$298,972	\$442,200	\$50,373	\$492,573	\$193,601	\$3,072,054

Appendix G 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 H 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, e.g. 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, e.g. 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, e.g. 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, e.g. roads, drainage, footpaths and cycle ways. 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, e.g. 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 (e.g. 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 e.g. 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, e.g. 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, e.g. 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, e.g. 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 are 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