

ASSET MANAGEMENT PLAN

District Council of Grant

CWMS Asset Management Plan

District Council of

Grant



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NAMS+ offers several Asset Management templates.

The asset owner can choose the template that best suits their circumstances.

The structure and content of this template is aligned to the International Infrastructure Management Manual and the ISO 550xx and 31000 series of standards. In some instances, the asset owner may choose to reformat/restructure content or only use the Executive Summary. IPWEA takes no responsibility for the end product.

This Asset Management Plan should be prepared in line with the Strategic Asset Management Plan (also referred to as an AM Strategy) and AM Policy and used to inform the Long-Term Financial Plan.

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1.0 EXECUTIVE SUMMARY

Our community relies on a diverse portfolio of infrastructure assets, including Community Wastewater Management Systems, valued at approximately \$15,292,122.

The Asset Management Plan (AM Plan) provides a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands.

1.1 Purpose of the Plan

The AM Plan aims to:

- Provide a systematic approach to asset management.
- Address critical risks associated with aging infrastructure and limited funding.
- Ensure infrastructure supports the community's social, economic, and environmental goals.

This AM Plan details information about CWMS Assets with key actions required to maintain service levels, optimise lifecycle costs, and support long-term financial sustainability.

The plan defines the services, how they are provided and what funds are required to provide the services over the 20 year planning period. The AM Plan expenditure forecasts inform the Long-Term Financial Plan which typically considers a 10-year planning period.

1.2 Asset Description

The CWMS Asset network comprises:

- Pumps Stations
- Pressure and Gravity Pipelines
- Inspection and Flushing Points
- Wastewater Treatment Plants

The above infrastructure assets have replacement value estimated at \$15,292,122.

1.3 Levels of Service

This plan covers the infrastructure assets that provide Wastewater Services to the residents of District Council of Grant Townships.

Well maintained and suitable wastewater collection and disposal system

- Provide a system with minimal break downs
- Meet SA Health Department
- Meet EPA standards
- Low level of risk to personal and environmental health
- Provide adequate effluent disposal systems to maintain public health standards and prevent environmental harm

The allocation in the planned budget is insufficient to continue providing these services at current levels for the planning period.

The main service consequences of the planned budget are:

- Minor Pipe Ruptures
- Occasional Outages
- Increased Adhoc Repairs

1.4 Future Demand

The factors influencing future demand and the impacts they have on service delivery are created by:

- Steady increase in population and evolution in demographics
- Increase levels of Development, particularly in the 'Rural Living' space
- Environmental factors including Climate Change, Extreme Weather events and Environmentally Friendly Design and Construction practice development
- Increased demand for CWMS utilisation driven by economic drivers
- Potential for legislative change

Strategies to manage these demands are discussed in Section 4.0.

1.5 Lifecycle Management Plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on 10-year Long-Term Financial Plan (LTFP).

Furthermore, when District Council of Grant commits to the upgrade of existing and acquisition of new assets, future operations, maintenance and renewal costs including depreciation will increase.

1.5.1 What does it Cost?

The lifecycle costs necessary to provide the services covered by this AM Plan include operations, maintenance, renewal and upgrade of existing assets, and the acquisition of new assets to meet demand. Disposal of assets is also considered.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost \$5781800 or \$578180 on average per year.

Depreciation is excluded from these cost estimates.

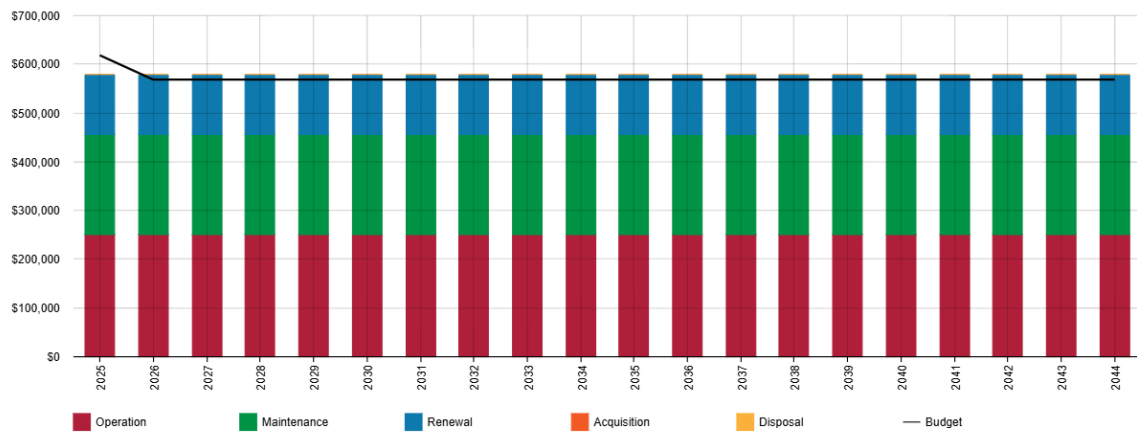
1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is \$5733720 or \$573372 on average per year which is approximately 99.17% of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends on the AM Plan emphasising the consequences of planned budgets on the service levels provided and communicating the residual risks. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The 10-year LTFP results in a shortfall of \$-4808 on average per year of the forecast lifecycle costs required to provide services. This is shown in the figure below.

The LTFP, on average, for the first 10-years is sufficient to provide services. This is shown in the figure below.



Forecast Lifecycle Costs and Planned Budgets

Amounts are shown in real values (i.e., current values, net of inflation).

We plan to provide CWMS services for the following:

- Operation, maintenance, renewal and acquisition of Pump Stations, Pipelines and Wastewater Treatment Systems to meet service levels set by District Council of Grant elected members in annual budgets.
- No fully self funded systems within the 10-year planning period.

1.5.3 What we cannot do

We currently do not allocate enough budget to sustain services at the proposed standard including the provision of new assets. Works and services that cannot be provided under present funding levels are:

- Fully self fund the augmentation of Port MacDonnell CWMS within the 10-year planning period.
- Fully self fund development of the Donovans CWMS to support the Glenelg River shacks within the 10-year planning period.

1.6 Risk Management

Council's present budget levels are insufficient however given the good condition of Council's CWMS Assets, Council can continue to effectively manage our risks into the medium.

The main risk consequences are:

- Public Safety and Environmental Risk associated with pipeline rupture and disruption to the CWMS network
- Public Safety and Environmental Risk associated Pumpstation and Wastewater Treatment Plan overflow and disruption to the CWMS Network

Strategies and actions to manage these risks are discussed in Section 6.0.

1.7 Financial Summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

The 10-year LTFP is \$573,372 on average per year giving a 10 year funding shortfall of \$-4808 per year. This indicates that 99.17% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the LTFP.

Asset values are forecast to increase as additional assets are added to service.

1.8 Monitoring and Improvement Program

Key assumptions made in this AM Plan are:

- All current assets will remain within the organisation's ownership throughout the planning period, with no Assets being disposed of.
- Renewal forecasts are based on costs associated with like for like or modern equivalent replacement and are based off current design standards and any legislated requirements. They do not account for additional costs to upgrade assets.
- Renewal forecast have been derived from treatment rates established from quantity surveyor estimates or contract rates, applied to asset dimensions recognised within the Asset Management System
- The renewal forecasts consider asset condition, asset functionality and integrated planning principles.
- Asset useful lives align with current levels of service and are based on the judgment and experience of internal staff.
- Asset remaining useful life estimates are based off asset condition data, renewal intervention levels aligned with current levels of service and technical asset deterioration profiles which are based on the judgement and experience of internal staff and available industry standards.
- Asset useful life and remaining useful life estimates assume existing maintenance resourcing levels are continued.

The Alternate Method was used to forecast the renewal lifecycle costs for this AM Plan.

This AM Plan is based on a reliable level of confidence information.

The next steps resulting from this AM Plan to improve asset management practices are:

- Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations
- Include changes into future revisions of this Asset Management Plan and Long-Term Financial Plan
- Continue to work in partnership with both the State and Federal Governments to pursue external funding opportunities for both renewal and significant upgrade/new CWMS projects
- Comprehensive review of long-term Capital New and Upgrade program for integration into Asset Management Plans and Long-Term Financial Plans, to be integrated going forward.

2.0 INTRODUCTION

2.1 Background

This AM Plan communicates the actions and necessary funds required to sustainably deliver services through the careful management of assets for the foreseeable future.

The AM Plan is to be read with the District Council of Grant planning documents. This should include the Asset Management Policy and Strategy, where developed, along with the following planning documents:

- District Council of Grant Strategic Plan 2024-2034
- District Council of Grant Long Term Financial Management Plan
- Inner Townships Master Plan
- Greater Mount Gambier Master Plan
- Port MacDonnell Urban Design Framework and Master Plan
- River & Coastal Communities Urban Design Framework and Master Plan
- Rural Living and Township Zones Boundaries Review and Master Plan
- Comment on the current status of Asset Management in the Organisation.

The infrastructure assets covered by this AM Plan include CWMS Pipelines, Pump Stations, Wastewater Treatment Plants and Wastewater Lagoons. For a detailed summary of the assets covered in this AM Plan refer to Table in Section 5.

These assets are used to provide grey and black wastewater services to DC Grant Residents.

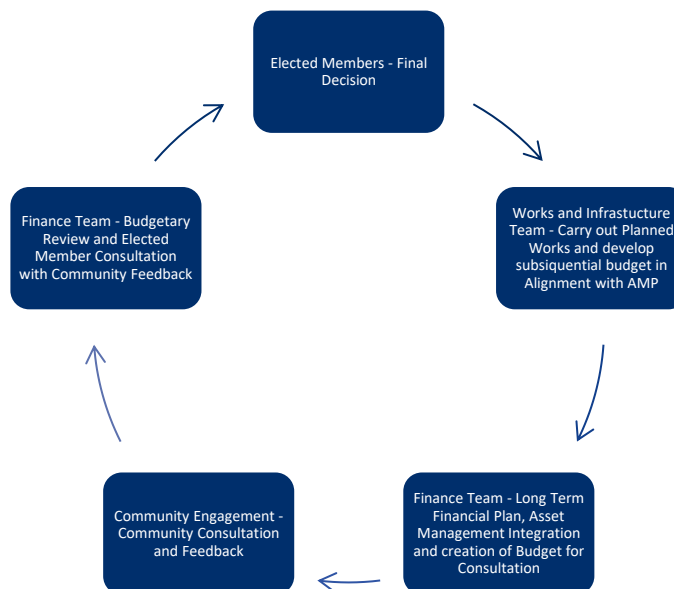
The infrastructure assets included in this plan have a total replacement value of \$15,292,122.

Key stakeholders in the preparation and implementation of this AM Plan are shown in Table 2.1.

Table 2.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Elected Members	Represent needs of community/shareholders, Allocate resources to meet planning objectives in providing services while managing risks, Ensure service sustainable.
CEO and Senior Management	Endorse the development of asset management plans and provide the resources required to complete this task. Set high level priorities for asset management development in Council and raise the awareness of this function among Council staff and contractors. Support the implementation of actions resulting from this plan and prepared to make changes to a better way of managing assets and delivering services. Support for an asset management driven budget and LTFP.
Works Staff	Provide local knowledge level detail on all CWMS assets. They verify the size, location and condition of assets. They can describe the maintenance standards deployed and Council's ability to meet technical and customer levels of service.
Residents and Businesses	Those who reside, work or have involvement with property connected to a CWMS.
Utility Agencies	Those utility service providers sharing use of the road reserve (water, sewerage, gas, electricity and telecommunications).
State And Federal Departments	Periodic provision of support funding to assist with management of the network.

Our organisational structure for service delivery from infrastructure assets is detailed below,



2.2 Principles, Goals and Objectives of Asset Management

The principles of asset management as per the International Standards for asset management are:

- **Value:** asset management focuses on the value assets provide to the organization over time.
- **Alignment:** asset management aligns financial, technical and operational decisions with the organizational objectives, promoting vertical and horizontal coordination.
- **Leadership:** leadership and sustained commitment at all levels are crucial for successful asset management.¹

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.²

¹ ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

² IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

3.0 LEVELS OF SERVICE

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer Research and Expectations

This AM Plan is prepared to facilitate consultation prior to adoption of levels of service by the Elected Members of the District Council of Grant. Future revisions of the AM Plan will incorporate customer consultation on service levels and costs of providing the service. This will assist the Elected Members of the District Council of Grant and stakeholders in matching the level of service required, service risks and consequences with the customer's ability and willingness to pay for the service.

3.2 Strategic and Corporate Goals

This AM Plan is prepared under the direction of the District Council of Grant vision, mission, goals and objectives.

Our vision is:

We are a district of welcoming, inclusive and vibrant coastal and rural communities within the Limestone Coast. With a pristine environment, relaxed rural lifestyle, quality services and a prosperous local economy, this is a great place to live, conduct business and a welcoming destination to visit and stay.

Our mission is:

To provide a range of services which meet the environmental, social and economic needs of our community.

Strategic goals have been set by the District Council of Grant. The relevant goals and objectives and how these are addressed in this AM Plan are summarised in Table 3.2.

Table 3.2: Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in the AM Plan
Community	A connected, inclusive, resilient and engaged community	Governance of provision of Assets that facilitates the Communities ability to connect
Economy	A growing and vibrant economy, optimising our diverse primary industries and unique natural assets	Ensuring the fiscal responsibility of development, operation, maintenance, renewal or upgrade and disposal of the assets
Environment	A sustainable district that values the natural qualities and heritage that underpin our health, liveability and economy	Provision of strategy surrounding the development and renewal of assets in an environmentally conscious manner
Infrastructure	Reliable and contemporary infrastructure that meets the needs of our community, industry and visitors	Facilitate the discussion of appropriate levels of service, intervention point and ongoing budget for associated infrastructure works
Council	A strategic and financially sustainable Council that values its people and delivers quality services	Enable the strategic and financial conversation around management of assets and facilitate consultation and education

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the CWMS service are outlined in Table 3.3.

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act 1999	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.
Local Government (Financial Management and Rating) Amendment Act 2005	Impetus for the development of a Strategic Management Plan, comprising an (Infrastructure) Asset Management Plan and Long-term Financial Plan.
Civil Liability Act 1936	Liability of road authorities – Section 42, May 2004 inclusion in the Act to provide a replacement for the nonfeasance defence consequent to May 2001 High Court judgement.
Development Act 1993	An Act to provide for planning and regulate development in the State; to regulate the use and management of land and buildings, and the design and construction of buildings; to make provision for the maintenance and conservation of land and buildings where appropriate.
Work Health and Safety Act 2012	An Act to provide for the health, safety and welfare of persons at work.
Local Government (General) Regulations 1999	Regulations applying to the Local Government Act 1999 and specific to: CWMS and Wastewater Systems

3.4 Customer Values

Service levels are defined in three ways, customer values, customer levels of service and technical levels of service.

Customer Values indicate:

- what aspects of the service is important to the customer,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

Table 3.4: Customer Values

Service Objective:			
Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
A functioning system with no perceived interruptions	Interruption to service	None perceived	Expected to be maintained
A functioning system with no perceived odours	No obnoxious odours from the system	No complaints	Expected to be maintained
An environmentally friendly solution	No wastewater released into the environment	No complaints	Expected to be maintained

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Condition How good is the service ... what is the condition or quality of the service?

Function Is it suitable for its intended purpose Is it the right service?

Capacity/Use Is the service over or under used ... do we need more or less of these assets?

In Table 3.5 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 3.5: Customer Level of Service Measures

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Well maintained and suitable wastewater collection and disposal system	No. of customer requests relating to CWMS maintenance	<i>Not currently formally measured however anecdotally below the 10 per Annum Target</i>	Expected Level of Service to be maintained
	Provide a system with minimal break downs	System works records	Not currently formally measured however anecdotally below the 10 Mechanical Faults per Annum Target	Expected Level of Service to be maintained
	Confidence levels		Medium (Professional judgement supported by data sampling)	High (Professional Judgement supported by extensive data)
Function	Meet SA Health Department	Compliance to approval conditions	< 1 non-compliance event	Expected Level of Service to be maintained
	Meet EPA standards	Compliance to approval conditions	< 1 non-compliance event	Expected Level of Service to be maintained
	Low level of risk to personal and environmental health	No. of overflows within the pipe network and/or at pump stations	< 4 per annum	Expected Level of Service to be maintained
		No. of overflows at Lagoons and the WWTP (untreated effluent)	< 1 per annum	Expected Level of Service to be maintained
	Confidence levels		High (Professional Judgement supported by extensive data)	High (Professional Judgement supported by extensive data)
Capacity	Provide adequate effluent disposal systems to maintain public health standards and prevent environmental harm	Compliance with standards and legislation	< 1 per annum	Expected Level of Service to be maintained
	Confidence levels		High (Professional Judgement supported by extensive data)	High (Professional Judgement supported by extensive data)

3.6 Technical Levels of Service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section 5) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.³

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AM Plan.

Table 3.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
TECHNICAL LEVELS OF SERVICE				
Acquisition	Ensure a safe, environmentally friendly, reliable CWMS that is fit for Service	All new Acquisitions meet DH, EPA, Development, Wastewater Industry Act and current Wastewater Guidelines at the time of construction	All new Acquisitions meet DH, EPA, Development, Wastewater Industry Act and current Wastewater Guidelines at the time of construction	All new Acquisitions meet DH, EPA, Development, Wastewater Industry Act and current Wastewater Guidelines at the time of construction
		Budget	As adopted	As adopted
Operations	Response time to customer requests	Time taken to complete requests	Not currently formally measured	> 80% of all requests adequately responded to within target time frames.
	Infrastructure meets user's needs	Compliance with EPA Licence reporting and monitoring requirements	Annual reporting verification and compliance	Annual reporting verification and compliance
		Remote monitoring and logging of pump stations	Remote monitoring and logging on all pump stations excluding minor pump stations	Remote monitoring and logging on all pump stations excluding minor pump stations
		Review and update of Operation and Maintenance manuals for each scheme	Annual	Annual
	Provide a well maintained system	Pump stations inspected and maintained	Monthly	Monthly
		Manholes inspected and maintained	Every two years	Every two years
		Gravity drain flushing	To be determined	To be determined

³ IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
		Septic tank desludging program	3-4 yearly (dependent on location)	3-4 yearly (dependent on location)
		Pipework inspections and conditioning monitoring. Capture of CCTV footage	On an adhoc basis	To be determined
		Budget	\$456180	\$456180
Renewal	Provide a safe and compliant CWMS system	Compliance with Department of Health CWMS design criteria	All pump stations comply	All pump stations comply
		Budget	\$117192	\$122000
Disposal	No Disposals are planned within the Asset Management Plans Planning Period			
		Budget	\$0	\$0

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

- *In addition to the above community and technical levels of service, guidelines stated within the "Water Retail Code – Minor and Intermediate Retailers" as issued by ESCOSA must be adhered to.*
- *At this point in time, Council is unable to formerly measure current levels of service criteria except anecdotally. As the Asset Management System and Customer Request System matures, a more accurate measure of current service levels can be provided.*

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged that circumstances such as technology and customer priorities will change over time.

4.0 FUTURE DEMAND

Future demand refers to the anticipated need for infrastructure services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand Drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. The factors influencing future demand are created by:

- Population Growth
- Changes in technology
- Regulatory changes in requirements

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand Forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.3.

4.3 Impacts and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in Table 4.3. Further opportunities will be developed in future revisions of this AM Plan.

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Area Growth	2021 ABS Census Population Data: Total: 8636 65+ years: 19.2% <19 years: 22.8% Median Age 45 years Senior to District Migration in 2021 of 300 people	Expected Growth (2023 ABS Estimated Residential Population 9044)	Area growth will place increasing demands on transportation infrastructure, with growing volumes of pedestrians, motorists, and cyclists using the network to get into Mount Gambier and around the District. This will result in increased level of service expectations as well as competing demands for the services provided by our transportation assets (e.g. Road, pedestrian, and cycling infrastructure).	Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents to enhance the transportation network and accommodate District growth through upgrading existing assets and creating new assets to align service provision with the evolving needs of the community. This Asset Management Plan will ensure asset renewals will consider and align where practical with these key upgrade/new initiatives.

Aging Population	65+ years: 19.2% <19 years: 22.8% Median Age 45 years Senior to District Migration in 2021 of 300 people	Expected Growth in the Aging Population due to moderate climate, lower cost of living and high middle-aged population.	Increase focus on levels of service provided by footpaths, roads, carparks in respect to access and egress and elevated risk to the aging population	Implementation of Council's Disability Access Inclusion Program, continued consultation with at risk communities and inspection / risk management of assets.
Climate Change	Current weather patterns starting to change	Increased Extreme Weather Events and Rising Sea Levels	Potential for damage to existing Infrastructure and reduced useful life of components	- Ensuring construction and maintenance of Assets aligns with current and evolving best practice - Continued research and training in new technology and construction standards - Infrastructure Planning process to continue to include Climate Change Risk Management

4.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 5.4.

Acquiring new assets will commit the District Council of Grant to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk that needs to be managed.

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts.⁴

As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 4.5.1

Table 4.5.1 Managing the Impact of Climate Change on Assets and Services

Climate change risk	Projection	Impact on services	Climate Change Management Plan
Increase in Extreme Weather Events	Increased water based emergency events on CWMS Assets	Increased and higher impact high water events impacting on CWMS service provision	Continued monitoring and development of capacity in CWMS, continued utilisation of SCADA for advanced management of the wastewater and treatment processes.

⁴ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Additionally, the way in which we construct new and upgrade existing assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Table 4.5.2 summarises opportunities to build climate change resilience into new and existing assets.

Table 4.5.2 Building Climate Change Resilience into New and Existing Assets

Asset Description	Climate change risk	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Pump Stations, Pipelines and Wastewater Treatment plants	Increased Stormwater inflow	Design with flexibility (e.g., modular infrastructure, adaptable flood barriers, scalable storage systems).	Incorporation within Renewal Process adaption to modularity and scalable storage solutions
		Expand real-time monitoring of hydrological and meteorological variables.	Augment real-time monitoring of hydrological and meteorological variables.
		Develop contingency plans for system failures during extreme events	Develop contingency plans for system failures during extreme events
		Access climate resilience funding mechanisms, like the Green Climate Fund	Access climate resilience funding mechanisms, like the Green Climate Fund
		Use lessons learned from past events to revise strategies	Use lessons learned from past events to revise strategies

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AM Plan.

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the District Council of Grant plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

- **Capital**
 - **Acquisition** – the activities to provide a higher level of service (e.g., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).
 - **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement).
- **Operating**
 - **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc.)
 - **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to provide service for its planned life (e.g., road patching, unsealed road grading, building and structure repairs).
 - **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.0.



Figure 5.0: Asset Lifecycle Activities

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this AM Plan are shown in Table 5.1.1.

Table 5.1.1: Assets covered by this Plan

Asset Category	Dimension	Replacement Value
CWMS Nodes	40	\$637,290
CWMS Pipelines	39806	\$9,211,450
CWMS Pump Stations Assets	656	\$3,079,572
CWMS WWTP Assets	120	\$2,363,810
TOTAL		\$15,292,122

District Council of Grant operates and maintains 6 CWMS's and 5 Waste Water Treatment Plans serving the towns of Port MacDonnell, Tarpeena, Allendale East, Pelican Point, Cape Douglas and Donovans. These CWMS's serving over 1100 properties or approximately 2000+ people with Wastewater Services

The age profile of the assets included in this AM Plan are shown in Figure 5.1.1.

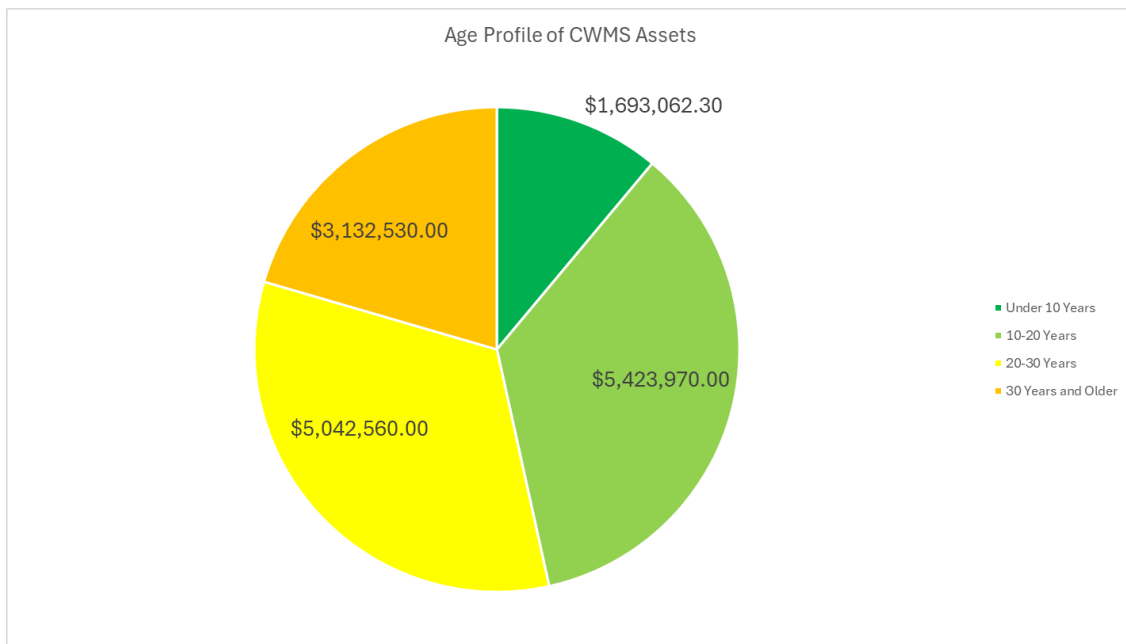


Figure 5.1.1: Asset Age Profile

Amounts are shown in real values (i.e., current values, net of inflation).

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. 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
Tarpeena	Tree root intrusion evidence in Pump Station 2, has been removed, poisoned and sealed however will need to be monitored going forward
Port MacDonnell	Pressure Main capacity has been reached and requires augmentation to allow all pump stations to run at full capacity at all times. Inflows exceeding design and housing development reached CWMS capacity

The above service deficiencies were identified from Emergency Response, SCADA and Engineering Contractor Analysis.

5.1.3 Asset condition

Condition is currently monitored on a weekly basis as part of the routine maintenance inspections. Every 4 years, independent contractors are brought in to verify and confirm data collected.

Condition is measured using a 1 – 5 grading system⁵ as detailed in Table 5.1.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

⁵ IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

Table 5.1.3: Condition Grading System

Condition Grading	Description of Condition
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor defects, increasing maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, higher order cost intervention likely
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required

The condition profile of our assets is shown in Figure 5.1.3.

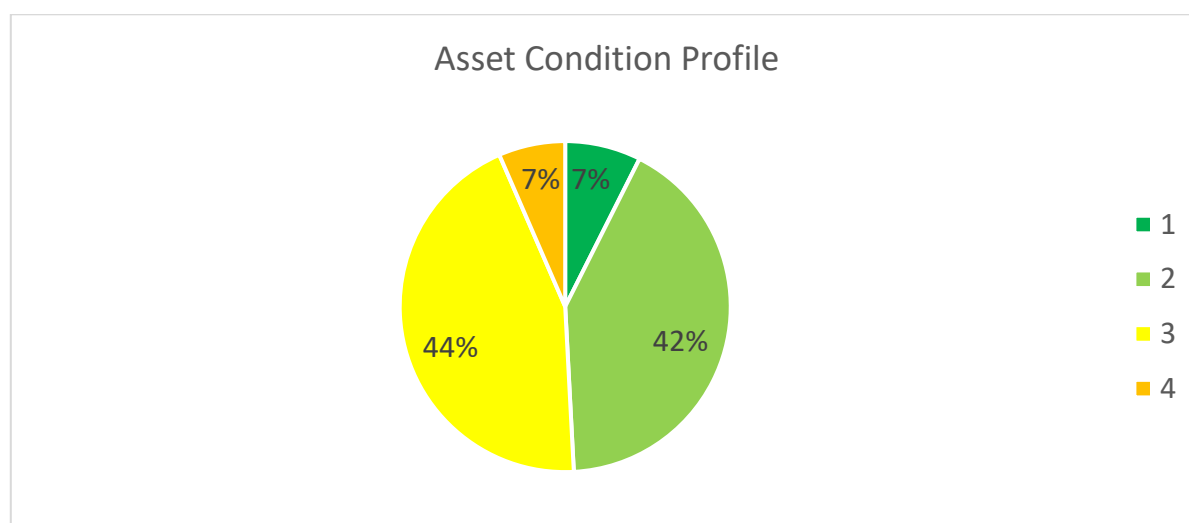


Figure 5.1.3: Asset Condition Profile

Condition of our array of assets is generally in good condition with active renewal programs of the past shown to be effective. With consistent renewals and proactive maintenance practices, this is set to be maintained or improve over the course of the planning period. Regular condition assessments of accessible assets is undertaken as part of the plant maintenance and review by contracted engineers, the latest including onsite inspection being completed by Liquid Engineering.

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, street sweeping, asset inspection, and utility costs.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, asphalt patching, and equipment repairs.

The trend in maintenance budgets are shown in Table 5.2.1.

Table 5.2.1: Maintenance Budget Trends

Year	Maintenance Budget \$
2023-2024	\$199,880
2024-2025	\$206,180
2025-2026	\$211,334

Maintenance budget levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified and are highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Reactive maintenance is carried out in accordance with response levels of service detailed in Appendix C.

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.

The service hierarchy is shown in Table 5.2.2.

Table 5.2.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Single Service	Single Pump at Pump Station (Cape Douglas)
Redundant Service	Pump Station with Redundant Pumps

Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.2 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

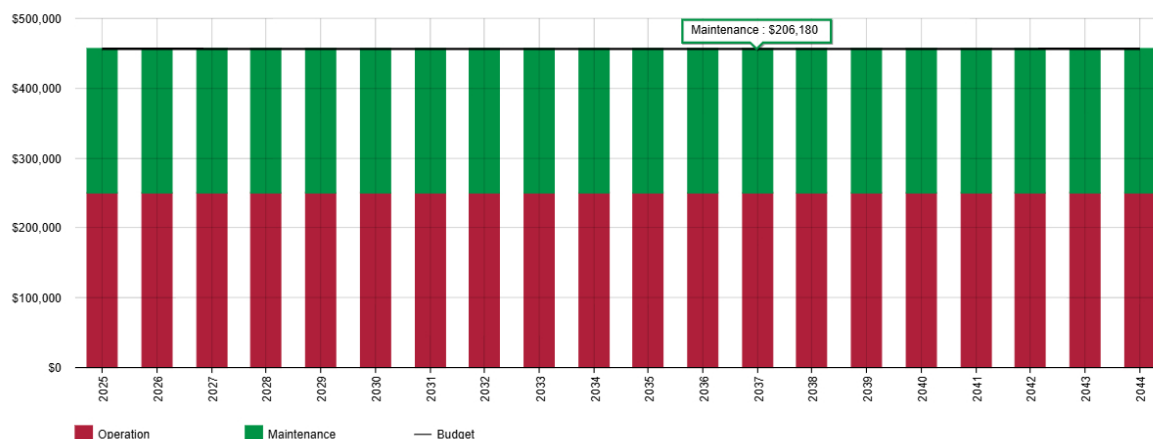


Figure 5.2: Operations and Maintenance Summary

Amounts are shown in real values (i.e., current values, net of inflation).

Maintenance budget levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified and are highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Reactive maintenance is carried out in accordance with response levels of service detailed in Appendix C.

5.3 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.3. Asset useful lives were last reviewed as part of the CWMS Revaluation and Condition Rating complete by Liquid Engineering.⁶

⁶ CWMS Revaluation and Condition Rating available by request

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
Pump Station Communications Equipment	8 Years
Cape Douglas Single Phase Pumps	10 Years
Controller Level Probes	15 Years
Pump Station Mechanicals	20-25 Years (Material Based)
Pump Station Civil	40/50/80 Years (Material Based)
Pipelines	100 Years
Lagoon Civil	200 Years

The estimates for renewals in this AM Plan were based on the Alternate Method derived from the Asset Register.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a playground).⁷

It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.⁸

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.3.1.

Table 5.3.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Deficiency / Fault Reports	50%
Risk Assessment	30%
Non-Compliant Design/Age	20%
Total	100%

⁷ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

⁸ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.3.2. A detailed summary of the forecast renewal costs is shown in Appendix D.

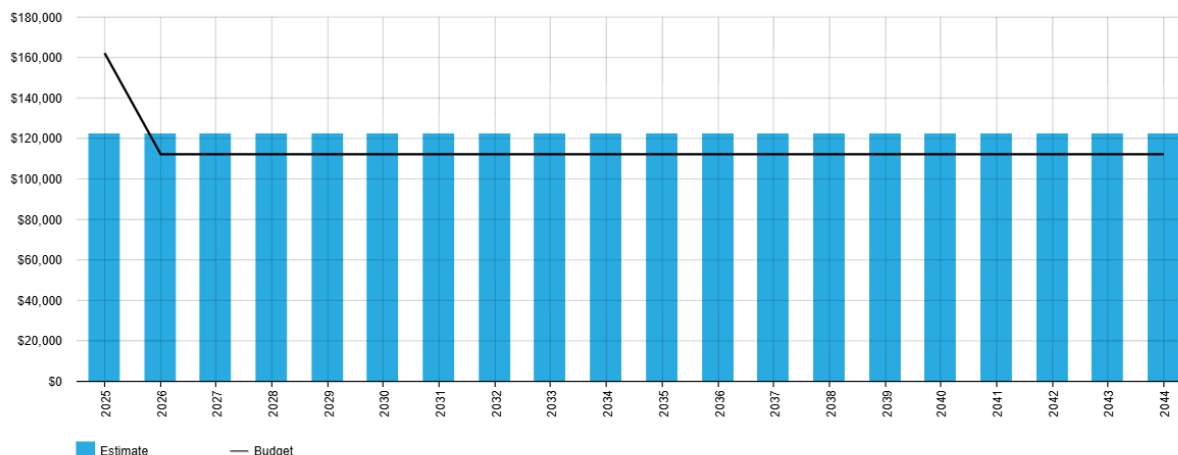


Figure 5.3.2: Forecast Renewal Costs

Amounts are shown in real values (i.e., current values, net of inflation).

Council's Asset 10 Year Asset Renewal Funding Ratio sits at 96%, the 10 Year Financial Ratio sits at 99% with indicative target range of 90-110%. The Renewal Forecast is calculated based on current useful lives, unit rates and Asset quantity in the 2025 CWMS Asset Condition Rating and Revaluation, post development of the current budget. This does not represent a threat to increased risk and loss of level of service in the short term as shown by Asset Condition Profile however if the current levels of risk and levels of service are to be maintained in the medium and long term, additional funding will be required

5.4 Acquisition Plan

Acquisition reflects are new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to the District Council of Grant.

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to the Entities needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1: Acquired Assets Priority Ranking Criteria

Criteria	Weighting
Legislative Compliance	50%
Service Deficiency	50%
Total	100%

5.4.2 Summary of future asset acquisition costs

No new capital Assets have been forecast for this Asset Management Plans at the current point in time due the unknown possible changes in the future. Port MacDonnell CWMS Augmentation Design project is underway and once complete will go to consultation with the Elected Members before going to public consultation. This project is currently expected to cost approximately \$1.2 Million Dollars and would feasibly go ahead if grant funding can be obtained. The Glenelg River Front Shacks CWMS Project is currently going or gone to Tender and being funded by the LGASA CWMS Committee. This will also require external grant funding to proceed and may cost up to \$2 Million dollars. Whole of Life Cost will need to be broken down and analysed prior to going out to consultation.

When an Entity commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity.

Expenditure on new assets and services in the capital works program will be accommodated in the long-term financial plan, but only to the extent that there is available funding.

5.5 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. No Assets are intended to be disposed of in the 20 Year Planning Period

5.6 Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 5.6. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

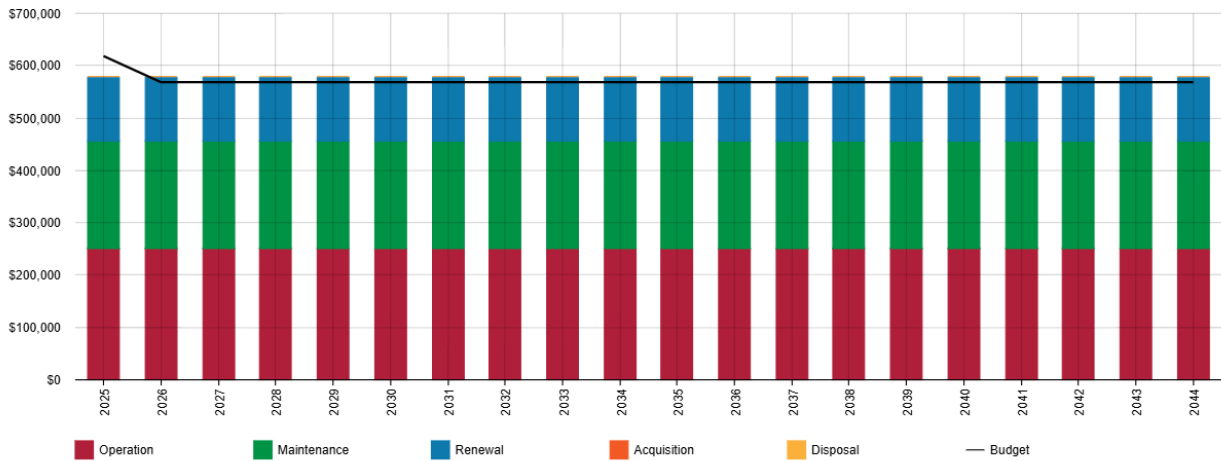


Figure 5.6: Lifecycle Summary

Amounts are shown in real values (i.e., current values, net of inflation).

Council's Asset Renewal Ratio currently sits well within the recommended 90-110% at 96%. This is based on current financial years figures and the calculated renewal requirements based on the recently completed revaluation. Prior budgets had seen our renewal ration higher and in alignment with prior Asset Management Plans however the valuation reflects the recent economic trends and the increased cost of renewal.

Given the renewal ratio, this would indicate a continued trend of meeting the residents expectation of a well maintained and manage CWMS system providing a high level of service and relatively minimal risk.

6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’⁹.

An assessment of risks¹⁰ associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 6.1. Failure modes may include physical failure, collapse or essential service interruption.

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
Port MacDonnell Pressure Main	Pressure Main Burst	Temporary reduction in service, high potential environmental hazard
Tarpeena Pressure Main	Pressure Main Burst	Temporary reduction in service, high potential environmental hazard
Port MacDonnell Treatment System	Loss of viable SA Water Service	High financial impact due to Wastewater Removal and Treatment Plant availability issues

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

⁹ ISO 31000:2009, p 2

¹⁰ REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

6.2 Risk Assessment

The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

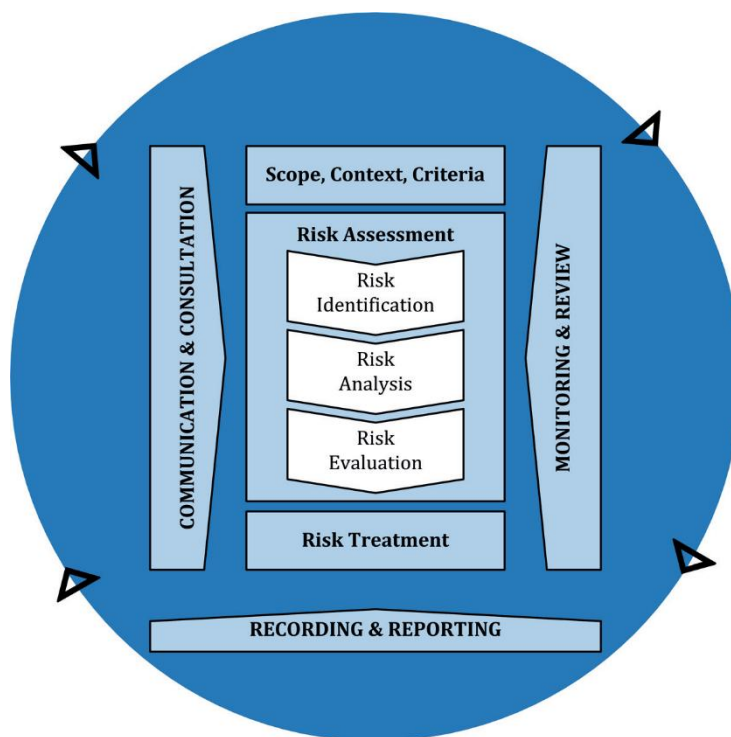


Fig 6.2 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks¹¹ associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the District Council of Grant Elected Members.

¹¹ REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

Table 6.2: Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
CWMS Pipelines	Bursts or ruptures	H	Ongoing Flushing Program and Pressure Management Via Pump Station Control	M	Ongoing Operation and Maintenance Budget
WWTP	Failed Treatment Process	VH	Ongoing Maintenance and Monitoring Program	L	Ongoing Operation and Maintenance Budget
Pump Stations	Overflow or Failure	H	Maintenance of SCADA system controls to prevent system failures and alarming prior to flood events	L	Ongoing Operation, Maintenance and Renewal Budget Allocation

Note * The residual risk is the risk remaining after the selected risk treatment plan is implemented.

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Resilience recovery planning, financial capacity, climate change risk assessment and crisis leadership.

Our current measure of resilience is shown in Table 6.3 which includes the type of threats and hazards and the current measures that the organisation takes to ensure service delivery resilience.

Table 6.3: Resilience Assessment

Threat / Hazard	Assessment Method	Current Resilience Approach
Increase in CWMS System Load	Ongoing Maintenance and monitoring of SCADA real time and historic records to ensure system meets capacity requirements	High

6.4 Service and Risk Trade-Offs

The decisions made in adopting this AM Plan are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 What we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Desludging of resident septic tanks driven by tank capacity
- Flushing of CWMS Pipelines at best practice levels

6.4.2 Service trade-off

If there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- Increase pressures on pipelines
- Extended lifecycle of Assets beyond best practice
- Increased Biosolid Load on Wastewater Treatment Plants
- Increased wear on assets

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Pipeline rupture
- Pump Failure
- Pump Station Overflow
- Wastewater Treatment System Failure

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

7.0 FINANCIAL SUMMARY

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the AM Plan for this service area. The two indicators are the:

- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years identified as warranted in the AM Plan), and
- Lifecycle Funding Ratio (planned lifecycle budget for the next 10 years / forecast lifecycle outlays for the next 10 years identified as warranted in the AM Plan).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio¹² 96.06%

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 96.06% of the funds required for the optimal renewal of assets.

The forecast renewal works along with the planned renewal budget, and the cumulative shortfall, is illustrated in Appendix D.

Lifecycle Funding Ratio – 10-year financial planning period

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide the levels of service to the community over a 10 year period. This provides input into 10 year long-term financial plan (LTFP) aimed at providing the required services in a sustainable manner.

This forecast work can be compared to the planned budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is \$578,180 average per year.

The 10-year LTFP is \$573,372 on average per year giving a 10 year funding shortfall of \$-4808 per year. This indicates that 99.17% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude depreciation and the acquisition of new and upgrade of existing assets.

Providing sustainable and affordable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the AM Plan and ideally over the 10 year life of the Long-Term Financial Plan.

7.1.2 Forecast Costs (outlays) for the long-term financial plan

Table 7.1.2 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

¹² AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the long-term financial plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan and/or financial projections in the LTFP.

We will manage any 'gap' by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs are shown in 2024-2025 dollar values.

Table 7.1.2: Forecast Costs (Outlays) for the Long-Term Financial Plan

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2025	\$0	\$250,000	\$206,180	\$122,000	\$0
2026	\$0	\$250,000	\$206,180	\$122,000	\$0
2027	\$0	\$250,000	\$206,180	\$122,000	\$0
2028	\$0	\$250,000	\$206,180	\$122,000	\$0
2029	\$0	\$250,000	\$206,180	\$122,000	\$0
2030	\$0	\$250,000	\$206,180	\$122,000	\$0
2031	\$0	\$250,000	\$206,180	\$122,000	\$0
2032	\$0	\$250,000	\$206,180	\$122,000	\$0
2033	\$0	\$250,000	\$206,180	\$122,000	\$0
2034	\$0	\$250,000	\$206,180	\$122,000	\$0
2035	\$0	\$250,000	\$206,180	\$122,000	\$0
2036	\$0	\$250,000	\$206,180	\$122,000	\$0
2037	\$0	\$250,000	\$206,180	\$122,000	\$0
2038	\$0	\$250,000	\$206,180	\$122,000	\$0
2039	\$0	\$250,000	\$206,180	\$122,000	\$0
2040	\$0	\$250,000	\$206,180	\$122,000	\$0
2041	\$0	\$250,000	\$206,180	\$122,000	\$0
2042	\$0	\$250,000	\$206,180	\$122,000	\$0
2043	\$0	\$250,000	\$206,180	\$122,000	\$0
2044	\$0	\$250,000	\$206,180	\$122,000	\$0

7.2 Valuation Forecasts

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at fair value at cost to replace service capacity:

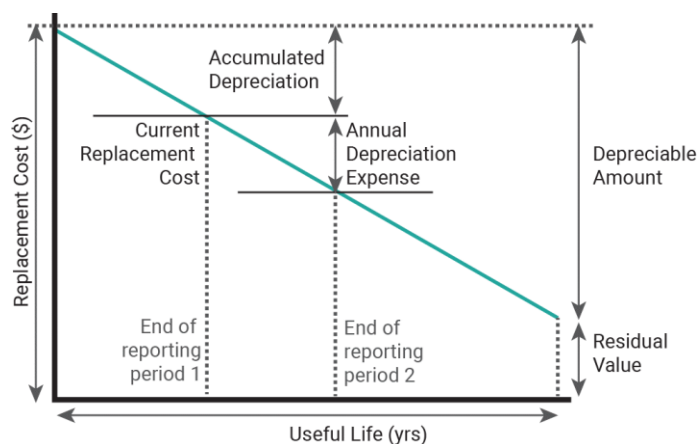


Figure 7.2.1: Valuation Terminology

Replacement Cost (Gross)	\$15,292,122
Depreciable Amount	\$15,292,122
Current Replacement Cost ¹³	\$9,339,300
Depreciation	\$284,923

Asset values are forecast to increase as additional assets are added to service.

Acquiring new assets will add to existing operations, maintenance, future renewal, and depreciation expenses.

¹³ Also reported as Written Down Value, Carrying or Net Book Value.

8.0 ASSUMPTIONS AND IMPROVEMENT PLANNING

8.1 Data and Information Sources

8.1.1 Accounting and financial data sources

This AM Plan utilises accounting and financial data sourced from **2024/2025 CWMS Asset Revaluation performed by Liquid Engineering**.

8.1.2 Asset management data sources

This AM Plan also utilises asset management data sourced from the 2024/2025 CWMS Asset Revaluation performed by Liquid Engineering, Councils Asset Management System and codes of best practice.

8.2 Key Assumptions

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the forecasts.

Key assumptions made in this AM Plan are:

- Some conditions are based on best practice life expectancies and history of asset failure due to physical inability to inspect directly
- Some values based on latest Rawlinson's guide as Council data could not be developed due to extended timeframe since last construction
- It is assumed that no Assets will be disposed of in the planning period and no significant legislative change
- Some age data has been updated with knowledge from existing staff due to Asset Data corruption in the past

Assets requiring renewal are identified from either the asset register or an alternative method.

- The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal,
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge. When doing so, the forecast remaining useful life in the asset register should be adjusted where necessary.

The Alternate Method was used to forecast the renewal lifecycle costs for this AM Plan.

8.3 Forecast Reliability and Confidence

The forecast demands, costs, planned budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date. Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual.¹⁴

¹⁴ IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Table 8.3.1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate $\pm 2\%$
B. High	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate $\pm 10\%$
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated $\pm 25\%$
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy $\pm 40\%$
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 8.3.2.

Table 8.3.2: Data Confidence Assessment for Data used in AM Plan

Data	Confidence Assessment	Comment
Demand drivers	B	Drivers were determined during workshops held with key staff during development of previous AM Plan.
Growth projections	C	Projections based on ABS Data.
Acquisition forecast	C	Projections based on Historic Data
Operation forecast	B	Expenditure has been taken directly from Councils financial system.
Maintenance forecast	B	Expenditure has been taken directly from Councils financial system.
Renewal forecast - Asset values	A	Supplied by external HDS and signed off by Audit Committee
- Asset useful lives	A	Developed over last decade by DCG Staff, audited and signed off by multiple Engineering firms and signed off by Audit Committee
- Condition modelling	A	Supplied by external Liquid Engineering and signed off by Audit Committee
Disposal forecast	A	No planned disposals

The estimated confidence level for and reliability of data used in this AM Plan is considered to be Confidence Grade B High.

8.4 Improvement Plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AM Plan is shown in Table 8.4.

Table 8.4: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
Completed and Ongoing				
1	Develop risk management plan.	MOD/WM	None	Framework Completed
2	Review desludging program to ensure over-service is not occurring.	EHM	None	Completed
3	Investigate options to allow for differentiation of maintenance expenditure as planned and unplanned.	WM/AMC2	None	Completed
4	Monitor ongoing legislative changes (ie. ESCOSA requirements).	EHM	Ongoing	Ongoing
5	Undertake an annual assessment of all CWMS Schemes and review of charges to ensure future sustainability of the Schemes.	DCEO/EHM	Ongoing	Ongoing
6	Continue to develop a uniform, componentised asset register for CWMS assets that satisfies Australian Accounting Standards and Works Department operational requirements.	AMC	Ongoing	Ongoing
7	Council's Works Department to review its current processes and continue to develop a ranking matrix to assist in determining a priority list for capital works across all asset classes.	WM/AMC2	Ongoing	Ongoing
Current and Outstanding				
8	Implement inspection program and review maintenance practices to ensure alignment with service level requirements.	WM/AMC2	Within existing budget	December 2018
9	Investigate properties in Port MacDonnell and Tarpeena for non-compliant connections and follow protocol to bring connections up to compliance.	DES/EHM	Within existing budget	June 2019
10	Conduct community research into desired levels of service for community used assets.	WM/DES	To be budgeted going forward	Not Currently Scheduled
11				
12				
13				
14				
15				

8.5 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

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

8.6 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan,
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 110%).

9.0 REFERENCES

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- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- District Council of Grant Strategic Plan 2024 – 2034
- Annual Business Plan and Budget

10.0 APPENDICES

Appendix A Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source

No Acquisitions could be included as part of the Asset Management Plan as no new Assets have been planned that are not subject to external funding be achieved currently.

Whilst this is the case, possible new acquisitions are the augmentation of the Port MacDonnell CWMS with a separate pipeline running from the eastern pump stations to Pump Station 9 to give the additional pumping capacity to allow for growth. This has had external cost estimation my HDS to cost \$1.2 Million dollars.

Council is currently investigating the cost and feasibility of the addition of the Glenelg River Shacks to the Donovans CWMS with the detail design being funded by LGASA. Once completed, it will allow for quantity surveyors to cost the project and feasibility to be accessed prior to seeking of grant funding. Very early estimates are being referenced at >\$2 Million.

Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source

Operation Forecast is based on the assumption of the continuation of funding as per the existing budget. Operation Figure made up of Asset Management Budget and staff overhead for planning.

B.2 – Operation Forecast Summary

Table B2 - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2025	\$250,000	\$0	\$250,000
2026	\$250,000	\$0	\$250,000
2027	\$250,000	\$0	\$250,000
2028	\$250,000	\$0	\$250,000
2029	\$250,000	\$0	\$250,000
2030	\$250,000	\$0	\$250,000
2031	\$250,000	\$0	\$250,000
2032	\$250,000	\$0	\$250,000
2033	\$250,000	\$0	\$250,000
2034	\$250,000	\$0	\$250,000
2035	\$250,000	\$0	\$250,000
2036	\$250,000	\$0	\$250,000
2037	\$250,000	\$0	\$250,000
2038	\$250,000	\$0	\$250,000
2039	\$250,000	\$0	\$250,000
2040	\$250,000	\$0	\$250,000
2041	\$250,000	\$0	\$250,000
2042	\$250,000	\$0	\$250,000
2043	\$250,000	\$0	\$250,000
2044	\$250,000	\$0	\$250,000

Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source

Calculations are based on current budget figures, planned capital renewal projects and existing costs to maintain the asset base calculated out to maintain the forecast new assets.

C.2 – Maintenance Forecast Summary

Table C2 - Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2025	\$206,180	\$0	\$206,180
2026	\$206,180	\$0	\$206,180
2027	\$206,180	\$0	\$206,180
2028	\$206,180	\$0	\$206,180
2029	\$206,180	\$0	\$206,180
2030	\$206,180	\$0	\$206,180
2031	\$206,180	\$0	\$206,180
2032	\$206,180	\$0	\$206,180
2033	\$206,180	\$0	\$206,180
2034	\$206,180	\$0	\$206,180
2035	\$206,180	\$0	\$206,180
2036	\$206,180	\$0	\$206,180
2037	\$206,180	\$0	\$206,180
2038	\$206,180	\$0	\$206,180
2039	\$206,180	\$0	\$206,180
2040	\$206,180	\$0	\$206,180
2041	\$206,180	\$0	\$206,180
2042	\$206,180	\$0	\$206,180
2043	\$206,180	\$0	\$206,180
2044	\$206,180	\$0	\$206,180

C.3 – Maintenance Response Levels

Table C3 – Maintenance Response Levels

Activity	Intervention Level	Response Times				
		Hierarchy	Inspection	Make Safe	Completion	Perf Target
Flow Switch Replacement	Flow Switch Fault	All	24 hours	24 hours	24 hours	90%
Pressure Switch Replacement	Failure on Weekly Test	All	24 hours	24 hours	24 hours	90%
Pressure Release Filter Replacement	Failure on Monthly Test	All	24 hours	24 hours	24 hours	80%
Pressure Gauge Replacement	Pressure Gauge Failure	All	24 hours	24 hours	1 week	80%
Pressure Transducer Replacement	Pressure Transducer Failure	All	24 hours	24 hours	1 week	80%
Non Return Valve Replacement	Non Return Valve Failure	All	24 hours	24 hours	1 week	80%
Pump Repair	Pump Fault	Single Service	24 hours	24 hours	2 days	80%
		Redundant Services	48 hours	48 hours	1 week	80%
Battery Replacement	Low Voltage Alarm / Weekly Testing	All	24 hours	24 hours	24 hours	90%
Siphon Control Valve Repair	Failure on Weekly Test	All	2 hours	2 hours	2 hours	80%
Aeration Unit Repair	Tolerance on Weekly Test	All	24 hours	24 hours	1 week	80%
Air Valve Repair Pressure Mains	Failure on Weekly Test	All	24 hours	24 hours	2 weeks	80%
Microbe Level Regulation	Quarterly Test Results	All	24 hours	24 hours	1 week	80%
Lagoon Water Removal	Tolerance on Weekly Test	All	24 hours	24 hours	1 week	80%
Fencing Repair	On Report of Damage or Inspection	All	24 hours	24 hours	24 hours	80%
Sludge Removal	Tolerance on Weekly Check	All	24 hours	24 hours	1 week	80%
Filter Cleaning	Tolerance on Weekly Test	All	24 hours	24 hours	1 week	80%
Filter Backwash Repair	Tolerance on Weekly Test	All	24 hours	24 hours	1 week	80%
Cleaning of Level Sensors	Tolerance on Weekly Check	All	24 hours	24 hours	24 hours	80%
Flushing of Gravity Main	Tolerance on Inspection	All	24 hours	24 hours	1 week	80%
Repair to Leaking Pressure Pipes	Routine Weekly Inspection	All	24 hours	24 hours	1 week	80%
Replacement of Beacon Globe	Routine Weekly Inspection	All	24 hours	24 hours	1 week	80%
Gate Valve Repair	Routine Quarterly Inspection	All	24 hours	24 hours	2 weeks	80%
Alarm Repair	Routine Weekly Inspection	All	24 hours	24 hours	24 hours	90%

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

Renewal Forecast was developed calculated on asset base multiplied by replacement cost then divided by useful life. This series of calculation per asset type and built standard was then combined to give the Renewal Forecast based on existing unit rates. Variance in this may be driven by various factors including but not limited to intervention levels, changes in construction standards, new technology and innovation, material quality and weather conditions.

D.2 – Renewal Project Summary

Current Renewal Project Summary can be found in current budget on Council's [website](#)

D.3 – Renewal Forecast Summary

Table D3 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2025	\$122,000	\$162,192
2026	\$122,000	\$112,192
2027	\$122,000	\$112,192
2028	\$122,000	\$112,192
2029	\$122,000	\$112,192
2030	\$122,000	\$112,192
2031	\$122,000	\$112,192
2032	\$122,000	\$112,192
2033	\$122,000	\$112,192
2034	\$122,000	\$112,192
2035	\$122,000	\$112,192
2036	\$122,000	\$112,192
2037	\$122,000	\$112,192
2038	\$122,000	\$112,192
2039	\$122,000	\$112,192
2040	\$122,000	\$112,192
2041	\$122,000	\$112,192
2042	\$122,000	\$112,192
2043	\$122,000	\$112,192
2044	\$122,000	\$112,192

Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source

No Disposals are Forecast for the duration of this Asset Management Plan

Appendix F Budget Summary by Lifecycle Activity

Operation, Maintenance, Renewal figures based on current year figures. 2024 Acquisition figure based on current budget, future figure based on PC sum for New / Upgrade Assets based on previous budget inclusion but has not had any Grant Funding applied due to inability to predict funding success or opportunities going forward.

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition	Operation	Maintenance	Renewal	Disposal	Total
2025	\$0	\$250,000	\$206,180	\$162,192	\$0	\$618,372
2026	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2027	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2028	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2029	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2030	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2031	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2032	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2033	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2034	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2035	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2036	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2037	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2038	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2039	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2040	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2041	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2042	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2043	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372
2044	\$0	\$250,000	\$206,180	\$112,192	\$0	\$568,372