Asset Management Plans

Junee Shire Council

May 2022

Buildings and Open Space Asset Management Plan

This asset management plan covers the portfolio of structures and open space assets that deliver a wide range of services to the Junee Shire Council ('Council') community. These include services such as Council's administration centres and depots, community halls, recreation and aquatic centres, public amenities as well as Council's sports fields, playgrounds and other open space areas.

As the owner and operator of building and open space assets, Council has a responsibility for a number of functions including:

- maintenance
- renewal and refurbishment
- upgrades and improvements
- disposal of assets.

The planning of these functions is outlined in this asset management plan.

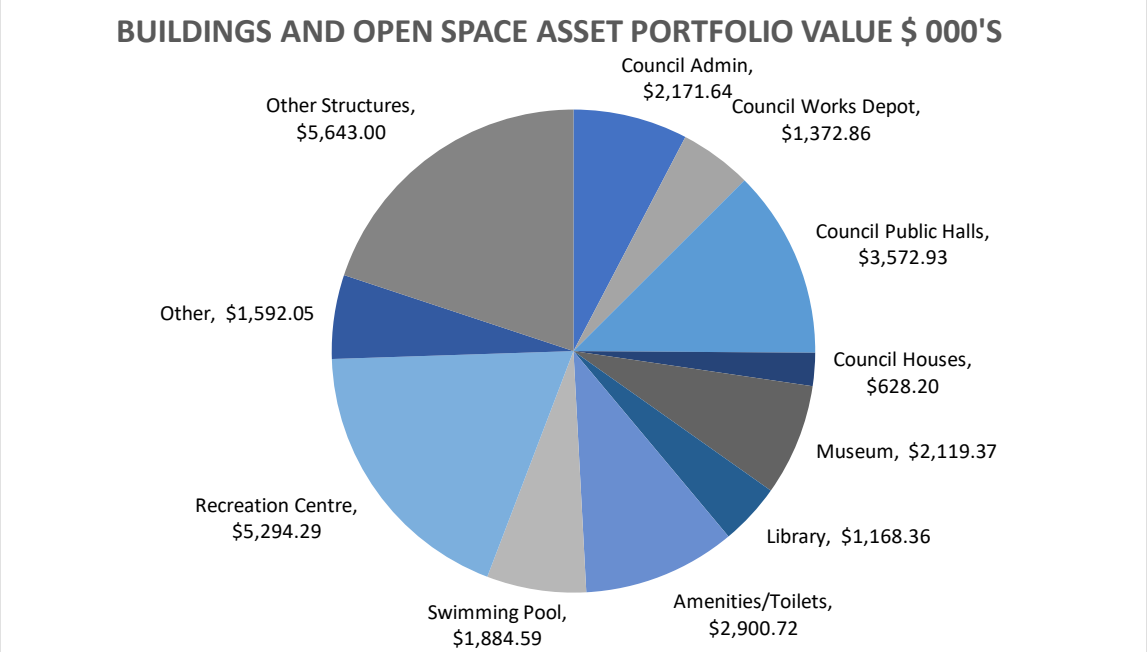
A3.1 Purpose of this plan

The purpose of this asset management plan is to develop a strategic framework for the maintenance and renewal of buildings and open spaces and to provide an agreed level of service in the most effective manner.

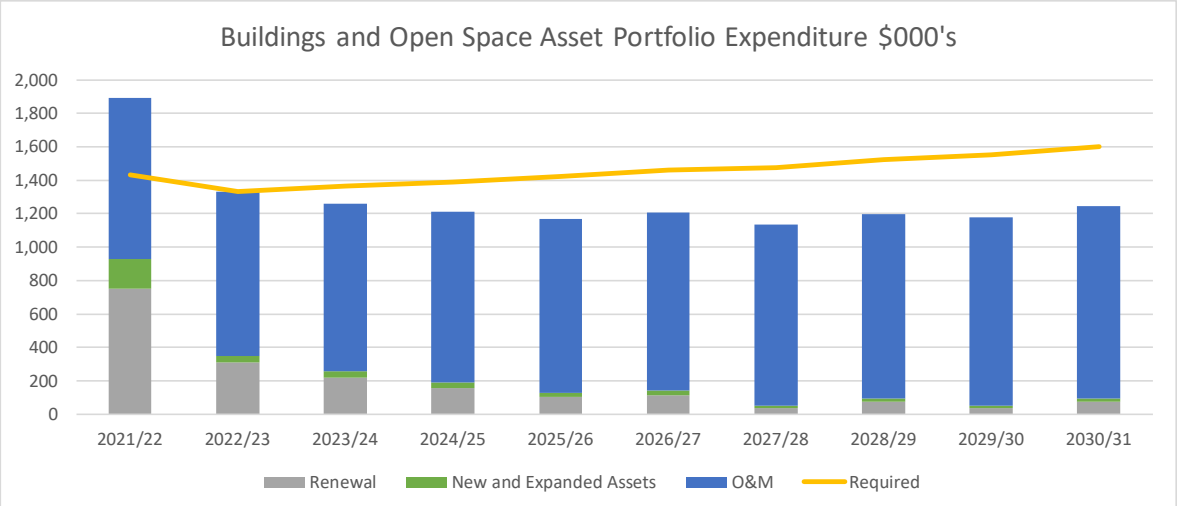
This plan includes the following scope of management:

- asset inventory, values and condition
- asset based levels of service
- demand and service management
- risk management
- development of the long-term financial plan (LTFP) for the maintenance and renewal of buildings and other structures.

A3.2 Portfolio overview



Infrastructure Ratios	Actual 2021/22	Estimated 2030/31	Funding gap	
Infrastructure renewals ratio	120.05%	9.58%	Yr 1	$126
			5 Yr Average	(-$354)
			10 Yr Average	(-$520)
Infrastructure Ratio	5.31%	11.53%	Yr 1	(-$495)
			5 Yr Average	(-$641)
			10 Yr Average	(-$901)
Maintenance Ratio	153.12%	145.53%	Yr 1	$334
			5 Yr Average	$339
			10 Yr Average	$346
Total Funding Gap			Yr 1	(-$35)
			5 Yr Average	(-$656)
			10 Yr Average	(-$1,074)



A3.3 Asset inventory, values and condition

The assets covered by this asset management plan are shown below:

Table 1 Buildings and open space asset inventory

Assets	Number of assets
Building	
Administration	1
Depot/SES	2
Museums	1
Libraries	1
Waste Facilities	1
Recreation Centres	1
Commercial Properties	1
Public Buildings	2
Residential Properties	2
Amenities/Toilets	18
Sheds	14
Open Space (Other Structures)	
Open Space Bridges / Platforms / Jetties	7
Open Space Playground Equipment	7
Open Space Shelters + Shade	24
Swimming Pools	2
Storage Tanks (Water/Petrol)	4
Other Open Space Assets	40

Table 2 Buildings and open space summary

Asset Category	Fair Value $'000s	Gross Cost $'000s	Condition 1 – excellent	Condition 2 – good	Condition 3 – satisfactory	Condition 4 - poor	Condition 5 – very poor
Council Admin	933	2,172	0%	10%	90%	0%	0%
Council Works Depot	371	1,373	0%	9%	32%	44%	15%
Council Public Halls	2,306	3,573	17%	0%	0%	83%	0%
Council Houses	422	628	42%	16%	0%	42%	0%
Museum	380	2,119	3%	0%	0%	97%	0%
Library	872	1,168	0%	100%	0%	0%	0%
Amenities/ Toilets	1,636	2,901	0%	63%	35%	2%	0%
Swimming Pool	1,337	1,885	0%	100%	0%	0%	0%
Recreation Centre	2,668	5,294	6%	0%	92%	0%	2%
Other Buildings	184	1,592	92%	4%	0%	2%	1%
Other Structures (Open Space)	3,593	5,643	42%	31%	13%	12%	2%

A3.4 Roles and responsibilities

Council is currently developing its roles and responsibilities matrix for asset classes as part of the SAMP improvement plan.

A3.5 Asset based levels of service

Table 3 Service levels buildings and other structures

Service level area	Service level outcome	Level of service	Performance measure process	Performance target
Capacity	Affordability	The services are affordable and managed using the most cost-effective methods for the required level of service.	Review of service agreements and benchmark with other councils. Income generating assets do not exceed the agreed upon level of O&M expenditure above the level of income received.	Maintenance/OPEX budget expenditure +/- 10% of quarterly budget review.
		Council maintains its assets.	Asset maintenance ratio (measured by actual maintenance expenditure / required maintenance expenditure).	OLG benchmark 100%.
	Health and safety	Ensure all assets are safe and do not cause hazards to people.	Compliance certification.	Fewer than five reported incidents which can be attributed to poorly maintained facilities.
			Annual Fire Safety Statements completed within three months of annual service and inspection.	100% of Annual Fire Safety Statements are certified for each facility requiring it, within required timeframe.
			Safety audits.	The three-year rolling average of total claims decreases.

Service level area	Service level outcome	Level of service	Performance measure process	Performance target
Condition	Accessibility/or availability	Provide adequate physical access to facilities.	Disability Discrimination Act (DDA) compliance.	100% of all new buildings and major building asset renewal works bring the building up to the current DDA standard.
	Quality/condition	Provide buildings in good condition and fit for purpose.	Survey of building assets condition.	75% of buildings in condition 3 or better (CRC).
		Provide safe, suitable facilities, free from hazards.	Regular assessments of sites depending on use.	Item identified in audit/assessment is to be rectified/isolated within council's response time charter.
		Assets are maintained in a satisfactory condition.	Backlog ratio (estimated cost to brig asset to a satisfactory condition / written down value of the assets).	OLG benchmark <2%.
		Facilities provide a good quality experience for all users and customers.	Regular site inspections and audits. Condition assessments.	75% of compliance with key performance indicators for maintenance and cleanliness as measured through cleaning diary audits.
Function	Customer satisfaction	Be responsive to the needs of customers using asset.	Number of customer requests received.	75% of requests are completed within Council's service charter.
	Reliability/ responsiveness	Be responsive to the needs of asset users.	Number customer requests received.	75% of requests are completed within Council's service charter.
		Provide well maintained facilities that are affordable to the community.	Biannual condition assessment. Planned versus reactive.	Scheduled maintenance to be > 60% of maintenance budget, reactive

Service level area	Service level outcome	Level of service	Performance measure process	Performance target
				maintenance to be < 40% of maintenance budget.
		Planned works completed in accordance with schedules.	Completion of scheduled work.	90% completion within service standard.
	Sustainability	Continues to provide building assets to meet the need of the community.	Complete capital work program on time and on budget.	Annual capital works for time and budget +/- 10%.
		Assets are being renewed in a sustainable manner.	Asset renewal ratio (asset renewal expenditure / annual depreciation expense).	OLG benchmark >100%.

Table 4 Open space service levels

Service level area	Service level outcome	Level of service	Performance measure process	Performance target
Capacity	Affordability	The services are affordable and managed using the most cost-effective methods for the required level of service.	Review of service agreements and benchmark with other councils.	Maintenance/OPEX budget expenditure +/-10% of quarterly budget review.
		Council maintains its open space assets.	Asset maintenance ratio (measured by actual maintenance expenditure / required maintenance expenditure).	OLG benchmark 100%.
	Health and safety	Ensure all playgrounds are safe and do not cause a hazard to people.	Scheduled playground audits and compliance certification.	Improvements and outcome from audit/assessment is to be 100% completed as per risk levels of the audit.
		Sport fields are safe and free of hazards to users.	Sport fields maintained in accordance with inspection and maintenance schedules.	90% completion within service standard.

Service level area	Service level outcome	Level of service	Performance measure process	Performance target
Condition	Quality/condition	Provide parks, recreation, and bushland areas in appropriate condition for recreational activity and amenity.	Survey of condition of open space assets.	75% of open space assets in condition 3 or better.
		Assets are maintained in a satisfactory condition.	Backlog ratio (estimated cost to bring asset to a satisfactory condition / written down value of the assets).	OLG benchmark <2%.
Function	Customer satisfaction	Fast and efficient response to reactive maintenance requests.	Planned versus reactive maintenance distribution. Asset management work order reports.	Complying to agreed customer responses times.
		Be responsive to the needs of customers using asset.	No customer requests received.	85% of requests are completed within Council's agreed response times.
	Reliability/ responsiveness	Provide well maintained park facilities that are affordable to the community.	Annual condition assessment. Planned versus reactive.	Greater than 60% of maintenance expenditure is undertaken through planned maintenance schedules.
		Planned works completed in accordance with schedules.	Completion of scheduled work.	85% completion of councils annual program
		Provide well maintained wharves, jetties and boat ramps facilities that are affordable to the community.	Annual condition assessment. Planned versus reactive.	Greater than 50% of maintenance expenditure is undertaken through planned maintenance schedules.
	Sustainability	Continues to provide open space assets to meet the need of the community.	Complete capital work program on time and on budget.	CAPEX budget expenditure +/- 10% of quarterly budget review.

Service level area	Service level outcome	Level of service	Performance measure process	Performance target
		Open space assets are being renewed in a sustainable manner.	Asset renewal ratio (asset renewal expenditure / annual depreciation expense).	OLG benchmark >100%.

A3.6 Future demand

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset condition.

Demand for new services will be managed through a number of strategies:

- supply side - a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand
- regulation - restrict time of use and type of use
- incentives - pricing and subsidies.

Table 5 Future demand

Demand factor	Impact on assets
Population	Current population growth estimates predict steady growth of 1.01% annually until 2040 and is not expected to make a significant impact on the current portfolio.
Demographics	The LGA's aging demographic is likely to require an increase in the accessibility and DDA compliance of Council's buildings and open space assets.
Increasing costs	Will be a requirement to continue to maximise service delivery within the current funding limitations and cost shifting by state and federal bodies.
Environment and climate	May impact on the environmental sustainability of Council's assets and their increasing move to renewable energy sources.

A3.7 Maintenance strategies

Council actively monitors and maintains its building and other structures portfolios to ensure assets meet a safe standard and maximise their long-term benefit to the community. These portfolios are currently managed separately with maintenance activities managed by the divisions as per the roles and responsibilities matrix.

Councils classifies its maintenance activities as follows:

- Reactive – work on breakdowns, failures and or damaged assets that are not operating or are about to fail.
- Corrective – works identified through schedules maintenance/asset inspections whereby assets are not operating as designed or to 100% capacity.
- Scheduled – planned preventative maintenance.

Council currently maintains its buildings portfolio and open space portfolio primarily in a reactive manner. Proactive inspections are scheduled based upon the condition of the asset portfolio however the majority of non-cyclical (e.g. HVAC maintenance contracts) are undertaken due to reactive customer requests. Council's maintenance ratio currently sits at around 150% of its expected requirements and could be indicative that Council's assets are in poor condition.

A3.8 Renewal strategies

Council's current buildings and open space capital program is in part driven by Council's asset data as well as being opportunistic with the availability of federal and state grant funding opportunities. Assets are identified for renewal/replacement based upon the following criteria:

Table 6 Renewal criteria

Criteria	Weighting
Risk posed by asset failure (including the risk to the public, environment, legal, financial and surrounding infrastructure)	60%
Importance of asset	40%
Total	**100%**

However, it is key to note, that there is currently a basic level of confidence in the asset data associated with Council's buildings and open space assets and as such capital planning has been reactive in nature. The development of a Buildings and Recreation Strategy for Council is essential to ensure that capital planning meets the needs of the community.

A3.9 Expenditure projections

Table 7 Budget gap by asset group

Budget gap by asset group			2021/22 Budget	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Buildings and Open Space	**Actual**											
		Renewal	753	311	219	159	104	116	40	76	40	76
		New and Expanded Assets	177	39	39	31	26	29	10	19	10	19
		Maintenance and Operations	962	981	1,000	1,020	1,041	1,062	1,083	1,105	1,127	1,149
		Total Expenditure	1,891	1,331	1,258	1,210	1,171	1,207	1,133	1,200	1,177	1,244
	Required											
		Required Renewal (Depreciation)	627	647	664	681	699	717	736	754	773	793
		New and Expanded Assets	177	39	39	31	26	29	10	19	10	19
		Required O&M	628	645	662	679	696	714	732	751	770	790
		Total	1,432	1,330	1,364	1,391	1,421	1,460	1,478	1,524	1,553	1,602
		Overall (GAP)	**459**	**1**	**-106**	**-180**	**-250**	**-254**	**-345**	**-325**	**-377**	**-357**

Figure 1 Buildings and open space expenditure

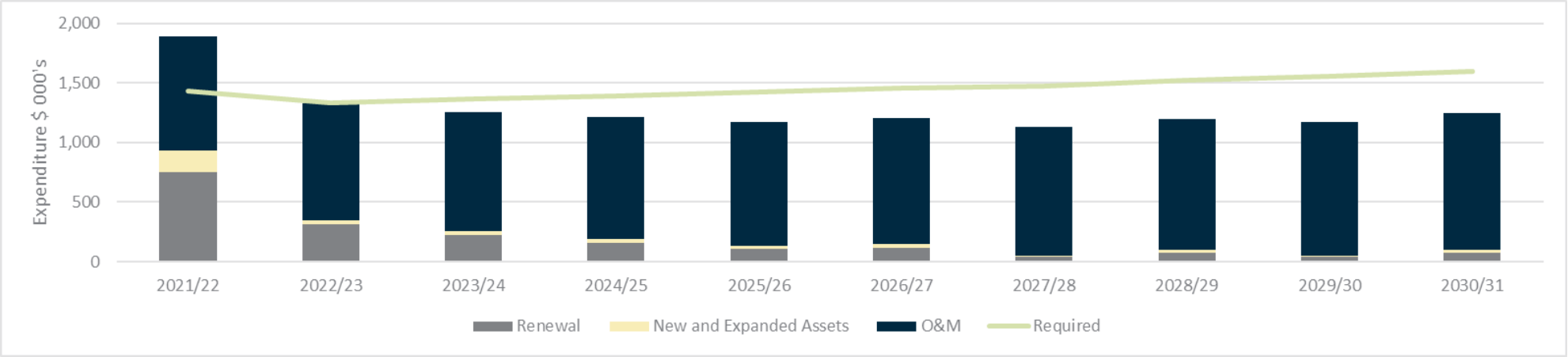


Figure 2 Buildings and open space renewals

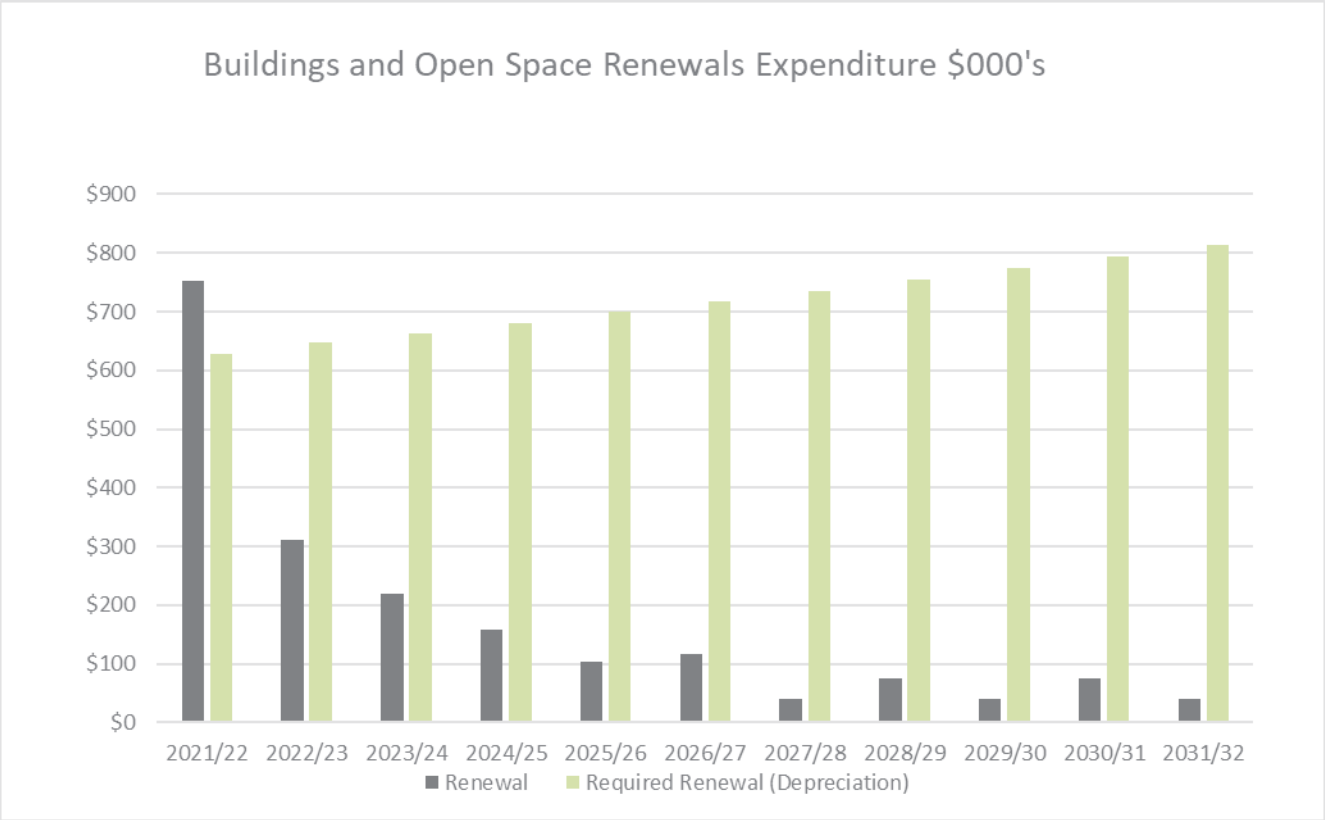


Figure 3 Buildings and open space operations and maintenance

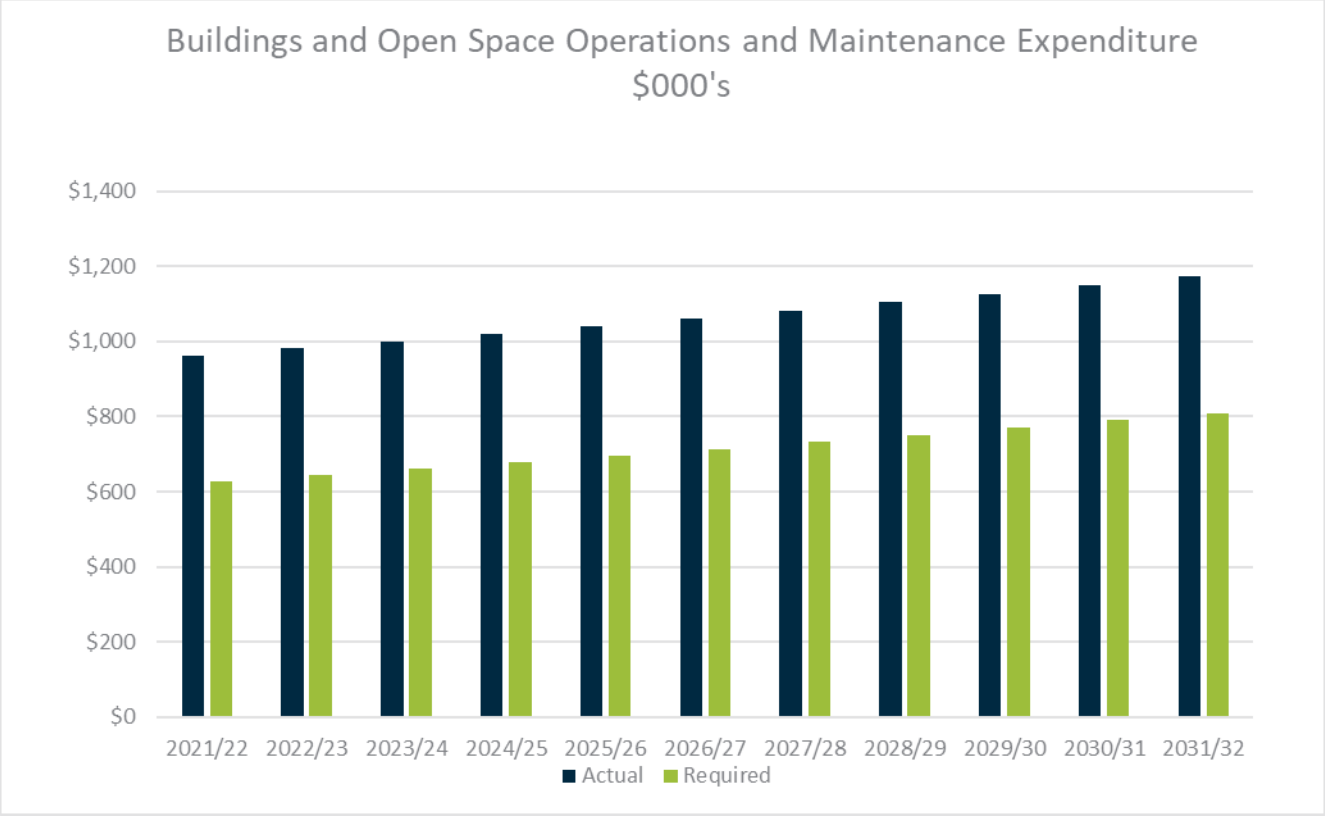


Figure 4 Buildings and open space sustainability ratios

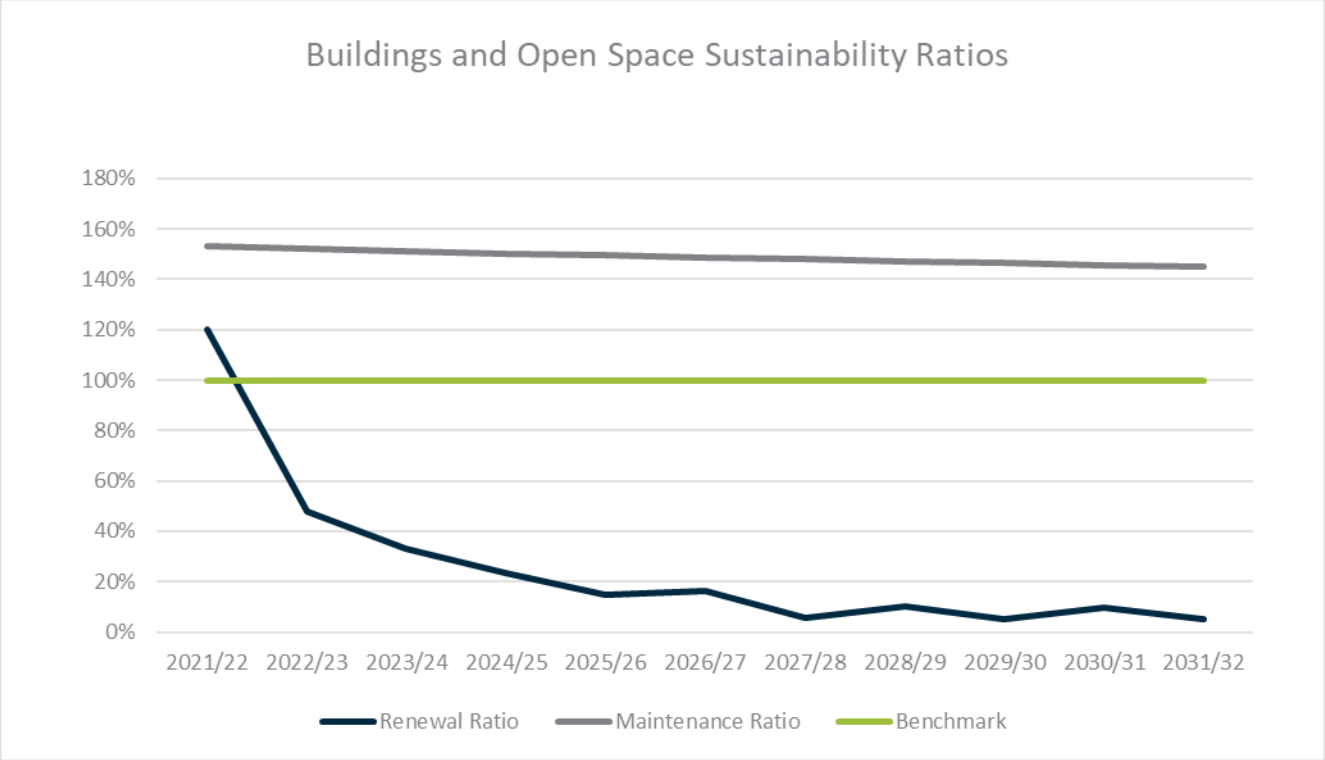
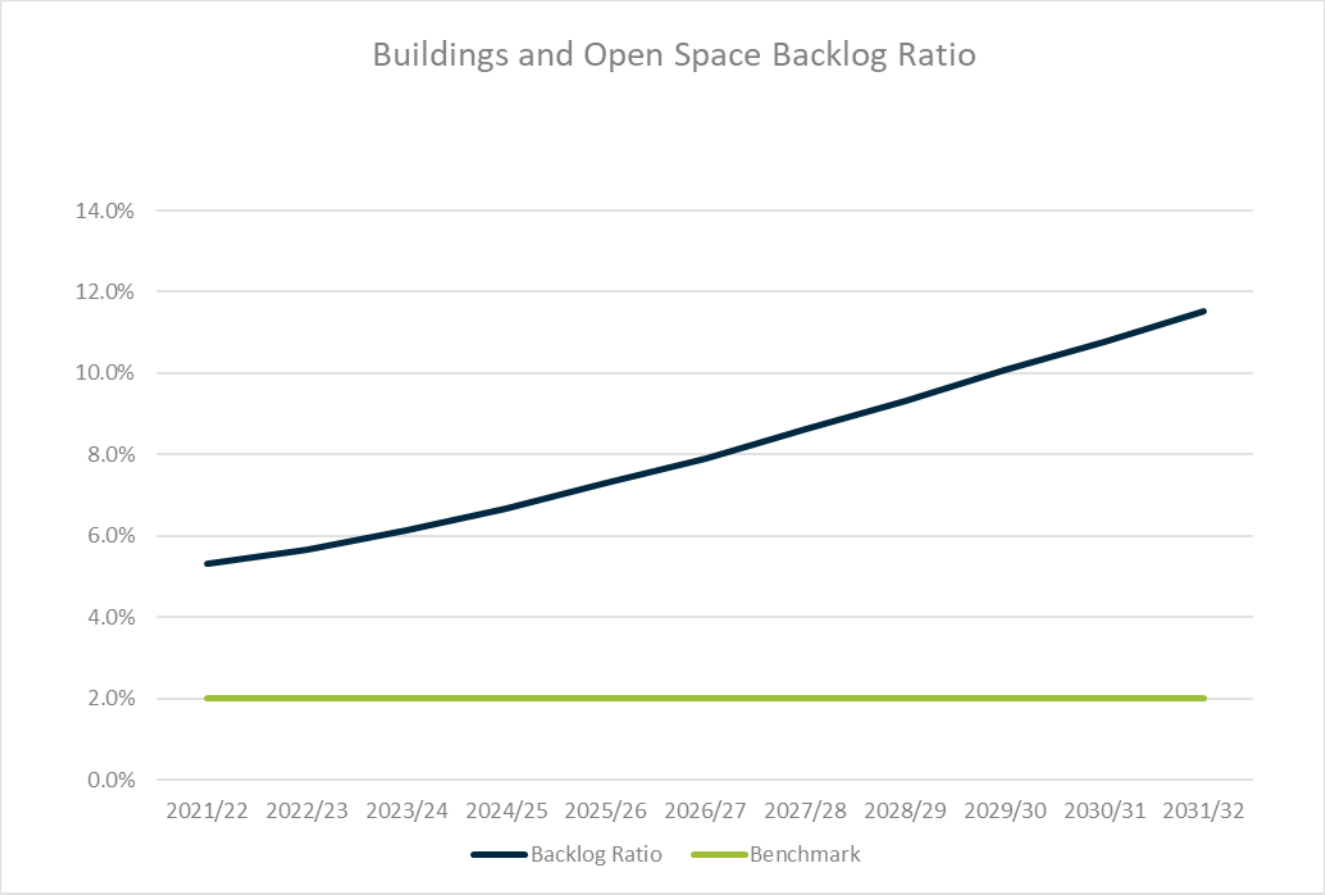


Figure 5 Buildings and open space financial ratios



A3.10 Risk - critical assets

Council is currently in the processes of assessing the criticality of its buildings and open space portfolio. The following attributes will form the key factors when reviewing the criticality of its assets.

Table 8 Building asset criticality

Asset criticality	High	Medium	Low
Civic purpose	Yes		
Size	Large (1000sqm approx.)	Medium (300sq approx.)	Small (<300sqm)
Multipurpose	>5 users	5 -2 users	1 additional user
Leased (involving commercial component, market terms or residential occupancy)	Commercial	Residential	
Frequency of use	Daily	2 - 4 time per week	1 time per week
Capacity	>100	50 - 100	<50
Hazardous materials stored on site	Yes		
Historical significance	Yes		
Emergency service/management use	Yes		

While there will typically be no critical open space assets from an organisational perspective, the range and quality of assets across the region will ensure that any short-term loss of facility can be accommodated and managed. However the following attributes will be considered when determining the relative importance and customer expectations regarding Council's open spaces facilities:

Table 9 Open space asset criticality

Attribute	High	Medium	Low
Park size	Large	Medium	Small
Number of playgrounds	> 1	1	
Amenities buildings	> 2	1 - 2	
Adjacent to waterway	Yes		
Typical use	Sporting facility	Passive recreation	Civic garden/pocket park
Off-leash dog facility		Yes	
Does the park contain significant bushland		Yes	

Council is currently in the process of applying these factors to its current asset portfolio.

A3.11 Risk – risk management

Junee Shire Council utilises a corporate risk framework which aligns with ISO 31000:2009. The framework has been adopted for Council's buildings and open space assets and highlights the strategic risks which impact Council's asset portfolio.

Table 10 Buildings and open space strategic risks

Service or asset at risk	What can happen	Risk rating (VH, H, M, L)	Risk treatment plan
All infrastructure assets	Unacceptable performance or early loss of building and other structure assets due to substandard design and/or construction including failure to comply with legislative and regulatory conditions.	H	Regular inspections undertaken to identified hazards and work scheduled based on risk priority and allocated budget.
All infrastructure assets	Personal injury or potential loss of life due to faulty building services, defects or lack of maintenance.	H	Regular inspections undertaken to identified hazards and work scheduled based on risk priority and allocated budget.
Roof and building envelope	Risk of building occupant being exposed to asbestos containing materials.	H	Review the Council's asbestos register and develop a plan to manage the asbestos if necessary.
Buildings	Building Safety - Notification when building fire protection is inactive for more than 1 hour.	H	• Fire alarms • Evacuation Procedures • Fire Safety Audits
Buildings	Damage to or loss of Gallery, paintings and/or artefacts	M	• Fire alarms • Evacuation Procedures • Fire Safety Audits
Buildings	Damage to or loss of buildings	H	• Business Continuity Plan • Physical security • Emergency procedures • Fire alarm system • Security patrols

A3.12 Confidence levels

The confidence in the asset data used as a basis for the forecasts has been assessed using the following grading system.

Table 11 Confidence levels

Confidence grade	General meaning
Highly reliable	Data based on sound records, procedure, investigations and analysis that is properly documented and recognised as the best method of assessment.
Reliable	Data based on sound records, procedures, investigations and analysis which is properly documented but has minor shortcomings; for example, the data is old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation.
Acceptable	Data based on sound records, procedures, investigations and analysis with some shortcomings and inconsistencies.
Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported or extrapolation from a limited sample.
Very uncertain	Data based on unconfirmed verbal reports and/or cursory inspection and analysis.

Table 12 Buildings and open space confidence levels

Asset Plan	Inventory	Condition	Age	Overall
Buildings and Recreation	Reliable	Acceptable/uncertain	Acceptable	**Acceptable**

The overall confidence level of the plan is considered to be '**acceptable**'.

A3.13 Improvement plan

Council's buildings and open space assets have a notable proportion of assets which are currently in unsatisfactory condition with a backlog ratio of 6%. However over the long term, adequate funds have not been allocated to address this shortfall. While capital funding has been incorporated into the early years of the LTFP there is a rapid drop off which would indicate a lack of strategic planning in this space. Key to improving confidence in this asset plan will be the development of an informing facilities and recreation strategy, which should guide the capital needs of the community for the next ten years, as well as the development of a condition inspection strategy to ensure that Council's data is decision grade and informs the long-term capital program. The shift from an operational to strategic focus will also reduce Council's operational expenditure in line with required expenditure, as Council balances the portion of reactive and proactive maintenance.

Table 13 Improvement plan

Task no	Task	Responsibility	Resources required	Timeline
1	Develop buildings and open space condition inspection strategy.	Assets	Internal	1 year
2	Undertake condition inspection of buildings and open space assets.	Assets	Internal	2 years
7	Document clear asset lifecycle strategy for all assets, which is to be supported by Council's Long Term Financial Plan.	Assets/Finance	Internal	3 years
8	Review asset capitalisation procedure and develop asset capitalisation review procedure involving project managers, asset managers and finance.	Finance	Internal/external	2 years
9	Develop clear and concise service levels for community consultation.	Assets/IP&R	Internal/external	3 years
10	Undertake risk and criticality assessment for Council's assets.	Assets	Internal	1 year
11	Develop inspection and maintenance strategies around critical building assets and highlight emergency response plans should there be a major service disruption within the assets.	Assets	Internal/external	3 years
12	Review buildings and open space roles and responsibilities and ensure all asset management functions are allocated and being completed.	Assets	Internal/external	3 years

Sewer Asset Management Plan

This asset management plan covers the portfolio of sewer assets that deliver a wide range of services to the Junee Shire Council ('Council') community. These include council's gravity sewer network, Wastewater Treatment Plant and effluent reuse system.

As the owner and operator of Sewer assets, Council has a responsibility for a number of functions including:

- maintenance
- renewal and refurbishment
- upgrades and improvements
- disposal of assets.

The planning of these functions is outlined in this asset management plan.

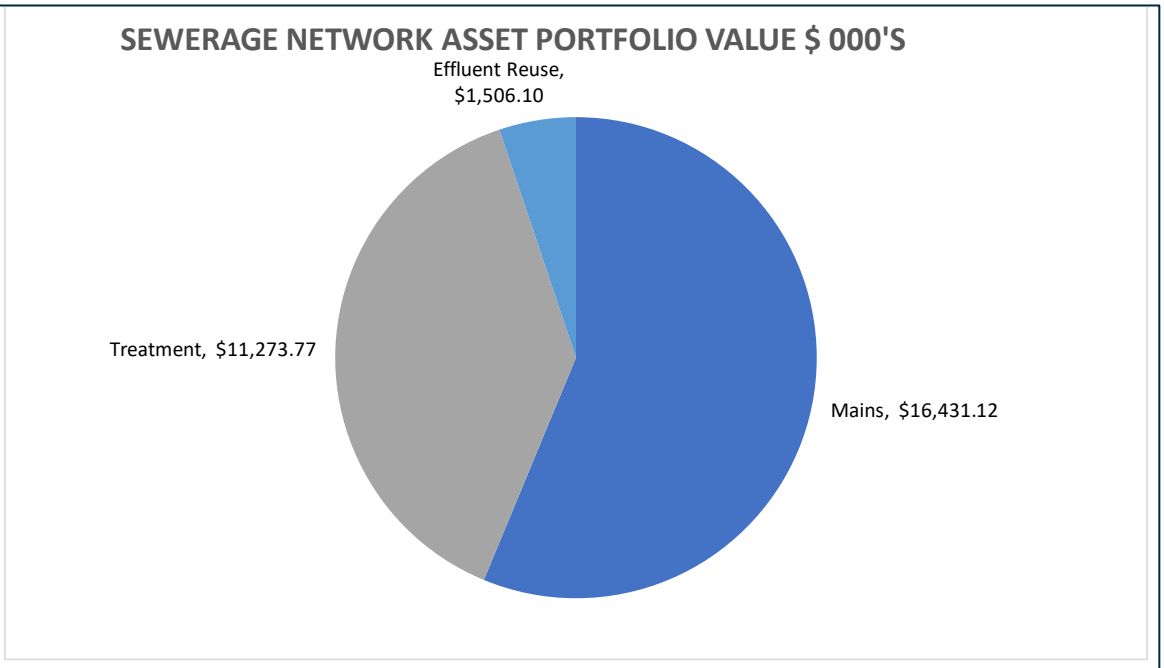
A1.1 Purpose of this plan

The purpose of this asset management plan is to develop a strategic framework for the maintenance and renewal of sewer assets and to provide an agreed level of service in the most effective manner.

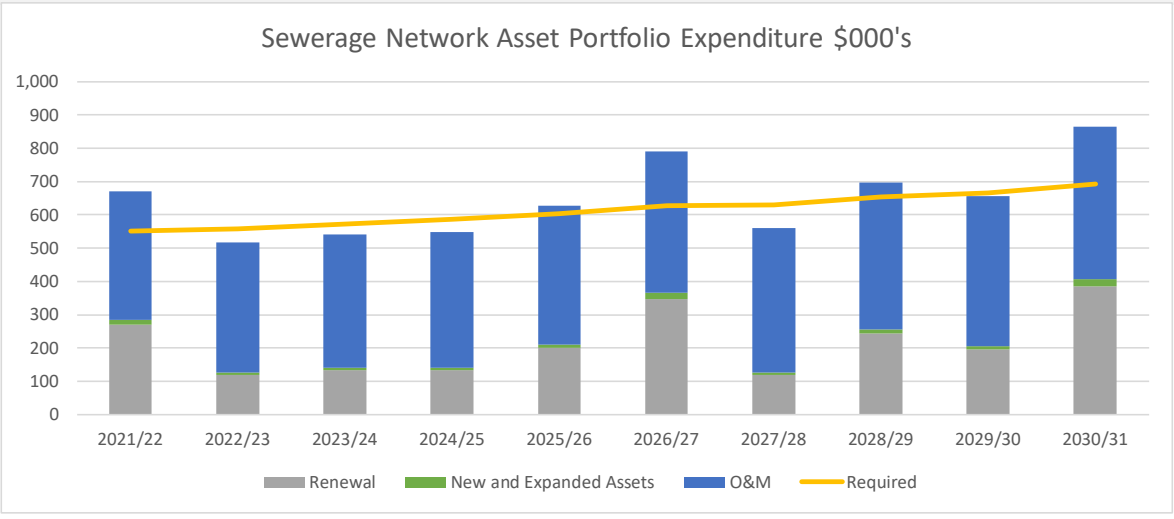
This plan includes the following scope of management:

- asset inventory, values and condition
- asset based levels of service
- demand and service management
- risk management
- development of the long-term financial plan (LTFP) for the maintenance and renewal of sewer assets.

A1.2 Portfolio overview



Infrastructure Ratios	Actual 2021/22	Estimated 2030/31	Funding gap	
Infrastructure renewals ratio	95.35%	108.09%	Yr 1	(-$13)
			5 Yr Average	(-$128)
			10 Yr Average	(-$105)
Infrastructure Ratio	13.96%	11.80%	Yr 1	(-$2,270)
			5 Yr Average	(-$2,308)
			10 Yr Average	(-$2,331)
Maintenance Ratio	152.54%	145.55%	Yr 1	$133
			5 Yr Average	$135
			10 Yr Average	$138
Total Funding Gap			Yr 1	(-$2,151)
			5 Yr Average	(-$2,301)
			10 Yr Average	(-$2,297)



A1.3 Asset inventory, values and condition

The assets covered by this asset management plan are shown below:

Table 1 Sewer asset inventory

Assets	Units	Unit of Measure
Manholes	779	EA
Vents	35	EA
Mains	50.33	Km
Wastewater and effluent reuse plant	1	No.
Ponds/Lagoons	4	EA
Pumping Stations	1	EA

Table 2 Sewer summary

Asset category	Fair value $ 000's	Gross cost $ 000's	Condition 1 – excellent	Condition 2 – good	Condition 3 – satisfactory	Condition 4 - poor	Condition 5 – very poor
Mains	8,422	16,431	31.5%	5.4%	5.7%	57.3%	0.1%
Treatment	8,803	11,274	68.1%	19.1%	12.8%	0.0%	0.0%
Effluent reuse	1,291	1,506	29.1%	0.0%	70.9%	0.0%	0.0%

A1.4 Roles and responsibilities

Council is currently developing its roles and responsibilities matrix for asset classes as part of the Strategic Asset Management Plan (SAMP) improvement plan.

A1.5 Asset based levels of service

Table 3 Service levels sewers

Key performance indicator	Level of service	Performance measurement process	Target performance
Accessibility/ availability	Availability of urban sewerage services.	% of all tenements that are connected	95% of properties served
		Frequency of system failures	Failures due to rainfall and deficient capacity – 0 Failures due to pump or other breakdown (one week downtime) - 0 Failures due to blockages – 20
Quality/condition	Sewerage discharge meets license conditions.	% compliance with EPA guidelines and regulations	95%
	Sewer network is in workable condition	% of network in condition 3 or greater	90%
	Provide treated effluent for irrigation	Availability of minimum supply	80%
Reliability/ responsiveness	Council is responsive to planned and unplanned disruptions to service supply.	% compliance with Council documented response times	90% with councils' response time charter: Defined as the maximum time to have staff on site Priority 1: (Major spill, significant environmental or health impact, or affecting large number of consumers i.e. a major main) Response time during working hours: 1 hr Response time after hours: 1hr Priority 2: (Moderate spill, some environmental or health impact, or affecting small number of consumers i.e. other mains)

			Response time during working hours: 1hr Response time after hours: 2hrs Priority 3: (Minor spill, little environmental or health impact, or affecting a couple of consumers) Response time work hours: 2hrs Response time after hours: 4hrs
Sustainability	Assets are managed with respect for future generations.	Adopt a life cycle approach to managing and maintain existing assets	Maintenance costs are within industry benchmarks
	Assets meet financial sustainability ratios.	Consumption ratio	Between 50% and 75%
		Renewal funding ratio	Between 90% and 110%
		Long term funding ratio	Between 95% and 105%

A1.6 Future demand

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset condition

Demand for new services will be managed through a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand. Councils current system has capacity to accommodate the expected growth of the LGA.

Table 4 Future demand

Demand factor	Impact on assets
Population	Current population growth estimates predict steady growth of 1.01% annually until 2040 and is not expected to make a significant impact on assets due to the current capacity of the network.
Increasing costs	Will be a requirement to continue to maximise service delivery within the funding limitations.
Industry	Anticipated upgrades and an increase in the number of inmates housed at the Junee Correctional Centre could potentially impact the capacity of the existing network.
Environment and Climate	There is likely to be tightening of controls on discharges from the sewerage system and greater environmental controls. Further, it is likely that effluent reuse schemes will increase.
Technology	May require improved environmental management of construction and the management of the sewerage network into the future.

A1.7 Maintenance strategies

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 functioning - e.g. sewer pipe or pump repair - but excluding rehabilitation or renewal. It is operating expenditure required to ensure that the asset reaches its expected useful life. Typically, this can be categorised as:

- Operations - regular activities to provide services such as public health, safety and amenity, e.g., cleaning, street sweeping, utilities costs and street lighting.
- Reactive maintenance - work on breakdowns, failures and or damaged assets that are not operating or are about to fail on an ad hoc basis.
- Planned proactive maintenance - works identified through scheduled maintenance/asset inspections whereby assets are not operating as designed or to 100% capacity.

The ability to schedule and leverage economies of scale to reduce the unit rate cost of rectifying defects, is critical to the prudent use of Council's funds. As such frequent inspections of Council's sewer portfolios in accordance with the hierarchy/criticality of the assets is essential for the sustainable management of Council's infrastructure. Maintenance works on Council's pipe network are largely reactive based upon customer complaints.

A1.8 Renewal strategies

Asset renewal and replacement is typically undertaken to either:

- ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate
- ensure the infrastructure is of sufficient quality to meet the service requirements.

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- have a high consequence of failure
- have a high utilisation and subsequent impact on users would be greatest
- the total value represents the greatest net value to the organisation
- have the highest average age relative to their useful lives
- are identified in the Asset Management Plan as key cost factors
- have high operational or maintenance costs
- where replacement with modern equivalent assets would yield material savings.

The ranking criteria used to determine priority of identified renewal and replacement proposals is outlined below.

Table 5 Renewal ranking criteria

Criteria	Weighting
Risk posed by asset failure	50%
Asset criticality	25%
Overall benefit to network operation	25%

Further, Council currently considers the impacts of climate change in the design and specification of replacement assets on an informal basis. Decisions in upgrading assets to meet changing performance/capacity requirements beyond current standards are aimed at delivering best value for current and future generations however these processes should be reviewed and formalised.

A1.9 Expenditure projections

Table 6 Budget gap by asset group

Budget gap by asset group			2021/22 Budget	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Sewer	**Actual**											
		Renewal	272	120	134	134	200	348	120	243	196	386
		New and Expanded Assets	14	6	7	7	11	18	6	13	10	20
		Maintenance and Operations	385	392	400	408	417	425	433	442	451	460
		Total Expenditure	671	518	541	549	628	791	559	698	657	866
	Required											
		Required Renewal (Depreciation)	285	292	300	307	315	323	331	339	348	357
		New and Expanded Assets	14	6	7	7	11	18	6	13	10	20
		Required O&M	252	259	265	272	279	286	293	300	308	316
		Total	552	557	572	586	604	627	630	653	666	693
		Overall (GAP)	**119**	**-39**	**-30**	**-37**	**23**	**164**	**-71**	**45**	**-10**	**173**

Figure 1 Sewer network expenditure

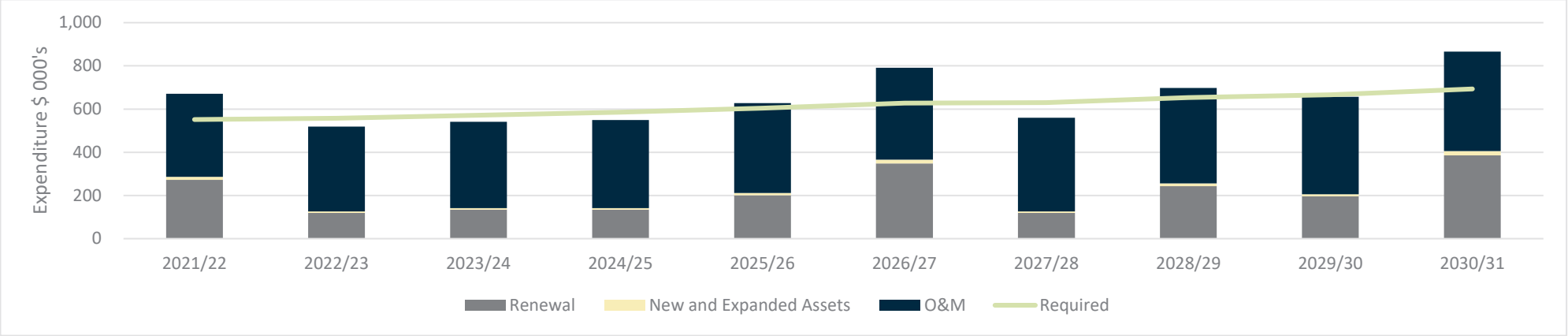


Figure 2 Sewer renewals

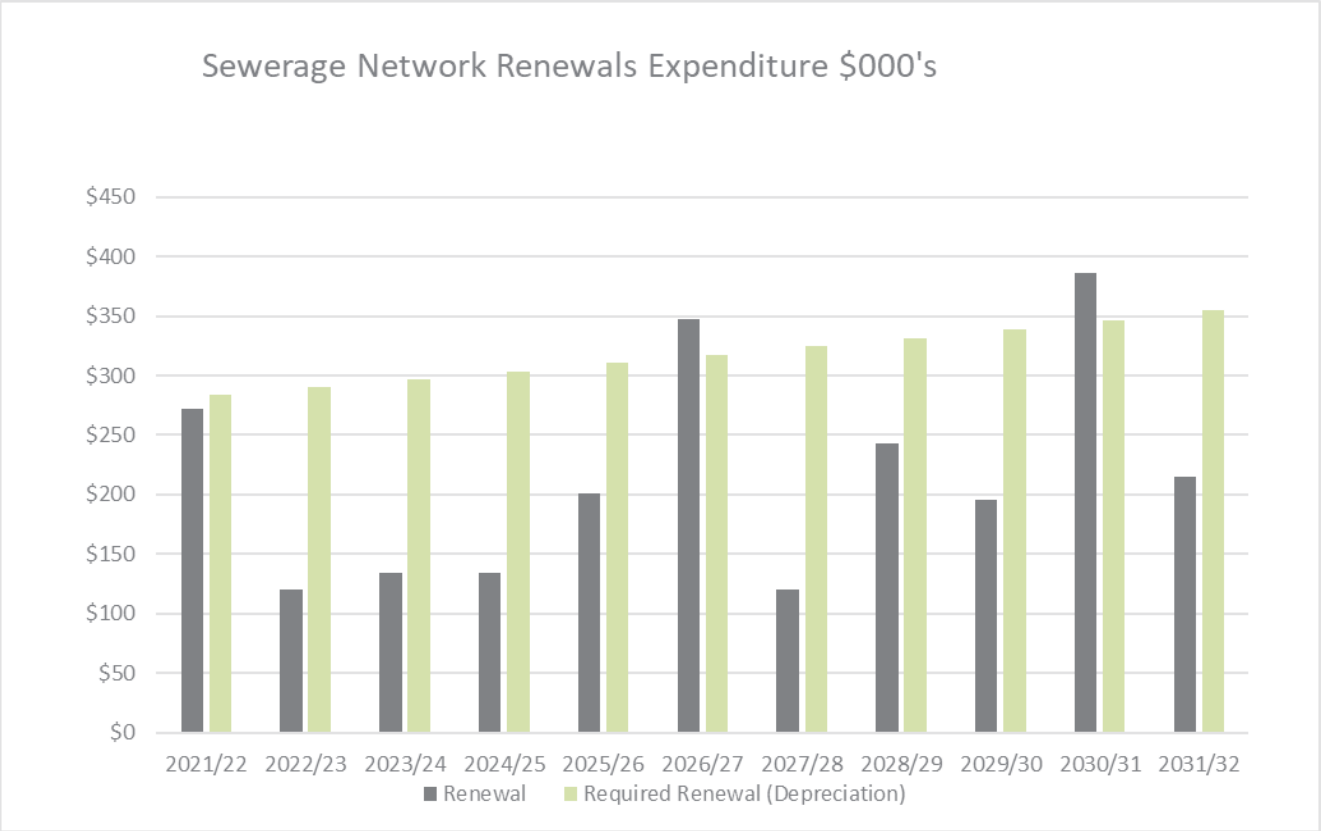


Figure 3 Sewer operations and maintenance

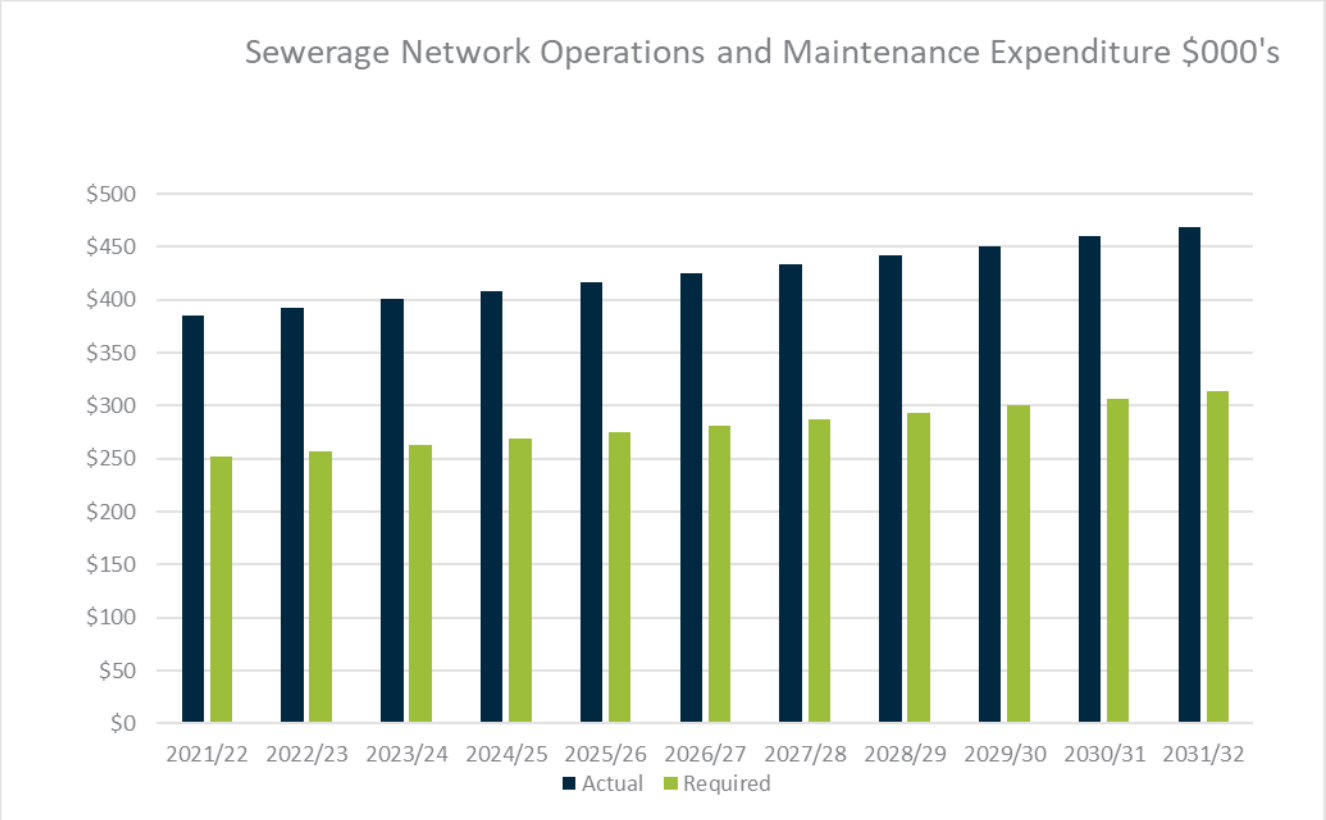


Figure 4 Sewer sustainability ratios

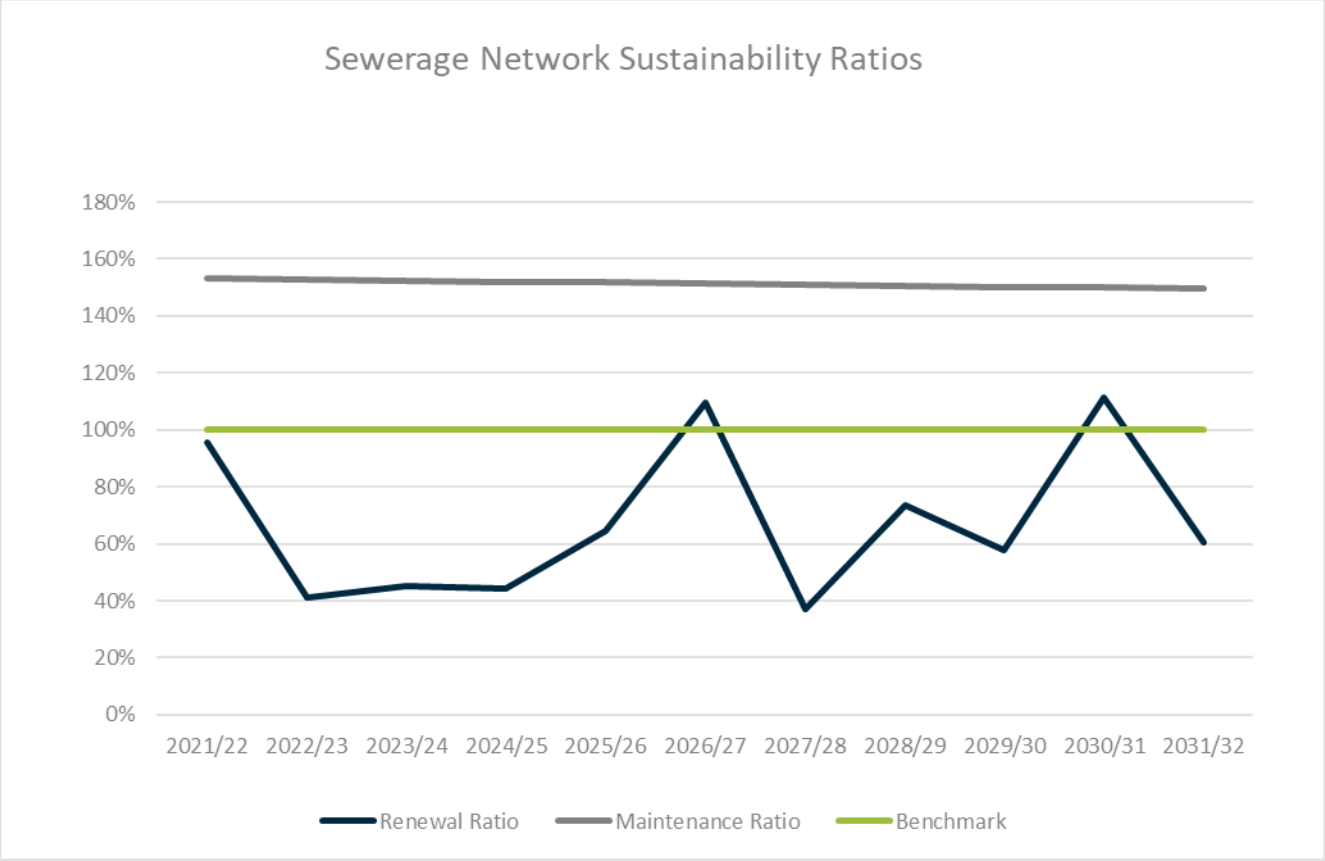
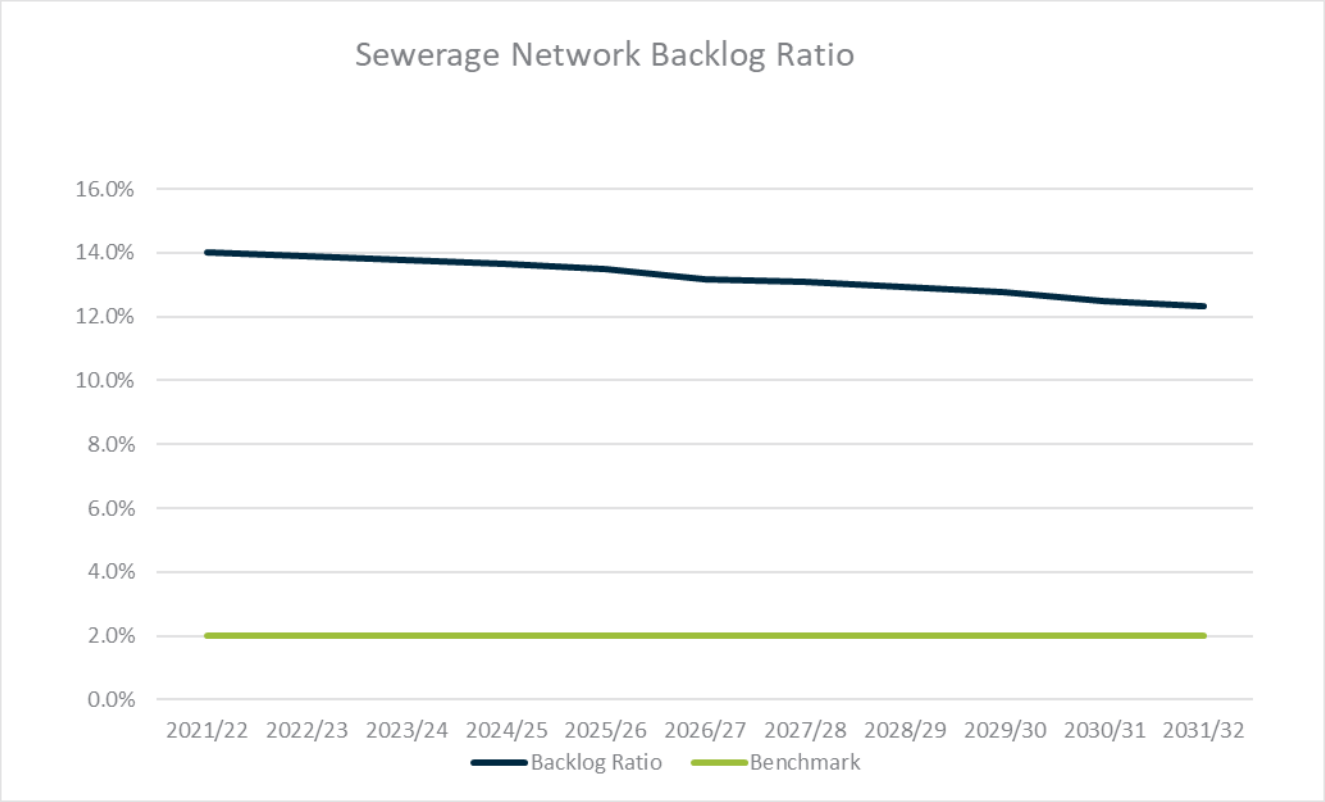


Figure 5 Sewer financial ratios



A1.10 Risk - critical assets

Council is currently in the processes of assessing the criticality of its sewer portfolio. The following attributes will form the key factors when reviewing the criticality of its assets.

Table 7 Sewer asset criticality

Sewer	High	Medium	Low
Trunk main	Yes		
Material	Clay	Concrete / PVC	
Flood zone		Yes	
Waterway	Line runs parallel to waterway	Line runs perpendicular to waterway	
Reticulation size	> 300mm diameter	200 - 300mm diameter	150mm diameter
Treatment Facility	Yes		
Catchment	Large	Medium	Small

Council is currently in the process of identifying its critical assets.

A1.11 Risk – risk management

Junee Shire Council utilises a corporate risk framework which aligns with ISO 31000:2009. The framework has been adopted for Council's sewer assets and highlights the strategic risks which impact Council's asset portfolio.

Table 8 Sewer strategic risks

Hazard	Potential impact (risk)	Consequence	Likelihood	Inherent risk
Contamination of environment by sewage due to inadequate planning	Release of untreated effluent, regulatory breaches, litigation, fines	Moderate	Likely	**High**
Frequent interruptions to supply due to main breaks/failures	inadequate planning leading to loss of confidence in Council's sewer system	Moderate	Likely	**High**
Individual or group take action against Council	Groundwater/air/land effected by pollutants Significant financial impost	Moderate	Unlikely	**Medium**
Plant or equipment damaged by deliberate acts of vandalism or sabotage	Effluent released without adequate treatment	Moderate	Possible	**High**
Damage to sewer facilities due to natural events	Disruption to service, financial loss	Major	Likely	**High**
Chemical/gas leakage at wastewater treatment plant	Temporary loss of sewage services, short-term environmental implications, health issues	Major	Unlikely	**Medium**
Power outage to wastewater treatment plants, sewage pumping stations and other major facilities	Environmental and health issues, loss of sewage services	Minor	Likely	**Medium**
Failure of key sewer contractors	Public health issues, financial loss, damage to reputation	Moderate	Possible	**High**
Loss of repeaters, telemetry and/or SCADA system	Environmental or health issues	Moderate	Unlikely	**Medium**
Sewer systems inappropriately operated	Contamination of environment and/or lack of service delivery Health pandemic halves staff numbers	Moderate	Rare	**Medium**
Loss of experienced and qualified staff	Loss of corporate and technical knowledge of councils infrastructure	High	Possible	**High**

A1.12 Confidence levels

The confidence in the asset data used as a basis for the forecasts has been assessed using the following grading system.

Table 9 Confidence levels

Confidence grade	General meaning
Highly reliable	Data based on sound records, procedure, investigations and analysis that is properly documented and recognised as the best method of assessment.
Reliable	Data based on sound records, procedures, investigations and analysis which is properly documented but has minor shortcomings; for example, the data is old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation.
Acceptable	Data based on sound records, procedures, investigations and analysis with some shortcomings and inconsistencies.
Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported or extrapolation from a limited sample.
Very uncertain	Data based on unconfirmed verbal reports and/or cursory inspection and analysis.

Table 10 Sewer network confidence

Asset Plan	Inventory	Condition	Age	Overall
Sewer	Reliable	Uncertain	Reliable	Acceptable

The overall confidence level of the plan is considered to be '**acceptable**'.

A1.13 Improvement plan

We currently observe that Council's sewer portfolio has 57% of its sewer mains in unsatisfactory condition, this is a significant risk to Council and is resulting in a high level of backlog for the asset class. It is likely that this assessment of the condition of Council's assets is age based and as such it is pertinent that Council undertakes condition sampling to observe whether the current stated condition is representative of the network. Council has started this process with preliminary sampling highlighting that the condition of assets is better than the expected condition due to age.

Further it should be noted that while there is an overall average annual surplus on expenditure this is primarily attributable to council maintenance expenditure and as such does not address the issues regarding the condition of the network. Council should review whether the current ratio of operational and capital expenditure is appropriate and whether a targeted approach can be undertaken to resolve the poor condition of the network.

Table 11 Improvement plan

Task no	Task	Responsibility	Resources required	Timeline
1	Develop sewer condition inspection strategy.	Assets	Internal	3 months
2	Undertake condition sampling inspection of sewer assets.	Assets	Internal	2 years
3	Document clear asset lifecycle strategy for all assets, which is to be supported by Council's Long Term Financial Plan.	Assets/Finance	Internal	1 year
4	Review asset capitalisation procedure and develop asset capitalisation review procedure involving project managers, asset managers and finance.	Finance	Internal/external	2 years
5	Develop clear and concise service levels for community consultation.	Assets/IP&R	Internal/external	1 year
6	Undertake risk and criticality assessment for Council's assets.	Assets	Internal	1 year
7	Develop inspection and maintenance strategies around critical assets and highlight emergency response plans should there be a major service disruption within the assets.	Assets	Internal/external	1 year
8	Review sewer roles and responsibilities and ensure all asset management functions are allocated and being completed.	Assets	Internal/external	1 year
9	Prepare succession plan and material for council's sewer team	Assets	Internal	3 years

Transport and Stormwater Asset Management Plan

This asset management plan covers the portfolio of transport and stormwater assets that deliver a wide range of services to the Junee Shire Council ('Council') community. These include services such as roads, bridges, footpaths, stormwater pipes, channels and pits.

As the owner and operator of transport and stormwater assets, Council has a responsibility for a number of functions including:

- maintenance
- renewal and refurbishment
- upgrades and improvements
- disposal of assets.

The planning of these functions is outlined in this asset management plan.

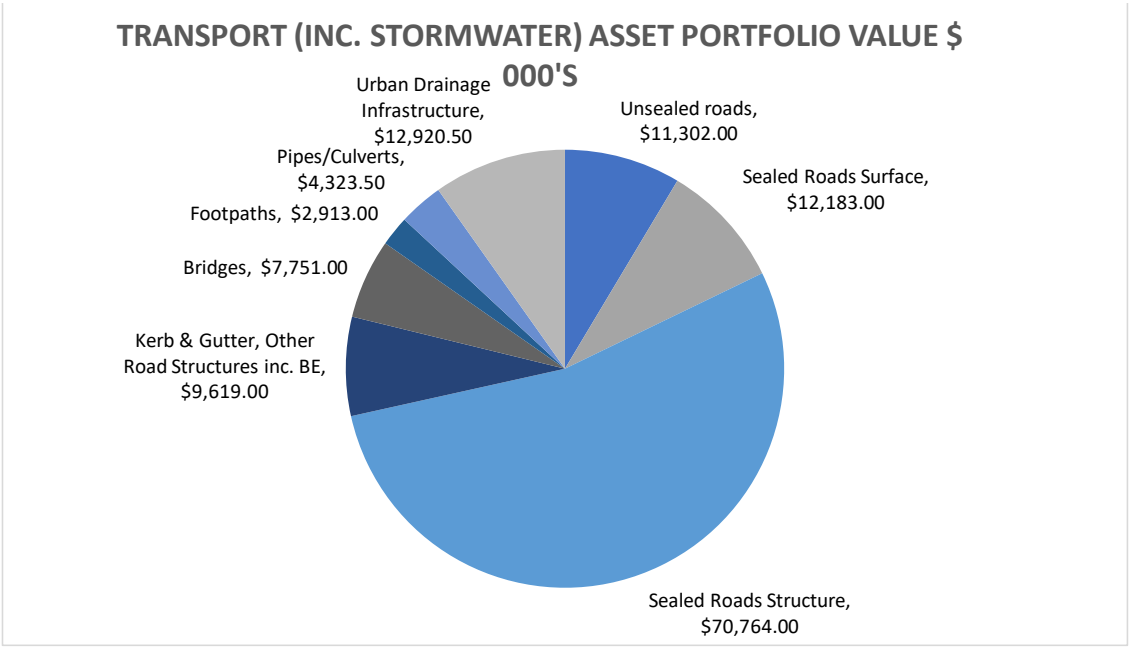
A2.1 Purpose of this plan

The purpose of this asset management plan is to develop a strategic framework for the maintenance and renewal of transport and stormwater assets and to provide an agreed level of service in the most effective manner.

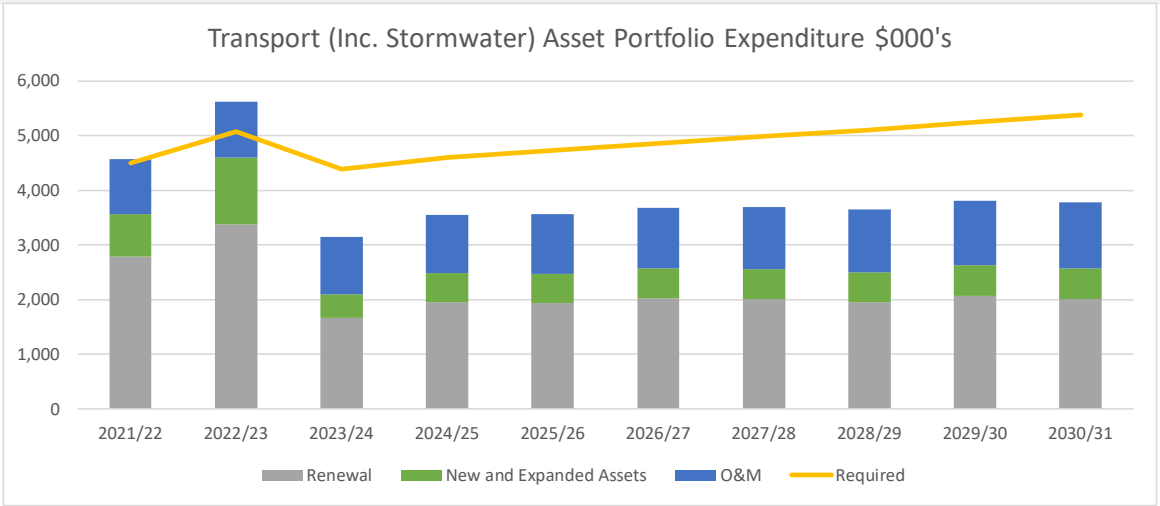
This plan includes the following scope of management:

- asset inventory, values and condition
- asset based levels of service
- demand and service management
- risk management
- development of the long-term financial plan (LTFP) for the maintenance and renewal of transport and stormwater assets.

A2.2 Portfolio overview



Infrastructure Ratios	Actual 2021/22	Estimated 2030/31	Funding gap	
Infrastructure renewals ratio	151.43%	84.41%	Yr 1	$946
			5 Yr Average	$388
			10 Yr Average	$72
Infrastructure Ratio	1.89%	1.60%	Yr 1	$0
			5 Yr Average	$0
			10 Yr Average	$0
Maintenance Ratio	53.49%	49.40%	Yr 1	(-$875)
			5 Yr Average	(-$953)
			10 Yr Average	(-$1,050)
Total Funding Gap			Yr 1	$71
			5 Yr Average	(-$565)
			10 Yr Average	(-$979)



A2.3 Asset inventory, values and condition

The assets covered by this asset management plan are shown below:

Table 1 Transport and stormwater asset inventory

Assets	Units	Unit of measure
Roads		
Local – Sealed	km	521.24
Local – Unsealed	km	316.79
Regional – Sealed	Km	46.09
Kerb and Gutter	km	61.86
Bridges		
Bridge	m	193.7
Box Culverts	m	310.2
Pathways		
Footpaths – Sealed	km	7.38
Footpaths – Unsealed	km	0.16
Shared Access Paths	km	15.42
Stormwater		
Box Culverts – urban	Km	0.44
Box Culverts – rural	km	0.39
Open Drains	km	4.05
Pipes – urban	km	14.38
Pipes – rural	km	3.5
Pits	No.	672

Table 2 Transport and stormwater summary

Asset category	Fair Value $ 000's	Gross Cost $ 000's	Condition 1 – excellent	Condition 2 – good	Condition 3 – satisfactory	Condition 4 - poor	Condition 5 – very poor
Unsealed roads	9,984	11,302	16%	61%	20%	3%	0%
Sealed Roads Surface	6,300	12,183	42%	37%	18%	3%	0%
Sealed Roads Structure	50,748	70,764	42%	41%	16%	1%	0%
Kerb & Gutter, Other Road Structures inc. BE	4,846	9,619	14%	36%	39%	11%	0%
Bridges	4,758	7,751	0%	72%	21%	7%	0%
Footpaths	1,821	2,913	9%	65%	24%	2%	0%
Pipes/Culverts	2,218	4,323	2%	96%	1%	1%	0%
Urban Drainage Infrastructure	7,837	12,921	19%	66%	14%	1%	0%

A2.4 Roles and responsibilities

Council is currently developing its roles and responsibilities matrix for asset classes as part of the Strategic Asset Management Plan (SAMP) improvement plan.

A2.5 Asset based levels of service

Table 3 Service levels transport and stormwater

Service level area	Service level outcome	Level of service	Performance measure process	Performance target
Capacity	Affordability	The services are affordable and managed using the most cost-effective methods for the required level of service.	Review of service agreements and benchmark with other councils.	Maintenance/opex budget expenditure +/-10% of quarterly budget review.
		Council maintains its assets.	Asset maintenance ratio (measured by actual maintenance expenditure / required maintenance expenditure).	OLG benchmark 100%.
	Health and safety	Sufficient capacity to protect life and property.	Number of customer requests of flooding (with significant safety/damage) reported annually.	Number of requests <5.
Condition	Quality/condition	Provide sealed road with smooth ride appropriate to road type and speed limits.	Survey of road pavement condition.	90% of road pavements in condition 3 or better.
		Provide kerb and gutter in a good condition and fit for purpose.	Survey of kerb and gutter asset condition.	75% of kerb and gutter in condition 3 or better.
		Provide sealed footpaths which are smooth and free of defects.	Survey of footpath condition.	75% of footpaths in condition 3 or better.
		Pipes and culverts in adequate condition to convey design stormwater flows.	Survey of drainage network condition.	75% of drainage assets condition 3 or better.

Service level area	Service level outcome	Level of service	Performance measure process	Performance target
		Assets are maintained in a satisfactory condition.	Backlog ratio (estimated cost to bring asset to a satisfactory condition / written down value of the assets).	OLG benchmark <2%.
Function	Reliability/ responsiveness	Be responsive to the needs of the road and transport asset users.	Number customer requests received.	85% of requests are completed within Council's documented response times
		Planned works completed in accordance with schedules.	Completion of scheduled work.	85% completion of council's annual works program
		Proactive cyclic inspections of known hotspots of flooding.	Completion of scheduled inspections.	100% completion within service standard.
		Planned inspection and associated works completed in accordance with schedules.	Completion of scheduled inspections work.	90% completion of planned inspection program.
	Sustainability	Continues to provide road and transport assets to meet the need of the community.	Complete capital work program on time and on budget.	CAPEX budget expenditure +/-10% of quarterly budget review.
		Assets are being renewed in a sustainable manner.	Asset renewal ratio (asset renewal expenditure / annual depreciation expense).	OLG benchmark >100%.
	Customer satisfaction	Deliver great customer service.	Percentage of requests completed within councils documented service response times.	Target > 90%.

Service level area	Service level outcome	Level of service	Performance measure process	Performance target
		Fast and efficient response to reactive road maintenance requests.	Planned versus reactive maintenance distribution work order reports.	> 60 planned: 40 reactive ratio.
		Fast and efficient response to reactive maintenance requests.	Planned versus reactive maintenance distribution. Asset management work order reports.	> 60 planned: 40 reactive ratio.

A2.6 Future demand

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset condition. Examples of non-asset solutions include encouraging community title in development, so the strata body owns the roads and footpaths, but they are available for the public use.

Demand for new services will be managed through a number of strategies:

- supply side - a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand
- regulation - restrict time of use and type of use

Table 4 Future demand

Demand factor	Impact on assets
Population	Current population growth estimates predict steady growth of 1.01% annually until 2040 and is not expected to make a significant impact on the current network.
Industry	Heavy Vehicle and Freight movements are expected to increase 3% in the region through the life of the plan. This may cause accelerated degradation of councils transport infrastructure.
Demographics	The LGA's aging demographic is likely to require an increase in the accessibility and DDA compliance of Council's transport and stormwater assets.
Increasing costs	Will be a requirement to continue to maximise service delivery within the current funding limitations and cost shifting by state and federal bodies.
Environment and climate	May impact on the environmental sustainability of Council's assets and their increasing move to renewable energy sources.

A2.7 Maintenance strategies

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 functioning - e.g. footpath repair, pothole patching - but excluding rehabilitation or renewal. It is operating expenditure required to ensure that the asset reaches its expected useful life. Typically, this can be categorised as:

- Operations - regular activities to provide services such as public health, safety and amenity, e.g., cleaning, street sweeping, utilities costs and street lighting.
- Reactive maintenance - work on breakdowns, failures and or damaged assets that are not operating or are about to fail on an ad hoc basis.
- Planned proactive maintenance - works identified through scheduled maintenance/asset inspections whereby assets are not operating as designed or to 100% capacity.

The ability to schedule and leverage economies of scale to reduce the unit rate cost of rectifying defects, is critical to the prudent use of Council's funds. As such frequent inspections of Council's transport portfolios in accordance with the hierarchy/criticality of the assets is essential for the sustainable management of Council's infrastructure.

Council's roads and drainage assets are monitored and maintained to a safe standard that will maximise their long-term benefit to the community and in accordance with priorities set through asset management planning. As part of Council's maintenance regime, a regular inspection of the road portfolio is essential. There are currently three types of inspections carried out:

- detailed condition inspection carried out every five years prior to the revaluation of the road portfolio
- ad hoc inspections by Council staff as required
- inspections as a result of customer queries and requests.

Council currently undertakes and plans its maintenance works primarily based on condition and risk of assets.

A2.8 Renewal strategies

Council will plan capital renewal and replacement projects to meet service level objectives and minimise infrastructure service risks. The capital program has been primarily driven by asset condition and works are prioritised on the following factors:

- safety risk – accident potential
- heavy vehicle use
- network significance
- cost/benefit
- environmental factors.

Generally, renewals relating to roads will be undertaken on a segment-by-segment basis. In certain circumstances, Council will rely on conditional and non-conditional grant funding the service to renew or upgrade assets. During major emergencies funding is generally available to repair damaged road assets as a result of the emergency. Council must be in a position to take advantage of this funding when available to protect the community assets. To ensure that the community assets are protected it is essential that a detailed record of the current asset condition is fully documented and kept up to date.

Further, Council currently considers the impacts of climate change in the design and specification of replacement assets on an informal basis. Decisions in upgrading assets to meet changing performance/capacity requirements beyond current standards are aimed at delivering best value for current and future generations however these processes should be reviewed and formalised.

A2.9 Expenditure projections

Table 5 Budget gap by asset group

Budget gap by asset group			2021/22 Budget	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Transport	**Actual**											
		Renewal	2,785	3,372	1,670	1,953	1,937	2,021	2,006	1,947	2,069	2,012
		New and Expanded Assets	779	1,227	433	534	535	550	551	547	563	560
		Maintenance and Operations	1,006	1,027	1,047	1,068	1,089	1,111	1,133	1,156	1,179	1,203
		Total Expenditure	4,570	5,625	3,151	3,555	3,561	3,682	3,690	3,650	3,812	3,775
	Required											
		Required Renewal (Depreciation)	1,839	1,895	1,959	2,014	2,072	2,131	2,192	2,254	2,318	2,383
		New and Expanded Assets	779	1,227	433	534	535	550	551	547	563	560
		Required O&M	1,881	1,945	2,000	2,057	2,116	2,177	2,239	2,302	2,368	2,435
		Total	4,499	5,068	4,393	4,606	4,723	4,857	4,981	5,103	5,249	5,378
		Overall (GAP)	**71**	**558**	**-1,242**	**-1,050**	**-1,162**	**-1,176**	**-1,291**	**-1,453**	**-1,437**	**-1,603**

Figure 1 Transport and stormwater expenditure

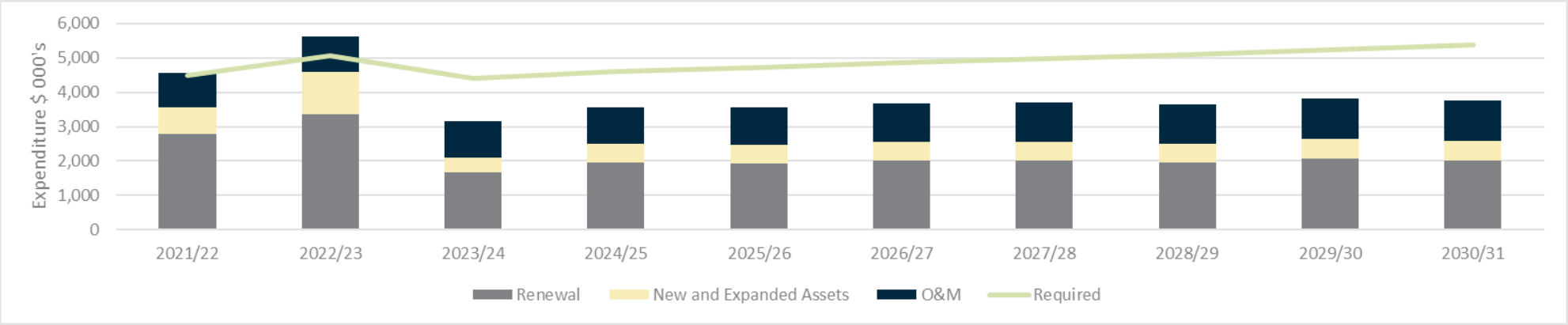


Figure 2 Transport and stormwater renewals

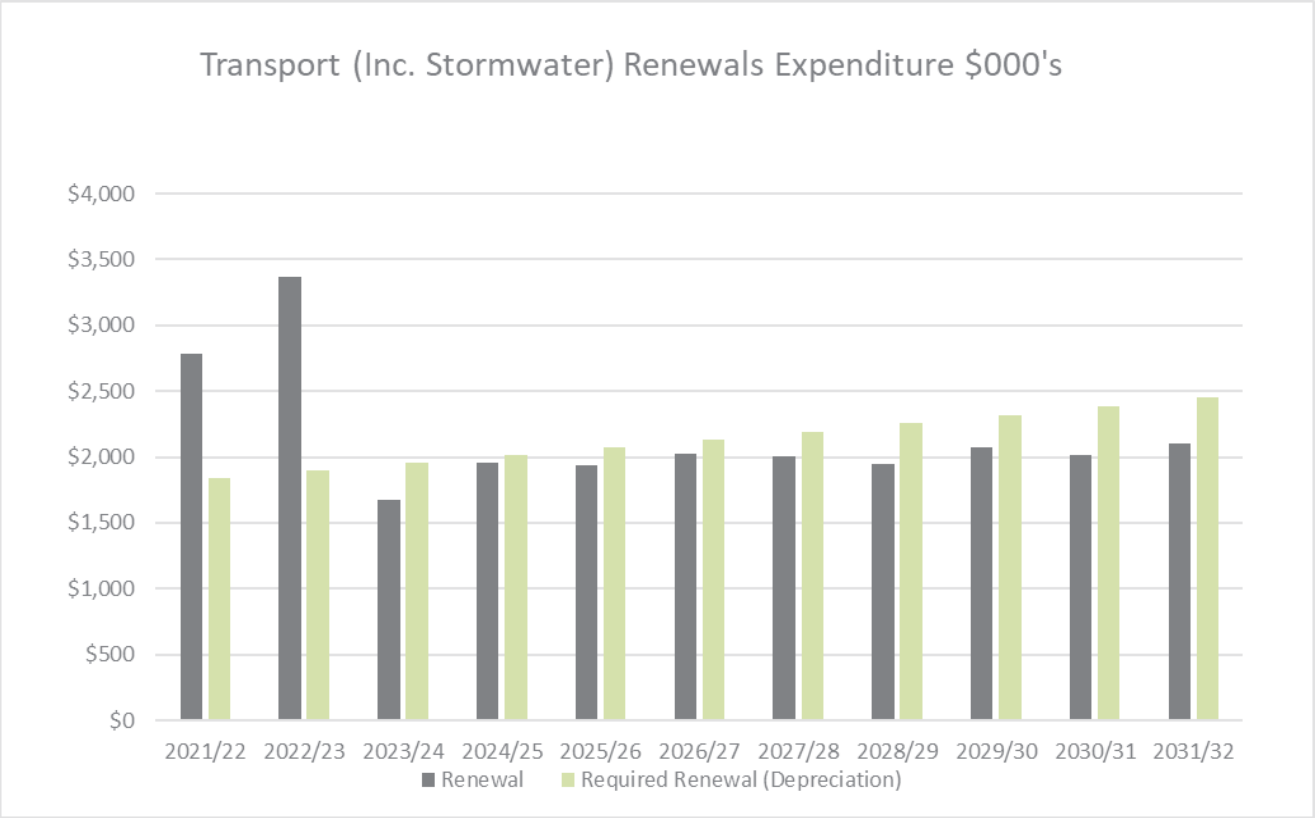


Figure 3 Transport and stormwater operations and maintenance

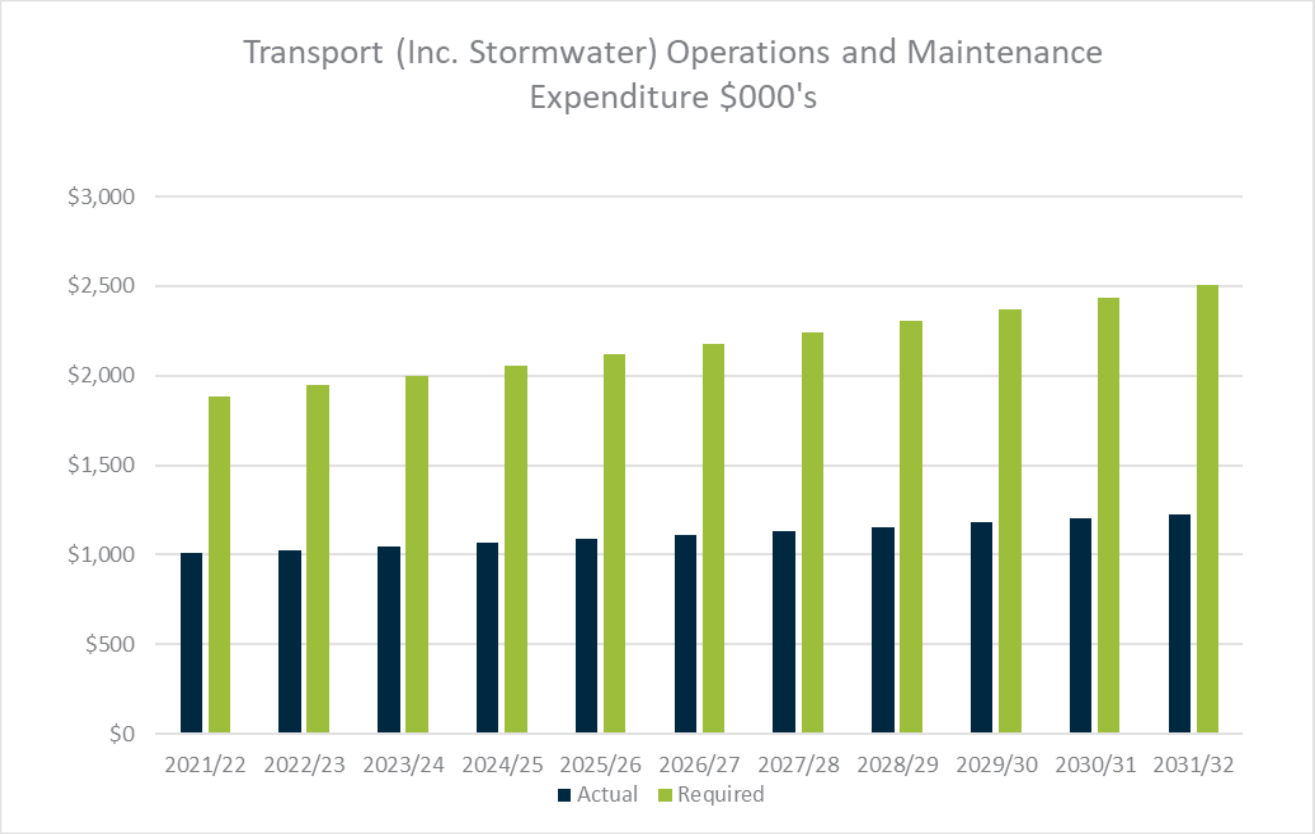


Figure 4 Transport and stormwater sustainability ratios

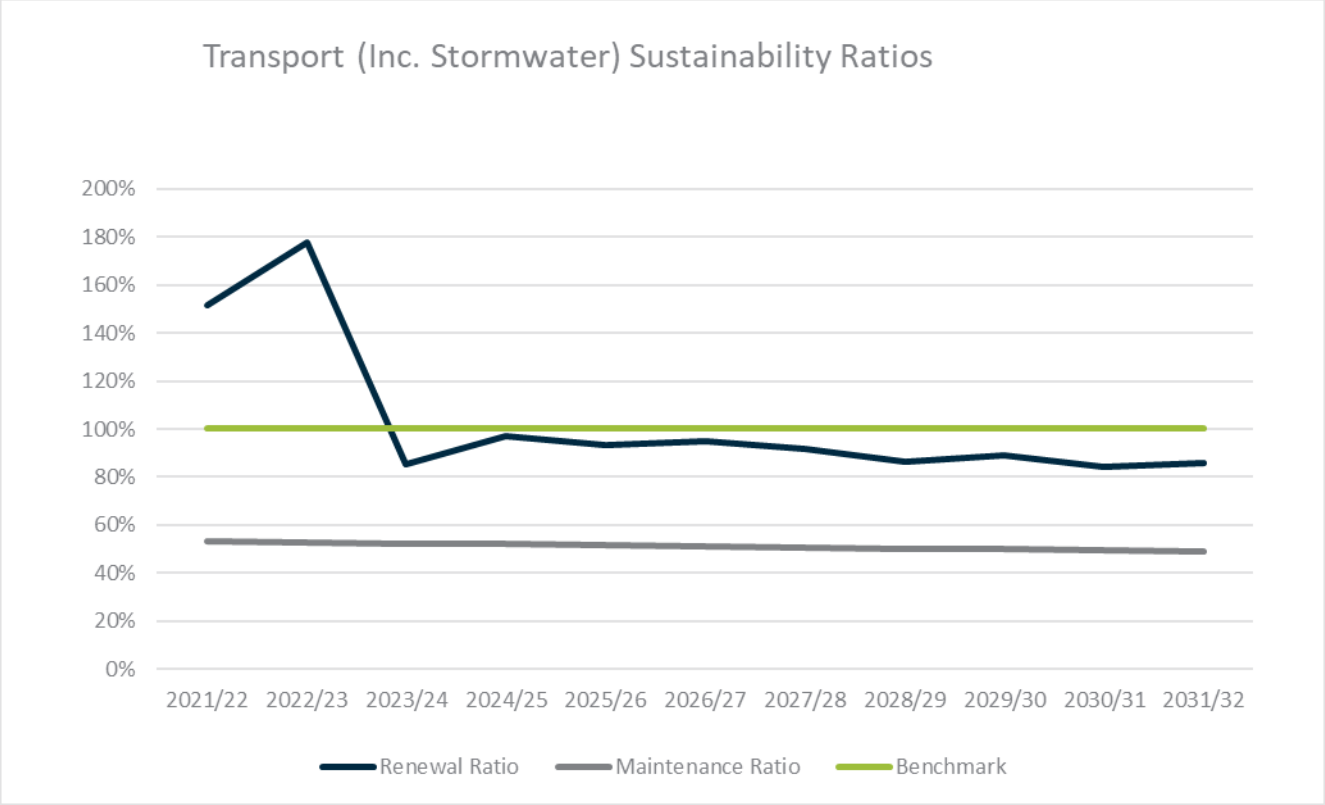
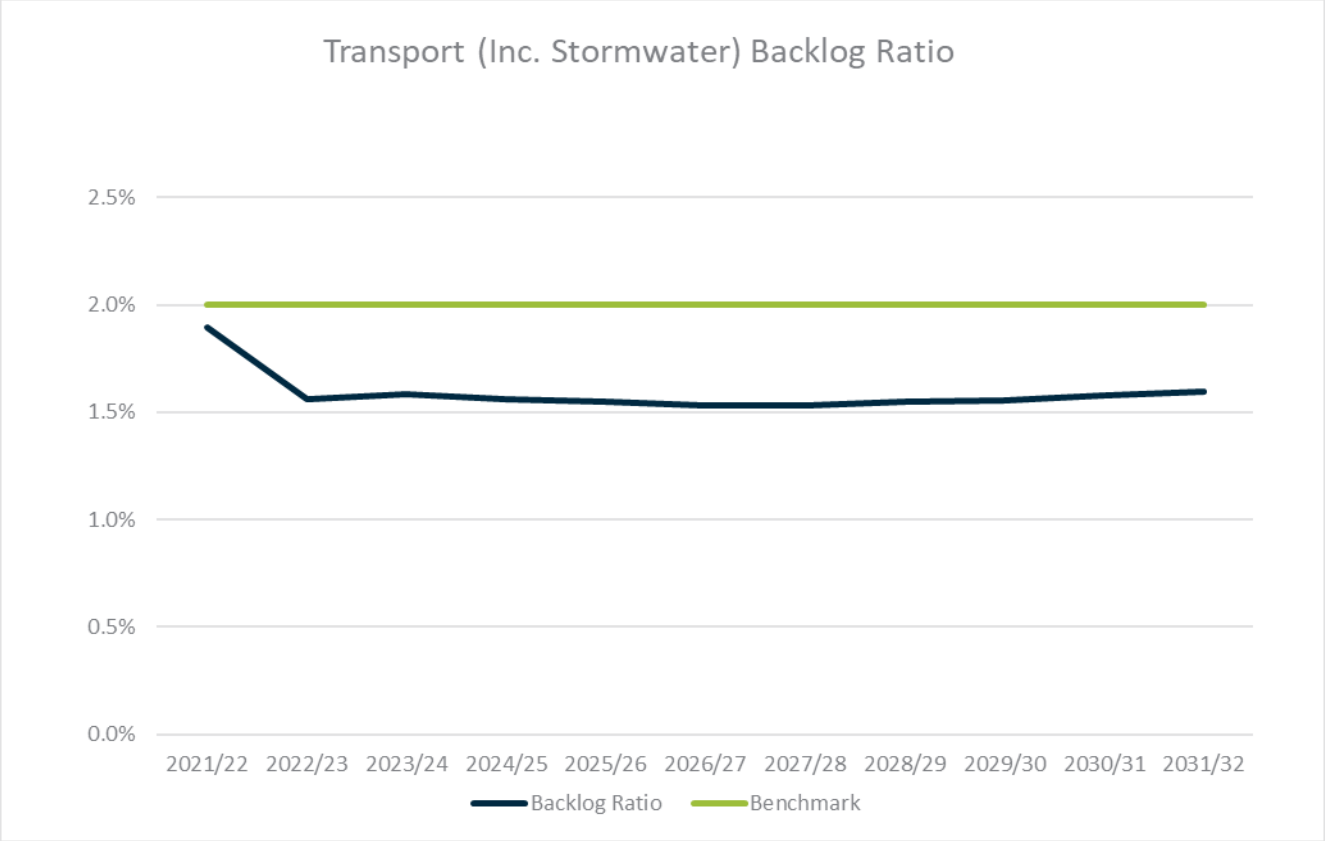


Figure 5 Transport and stormwater financial ratios



A2.10 Risk - critical assets

Council is currently in the processes of assessing the criticality of its transport portfolio. The following attributes will form the key factors when reviewing the criticality of its assets.

Table 6 Transport asset criticality

Confidence grade	High	Medium	Low
Road classification	Regional roads	Urban roads	Rural roads
Waterway area	Road runs parallel to waterway	Road runs perpendicular to roadway	
Emergency services	Police, ambulance	RFS, SES	Council depot
Schools	40km zones		
Bus routes	School bus route		
Accident history	Fatality	Accidents (hospitalisation)>5	
Isolated communities		Only one road providing access to or from a community	

Table 7 Stormwater asset criticality

Attribute	High	Medium	Low
Asset size	Box culvert or open channel	1200mm - 600mm diameter	<= 525 mm diameter
Flooding (sub catchment)	<1:5 recurrent interval storm capacity	<1:20 recurrent interval storm capacity	<1:100 recurrent interval storm capacity
Outlet structure	Waterway environment		
Material		AC	PVC

Council is currently in the process of identifying its critical assets.

A2.11 Risk – risk management

Junee Shire Council utilises a corporate risk framework which aligns with ISO 31000:2009. The framework has been adopted for Council's Transport and Stormwater assets and highlights the strategic risks which impact Council's asset portfolio.

Table 8 Transport and stormwater strategic risks

Hazard	Potential impact (risk)	Inherent risk	Existing controls
Reliance on inaccurate data for infrastructure planning	Financial loss, poor decision making	**High**	• Use of technical experts • Best practice standard and guidelines
Insufficient funds allocated for roads infrastructure maintenance	Catastrophic failure, decreased community satisfaction, increased liability claims (trips, potholes), increased risk of injuries, increased future costs to replace failed assets if not satisfactorily maintained.	**High**	• Road maintenance program • Road safety officer • Levels of service • Speed limits • Asset management
Works occurring on contaminated land	Environmental damage, staff illness or injury	**High**	• Safety systems • Training and education
Flooding on roads	Public safety risk, injury, litigation	**High**	• Road closures notified to media, neighbouring shires • Road closure signage • Flood warning signs • Depth markers in causeways
Road closure signage and barriers removed or ignored	Asset damage, injury	**Extreme**	• Inspections • Road closures notified to media, neighbouring shires • Flood warning signs • Depth markers in causeways • Civil Liability Act 2002

Hazard	Potential impact (risk)	Inherent risk	Existing controls
Works occurring on eco sensitive land or land identified with endangered species	Environmental damage	**Medium**	• Review Environmental Factors
Footpaths disturbed by other authorities or residents without approval	Financial loss, litigation	**Medium**	• Approvals process
Excessive wet weather resulting in delayed maintenance program	Injury, asset damage	**High**	• Access to natural disaster funding (if available) • Project scheduling and planning includes consideration of possible weather impacts
Asset failure or reduced life due to use of substandard materials, construction methods etc	Injury, property damage, financial loss, decrease in productivity	**Medium**	• Specification of materials and methods • Surveillance and testing by Council
Errors or negligence in carrying out maintenance activities	Injury, litigation, damage to reputation	**High**	• Separation of duties • Surveillance and supervision
Excessive wet weather resulting in delayed resealing of state or regional roads	Returning funding, financial loss	**High**	• Reallocation of regional funding to other projects
Bridge defect not detected by Council resulting in bridge failure	Injury, property damage, litigation, financial loss, damage to reputation	**Medium**	• Inspection program Asset maintenance program
Diminishing gravel resources	Project delays, disruption to services	**High**	

A2.12 Confidence levels

The confidence in the asset data used as a basis for the forecasts has been assessed using the following grading system.

Table 9 Confidence levels

Confidence grade	General meaning
Highly reliable	Data based on sound records, procedure, investigations and analysis that is properly documented and recognised as the best method of assessment.
Reliable	Data based on sound records, procedures, investigations and analysis which is properly documented but has minor shortcomings; for example, the data is old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation.
Acceptable	Data based on sound records, procedures, investigations and analysis with some shortcomings and inconsistencies.
Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported or extrapolation from a limited sample.
Very uncertain	Data based on unconfirmed verbal reports and/or cursory inspection and analysis.

Table 10 Transport and stormwater confidence levels

Asset Plan	Inventory	Condition	Age	Overall
Transport (inc. sormwater)	Reliable	Acceptable	Reliable	**Reliable**

The overall confidence level of the plan is considered to be '**reliable**'.

A2.13 Improvement plan

Overall, Council's transport infrastructure is in good condition with the exception of Council's kerb and gutter and footpath assets which have 12% and 8% of assets below satisfactory condition. This is evident through Council's backlog percentage which remains below the OLG 2% benchmark through the forecasting period. Key to Council's transition to a strategic approach to manage its portfolio will be to assess the criticality of its asset portfolio and to engage the community on its desired levels of service. Currently we observe that Council is well below (60%) its estimated required operational expenditure for transport and stormwater assets and should undertake a review to determine whether requirements/allocated funding is appropriate.

Table 11 Improvement plan

Task no	Task	Responsibility	Resources required	Timeline
1	Develop transport and stormwater condition inspection strategy.	Assets	Internal	3 months
2	Undertake condition inspection of transport and stormwater assets.	Assets	Internal	2 years
3	Document clear asset lifecycle strategy for all assets, which is to be supported by Council's Long Term Financial Plan.	Assets/Finance	Internal	2 years
4	Review asset capitalisation procedure and develop asset capitalisation review procedure involving project managers, asset managers and finance.	Finance	Internal/external	4 years
5	Develop clear and concise service levels for community consultation.	Assets/IP&R	Internal/external	2 years
6	Undertake risk and criticality assessment for Council's assets.	Assets	Internal	1 year
7	Develop inspection and maintenance strategies around critical assets and highlight emergency response plans should there be a major service disruption within the assets.	Assets	Internal/external	4 years
8	Review transport and stormwater roles and responsibilities and ensure all asset management functions are allocated and being completed.	Assets	Internal/external	3 years
9	Prepare succession plan and material for council's transport and stormwater teams	Assets	Internal	3 years
10	Formalise climate change decision criteria and asset lifecycle processes	Assets	Internal	3 years