



Cootamundra-Gundagai
Regional Council

Asset Management Plan – Sewer

May 2025



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GUNDAGAI REGIONAL
COUNCIL



Cootamundra-Gundagai Regional Council

Asset Management Plan - Sewer

May 2025

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Version Control Protocol:

1. Primary number changes to Versions (e.g. V1.00 to V2.00) apply when the document undergoes its regular review and/or when significant changes are made.
2. Secondary number changes to Versions (e.g. V1.00 to V1.01) apply to minor amendments that do not materially impact the documents and are intended only to clarify or update issues.





Abbreviations

ABS	Australian Bureau of Statistics
AMP	Asset Management Plan
AMS	Asset Management System
AO	Audit Office of New South Wales
CAPEX	Capital Investment Expenditure
CRC	Current replacement cost
CSS	Customer Service Standard
DA	Depreciable amount
EP	Equivalent Persons
FWP	Forward Works Plan
CGRC	Cootamundra – Gundagai Regional Council
GIS	Geographic Information System
IRI	International Roughness Index
IRMP	Infrastructure risk management plan
KIM	Knowledge Information Mapping
KPI	Key Performance Indicator
LCE	Life Cycle Expenditure
LCC	Life Cycle Cost
LGIP	Local Government Infrastructure Plan
LoF	Likelihood of failure
LOS	Levels of Service
MMS	Maintenance management system
TCorp	New South Wales Treasury Corporation
RACAS	Road Asset Condition Assessment System
RUL	Remaining Useful Life
RV	Residual value
SL	Service Level



Executive Summary

1.1 The Purpose of the Plan

This Asset Management Plan (AM Plan) details information about infrastructure assets with actions required to provide an agreed level of service in the most cost-effective manner while outlining associated risks.

The plan defines the services to be provided, how the services are provided and what funds are required to provide over the 10 year planning period. The AM Plan will link to a Long-Term Financial Plan which typically considers a 10 year planning period.

Sewer assets provide a critical service to the community by facilitating safe access to properties and businesses throughout the region.

1.2 Asset Description

This plan covers the assets that provide Sewer Infrastructure including:-

Table 1 - Asset Classes

Waste Water Asset Classes			
Treatment Plants	Gravity Mains	Pump Stations	Rising Mains

The above infrastructure assets have replacement value estimated at \$43M as off the last comprehensive valuation.

1.3 Levels of Service

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

1.4 Future Demand

The factors influencing future demand and the impacts they have on service delivery. These demands will be approached using a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand. Demand management practices may also include a combination of non-asset solutions, insuring against risks and managing failures.

1.5 Lifecycle Management Plan

1.5.1 What does it Cost?

The forecast lifecycle costs necessary to provide the services covered by this AM Plan includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the AM Plan may be prepared for a range of time periods, it typically informs a Long-Term Financial Planning period of 10 years. Therefore, a summary output from the AM Plan is the forecast of 10 year total outlays, which for the Sewer Assets is estimated as \$3.6M on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is \$6.6M or \$660K on average per year as per the Long-Term Financial plan or Planned Budget.

The infrastructure reality is that only what is funded in the long-term financial plan can be provided. The Informed decision making depends on the AM Plan emphasising the consequences of Planned Budgets on the service levels provided and risks.

The anticipated Planned Budget for the Wastewater Asset Class leaves an overspend of \$400k on average per year of the forecast lifecycle costs required to provide services in the AM Plan compared with the Planned Budget currently included in the Long-Term Financial Plan. This is shown in the figure below.

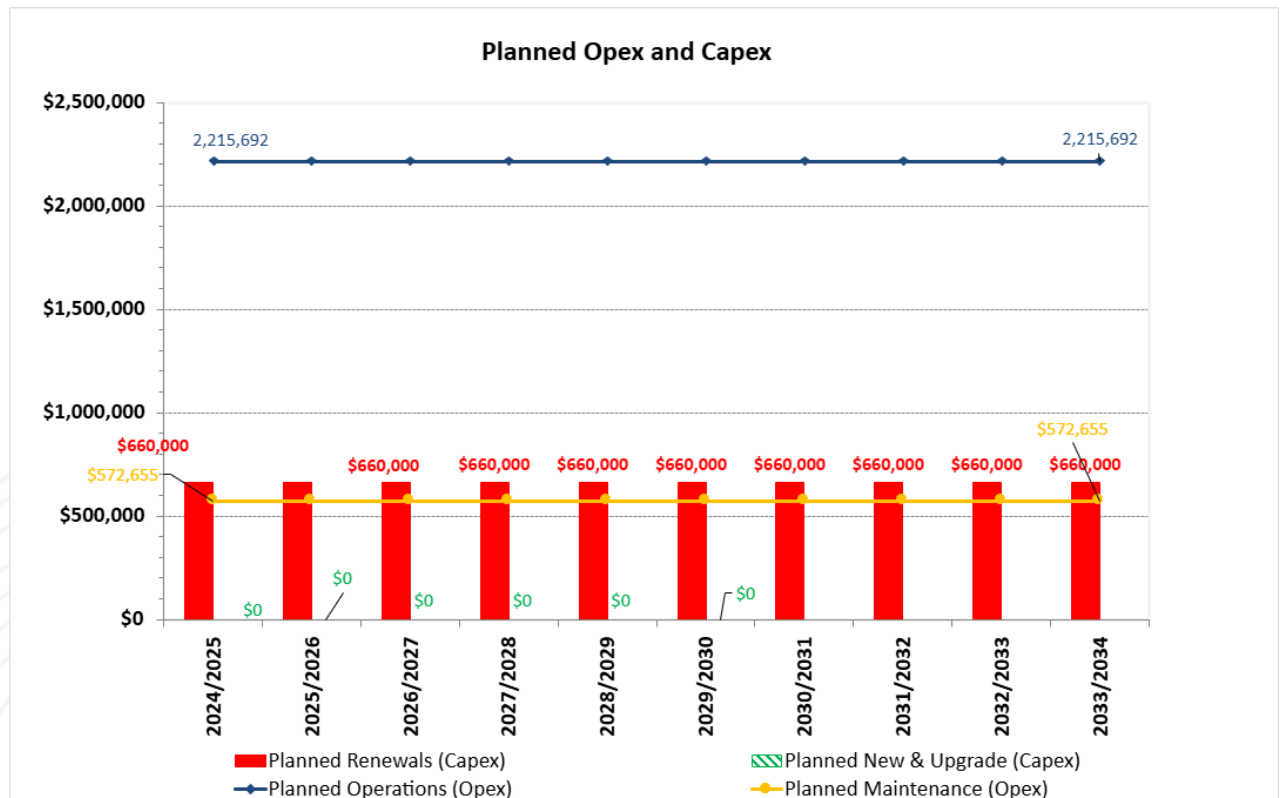


Figure 1 -Lifecycle Summary Graph (Current Dollars)



We plan to provide Sewer services for the following:

- Operation, maintenance, renewal and acquisition of Sewer Assets to meet service levels set by CGRC in annual budgets.

1.7 Asset Management Planning Practices

Key assumptions made in this AM Plan are:

- Current historic expenditure will cover the technical levels of service
- Remaining useful life in the financial exports depicts the forecast renewals

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.

The remaining useful life was used to forecast the renewal lifecycle costs for this AM Plan.

This AM Plan is based on a Reliable level of confidence information. Score of B.

1.8 Monitoring and Improvement Program

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

Table 2 - Monitoring and Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Organisational decision and communication of 'one place of truth' for asset data storage and management.	Deputy General Manager - Operations	All Council staff	
2	Updated condition data to drive future works renewal program. Utilisation asset condition to verify the renewals required to develop works program development	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	Ongoing Budget timeframes (March each year)
3	Continued focus on the development of a comprehensive GIS system (and documented	Deputy General Manager -	Both Team Leads - Engineering	1/7/2026



Task	Task	Responsibility	Resources Required	Timeline
	business processes and training of the system) of Sewer assets should be a priority, across both operational bases of the Council (Cootamundra and Gundagai Offices). Checks on data accuracy to be undertaken in parallel. This is to include asset attributes, such as location, asset attributes and condition score. This data is to be collated through - Undertaking inspections of each building, park and waste asset category, including roads, culverts and road delineation/signage. - Complete analysis of map data and audit asset date. - Ensure all infrastructure is captured and added into the GIS, when new assets are found or added into the building, park and waste asset class. <u>Note:</u> Each asset is to be aligned to an operational base within the GIS asset attributes, to allow GIS data to be easily split, and broken into separate GIS data sets, should 'deamalgamation' processes be activated.	Operations	Cootamundra and Engineering Gundagai	
4	System to manage and collate data which captures completed works (including documented workflows, and As-Con/Asset Team/Finance Team completion process). Clarification of financial and non-financial asset process(based on thresholds).	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	1/7/2026
5	Defining ownership of various asset types (including clarification of budget allocations for each	Deputy General Manager -	Both Team Leads - Engineering	31/12/2026





Task	Task	Responsibility	Resources Required	Timeline
	asset types).	Operations	Cootamundra and Engineering Gundagai	
6	Clarification of each asset type including financial and non-financial assets with their inclusion into the Enterprise system.		Both Team Leads - Engineering Cootamundra and Engineering Gundagai	31/12/2026
7	Inspection system (condition) based on 3-year valuation process.	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	Ongoing
8	Creation of specific Site Based Management Plans for each sewerage treatment plant. Utilise these management plans to further develop site maintenance and rehabilitation in alignment with this overarching AMP document.	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	30/6/2026
9	Creation of documented maintenance/servicing programs for asset/services associated with treatment plant operations, with yearly review periods for KPIs.	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	30/9/2025
11	Consistent work processes and procedures is key across both offices of the CGRC, especially in the event de-merging does not occur. The support of change management processes throughout the Council operations is warranted to ensure the amalgamated Council operates	Deputy General Manager - Operations	All Council staff	1/8/2025





Task	Task	Responsibility	Resources Required	Timeline
	across the two distinct operational bases to obtain operational benefits through sharing information, knowledge and experience to further develop asset management culture within the organisation. The use of a Change Management support organisation should be considered, to support this activity across Councils organisational operational base.			
12	Commencement of project to investigate alternative treatment options for sewerage treatment plant (principally the drying/disposal processes). This project team needs to develop the planning Business Case to investigate treatment options, with follow-on rollout for design and construction to occur in preceeding years. This project funding to be clearly shown within Councils budget to ensure visibility to external government agencies of proposed development timeframe.	Deputy General Manager - Operations	All Council staff	30/6/2026
13	Create an in-depth replacement program identifying which assets are being replaced, when they are being replaced and their replacement value - this will strength the linkage between asset management and the long term financial plan by improving the planning process.	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	30/9/2026
14	Document emergency management plan for access arrangements to the Gundagai Treatment Plant, which has limited access to the site during flooding events. Documented agreement	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering	30/8/2025





Task	Task	Responsibility	Resources Required	Timeline
	to be obtained in regards to support offered by community/emergency services to support access to the site via boat. This plan to include risk assessments, and any corresponding training arrangements required in regards to this process.		Gundagai	





BACKGROUND

2.1 Purpose of the Plan

The purpose of this AMP is to assist Council in two (2) principal ways. The first purpose is to document asset management information in regards to Council's Sewer assets. The second purpose, which is unique to Cootamundra Gundagai Regional Council, is that this AMP will be utilised to support Council navigation through any potential 'de-malgamation' process, should it be approved.

The purpose of this AMP is to assist Council in:

- Documenting its current management approach of Sewer assets;
- Demonstrating responsible management;
- Understanding and managing significant risks;
- Identifying opportunities to improve the management of Sewer assets; and
- Identifying opportunities to support the separation of Sewer assets in the event of initiation of potential de-amalgamation activities.

This AMP plan documents asset management planning information for the Sewer assets for the Council. This includes a review of strategic trends facing the Council and potential impacts on the asset stock, asset condition and performance against key indicators, long term financial forecasts risk register and an improvement plan for managing the assets. Financial implications for providing the required levels of service into the future are also provided based on the associated separate spreadsheet model for the AMP.

The potential benefits are:

- Enables Council to satisfy more community needs at less cost allowing the resources saved to be deployed to provide more services;
- Enables Council to know where to spend funds to get the most bang for their buck;
- Protects Council from industry regulators, Audit Office (AO) etc.;
- Protects Council against potential litigation;
- Documented asset management processes make it easier for existing and new staff;
- Enables Council to avoid waste and the associated unfavorable publicity; and
- Financial Sustainability.



2.2 Council's Vision, Aims, Outcomes and Strategies

Councils' Community Strategic Plan (2022-32) includes a number of strategic objectives, which link to Councils AMP documents. These include are:

A Protected and Enhanced Environment

- Ensuring new developments minimise impacts on water catchments, including downstream and groundwater sources
- Investigate and implement sustainable water and waste strategies as outlined in CGRC Local Strategic Planning Statement

The key vision for Council to work towards meeting these strategies are:

- Providing a defined level of service and monitoring performance (as amended from time to time),
- Linking to a Long-Term Financial Plan (including renewal, maintenance and operational funding) which identifies required, affordable forecast costs and how it will be allocated.
- Taking a life cycle approach;
- Developing cost-effective management strategies for the long term;
- Identifying, assessing and appropriately controlling risks,
- Review our services to ensure they meet our customer needs within the financial constraints of Council;
- Sustainable use of physical resources; and
- Continuous improvement in asset management practices.

Key elements of the planning framework are

- Levels of service – specifies the services and levels of service to be provided,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Risk Management – how to manage these risks, and
- Asset management improvement plan – how we increase asset management maturity across the organization.

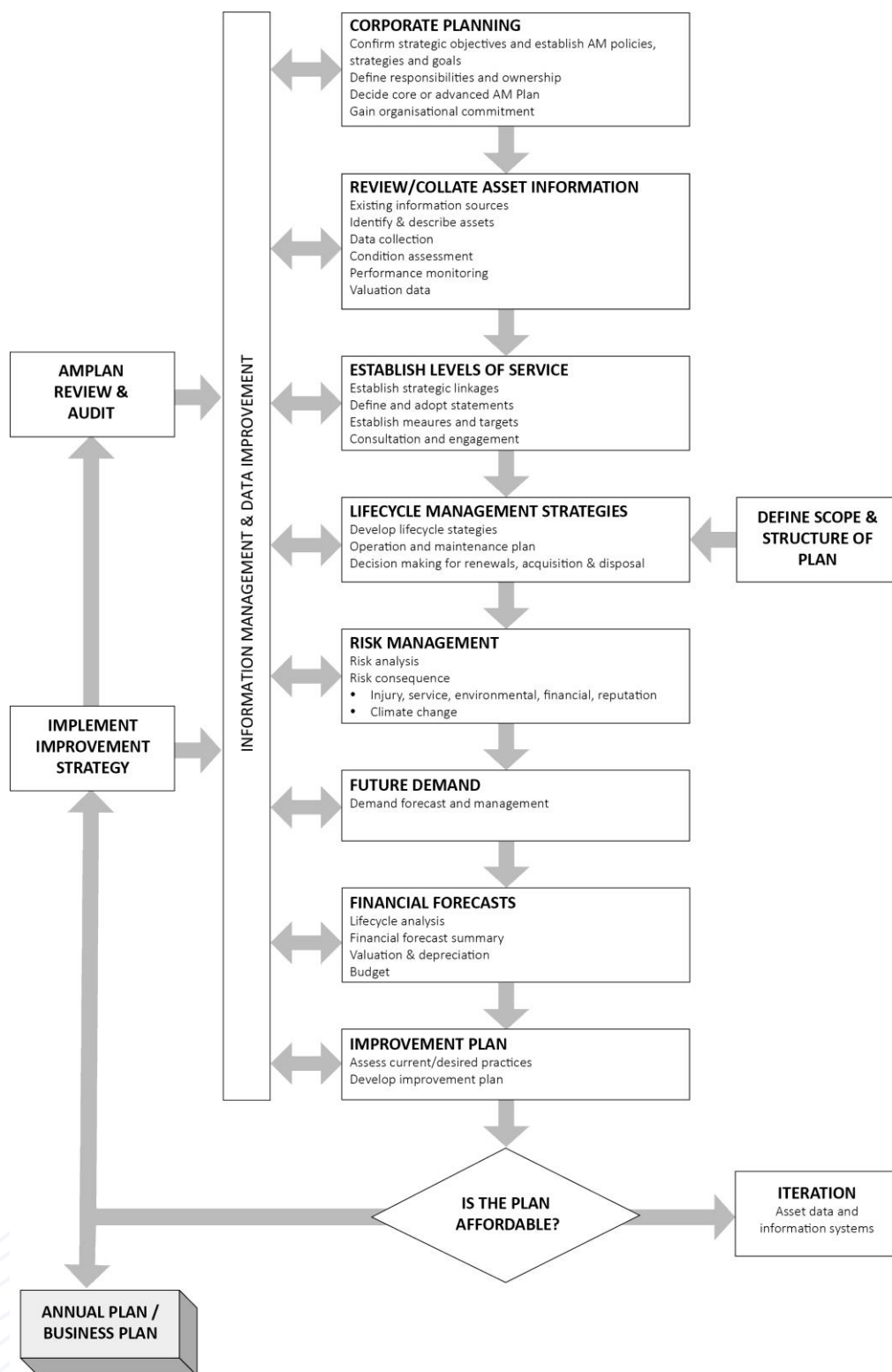


Figure 2 - Road Map for preparing an Asset Management Plan (IPWEA, 2006)

2.3 Key Stakeholders

Good asset management requires the alignment of resources with all people understanding the objectives and then playing their respective roles in the management of assets and the delivery of services to the community. Table 1.c outlines the roles and responsibilities for asset management within HSC.

Table 3 - Key Stakeholders and Roles

Role	Who	Responsibilities
Strategic Direction	Councillors	• Represent needs of community and service level expectations; • Endorsement of the asset management policy; • Ensure Council is financially sustainable; and • Approval of allocation of resources.
Operational Decision Making	Executive Management Team	• Overall responsibility for developing an asset management policy, plans and procedures and reporting on the status and effectiveness of asset management within Council; • Allocate resources to meet the organisation's objectives in providing services while managing risks; • Ensuring Council is financially sustainable. • Provision of sound organisation structure • Lead the organisations culture • Managing risks in accordance with adopted appetite • Manage Statutory Requirements • Develop and Administer Policies • Provide Service Strategy • Asset management objectives
Strategic Alignment/ Organisational	Asset Management Working Group	• Custodian of the corporate asset register and ensuring the asset valuations are accurate;



Role	Who	Responsibilities
Alignment		• Preparation of asset sustainability and financial reports incorporating asset depreciation in compliance with current Australian accounting standards; • Asset Management System development and administration; • Develop 10-Year Capital Works Plans and budgeting; • Ensure funds are invested appropriately to ensure best value for money is delivered to the community; and • Develop the maintenance standards deployed and Council's ability to meet technical and community levels of service. • Championing promotion of adequate resourcing for asset management • Whole of Council asset performance monitoring • Demonstrate whole of organisation support for sustainable asset management • Wider accountability for achieving and reviewing sustainable asset management practices • Encourage buy-in and responsibility; • Coordinate strategic planning, information technology and asset management activities • Promote uniform and fit for purpose asset management practices across the organisation • Information sharing across IT hardware and software • Pooling of corporate expertise • Championing of asset management improvement initiatives





Role	Who	Responsibilities
Tactical / Operational	Asset Custodians Maintenance Managers Service Managers	• Service delivery • Asset data capture • Operational risk management • Alignment of service levels to budgets • Asset Management Plan Development • Development of renewal and upgrade plans • Asset specific condition monitoring • Asset and resource optimisation • Asset Maintenance and Operations • Identification of asset disposal opportunities • Identification of service efficiency opportunities
Tactical / Operational	Staff	• Verify the size, location, and condition of assets; • Provide local knowledge detail on all infrastructure assets; • Capital Works, Operation and Maintenance management to meet agreed levels of service; and • Liaison internally with the Senior Management Team regarding asset prioritisation and planning.
	Community (residents, businesses, property owners)	• End users of services provided by assets; • Aware of service levels and costs; • Participate in consultation processes; and • Provide feedback on services.
	Consultants	• Engineering expertise input.
	Utility Service Providers	• Interaction in service delivery.





Role	Who	Responsibilities
	State and Federal Government	• Provision of various grants and subsidies; • Provide Leadership in promoting Best Practice Asset Management; • Facilitate Training and Education; • Recognising the importance of LG Assets to community and provide funding; and • Other assistance to sustain.

2.4 Legislative Requirements

The management of assets is often driven by complex legislative arrangements. Table 1.d provides a list of Legislation that is relevant to the Sewer asset class.

Table 4 - Legislation and Requirements

Legislation	Requirement
Local Government Act	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, , the acquisition and disposal of assets and requirements for corporate and operational plans. The Local Government (Finance, Plans and Reporting) Regulation is subordinate legislation.
Roads Act 1997	To provide public access to Roads, to classify Roads, to act as the local road authority, to carry out certain functions e.g. road works and to regulate activities on public Roads.
Work Health and Safety Act & Regulation 2011	This Act is directed at eliminating the human cost to individuals, families and the community of death, injury and damage/ destruction of property that can be caused by electricity. It sets out roles and responsibilities to secure the health, safety, and welfare of persons at work.
The Australian Accounting Standards	The Australian Accounting Standards consisting of AASB13, AASB 16, AASB116 define the financial accounting requirements related to assets. The Australian Accounting Standards Section 27 (AAS27) requires that assets be valued, and reported in the annual accounts, which also includes depreciation value (i.e. how fast are these assets wearing out).
Environmental Planning	Sets out guidelines for land use planning and promotes





and Assessment Act 1979	sharing of responsibilities between various levels of government in the state.
Environmental Planning and Assessment Amendment Act 2008	Sets out guidelines for land use planning and promotes sharing of responsibilities between various levels of government in the state.
Protection of the Environment Operations Act 1997	Sets out Council responsibility and powers of local area environment and its planning functions.
Civil Liability Act 2002	To manage negligence, elements of a claim, duty of care, standard of care and causation and to address the requirements of sections 42 and 45.

Overarching Organisation Structure (as of 30 June 2024) is shown below:-

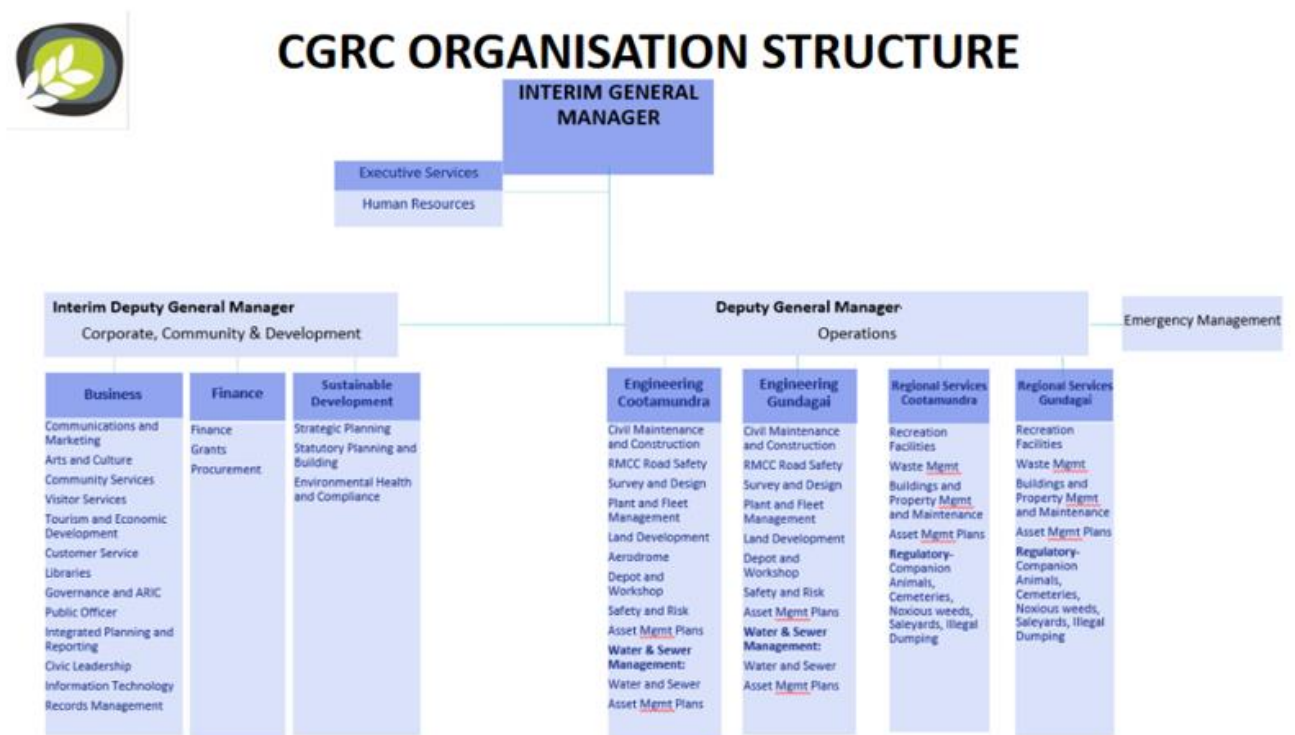


Figure 3 - Overarching Organisation Structure (as of 30 June 2024)

The council itself is currently involved within a review of its overarching body. The outcome of this review may see the council remain as a combined (amalgamated) organisation, or it may see the council be de-amalgamated into its separate components. At the time of production of this AMP document, the outcome of this review is not known. Therefore, this document has been written with both options in mind. Therefore in certain parts of this document, additional NOTE: comments have been made, which need to be considered for each eventual outcome.





From an asset management perspective, the importance of data management and clear delineation of asset ownership is underlined. In the event, de-amalgation occurs, it is imperative that the necessary slip of asset ownership is undertaken cleanly. This could be supported prior to the review being completed, through ensuring asset data systems have a link to asset ownership during the collection/management phase.





ASSET DESCRIPTION

The Council owns and maintains Sewer assets across the Cootamundra-Gundagai Regional Council area.

3.1 Physical Parameters

The infrastructure assets covered by this AM Plan include:

Table 5 - Asset Class

Waste Water Asset Classes			
Treatment Plants	Gravity Mains	Pump Stations	Rising Mains

The criticality rating will identify different intervention levels for different assets depending on their assessed criticality and consequence rating, in accordance with the following:

Table 6 - Asset Criticality Guide

Criticality Guide	Sewer
AA	Rising mains 150mm and 200mm
A	Rising mains 100mm
A	Gravity mains 225mm and 300mm
B	Rising mains 50mm and 80mm
B	Gravity mains 100mm and 150mm
C	Water mains – effluent recycling



3.2 Asset Valuations

Asset valuations for the Sewer class were completed in 2023 with data loaded into Authority. Table 2b details the value of assets in the Sewer class based on the asset revaluation for all assets

Table 7 - Asset Valuations by Asset Type

Asset Type	Replacement Cost	Written Down Value
Dam	\$1,170,000	\$1,045,200
Pipework	\$201,066	\$201,066
Pipework - Liner	\$25,768,055	\$11,590,213
Sewage Pump Station	\$4,222,804	\$2,172,995
Sewer Treatment Plant	\$14,832,714	\$10,258,202
Grand Total	\$60,220,784	\$33,829,119

3.3 Asset Registers

Council's asset register is maintained in 'Authority' which is Council's primary ERP (Enterprise Resource Planning) system. This system offers advanced capabilities when it is well configured and data is regularly maintained. There are considerable benefits when data in 'Authority' and Council's GIS (geographic information system) are linked, and the linkages are well maintained. In addition, having a single point of truth and linking operational information from field teams to assets also offers benefits if the data is maintained.

Improving organisational understanding of data management, maintenance and reporting principles will help progressively improve the data quality in the asset register. Improving other operational registers in a way that aligns with the GIS and 'Authority' would also assist in improved reporting capabilities and management of assets.

3.4 Asset Useful Life & Condition

Asset lives for Sewer assets in Council's asset register vary from 1 to 99 years. Council's 2024 asset revaluation had useful life ranges from 7 to 180 years (as detailed within Council's asset data). Use of the Useful Life, Remaining Useful Life and Expiry Date fields within Authority requires review to improve consistency and reporting.

A single point of truth needs to be adopted and all other data that could be misinterpreted should be archived and removed from the GIS and Authority. The table below provides details of useful lives from the 2024 asset revaluation.

Table 8 - Useful Life by Asset Type Based on 2024 Asset Revaluation

Asset Type	Average Useful Life
Reticulation-Pipework	78.2
Reticulation-Pipework - Liner	62.3
Reticulation-Trench - Conduit	162.3
Rising Mains-Pipework - Liner	80.0



Asset Type	Average Useful Life
Rising Mains-Trench - Conduit	180.0

3.5 Condition Profile

Condition data for Sewer assets are shown in the below figure where condition:

- 1 = Brand New,
- 2 = Excellent Good,
- 3 =Very Good,
- 4= Good Overall,
- 5 = Fair Overall,
- 6 = fair to poor,
- 7 = Poor Overall,
- 8 = Very Poor Overall,
- 9 = Extremely poor condition,
- 10 = Failed Assets.

Data comes from Council's 2024 asset revaluation for all assets. Assets that shown as NA are assets which do not deteriorate, primarily formation assets. Assets that are shown as blank are mostly Sewer assets that have no record of previous condition assessment.

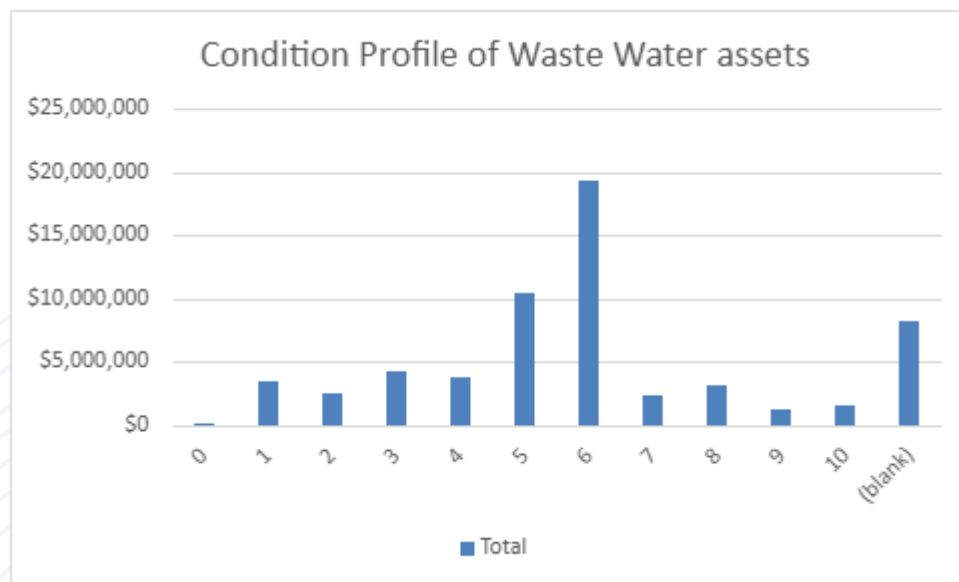


Figure 4 - Asset Condition Profile

LEVELS OF SERVICE

4.1 Background

One of the basic tenets of good asset management practice is to provide the level of service the current and future community want and are prepared to pay for, in the most cost effective way.

Community Levels of Service

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 commonly used in the asset management planning are:

- **Quality** How good is the service?
- **Function** Does it meet users' needs?
- **Safety** Is the service safe?

Table 9 – Community Levels of Service

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Efficient disposal of wastewater.	Customer service requests relating to blockages and breaks.	Satisfactory	90% maintenance request
	Free from objectionable odours.	Complaints relating to odour.		
Function	Service is continuous and reliable for use.	Customer service requests relating to breaks and blockage.	Satisfactory	Medium to High
Capacity	Effluent does not enter water sources or people's property.	Number of Council sewage overflow incidents.		

4.2 Technical Levels of Service

Technical Levels of Service support the community service levels and 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;
- **Maintenance** – the activities necessary to retain an assets as near as practicable to its original condition;
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally;
- **Upgrade** – the activities to provide a higher level of service (e.g. sealing and unsealed road or widening a sealed road) or a new service that did not exist previously (e.g. adding a road onto Council’s maintained road network);

Table 10 - Technical Level of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance**
TECHNICAL LEVELS OF SERVICE				
Operation	Sewerage treatment systems are operated within the conditions of Councils environment licences, and site-based management plans.	Schedule of monitoring and verification as per of Councils environment licences, and site-based management plans.	Satisfactory	High level of performance
Maintenance	Sewerage treatment plants are safe and maintained in a condition that is appropriate for use.	Reactive service requests completed within adopted time frames	Reporting system to be documented.	90% of defects and repairs complete in time
		Planned maintenance activities completed to schedule	Reporting system to be documented.	90% complete
	Sewer pump	Planned	Reporting system	



Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance**
	stations are maintained in a condition that is appropriate for use.	maintenance completed to schedule.	to be documented..	
		Unplanned maintenance completed to required timeframes.	Reporting system to be documented.	
	Sewer mains are maintained in a condition that is appropriate for use, with minimal interruptions to service.	Planned maintenance is completed in relation to schedule.	Reporting system to be documented.	
		Total sewerage main breaks and chokes	≤40 per 100km sewerage mains	2.8 per 100km of sewerage mains
Renewal	Asset are renewed within accepted risk levels.	Compliance with environment licences, and site-based management plans and in regards to customer service standards.	Planned renewal is required due to risks in relation to current treatment (drying) process being within floodplain area. Planned design and construct project to be progressed, to investigate treatment options available to Council for sewerage treatment processes.	
Upgrade	To provide any upgrades to processing and processes to reduce risks, to	Project objectives achieved.	Planned projects 100% within designed timeframes.	





Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance**
	mitigate any changes in environmental standards, and improvements in reliability.			



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 changing circumstances such as technology and customer priorities will change over time.

4.3 Sustainable Asset Base

Based on the financial position of Council ensuring that Sewer services are prioritised and provided adequate funding is essential to ensure the ongoing operation of the sewer network, sewerage pump station and sewerage treatment plant.





FUTURE DEMANDS

The Cootamundra-Gundagai Regional Council population was 11,403 in the later ABS Census Data from 2021. The current growth rate is flat (0.75%) and predicted to continue as such or decline further in future years.

It is not expected that future demand (growth) will influence this class of assets over the next 20 years. Any planned upgrades or improvements in the Sewer category will be focused on renewal of existing Sewer sites. These works will generally be funded through external grants obtained by Council.

5.1 Demand Drivers

Drivers affecting demand include things such as population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

There are no known or planned large demographical changes across the Council area that would impact on changing Sewer needs of the community. Some projects are planned (including alternative energy construction and links) but it is expected there to have minimum impacts across the Council network, as their workers would be of a short term nature, spread across the entire region.

5.2 Technological Changes

Technology changes are forecast to affect the delivery of services covered by this plan. Historically changes in technology have the effect of reducing whole-of-life costs. Changes in technology will be embraced where possible by Council, to reduce future whole of life costs.

5.3 Demand Impact 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.

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

Opportunities identified to date for demand management are shown in Table 11. Further opportunities will be developed in future revisions of this Asset Management Plan.

Table 11 - Demand Impact

Demand Driver	Current Position	Projection	Impact on Services	Demand Management Plan
Population Change	11,403 in 2021	Average growth rate of 0.75%	Small incremental increased in the usage of Sewer.	Continue to manage assets in alignment with this plan. Continue to apply for available grant funding to support rehabilitation projects across the network and upgrades the treatment plants.
Customer Values	Residents and network users are expecting a greater demonstration of value from the network, and decreased numbers of incidents.	Increasing	Increasing capital budget demand, to support upgrades to existing parks and waste facilities. If Council provides these upgrades and new assets this leads to increased whole of life costs.	Continue to apply for available grant funding to support upgrades and rehabilitation projects across the sewer network and at the treatment plant A prioritisation system to be used to develop Councils works program. This prioritization system is to be underpinned through current asset condition data and age data and planned allocated funding available for future years

WHOLE OF LIFECYCLE MANAGEMENT PLAN

6.1 Cootamundra-Gundagai Regional Council

6.1.1 Operations and Maintenance Expenditure (Opex)

Historical

3 years of historical maintenance and operations expenditure figures have been taken from Council's financial system and averaged for the purposes of financial modeling. Based on available data which has been reviewed by Council staff the figures in Table 12 represent the best available data for historical maintenance costs.

Table 12 - Historical Operations and Maintenance Costs (2022-2024)

Expenditure Type	\$
Operations	\$533,404
Maintenance	\$572,655
Total OPEX (O & M)	\$1,106,059

Future

For the purposing of this asset management plan the historical average has been used with no annual increase being applied, as well as the inclusion of additional operations and maintenance costs associated with new or upgraded assets.

6.1.2 Capital Expenditure (Capex)

Forward Works and Future Capital Program

Planned renewals total \$ 6.6M for the 10 year period based on the forward works program shown in Table 13. Projected renewals total \$ 5.4 M for the next 10-years to 2033 derived from valuations data for remaining useful lives. Thus, the average amount projected for renewals from valuations is approximately \$540,000 per year (in current dollars).



Table 13: Planned 10 years Renewals

Program/ Project	24/25	25/26	26/27	27/28	28/29	29/30	30/31	3/32	32/33	33/34	Total
Passive Assets- Main	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$3,500,000
Active Assets- Treatment Plant	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$2,000,000
Active Assets- Pump Station	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$1,000,000
Active Assets- Dam	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$100,000



6.1.3 Asset Sustainability Ratio

A financial measure of satisfactory levels of expenditure on asset replacements is the Asset Sustainability Ratio - the net capital expenditure on replacements as a percentage of the depreciation. It indicates whether the amount of replacement exceeds or is less than the amount of depreciation, that is, whether assets are being replaced at the rate they are wearing out. Although not a true reflection of the required long-term funding, depreciation does indicate the rate of consumption of assets. The New South Wales Audit Office sets a target for renewals that is equal to or greater than 90% of depreciation.

Figure 5 shows the annual sustainability ratio based on planned and projected renewals.

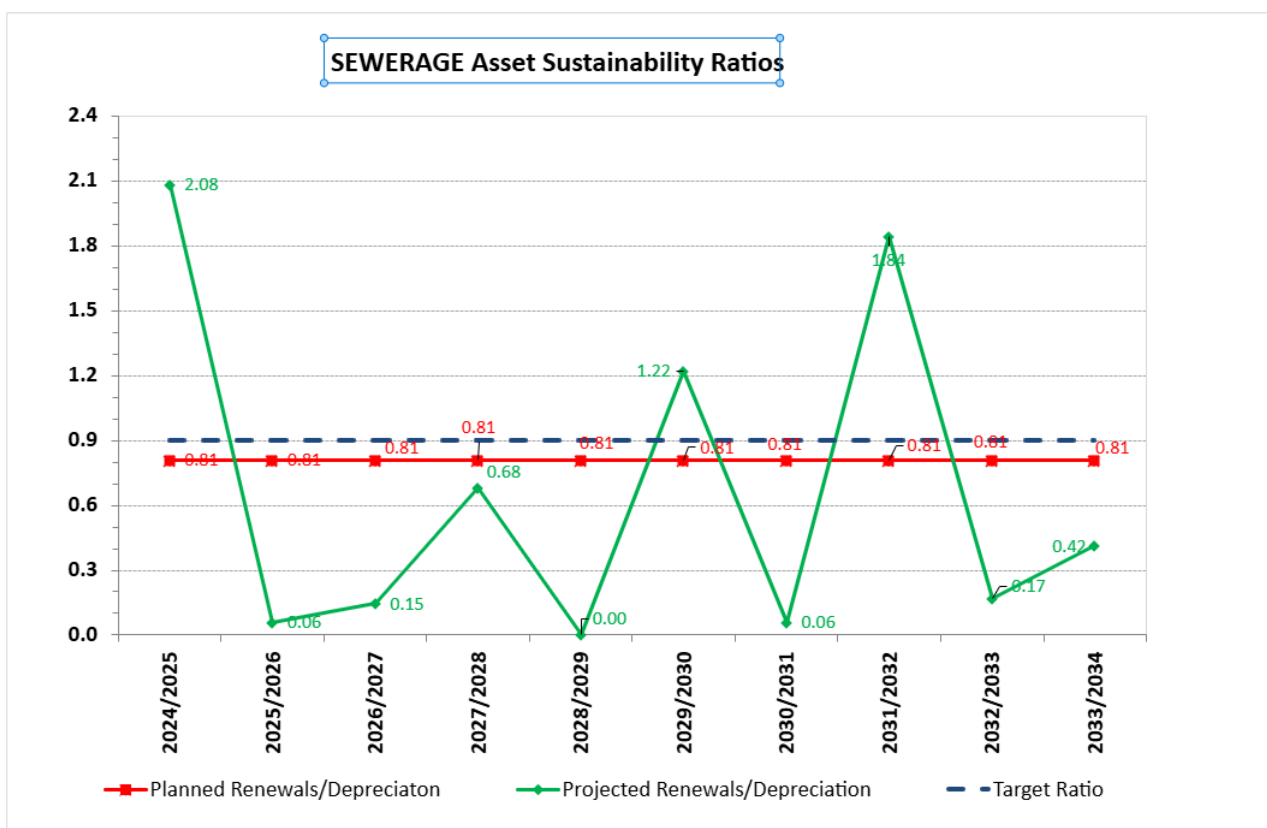


Figure 5 - Asset Sustainability Ratios

6.2 Cootamundra Component

6.2.1 Operations and Maintenance Expenditure (Opex)

Historical

3 years of historical maintenance and operations expenditure figures have been taken from Council's financial system and averaged for the purposes of financial modeling. Based on available data which has been reviewed by Council staff the figures in Table 14 represent the best available data for historical maintenance costs.

Table 14 - Historical Operations and Maintenance Costs (2022-2024)

Expenditure Type	\$
Operations	\$350,802
Maintenance	\$393,333
Total OPEX (O & M)	\$744,135

Future

For the purposing of this asset management plan the historical average has been used with no annual increase being applied, as well as the inclusion of additional operations and maintenance costs associated with new or upgraded assets.

6.2.2 Capital Expenditure (Capex)

Forward Works and Future Capital Program

Planned renewals total \$ 3.6M for the 10 year period based on the forward works program shown in Table 15. Projected renewals total \$ 3.1M for the next 10-years to 2033 derived from valuations data for remaining useful lives. Thus, the average amount projected for renewals from valuations is approximately \$310K per year (in current dollars).

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Table 15 - Planned 10 years Renewals

Program/ Project	24/25	25/26	26/27	27/28	28/29	29/30	30/31	3/32	32/33	33/34
Passive Assets- Main	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Active Assets- Treatment Plant	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Active Assets-Pump Station	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Active Assets-Dam	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000



6.2.3 Asset Sustainability Ratio

A financial measure of satisfactory levels of expenditure on asset replacements is the Asset Sustainability Ratio - the net capital expenditure on replacements as a percentage of the depreciation. It indicates whether the amount of replacement exceeds or is less than the amount of depreciation, that is, whether assets are being replaced at the rate they are wearing out. Although not a true reflection of the required long-term funding, depreciation does indicate the rate of consumption of assets. The New South Wales Audit Office sets a target for renewals that is equal to or greater than 90% of depreciation.

The current total annual depreciation is \$584K per annum. A 90% target equates to \$525K per annum. Projected renewals over the next 10 years average \$310K per year. Planned renewals average \$ 360K per year

Figure 5.c shows the annual sustainability ratio based on planned and projected renewals for Cootamundra

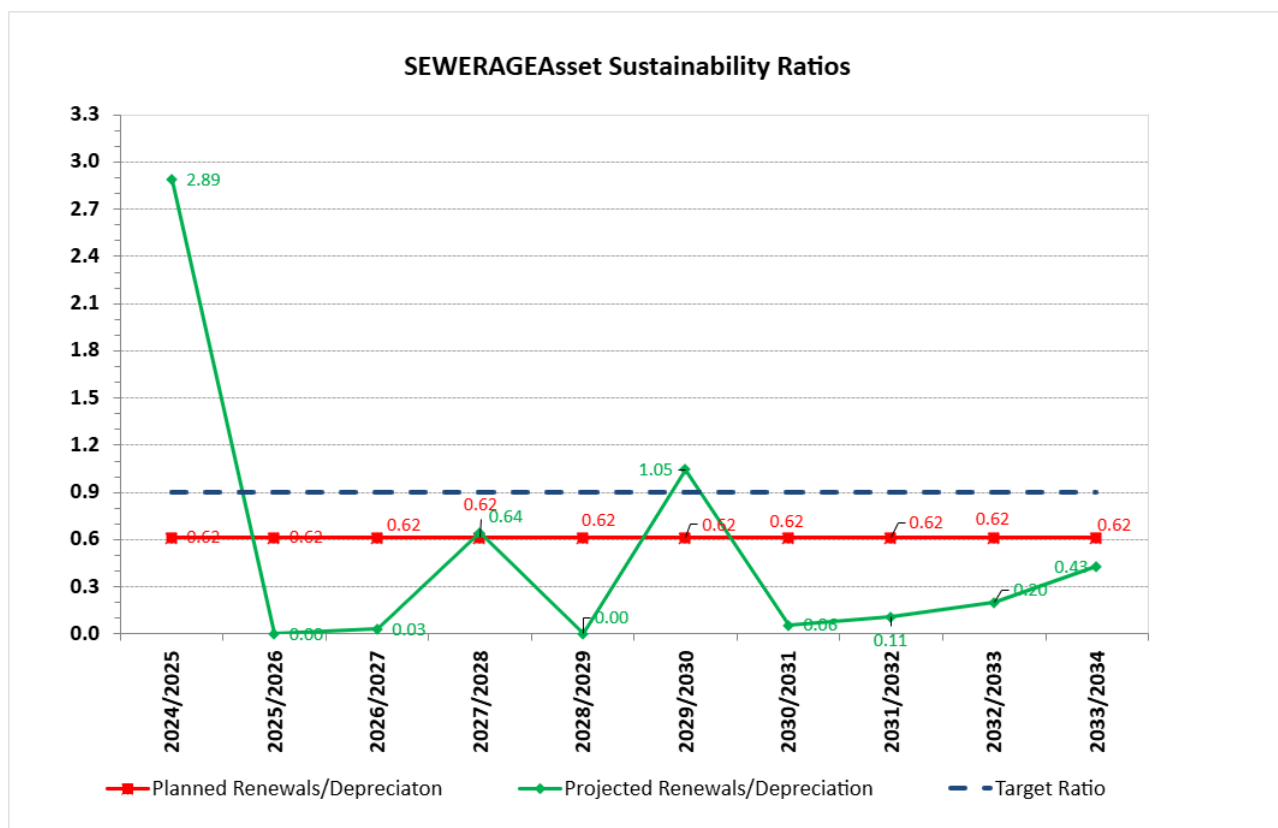


Figure 6 - Asset Sustainability Ratios



6.3 Gundagai Component

6.3.1 Operations and Maintenance Expenditure (Opex)

Historical

3 years of historical maintenance and operations expenditure figures have been taken from Council's financial system and averaged for the purposes of financial modeling. Based on available data which has been reviewed by Council staff the figures in table 16 represent the best available data for historical maintenance costs.

Table 16 - Historical Operations and Maintenance Costs (2022-2024)

Expenditure Type	\$
Operations	\$299,563
Maintenance	\$179,322
Total OPEX (O & M)	\$478,884

Future

For the purpose of this asset management plan the historical average has been used with no annual increase being applied, as well as the inclusion of additional operations and maintenance costs associated with new or upgraded assets.

6.3.2 Capital Expenditure (Capex)

Forward Works and Future Capital Program

Planned renewals total \$3M for the 10 year period based on the forward works program shown in Table 17. Projected renewals total \$ 2.2 M for the next 10-years to 2033 derived from valuations data for remaining useful lives. Thus, the average amount projected for renewals from valuations is approximately \$210,000 per year (in current dollars).



Table 17 - Planned 10 years Renewals

Program/ Project	24/25	25/26	26/27	27/28	28/29	29/30	30/31	3/32	32/33	33/34
Passive Assets- Main	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Active Assets- Treatment Plant	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Active Assets- Pump Station	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000



6.3.3 Asset Sustainability Ratio

A financial measure of satisfactory levels of expenditure on asset replacements is the Asset Sustainability Ratio - the net capital expenditure on replacements as a percentage of the depreciation. It indicates whether the amount of replacement exceeds or is less than the amount of depreciation, that is, whether assets are being replaced at the rate they are wearing out. Although not a true reflection of the required long-term funding, depreciation does indicate the rate of consumption of assets. The New South Wales Audit Office sets a target for renewals that is equal to or greater than 90% of depreciation.

The current total annual depreciation is \$230K per annum. A 90% target equates to \$207K per annum. Projected renewals over the next 10 years average \$ 220K per year. Planned renewals average \$ 300K per year.

The figure below shows the annual sustainability ratio based on planned and projected renewals for Gundagai.

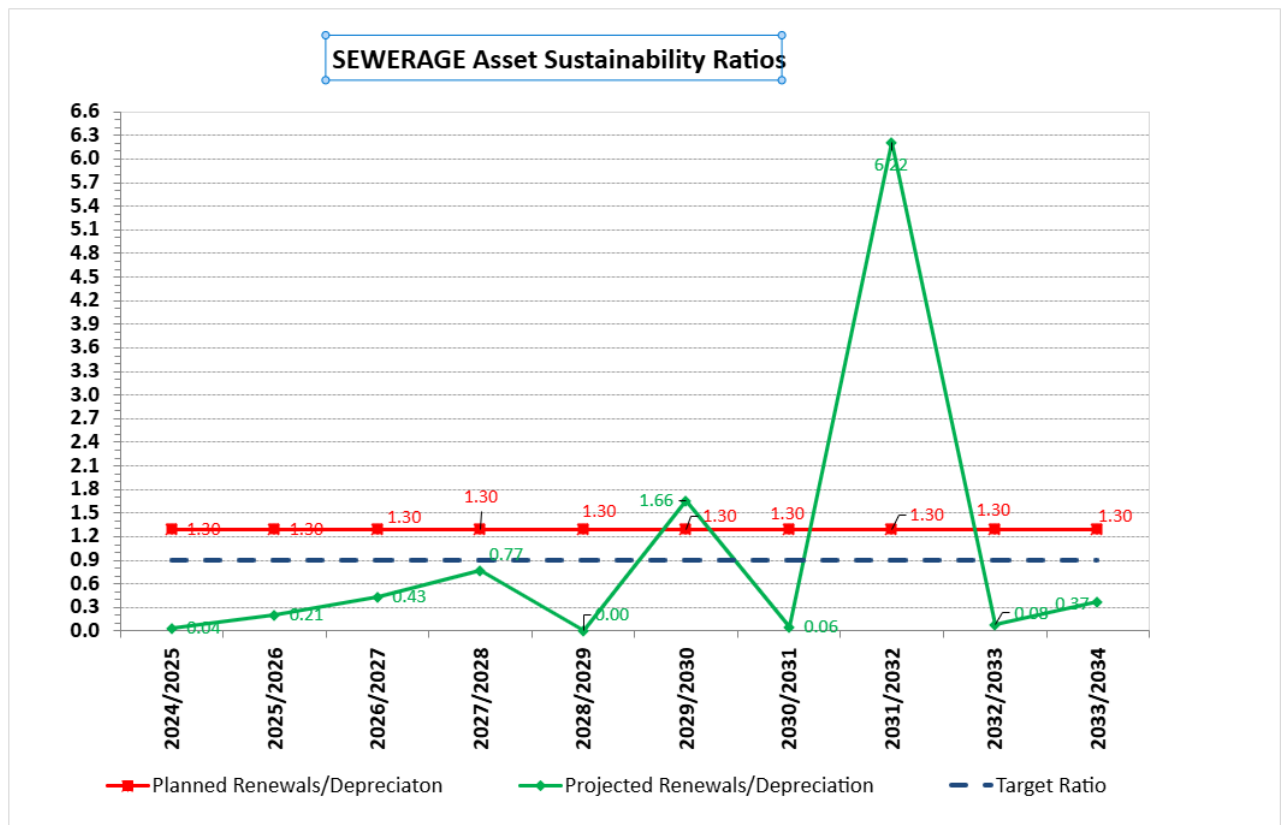


Figure 7 – Asset Sustainability Ratio



FINANCIAL SUMMARY

7.1 Summary Financial Projections

The Life Cycle Cost (LCC) shown in Figure 8 is the average projected cost to provide the service over the longest asset life cycle. It comprises required annual maintenance based on benchmarks and asset consumption expense, represented by depreciation expense. The average LCC over the forward 10 years to provide the Sewer network is estimated at approximately \$3.8M per annum.

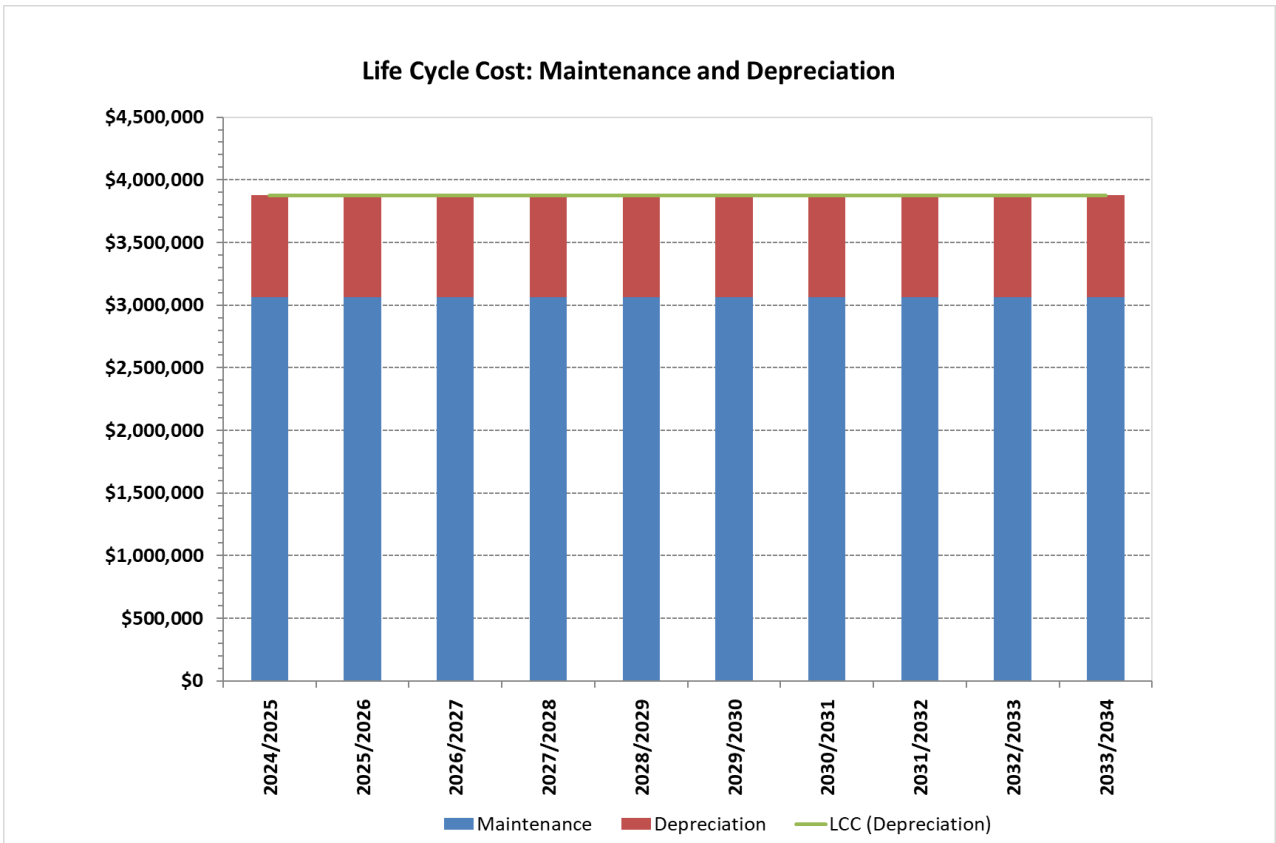


Figure 8 - Life Cycle Cost – maintenance and depreciation

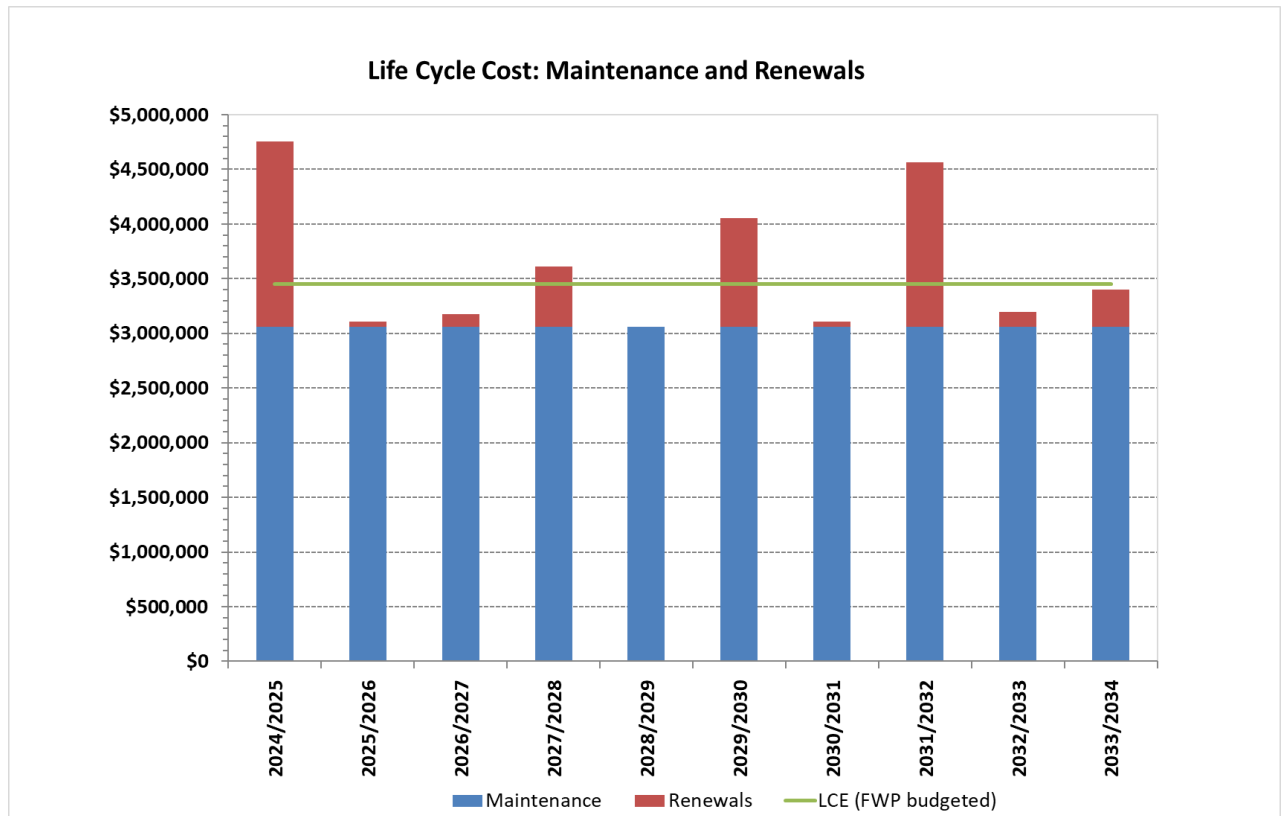


Figure 9 - Life Cycle Expenditure – maintenance and renewals

7.2 Future Valuations

Over the next 10-years escalation in the cost of materials, labour and services will increase the value of Council's asset based and annual depreciation. Current escalation rates in the Sewer class are relatively high as the class has assets that relate to both civil and building indices. Figure below shows projected asset valuations for the Sewer class, to present a balanced forecast annual no indexation has been adopted.

Due to the size of Council's Sewer network, the costs associated with the asset class are somewhat significant. Indexation will significantly increase the value of the asset class in future years which will increase the challenge to the fund depreciation expense associated with the class in the long term. This demonstrates the importance of ensuring upgrades to the Sewer network will create significant benefit as the community will struggle to fund the Sewer class in the long term.

7.3 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:

- Natural disasters (such as flood), vandalism and other unplanned events are not considered in the asset lifecycles;
- Information within the Sewer register and values are based on current knowledge only;
- Maintenance and operations allocations are largely based on maintaining current budget levels; and
- Depreciation has been calculated on a straight-line basis.

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

- Provision of a detailed 1-3 year forward work plan (Council should then consider extending the plan to 5-10 years however shifting from year to year budgeting to 1-3 year budgeting will take significant focus but is achievable);
- Ensure condition assessment data from Asset Inspector is used to progressively update data;
- Improved asset revaluation processes that incorporate operational information, increased focus on assets nearing end of life and industry benchmarks to better inform 10 year renewal plans;
- Full Implementation of a single Asset Register that is linked to the GIS; and
- Maintaining the Asset Register and GIS integrity.

RISK MANAGEMENT

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, 'the coordinated activities to direct and control with regard to risk'.

An assessment of risks 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.

8.1 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 the table below. Failure modes may include physical failure, collapse or essential service interruption.

Table 18 – Critical Assets

Critical Asset(s)	Failure Mode	Impact
Sewerage Treatment Plants	Equipment failure.	Breach of licence conditions.
	Lack of access to plant during flooding event	Inability to manage site due to limited physical access to the site. (currently utilising SES boat access if required)
Gundagai Treatment Plant - current treatment process (polymer area/dewatering/disposal options)	Disposal area no longer compliant due to environmental constraints	Environmental impacts and licensing approval processes
Pump Stations	Equipment Failure, power failure	Environmental damage, backflow.
Rising and gravity Mains	Mains Failure caused by age, damage by 3rd parties, floods.	Replacement required and planned, environmental damage/reputational damage



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.

8.2 Risk Assessment

The risk management process used is shown in Figure 11 below.

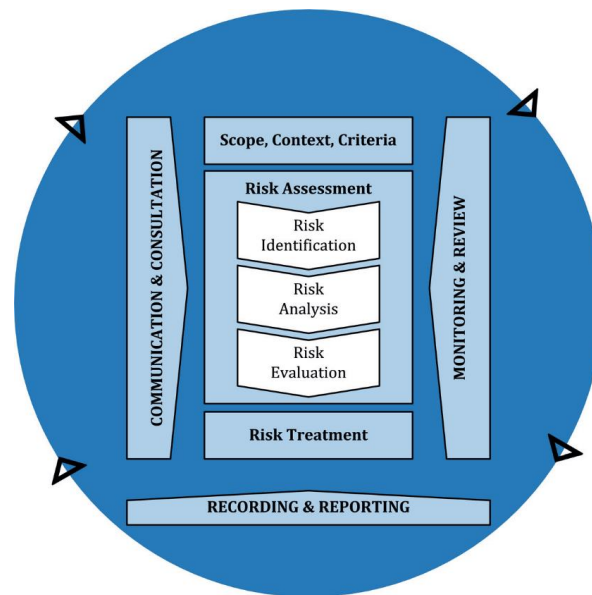


Figure 10 - Risk Management Process (ISO 31000:2018)

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.

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 risks 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 Cootamundra-Gundagai Regional Council.

Table 19 - Risk Management

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Non-compliance with licensing requirements relative to quantity and quality of discharges to environment and waterways.	Potential system-related deficiencies in existing treatment plant systems. Ineffective operational processes, equipment failure.	Likely	High	Prioritised action required.	Non-compliance with licencing requirements relative to quantity and quality of discharges to environment and waterways. Gundagai Plant is outside of flood zone but has limited access to the site during flooding events
Reticulation network	Stormwater discharge entering sewerage network negatively impacting treatment capacity, and potentially environmental impacts.	Almost certain	High	Prioritised action required.	Retic network
Pump Stations	Environmental or accidental damage to network, resulting from pump station overflows due to excessive inflows or component failure.	Possible	High	Prioritised action required.	Pump Stations
SCADA	Loss of oversight, (not control) and coordination of Waste water system.	Possible	Medium	Planned action required.	SCADA



The Improvement Plan outlines opportunities for Council to improve its risk management practices to align with its risk appetite.

IMPROVEMENT PROGRAM AND MONITORING

9.1 Improvement Program

Asset Improvement Plan is intended to provide improvements in the knowledge of our assets and their management. This plan will ensure that acceptable progress is made on improving asset management processes and procedures and that progress can be verified and quantified. This improvement plan should ensure asset management progresses at an acceptable pace and moves in the "right" direction - that is "improvement" is embedded in the process.

Focus areas for Sewer assets are related to better understanding the condition of assets so that renewals can be effectively planned into the future.

Table 11 provides a list of improvements that Council should pursue in the Sewer asset class.

Table 11 - Improvement Program

Task	Task	Responsibility	Resources Required	Timeline
1	Organisational decision and communication of 'one place of truth' for asset data storage and management.	Deputy General Manager - Operations	All Council staff	1/5/2025
2	Updated condition data to drive future works renewal program. Utilisation asset condition to verify the renewals required to develop works program development	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	1/7/26 Ongoing Budget timeframes (March each year)
3	Continued focus on the development of a comprehensive GIS system (and documented business processes and training of the system) of Sewer assets should be a priority, across both operational bases of the Council (Cootamundra and Gundagai Offices). Checks on data accuracy to be undertaken in parallel. This is to include asset attributes, such as location, asset attributes and	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	1/7/2026





Task	Task	Responsibility	Resources Required	Timeline
	condition score. This data is to be collated through - Undertaking inspections of each building, park and waste asset category, including roads, culverts and road delineation/signage. - Complete analysis of map data and audit asset data. - Ensure all infrastructure is captured and added into the GIS, when new assets are found or added into the building, park and waste asset class. <u>Note:</u> Each asset is to be aligned to an operational base within the GIS asset attributes, to allow GIS data to be easily split, and broken into separate GIS data sets, should 'deamalgation' processes be activated.			
4	System to manage and collate data which captures completed works (including documented workflows, and As-Con/Asset Team/Finance Team completion process). Clarification of financial and non-financial asset process(based on thresholds).	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	1/7/2026
5	Defining ownership of various asset types (including clarification of budget allocations for each asset types).	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	31/12/2026





Task	Task	Responsibility	Resources Required	Timeline
6	Clarification of each asset type including financial and non-financial assets with their inclusion into the Enterprise system.		Both Team Leads - Engineering Cootamundra and Engineering Gundagai	31/12/2026
7	Inspection system (condition) based on 3-year valuation process.	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	Ongoing
8	Creation of specific Site Based Management Plans for each sewerage treatment plant. Utilise these management plans to further develop site maintenance and rehabilitation in alignment with this overarching AMP document.	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	30/6/2026
9	Creation of documented maintenance/servicing programs for asset/services associated with treatment plant operations, with yearly review periods for KPIs.	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	30/9/2025
11	Consistent work processes and procedures is key across both offices of the CGRC, especially in the event de-merging does not occur. The support of change management processes throughout the Council operations is warranted to ensure the amalgamated Council operates across the two distinct operational bases to obtain operational benefits through sharing information, knowledge and experience to further develop asset management culture	Deputy General Manager - Operations	All Council staff	1/5/2025





Task	Task	Responsibility	Resources Required	Timeline
	within the organisation. The use of a Change Management support organisation should be considered, to support this activity across Councils organisational operational base.			
12	Commencement of project to investigate alternative treatment options for sewerage treatment plant (principally the drying/disposal processes). This project team needs to develop the planning Business Case to investigate treatment options, with follow-on rollout for design and construction to occur in preceding years. This project funding to be clearly shown within Councils budget to ensure visibility to external government agencies of proposed development timeframe.	Deputy General Manager - Operations	All Council staff	30/6/2025
13	Create an in-depth replacement program identifying which assets are being replaced, when they are being replaced and their replacement value - this will strength the linkage between asset management and the long term financial plan by improving the planning process.	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	30/9/2025
14	Document emergency management plan for access arrangements to the Gundagai Treatment Plant, which has limited access to the site during flooding events. Documented agreement to be obtained in regards to support offered by community/emergency services to support access to the site via boat. This plan to include risk assessments, and any corresponding training arrangements required in regards to this process.	Deputy General Manager - Operations	Both Team Leads - Engineering Cootamundra and Engineering Gundagai	30/8/2025





9.2 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 in line with comprehensive revaluation cycles.

9.3 Performance Measures

No data on asset management performance measures was available at the time of preparation of this Asset Management Plan. Council should develop performance measures which can include:



REFERENCES

- IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMG.
- IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM.
- ISO 31000 Risk Management Standards, International Organisation for Standardization
- ISO 55000 Asset Management Standards, International Organisation for Standardization
- Accounting Standards, Australian Accounting Standards Board



APPENDICES

APPENDIX A

Definitions



Appendix A: Definitions

Asset Condition Assessment	The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific asset so as to determine the need for some preventative or remedial action.
Asset Management	The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.
Asset Management Plan	A plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the lifecycle of the asset in the most cost effective manner to provide specified level of service. A significant component of the plan is a long term cash flow projection for the activities.
Asset Renewal	Replacement or rehabilitation to original size and capacity of a road or drainage asset or the component of the asset. Renewals are "capitalised", so that the cost can be depreciated over the future life of the asset.
Core Asset Management	Asset management which relies primarily on the use of an asset register, maintenance management systems, job/resource management, condition assessment and defined levels of service, in order to establish alternate treatment options and long term cash flow predictions. Priorities are usually established on the basis of financial return gained by carrying out the work (rather than risk analysis and optimised renewal decision making).
Infrastructure Assets	Physical assets of the entity or of another entity that contribute to meeting the public's need for access to major economic and social facilities and services, 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 market value.
Level of Service	The defined service quality for a particular service against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental, acceptability and cost).
Life Cycle Cost	The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises annual maintenance and asset consumption expense, represented by depreciation expense. The Life





	Cycle Cost does not indicate the funds required to provide the service in a particular year.
Life Cycle Expenditure	The Life Cycle Expenditure (LCE) is the actual or planned annual maintenance and capital renewal expenditure incurred in providing the service in a particular year. Life Cycle Expenditure may be compared to Life Cycle Cost to give an initial indicator of life cycle sustainability.
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).
Performance Measure	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.
Reactive Maintenance	Unplanned repair work carried out in response to service requests and management/supervisory directions.
Scheduled Maintenance	Maintenance carried out in accordance with a routine maintenance schedule e.g. scheduled maintenance grading.
Planned Maintenance	Repair work that is identified and managed through the customer requests system. These activities include inspections, 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.
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/ depreciable amount).
Reactive Maintenance	Unplanned repair work carried out in response to service requests & management / supervisory directions.
Recurrent Expenditure	Relatively small (immaterial) expenditure or that which has benefits expected to last less than 12 months. Recurrent expenditure includes operating and maintenance expenditure.
Remaining Life	The time remaining until an asset ceases to provide the required service level or economic usefulness. Age plus remaining life is economic life (also useful life).
Renewal Expenditure	Major works which do not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential.
Upgrade/Expansion Expenditure	Work over and above restoring an asset to original service potential.





Useful Life (also economic 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.
New Assets	Activities that create a road or drainage asset that did not exist previously or extend an asset beyond its original size or capacity. New assets are also "capitalised", but they increase the asset base rather than restore its capacity to perform.



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