Extraordinary Meeting of Council - 26 June 2024
Attachments

Wingecarribee
SHIRE COUNCIL

Asset Management Plan – Transport

We're with you

WINGECARRIBEE SHIRE COUNCIL

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Version	Adoption Date	Notes
1	TBC	First version of Asset Management Plan - Transport

Contents

1 Executive Summary

This Asset Management Plan (AMP) is part of a suite of Portfolio AMPs, which together sit under the Asset Management Strategy (AMS). It is to be read in conjunction with the AMS and Four Year Capital Works Program.

This AMP provides an overarching document of Council's management of, and investment in, the Transport Asset Class over a 10-year planning period.

Council manages a transport asset class of over 1,300km of roads plus other assets across a broad range of asset categories worth a combined $1.4B. The average condition of these structures is 2.0, which is defined as therefore being in 'good' condition.

The level of service that Council provides through this asset class can be described within the three categories of: Provision, Renewal, and Maintenance and Operations. What Council delivers through these levels of service are driven by consideration of: Risk Management, Community Satisfaction and Strategies and Masterplans. But is constrained by funding and availability of resourcing.

Review of the 2022 Community Satisfaction Survey shows that community satisfaction is low, albeit consistent, in relation to the provision and quality of footpaths and Local Traffic Management. However the community is increasingly less satisfied year on year in the condition of local roads. The Condition of Local Roads is the largest performance gap identified in this survey across all Council Services.

In accordance with these results, the Provision Level of Service details how the Capital Works Program features investment in new footpath and shared paths across Shire – both through the completion of targeted missing links and the completion of detailed design for large strategic connections to be delivered through grant funding opportunities. The Renewal Level of Service details the results of the 2023 Road Condition Audit and the resultant program of renewal works that will see the local network brought into a satisfactory condition.

In order to provide an analysis of financial investment required across the planning period, calculation of forecast asset base growth must be completed. Asset base growth is calculated through consideration of the value of the asset class growing as result of new and upgrade projects, assets contributed through development, development contributions plans and indexation, as well as subtracting any known asset disposals.

It is forecast that across the planning period the asset base will grow by $467M.

Recommended financial investment for the Renewal Level of Service and Maintenance and Operations Level of Service is calculated at $204M and $85M respectively. These have been calculated through aligning renewals with annual depreciation, and ensuring maintenance and operational budgets increase in step with asset base growth.

The Long-Term Financial Plan is unfortunately not able to accommodate the entirety of this desired financial investment, largely as result of asset base growth exceeding the Council rate peg.

This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure

requirements. Future iterations of the Asset Management Plan will further investigate and identify potential solutions to this difficult situation.

Asset management is a journey of continuous improvement, and so the AMP concludes with a concise Improvement Plan detailing the asset management maturity tasks programmed for the years ahead.

2 Asset Systems and Structures

2.1 Asset Planning Framework

The Asset Management Planning Framework, as summarised in Figure 1, integrates into the wider IP&R Framework, and ensures Council performs the Asset Management functions of planning, coordinating, controlling, executing, monitoring, and improving the activities associated with managing its assets.

In accordance with the Integrated Planning and Reporting (IP&R) Framework, which all NSW Local Governments are subject to, Council is required to prepare a suite of strategic documents – one being the Resourcing Strategy. It is through the Resourcing Strategy that the Asset Management Framework of Council is defined and endorsed.

The Asset Management Framework has three primary components:

1. Asset Management (AM) Policy: defines Council's Asset Management objectives.
2. Asset Management Strategy (AMS): also known as a Strategic Asset Management Plan (SAMP), shows how Council will achieve the objectives of the AM Policy. It is a road map for the delivery of these asset management objectives in accordance with the principles set in the AM Policy. It is to be continually monitored and regularly reviewed, in alignment with the formulation of the Long-Term Financial Plan (LTFP) and the Delivery Program and Operational Plans adopted annually by Council.
3. Asset Management Plans (AMP): further explores the high-level summary contained in the AMS with a detailed analysis of inventory, risk, levels of service and sustainability undertaken. AMPs are developed for all major infrastructure asset classes, grouped by the type of function the assets serve – i.e., community assets or a specific business unit.
    a. Community assets
        i. Transport
        ii. Stormwater
        iii. Buildings and Aquatics
        iv. Open Space and Recreation
        v. Water
        vi. Wastewater
    b. Business units
        i. Cemeteries
        ii. Resource Recovery Centre
        iii. Southern Regional Livestock Exchange

The AMPs are continually reviewed, to ensure long-term sustainability of the Council services they support. They are informed by community consultation and will be used as core inputs into the development of Council's Long Term Financial Plan.

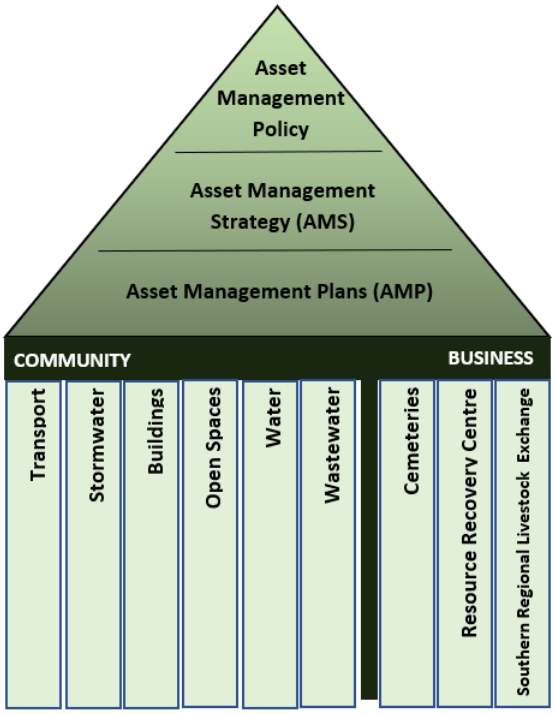


Figure 1: Asset management Planning Framework

2.2 Asset Planning Systems

Wingecarribee Shire Council utilises several databases and systems to deliver on asset planning requirements, specific to road assets. These databases and systems are summarised in Table 1 below:

System	Description
Conquest	Asset register – inventory, condition and attributes
ArcGIS Pro	Spatial data
Technology One – Finance	Budgeting, purchase orders, expenditure
Technology One – Enterprise Content Management (ECM)	Record keeping
Technology One – Customer Request Management (CRM)	Workflow management for customer requests
Pulse – Project Management	Scoping and project control for Capital Projects

Table 1 - Asset Planning Systems

It is however acknowledged that Council has embarked on a digital transformation journey, with Council executing a 10-year contract at the 19 October 2022 Council Meeting with Technology One. This contract will see all Technology One modules and additional options being made available to Council and them being progressively implemented across the organisation. A 10-year roadmap for the implementation of the Technology One suite is currently being developed.

This will generate asset planning outcomes through modernisation and integration of the works management asset register and strategic asset modules. This will enable Council to model asset conditions that will result from 10 year funding scenarios, which will in turn enable data driven decision-making to achieve financial sustainability.

2.3 Organisational Structure

Council has adopted a centralised approach to Asset Planning with all asset management and network planning functions being consolidated within the Assets Team. Management of operations and maintenance, as well as capital project delivery, are primarily distributed across the teams of Shire Presentation, Water Services and Project Delivery. The below figures detail the structure of these teams within the Service and Project Delivery Directorate, the Assets Team, as well as that of the Road and Drainage Team.

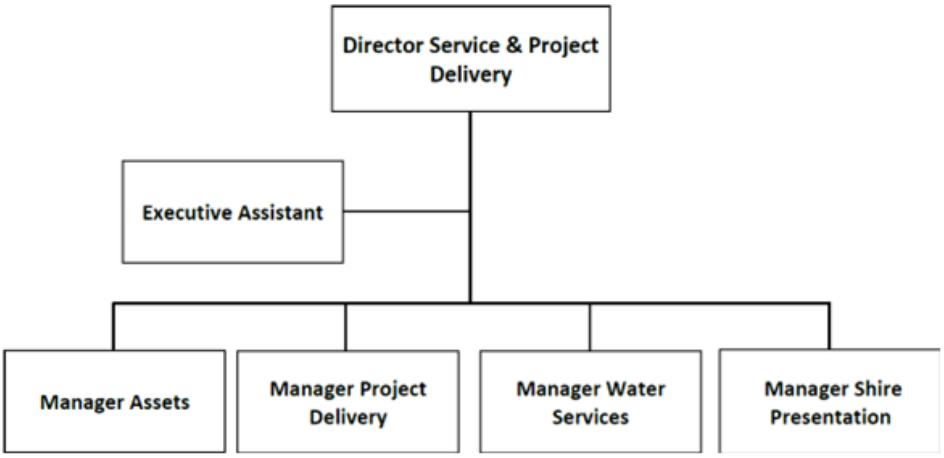


Figure 2: Service and Project Delivery Directorate

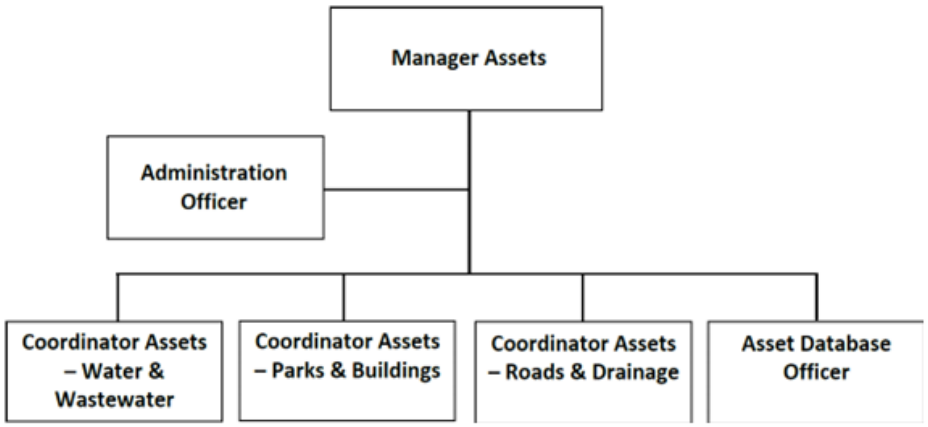


Figure 3: Assets Team Structure

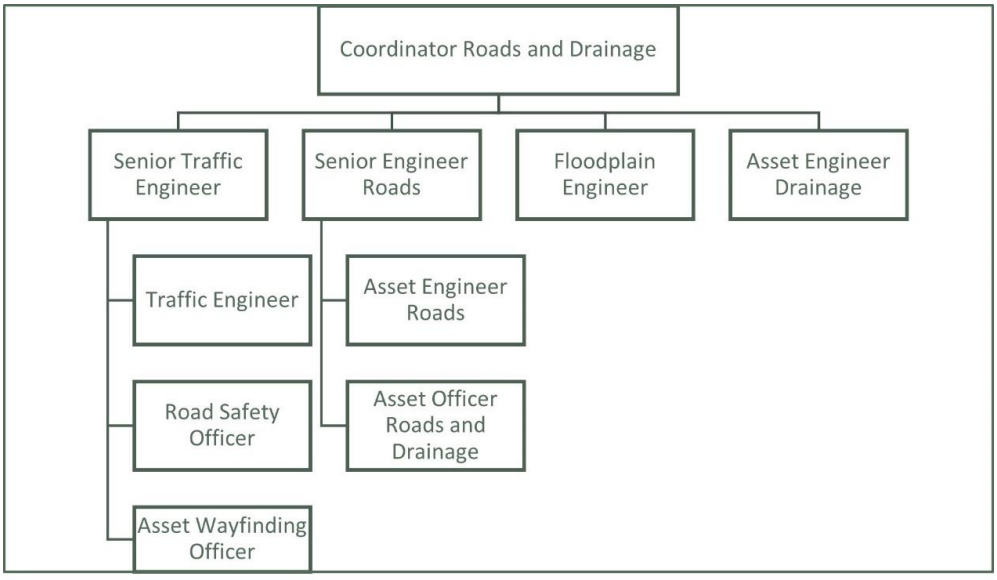


Figure 4: Roads and Drainage Team Structure

3 Our Assets

3.1 Overall Inventory

A summary of the asset types contained in the Transport asset class, and the amount of assets stored in the register is shown in the table below.

Category	Subcategory		Amount	UoM	Value ($)
Roads	Local Roads	Sealed	794.30	Km	$704,817,511
		Unsealed	247.4	Km	$119,889,532
		Lower Order Roads	41.5	Km	-
	Regional Roads	Sealed	92.3	km	$117,313,890
		Unsealed	24.9	km	$14,019,721
	Shoulders (State Roads)		702	km	$2,498,391
Fire Trails	Strategic Trails		29.85	km	-
	Tactical Trails		31.83	km	-
	Management Trails		18.53	km	-
Carparks	Carparks		76,500	m^2	$10,554,614
Bridges	Bridges		59	item	$47,433,271
	Footpath Bridges		5	item	$1,920,038
Footpaths	Cycle paths		78	km	$17,282,882
	Footpaths		170	km	$37,947,266
Kerb and Gutter	Kerb and Gutter		457	km	$62,040,856
Traffic Facilities	Crash Barriers		29.3	km	$7,296,198
	Kerb Extensions (Necking)		70	item	$491,303
	Medians		8,039	m^2	$2,594,732
	Pedestrian Refuges		20	item	$491,041
	Road Crossings		24	item	$462,054
	Roundabouts		53	item	$3,355,405
	Thresholds		95	item	$3,875,567
	Traffic Islands		18	item	$411,748
Street Furniture	Bus Shelters		116	item	$1,604,803

	Litter Bins	107	item	$149,081
	Signs	10,260	item	$3,650,945
	Street Seats	101	item	$210,273

Table 2 - Asset Categories and Types

Asset inventory is maintained and updated through three primary means:

- Recognition of constructed assets – both through Council delivered capital projects, but also assets dedicated to Council through subdivision development.
- Ad-hoc Asset Inspections – inspections are regularly conducted in response to customer or internal requests, as well as part of project scoping phases.
- Scheduled Asset Inspections – all assets are to feature within a schedule of asset inspections. The frequency of inspection would be commensurate to the rate of degradation of the asset, as well as consequence of failure and cost of inspection.

The value and count of transport assets below will differ to that of the Asset Management Strategy due to a comprehensive road and related infrastructure inspection completed in 2023/24.

The split of asset amounts across these asset categories is provided in Figure 5 below.

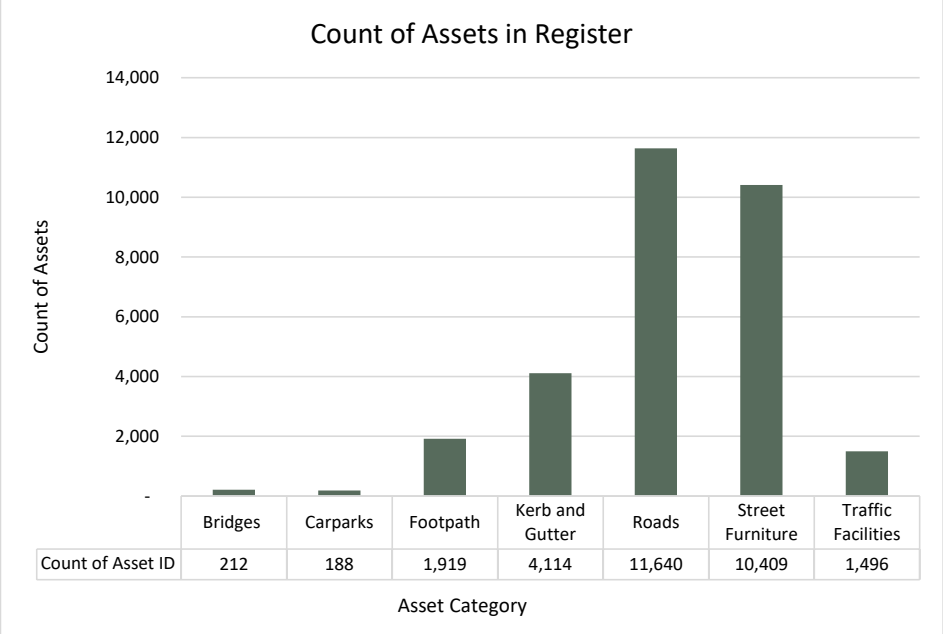


Figure 5: Count of Assets in Register

Square metres are used for the measurement of bridges, carparks, and traffic facilities. Metres have been used to measure roads, Kerb and Gutter and footpaths, whereas

street furniture and traffic facilities are counted as individual assets. This is in line with industry practice for how these assets are measured.

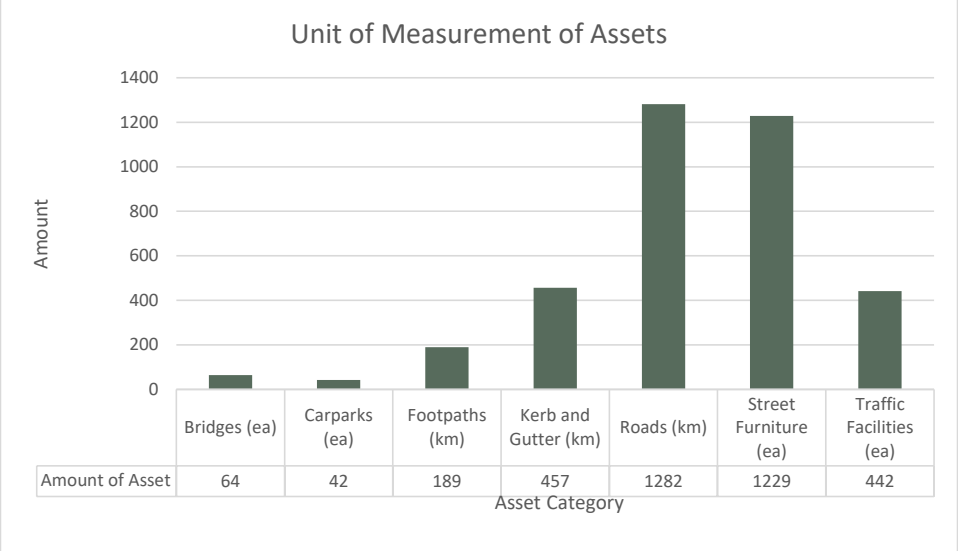


Figure 6: Unit of Measurement for each asset type

Assets are valued in accordance with the Detailed revaluations of asset classes are undertaken in accordance with Australian Accounting Standards and so a comprehensive revaluation of each asset class is undertaken at a minimum every five years. Outside of the comprehensive revaluation years, fair value assessments are to be undertaken on an annual basis for all asset classes. If the assessment identifies that a material change has occurred, the corresponding asset classes will be indexed with an industry accepted index.

A comprehensive valuation for transport was performed in the financial year 2019/20. The next comprehensive valuation was scheduled for 2024/25, however this was brought forward to 2023/24 due to the degradation of the network as result of the flooding events of 2022.

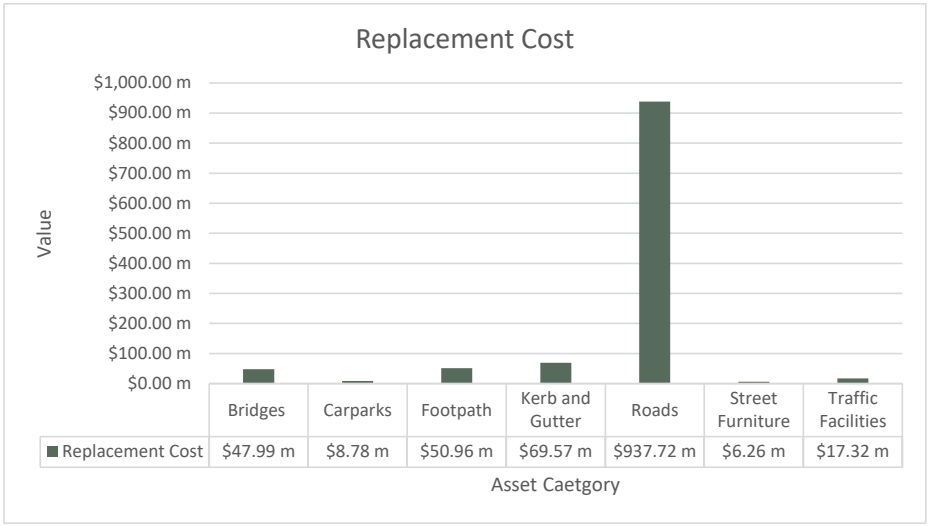


Figure 7: Value of Transport Assets

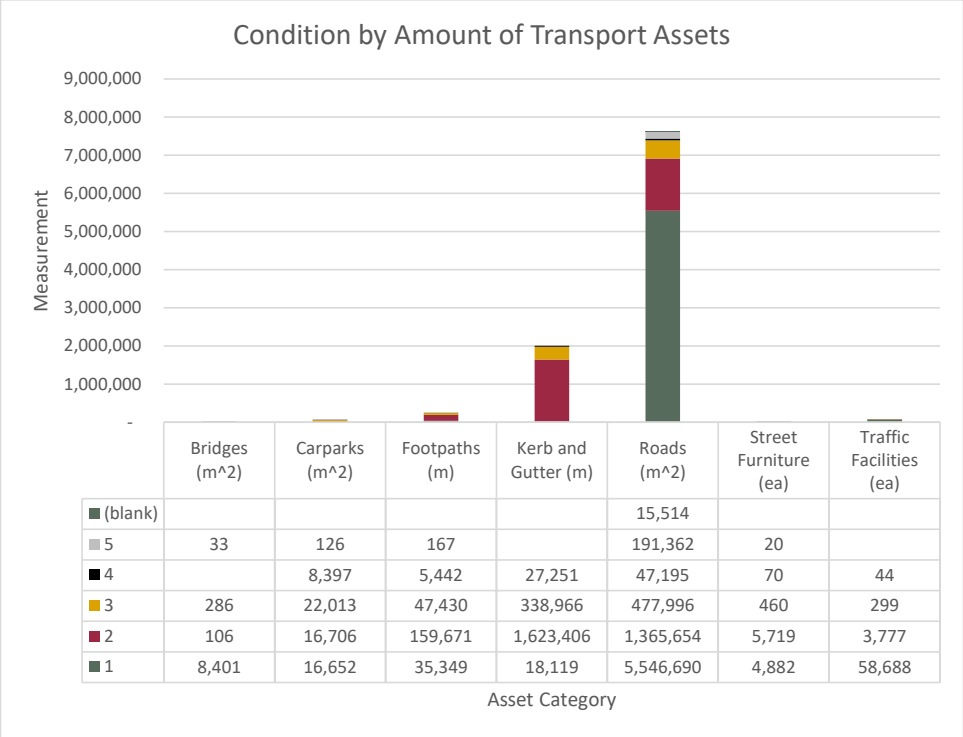
Given the high value of the road assets, they will be further explored in Section 3.3.

3.2 Overall Condition

Asset conditions are assessed as part of comprehensive network inspections, conducted on a rolling program. These assessments are undertaken in accordance with the relevant Practice Notes issued by the Institute of Public Works Engineering Australasia. The condition rating scale is 1-5:

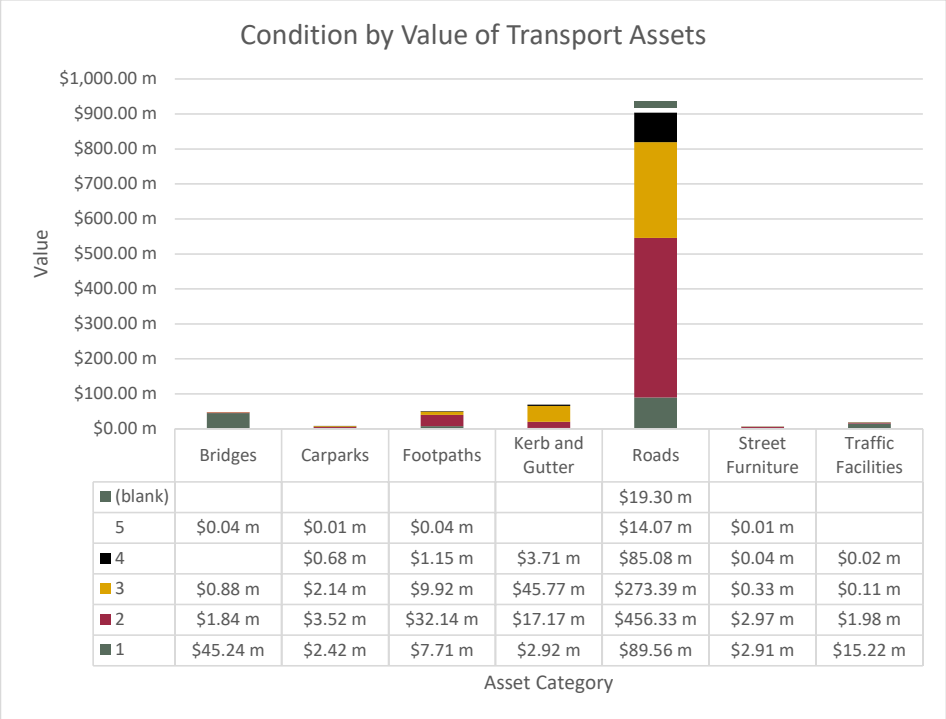
1. As new / excellent
2. Good / satisfactory
3. Fair / tolerable
4. Poor / intolerable
5. Very poor / reconstruction required.

Asset condition by asset count and value is shown below in Figures 7 and 8. The average condition for each asset class is contained in Table 4



	Bridges (m^2)	Carparks (m^2)	Footpaths (m)	Kerb and Gutter (m)	Roads (m^2)	Street Furniture (ea)	Traffic Facilities (ea)
(blank)					15,514		
5	33	126	167		191,362	20	
4		8,397	5,442	27,251	47,195	70	44
3	286	22,013	47,430	338,966	477,996	460	299
2	106	16,706	159,671	1,623,406	1,365,654	5,719	3,777
1	8,401	16,652	35,349	18,119	5,546,690	4,882	58,688

Figure 8: Condition by Count of Transport Assets



	Bridges	Carparks	Footpaths	Kerb and Gutter	Roads	Street Furniture	Traffic Facilities
(blank)					$19.30 m		
5	$0.04 m	$0.01 m	$0.04 m		$14.07 m	$0.01 m	
4		$0.68 m	$1.15 m	$3.71 m	$85.08 m	$0.04 m	$0.02 m
3	$0.88 m	$2.14 m	$9.92 m	$45.77 m	$273.39 m	$0.33 m	$0.11 m
2	$1.84 m	$3.52 m	$32.14 m	$17.17 m	$456.33 m	$2.97 m	$1.98 m
1	$45.24 m	$2.42 m	$7.71 m	$2.92 m	$89.56 m	$2.91 m	$15.22 m

Figure 9: Condition by Value of Transport Assets

It is noted in some of the above charts that there is a condition series that is blank. The condition for these assets in not currently stored within Council's Asset Register due to how recently the inspections were conducted. This includes assets such bridges, crash barriers, road pavements and road shoulders, for a total of 1,303 assets. The recognition and updating of these assets will be listed as a step in the Improvement plan in Section 8.

Asset Category			Average Condition
Bridges			1.12
Carparks			2.16
Footpaths			1.94
Kerb and Gutter			2.44
Roads - Categorised	Sealed Roads	Surface	2.12
		Pavement	2.33
		Earthworks	2.00
	Unsealed Roads	Pavement	2.68
		Earthworks	2.00

		Surface	1.70
Roads – Sub Total			*2.20*
Street Furniture			1.66
Traffic Facilities			1.39
Grand Total			**1.97**

Table 3: Average Condition of Asset Categories in Transport Asset Class

The above table contains the average condition of all asset categories in the transport asset class. Due to the size of the road category, that has been categorised in to sealed and unsealed roads, then componentised into wearing surface, pavement, and earthworks layers. Due to the non-depreciable nature of road earthworks, that category is assigned a condition rating of two, and will not deteriorate.

3.3 Road Condition and Inventory Detail

The road asset category is the largest in this asset class, with 35% of the asset count and 82% of the asset value. As this is such a large component of WSC's asset base, it will be looked at in this section in more detail.

An inspection of the road network was undertaken in mid-2023 by Infrastructure Management Group (IMG), following a year of heavy rainfall resulting in quicker deterioration that normal, and increased landslide activity.

Condition of the road segments was recorded in two ways, a Surface Condition Index (SCI) and a Pavement Condition Index (PCI). Further detail regarding earthworks is not considered in this chapter due to its non-depreciable nature.

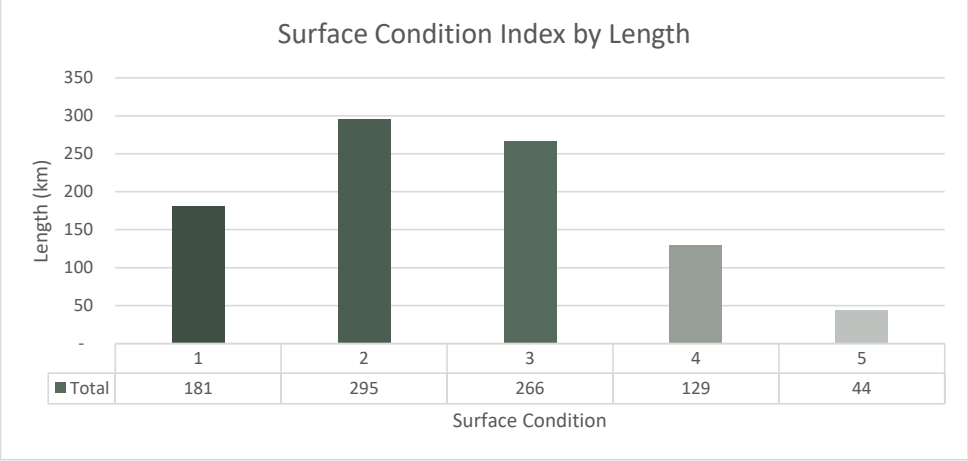


Figure 10: Surface condition by length.

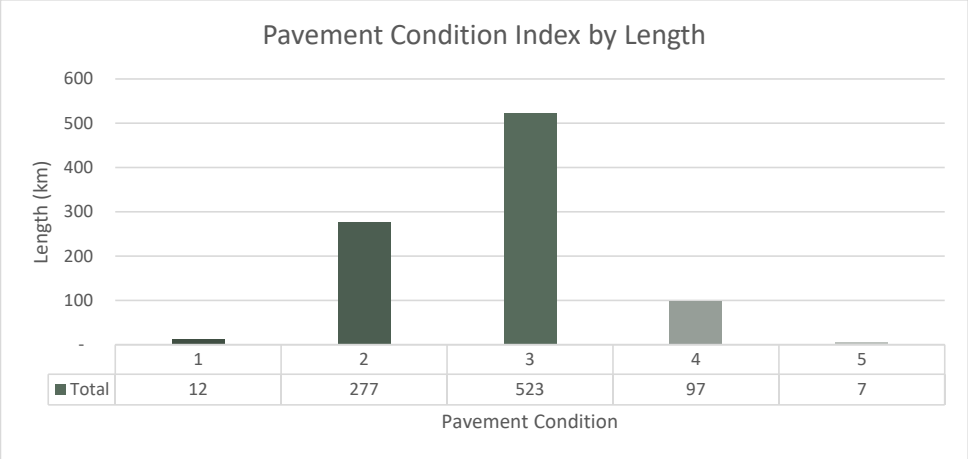


Figure 11: Pavement condition by length

To prevent the asset renewal backlog increasing, a works program was also prepared with assigned priorities ranging from Very High to No Assigned Priority, shown in the graph and table below. The priority considers the condition of the road, including the speed of degradation, the category of the road and estimated traffic volumes.

The priority works will be completed over the next four years to reduce the backlog, while also focusing on regular renewals.

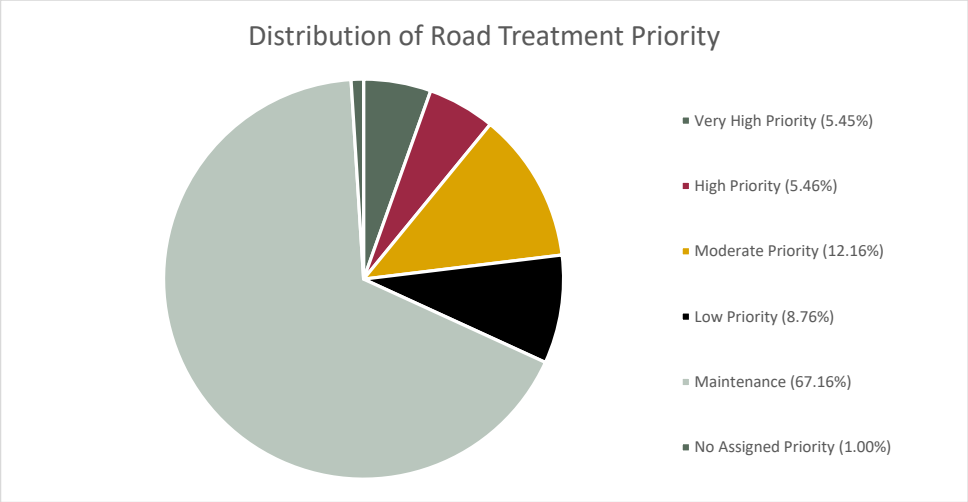


Figure 12: Distribution of repair priorities

Road Selection Priority	Total Preparation Cost	Total Treatment Cost	Total Cost of Works	Treated Length (Km)
Very High Priority	$2,263,994	$7,718,577	$9,982,571	18.8
High Priority	$1,488,020	$7,797,459	$9,285,479	18.8
Moderate Priority	$2,069,236	$7,082,629	$9,151,865	41.8
Low Priority	$1,196,830	$6,295,638	$7,492,468	30.2
Maintenance	$3,476,925	$105,191	$3,582,116	231.1
Preservation	$22,560	$220,453	$243,013	3.5
Grand Total:	**$10,517,565**	**$29,219,947**	**$39,737,512**	**344.1**

Table 4: Summary of repair priorities.

IMG describe their road renewal priorities based on the following definitions:

P1 (Year-One) Addressing pavements with significant levels of critical defects on major traffic load routes to minimize asset losses by arresting rapid degradation of high-value pavement structures.

P2 (Year-Two) Addressing pavements displaying significant areas of active defects and / or poor surface condition providing inadequate pavement protection and / or insufficient levels of service.

P3 (Year-Three) Addressing pavements with moderate levels of defects or undesirable surface condition to maintain appropriate service levels and provide effective pavement protection.

P4 (Year-Four) restoration of surfacing to manage road defects levels, user comfort and ongoing pavement protection.

P5 (Maintenance Patching or Crack Sealing) Addressing significant levels of defect through maintenance activities for asset protection when capital works such as resurfacing is not economically prudent.

P6 (Preservation) The cost-effective life extension of otherwise good condition asphalt roads with surface preservation coatings to retard the oxidation process.

This information will be used to inform renewal budgets in Section 5.2 – Renewal Level of Service.

3.4 Roads and Potential Asbestos Contamination

Following Council's findings in 2012 that a number of roads had been treated with a material containing suspected asbestos fragments, a thorough investigation was undertaken by an independent asbestos specialist including visual inspections, air quality monitoring and risk assessments.

Through collaboration with Environmental Protection Agency (EPA), Department of Health and WorkCover NSW, Council prepared an Asbestos Management Plan for the roads which was approved by the EPA February 2013 and is available on the Council website.

The asbestos management plan identified an appropriate treatment for the 36 roads that were either found to, suspected to, contain asbestos contaminated material. As well as dictating an ongoing maintenance requirement for six monthly inspections.

The following table provides a summary of the treatment identified for the road segments.

Road Segment	Suburb	Road Length (km)	Fragments Identified	Initial Treatment	Inspections
Walkers Lane	Avoca	1.34	0		Six Monthly
Scarlett Street (2nd rh bend to Clariville St)	Balaclava	0.54	4	Sealed	Six Monthly
Beresford Street (end Bitumen-Balaclava Rd)	Balaclava	0.13	0		Six Monthly
Birchalls Lane (Old Mandemar Rd-end of road)	Berrima	2.00	0		Six Monthly
Nathan Street (all)	Berrima	0.98	0		Six Monthly
Parry Drive (all)	Bowral	0.71	2	Sealed	Six Monthly
MR258 Wombeyan Caves Rd (Bullio gate - 1st c/way past tower)	Bullio	2.21	0		Six Monthly
Ferndale Road (end bitumen-Old Argyle Rd)	Bundanoon	2.69	2	Sealed	Six Monthly
Ellsmore Road (end of bitumen-Morgans Rd)	Bundanoon	1.47	0		Six Monthly
Hayman Road (all)	Bundanoon	0.67	0		Six Monthly
Quarry Road (end of seal-Ferndale)	Bundanoon	0.50	0		Six Monthly
Quarry Road (part of Penrose Rd-end of seal)	Bundanoon	0.21	0		Six Monthly
Barrett Street (Mcgraths rd to end)	Burrawang	0.49	3	Sealed	Six Monthly
East Parade (Wilson Drive-shire boundary)	Buxton	1.01	9	Sealed	Six Monthly
Foxgrove Road (1010m past c/Leigh Rd-end of road)	Canyonleigh	2.32	0		Six Monthly
Old Argyle road (end of bitumen-ferndale rd - part of)	Exeter	2.00	1	Gravel Resheet	Six Monthly
Ryans Lane (end of bitumen-end of road)	Fitzroy Falls	0.63	1	Gravel Resheet	Six Monthly
MR258 Wombeyan Caves rd (end bitumen-1st concrete c/way	Goodman Ford	4.83	0		Six Monthly

High Range Lane (Wombeyan Caves Rd-end of road)	High Range	1.32	0		Six Monthly
MR258 Wombeyan Caves Rd (360m from yabbamore-cos/stockpile)	High Range	1.20	0		Six Monthly
Brookdale Road (Berrima Rd-Berrima Rd)	Medway	1.29	7	Gravel Resheet	Six Monthly
Liebmans Road	Medway	0.62	3	Gravel Resheet	Six Monthly
Broughton Street (Caber st to end)	Medway	0.56	3	Gravel Resheet	Six Monthly
Carribee Road (end bitumen-end of road)	Medway	0.58	2	Gravel Resheet	Six Monthly
Australia Avenue (old hume hwy-burwan st)	New Berrima	0.66	14	Gravel Resheet	Six Monthly
Yeola Road	Robertson	1.90	20	Sealed	Six Monthly
Vandenbergh Road	Robertson	1.50	19	Sealed	Six Monthly
Lees Road (Jamberoo Rd-end of rd)	Robertson	1.82	11	Sealed	Six Monthly
McEvilly Road (top of hill to road to left)	Robertson	0.60	14	Gravel Resheet	Six Monthly
Fountaindale Road	Robertson	1.07	9	Gravel Resheet	Six Monthly
Belmore Falls Road (Pearsons Ln to Burrawang Creek)	Robertson	3.39	0		Six Monthly
Allambie Road (Old Hume Hwy-start bitumen)	Welby	0.49	0		Six Monthly
Kells Creek Rd (end Bitumen-Spring Hill Rd)	Welby	2.33	0		Six Monthly
Gatehouse Lane	Werai	0.38	0		Six Monthly
Cordeaux Street (end of bitumen to end of rd)	Willow Vale	0.16	0		Six Monthly
Davys Lane (Murrimba Rd-unformed section)	Wingello	0.17	7	Sealed	Six Monthly

3.5 Crown Roads

Crown land is land that is owned and managed by the NSW Government. It accounts for approximately half of all land in New South Wales and carries special provisions.

The origin of Crown land is from when European settlement began in 1788, Governor Phillip claimed possession of the land for a penal colony on behalf of the British Government. All lands were vested in the name of the Crown, hence the name Crown lands. Over the subsequent years, the management and sale/granting of Crown land has been governed by a range of Federal and State Acts, with the current legislation for the

administration of Crown lands being the Crown Land Management Act 2016 and Roads Act 1993.

There are several types of Crown land including, but not limited to, reserves, cemeteries and Crown roads.

The NSW Government Crown Lands website provides the following description of Crown roads:

- Crown or 'paper' roads were established during the settlement of NSW and are part of the state's public road network.
- Generally, Crown public roads provide access to freehold and leasehold land where little or no subdivision has occurred since the original Crown subdivision of NSW in the early nineteenth century.
- Most Crown roads are found in rural areas and many have never been constructed, so they are called 'paper roads'. They are managed under the Roads Act 1993.

The Roads Act 1993, Clauses 152A to 152J, provides specific functions for the administration of Crown roads – the most pertinent being Clause 152I:

- 152I Transfer of Crown road to roads authority
    - The roads authority may, by order published in the Gazette, transfer a specified Crown road to another roads authority
    - On the publication of the order, the road ceases to be a Crown road
    - An order transferring a Crown road to TfNSW may not be made except with the consent of TfNSW.

It is therefore at the discretion of Crown Lands as to if they wish to transfer a Crown Road to Council.

4 Drivers of Level of Service

Levels of Service (LoS) are comprised of four components: provision, renewal, maintenance, and operations. Each LoS is constrained by funding and resource availability, however the fundamental drivers of LoS can be identified in three categories:

- Risk Management
- Community Satisfaction
- Strategies and Masterplans

4.1 Risk Management

Risk is the effect of uncertainty on Council's ability to achieve its objectives. Risk Management is the process of systematically identifying, monitoring, treating, and reporting these risks.

A Risk Assessments has been completed for the asset class, covering generic hazards that are typical across the entire asset network and consideration of Critical Assets.

4.1.1 Legislation

There are many legislative requirements and regulations relating to the management of assets. Council must comply with these requirements and ensure their assets meet these legislative service levels these include;

- Local Government Act 1993 (NSW)
- Roads Act 1993 (NSW)
- State Records Act 1998 (NSW)
- Protection of the Environment Operations Act 1997 (NSW)
- Disability Discrimination Act 1992
- Australian Road Rules
- Environmental Planning and Assessment Act 1979 (NSW)
- Work Health and Safety Act 2011
- AUSTROADS Guidelines
- Australian Standards

4.1.2 Critical Assets

Critical assets are those assets that have a high consequence of failure in terms of community impact. By identifying critical assets and failure modes, Wingecarribee Shire Council can ensure that condition inspection programs, maintenance and capital expenditure plans are targeted to ensure that the risk of critical asset failure is minimised.

The critical road assets have been separated into three categories, high criticality bridges, other bridges, and regional roads. A list of critical Transport assets is tabulated below:

Status	Road	Creek
High Criticality bridges (no secondary route available)	Greenhills Rd	Lutwyche Creek
	Redhills Road	Unnamed Creek
	Meryla Road	Bundanoon Creek
	Meryla Road	Gunrock Creek

	Meryla Road	Ritters Creek
	Scarlet Street	Unnamed Creek
	Sproules Lane	Wingecarribee River
	Diamonds Field Road	Diamonds Field Creek
Other bridges (secondary route available, may cause a significant detour)	All other bridges	
Regional Roads (significant roads that link Council's local roads to the state road network)	MR264 – Jamberoo Mountain Road	
	MR569 – Bundanoon Road	
	MR372 – Taylor Ave/Berrima Road	
	MR7639 – Station St	
	MR258 – Wombeyan Caves Road	
	MR7635 – Wilson Drive	
	MR645 – Old Hume Highway (New Berrima to Medway)	
	MR7636 – Penrose Road	
Local Roads (High traffic, Council owned roads that provide economic benefits, or act as a direct route between State and Regional Roads)	Old South Road	
	Eridge Park Road	
	Old Hume Highway	
	Old Bowral Road	
	Lyell Street	
	Cavendish Street	
	Greenhills Road	
	Myra Vale Road	
	Pearsons Lane	

Table 5: Critical transport Assets

4.1.3 Risk Assessment Framework

The below risk matrix categories the risk that Council is exposed to, depending on the consequence, and the likelihood the risk.

Risk (R) Matrix		Consequence (C)				
		Severe	**Major**	**Moderate**	**Minor**	**Insignificant**
Likelihood (L)	**Almost Certain**	Extreme	Extreme	High	High	Moderate
	Likely	Extreme	Extreme	High	Moderate	Moderate
	Possible	Extreme	High	Moderate	Moderate	Low
	Unlikely	High	High	Moderate	Low	Insignificant
	Rare	High	Moderate	Low	Insignificant	Insignificant

Table 6 - Risk Assessment Framework

4.1.4 Risk Assessment

Risk	Hazard	Inherent Risk			Treatment	Residual Risk			Implementation Status	Branch Responsibility	Level of Service
		C	L	R		C	L	R			
Personal injury	Deteriorated or poor quality: Footpaths	MOD	LIK	H	Undertake proactive network inspections.	MOD	RAR	L	Future	Assets	Operations
					Reactive maintenance of paths through CRM and Work order system (e.g., grinding of trip hazards)				Current	Shire Presentation	Maintenance
					Review Subdivision DAs and CCs to ensure satisfactory design methodology and adjacent tree plantings are suitable to prevent the increased likelihood of trip hazards.				Future	Assets	Provision
					Prioritised renewal of poor condition paths.				Current	Assets	Renewal
	Deteriorated or poor quality: Sealed Roads	MOD	POS	M	Undertake proactive network inspections.	MOD	RAR	L	Future	Assets	Operations
					Reactive maintenance of sealed roads through CRM system (e.g., pothole repair)				Current	Shire Presentation	Maintenance
					Allocate Block grant funding to repair poor condition segments of regional roads, managing the critical asset.				Current	Assets	Renewal
					Prioritised renewal of poor condition road wearing surfaces and pavements.				Current	Assets	Renewal
	Deteriorated or poor quality: Unsealed Roads.	MOD	POS	M	Undertake proactive network inspections.	MOD	RAR	L	Future	Assets	Operations
					Reactive maintenance of unsealed roads through CRM system (e.g., maintenance grading)				Current	Shire Presentation	Maintenance
					Prioritised renewal of poor condition unsealed pavements in conjunction with the Shire Presentation team.				Current	Assets	Renewal
	Deteriorated or poor quality: Bridges	MOD	UNL	M	Undertake proactive network inspections.	MOD	RAR	L	Future	Assets	Operations
					Undertake level 3 bridge inspections on bridges with defects to ensure the asset can carry heavy vehicles. Implement load limits if not.				Current	Assets	Operation
					Reactive maintenance through Council's CRM system				Current	Shire Presentation	Maintenance

Risk	Hazard	Inherent Risk			Treatment	Residual Risk			Implementation Status	Branch Responsibility	Level of Service
		C	L	R		C	L	R			
					Undertake quarterly inspections of high criticality bridges.				Future	Assets	Operation
					Development of an annual bridge refurbishment program				Current	Assets	Maintenance

Table 7: Risk assessment for Transport Assets

Further development of Council's strategic and operational risk management assessments is identified as an improvement action in Section 8.

4.2 Community Satisfaction

Council's community satisfaction survey is undertaken biennially and tracks Council's performance in service delivery, identifies priority areas and evaluates community attitudes towards customer services, communication and Council as an organisation.

The objectives of the community satisfaction survey process are to:

- Measure the importance of, and satisfaction with, services and facilities provided by Council
- Compare levels of satisfaction for Council's services and facilities with similar councils
- Assist Council in identifying service priorities for the community
- Evaluate Council's customer services and communication

The survey covers facilities and services provided by Council identifying both importance and satisfaction on a 5-point scale, with 1 = low and 5 = high.

The most recent community survey was conducted in 2022, with the results of the prior years also provided for comparison. The following table contains the items relevant to this asset management plan.

Council Service	Importance			Satisfaction			2022 Performance Gap
	2019	2021	2022	2019	2021	2022	
Condition of Local Roads	4.61	4.72	4.67	2.27	1.98	1.53	63%
Provision and quality of footpaths	4.32	4.37	4.31	2.64	2.67	2.73	32%
Local Traffic Management	4.32	4.44	4.35	2.79	2.70	2.86	30%

Table 8: Comparison of Importance and Satisfaction in Council Transport services over 2019, 2021 and 2022.

In the table above, the 2022 Performance Gap is the difference between community importance and community satisfaction.

Referring to the above tables taken from the most recent resident survey, Council has been consistent in the provision and quality of footpaths and Local Traffic Management, however the community is less and less satisfied in the condition of local roads over the past three years. The Condition of Local Roads is the largest performance gap identified in this survey across all Council Services, and satisfaction for this service aspect is 43% lower than comparable regional councils.

Given the increasing dissatisfaction and high importance, the condition of local roads is an item that should receive additional and continuous attention.

4.3 Strategies and Masterplans

The third driver of Levels of Service can be broadly grouped as Strategies and Masterplans. Council prepares strategies and masterplans across all asset classes to ensure that network planning, implementation and maintenance is being conducted in a wholistic, considered and effective manner.

A non-exhaustive list of strategies and masterplans that impact the levels of service for the asset base of the Shire is provided in Table 8.

Plan	Town covered by plan	Level of Service
Town Centre Masterplans	Bowral	Provision
	Mittagong	Provision
	Moss Vale	Provision
Pedestrian Access and Mobility Plans (PAMPs)	Bowral	Provision
	Mittagong	Provision
	Moss Vale	Provision
	Robertson	Provision
	Villages	Provision
Bicycle Strategy	LGA wide	Provision
Disability Inclusion Action Plan 2022-2026	LGA wide	Provision and Renewal

Table 9: Strategic plans and Masterplans

The above strategies and masterplans can be found on Council's website.

5 Levels of Service

Levels of Service (LoS) are comprised of three components: provision, renewal, and maintenance and operations. These three components are best understood in isolation, but an adjustment to one level of service results in changes to others, so they must be considered together.

5.1 Provision Level of Service

The Provision LoS relates to what Council provides, how much and where. Council's road asset network is composed of 29,979 assets with a total value of close to $1.14 billion.

The provision of road assets across the LGA is not consistent, especially footpaths and street furniture which is typically concentrated in towns and larger villages. This is exacerbated by the construction of new subdivisions that are built to contemporary standards and conditions of consent, governed by the following documents:

- Wingecarribee Local Environmental Plan 2010
- Development Control Plans for the various areas
- Engineering Design and Construction Specifications
- Developer Contribution and Servicing Plans

That withstanding, Council is striving towards a consistent provision level of service across the Shire, and this will primarily be governed through the completion of actions identified within adopted Strategies and Plans.

The table below provides a summary of how provision level of service will be determined by asset category:

Asset Category	Document	Provision Level of Service
Bus Shelters	Ordinary Council Meeting 21 June 2023	New bus shelters to only be provided within town centres, village centres and along State roads that are serviced by a public bus route.
	Ordinary Council Meeting 18 October 2023	That advertising not be approved for installation on bus shelters.
Roads	Asset Management Plan - Roads	Roads will be renewed in accordance with their designated hierarchy/categorisation, eg: • Unsealed roads will be renewed as unsealed roads • Lower order road will be maintained as lower order roads.
	Asbestos Management Plan	The 18 road segments identified within the Asbestos Management Plan will be managed in accordance with this Plan. Consideration will be given to the sealing of the eight roads initially treated with gravel resheeting, as funding allows.
Bridges	Asset Management Plan - Roads	All new vehicular bridges will contain pedestrian access along at least one side of the bridge.

Footpaths	Pedestrian Access and Mobility Plans	New footpath or shared path connections will not be considered unless they are contained within a PAMP or the Cycling Strategy.
	Cycling Strategy	
Kerb and Gutter	Asset Management Plan - Roads	Kerb and Gutter will not be provided in locations without stormwater pipes and pits.

Table 10 - Provision Level of Service Summary

It is recommended that the provision of road assets is maintained, and as such, Council will not expand its road network beyond developer contributed roads and strategic links. The sealing of unsealed roads is considered an upgrade, and as such, is not considered in this iteration of the Transport Asset Management Plan.

It recognised that an uplift in community satisfaction is required for the provision of footpaths and shared paths across the Shire. To this end, the Capital Works Program features an allocation of $500k for new footpaths and shared paths across the Shire. With this allocation, Council will construct targeted connections across the Shire and prepare designs for large strategic links. Delivery of these large strategic links will however be subject to grant funding outcomes, and so these will be actively pursued as opportunity arises.

5.1.1 Paper Roads

Historically, there are numerous paper roads within the Wingecarribee Local Government Area.

Council reserves the right to name/gazette and classify any section of these paper roads which have been identified as public roads under Council control in accordance with the Roads Act 1993. Until this classification occurs, the paper road will not be included in Council's maintenance program.

Council also reserves the right to close a section of paper road in accordance with the Roads Act 1993

5.2 Renewal Level of Service

The Renewal LoS defines how often Council intends to replace existing assets with a Modern Engineering Equivalent Replacement Asset (MEERA), including disposal of the existing asset.

This renewal frequency is termed 'useful life' and adjusting this value has significant implications for annual depreciation, with asset useful being a direct factor in its calculation. Annual investment in the capital renewal of assets should ideally equate to the value of annual depreciation, which, for the Transport asset class is $16.9 m. Although asset degradation and failure will not follow a straight line across financial years, failure to maintain asset renewal at the rate of annual depreciation will result in an overwhelming volume of renewal works in later years and increased reactive maintenance in the interim.

Adjustments to asset useful life also has impacts on required maintenance and operations expenditures. Shorter useful lives generally result in less required maintenance, all other factors being equal, and vice versa.

The below table includes the asset renewal lives for assets in the Road Asset Class. These useful lives are currently stored in the Conquest Asset Management System

Asset Category	Asset type/Material	Useful Life (years)
Bridges	Timber	50-80

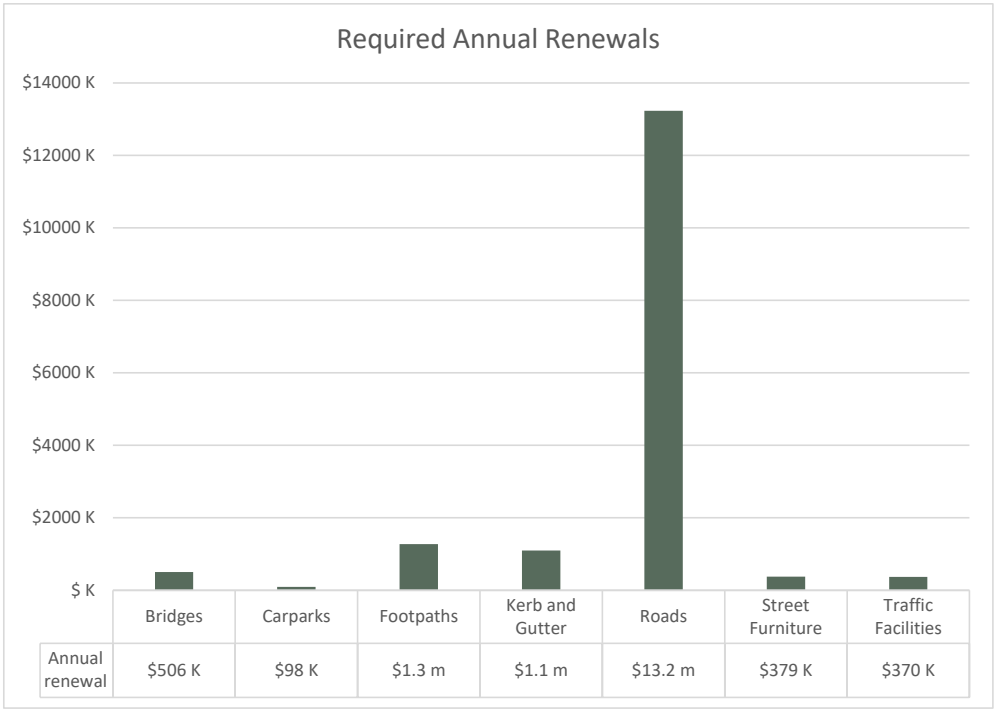
	Concrete/Steel	100
Footpaths	Concrete	50
	Asphalt	20
	Pavers	50
	Unsealed	15
Kerb and Gutter	Concrete	60
	Natural Stone	30-100
Roads	Base material – Sealed Road	80-100
	Base material – Unsealed Road	14
	Subbase	80-100
	Wearing surface – Concrete	15
	Wearing surface – Pavers	20
	Wearing surface – Asphalt	25
	Wearing surface – Double coat spray seal	16
	Wearing surface – Single coat spray seal	15
Street Furniture	Bus Shelter	20
	Timber fencing	20
	Galvanised fencing	25
	Retaining walls	80
Traffic Facilities	Concrete traffic facilities	50
	Guardrail	50
	Signs	20-30

Table 11: Transport Asset Useful Lives.

These useful lives are reviewed and assessed as part of the comprehensive revaluation exercise. In the next iteration of the revaluation, the useful lives of footpaths and sealed road pavements will be especially scrutinised to ensure they are of reasonable magnitude.

The intent is therefore that all transport assets will be renewed prior to exceeding their designated useful life. However, renewal works will also be based on asset condition. When an asset is found to be of Condition 4 or 5 it will then be programmed for renewal within the Capital Works program.

The chart below shows the required renewal expenditure across the asset categories in order to match the annual depreciation.



	Bridges	Carparks	Footpaths	Kerb and Gutter	Roads	Street Furniture	Traffic Facilities
Annual renewal	$506 K	$98 K	$1.3 m	$1.1 m	$13.2 m	$379 K	$370 K

Figure 13: Required Asset Renewals

5.3 Maintenance and Operations Level of Service

Maintenance and operation activities are completed in both a proactive and reactive fashion across the asset network. Many operational activities by their nature are more readily able to be scheduled and completed in a timely and controlled way. Maintenance activities are more difficult to deliver in scheduled fashion, with mature systems and full resourcing required to do so – however even then reactive works cannot be completely eliminated.

As mentioned in Section 4.2 - Community Satisfaction, the community is increasingly dissatisfied with the current condition of local roads. To improve this, an additional $1.3M was incorporated in the transport maintenance budget to accommodate an additional pothole maintenance crew for three years.

That withstanding, maintenance and operations budgets are heavily constrained by both funding and resourcing availability.

Although results of the recent community satisfaction survey indicate a performance gap in transport maintenance, these constraints mean that solutions will need to be found whilst maintaining existing budget levels, as 89% of the maintenance budget for Transport assets is already allocated to roads.

Potential opportunities being investigated are a more strategic approach being adopted for maintenance, as well as programming and delivery of more effective capital renewal and upgrade projects.

Maintenance and operations level of service will be provided under two categories: inspections and maintenance.

5.3.1 Inspections

Inspection of road assets is included in the Maintenance and Operation Level of Service, and is a critical component of the risk mitigation processes.

Inspections will be of two categories. Scheduled inspection and reactive inspection.

- Scheduled inspection

Full network inspections are undertaken by specialist consultants proactively on a 5-year cycle to match the revaluation schedule outlined by the Office of Local Government. The outcomes of these inspections are used to prioritise works in the Capital Works Program and provide an updated condition to best reflect the current asset depreciation.

- Reactive inspection

Council Staff undertake reactive inspections of assets in the network. These are undertaken after one of the three triggers occur:

1. Customer Request
2. Weather Event
3. Events that may damage council infrastructure i.e. traffic collisions.

After a reactive inspection, the asset is either assessed to be in a satisfactory condition or functioning as designed, made safe through maintenance staff, or programmed for a capital renewal.

5.3.2 Maintenance

The current maintenance and operations budgets are provided in Table 10 below:

Asset Class	Annual Maintenance and Operations	
	$	as % of Asset Value
Transport	$6,470,500	0.6%

Table 12 - Asset Class Maintenance

This can be further broken down into the relevant asset categories of:

Asset Category	Annual Maintenance and Operations
Bridges	$20,000
Carparks	$14,740
Footpaths	$221,734
General Maintenance	$912,792
Kerb and Gutter	$85,812
Roads - Sealed	$3,749,512
Roads - Unsealed	$1,246,661
Roadside Furniture	$21,364
Traffic - Line Marking	$151,486
Traffic - Signage	$209,107
Traffic - Traffic Facilities	$137,827
Verge and Litter Maintenance	$573,600
Wombeyan Caves Road	$119,967
Total	**$6,470,500**

Table 13: Annual maintenance for Transport Assets

Currently, Council transport maintenance budget is used to undertake repairs to the road network in a reactive manner and is largely driven by requests submitted by the community. The types of maintenance works undertaken include pothole repair, edge break repair, maintenance grading of unsealed roads and heavy patches under 60m^2.

In light of the outcomes from the IMG Road Network Inspection, it is intended that over the next four years a degree of proactive maintenance will be delivered through these annual maintenance budgets to complement the four year renewal program.

These proactive maintenance items may include:

- Proactive patching.
- The introduction of a crack sealing program to extend the life of wearing surface assets.
- Application of surface preservation agents to prevent wearing surface cracking from oxidisation.

6 Asset Base Growth

Council's asset base will expand over the next 10 years through committed and expected new and upgrade expenditure, assets contributed by development through conditions of consent, and the Developer Contributions and Servicing Plans. This growth can be decreased through asset disposals; however, no significant disposals are currently committed.

In this analysis, all future asset values, as well as planned and recommended expenditures, assume indexation rate of 3.0% per annum.

6.1 New and Upgraded Assets

The new and upgrade asset projects category covers those projects resourced by Council or grant funding, but excluding Development Contributions, that involve existing assets being enhanced or new assets being constructed.

New and upgrade expenditure included within the draft 2023/24 to 2026/27 Capital Works Program has been considered within the Asset Base Growth calculation. This expenditure is largely derived from grant funded projects, such as the Moss Vale Bypass. With grant funding only being reflected in Council's budgets upon notification of success, grant funding does not impact the asset base growth calculation after the 2025/26 Capital Works Program. This results in there being minimal new and upgrade expenditure considered beyond 2026/27.

Financial Year	Project Name	Sum of Value
2023/24	Balmoral Entry Signs	$12,000
2023/24	Berrima Road Bridge Overpass	$1,130,911
2023/24	Bong Bong Common Intersection Upgrade	$924,227
2023/24	Browley St Wombat Crossing	$50,019
2023/24	Eridge Park Road Shared Path	$273,384
2023/24	Hill Top Entry Signs	$5,200
2023/24	Hill Top Loop Line Lookout (design)	$69,625
2023/24	Hoddle Street Robertson New Footpath (design)	$25,000
2023/24	Mittagong to Bowral Pathway (design)	$50,000
2023/24	Moss Vale Bypass (design)	$1,278,404
2023/24	Moss Vale to Bowral Pathway (design)	$50,000
2023/24	New Footpath Program	$125,000
2023/24	Old Hume Hwy Safety Upgrades	$42,577
2023/24	Robertson Road Moss Vale Footpath	$176,381
2023/24	Wilson Drive Balmoral Footpath	$52,656
2024/25	New Footpath Program	$500,000
2025/26	New Footpath Program	$500,000
2026/27	New Footpath Program	$500,000
2027/28	New Footpath Program	$500,000

Table 14:New and Upgraded Assets

6.2 Assets Contributed by Development through Conditions of Consent

As development occurs, particularly within the new living areas identified within the Wingecarribee Local Housing Strategy, it is intended that infrastructure be provided at a rate consistent with the Provision LoS in existing parts of the Wingecarribee Local Government Area.

A reasonable estimate is that transport assets contributed by development through conditions of consent grow the existing asset base at a rate similar to the population growth rate for greenfields development. The table below provides the forecast population growth figures provides by Forecast.Id

With the Wingecarribee Local Housing Strategy setting an objective of a 50:50 split of infill and greenfield development, it is therefore forecast that annual asset base growth from greenfield development will be 50% of the annual population growth.

Reviewing the rate of contributed assets across 2021/22 and 2022/23, it is observed that the value of contributed assets is equivalent to 30% of this forecast population growth from greenfield development. Which is understood to be the result of assets contributed through this method generally being of a non-major nature. (eg sewer pipelines will be contributed through a development, but not another sewage treatment plant).

Financial Year	Population	Population Growth (from previous year)	Forecast Asset Base Growth
2023/24	53,700	0.9%	0.16%
2024/25	54,270	1.1%	0.16%
2025/26	54,913	1.2%	0.16%
2026/27	55,521	1.1%	0.16%
2027/28	56,145	1.1%	0.17%
2028/29	56,789	1.1%	0.17%
2029/30	57,439	1.1%	0.16%
2030/31	58,101	1.2%	0.16%
2031/32	58,762	1.1%	0.16%
2032/33	59,425	1.1%	0.18%

Table 15 - Forecast.ID Population Growth

6.3 Developer Contributions and Servicing Strategies

An important funding source for new infrastructure are Development Contributions collected under Section 7.11 and 7.12 of the Environmental Planning and Assessment Act. These contributions fund a significant proportion, though not all, of the infrastructure required by new development.

Council currently levies contributions for road assets through the following Plans:

- Roads and Traffic Facilities 2012 to 2031
- Section 94A Contributions Plan (Footpaths)
- Southern Highlands Innovation Park (SHIP) Plan

It is acknowledged that the infrastructure programs contained within these plans are due for revision or are currently under development, with it being currently uncertain whether contributions are being received in line with expected forecasts – as well as whether the magnitude of Council co-funding remains financially viable.

Several strategic studies have been completed or are in progress which will inform future updates to the plans, some of these strategic studies being:

- Integrated Transport Study
- Pedestrian Access and Mobility Plans

Therefore, only projects that currently feature within the 2024/25 to 2028/29 Capital Works Program which are funded by developer contributions are to be included within this section.

There are no projects within the 2024/25 to 2028/29 Capital Works Program which are funded by developer contributions.

6.4 Asset Disposals

Asset disposals entail the removal of an existing asset without replacing it with a similar asset. No such disposals are planned for Transport assets in the 10 years that the AMP covers. This may be examined in future revisions when considering the results of community engagement.

6.5 Asset Indexation

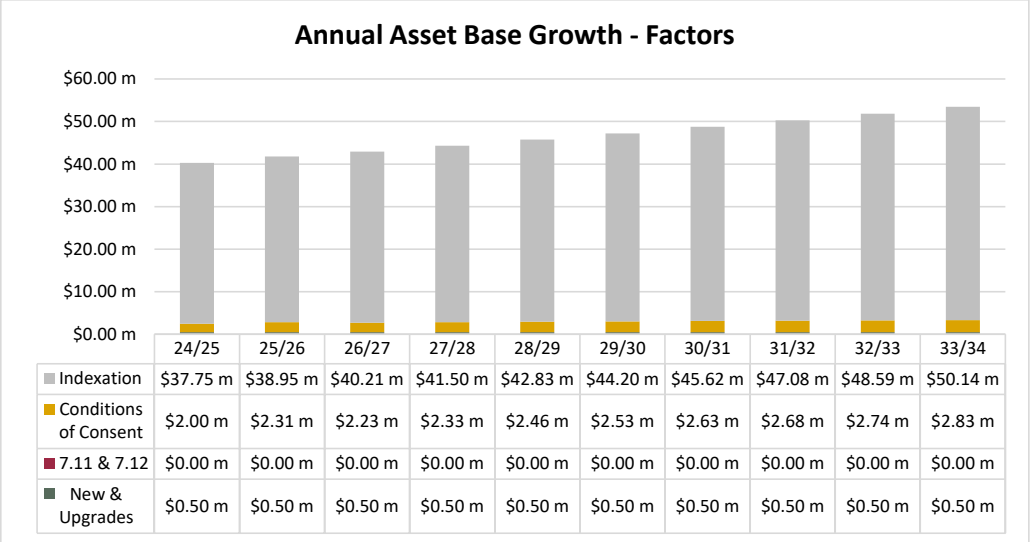
Indexation rate of 3.0% p.a has been applied across the 10-year forecast period. This aligns with the indexation rate adoption in the LTFP. The same rate has been adopted in this AMS to ensure that lifecycle costs and associated budgets are comparable in future financial years.

6.6 Asset Base Growth

Total asset base growth is comprised these components:

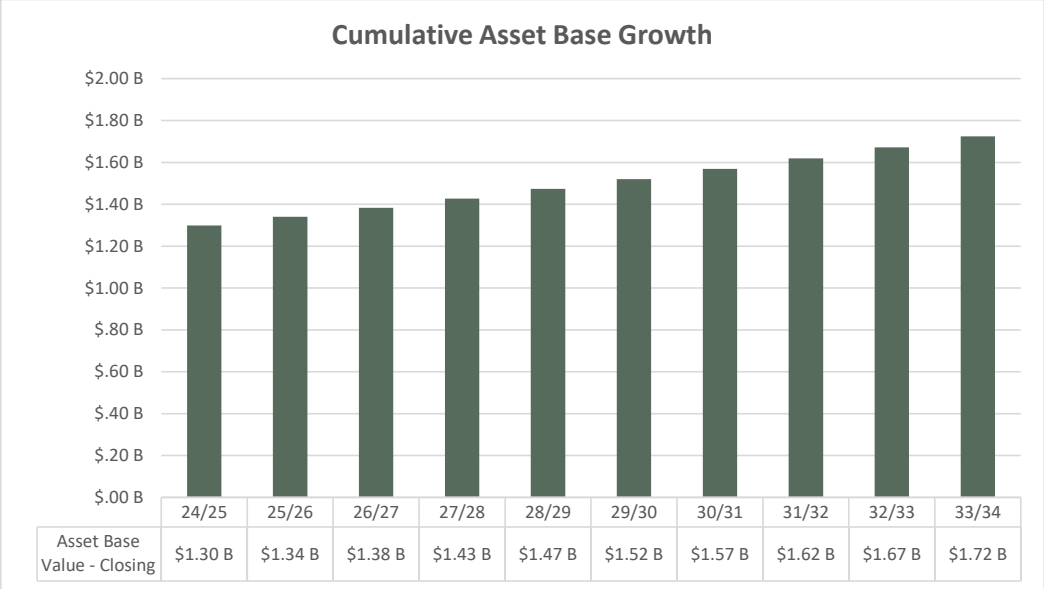
- Asset upgrades
- Assets contributed by development through conditions of consent.
- Development Contributions
- Subtracting asset disposals
- Indexation

Figures 11 and 12 shows this forecast asset base growth of $467M over 10 years, with the majority of the growth attributed to indexation.



	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34
Indexation	$37.75 m	$38.95 m	$40.21 m	$41.50 m	$42.83 m	$44.20 m	$45.62 m	$47.08 m	$48.59 m	$50.14 m
Conditions of Consent	$2.00 m	$2.31 m	$2.23 m	$2.33 m	$2.46 m	$2.53 m	$2.63 m	$2.68 m	$2.74 m	$2.83 m
7.11 & 7.12	$0.00 m	$0.00 m	$0.00 m	$0.00 m	$0.00 m	$0.00 m	$0.00 m	$0.00 m	$0.00 m	$0.00 m
New & Upgrades	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m

Figure 14: Annual Asset Base Growth – Factors



	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34
Asset Base Value - Closing	$1.30 B	$1.34 B	$1.38 B	$1.43 B	$1.47 B	$1.52 B	$1.57 B	$1.62 B	$1.67 B	$1.72 B

Figure 15: Cumulative Asset Base Growth, measured in billions of dollars.

7 Financial Lifecycle Forecast

The Council assets described in Section 3, with the asset base growth forecast in Section 6, require resourcing across their lifecycle in order to achieve the LoS contained in Section 5.

The two main components are renewal expenditure, and maintenance and operations expenditure, which sum together to give the recommended overall expenditure on Council assets over the next 10 years.

7.1 Renewal Forecast

To ensure that satisfactory condition is maintained across the asset base and the Infrastructure Backlog Ratio benchmark is achieved, capital renewal works should be undertaken when assets reach the end of their useful lives. These capital renewal works involve disposing of the existing asset and constructing the MEERA.

However, if the expiry of useful lives or asset conditions are solely relied upon to inform these recommended renewals, annual budgets fluctuate significantly, which creates difficulties from a resourcing perspective. Rather, it is better practice to average out the recommended renewal expenditure in order to reduce annual fluctuations. When future Delivery Programs are prepared, actual allocations to each asset class may vary depending upon the scale of individual projects.

The required renewal expenditure across the 10-year period is therefore forecast to be $204M. The Long Term Financial Plan is unfortunately not able to accommodate the entirety of this desired asset renewal budget. This is largely as result of asset base growth exceeding the Council rate peg.

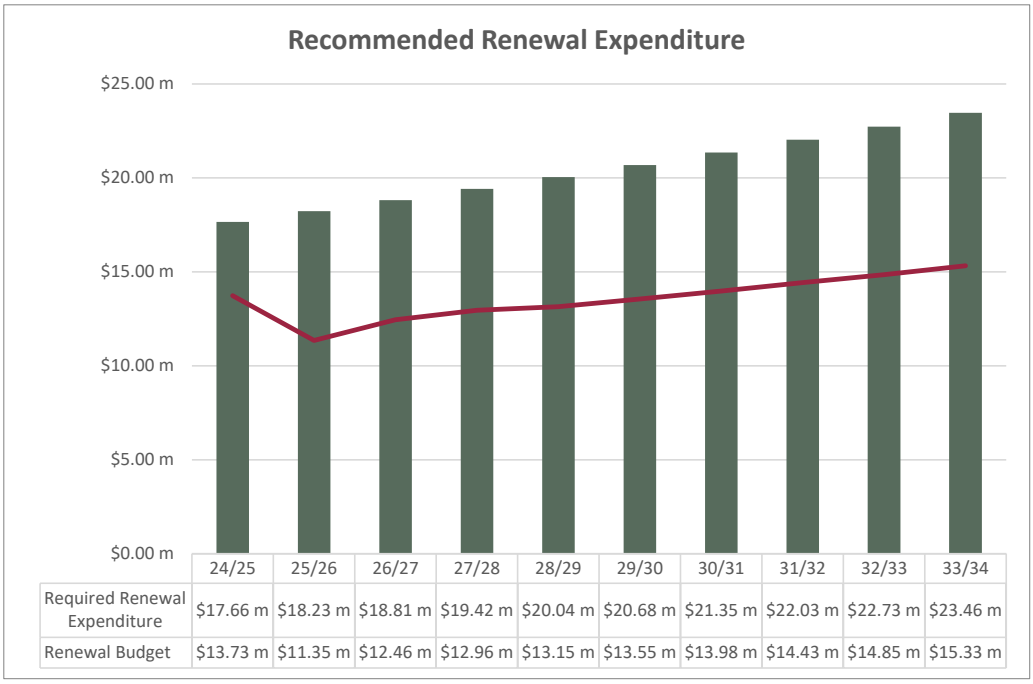
Figure 9 shows the renewal budget featured in the Capital Works Program and Long Term Financial Plan, as well as the required renewal expenditure to align with asset depreciation. The Capital Works Program and Long Term Financial Plan currently can only accommodate $135M of transport asset renewal. This shortfall in asset renewal investment will result in a deterioration of asset condition and heighten future asset renewal investment requirements.

In light of the funding constraints, capital budgeting is focusing on investment in road renewals as the highest priority. This enables the priorities identified by IMG to be actioned, which will in turn reduce the backlog of poor condition pavement and surface assets. Similarly, $500k has been allocated annually in the 24/25 to 27/28 Capital Works Program to renew footpaths in poor condition, in line with the audit results received from IMG. This does however fall short of the aligning with the $1.3M annual depreciation of footpaths.

However road condition will continue to deteriorated across the life of the program if renewal investment cannot be aligned with annual depreciation.

Current renewal budget figures do contain future grant opportunities, and it is considered reasonable to assume that $2-3M of grant funding will be annually received. The primary source of this funding will be the new Roads to Recovery Program, of which the annual allocations have not yet been released.

As part of the 2023/24 comprehensive valuation, unit rates and useful lives will be reviewed to ensure that overly conservative figures have not been adopted.



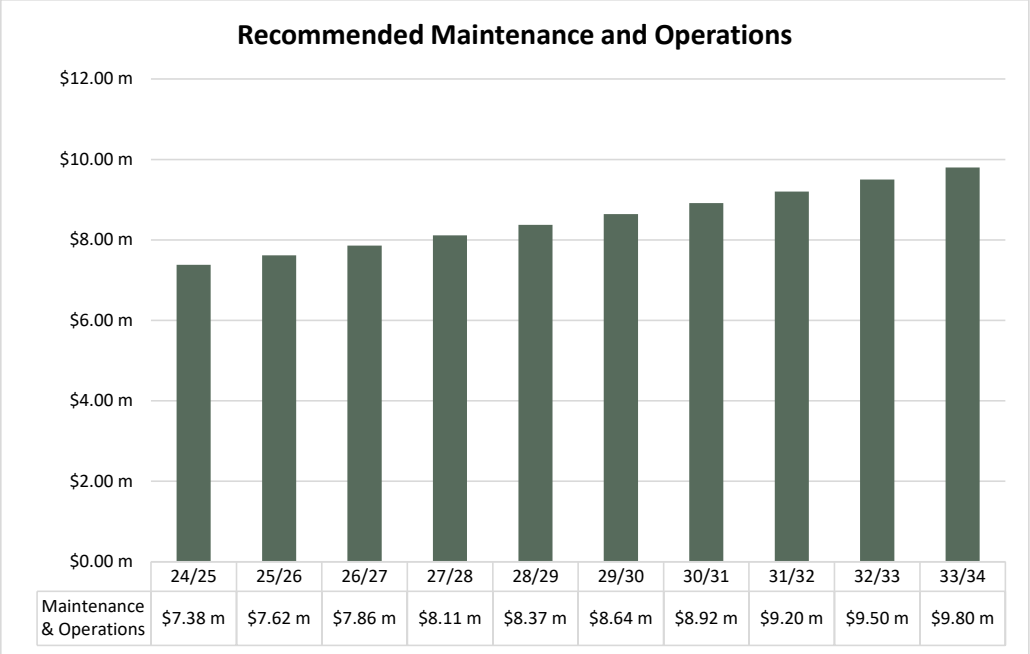
	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34
Required Renewal Expenditure	$17.66 m	$18.23 m	$18.81 m	$19.42 m	$20.04 m	$20.68 m	$21.35 m	$22.03 m	$22.73 m	$23.46 m
Renewal Budget	$13.73 m	$11.35 m	$12.46 m	$12.96 m	$13.15 m	$13.55 m	$13.98 m	$14.43 m	$14.85 m	$15.33 m

Figure 16: Recommended Renewal Expenditure, measured in millions of dollars.

7.2 Maintenance and Operations Forecast

To sustain the current Maintenance and Operations Level of Service whilst accommodating a growing asset base, annual maintenance and operations budget increases are required. The required maintenance and operations expenditure across the 10-year period is therefore forecast to be $85M.

The Long Term Financial Plan is unfortunately not able to accommodate the entirety of this desired maintenance and operations budget. This is largely as result of asset base growth exceeding the Council rate peg. This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure requirements.



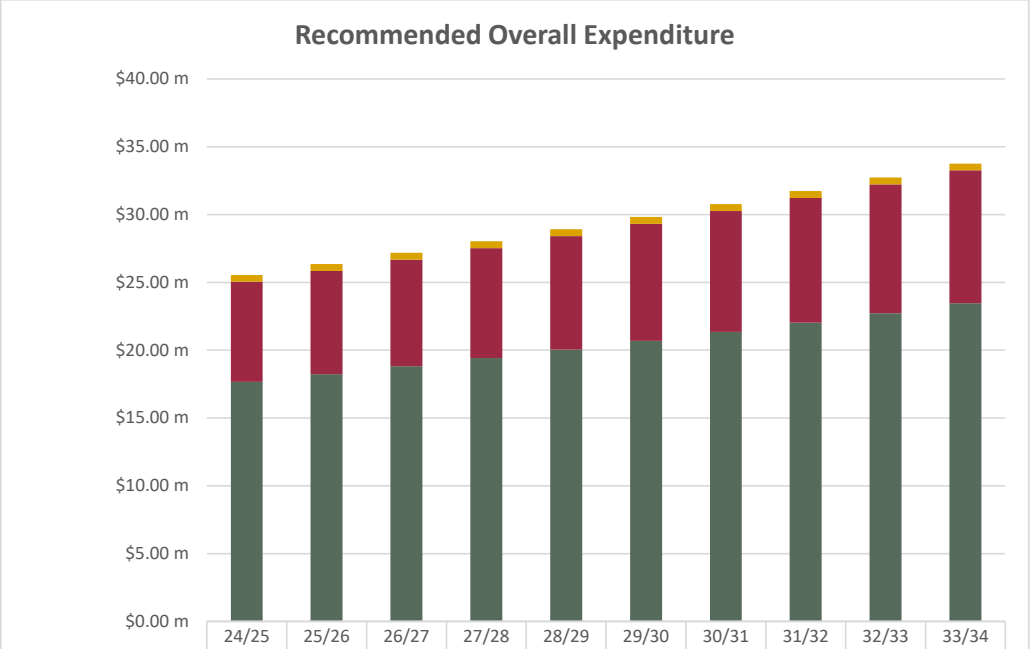
	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34
Maintenance & Operations	$7.38 m	$7.62 m	$7.86 m	$8.11 m	$8.37 m	$8.64 m	$8.92 m	$9.20 m	$9.50 m	$9.80 m

Figure 17 Recommended Maintenance and Operations.

7.3 Overall Forecast

The recommended overall expenditure is a combination of the new, upgrades and developer contributions from Section 6 and the recommended renewal, maintenance and operations expenditure from Section 7. Resulting in an overall recommended expenditure of $395M over 10 years as depicted in Figure 15.

It is however acknowledged that the full extent of this recommended expenditure cannot be accommodated within the Long Term Financial Plan. Future iterations of the Asset Management Plan will further investigate and identify potential solutions.



	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34
7.11 & 7.12	$0.00 m	$0.00 m	$0.00 m	$0.00 m	-	$0.00 m	$0.00 m	$0.00 m	$0.00 m	$0.00 m
New & Upgrades	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m	$0.50 m
Maintenance & Operations	$7.38 m	$7.62 m	$7.86 m	$8.11 m	$8.37 m	$8.64 m	$8.92 m	$9.20 m	$9.50 m	$9.80 m
Required Renewal Expenditure	$17.66 m	$18.23 m	$18.81 m	$19.42 m	$20.04 m	$20.68 m	$21.35 m	$22.03 m	$22.73 m	$23.46 m

Figure 18: Recommended Overall Expenditure, measured in millions of dollars.

8 Improvement Plan

Asset Planning is a journey of continuous improvement with there always being opportunities to further improve the accuracy of asset data, better understand community needs and expectations and more efficiently meet the service needs of the Shire. The below items are specific improvements that can be made to this document as well as the operation of Council.

Ranking	Improvement	Responsibility	Timeline
1	Recognition and updating of asset attributes from recent inspections.	Asset Engineer – Roads	2024/25
2	Reduce backlog of road renewal projects	Road Assets Section	2024/25 – 2027/28
3	Review of asset useful lives.	Senior Asset Engineer – Roads	2025/26
4	Development of the road hierarchy and associated levels of service.	Senior Asset Engineer - Roads	2024/25
5	Conversion of a hierarchical asset structure to a flat asset structure (i.e. creating asset numbers for footpaths, cycleways and kerb and gutter)	Asset Engineer – Roads and Assets Systems Officer	2024/25
6	Migration of Conquest Asset Register to Technology1 Asset Register.	Manager Assets and Chief Financial Officer	2024/25
7	Review of existing spatial asset data and reconcile back to register.	Asset Engineer – Roads	2024/25
8	Further development of risk assessment.	Senior Asset Engineer - Roads	2026/27
9	Recognition of missing assets.	Road Assets Section	Continuous

Table 16: Improvement Plan

Wingecarribee
SHIRE COUNCIL

Asset Management Plan - Stormwater

We're with you

WINGECARRIBEE SHIRE COUNCIL

Document Name	Asset Management Plan - Stormwater
Version No.	1
Council File Reference	[Insert departmental file number, generally the relevant electronic records management system subject reference]
Adoption Date	[Governance to insert]
Resolution Number	[Governance to insert]
Document Owner	Manager Assets
Responsible Branch	Assets
Responsible Business Unit	Assets Roads and Drainage
Review Schedule	Annually
Review Date	[Governance to insert]

Version	Adoption Date	Notes
1	TBC	First version of Asset Management Plan - Stormwater

Contents

1 Executive Summary

This Asset Management Plan (AMP) is part of a suite of Portfolio AMPs, which together sit under the Asset Management Strategy (AMS). It is to be read in conjunction with the AMS and Four Year Capital Works Program.

This AMP provides an overarching document of Council's management of, and investment in, the Stormwater Asset Class over a 10-year planning period.

Council manages a water asset class of 230km of pipes and culverts, plus other assets across a broad range of asset categories, worth a combined $249M. The average condition of these structures is 2.0, which is defined as therefore being in 'good' condition.

The level of service that Council provides through this asset class can be described within the three categories of: Provision, Renewal, and Maintenance and Operations. What Council delivers through these levels of service are driven by consideration of: Risk Management, Community Satisfaction and Strategies and Masterplans. But is constrained by funding and availability of resourcing.

Review of the 2022 Community Satisfaction Survey demonstrate stormwater drainage continuing to grow in importance for the community, however the community's satisfaction with the stormwater drainage continues to decline. This shows a clear disconnect between Council's current performance in the provision of adequate drainage and the community's expectations.

In review of Levels of Service, it is noted that available budgets are heavily constrained by both funding and resourcing availability. And so despite the noted satisfaction performance gap, these constraints mean that solutions will need to be found whilst maintaining exist budget levels. Potential opportunities being investigated are a more strategic approach being adopted for maintenance, as well as programming & delivery of more effective capital renewal & upgrade projects.

A community wide survey will also be conducted in 2024/25 to better understand the community's dissatisfaction with Council's drainage services, such that targeted solutions/improvements can then be made. It needs to be better understood as to if the community is dissatisfied with provision of drainage to new areas, quality of existing drainage infrastructure, management of creeks or delivery of water quality outcomes

In order to provide an analysis of financial investment required across the planning period, calculation of forecast asset base growth must be completed. Asset base growth is calculated through consideration of the value of the asset class growing as result of new and upgrade projects, assets contributed through development, development contributions plans and indexation, as well as subtracting any known asset disposals.

It is forecast that across the planning period the asset base will grow by $115M.

Recommended financial investment for the Renewal Level of Service and Maintenance and Operations Level of Service is calculated at $16M and $9M respectively. These have been calculated through aligning renewals with annual depreciation, and ensuring maintenance and operational budgets increase in step with asset base growth.

The Long-Term Financial Plan is able to accommodate the required investment in asset renewal across the life of the plan, but it cannot accommodate the maintenance and operations investment largely as result of asset base growth exceeding the Council rate peg.

This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure requirements. Future iterations of the Asset Management Plan will further investigate and identify potential solutions to this difficult situation.

Asset management is a journey of continuous improvement, and so the AMP concludes with a concise Improvement Plan detailing the asset management maturity tasks programmed for the years ahead.

2 Asset Systems & Structures

2.1 Asset Planning Framework

The Asset Management Planning Framework, as summarised in Figure 1, integrates into the wider IP&R Framework and ensures Council performs the Asset Management functions of planning, coordinating, controlling, executing, monitoring and improving the activities associated with managing its assets.

In accordance with the Integrated Planning & Reporting (IP&R) Framework, which all NSW Local Governments are subject to, Council is required to prepare a suite of strategic documents – one being the Resourcing Strategy. It is through the Resourcing Strategy that the Asset Management Framework of Council is defined and endorsed.

The Asset Management Framework has three primary components:

1. *Asset Management (AM) Policy:* defines Council's Asset Management objectives.
2. *Asset Management Strategy (AMS):* also known as a Strategic Asset Management Plan (SAMP), shows how Council will achieve the objectives of the AM Policy. It is a road map for the delivery of these asset management objectives in accordance with the principles set in the AM Policy. It is to be continually monitored and regularly reviewed, in alignment with the formulation of the Long-Term Financial Plan (LTFP) and the Delivery Program & Operational Plans adopted annually by Council.
3. *Asset Management Plans (AMP):* further explores the high-level summary contained in the AMS with a detailed analysis of inventory, risk, levels of service and sustainability undertaken. AMPs are developed for all major infrastructure asset classes, grouped by the type of function the assets serve – i.e., community assets or a specific business unit.
    - Community assets
        - Transport
        - Stormwater
        - Buildings & Aquatics
        - Open Space & Recreation
        - Water
        - Wastewater
    - Business units
        - Cemeteries
        - Resource Recovery Centre
        - Southern Regional Livestock Exchange

The AMPs are continually reviewed, to ensure long-term sustainability of the Council services they support. They are informed by community consultation and will be used as core inputs into the development of Council's Long Term Financial Plan.

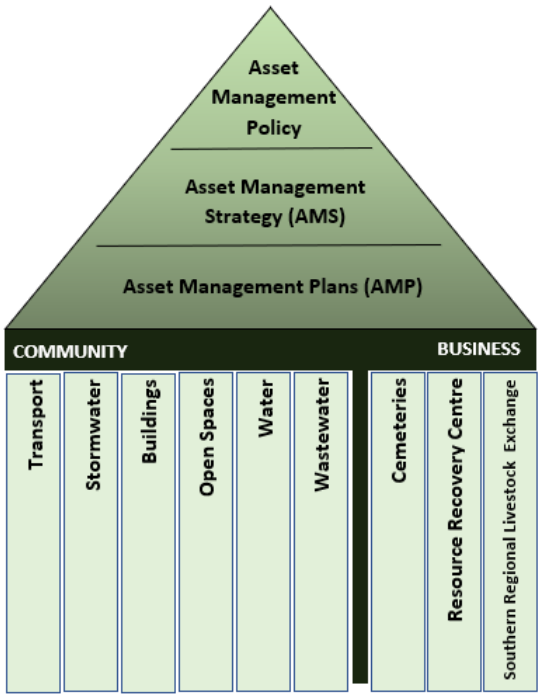


Figure 1 Asset Management Planning Framework

2.2 Asset Planning Systems

Wingecarribee Shire Council utilises several databases and systems to deliver on asset planning requirements. These databases and systems are summarised in Table 1 below:

System / Database	Description / Purpose
Conquest	Asset register – inventory, condition & attributes
ArcGIS	Spatial data
Technology One – Finance	Budgeting, purchase orders, expenditure
Technology One – Enterprise Content Management (ECM)	Record keeping
Technology One – Customer Request Management (CRM)	Workflow management for customer requests
Pulse – Project Management	Scoping and project control for Capital Projects
Drains	Stormwater Modelling Software

Table 1 Asset Planning Systems

It is however acknowledged that Council has embarked on a digital transformation journey, with Council executing a 10-year contract at the 19 October 2022 Council Meeting with Technology One. This contract will see all Technology One modules and additional options being made available to Council and them being progressively implemented across the organisation. A 10-year roadmap for the implementation of the Technology One suite is currently being developed.

This will generate asset planning outcomes through modernisation and integration of the works management asset register and strategic asset modules. This will enable Council to model asset conditions that will result from 10 year funding scenarios, which will in turn enable data driven decision-making to achieve financial sustainability.

2.3 Organisational Structure

Council has adopted a centralised approach to Asset Planning with all asset management and network planning functions being consolidated within the Assets Team. Management of operations and maintenance, as well as capital project delivery, are primarily distributed across the teams of Shire Presentation, Water Services and Project Delivery. The below figures detail the structure of these teams within the Service & Project Delivery Directorate, as well as that of the Assets Team.

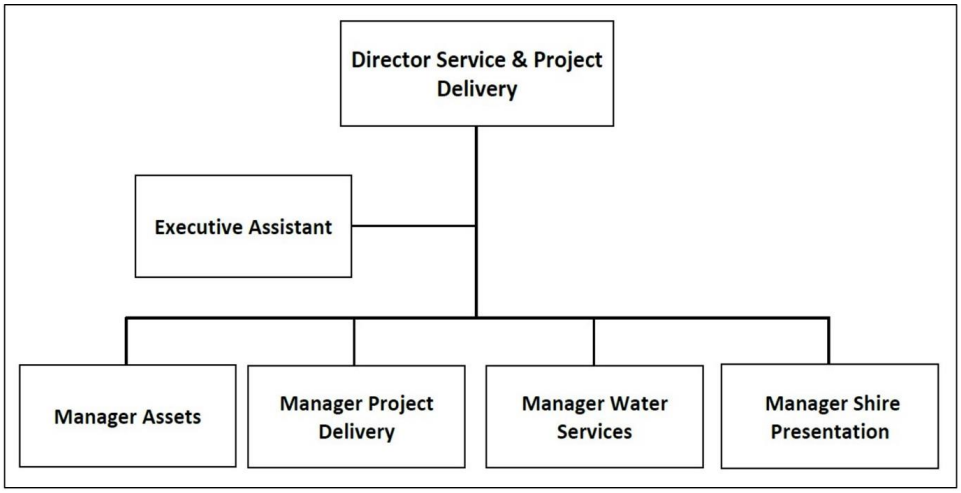


Figure 2 Service and Project Delivery Directorate

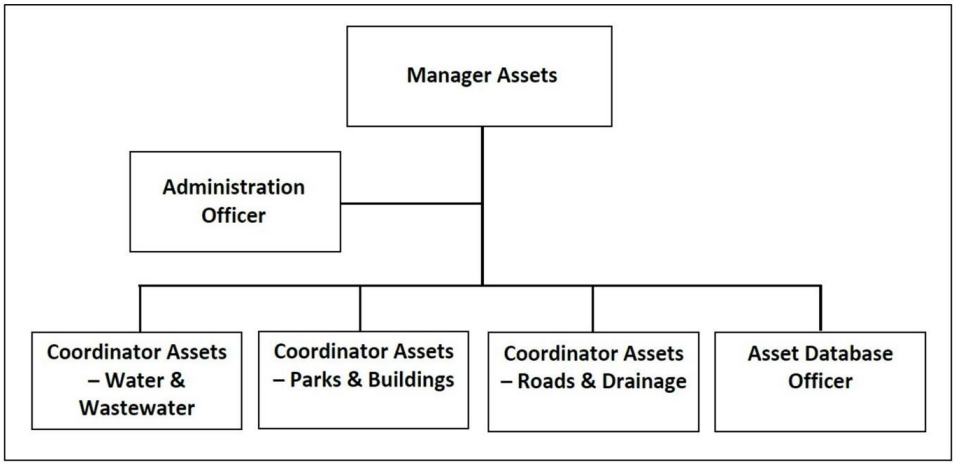


Figure 3 Asset Team Structure

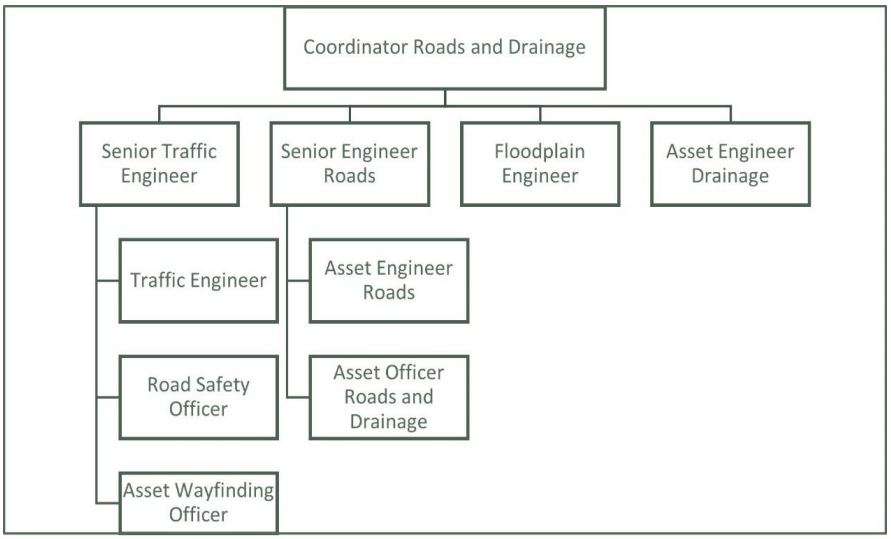


Figure 4 Roads and Drainage Team Structure

3 Our Assets

3.1 Asset Class Inventory

Council drainage assets are pits, pipes, headwalls, culverts, kerb and gutter, table drains, lined channel, detention basins. The table below provides an inventory of council drainage assets.

Asset Category	Amount	Unit of Measure
Stormwater Conduits - Culverts	7,918	metres
Stormwater Conduits - Causeway	248	metres
Stormwater Conduits - Swale	3,252	metres
Stormwater Conduits - Pipes	213,238	metres
Stormwater Conduits -Open Channels	59,770	metres
Stormwater Facilities - Detention Basins	73	item
Stormwater Nodes - Headwalls	2,486	item
Stormwater Nodes - Pits	7,044	item
Stormwater Nodes - SQIDS (GPTs)	47	item

Table 2 Stormwater Assets

Council manages 19,627 assets with a Current Asset Cost of $249.02million.

Asset inventory is maintained and updated through three primary means:

- Recognition of constructed assets – both through Council delivered capital projects, but also assets dedicated to Council through subdivision development.
- Ad-hoc Asset Inspections – inspections are regularly conducted in response to customer or internal requests, as well as part of project scoping phases.
- Scheduled Asset Inspections – all assets are to feature within a schedule of asset inspections. The frequency of inspection would be commensurate to the rate of degradation of the asset, as well as consequence of failure and cost of inspection.

The value and count of road assets below will differ to that of the Asset Management Strategy due to a comprehensive road and related infrastructure inspection completed in 2023/24.

The split of asset amounts across these asset categories is provided in Figure 5 below.

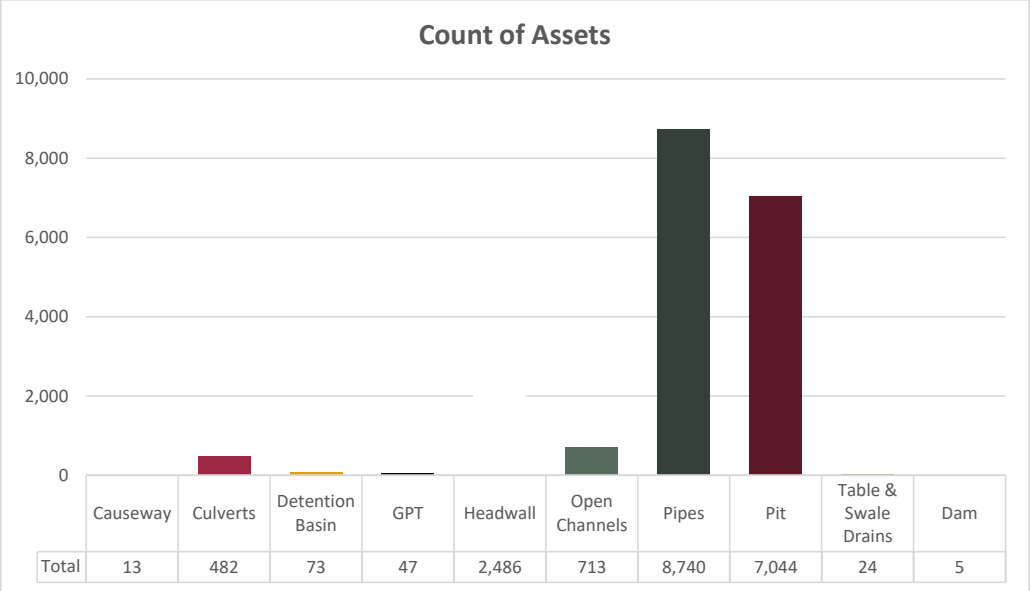


Figure 5 - Asset Category by Count

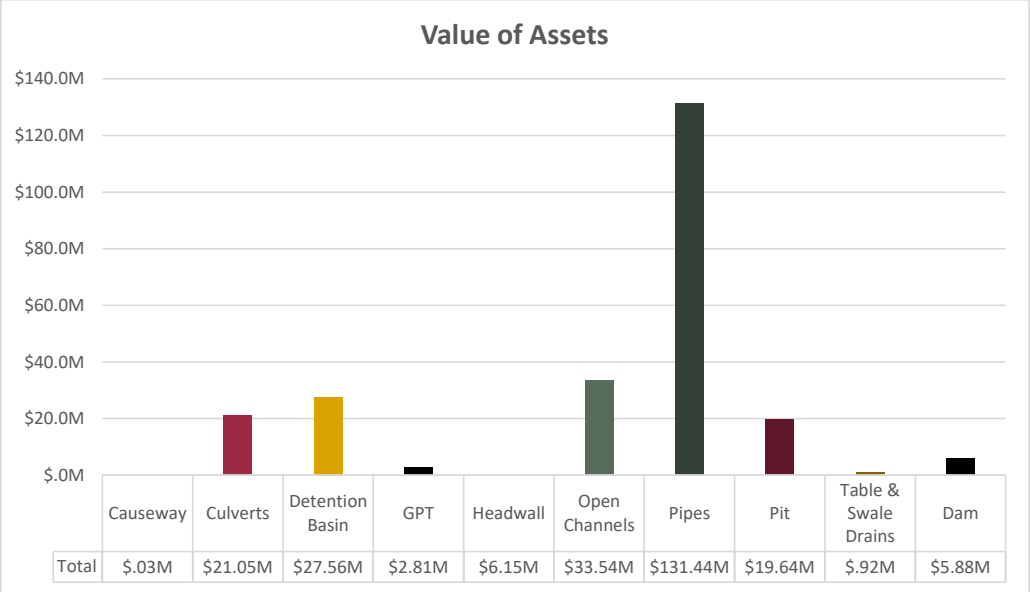


Figure 6 Current Asset Value

Assets are valued in accordance with the Detailed revaluations of asset classes are undertaken in accordance with Australian Accounting Standards and so a comprehensive revaluation of

each asset class is undertaken at a minimum every five years. Outside of the comprehensive revaluation years, fair value assessments are to be undertaken on an annual basis for all asset classes. If the assessment identifies that a material change has occurred, the corresponding asset classes will be indexed with an industry accepted index.

A comprehensive valuation for stormwater was performed in the financial year 2021/22. Next valuation will fall on financial year 2026/27.

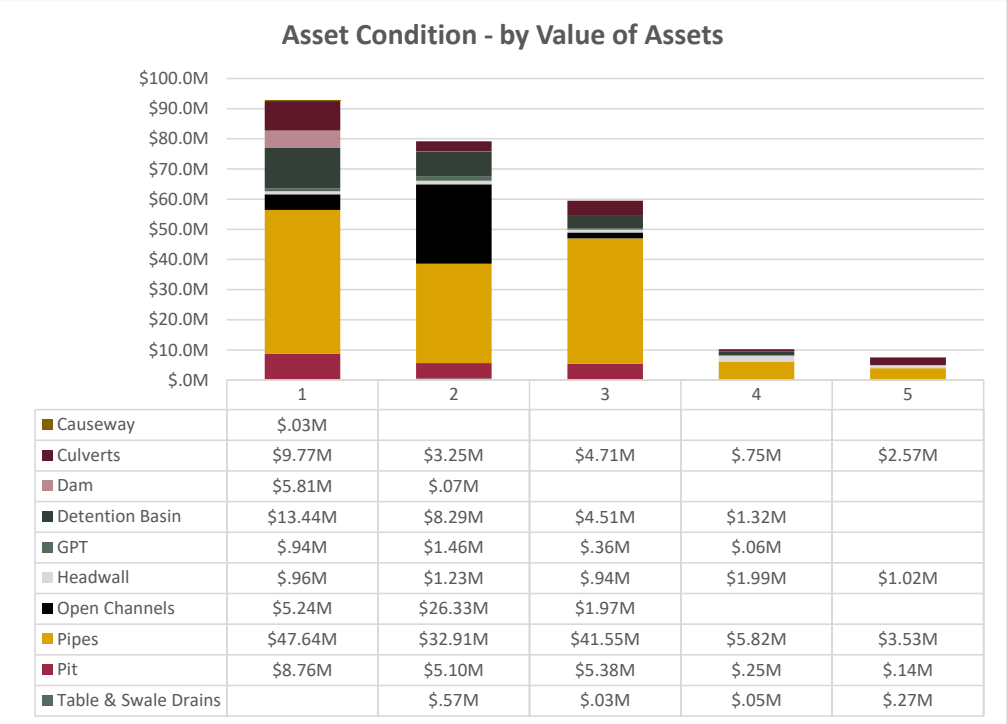
3.2 Asset Class Condition

Asset conditions are assessed as part of comprehensive network inspections, conducted per the schedule contained in Section 5.3. These assessments are undertaken in accordance with the relevant Practice Notes issued by the Institute of Public Works Engineering Australasia.

The condition rating scale is 1-5:

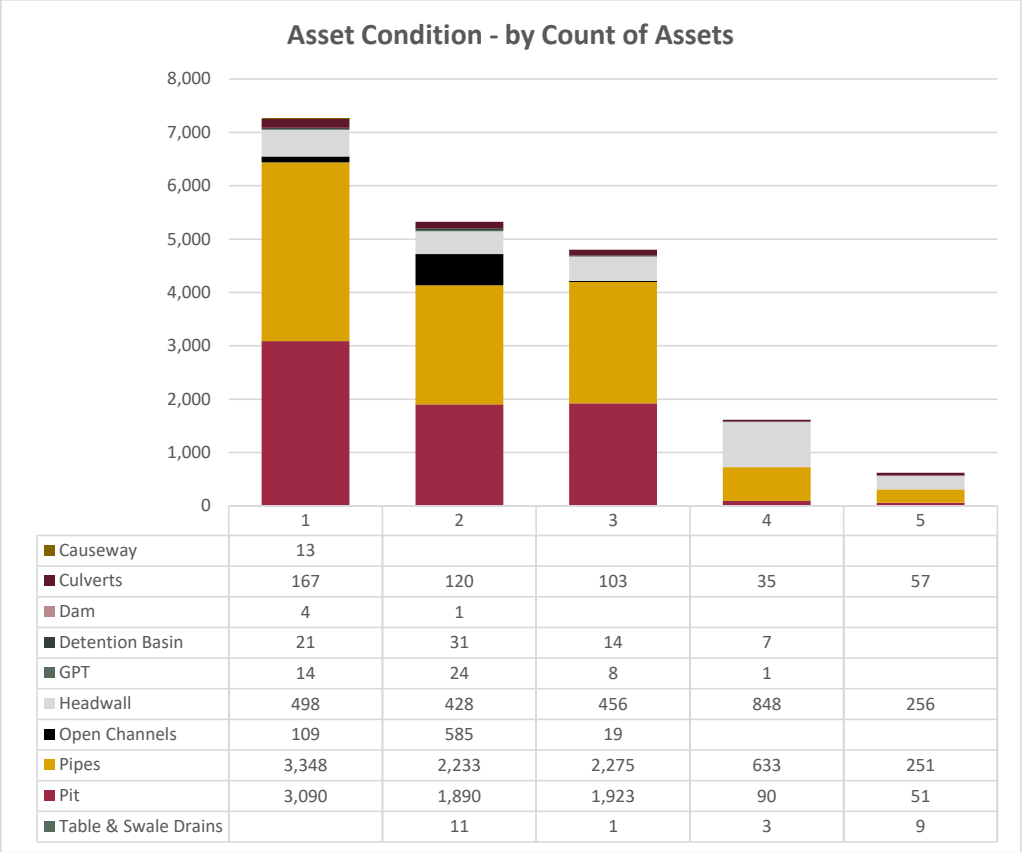
1. As new / excellent
2. Good / satisfactory
3. Fair / tolerable
4. Poor / intolerable
5. Very poor / reconstruction required

Asset Condition by current replacement cost is shown in Figure 7 Asset Condition Profile (by value).



	1	2	3	4	5
Causeway	$.03M				
Culverts	$9.77M	$3.25M	$4.71M	$.75M	$2.57M
Dam	$5.81M	$.07M			
Detention Basin	$13.44M	$8.29M	$4.51M	$1.32M	
GPT	$.94M	$1.46M	$.36M	$.06M	
Headwall	$.96M	$1.23M	$.94M	$1.99M	$1.02M
Open Channels	$5.24M	$26.33M	$1.97M		
Pipes	$47.64M	$32.91M	$41.55M	$5.82M	$3.53M
Pit	$8.76M	$5.10M	$5.38M	$.25M	$.14M
Table & Swale Drains		$.57M	$.03M	$.05M	$.27M

Figure 7 Asset Condition Profile (by value)



	1	2	3	4	5
Causeway	13				
Culverts	167	120	103	35	57
Dam	4	1			
Detention Basin	21	31	14	7	
GPT	14	24	8	1	
Headwall	498	428	456	848	256
Open Channels	109	585	19		
Pipes	3,348	2,233	2,275	633	251
Pit	3,090	1,890	1,923	90	51
Table & Swale Drains		11	1	3	9

Figure 8 Asset Condition Profile (by Asset Count)

Reviewing this data, it is evident that $18M of assets are deemed to be of Condition 4 or 5 – and so would need renewal. This equates to 7% of the asset class by value, and 12% of the asset class by asset count.

The overall average condition of Council's drainage assets is good / satisfactory. However, there are 24.4 % assets are in condition 3 which might be worthy of including into current year inspection list before they turn into 4 and 5. Average condition rating for stormwater assets is 2.08.

Asset Category	Average Condition	
	By Count of Asset	By Value of Asset
Table & Swale Drains	3.42	1.00
Pit	1.88	2.20
Pipes	2.11	1.65
Open Channels	1.87	1.83

Headwall	2.97	3.14
GPT	1.91	1.90
Detention Basin	2.10	1.65
Culverts	2.37	1.88
Causeway	1.00	3.01
Dam	1.20	1.01
Grand Total	**2.08**	**2.04**

Table 3 - Average Asset Condition

3.3 Age Profile

Construction years have not been recorded for many older assets. As a result, when comprehensive inspections and revaluations are undertaken, construction years are estimated using the asset condition and expected useful life, assuming straight-line deterioration. As a result, the written down value of the asset can be used, together with the Useful Life, to calculate an estimated construction year.

The following figure displays the estimated value of assets constructed across the decades. From the graph it appears that for 1917-1926 period growth was low, but there was a steady period of asset base growth.

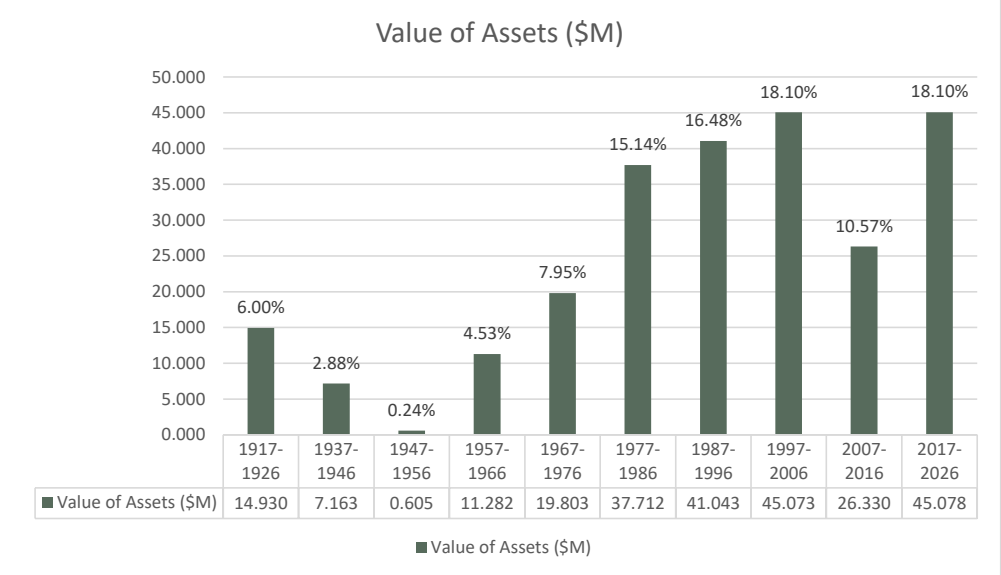


Figure 9 Age Profile of Assets

3.4 Asset Category Inventory

Over 50% of the value of the stormwater network is in the 213.1 km of stormwater pipes.

The following tables provide further insight into this asset category.

Pipe Materials	Length (km)
Reinforced Concrete	197.9
Asbestos Cement	6.2
Fibre Reinforced Cement	4.2
UPVC	1.8
Unknown	1.6
Vitreous Clay	0.3
Ribbed Polypropylene	1.1
Total	213.1

Figure 10 Stormwater Pipes by Material

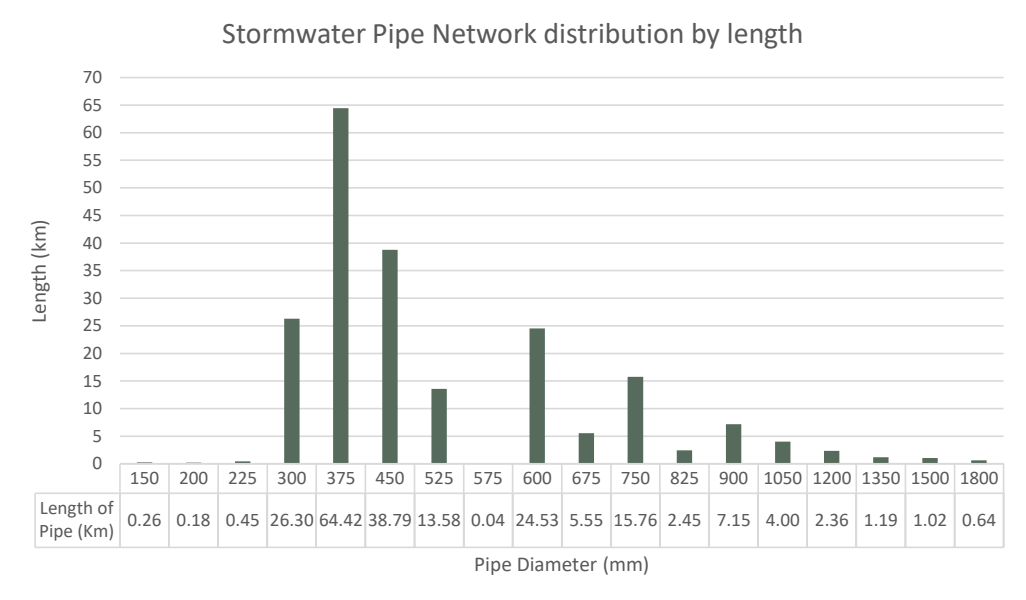


Figure 11 Stormwater Pipes Length

3.5 Data Confidence

Confidence in the completeness and accuracy of stormwater asset data is mixed.

Asset inventory data for the three town centres and some villages is of high confidence, however inventory data is missing entirely for many villages – examples being Yerrinbool, Colo Vale, Hill Top, Balmoral and Berrima. Drainage infrastructure along rural roads is also largely uncaptured.

The majority of condition data is derived from an age-based calculation. With a rolling CCTV program, it is desired that 5% of the network may be inspected per year – which will enable higher confidence to be had in condition and inventory data.

Further inventory data collection is listed within the Improvement Program of Section 8.

4 Drivers of Level of Service

Levels of Service (LoS) are comprised of four components: provision, renewal, maintenance and operations. Each LoS is constrained by funding & resource availability, however the fundamental drivers of LoS can be identified in three categories:

- Risk Management
- Community Satisfaction
- Strategies & Masterplans

4.1 Risk Management

This section identified the risks to Council and the public arising from various stormwater assets.

A Risk Assessment has been completed for the asset class, covering generic hazards that are typical across the entire asset network and consideration of Critical Assets.

4.1.1 Critical Assets

Critical assets are those assets that have a high consequence of failure in terms of community impact. By identifying critical assets and failure modes, an organisation can ensure that condition inspection programs, maintenance and capital expenditure plans are targeted to ensure that the risk of critical asset failure is minimised.

Critical assets for the stormwater asset class are determined to be:

- The trunk drainage network – that is stormwater pipes of diameter greater than 900mm and culverts greater than 0.636m2 in area.
- Flood retention basins and dams having current replacement cost over $500k.

The following tables provide an indication as to the magnitude of these critical assets.

Diameter (mm)	Length of Pipes (km)
900	7.15
1050	4.00
1200	2.36
1350	1.19
1500	1.02
1800	0.64
	16.36 Km

Table 4 - Critical Assets: Pipes

Box culvert Size	Length in meter
1200X600	256.4
1200X900	6
1200X1200	119
1250X900	198
1500X600	393.4
1500X750	11

1500X900	24
1500X1200	274.46
1500X1600	52
1800X600	237.49
1800X900	171
1800X1200	80
1850X1700	13
1900X600	20
2100X450	40.32
2100X600	53
2100X900	176
2100X1200	115
2150X750	116
2300X700	23
2400X600	10.8
2400X750	81
2400X900	45
2400X1200	101.22
2400X1800	109
2700X600	212.19
2700X900	95.2
2700X1200	25
2800X1300	32
3000X600	149.1
3000X750	20
3000X900	35
3000X1200	46
3000X1500	72
4000X2500	21.9
4200X900	91.6
4200X1200	19.6
6100x2950	9
Total	**3.55 km**

Table 5 Critical Assets: Box Culverts

Asset Category	Location	Asset ID	Year Acquired	Value	Condition

Detention Basin	1 Old South Road Bowral	182882	2003	2.27	1
Detention Basin	1 Old South Road Bowral	182898	2003	1.88	1
Detention Basin	1 Old South Road Bowral	182891	2003	1.21	1
Detention Basin	13-15 fern Brook Crescent Mittagong	184976	2003	0.71	3
Detention Basin	Drainage Reserve Eloura Lane Moss Vale	184978	1970	0.61	3
Dam	Bowral Golf Course, Bowral	36024	1983	1.26	1
Dam	62 Alfred Street Mittagong	36027	1917	4.54	1

Table 6 Critical Assets: Basins and Dam

4.1.2 Risk Assessment Framework

Risk (R) Matrix		Consequence (C)				
		Severe	**Major**	**Moderate**	**Minor**	**Insignificant**
Likelihood (L)	**Almost Certain**	Extreme	Extreme	High	High	Moderate
	Likely	Extreme	Extreme	High	Moderate	Moderate
	Possible	Extreme	High	Moderate	Moderate	Low
	Unlikely	High	High	Moderate	Low	Insignificant
	Rare	High	Moderate	Low	Insignificant	Insignificant

Table 7 Risk Assessment Framework

4.1.3 Risk Assessment

Risk	Source	Inherent Risk			Treatment	Residual Risk			Implementation Status	Responsible Team	Level of Service
		C	L	R		C	L	R			
Personal injury	Pipes and Culverts	MOD	POS	M	Inspect pipes and culverts in accordance with inspection regime prioritised to account for trunk drainage	MOD	RAR	L	Current	Assets	Operations
					Reactive maintenance of pipes & culverts through CRM system				Current	Shire Presentation	Maintenance
					Programming and renewal of assets in accordance with useful life				Current	Assets	Renewal
	Pits & Headwalls	MOD	POS	M	Reactive maintenance of stormwater pits & headwalls through CRM system	MOD	RAR	L	Current	Shire Presentation	Maintenance
					Inspect locations susceptible to sediment and debris blockages in accordance inspection regime				Future	Assets / Shire Presentation	Operations
	Detention basins	MOD	UNL	M	Inspect detention basins in accordance with inspection regime	MOD	RAR	L	Future	Assets	Operations
					Reactive maintenance of assets through CRM system				Current	Shire Presentation	Maintenance
					Programming and renewal of assets in accordance with useful life				Current	Assets	Maintenance
	Open Channels & Creeks	MOD	UNL	M	Inspect open channels & creeks in accordance with inspection regime	MOD	RAR	L	Future	Assets	Operations
					Reactive maintenance of channels to address significant blockages				Current	Shire Presentation	Maintenance
Reduction in water quality	GPT	MIN	LIK	M	Define acceptable GPT devices, consolidate GPT network, identify & prioritise new install locations, develop prioritised cleaning schedule	INS	RAR	I	Future	Assets	Provision
					Removal of pollution from GPTs on scheduled basis				Future	Shire Presentation	Operations
					Review Subdivision DAs and SWXs to ensure satisfactory GPT design				Current	Assets	Provision
	Secondary & Tertiary water quality improvement devices	MIN	LIK	M	Define acceptable secondary & tertiary devices, identify & prioritise new install locations, develop prioritised cleaning schedule	INS	RAR	I	Future	Assets	Provision
					Develop Operation & Maintenance Plans for the complex systems				Future	Assets	Operations
					Removal of pollution from secondary & tertiary devices on scheduled basis				Future	Shire Presentation	Operations

Risk	Source	Inherent Risk			Treatment	Residual Risk			Implementation Status	Responsible Team	Level of Service
		C	L	R		C	L	R			
Personal injury and loss of property	Flooding behaviour of LGA not understood	SEV	POS	E	Develop flood studies and floodplain risk management studies in accordance with the Flood Prone Land Policy and the Floodplain Development Manual	MOD	UNL	M	Current	Assets	Provision
	Stormwater network of insufficient capacity	MAJ	POS	H	Pursue funding opportunities to progress infrastructure upgrades identified within Floodplain Risk Management Plans.	MOD	UNL	M	Current	Assets	Provision

Table 8 Risk Assessment

4.2 Community Satisfaction

Council's community satisfaction survey is undertaken biennially and tracks Council's performance in service delivery, identifies priority areas and evaluates community attitudes towards customer services, communication and Council as an organisation.

The objectives of the community satisfaction survey process are to:

- Measure the importance of, and satisfaction with, services and facilities provided by Council
- Compare levels of satisfaction for Council's services and facilities with similar councils
- Assist Council in identifying service priorities for the community
- Evaluate Council's customer services and communication

The survey covers facilities and services provided by Council identifying both importance and satisfaction on a 5-point scale, with 1 = low and 5 = high.

The most recent community survey was conducted in 2022, with the results of the prior years also provided for comparison. The following table contains the items relevant to this asset management plan.

Service	Importance			Satisfaction			2022 Performance Gap
	2019	2021	2022	2019	2021	2022	
Providing adequate drainage	4.35	4.44	4.57	2.99	2.75	2.56	40%

Table 9 Community Satisfaction Survey Result

In the table above, the 2022 Performance Gap is the difference between community importance and community satisfaction.

Community survey results demonstrate stormwater drainage continuing to grow in importance for the community, however the community's satisfaction with the stormwater drainage continues to decline.

This shows a clear disconnect between Council's current performance in the provision of adequate drainage and the community's expectations.

Resultant actions will be further explored in Chapter 5 Levels of Service.

4.3 Strategies & Masterplans

The third driver of Levels of Service can be broadly grouped as Strategies and Masterplans. Council prepares strategies and masterplans across all asset classes to ensure that network planning, implementation and maintenance is being conducted in a wholistic, considered and effective manner.

4.3.1 Drainage Masterplans:

Draft Stormwater Masterplans have been developed for several villages of the Shire – however further refinement is required to enable their public exhibition and final adoption by Council.

The vision is for Stormwater Masterplans to be developed for areas that a Floodplain Risk Management Plan is not suitable, as result of the area not being subject to significant flooding.

However, it is acknowledged that the infrastructure works noted within the Stormwater Masterplans will exceed Council's available stormwater capital budgets. And so the primary

purpose of the Masterplans is to ensure that suitable upgrades are included within conditions of consent for future developments, as well as providing options for grant funding opportunities.

The table below details the status and program of Stormwater Masterplan development:

Location	Status	Level of Service it influences
West Mittagong	Complete – October 2013	Provision
Wembley Road & Farnborough Drive Catchments	Complete – September 2017	Provision
Yerrinbool	Draft – Adoption by Council forecast for July 2024	Provision
New Berrima	Draft – Adoption by Council forecast for 2025/26	Provision
Hilltop	Draft – Adoption by Council forecast for 2025/26	Provision
Bundanoon	Draft – Adoption by Council forecast for 2025/26	Provision
Colo Vale	Not Started – Adoption by Council forecast for 2026/27	Provision

Table 10 Drainage masterplan

4.3.2 Floodplain Management Program

Council develops flood studies and floodplain risk management plans in accordance with the Flood Prone Land Policy and the Floodplain Development Manual.

The resultant Floodplain Risk Management Plans contain a variety of actions for Council to undertake in order to manage flooding hazards within the catchment. The actions will generally fall within the categories of either infrastructure upgrades, development controls, emergency services and community education. A comprehensive list of actions and their corresponding implementation status is available on the Council website and updated on a quarterly basis.

The table below provides a summary of the Flood Studies and Risk Management Studies that Council has completed or are in progress.

Catchment	Study	Status	Year of Completion	Level of Service it influences
Nattai Ponds	Flood Study	Complete	2016	-
	Risk Management Study and Plan	Complete	2020	Provision
Nattai River	Flood Study	Complete	2014	-
	Risk Management Study and Plan	Complete	2017	Provision
	Flood Study	Complete	2013	-

Gibbergunyah Creek	Risk Management Study and Plan	Complete	2016	Provision
Bowral (Mittagong Creek)	Flood Study	Complete	2009	-
	Risk Management Study and Plan	Complete	2009	Provision
	Revision of Risk Management Study and Plan	In progress	Forecast - 2025	Provision
Whites Creek	Flood Study	Complete	2012	-
	Risk Management Study and Plan	Complete	2012	Provision
	Revision of Risk Management Study and Plan	Complete	2020	Provision
Burradoo BU2	Flood Study	Complete	2010	-
	Risk Management Study and Plan	Complete	2014	Provision
Robertson Village (Caalong Creek)	Overland Flow Study	Complete	2016	-
	Risk Management Study and Plan	Complete	2016	Provision

Table 11 Floodplain Management Program

5 Levels of Service

Levels of Service (LoS) are comprised of four components: provision, renewal, maintenance and operations. These four components are best understood in isolation, but an adjustment to one result in changes to others, so they must be considered together.

In this AMP, maintenance and operations are considered together due to there being no distinction within Council's current financial system.

5.1 Provision

The Provision LoS relates to what Council provides, how much and where. Council's stormwater asset network is composed of 19,627 assets with a total value of $249M.

The Provision LoS is not consistent across the Shire as subdivisions & development are completed in accordance with the standards of the time – and these standards change with time. Urban and rural centres also generally contain different stormwater drainage networks – with urban areas more likely to feature kerb and gutter with pits and pipes, whereas rural areas will generally consist of a network of swales with pipes only at road crossings.

The Provision LoS for new subdivisions & development is therefore that which is stipulated in the documents which govern it, namely Council's:

- Local Environmental Plan
- Development Control Plans
- Engineering Design and Construction Specifications
- Developer Contribution & Servicing Plans

That withstanding, due to the Level of Service Drivers described in Section 4, Council must be striving for progressive implementation of a consistent Provision Level of Service across the Shire.

This is to be primarily achieved through the implementation of actions identified through Stormwater Masterplans and Floodplain Risk Management Plans – the details of which are provided in Section 4.4.

It is however acknowledged that these Masterplans and Risk Management Plans have not been developed for all areas within the Shire, and so upgrades will be considered in these areas on a case-by-case basis.

There is significant financial support available for the implementation of actions identified within Floodplain Risk Management Plans from State and Federal grant funding programs – the annual Floodplain Management Plan being the primary source.

Unfortunately, there are limited funding opportunities for the implementation of Stormwater Masterplans and so they will primarily be utilised to inform conditions of consent for developments, as well as providing options for unique grant funding opportunities when available. However opportunities will be taken as part of road and drainage renewal projects to deliver improved drainage outcomes when possible.

It is to also be noted that the Wingecarribee Stormwater Management Policy provides detail as to areas of Council and private responsibility for the management of the stormwater network.

5.2 Renewal

The Renewal LoS defines how often Council intends to replace existing assets with a Modern Engineering Equivalent Replacement Asset (MEERA), including disposal of the existing asset.

This renewal frequency is termed 'useful life' and adjusting this value has significant implications for annual depreciation, with asset useful being a direct factor in its calculation. Annual investment in the capital renewal of assets should ideally equate to the value of annual depreciation. Although asset degradation and failure will not follow a straight line across financial years, failure to maintain asset renewal at the rate of annual depreciation will result in an overwhelming volume of renewal works in later years.

Adjustments to asset useful life also has impacts on required maintenance and operations expenditures. Shorter useful lives generally result in less required maintenance, all other factors being equal, and vice versa.

Summary of useful lives for stormwater asset categories are provided below:

Asset Class	Asset Category	Useful life (years)
Stormwater	Pits	100
	Pipes	100
	GPT	80
	Headwall	80

Table 12 Useful lives

The intent is therefore that all stormwater assets will be renewed prior to exceeding their designated useful life.

However, renewal works will also be based on asset condition. When an asset is found to be of Condition 4 or 5 it will then be programmed for renewal within the Capital Works program.

5.3 Maintenance & Operations

Maintenance and operation activities are completed in both a proactive and reactive fashion across the asset network. Many operational activities by their nature are more readily able to be scheduled and completed in a timely & controlled way. Maintenance activities are more difficult to deliver in scheduled fashion, with mature systems and full resourcing required to do so – however even then reactive works cannot be completely eliminated.

Results from the recent community satisfaction survey show a noted lack of satisfaction in Council's current maintenance level of service for the stormwater networks.

Nevertheless, maintenance and operations budgets are heavily constrained by both funding and resourcing availability. Although results of the recent community satisfaction survey indicate a performance gap in stormwater maintenance, these constraints mean that solutions will need to be found whilst maintaining exist budget levels.

Potential opportunities being investigated are a more strategic approach being adopted for maintenance, as well as programming & delivery of more effective capital renewal & upgrade projects.

A community wide survey will also be conducted in 2024/25 to better understand the community's dissatisfaction with Council's drainage services, such that targeted solutions/improvements can then be made. It needs to be better understood as to if the community is dissatisfied with provision of drainage to new areas, quality of existing drainage infrastructure, management of creeks or delivery of water quality outcomes.

Maintenance and operations level of service will be provided under two categories: inspections and maintenance.

5.3.1 Inspections:

Inspections will be of two categories. Scheduled inspection and reactive inspection.

- Scheduled inspection

As part of the risk management of the asset network, all assets are to be inspected at a regular interval. The frequency of the inspection will be commensurate to the magnitude of the network as well as the assets rate of decay. The following condition inspection frequencies have been adopted for the following asset categories:

Asset Class	Asset Category	Inspection Method	Inspection Frequency
Stormwater	Pits	CCTV Tractor Camera	20 years (5% of network inspected annually)
	Pipes	CCTV Tractor Camera	20 years (5% of network inspected annually)
	GPT	Visual Inspection	Annually
	Headwall	Visual Inspection	5 years (20% of network inspected annually)
	Detention Basins	Visual Inspection	Annually

Table 13 Scheduled Asset Inspection

- Reactive inspection

Reactive inspections will be conducted as required in response to notification, or suspicion, of asset structural or performance failure. The reactive inspection will generally be an onsite visual inspection; however, CCTV Tractor Cameria inspections will be utilised to inspect the stormwater pipeline network.

5.3.2 Maintenance:

Maintenance works are currently completed on a solely reactive basis. This is largely as result of current work management systems, but also due to available resourcing.

The current level of service can therefore be detailed as such in the following table:

Activities	Reactive or scheduled	Annual Budget
• Pit, pipe and headwall clearing. • Repairs and replacement of minor items • Vegetation and litter removal • Cleaning of GPTs and water quality devices	Reactive	$669,971

Table 14 Maintenance Activities

As an improvement for 2024/25, it is planned that GPT cleaning will move towards a scheduled program – with all GPTs being programmed for cleaning at least once per year.

6 Asset Base Growth

Council's asset base will expand over the next 10 years through committed and expected new & upgrade expenditure, assets contributed by development through conditions of consent, and the Developer Contributions & Servicing Plans. This growth can be decreased through asset disposals; however, no significant disposals are currently committed.

In this analysis, all future asset values, as well as planned and recommended expenditures, assume indexation rate of 3.0% per annum.

6.1 New & Upgraded Assets

The new and upgrade asset projects category covers those projects resourced by Council or grant funding, but excluding Development Contributions, that involve existing assets being enhanced or new assets being constructed.

The table below summarises the new or upgrade projects that Council is known to be delivering within the 10-year window of this AMP. These projects are being funded by Council through a combination of General Fund, Stormwater Management Levy and Grant funding. The financial year listed is that in which the project will be completed, but construction may have commenced in the years prior.

Asset Class	Financial Year	Project Name	Value
Stormwater	2025/26	Retford Farm Basin	$6.15M
Stormwater	2025/26	Gascoigne Street Drainage	$0.81M
Stormwater	2025/26	Sunninghill Ave Burradoo	$1.85M
Stormwater	2025/26	Drapers Road Drainage	$0.80M
Stormwater	2025/26	Penrose Road Drainage	$0.30M
Stormwater	2026/27	Bowral Golf Course Basins	$2.00M

Table 15 New and Upgraded Assets

6.2 Assets Contributed by Development through Conditions of Consent

As development occurs, particularly within the new living areas identified within the Wingecarribee Local Housing Strategy, it is intended that infrastructure be provided at a rate consistent with the Provision LoS in existing parts of the Wingecarribee Local Government Area.

With the Wingecarribee Local Housing Strategy setting an objective of a 50:50 split of infill and greenfield development, it is therefore forecast that only 50% of the annual population growth will result in asset base growth.

Reviewing the rate of contributed assets across 2021/22 and 2022/23, it is observed that the value of contributed assets is equivalent to 30% of this forecast population growth from greenfield development. Which is understood to be the result of assets contributed through this method generally being of a non-major nature. (eg sewer pipelines will be contributed through a development, but not another sewage treatment plant).

Financial Year	Population Forecast	Population Growth	Forecast Asset Base Growth
2023/24	53,615	1.1%	0.16%

2024/25	54,196	1.1%	0.16%
2025/26	54,776	1.1%	0.16%
2026/27	55,357	1.1%	0.16%
2027/28	55,975	1.1%	0.17%
2028/29	56,593	1.1%	0.17%
2029/30	57,212	1.1%	0.16%
2030/31	57,830	1.1%	0.16%
2031/32	58,448	1.1%	0.16%
2032/33	59,138	1.2%	0.18%

Table 16 Forecast ID Population Growth

6.3 Developer Contributions and Servicing Strategies

An important funding source for new infrastructure are Development Contributions collected under Section 7.11 and 7.12 of the Environmental Planning and Assessment Act. These contributions fund a significant proportion, though not all, of the infrastructure required by new development.

Council currently primarily levies contributions through the following plan relating to stormwater.

- Stormwater Development Servicing Plan 2010

As of 30 June 2023, $640K is currently held in reserve for the delivery of infrastructure items detailed within this plan. However, it is acknowledged that the infrastructure program within the plan is due for revision, with it being currently uncertain whether contributions are being received in line with expected forecasts – as well as whether the magnitude of Council co-funding detailed within the Plan remains financially viable.

Several strategic studies have been completed or are in progress which will inform future updates to the plans, these being:

- Floodplain Risk Management Plans
- Stormwater Masterplans

Therefore, only projects that currently feature within the 2024/25 to 2028/29 Capital Works Program which are funded by developer contributions are to be included within this section.

These being:

- Retford Farm Detention Basin
- Bowral Golf Course Detention Basin
- Sunninghill Avenue Drainage Upgrade
- Gascoigne Street Drainage Upgrade

6.4 Asset Disposals

Asset disposals entail the removal of an existing asset without replacing it with a similar asset. No such disposals are considered in this AMP. This may be examined in future revisions when considering the results of community engagement.

6.5 Asset Indexation

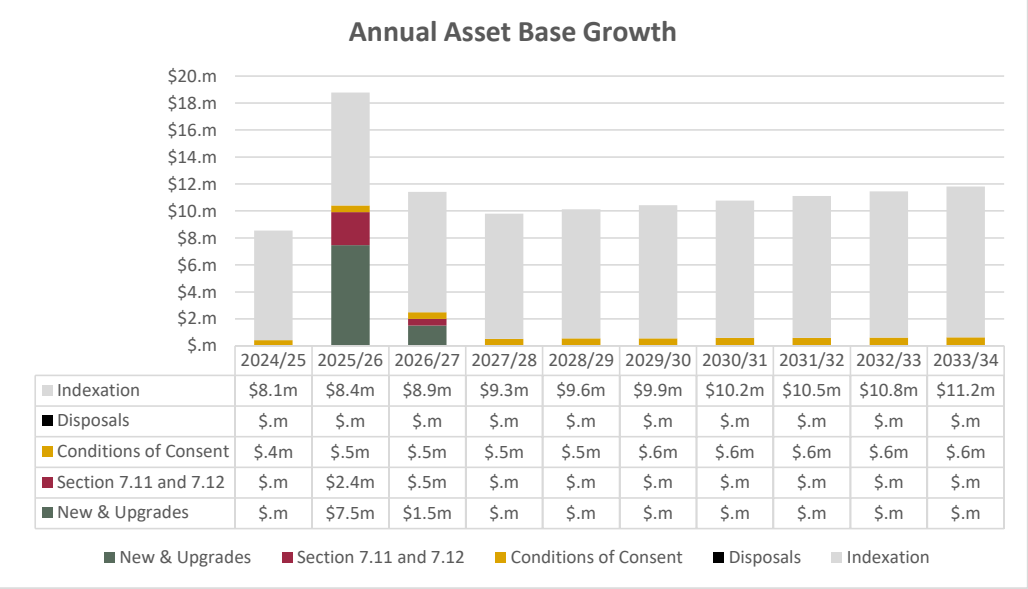
Indexation rate of 3.0% p.a has been applied across the 10-year forecast period. This aligns with the indexation rate adoption in the LTFP. The same rate has been adopted in this AMS to ensure that lifecycle costs and associated budgets are comparable in future financial years.

6.6 Asset Base Growth

Total asset base growth is comprised these components:

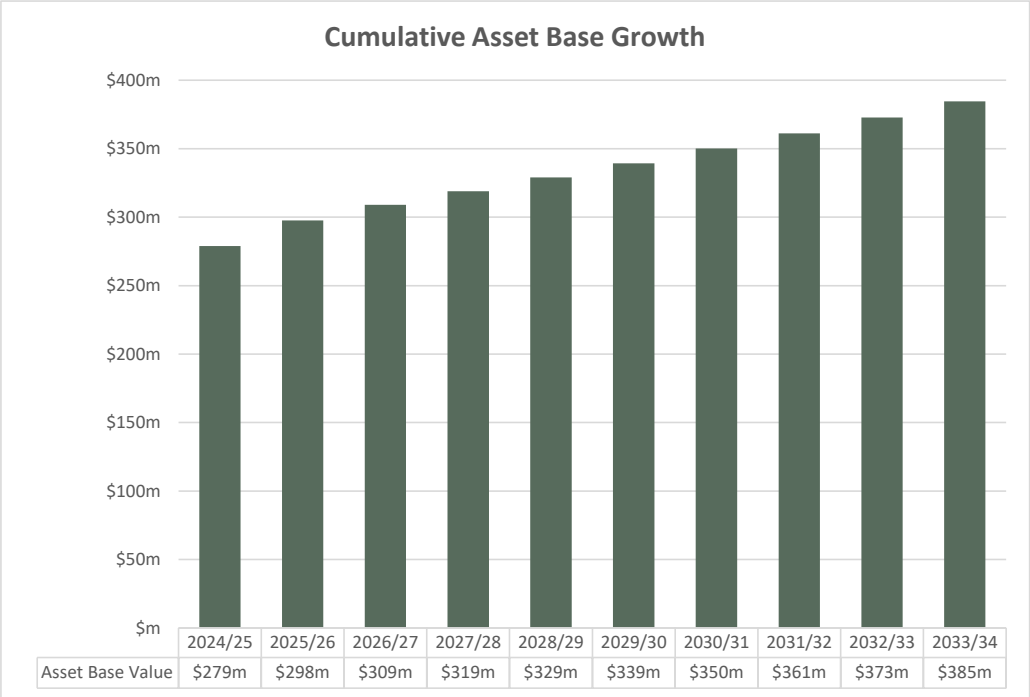
- Asset upgrades
- Assets contributed by development through conditions of consent.
- Development Contributions
- Subtracting asset disposals
- Indexation

The stormwater asset base is forecast to see $115M of growth across the 10-year window of this AMP.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Indexation	$8.1m	$8.4m	$8.9m	$9.3m	$9.6m	$9.9m	$10.2m	$10.5m	$10.8m	$11.2m
Disposals	$.m	$.m	$.m	$.m	$.m	$.m	$.m	$.m	$.m	$.m
Conditions of Consent	$.4m	$.5m	$.5m	$.5m	$.5m	$.6m	$.6m	$.6m	$.6m	$.6m
Section 7.11 and 7.12	$.m	$2.4m	$.5m	$.m	$.m	$.m	$.m	$.m	$.m	$.m
New & Upgrades	$.m	$7.5m	$1.5m	$.m	$.m	$.m	$.m	$.m	$.m	$.m

Figure 12 Annual Asset Base Growth



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Asset Base Value	$279m	$298m	$309m	$319m	$329m	$339m	$350m	$361m	$373m	$385m

Figure 13 Cumulative Asset Base Growth

7 Financial Lifecycle Forecast

The Council assets described in Section 3, with the asset base growth forecast in Section 6, require resourcing across their lifecycle to achieve the LoS contained in Section 5.

The two main components are renewal expenditure, and maintenance and operations expenditure, which sum together to give the recommended overall expenditure on Council assets over the next 10 years.

7.1 Renewal Forecast

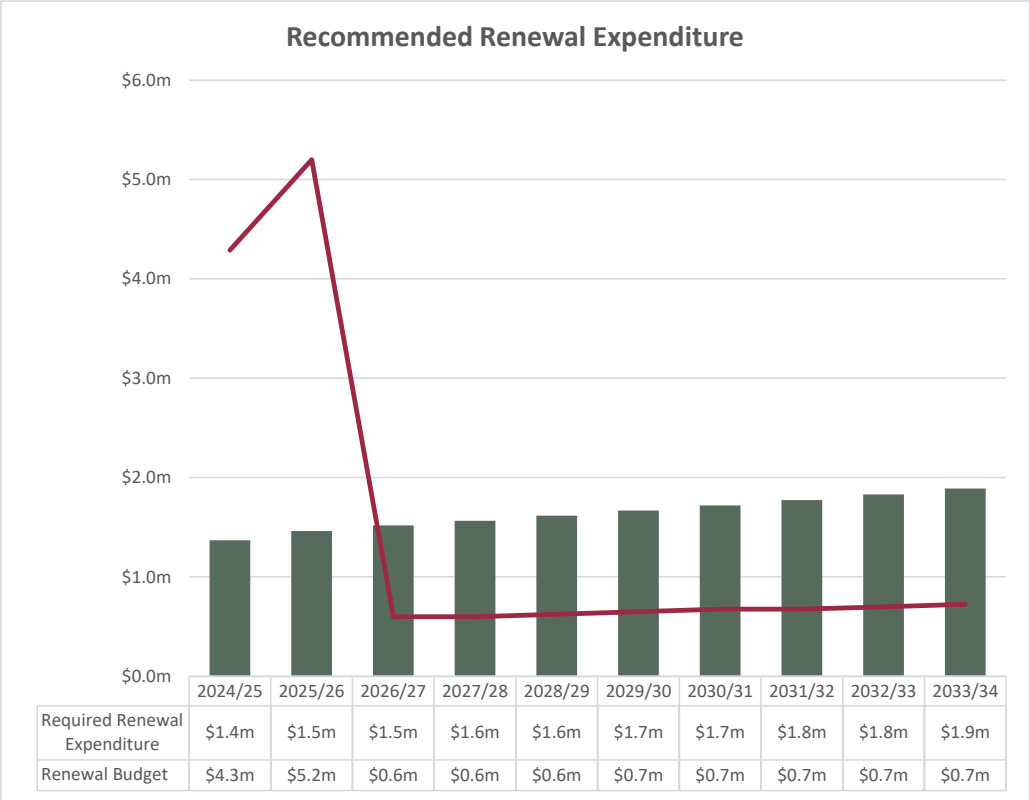
To ensure that satisfactory condition is maintained across the asset base and the Infrastructure Backlog Ratio benchmark is achieved, capital renewal works should be undertaken when assets reach the end of their useful lives. These capital renewal works involve disposing of the existing asset and constructing the MEERA.

However, if the expiry of useful lives or asset conditions are solely relied upon to inform these recommended renewals, annual budgets fluctuate significantly, which creates difficulties from a resourcing perspective. Rather, it is better practice to average out the recommended renewal expenditure in order to reduce annual fluctuations. When future Delivery Programs are prepared, actual allocations to each asset class may vary depending upon the scale of individual projects.

Figure 19 below shows the annual renewal expenditure required for each asset class, with the requirement increasing each year as result of the asset base ever increasing. It is recommended that a total of $16M is invested in stormwater asset renewal across the next 10 years. The Capital Works Program and Long-Term Financial Plan currently accommodates $15M of stormwater asset renewal, with grant opportunities to be pursued to bring total investment into alignment with that required.

Figure 9 shows the renewal budget featured in the Capital Works Program and Long-Term Financial Plan, as well as the required renewal expenditure to align with asset depreciation. In 2024/25 and 2025/26 expenditure will well exceed that of annual depreciation with significant investment in asset renewal in accordance with the final two years of the SRV application. However, in the years subsequent, distribution of the SRV funding across asset classes will be in accordance with the annual depreciation of asset classes.

That withstanding, total investment across the 10-year planning period is in alignment with asset depreciation.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Required Renewal Expenditure	$1.4m	$1.5m	$1.5m	$1.6m	$1.6m	$1.7m	$1.7m	$1.8m	$1.8m	$1.9m
Renewal Budget	$4.3m	$5.2m	$0.6m	$0.6m	$0.6m	$0.7m	$0.7m	$0.7m	$0.7m	$0.7m

Figure 14 Recommended Renewal Expenditure

7.2 Maintenance & Operations Forecast

To sustain the current Maintenance and Operations LoS whilst accommodating a growing asset base, annual maintenance & operations budget increases are required. The required maintenance and operations expenditure across the 10-year period is therefore forecast at $9.1M.

The Long-Term Financial Plan is unfortunately not able to accommodate the entirety of this desired maintenance and operations budget. This is largely as result of asset base growth exceeding the Council rate peg. This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure requirements.

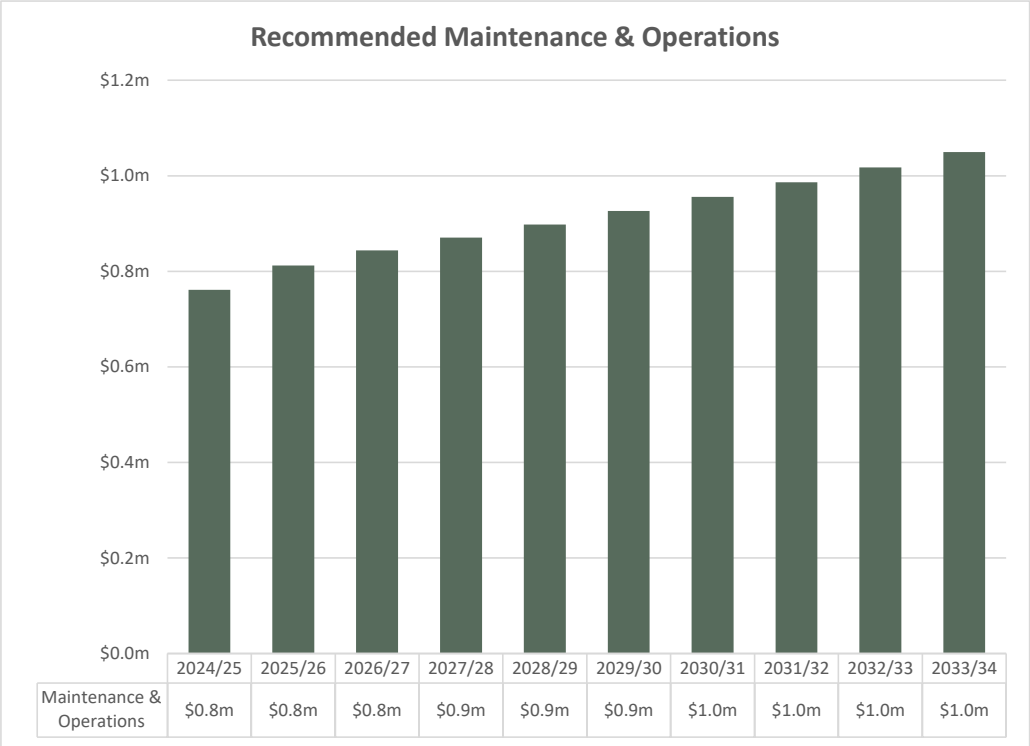
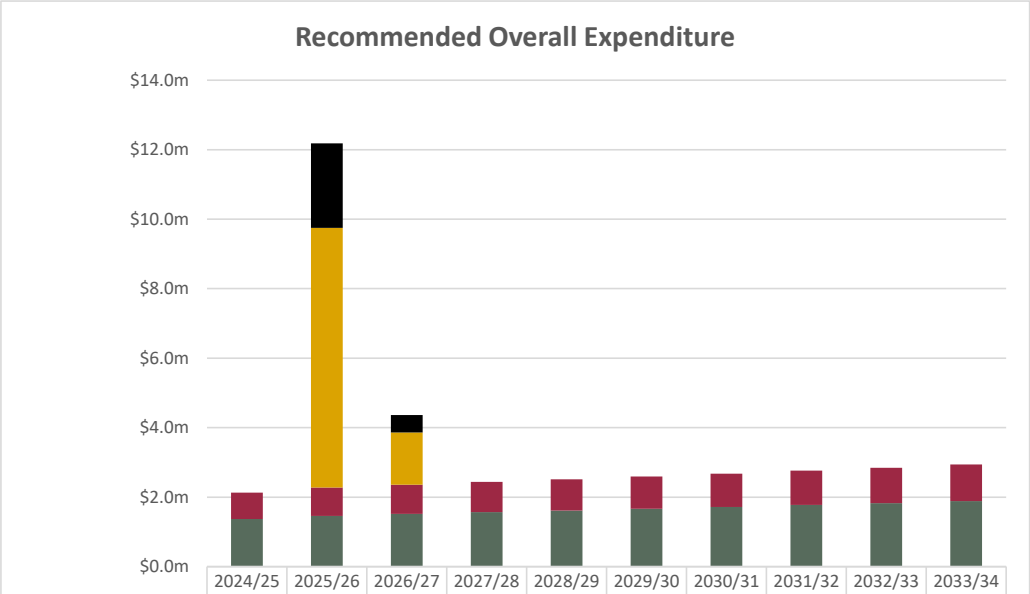


Figure 15 Recommended Maintenance and Operations Expenditure

7.3 Overall Forecast

The recommended overall expenditure is a combination of the new, upgrades & developer contributions from Section 6 and the recommended renewal, maintenance & operations expenditure from Section 7. Resulting in an overall recommended expenditure of $37.4M over 10 years as depicted in Figure 21.

It is however acknowledged that the full extent of this recommended expenditure cannot be accommodated within the Long-Term Financial Plan. Future iterations of the Asset Management Plan will further investigate and identify potential solutions.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
7.11 & 7.12	$0.0m	$2.4m	$0.5m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
New & Upgrades	$0.0m	$7.5m	$1.5m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
Maintenance & Operations	$0.8m	$0.8m	$0.8m	$0.9m	$0.9m	$0.9m	$1.0m	$1.0m	$1.0m	$1.0m
Required Renewal Expenditure	$1.4m	$1.5m	$1.5m	$1.6m	$1.6m	$1.7m	$1.7m	$1.8m	$1.8m	$1.9m

Figure 16 - Recommended Overall Expenditure

8 Improvement Plan

Asset Planning is a journey of continuous improvement with there always being opportunities to further improve the accuracy of asset data, better understand community needs & expectations and more efficiently meet the service needs of the Shire.

To this end, an asset management improvement plan (Table 19) has been prepared to guide this journey of continuous improvement.

Ranking	Improvement	Responsibility	Timeline
1	Annual CCTV Tractor Camera inspection of 5% of stormwater pipe network	Asset Engineer Drainage	Annually
2	Community wide survey to better understand community's dissatisfaction with Council's provision and operation of drainage network.	Manager Assets	2024/25
2	Prepare scheduled GPT cleaning program	Asset Engineer Drainage	2024/25
3	Prepare GPT Masterplan	Asset Engineer Drainage	2024/25
4	Asset Inventory Capture of villages	Asset Engineer Drainage	2024/25
5	Finalise Stormwater Masterplans for: - Hill Top - Bundanoon - New Berrima	Floodplain Management Engineer	2024/25
6	Asset Inventory Capture of collector and major collector roads	Asset Engineer Drainage	2025/26
7	Prepare Stormwater Masterplan for Colo Vale	Floodplain Management Engineer	2025/26

Table 17 Asset Management Improvement Plan

Wingecarribee
SHIRE COUNCIL

Asset Management Plan – Wastewater

We're with you

WINGECARRIBEE SHIRE COUNCIL

Document Name	Asset Management Plan - Wastewater
Version No.	1
Council File Reference	[Insert departmental file number, generally the relevant electronic records management system subject reference]
Adoption Date	[Governance to insert]
Resolution Number	[Governance to insert]
Document Owner	Manager Assets
Responsible Branch	Assets
Responsible Business Unit	Assets Water and Wastewater
Review Schedule	Annually
Review Date	[Governance to insert]

Version	Adoption Date	Notes
1	TBC	First version of Asset Management Plan - Wastewater

Contents

1 Executive Summary

This Asset Management Plan (AMP) is part of a suite of Portfolio AMPs, which together sit under the Asset Management Strategy (AMS). It is to be read in conjunction with the AMS and Four Year Capital Works Program.

This AMP provides an overarching document of Council's management of, and investment in, the Water Asset Class over a 10-year planning period.

Council manages a water asset class of 551km of wastewater gravity mains and 98km of rising mains, plus other assets across a broad range of asset categories, worth a combined $855M. The average condition of these structures is 1.4, which is defined as therefore being in 'good' condition.

The level of service that Council provides through this asset class can be described within the three categories of: Provision, Renewal, and Maintenance and Operations. What Council delivers through these levels of service are driven by consideration of: Risk Management, Community Satisfaction and Strategies and Masterplans. But is constrained by funding and availability of resourcing.

Review of the 2022 Community Satisfaction Survey shows that community satisfaction for the overall performance of the wastewater network has consistently been valued of high importance and high satisfaction by the community.

In accordance with these results, the Provision Level of Service details how the focus is to therefore to continue ensuring the resilience, performance and sustainability of the existing wastewater management network.

In order to provide an analysis of financial investment required across the planning period, calculation of forecast asset base growth must be completed. Asset base growth is calculated through consideration of the value of the asset class growing as result of new and upgrade projects, assets contributed through development, development contributions plans and indexation, as well as subtracting any known asset disposals. It is forecast that across the planning period the asset base will grow by $485M.

Recommended financial investment for the Renewal Level of Service and Maintenance and Operations Level of Service is calculated at $104M and $123M respectively. These have been calculated through aligning renewals with annual depreciation, and ensuring maintenance and operational budgets increase in step with asset base growth.

The Long-Term Financial Plan is able to accommodate the required investment in asset renewal across the life of the plan, but it cannot accommodate the maintenance and operations investment due to the funding model for the Sewer Fund not being structured such that maintenance and operations funding increases in line with asset base growth.

This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure requirements. Future iterations of the Asset Management Plan will further investigate and identify potential solutions to this difficult situation.

Asset management is a journey of continuous improvement, and so the AMP concludes with a concise Improvement Plan detailing the asset management maturity tasks programmed for the years ahead.

2 Asset Systems & Structures

2.1 Asset Planning Framework

The Asset Management Planning Framework, as summarised in Figure 1, integrates into the wider IP&R Framework, and ensures Council performs the Asset Management functions of planning, coordinating, controlling, executing, monitoring, and improving the activities associated with managing its assets.

In accordance with the Integrated Planning & Reporting (IP&R) Framework, which all NSW Local Governments are subject to, Council is required to prepare a suite of strategic documents – one being the Resourcing Strategy. It is through the Resourcing Strategy that the Asset Management Framework of Council is defined and endorsed.

The Asset Management Framework has three primary components:

1. Asset Management (AM) Policy: defines Council's Asset Management objectives.
2. Asset Management Strategy (AMS): also known as a Strategic Asset Management Plan (SAMP), shows how Council will achieve the objectives of the AM Policy. It is a road map for the delivery of these asset management objectives in accordance with the principles set in the AM Policy. It is to be continually monitored and regularly reviewed, in alignment with the formulation of the Long-Term Financial Plan (LTFP) and the Delivery Program & Operational Plans adopted annually by Council.
3. Asset Management Plans (AMP): further explores the high-level summary contained in the AMS with a detailed analysis of inventory, risk, levels of service and sustainability undertaken. AMPs are developed for all major infrastructure asset classes, grouped by the type of function the assets serve – i.e., community assets or a specific business unit.
    a. Community assets
        i. Transport
        ii. Stormwater
        iii. Buildings & Aquatics
        iv. Open Space & Recreation
        v. Water
        vi. Wastewater
    b. Business units
        i. Cemeteries
        ii. Resource Recovery Centre
        iii. Southern Regional Livestock Exchange

The AMPs are continually reviewed, to ensure long-term sustainability of the Council services they support. They are informed by community consultation and will be used as core inputs into the development of Council's Long Term Financial Plan.

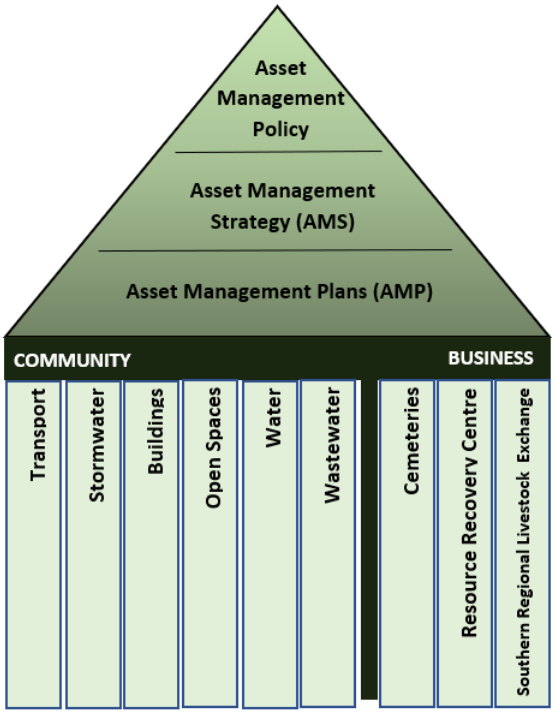


Figure 1: Asset management Planning Framework

2.2 Asset Planning Systems

Wingecarribee Shire Council utilises several databases and systems to deliver on asset planning requirements. These databases and systems are summarised in Table 1 below:

System / Database	Description / Purpose
Conquest	Asset register – inventory, condition & attributes
ArcGIS	Spatial data
Technology One – Finance	Budgeting, purchase orders, expenditure
Technology One – Enterprise Content Management (ECM)	Record keeping
Technology One – Customer Request Management (CRM)	Workflow management for customer requests
Pulse – Project Management	Scoping and project control for Capital Projects
Pavement Management System (PMS)	Road condition modelling software

Infoworks WS Pro & ICM	Water and wastewater modelling software

Table 1 - Asset Planning Systems

It is however acknowledged that Council has embarked on a digital transformation journey, with Council executing a 10-year contract at the 19 October 2022 Council Meeting with Technology One. This contract will see all Technology One modules and additional options being made available to Council and them being progressively implemented across the organisation. A 10-year roadmap for the implementation of the Technology One suite is currently being developed.

This will generate asset planning outcomes through modernisation and integration of the works management asset register and strategic asset modules. This will enable Council to model asset conditions that will result from 10 year funding scenarios, which will in turn enable data driven decision-making to achieve financial sustainability.

2.3 Organisational Structure

Council has adopted a centralised approach to Asset Planning with all asset management and network planning functions being consolidated within the Assets Team. Management of operations and maintenance, as well as capital project delivery, are primarily distributed across the teams of Shire Presentation, Water Services and Project Delivery.

The below figures detail the structure of these teams within the Service & Project Delivery Directorate, the Assets Team, as well as that of the Water and Wastewater Team.

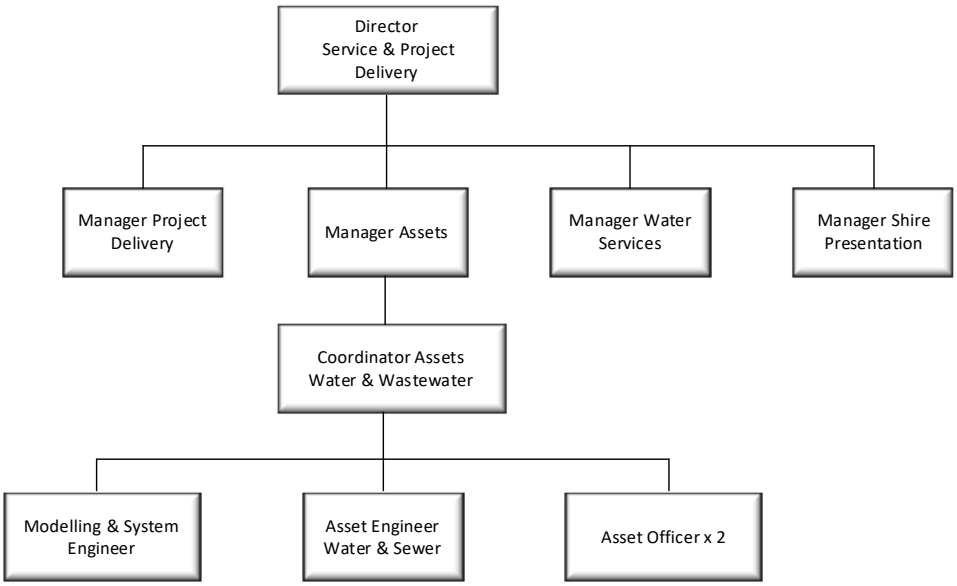


Figure 2: Service & Project Delivery Directorate


Wingecarribee
SHIRE COUNCIL

3 Our Assets

3.1 Overall Inventory

The sewer infrastructure assets included in this plan have a total replacement value of $855,220,666 and include the following major asset category:

Asset Category	Quantity/Length (Km)	Replacement Value ($)
Sewer Pump Stations	77	$40,711,489
Sewer Gravity Mains	551	$542,246,768
Sewer Rising Mains	98	$36,333,239
Sewer Vents	192	$1,907,627
Sewer Valves	492	$1,300,223
Sewer Access Chambers	11053	$50,402,364
Sewer Service Lines	19285	$86,267,157
Sewer Treatment works	6	$95,900,281
Sewer Telemetry Systems	10	$151,517
Total Replacement Cost		**$855,220,666**

Table 2 - Asset Category Inventory

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

Service Hierarchy	Service Level Objective
Pump Stations	Temporary storage and bulk transfers
Gravity Mains	Conveyance of wastewater
Rising Mains	Pressurised conveyance of wastewater
Valves	Operational control of the network
Vents	Removal of harmful gas build up from the network
Access Chambers	Point of entry for technical staff to carry out inspections and maintenance
Services Lines	Connecting sewer mains to individual properties
Treatment Works	Treatment of wastewater to protect the environment

Table 3 - Asset Category Description

Asset inventory is maintained and updated through three primary means:

- Recognition of constructed assets – both through Council delivered capital projects,

but also assets dedicated to Council through subdivision development.

- Ad-hoc Asset Inspections – inspections are regularly conducted in response to customer or internal requests, as well as part of project scoping phases.
- Scheduled Asset Inspections – all assets are to feature within a schedule of asset inspections. The frequency of inspection would be commensurate to the rate of degradation of the asset, as well as consequence of failure and cost of inspection.

The split of asset amounts across these asset categories is provided in Figure 5 below.

Assets are valued in accordance with the Detailed revaluations of asset classes are undertaken in accordance with Australian Accounting Standards and so a comprehensive revaluation of each asset class is undertaken at a minimum every five years. Outside of the comprehensive revaluation years, fair value assessments are to be undertaken on an annual basis for all asset classes. If the assessment identifies that a material change has occurred, the corresponding asset classes will be indexed with an industry accepted index.

A comprehensive valuation for wastewater was performed in the financial year 2021/22. Next comprehensive valuation was scheduled for 2026/27.

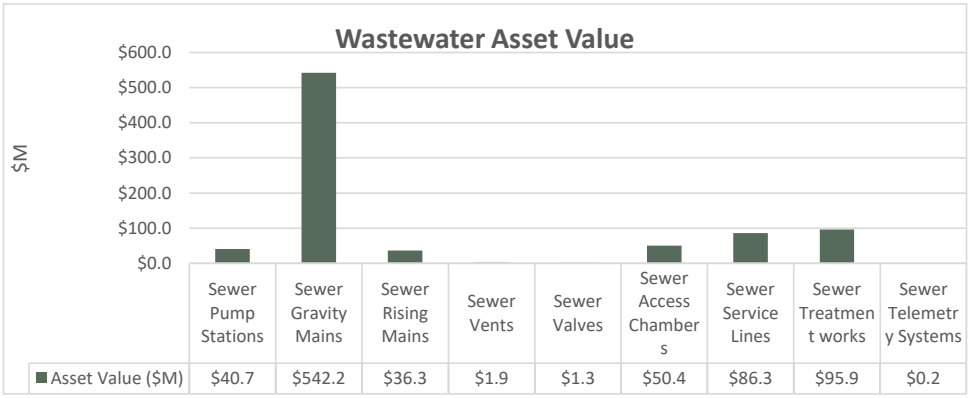


Figure 3 - Asset Category Value

3.2 Overall Condition

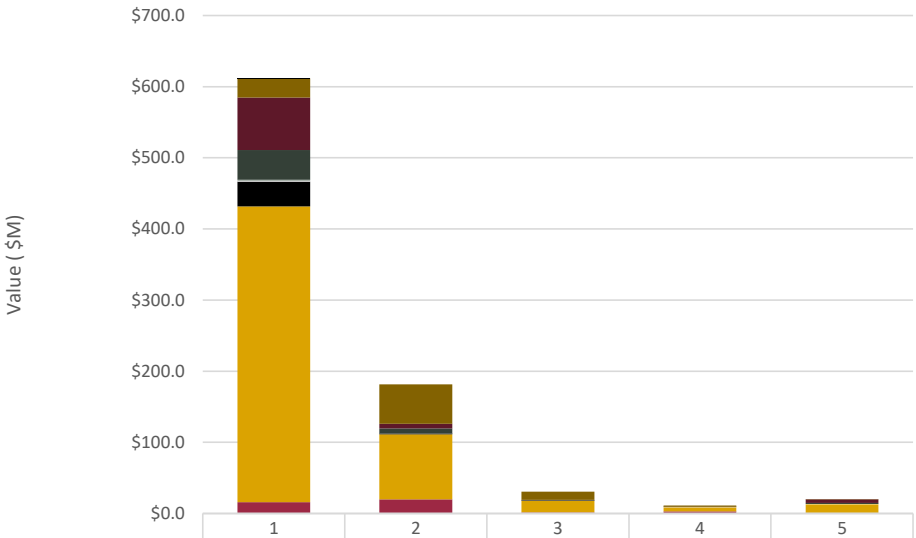
Asset conditions are assessed as part of comprehensive network inspections, conducted on a rolling program. These assessments are undertaken in accordance with the relevant Practice Notes issued by the Institute of Public Works Engineering Australasia. The condition rating scale is 1-5:

1. As new / excellent
2. Good / satisfactory
3. Fair / tolerable
4. Poor / intolerable
5. Very poor / reconstruction required.

With a vast network of underground wastewater assets, obtaining good condition data is often difficult and expensive. The Council makes use of ad-hoc condition assessments of its underground assets during works that expose those assets. For example, during routine maintenance, excavating for new service connections or during emergency

repairs, information such as pipe diameter, condition, wall thickness, consequence of failure and location should be recorded and entered the asset register for future reference.

Desktop method of condition assessments is carried out by analysing the asset inventory data such as age, material, useful life, failures, risk and criticality.



	1	2	3	4	5
Telemetry System	$0.2	$0.0	$0.0	$0.0	$0.0
Sewer TP	$26.8	$55.2	$11.6	$1.8	$0.5
Sewer Service Lines	$74.0	$6.6	$0.3	$0.3	$5.1
Access Chambers	$41.7	$6.8	$0.5	$0.0	$1.4
Valves	$1.2	$0.0	$0.0	$0.0	$0.0
Sewer Vents	$1.3	$0.0	$0.1	$0.0	$0.5
Rising Mains	$34.9	$1.4	$0.0	$0.0	$0.0
Gavity Mains	$416.0	$91.5	$16.7	$5.9	$12.2
Sewer Pump Stations	$15.8	$19.9	$1.4	$3.0	$0.7

Figure 4: Condition by Value of Wastewater Assets

The overall average condition of Council's wastewater assets is good / satisfactory.

Average condition rating for wastewater assets is 1.43.

However it is acknowledged that this condition rating may be overly optimistic and is further explored in Section 3.3.1.

3.3 Asset Category Inventory

3.3.1 Wastewater mains

Council manages a wastewater pipe network of 649 kilometres – of which 551 kilometres are gravity mains and 98 kilometres are rising mains (aka pressure mains). This network of water pipes is comprised of many different material types with UPVC accounting for 54% of the network.

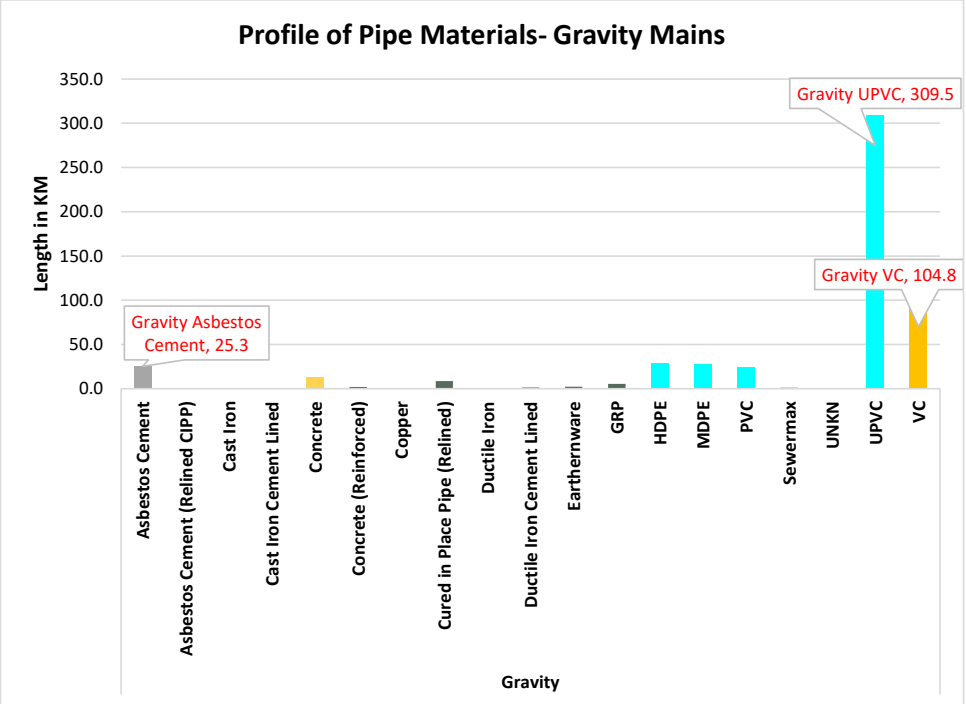


Figure 5 - Gravity Mains material

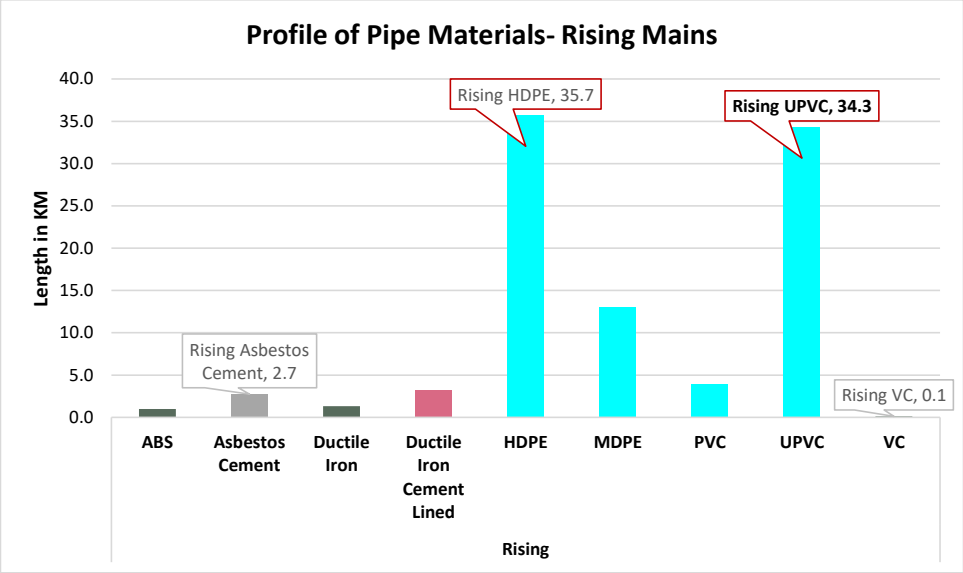


Figure 6 - Rising Mains Material

At network level, condition ratings are therefore estimated based upon construction age, useful life and an accepted deterioration curve. It is however acknowledged that Council has limited detailed condition data on these underground pipes, but this will change in the coming years with a CCTV inspection target of 5% of the network per year.

The figure below displays the current spread of condition values across the wastewater main network, with 93% of the network currently recorded as being of Condition 1, ie As New / Excellent condition.

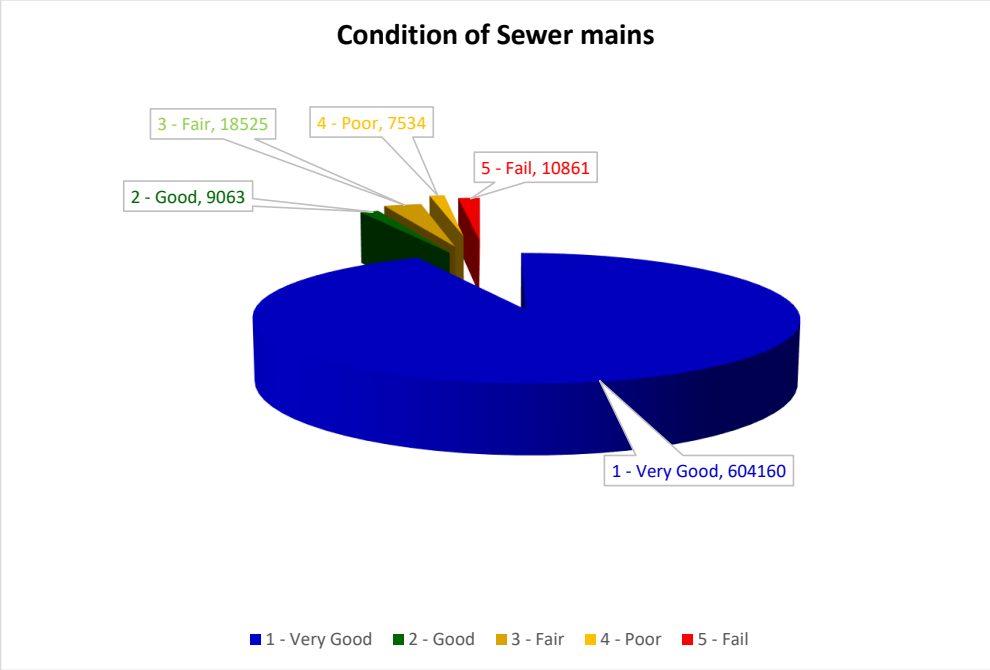


Figure 7 - Wastewater Main Condition

This unfortunately does not appear to align with the wastewater main age data, from which it would be expected that a more even distribution of asset condition ratings would be applied. A reapplication of age based condition rating for the wastewater main network is therefore identified as a future improvement within the Improvement Plan of Section 8.

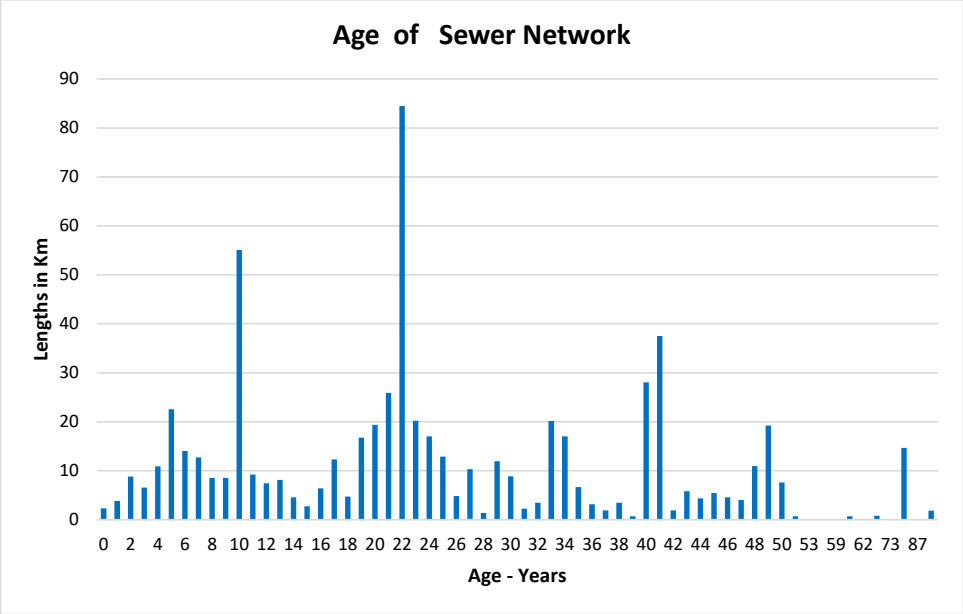


Figure 8 - Wastewater mains age

3.3.2 Access Chambers

The wastewater network of the Wingecarribee Shire has over 11,000 access chambers – which can be broadly grouped into three types: lamphole, maintenance shaft and manhole.

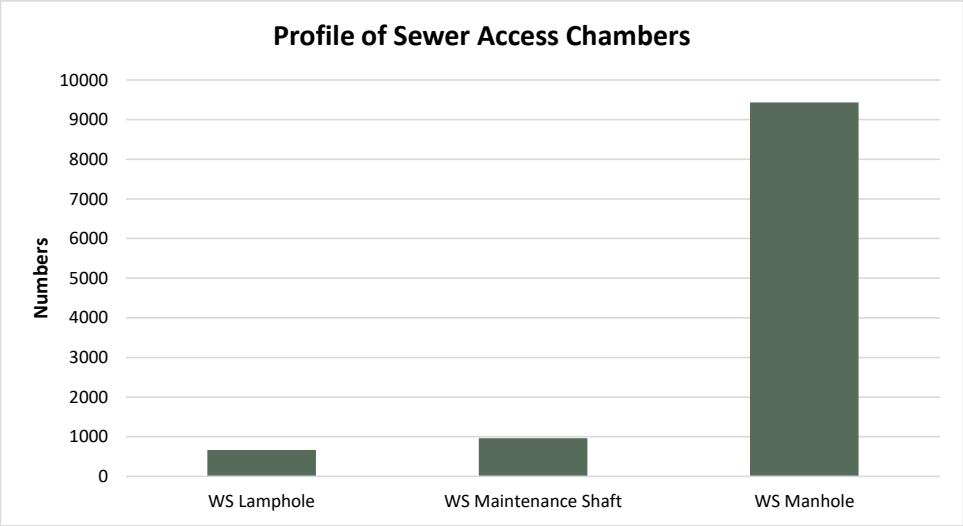


Figure 9 - Access Chamber Types

3.3.3 Wastewater Valves

The wastewater network of the Wingecarribee Shire has just under 500 valves – which can be broadly grouped into four types: air valve, non-return valve, scour valve and stop valve.

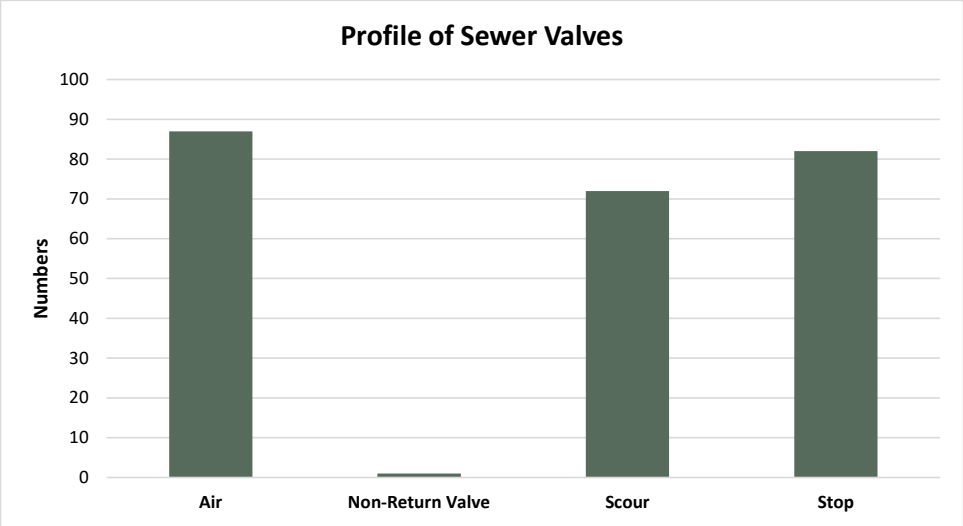


Figure 10 - Wastewater Valves Types

4 Drivers of Level of Service

Levels of Service (LoS) are comprised of four components: provision, renewal, maintenance, and operations. Each LoS is constrained by funding & resource availability, however the fundamental drivers of LoS can be identified in three categories:

- Risk Management
- Community Satisfaction
- Strategies & Masterplans

4.1 Risk Management

Risk is the effect of uncertainty on Council's ability to achieve its objectives. Risk Management is the process of systematically identifying, monitoring, treating, and reporting these risks.

A Risk Assessments has been completed for the asset class, covering generic hazards that are typical across the entire asset network and consideration of Critical Assets.

4.1.1 Critical Assets

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

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
Pump Stations	Electrical fault, blockages, insufficient capacity	Inspection program, emergency generator points, and pump out points
Gravity Mains	Pipe failure, blockage	CCTV inspection and cleaning program
Rising Mains	Pipe failure	Inspection program
Valves	Seal failure	Inspection program
Vents	Cracking	Inspection program
Access Chambers	Blockage, cracking	Inspection program, cleaning
Services Lines	Pipe failure, blockage	Inspection program, root cutting
Treatment Works	Mechanical/electrical fault, biological failure	Inspection and preventative maintenance program

Table 4: Critical Assets

4.1.2 Risk Assessment Framework

The below risk matrix categories the risk that Council is exposed to, depending on the consequence, and the likelihood the risk.

Risk (R) Matrix	Consequence (C)

		Severe	Major	Moderate	Minor	Insignificant
Likelihood (L)	**Almost Certain**	Extreme	Extreme	High	High	Moderate
	Likely	Extreme	Extreme	High	Moderate	Moderate
	Possible	Extreme	High	Moderate	Moderate	Low
	Unlikely	High	High	Moderate	Low	Insignificant
	Rare	High	Moderate	Low	Insignificant	Insignificant

Table 5 - Risk Assessment Framework

4.1.3 Risk Assessment

Hazard	Risk	Inherent Risk	Treatment			Residual Risk			Implementation Status	Responsibility	Level of Service
		C	L	R		C	L	R			
Operation of Sewer Treatment Plants fail to meet licence conditions	Environmental impact and EPA fines	**MAJ**	**POS**	**H**	Ensure sewage treatment plants are either of sufficient treatment capacity or upgrade works are programmed to ensure that they will be	**MIN**	**POS**	**M**	Current	Assets	Provision
Loss of Electricity Power Supply	Sewer Treatment Plants stop operating	**MOD**	**POS**	M	Liaise with Integral Energy on notification requirements, Investigate the provisions for standby generators and or dual feeds. Auto mode operations are available for diversion to storm ponds.	**INS**	**POS**	**L**	Current	Assets	Operations
Mechanical failure of sewer pump stations	Sewer pump stations stop operating	**MOD**	**LIK**	**H**	Implement preventative maintenance program	**MOD**	**POS**	**M**	Current	Water Services	Operations
					Ensure adequate spare parts are stored at Depot				Current	Water Services	Operations
					Upgrade SCADA system to improve control.				Future	Water Services	Operations
High levels of inflow and infiltration into sewer reticulation network	Capacity of reticulation network prematurely exceeded	**MOD**	**POS**	**M**	Complete flow gauging and calibration of reticulation models	**INS**	**POS**	**L**	Current	Assets	Operations
					Implement smoke testing and house to house inspections within the reticulation on a rolling program.				Future	Water Services	Operations
					Ensure upgrade works identified in containment modelling are included in capital works program and delivered.				Current	Assets	Operations

Hazard	Risk	Inherent Risk	Treatment			Residual Risk			Implementation Status	Responsibility	Level of Service
		C	L	R		C	L	R			
Poor quality assets dedicated through subdivision	Levels of service not meet and increased financial burden	MOD	POS	M	Review council's design and construction standards for Wastewater services.	MOD	POS	M	Current	Assets	Provision
					Ensure adequate hold points exist for quality inspections and testing (and are applied both internally and externally).				Current	Development Team	Provision

Table 6: Risk assessment

4.2 Community Satisfaction

Council's community satisfaction survey is undertaken biennially and tracks Council's performance in service delivery, identifies priority areas and evaluates community attitudes towards customer services, communication and Council as an organisation.

The objectives of the community satisfaction survey process are to:

- Measure the importance of, and satisfaction with, services and facilities provided by Council
- Compare levels of satisfaction for Council's services and facilities with similar councils
- Assist Council in identifying service priorities for the community
- Evaluate Council's customer services and communication

The survey covers facilities and services provided by Council identifying both importance and satisfaction on a 5-point scale, with 1 = low and 5 = high.

The most recent community survey was conducted in 2022, with the results of the prior years also provided for comparison. The following table contains the items relevant to this asset management plan.

	Importance			Satisfaction			2022 Performance gap
	2019	2021	2022	2019	2021	2022	
Overall sewerage system performance (chokes, overflows, odour)	4.54	4.61	4.47	4.13	4.14	3.96	10%

Table 7: Comparison of Importance and Satisfaction over 2019, 2021 and 2022.

In the table above, the 2022 Performance Gap is the difference between community importance and community satisfaction.

Overall performance of the wastewater management network has consistently been valued of high importance by the community. And the results also show that community satisfaction with this matter is consistently high. Although result from the 2022 survey do show a decline in satisfaction, it is still a high satisfaction rating and so the focus is therefore primarily on maintaining existing service provision.

4.3 Strategies & Masterplans

The third driver of Levels of Service can be broadly grouped as Strategies and Masterplans. Council prepares strategies and masterplans across all asset classes to ensure that network planning, implementation and maintenance is being conducted in a wholistic, considered and effective manner.

A non-exhaustive list of strategies and masterplans that impact the levels of service for the asset base of the Shire is provided in Table 8.

Strategies /Masterplans	Asset Category	Level of Service Influenced	
Integrated Water Cycle Management (IWCM) Strategy	Pump Stations Gravity Mains	Provisional	Planning for Sewer Treatment and network

	Rising Mains Valves Vents Access Chambers Services Lines Treatment Works		capacity improvements to meet future demands. Planning for the extension of sewer services for new developments and subdivisions
Bowral/Mittagong/Moss Vale Wastewater Masterplans	Pump Stations Gravity Mains Rising Mains Valves Vents Access Chambers Services Lines Treatment Works Valves & Hydrants	Provisional	Planning for Sewer Treatment and network capacity improvements to meet future demands in 2051. Planning for the extension of sewer services for new developments and subdivisions Mitigating the sewer overflow risks in existing network
Asbestos Management Strategy	Gravity Mains Rising Mains	Maintenance & Operations	Ensuring a healthy and safe environment for the community in handling asbestos in sewer assets.

Table 8: Strategic plans and Masterplans driving the Level of Service.

5 Levels of Service

Levels of Service (LoS) are comprised of three components: provision, renewal, and maintenance & operations. These three components are best understood in isolation, but an adjustment to one level of service results in changes to others, so they must be considered together.

5.1 Provision Level of Service

The Provision LoS concerning to what standard or ideal Council will endeavour to provide the assets and its function to the community. This LoS will primarily influence decisions around Council's provision to new infrastructure, or in the upgrade of existing infrastructure which fails to meet the provision benchmarks set.

Council's current provision of wastewater assets is worth a combined $855.2M and provides services for 20,151 dwellings.

Extent of Wastewater Management Schemes

Council will not pursue any extension of the wastewater management schemes to areas currently not serviced.

The focus is on ensuring the resilience, performance and sustainability of the existing wastewater management networks.

Wastewater Management Schemes and New Developments

The Provision LoS for new subdivisions & development is that which is stipulated in the documents which govern it, namely Council's:

- Local Environmental Plan
- Local Housing Strategy
- Local Strategic Planning Statement
- Development Control Plans
- Engineering Design and Construction Specifications
- Developer Contribution & Servicing Plans
- Water and Wastewater Modelling Design Standards

Performance of Wastewater Management Schemes

Council has adopted the performance standards for the Wastewater Management network as detailed within the Modelling Design Standards – which are available on the Council website.

These standards provide a design criteria for:

- Loading rates
- Minimum Pipe Diameters
- Wet weather containment
- Pumping station specifications

A suite of wastewater reticulation masterplans is currently in delivery to outline the program of works required across the existing wastewater schemes to ensure these performance standards can be met.

Performance of Wastewater Treatment Plants

Council maintains a portfolio of six wastewater treatment plants across the Shire. The provision level of service for these facilities is such that each site can operate within licensing conditions and that they are of adequate capacity to accommodate project demand of 2051.

The following table provides a basic capacity analysis of the wastewater treatment plants:

Wastewater Treatment Plant	Current Design Capacity (EP)	Sufficient Capacity to 2051	Planned Upgrade
Berrima	2,000	Yes	
Robertson	2,000	Yes	
Bundanoon	5,400	Yes	
Moss Vale	9,000	No	20,000 – Forecast completion June 2026
Mittagong	14,000	No	20,000 – Forecast completion June 2028*
Bowral	14,600	No	21,000 – Forecast completion December 2025

Table 9 - Summary of Wastewater Treatment Plants

*Note: Delivery of Mittagong Wastewater Treatment Plant Upgrade is contingent upon receipt of grant funding support.

5.2 Renewal Level of Service

The Renewal LoS defines how often Council intends to replace existing assets with a Modern Engineering Equivalent Replacement Asset (MEERA), including disposal of the existing asset.

This renewal frequency is termed 'useful life' and adjusting this value has significant implications for annual depreciation, with asset useful being a direct factor in its calculation. Annual investment in the capital renewal of assets should ideally equate to the value of annual depreciation. Although asset degradation and failure will not follow a straight line across financial years, failure to maintain asset renewal at the rate of annual depreciation will result in an overwhelming volume of renewal works in later years.

Adjustments to asset useful like also has impacts on required maintenance and operations expenditures. Shorter useful lives generally result in less required maintenance, all other factors being equal and vice versa.

The below table includes the asset renewal lives for assets in the Wastewater Asset Class. These useful lives are currently stored in the Conquest Asset Management System

Asset Category	Useful life (Years)
Pump Stations	3 - 80
Manholes / Maintenance Shafts	70
Residential Pump Stations	10 - 60
Treatment Plants	3 - 80
Service Lines	30 - 60

Vents	70
Valves	40
Rising Mains	50 - 100
Gravity Main	30 - 100

Table 10: Wastewater Asset Useful Lives.

The intent is therefore that assets will be renewed prior to exceeding their designated useful life. However, renewal works will also be based on asset condition. When an asset is found to be of Condition 4 or 5 it will then be programmed for renewal within the Capital Works program.

The following charts provide a comparison of asset category and their respective useful life.

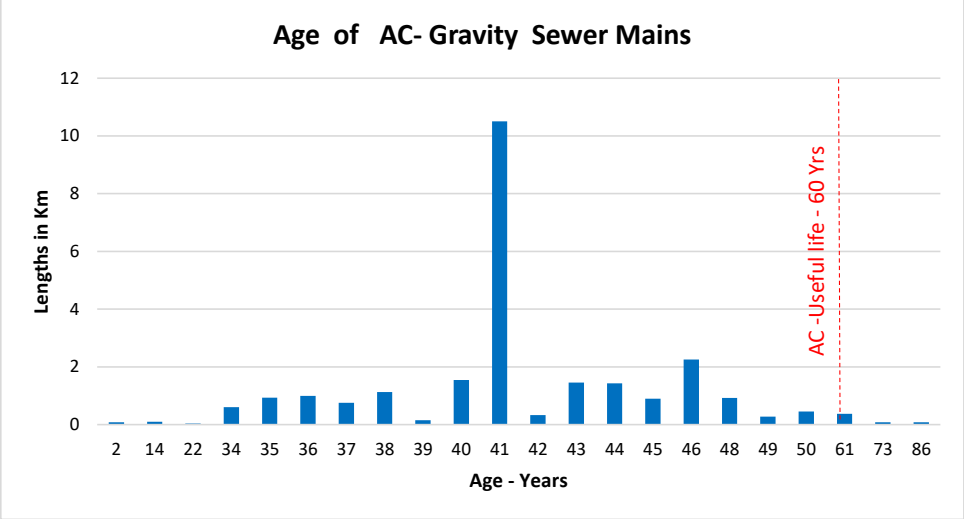


Figure 11 - Analysis of Useful Life for AC Gravity Mains

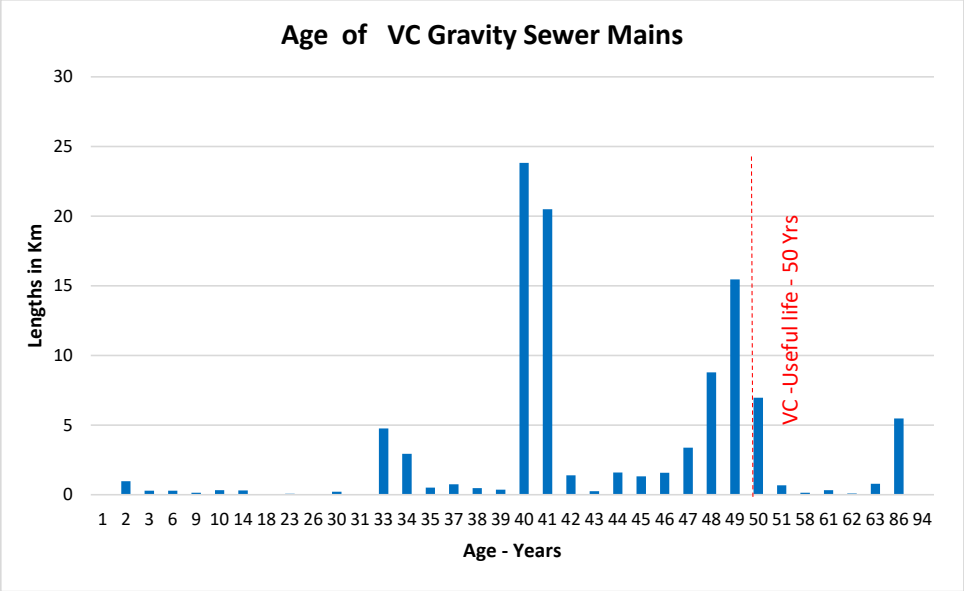


Figure 12 - Analysis of Useful Life for VC gravity mains

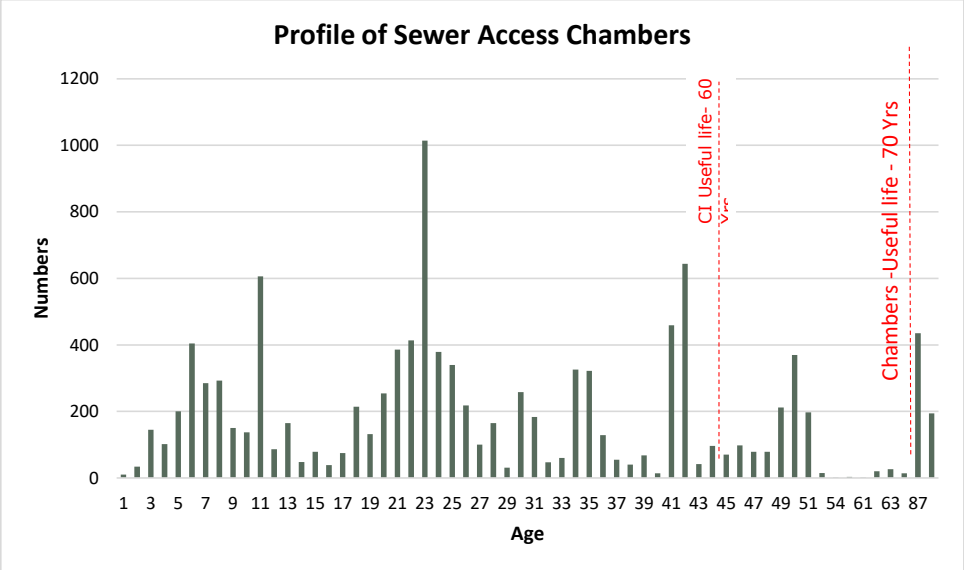


Figure 13 - Analysis of Useful Life for Access Chambers

5.3 Maintenance & Operations Level of Service

Maintenance and operation activities are completed in both a proactive and reactive fashion across the asset network. Many operational activities by their nature are more readily able to be scheduled and completed in a timely & controlled way. Maintenance activities are more difficult to deliver in scheduled fashion, with mature systems and full resourcing required to do so.

Maintenance and operations level of service will be provided under two categories: inspections and maintenance.

5.3.1 Inspections

Asset condition assessments involve periodically monitoring assets and utilizing the collected inspection data to determine their condition Analysis of this data may reveal the need for preventative maintenance to ensure that assets meet their expected useful life or require replacement if they have reached the end of their lifespan.

- **Sewer Treatment Plants and Sewer Pumpstations**
  Visual and ad hoc specialised inspection of all assets, components and sub-components undertaken by suitable qualified consultants/contractors in conjunction with operations staff. These inspections are performed in every two years.

- **Sewer Mains**
  Desktop method is performed to analyse the inventory data of underground assets. This analysis is conducted annually and based on asset Age, material type, burst history, risk and criticality.
  Additionally, CCTV inspections and smoke testing are undertaken by contractors and operations staff annually based on the risk and criticality. Follows the WSAA Conduit Inspection Reporting Code and uses Wincan VX software.

- **Access Chambers**
  Desktop method data analysis of asset inventory. Age and material type analysis, burst history, risk and criticality analysis- Annually.
  Desk top method, visual and CCTV inspections are undertaken annually, by contractors and operations staff. Follows the WSAA Conduit Inspection Reporting Code and uses Wincan VX software annually based on their criticality.

- **Vents**
  Desktop method, visual inspection, and testing of reticulation assets by way of opportunistic methods are performed annually.

The condition assessment of aboveground treatment plant and pump station assets is carried out every 5 years during the asset revaluation process.

5.3.2 Maintenance

Maintenance concerning the essential activities required to keep existing assets functioning to their design capacity and performance. This LoS will combine activities which are either proactive (i.e. scheduled, cyclical activities) that are carried out before service delivery is compromised, or reactive which are carried out after service delivery is compromised due to wear, malfunction or breakage.

The operation concern to the day-to-day activities that are required to ensure the asset is kept in a functional state so that it can provide its service delivery to community. Operational

activities are often active processes of utilising an asset which will consume resources such as manpower, energy, chemicals and materials.

Activities are completed in both a proactive and reactive fashion across the asset network. Many operational activities by their nature are more readily able to be scheduled and completed in a timely & controlled way. Maintenance activities are more difficult to deliver in scheduled fashion, with mature systems and full resourcing required to do so.

Asset Class	Annual Maintenance & Operations Budget
Reticulation Network	$2,305,720
Treatment - Berrima	$379,419
Treatment - Bowral	$1,181,845
Treatment - Bundanoon	$597,359
Treatment - General	$879,803
Treatment - Mittagong	$1,444,781
Treatment - Moss Vale	$1,255,945
Treatment - Robertson	$658,318
Total	**$8,044,871**
Annual Maintenance as % of Asset Value	*1.02%*

Figure 14 - Asset Class Maintenance Budget

6 Asset Base Growth

Council's asset base will expand over the next 10 years through committed and expected new & upgrade expenditure, assets contributed by development through conditions of consent, and the Developer Contributions & Servicing Plans. This growth can be decreased through asset disposals; however, no significant disposals are currently committed.

In this analysis, all future asset values, as well as planned and recommended expenditures, assume indexation rate of 3.0% per annum.

6.1 New & Upgraded Assets and Developer Contribution

The new and upgrade asset projects category covers those projects resourced by Council or grant funding that involve existing assets being enhanced or new assets being constructed.

An important funding source for new infrastructure are Development Contributions collected under Section 64. These contributions fund a significant proportion, though not all, of the infrastructure required by new development.

Council currently primarily levies contributions through the following Plans:

- Southern Highlands Innovation Park (SHIP) Plan
- Water & Sewer Development Servicing Plan

The Integrated Water Cycle Management Plan (IWCM) provides guidance as to the expenditure of the overall Sewer Fund and Section 64 contributions and forms the starting point for the 2024/25 to 2027/28 Capital Works Program.

The following table provides a summary of the new/upgrade components of projects within the 2024/25 to 2027/28 Capital Works Program and the works program within the IWCM has been used for the remaining years of the planning period.

Financial Year	Project Name	New/ Upgrade Component
2024/25	STP asset renewal or upgrades	$200,000
2024/25	Sewer private works - extensions & connections	$75,000
2024/25	Bowral STP Upgrade	$10,576,665
2024/25	Moss Vale STP Upgrade	$13,725,000
2024/25	Mittagong STP Upgrade	$200,000
2024/25	SPS-AM3 Pikkat Drive Upgrade (construction)	$400,000
2025/26	Bowral STP Upgrade	$5,500,000
2025/26	Moss Vale STP Upgrade	$13,725,000
2025/26	Mittagong STP Upgrade	$10,000,000
2025/26	Master plan project 1	$1,500,000
2025/26	Master plan project 2	$175,000
2025/26	Sewer private works - extensions & connections	$75,000
2025/26	SPS-AM3 pump station upgrade (Pikkat Drive)	$3,045,546
2025/26	STP solar installation	$150,000

2026/27	Moss Vale STP Upgrade	$5,500,000
2026/27	Mittagong STP Upgrade	$9,775,000
2026/27	Master plan project 2	$1,500,000
2026/27	Master plan project 3	$175,000
2026/27	Sewer private works - extensions & connections	$75,000
2026/27	STP solar installation	$350,000
2027/28	Mittagong STP Upgrade	$5,000,000
2027/28	Master plan project 3	$1,500,000
2027/28	Master plan project 4	$175,000
2027/28	Sewer private works - extensions & connections	$75,000
2027/28	STP solar installation	$250,000
2028/29	Integrated Water Cycle Management Plan	$2,185,000
2029/30	Integrated Water Cycle Management Plan	$1,335,000
2030/31	Integrated Water Cycle Management Plan	$1,365,000
2031/32	Integrated Water Cycle Management Plan	$2,335,000
2032/33	Integrated Water Cycle Management Plan	$12,935,000
2033/34	Integrated Water Cycle Management Plan	$12,935,000

Table 11:New and Upgraded Assets

6.2 Assets Contributed by Development through Conditions of Consent

As development occurs, particularly within the new living areas identified within the Wingecarribee Local Housing Strategy, it is intended that infrastructure be provided at a rate consistent with the Provision LoS in existing parts of the Wingecarribee Local Government Area.

With the Wingecarribee Local Housing Strategy setting an objective of a 50:50 split of infill and greenfield development, it is therefore forecast that annual asset base growth from greenfield development will be 50% of the annual population growth.

Reviewing the rate of contributed assets across 2021/22 and 2022/23, it is observed that the value of contributed assets is equivalent to 30% of this forecast population growth from greenfield development. Which is understood to be the result of assets contributed through this method generally being of a non-major nature. (eg sewer pipelines will be contributed through a development, but not another sewage treatment plant).

Financial Year	Population	Population Growth (from previous year)	Forecast Asset Base Growth
2023/24	53,700	0.9%	0.16%
2024/25	54,270	1.1%	0.16%
2025/26	54,913	1.2%	0.16%
2026/27	55,521	1.1%	0.16%

2027/28	56,145	1.1%	0.17%
2028/29	56,789	1.1%	0.17%
2029/30	57,439	1.1%	0.16%
2030/31	58,101	1.2%	0.16%
2031/32	58,762	1.1%	0.16%
2032/33	59,425	1.1%	0.18%

Table 12 - Forecast.ID Population Growth

6.3 Asset Disposals

Asset disposals entail the removal of an existing asset without replacing it with a similar asset. No such disposals are identified within the planning period.

6.4 Asset Indexation

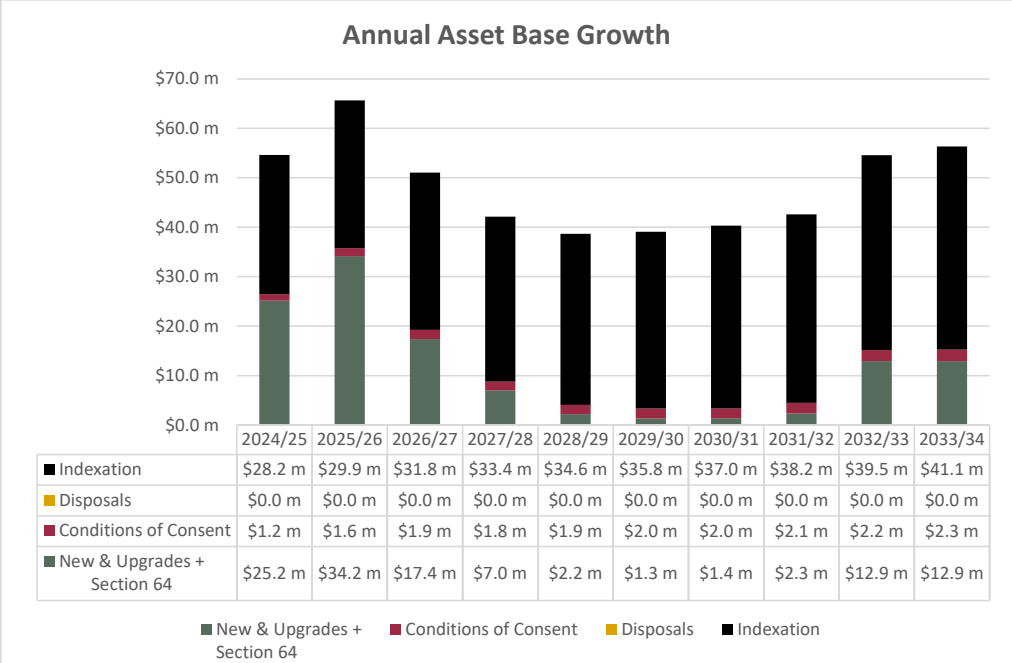
Indexation rate of 3.0% p.a has been applied across the 10-year forecast period. This aligns with the indexation rate adoption in the LTFP. The same rate has been adopted in this AMP to ensure that lifecycle costs and associated budgets are comparable in future financial years.

6.5 Asset Base Growth

Total asset base growth is comprised these components:

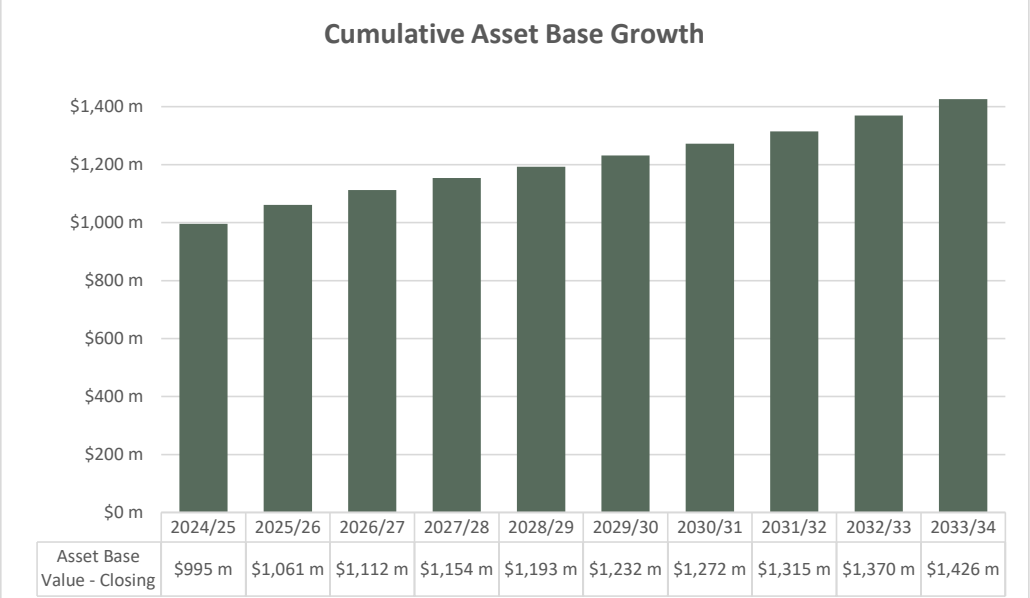
- Asset upgrades
- Assets contributed by development through conditions of consent.
- Development Contributions
- Subtracting asset disposals
- Indexation

Figures 11 and 12 shows this forecast asset base growth of $485M over 10 years, with the majority of the growth attributed to indexation.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Indexation	$28.2 m	$29.9 m	$31.8 m	$33.4 m	$34.6 m	$35.8 m	$37.0 m	$38.2 m	$39.5 m	$41.1 m
Disposals	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m
Conditions of Consent	$1.2 m	$1.6 m	$1.9 m	$1.8 m	$1.9 m	$2.0 m	$2.0 m	$2.1 m	$2.2 m	$2.3 m
New & Upgrades + Section 64	$25.2 m	$34.2 m	$17.4 m	$7.0 m	$2.2 m	$1.3 m	$1.4 m	$2.3 m	$12.9 m	$12.9 m

Figure 15: Annual Asset Base Growth – Factors



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Asset Base Value - Closing	$995 m	$1,061 m	$1,112 m	$1,154 m	$1,193 m	$1,232 m	$1,272 m	$1,315 m	$1,370 m	$1,426 m

Figure 16: Cumulative Asset Base Growth

7 Financial Lifecycle Forecast

The Council assets described in Section 3, with the asset base growth forecast in Section 6, require resourcing across their lifecycle in order to achieve the LoS contained in Section 5.

The two main components are renewal expenditure, and maintenance and operations expenditure, which sum together to give the recommended overall expenditure on Council assets over the next 10 years.

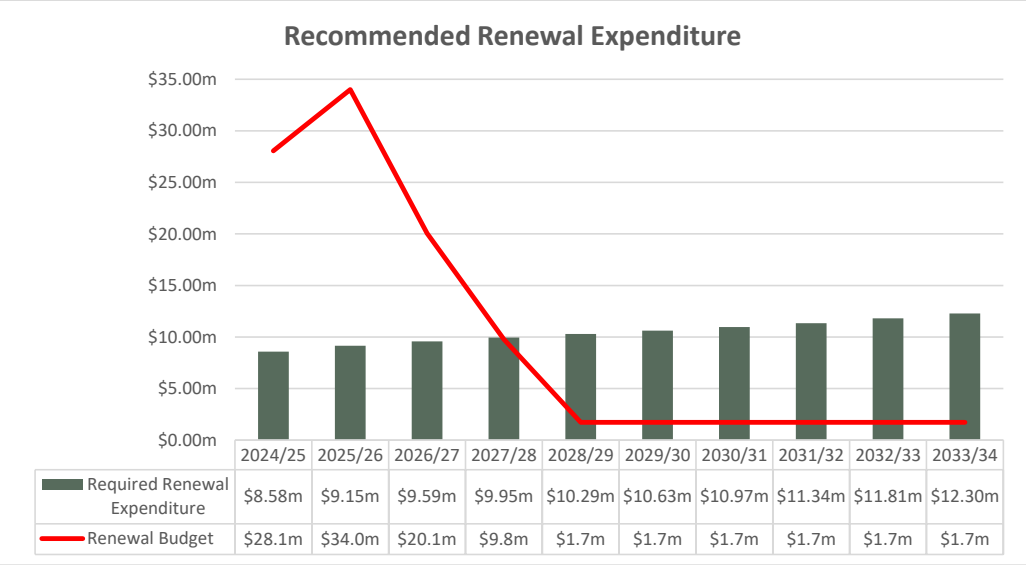
7.1 Renewal Forecast

To ensure that satisfactory condition is maintained across the asset base and the Infrastructure Backlog Ratio benchmark is achieved, capital renewal works should be undertaken when assets reach the end of their useful lives. These capital renewal works involve disposing of the existing asset and constructing the MEERA.

However, if the expiry of useful lives or asset conditions are solely relied upon to inform these recommended renewals, annual budgets fluctuate significantly, which creates difficulties from a resourcing perspective. Rather, it is better practice to average out the recommended renewal expenditure in order to reduce annual fluctuations. When future Delivery Programs are prepared, actual allocations to each asset class may vary depending upon the scale of individual projects.

The required renewal expenditure across the 10-year period is therefore forecast to be $104M.

Figure 9 shows the renewal budget featured in the Capital Works Program and Long Term Financial Plan, as well as the required renewal expenditure to align with asset depreciation. The Capital Works Program and Long Term Financial Plan currently accommodates $102M of wastewater asset renewal.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Required Renewal Expenditure	$8.58m	$9.15m	$9.59m	$9.95m	$10.29m	$10.63m	$10.97m	$11.34m	$11.81m	$12.30m
Renewal Budget	$28.1m	$34.0m	$20.1m	$9.8m	$1.7m	$1.7m	$1.7m	$1.7m	$1.7m	$1.7m

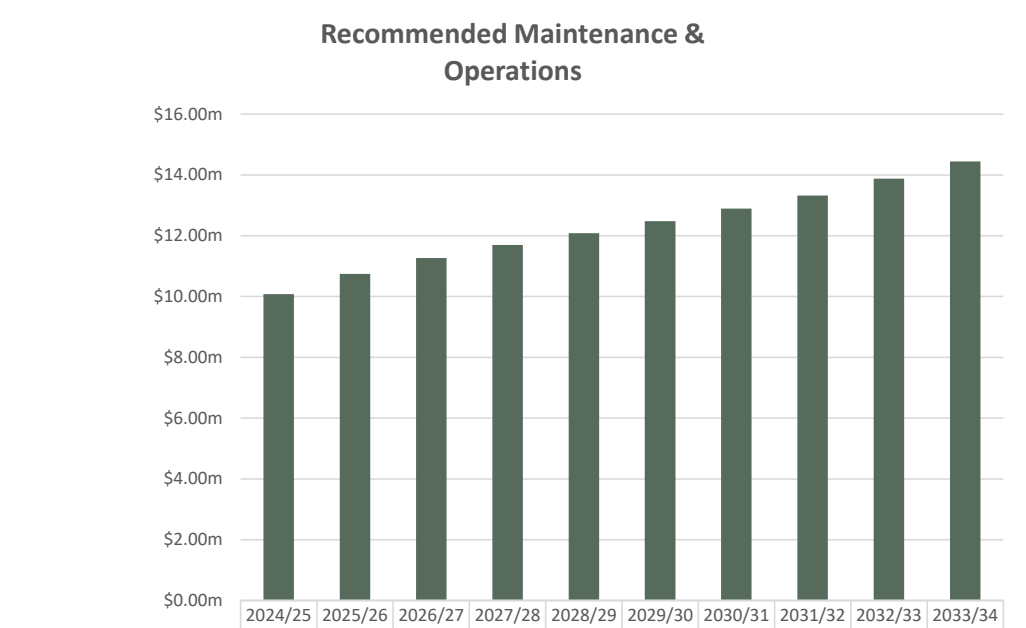
Figure 17: Recommended Renewal Expenditure, measured in millions of dollars.

7.2 Maintenance & Operations Forecast

To sustain the current Maintenance and Operations Level of Service whilst accommodating a growing asset base, annual maintenance & operations budget increases are required. The required maintenance and operations expenditure across the 10-year period is therefore forecast to be $123M.

The Long Term Financial Plan is unfortunately not able to accommodate the entirety of this desired maintenance and operations budget. This is largely as result of the funding model for the Sewer Fund not being structured such that maintenance and operations funding increases in line with asset base growth.

This will therefore be a key parameter included within an update of the Sewer Fund model in 2024/25.



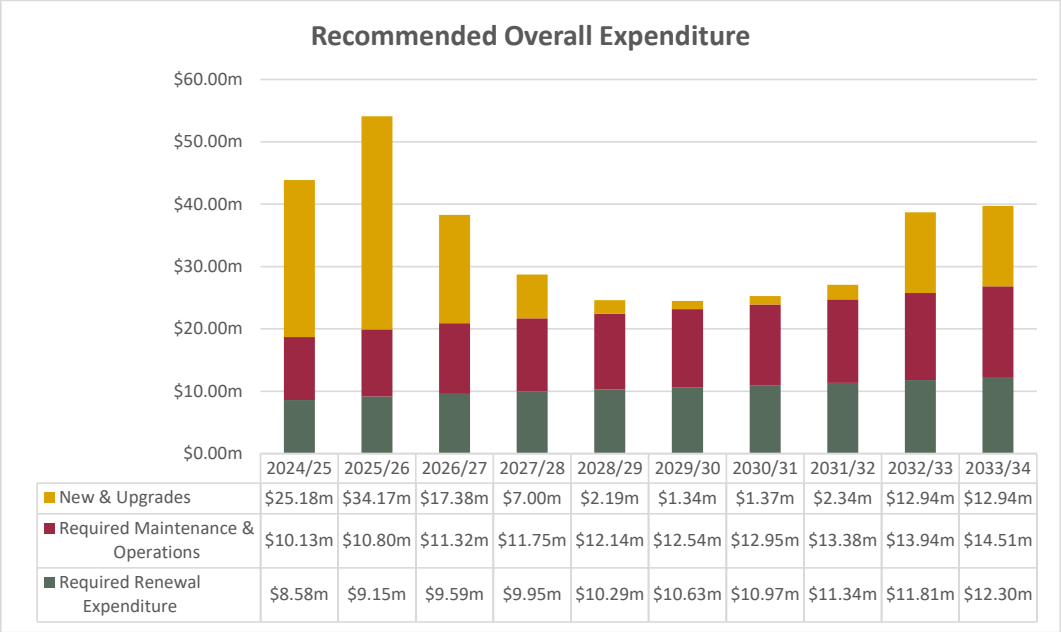
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Required Maintenance & Operations	$10.08m	$10.75m	$11.27m	$11.69m	$12.08m	$12.48m	$12.89m	$13.32m	$13.88m	$14.45m

Figure 18 Recommended Maintenance & Operations.

7.3 Overall Forecast

The recommended overall expenditure is a combination of the new, upgrades & developer contributions from Section 6 and the recommended renewal, maintenance & operations expenditure from Section 7. Resulting in an overall recommended expenditure of $344M over 10 years as depicted in Figure 15.

It is however acknowledged that the full extent of this recommended expenditure cannot be accommodated within the Long Term Financial Plan. Future iterations of the Asset Management Plan will further investigate and identify potential solutions.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
New & Upgrades	$25.18m	$34.17m	$17.38m	$7.00m	$2.19m	$1.34m	$1.37m	$2.34m	$12.94m	$12.94m
Required Maintenance & Operations	$10.13m	$10.80m	$11.32m	$11.75m	$12.14m	$12.54m	$12.95m	$13.38m	$13.94m	$14.51m
Required Renewal Expenditure	$8.58m	$9.15m	$9.59m	$9.95m	$10.29m	$10.63m	$10.97m	$11.34m	$11.81m	$12.30m

Figure 19: Recommended Overall Expenditure, measured in millions of dollars.

8 Improvement Plan

Asset Planning is a journey of continuous improvement with there always being opportunities to further improve the accuracy of asset data, better understand community needs & expectations and more efficiently meet the service needs of the Shire. The below items are specific improvements that can be made to this document as well as the operation of Council.

No	Task	Responsibility	Timeline
1	Review construction year data and subsequent age based condition calculations	Assets	2024/25
2	Review and update Sewer Fund model	Assets	2024/25
3	Implement Technology One Strategic Assets Module	Assets	2024/25
4	Flow gauging and calibration of Mittagong Wastewater Reticulation Masterplan	Assets	2025/26
5	Update valuation methodology of assets from modrates to unit rates	Assets	2025/26
6	Comprehensive Valuation	Assets	2026/27
7	Formalise documentation of inspection and maintenance works.	Assets	2025/26

Table 13: Improvement Plan

Wingecarribee
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Asset Management Plan – Water

We're with you

WINGECARRIBEE SHIRE COUNCIL

Document Name	Asset Management Plan - Water
Version No.	1
Council File Reference	[Insert departmental file number, generally the relevant electronic records management system subject reference]
Adoption Date	[Governance to insert]
Resolution Number	[Governance to insert]
Document Owner	Manager Assets
Responsible Branch	Assets
Responsible Business Unit	Assets Water and Wastewater
Review Schedule	Annually
Review Date	[Governance to insert]

Version	Adoption Date	Notes
1	TBC	First version of Asset Management Plan - Water

Contents

1 Executive Summary

This Asset Management Plan (AMP) is part of a suite of Portfolio AMPs, which together sit under the Asset Management Strategy (AMS). It is to be read in conjunction with the AMS and Four Year Capital Works Program.

This AMP provides an overarching document of Council's management of, and investment in, the Water Asset Class over a 10-year planning period.

Council manages a water asset class of over 715km of water mains and 20,000 meters, plus other assets across a broad range of asset categories, worth a combined $463M. The average condition of these structures is 1.4, which is defined as therefore being in 'good' condition.

The level of service that Council provides through this asset class can be described within the three categories of: Provision, Renewal, and Maintenance and Operations. What Council delivers through these levels of service are driven by consideration of: Risk Management, Community Satisfaction and Strategies and Masterplans. But is constrained by funding and availability of resourcing.

Review of the 2022 Community Satisfaction Survey shows that community satisfaction for the quality and reliability of the water supply network has consistently been valued of high importance and high satisfaction by the community.

In accordance with these results, the Provision Level of Service details how the focus is to therefore to continue ensuring the resilience, performance and sustainability of the existing water supply network.

In order to provide an analysis of financial investment required across the planning period, calculation of forecast asset base growth must be completed. Asset base growth is calculated through consideration of the value of the asset class growing as result of new and upgrade projects, assets contributed through development, development contributions plans and indexation, as well as subtracting any known asset disposals.

It is forecast that across the planning period the asset base will grow by $246M.

Recommended financial investment for the Renewal Level of Service and Maintenance and Operations Level of Service is calculated at $87M and $100M respectively. These have been calculated through aligning renewals with annual depreciation, and ensuring maintenance and operational budgets increase in step with asset base growth.

The Long-Term Financial Plan is unfortunately not able to accommodate the entirety of this desired financial investment, largely as result of the funding model for the Water Fund not being structured such that asset renewal aligns with asset depreciation, and maintenance and operations funding not increasing in line with asset base growth.

This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure requirements. Future iterations of the Asset Management Plan will further investigate and identify potential solutions to this difficult situation.

Asset management is a journey of continuous improvement, and so the AMP concludes with a concise Improvement Plan detailing the asset management maturity tasks programmed for the years ahead.

2 Asset Systems & Structures

2.1 Asset Planning Framework

The Asset Management Planning Framework, as summarised in Figure 1, integrates into the wider IP&R Framework, and ensures Council performs the Asset Management functions of planning, coordinating, controlling, executing, monitoring, and improving the activities associated with managing its assets.

In accordance with the Integrated Planning & Reporting (IP&R) Framework, which all NSW Local Governments are subject to, Council is required to prepare a suite of strategic documents – one being the Resourcing Strategy. It is through the Resourcing Strategy that the Asset Management Framework of Council is defined and endorsed.

The Asset Management Framework has three primary components:

1. Asset Management (AM) Policy: defines Council's Asset Management objectives.
2. Asset Management Strategy (AMS): also known as a Strategic Asset Management Plan (SAMP), shows how Council will achieve the objectives of the AM Policy. It is a road map for the delivery of these asset management objectives in accordance with the principles set in the AM Policy. It is to be continually monitored and regularly reviewed, in alignment with the formulation of the Long-Term Financial Plan (LTFP) and the Delivery Program & Operational Plans adopted annually by Council.
3. Asset Management Plans (AMP): further explores the high-level summary contained in the AMS with a detailed analysis of inventory, risk, levels of service and sustainability undertaken. AMPs are developed for all major infrastructure asset classes, grouped by the type of function the assets serve – i.e., community assets or a specific business unit.
    a. Community assets
        i. Transport
        ii. Stormwater
        iii. Buildings & Aquatics
        iv. Open Space & Recreation
        v. Water
        vi. Wastewater
    b. Business units
        i. Cemeteries
        ii. Resource Recovery Centre
        iii. Southern Regional Livestock Exchange

The AMPs are continually reviewed, to ensure long-term sustainability of the Council services they support. They are informed by community consultation and will be used as core inputs into the development of Council's Long Term Financial Plan.

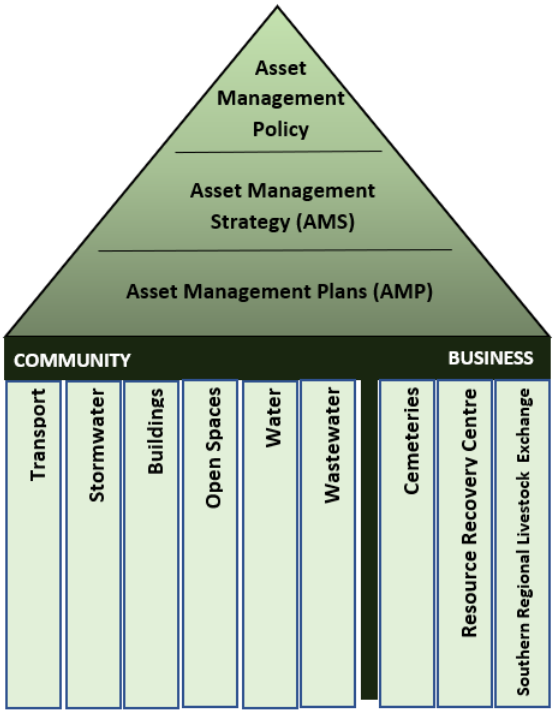

Figure 1: Asset management Planning Framework

2.2 Asset Planning Systems

Wingecarribee Shire Council utilises several databases and systems to deliver on asset planning requirements. These databases and systems are summarised in Table 1 below:

System / Database	Description / Purpose
Conquest	Asset register – inventory, condition & attributes
ArcGIS	Spatial data
Technology One – Finance	Budgeting, purchase orders, expenditure
Technology One – Enterprise Content Management (ECM)	Record keeping
Technology One – Customer Request Management (CRM)	Workflow management for customer requests
Pulse – Project Management	Scoping and project control for Capital Projects

Pavement Management System (PMS)	Road condition modelling software
Infoworks WS Pro & ICM	Water and wastewater modelling software

Table 1 - Asset Planning Systems

It is however acknowledged that Council has embarked on a digital transformation journey, with Council executing a 10-year contract at the 19 October 2022 Council Meeting with Technology One. This contract will see all Technology One modules and additional options being made available to Council and them being progressively implemented across the organisation. A 10-year roadmap for the implementation of the Technology One suite is currently being developed.

This will generate asset planning outcomes through modernisation and integration of the works management asset register and strategic asset modules. This will enable Council to model asset conditions that will result from 10 year funding scenarios, which will in turn enable data driven decision-making to achieve financial sustainability.

2.3 Organisational Structure

Council has adopted a centralised approach to Asset Planning with all asset management and network planning functions being consolidated within the Assets Team. Management of operations and maintenance, as well as capital project delivery, are primarily distributed across the teams of Shire Presentation, Water Services and Project Delivery.

The below figures detail the structure of these teams within the Service & Project Delivery Directorate, the Assets Team, as well as that of the Water and Wastewater Team.

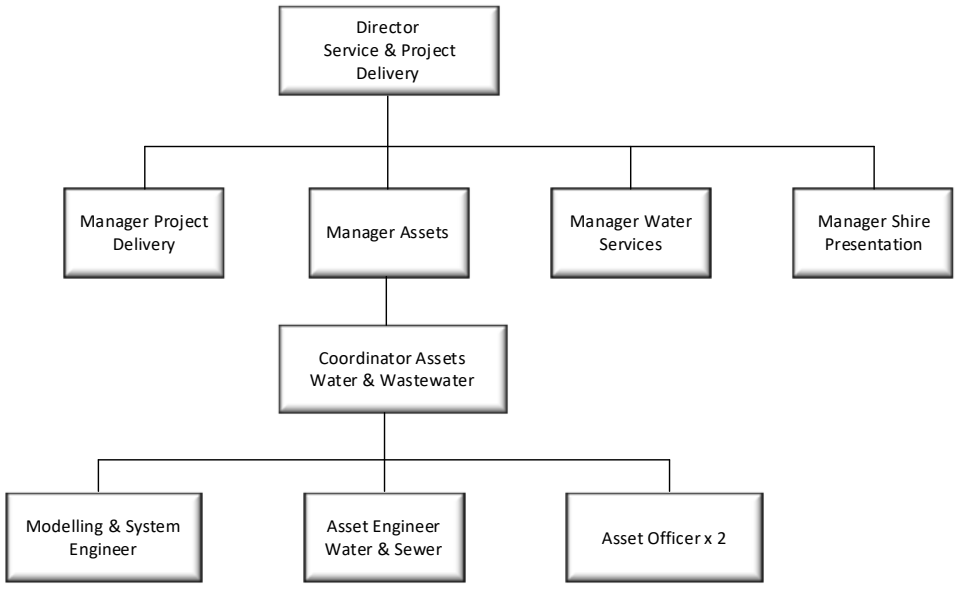

Figure 2: Service & Project Delivery Directorate


Wingecarribee
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3 Our Assets

3.1 Overall Inventory

The water infrastructure assets included in this plan have a total replacement value of $462,519,092 and include the following major asset category:

Asset Category	Quantity/Length (Km)	Replacement Value ($)
Water Bulk Meters	52	$394,413
Water Source Dams	2	$24,372,386
Water Hydrants	8,181	$33,143,120
Water Meters	20,128	$7,673,153
Water Mains	715.5 km	$220,651,502
Water Pump Stations	17	$14,505,580
Water Reservoir	31	$47,356,365
Water Services	20,538	$46,169,252
Water Treatment Plants	2	$45,124,230
Water Filling Station	8	$205,723
Water Valves	5,178	$22,923,367
Total Replacement Cost		**$462,519,092**

Table 2 - Asset Category Inventory

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

Asset Category	Asset Purpose
Water Bulk Meters	Demand management and active leakage control
Water Source Dams	Water supply
Water Hydrants	Access for firefighting and operational activities
Water Mains	Conveyance of water for bulk transfers and supply to water service lines
Water Meters	Usage monitoring of consumption for billing and modelling
Water Pump Stations	Bulk transfers and pressure management
Water Reservoirs	Storage of water for customers and fire fighting
Water Service Lines	Connecting water mains to individual property meters
Water Treatment Plants	Treatment of water to protect public health
Water Filling Stations	Commercial supply point for bulk water purchases

Water Valves	Operational control of the network

Table 3 - Asset Category Description

Asset inventory is maintained and updated through three primary means:

- Recognition of constructed assets – both through Council delivered capital projects, but also assets dedicated to Council through subdivision development.
- Ad-hoc Asset Inspections – inspections are regularly conducted in response to customer or internal requests, as well as part of project scoping phases.
- Scheduled Asset Inspections – all assets are to feature within a schedule of asset inspections. The frequency of inspection would be commensurate to the rate of degradation of the asset, as well as consequence of failure and cost of inspection.

The split of asset amounts across these asset categories is provided in Figure 5 below.

Assets are valued in accordance with the Detailed revaluations of asset classes are undertaken in accordance with Australian Accounting Standards and so a comprehensive revaluation of each asset class is undertaken at a minimum every five years. Outside of the comprehensive revaluation years, fair value assessments are to be undertaken on an annual basis for all asset classes. If the assessment identifies that a material change has occurred, the corresponding asset classes will be indexed with an industry accepted index.

A comprehensive valuation for water was performed in the financial year 2021/22. Next comprehensive valuation was scheduled for 2026/27.

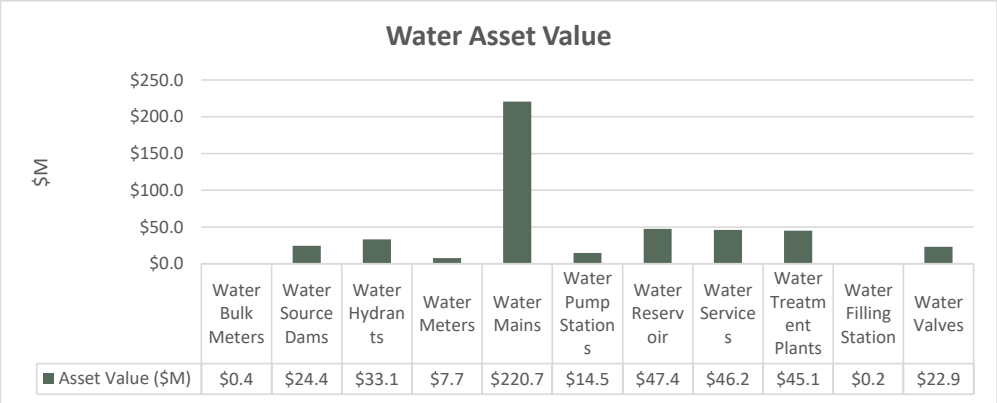


Figure 3 - Asset Category Value

3.2 Overall Condition

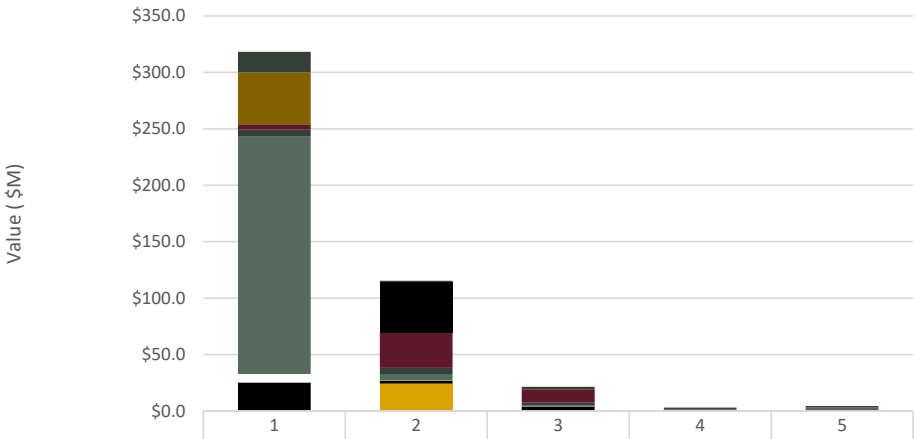
Asset conditions are assessed as part of comprehensive network inspections, conducted on a rolling program. These assessments are undertaken in accordance with the relevant Practice Notes issued by the Institute of Public Works Engineering Australasia. The condition rating scale is 1-5:

1. As new / excellent
2. Good / satisfactory
3. Fair / tolerable

4. Poor / intolerable
5. Very poor / reconstruction required.

With a vast network of underground water and sewer assets, obtaining good condition data is often difficult and expensive. The Council makes use of ad-hoc condition assessments of its underground assets during works that expose those assets. For example, during routine maintenance, excavating for new service connections or during emergency repairs, information such as pipe diameter, condition, wall thickness, consequence of failure and location should be recorded and entered the asset register for future reference.

Desktop method of condition assessments is carried out by analysing the asset inventory data such as age, material, useful life, burst history, risk and criticality.



	1	2	3	4	5
Water Valves	$17.9	$1.1	$2.3	$0.4	$1.1
Water Filling Station	$0.2	$0.0	$0.0	$0.0	$0.0
WTP's	$0.0	$45.1	$0.0	$0.0	$0.0
Water Services	$46.1	$0.0	$0.0	$0.0	$0.0
Water Reservoir	$4.6	$30.8	$11.7	$0.1	$0.1
Water Pump Stations	$5.8	$5.4	$2.2	$0.9	$0.3
Water Mains	$210.8	$5.8	$1.3	$1.2	$1.5
Water Meters	$7.5	$0.2	$0.0	$0.0	$0.0
Water Hydrants	$24.9	$2.5	$3.9	$0.5	$1.4
Water Source Dams	$0.0	$24.4	$0.0	$0.0	$0.0
Water Bulk Meters	$0.3	$0.1	$0.0	$0.0	$0.0

Figure 4: Condition by Value of Water Assets

The overall average condition of Council's water assets is good / satisfactory.

Average condition rating for water assets is 1.40.

However it is acknowledged that this condition rating may be overly optimistic and is further explored in Section 3.3.1.

3.3 Asset Category Inventory

3.3.1 Water mains

Council manages a water pipe network 715 kilometres. This network of water pipes is comprised of many different material types with, as result of the construction years of the water schemes, asbestos cement pipes comprising 51% of the network.

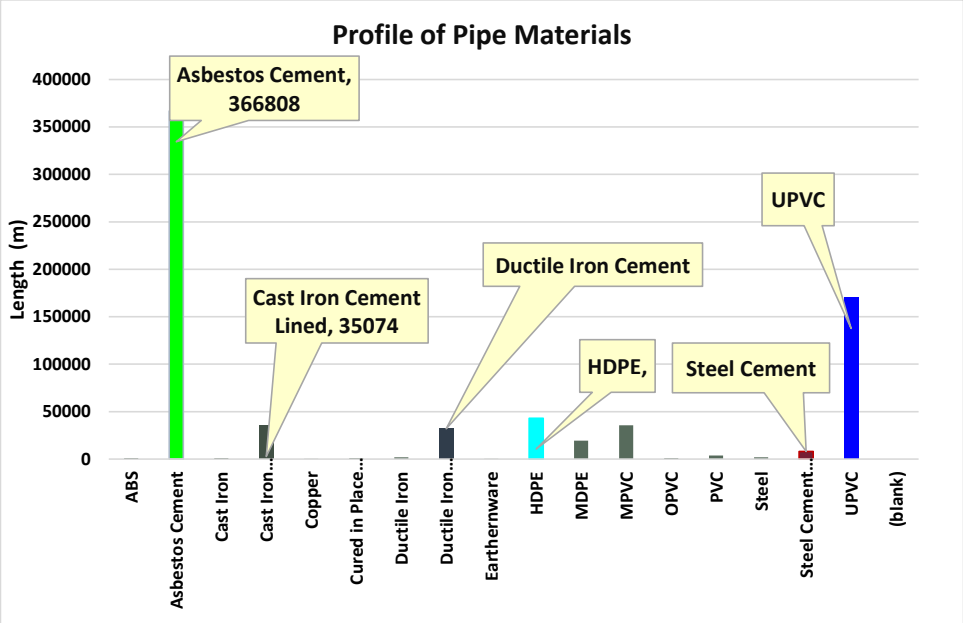


Figure 5 - Water Main Material

At network level, condition ratings are therefore estimated based upon construction age, useful life and an accepted deterioration curve. It is however acknowledged that Council has limited detailed condition data on these underground pipes, beyond burst history where mains have been reported as Soft AC or severely corroded cast iron.

The figure below displays the current spread of condition values across the water main network, with 95% of the network currently recorded as being of Condition 1, ie As New / Excellent condition.

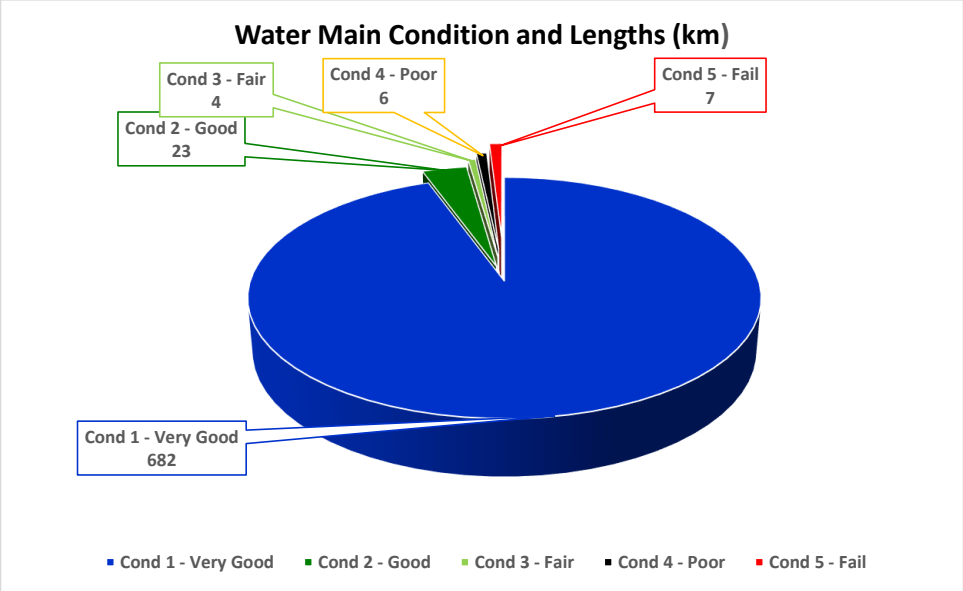


Figure 6 - Water Main Condition

This unfortunately does not appear to align with the water main age data, from which it would be expected that a more even distribution of asset condition ratings would be applied. A reapplication of age based condition rating for the water main network is therefore identified as a future improvement within the Improvement Plan of Section 8.

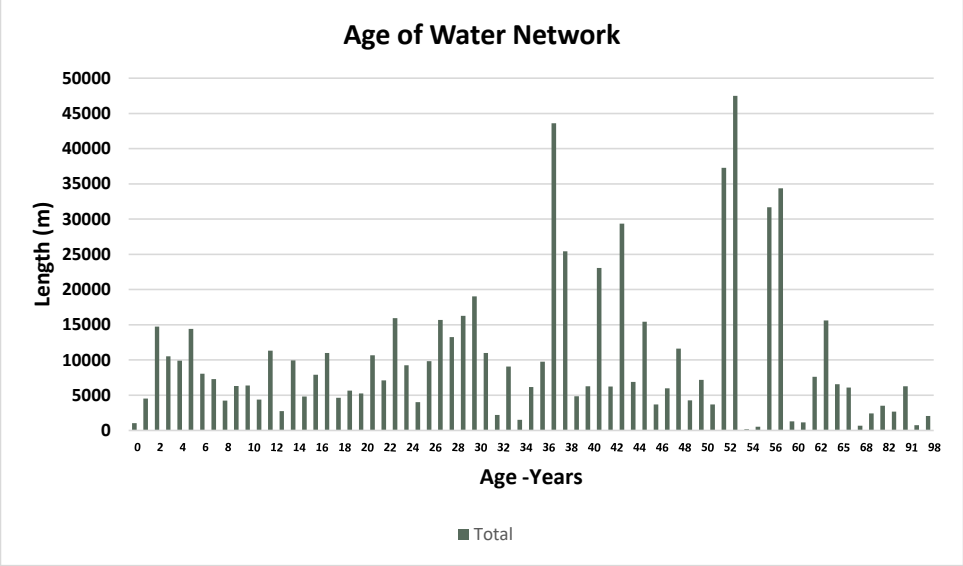


Figure 7 - Water Main Age

3.3.2 Water Reservoirs

The water supply network of the Wingecarribee Shire is supported by 29 water reservoirs.

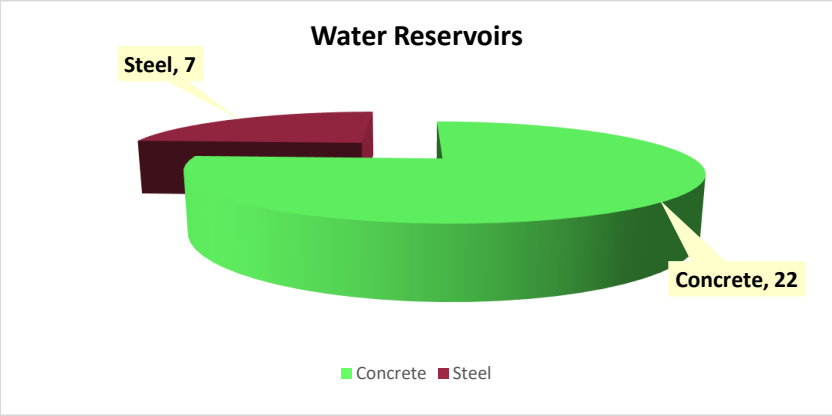


Figure 8 - Reservoir Material

3.3.3 Bulk Water Meters

Council has a network of 52 bulk water meters distributed across the water supply network to assist with demand management and active leakage control. These meters range in size from 100mm to 750mm.

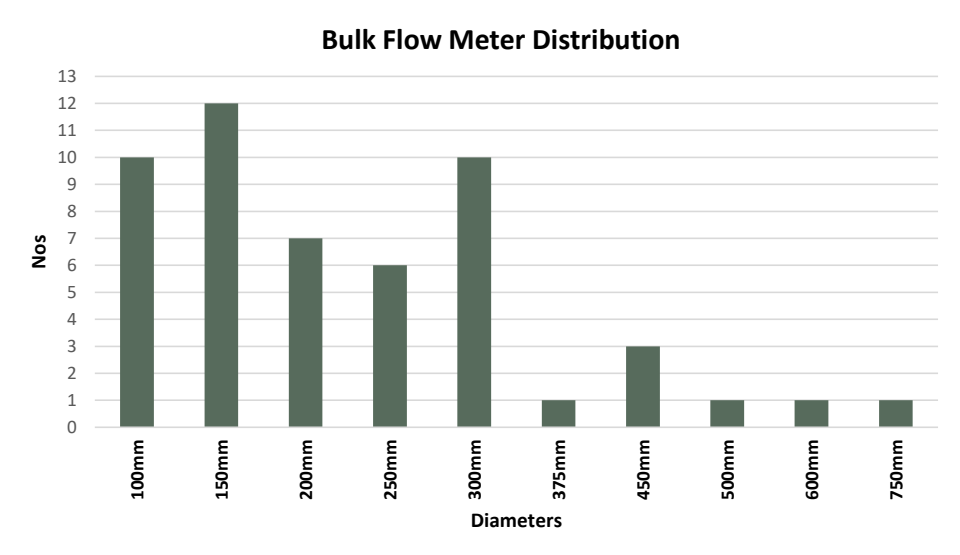


Figure 9 - Bulk Water Meter Sizes

4 Drivers of Level of Service

Levels of Service (LoS) are comprised of four components: provision, renewal, maintenance, and operations. Each LoS is constrained by funding & resource availability, however the fundamental drivers of LoS can be identified in three categories:

- Risk Management
- Community Satisfaction
- Strategies & Masterplans

4.1 Risk Management

Risk is the effect of uncertainty on Council's ability to achieve its objectives. Risk Management is the process of systematically identifying, monitoring, treating, and reporting these risks.

A Risk Assessments has been completed for the asset class, covering generic hazards that are typical across the entire asset network and consideration of Critical Assets.

4.1.1 Critical Assets

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

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
Water dams and storages	Loss of supply due to drought, water quality or other Structural failure of dams	Loss of supply, health
Water treatment plants at Wingecarribee and Bundanoon	Power supply, process (water quality), mechanical or electrical	Loss of supply, health (e.g. algal toxins, insufficient disinfection)
Reservoirs	Leak, overflow, water quality, structural failure	Loss of supply, damage to property, reputation
Pumping stations	Power failure, pump electrical or mechanical failure	Loss of supply
Trunk water mains	Main break	Loss of supply, water loss (NRW), reputation
Control valves	Power failure, communications failure	Overflow, pressure and flow increase/decrease, damage to property

Table 4: Critical Assets

4.1.2 Risk Assessment Framework

The below risk matrix categories the risk that Council is exposed to, depending on the consequence, and the likelihood the risk.

Risk (R) Matrix		Consequence (C)				
		Severe	**Major**	**Moderate**	**Minor**	**Insignificant**
Likelihood (L)	**Almost Certain**	Extreme	Extreme	High	High	Moderate
	Likely	Extreme	Extreme	High	Moderate	Moderate
	Possible	Extreme	High	Moderate	Moderate	Low
	Unlikely	High	High	Moderate	Low	Insignificant
	Rare	High	Moderate	Low	Insignificant	Insignificant

Table 5 - Risk Assessment Framework

4.1.3 Risk Assessment

Hazard	Risk	Inherent Risk			Treatment	Residual Risk			Implementation Status	Responsibility	Level of Service
		C	L	R		C	L	R			
Loss of Electricity Power Supply	Wingecarribee Water Treatment Plant stops operation	MAJ	POS	H	Power generators installed at WTP	MIN	POS	M	Current	Assets	Provision
	Water Pump Stations stop operating				Reservoirs should have at least 12 hours reserve MDD storage at their lowest operating range under normal conditions. Fixed generators are installed at critical pump stations: Evans Lane and Oldbury Road. Remaining pump stations have generator connection points for trailer mounted generators				Current	Assets	Operations
Poor condition, asset life and performance data availability.	Poor results as result of non-evidence based decision making	MOD	LIK	H	Adopt approach of continuous improvement, with progressive implementation of Improvement Program (see Section 8)	INS	POS	L	Current	Assets	Operations
Water supply shortage as result of drought conditions	Water supply services compromised	MOD	POS	M	Implement Drought Management Policy (ie water restrictions)	MIN	POS	M	Current	Water Services	Operations
					Review and update Drought Management Policy in collaboration with Water NSW				Future	Assets	Operations
Disruption of water supply due to catastrophic failure of Wingecarribee Dam	Water supply services compromised	SEV	ULIK	H	Prepare Water Supply Resilience Plan to identify a suitable 'Plan B'	MOD	POS	M	Future	Assets	Provision

Hazard	Risk	Inherent Risk			Treatment	Residual Risk			Implementation Status	Responsibility	Level of Service
		C	L	R		C	L	R			
Wingecarribee Water Treatment Plant requires manual operation/intervention for critical components of treatment process. (Requires manual intervention to adjust chemical dosing for any changes in raw water quality, which can often be 24 hours after the change occurred)	Critical steps of treatment process are not completed in accordance with requirements.	MAJ	POS	H	WWTP Upgrade Project. Treatment process will be updated to current standards, including increased automation and flow-based dosing. Treatment capacity increased to 60ML/day to cater for population growth. - 23/24: Options Study - 24/25: Concept Design - 25/26: Detailed Design - 26/27 & 27/28: Construction	MIN	POS	M	Current	Assets	Provision / Renewal
Disruption of water supply due to catastrophic failure of Wingecarribee Water Treatment Plant	Water supply services compromised										
Demand for water supply exceeds treatment capacity	Water supply services compromised										
Residual chlorine exceeding public health guidelines	Public health	MOD	LIK	H	Develop and implement Water Quality Improvement Plan	MIN	POS	M	Current	Assets	Operations
					Undertake water quality modelling				Current	Water Services	Operations
					Install data loggers and on-line monitoring at reservoirs				Future	Assets	Provision
Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources)	Asset and/or treatment process failure	MOD	LIK	H	Review Water Fund Model and allocation of financial and workforce resources to scheduled maintenance.	MOD	LIK	H	Future	Assets	Maintenance

Hazard	Risk	Inherent Risk			Treatment	Residual Risk			Implementation Status	Responsibility	Level of Service
		C	L	R		C	L	R			
Aging and poor condition critical water mains	High number of critical mains ageing and increased occurrence of breaks – which halts operation of the water supply network	MOD	LIK	H	Update age based condition ratings of water mains	MOD	UNL	M	Future	Assets	Operations
					Implement rolling program of detailed condition assessment on critical water mains				Future	Assets	Operations
					Align investment in asset renewal with annual depreciation.				Future	Assets	Renewal

Table 6: Risk Assessment

4.2 Community Satisfaction

Council's community satisfaction survey is undertaken biennially and tracks Council's performance in service delivery, identifies priority areas and evaluates community attitudes towards customer services, communication and Council as an organisation.

The objectives of the community satisfaction survey process are to:

- Measure the importance of, and satisfaction with, services and facilities provided by Council
- Compare levels of satisfaction for Council's services and facilities with similar councils
- Assist Council in identifying service priorities for the community
- Evaluate Council's customer services and communication

The survey covers facilities and services provided by Council identifying both importance and satisfaction on a 5-point scale, with 1 = low and 5 = high.

The most recent community survey was conducted in 2022, with the results of the prior years also provided for comparison. The following table contains the items relevant to this asset management plan.

	Importance			Satisfaction			2022 Performance gap
	2019	2021	2022	2019	2021	2022	
Town drinking water quality (taste, smell and colour)	4.73	4.72	4.64	3.79	4.07	3.91	14%
Reliability of town water	4.68	4.72	4.70	4.19	4.26	4.18	10%

Table 7: Comparison of Importance and Satisfaction over 2019, 2021 and 2022.

In the table above, the 2022 Performance Gap is the difference between community importance and community satisfaction.

Quality and reliability of the water supply network has consistently been valued of high importance by the community. And the results also show that community satisfaction with this matter is consistently high.

The focus is therefore primarily on maintaining existing service provision.

4.3 Strategies & Masterplans

The third driver of Levels of Service can be broadly grouped as Strategies and Masterplans. Council prepares strategies and masterplans across all asset classes to ensure that network planning, implementation and maintenance is being conducted in a wholistic, considered and effective manner.

A non-exhaustive list of strategies and masterplans that impact the levels of service for the asset base of the Shire is provided in Table 8.

Strategies /Masterplans	Asset Category	Level of Service Influenced	
Integrated Water Cycle	Water dams and storages	Provisional	Planning for Water Treatment Plant and network capacity

Management (IWCM) Strategy	Water treatment plants at Wingecarribee and Bundanoon		improvements to meet future demands. Planning for the extension of water services for new developments and subdivisions
Water Supply Master Plan	Water dams and storages Water treatment plants at Wingecarribee and Bundanoon Reservoirs Pumping stations Water mains Valves & Hydrants	Provisional	Planning for Water Treatment Plant Capacity Improvement to meet future demands. Planning for the extension of water services for new developments and subdivisions
Dam Safety Management Plans	Water dams and storages	Maintenance & Operations	Managing the risk of dam failure
Drinking Water Quality Management (DWQM)	Water dams and storages Water treatment plants at Wingecarribee and Bundanoon Reservoirs	Maintenance & Operations	Implementing a proactive and reactive maintenance program to operate the water supply system, ensuring the supply of safe drinking water in compliance with ADWG (Australian Drinking Water Guidelines)
Risk Management Strategy	Water treatment plants at Wingecarribee and Bundanoon Reservoirs Pumping stations Water mains	Renewals	Ensuring a reliable water supply service by mitigating the risk of failure of critical water infrastructure assets
Asbestos Management Plan	Water mains	Renewals	Ensuring a healthy and safe environment for the community in handling asbestos in water assets
Condition Assessment Strategy	Water treatment plants at Wingecarribee and Bundanoon Reservoirs Pumping stations Water mains Valves & Hydrants Water meters	Renewals	Conducting aged, condition, and risk-based assessments on critical water assets to renew them before reaching the run-to-failure mode.

2023 Economic Review	Water treatment plants at Wingecarribee and Bundanoon Pumping stations Water mains	Provisional /Renewals	Planning Water Treatment Plant Capacity Improvement to meet the 2031 demand targets set in IWCM and ensuring a water supply of 60 ML/DAY to support growth beyond 2051.

Table 8: Strategic plans and Masterplans driving the Level of Service.

5 Levels of Service

Levels of Service (LoS) are comprised of three components: provision, renewal, and maintenance & operations. These three components are best understood in isolation, but an adjustment to one level of service results in changes to others, so they must be considered together.

5.1 Provision Level of Service

The Provision LoS concerning to what standard or ideal Council will endeavour to provide the assets and its function to the community. This LoS will primarily influence decisions around Council's provision to new infrastructure, or in the upgrade of existing infrastructure which fails to meet the provision benchmarks set.

Council's current provision of Water assets is worth a combined $462.5M and provides services for 20,151 dwellings.

Extent of Water Supply Scheme

In accordance with the resolution of Ordinary Council Meeting 17 May 2023, Council will not pursue an extension of the water supply network to areas currently not serviced.

The focus is to therefore continue ensuring the resilience, performance and sustainability of the existing water supply network.

Raw Water Supply

To this end at Ordinary Council Meeting 19 April 2023, Council resolved the following deliverables, which relate to the provision level of service, for the water supply network:

1. *Implementation of Wingecarribee Water Supply Augmentations continue unchanged.*
2. *Operation and maintenance of the Bundanoon water supply system, minor upgrades and renewals at the Bundanoon Water Treatment Plant (WTP) and Werai Water Pump Station (WPS) are continued to be undertaken until such time that the following projects are completed:*
    a. *Wingecarribee WTP Process Improvement and 2031 Augmentation;*
    b. *Wingecarribee WTP to Moss Vale pipeline;*
    c. *Moss Vale Reservoir Duplication; and*
    a. *Renewal of transfer pipeline Moss Vale to Exeter.*
3. *Upon completion of the above projects the Bundanoon raw water supply, treatment plant and Werai WPS are decommissioned.*
4. *A qualified and experienced consultant is engaged to prepare a contingency plan in the unlikely event of total failure of Wingecarribee Dam.*

Water Supply in New Developments

The Provision LoS for new subdivisions & development is that which is stipulated in the documents which govern it, namely Council's:

- Local Environmental Plan
- Local Housing Strategy
- Local Strategic Planning Statement
- Development Control Plans
- Engineering Design and Construction Specifications
- Developer Contribution & Servicing Plans
- Water and wastewater Modelling Design Standards

Performance of Water Supply Scheme

Council has adopted the performance standards for the Water Supply network as detailed within the Modelling Design Standards – which are available on the Council website.

These standards provide a design criteria for:

- Demand factor to used within models
- Operating Pressures
- Minimum Pipe Diameters
- Fire Flow
- Flow velocity and head loss
- Reservoir Storage

Properties for which Council cannot meet these operating pressures, a 50% rebate on the water access charge is available.

5.2 Renewal Level of Service

The Renewal LoS defines how often Council intends to replace existing assets with a Modern Engineering Equivalent Replacement Asset (MEERA), including disposal of the existing asset.

This renewal frequency is termed 'useful life' and adjusting this value has significant implications for annual depreciation, with asset useful being a direct factor in its calculation. Annual investment in the capital renewal of assets should ideally equate to the value of annual depreciation. Although asset degradation and failure will not follow a straight line across financial years, failure to maintain asset renewal at the rate of annual depreciation will result in an overwhelming volume of renewal works in later years.

Adjustments to asset useful like also has impacts on required maintenance and operations expenditures. Shorter useful lives generally result in less required maintenance, all other factors being equal and vice versa.

The below table includes the asset renewal lives for assets in the water Asset Class. These useful lives are currently stored in the Conquest Asset Management System

Asset Category	Useful life (Years)
Water Bulk Meters	15
Water Source Dams	3-80
Water Hydrants	60
Water Mains - AC	80
Water Mains - DI	100
Water Mains - CI	60
Water Mains - PVC	100
Water Meters	15
Water Pump Stations	20
Water Reservoirs	3-80
Water Service Lines	60

Water Treatment Plants	3-80
Water Filling Stations	20-70
Water Valves	50-60

Table 9: Water Asset Useful Lives.

The intent is therefore that water assets will be renewed prior to exceeding their designated useful life. However, renewal works will also be based on asset condition. When an asset is found to be of Condition 4 or 5 it will then be programmed for renewal within the Capital Works program.

The following charts provide a comparison of asset category and their respective useful life.

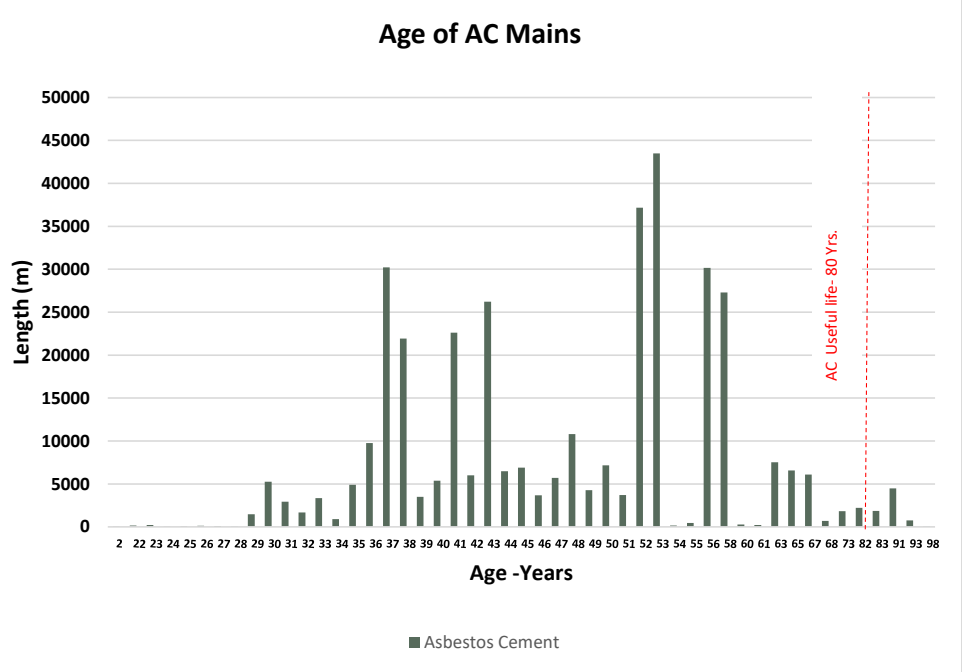


Figure 10 - Analysis of AC Main Useful Life

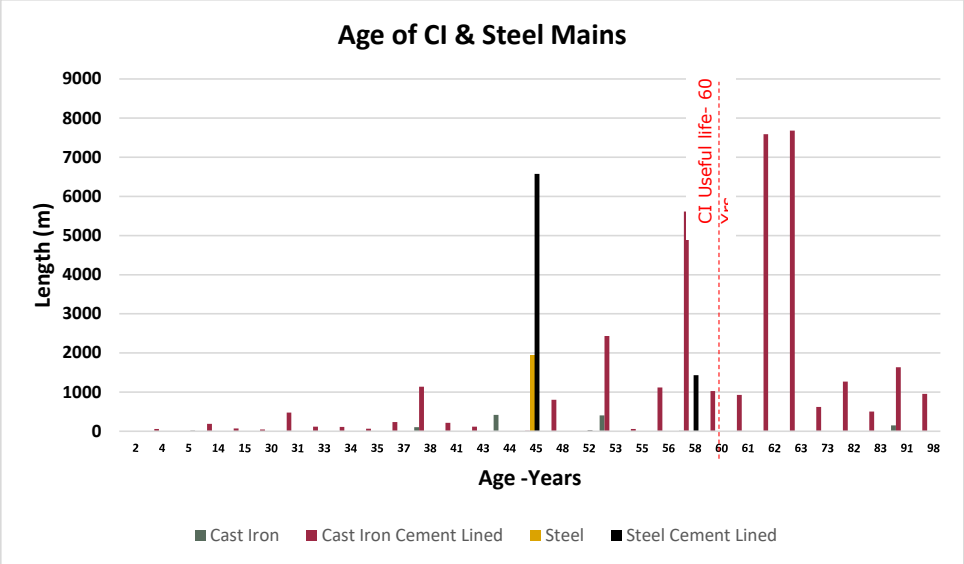


Figure 11 - Analysis of Steel Main Useful Life

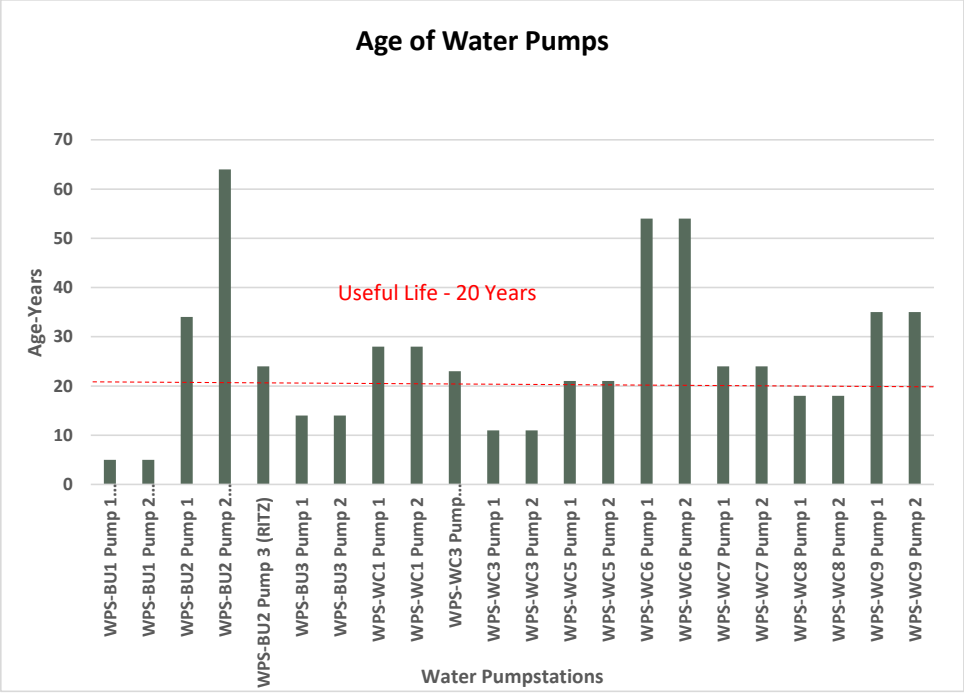


Figure 12 - Analysis of Water Pump Useful Life

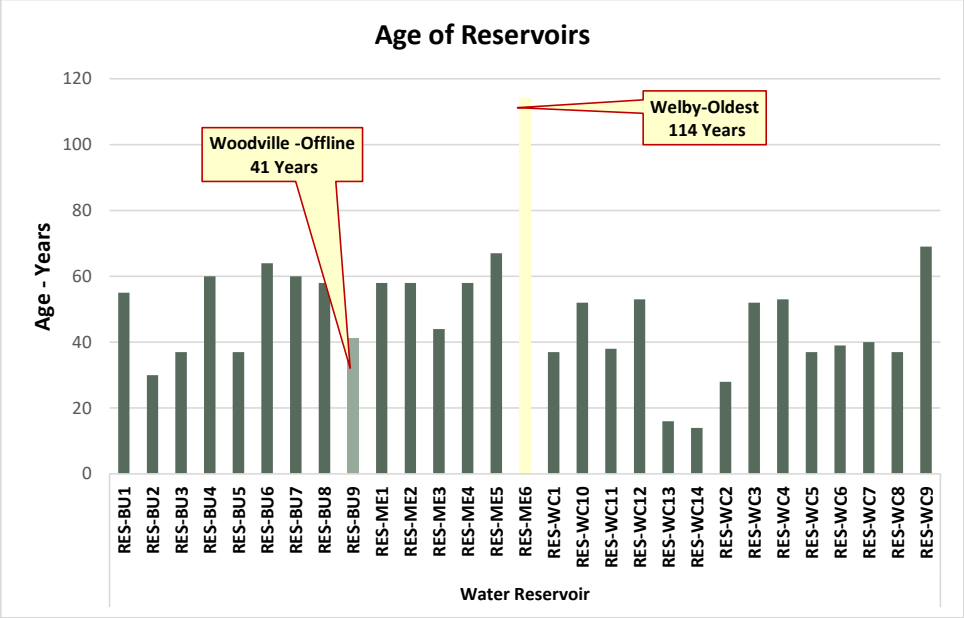


Figure 13 - Analysis of Water Reservoir Useful Life

5.3 Maintenance & Operations Level of Service

Maintenance and operation activities are completed in both a proactive and reactive fashion across the asset network. Many operational activities by their nature are more readily able to be scheduled and completed in a timely & controlled way. Maintenance activities are more difficult to deliver in scheduled fashion, with mature systems and full resourcing required to do so.

Maintenance and operations level of service will be provided under two categories: inspections and maintenance.

5.3.1 Inspections

Asset condition assessments involve periodically monitoring assets and utilizing the collected inspection data to determine their condition align with Council's Condition Assessment Strategy – April 2020. Appendix-A. Analysis of this data may reveal the need for preventative maintenance to ensure that assets meet their expected useful life or require replacement if they have reached the end of their lifespan.

- **Dams**

  Council-owned dams are managed in compliance with the Dam Safety Regulations 2019. All periodic inspections and condition assessments are conducted in accordance with the Council's Dam Safety Management System (DSMS), which is adopted by Dam Safety NSW.

- **Reservoirs**
  All reservoirs are inspected in every 4 years. This includes identifying maintenance,

structural intervention and safety and security priorities in accordance with the Council's Drinking Water Management System (DWQMS).

- **Bundanoon WTP**

Asset System	12 M	3 M	3M	6 M	6M	9 M	Reactive	Grand Total
Backwash System	8	12		7				27
Chemical Dosing	11	31		13		1	4	60
Clear Water Processing		2		2			1	5
Compressed Air		11		7			1	19
DAF System	6	8	3	5	2			24
Filter	2	2		5				9
Laboratory		1					13	14
Pump Station - WPS BU4 Clear Water	6	12		5			1	24
Raw Water Headwork's	1	10	1	7				19
Site	1	2		5			5	13
Sludge Lagoon	1	8		1				10
Structures	1							1
Telemetry Unit	3			3				6
Treatment Plant Controls	12						6	18
WPS-BU3 Bundanoon #3, Green Hills Rd Raw Water	9	13		6			1	29
WTP Power Lines, WPS-BU3 Bundanoon #3, Green Hills Rd Raw Water	1							1
WTP Transformers, WPS-BU3 Bundanoon #3, Green Hills Rd Raw Water	3							3
Grand Total	**65**	**112**	**4**	**66**	**2**	**1**	**32**	**282**

Figure 14 - Bundanoon WTP Inspection Schedule

- **Wingecarribee WTP**

Asset System	1 M	12 M	3 M	6 M	9 M	Reactive	Grand Total
All Systems						1	1
Backwash System		10	7	25			42
Chemical Dosing		5	18	55	1	2	81
Clear Water Processing		1	2	1		2	6
Compressed Air		6	3	19			28
DAF System		6	6	24			36
Drying Beds			11				11
Filter		2	4	5		1	12
Laboratory		4	1			9	14
Raw Water Headwork's		1	1	19			21
Site	1	2	2	12		2	19
Sludge Lagoon		2	8	2			12
Telemetry Unit		2		3		1	6
Treatment Plant Controls		10				4	14
WPS-WC10 Clear Water		5	6	15			26
WPS-WC9 Wingecarribee #9, Treatment Plant Raw Water		8	8	14		2	32
Grand Total	**1**	**64**	**77**	**194**	**1**	**24**	**361**

Figure 15 - Wingecarribee WTP Inspection Schedule

- **Water Pumpstations**

Water Pumpstat	12M	Grand Total
Bundanoon Network	1	1
Medway Network	1	1
WPS-BU1	1	1
WPS-BU2	1	1
WPS-BU3	1	1
WPS-BU4	1	1
WPS-ME1	1	1
WPS-WC1	1	1
WPS-WC10	1	1
WPS-WC11	1	1
WPS-WC2	1	1
WPS-WC3	1	1
WPS-WC4	1	1
WPS-WC5	1	1
WPS-WC6	1	1
WPS-WC7	1	1
WPS-WC8	1	1
WPS-WC9	1	1
Grand Total	**18**	**18**

Figure 16 - Pump Stations Inspection Schedule

- **Mains**
  Critical water mains are reviewed annually, with programming of condition assessment determined by the number of pipe failures in recent years, including pipe breaks and leaks at joints. These inspections involve field tests on the pipeline to assess its condition and identify known features and anomalies, such as blockages, air pockets, and wall thickness deterioration.
- **Valves**
  Valves are currently inspected on a reactive basis due to a lack of resources, but plans are underway to establish a proactive inspection regime for critical valves on a priority basis.
- **Hydrants**
  Currently, inspections and flushing are carried out on a reactive basis due to a lack of resources, but plans are underway to establish a proactive inspection and flushing regime for critical hydrants.

The condition assessment of other aboveground water treatment plant and pump station assets is carried out every 5 years during the asset revaluation process. The condition of underground assets such as water mains, valves, and hydrants are assessed annually based on age during asset valuation.

5.3.2 Maintenance

Maintenance concerning the essential activities required to keep existing assets functioning to their design capacity and performance. This LoS will combine activities which are either proactive (i.e. scheduled, cyclical activities) that are carried out before service delivery is compromised, or reactive which are carried out after service delivery is compromised due to wear, malfunction or breakage.

The operation concern to the day-to-day activities that are required to ensure the asset is kept in a functional state so that it can provide its service delivery to community. Operational activities are often active processes of utilising an asset which will consume resources such as manpower, energy, chemicals and materials.

Activities are completed in both a proactive and reactive fashion across the asset network. Many operational activities by their nature are more readily able to be scheduled and completed in a timely & controlled way. Maintenance activities are more difficult to deliver in scheduled fashion, with mature systems and full resourcing required to do so.

Asset Class	Annual Maintenance & Operations Budget
Pumping Stations	$284,012
Reservoirs	$256,071
Reticulation Network	$2,707,553
Treatment	$771,039
Treatment - Bundanoon Dam	$527,016
Treatment - Medway Dam	$93,564
Treatment - Wingecarribee Dam	$2,426,910
Total	*$7,066,165*
Annual Maintenance as % of Asset Value	*1.5%*

Table 10 - Asset Class Maintenance

6 Asset Base Growth

Council's asset base will expand over the next 10 years through committed and expected new & upgrade expenditure, assets contributed by development through conditions of consent, and the Developer Contributions & Servicing Plans. This growth can be decreased through asset disposals; however, no significant disposals are currently committed.

In this analysis, all future asset values, as well as planned and recommended expenditures, assume indexation rate of 3.0% per annum.

6.1 New & Upgraded Assets and Developer Contribution

The new and upgrade asset projects category covers those projects resourced by Council or grant funding that involve existing assets being enhanced or new assets being constructed.

An important funding source for new infrastructure are Development Contributions collected under Section 64. These contributions fund a significant proportion, though not all, of the infrastructure required by new development.

Council currently primarily levies contributions through the following Plans:

- Southern Highlands Innovation Park (SHIP) Plan
- Water & Sewer Development Servicing Plan

The Integrated Water Cycle Management Plan (IWCM) provides guidance as to the expenditure of the overall Water Fund and Section 64 contributions and forms the starting point for the 2024/25 to 2027/28 Capital Works Program.

The following table provides a summary of the new/upgrade components of projects within the 2024/25 to 2027/28 Capital Works Program and the works program within the IWCM has been used for the remaining years of the planning period.

Financial Year	Project Name	New/ Upgrade Component
2024/25	Water pump station renewals or upgrades	$50,000
2024/25	Water private works - new meters and connections	$200,000
2024/25	WWTP Major improvements	$300,000
2024/25	Master Plan - East Bowral PMA inlet and elec actuated control valve upgrade	$500,000
2024/25	Master Plan - Bowral to Moss Vale 450mm duplication	$400,000
2024/25	Water SCADA System minor works	$75,000
2024/25	Moss Vale Hill Road Reservoir Duplication	$2,000,000
2024/25	Water Supply Zone Control Valves	$500,000
2024/25	Reservoir Gas chlorination	$300,000
2024/25	Eridge Park Booster WPS	$350,000
2024/25	Northern Villages Distribution Main Duplication - Stage 1A	$800,000
2024/25	Water reticulation and service improvements	$50,000
2024/25	Critical Water Main Renewal Design	$150,000
2024/25	Moss Vale Hill Road Reservoir Duplication	$3,000,000
2025/26	East Bowral PMA inlet upgrade and zone control valve	$500,000
2025/26	Moss Vale Trunk Main Duplication (Master Plan)	$9,000,000

2025/26	Private works - meters and services	$200,000
2025/26	Water Main Duplication - Yerrinbool	$300,000
2025/26	Water reticulation improvements	$50,000
2025/26	Wingecarribee WTP augmentation 60ML	$3,750,000
2026/27	Northern Villages Distribution Main Duplication - Stage 3	$1,398,481
2026/27	Water Main Duplication - Yerrinbool	$4,124,612
2026/27	Moss Vale Trunk Main Duplication (Master Plan)	$6,700,000
2026/27	Wingecarribee WTP augmentation 60ML	$7,500,000
2027/28	Northern Villages Distribution Main Duplication - Stage 1B	$2,756,000
2027/28	Water Main Duplication - Hill Top	$300,000
2027/28	Wingecarribee WTP augmentation 60ML	$11,250,000
2028/29	Integrated Water Cycle Management Plan	$2,806,250
2029/30	Integrated Water Cycle Management Plan	$3,193,750
2030/31	Integrated Water Cycle Management Plan	$1,193,750
2031/32	Integrated Water Cycle Management Plan	$1,193,750
2032/33	Integrated Water Cycle Management Plan	$1,193,750
2033/34	Integrated Water Cycle Management Plan	$1,833,750

Table 11:New and Upgraded Assets

6.2 Assets Contributed by Development through Conditions of Consent

As development occurs, particularly within the new living areas identified within the Wingecarribee Local Housing Strategy, it is intended that infrastructure be provided at a rate consistent with the Provision LoS in existing parts of the Wingecarribee Local Government Area.

With the Wingecarribee Local Housing Strategy setting an objective of a 50:50 split of infill and greenfield development, it is therefore forecast that annual asset base growth from greenfield development will be 50% of the annual population growth.

Reviewing the rate of contributed assets across 2021/22 and 2022/23, it is observed that the value of contributed assets is equivalent to 30% of this forecast population growth from greenfield development. Which is understood to be the result of assets contributed through this method generally being of a non-major nature. (eg sewer pipelines will be contributed through a development, but not another sewage treatment plant).

Financial Year	Population	Population Growth (from previous year)	Forecast Asset Base Growth
2023/24	53,700	0.9%	0.16%
2024/25	54,270	1.1%	0.16%
2025/26	54,913	1.2%	0.16%
2026/27	55,521	1.1%	0.16%
2027/28	56,145	1.1%	0.17%
2028/29	56,789	1.1%	0.17%
2029/30	57,439	1.1%	0.16%

2030/31	58,101	1.2%	0.16%
2031/32	58,762	1.1%	0.16%
2032/33	59,425	1.1%	0.18%

Table 12 - Forecast.ID Population Growth

6.3 Asset Disposals

Asset disposals entail the removal of an existing asset without replacing it with a similar asset.

In accordance with the resolution of Ordinary Council Meeting 19 April 2023, the following assets are noted within the Asset Base Growth assessment as disposal:

Financial Year	Asset Description	Value
2032/33	Bundanoon Water Treatment Plant and Raw Water Main	$13M
2032/33	Water Main - Bundanoon Water Treatment Plan to Werai Pump Station	$10M

In accordance with the resolution of Council and water supply source strategy, Bundanoon WTP and water main from Bundanoon Dam to Werai Pump Station will not be renewed. And so their depreciation does not need to be offset with asset renewal expenditure.

It will however be determined at a later date as it if these assets are to be demolished onsite or, similar to the approach adopted for the old Medway Dam Water Supply, the usage of the assets just halted.

6.4 Asset Indexation

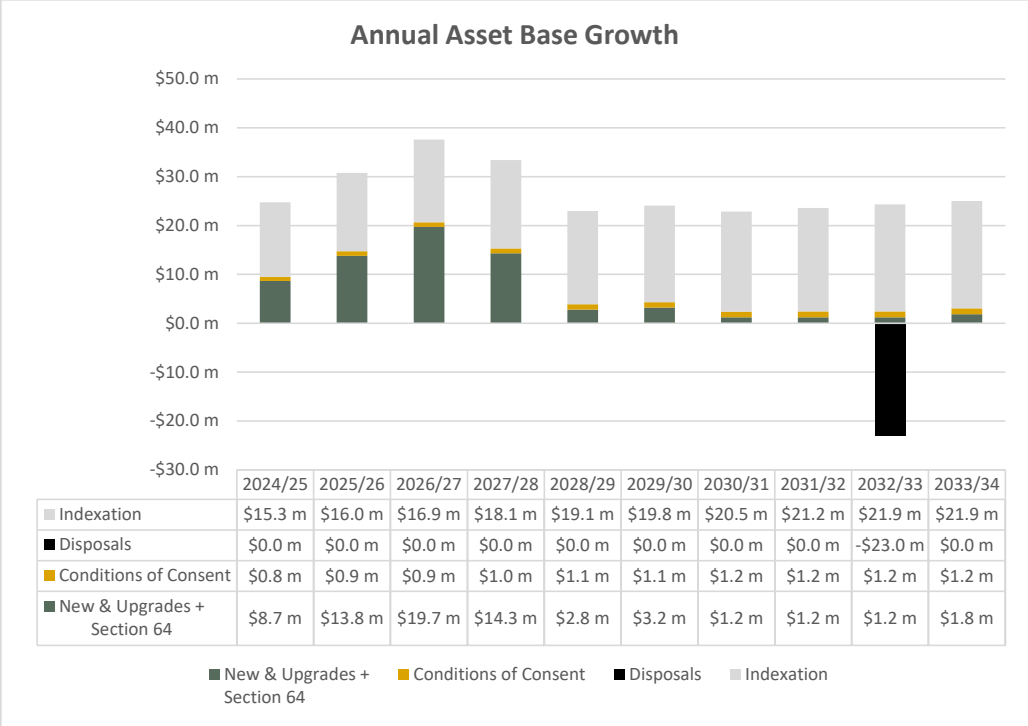
Indexation rate of 3.0% p.a has been applied across the 10-year forecast period. This aligns with the indexation rate adoption in the LTFP. The same rate has been adopted in this AMS to ensure that lifecycle costs and associated budgets are comparable in future financial years.

6.5 Asset Base Growth

Total asset base growth is comprised these components:

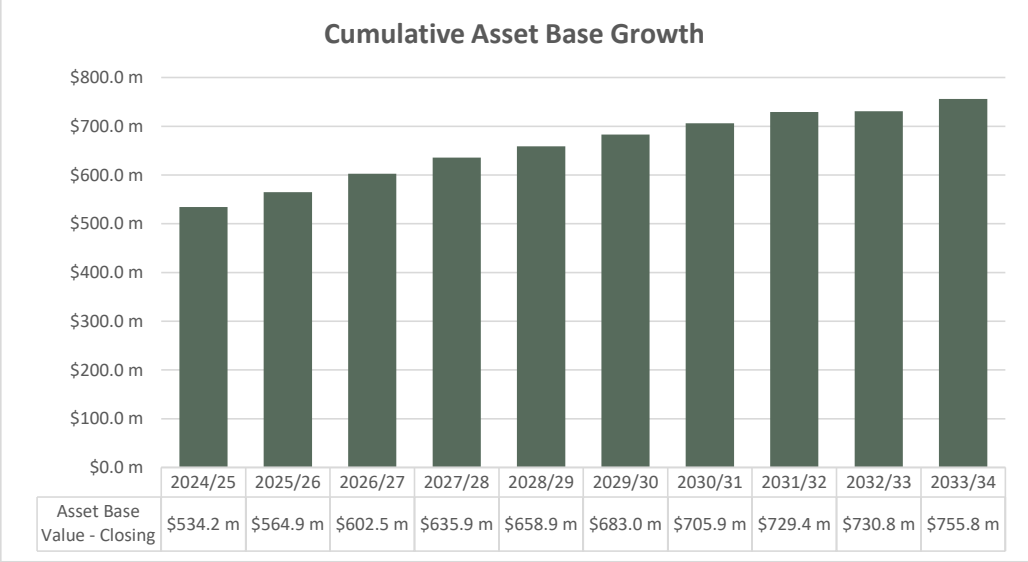
- Asset upgrades
- Assets contributed by development through conditions of consent.
- Development Contributions
- Subtracting asset disposals
- Indexation

Following graphs shows this forecast asset base growth of $246M over 10 years, with the majority of the growth attributed to indexation.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Indexation	$15.3 m	$16.0 m	$16.9 m	$18.1 m	$19.1 m	$19.8 m	$20.5 m	$21.2 m	$21.9 m	$21.9 m
Disposals	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m	$0.0 m	-$23.0 m	$0.0 m
Conditions of Consent	$0.8 m	$0.9 m	$0.9 m	$1.0 m	$1.1 m	$1.1 m	$1.2 m	$1.2 m	$1.2 m	$1.2 m
New & Upgrades + Section 64	$8.7 m	$13.8 m	$19.7 m	$14.3 m	$2.8 m	$3.2 m	$1.2 m	$1.2 m	$1.2 m	$1.8 m

Figure 17: Annual Asset Base Growth – Factors



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Asset Base Value - Closing	$534.2 m	$564.9 m	$602.5 m	$635.9 m	$658.9 m	$683.0 m	$705.9 m	$729.4 m	$730.8 m	$755.8 m

Figure 18: Cumulative Asset Base Growth

7 Financial Lifecycle Forecast

The Council assets described in Section 3, with the asset base growth forecast in Section 6, require resourcing across their lifecycle in order to achieve the LoS contained in Section 5.

The two main components are renewal expenditure, and maintenance and operations expenditure, which sum together to give the recommended overall expenditure on Council assets over the next 10 years.

7.1 Renewal Forecast

To ensure that satisfactory condition is maintained across the asset base and the Infrastructure Backlog Ratio benchmark is achieved, capital renewal works should be undertaken when assets reach the end of their useful lives. These capital renewal works involve disposing of the existing asset and constructing the MEERA.

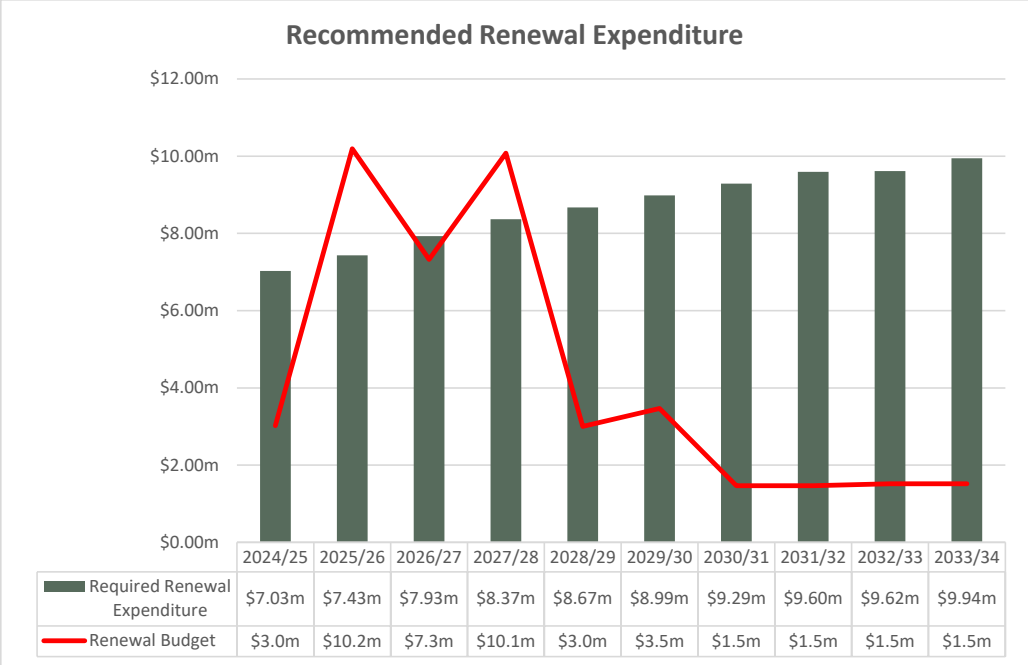
However, if the expiry of useful lives or asset conditions are solely relied upon to inform these recommended renewals, annual budgets fluctuate significantly, which creates difficulties from a resourcing perspective. Rather, it is better practice to average out the recommended renewal expenditure in order to reduce annual fluctuations. When future Delivery Programs are prepared, actual allocations to each asset class may vary depending upon the scale of individual projects.

The required renewal expenditure across the 10-year period is therefore forecast to be $87M. The Long Term Financial Plan is unfortunately not able to accommodate the entirety of this desired asset renewal budget. This is largely as result of the funding model for the Water Fund not being structured such that asset renewal aligns with asset depreciation. This will therefore be a key parameter included within an update of the Water Fund model in 2024/25.

Figure 9 shows the renewal budget featured in the Capital Works Program and Long Term Financial Plan, as well as the required renewal expenditure to align with asset depreciation. The Capital Works Program and Long Term Financial Plan currently only accommodates $43M of water asset renewal.

This shortfall in asset renewal investment will result in a deterioration of asset condition and heighten future asset renewal investment requirements.

In response to this, a review of the Water Fund model will be undertaken in 2024/25 to ensure that financial sustainability can be achieved for the asset class.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Required Renewal Expenditure	$7.03m	$7.43m	$7.93m	$8.37m	$8.67m	$8.99m	$9.29m	$9.60m	$9.62m	$9.94m
Renewal Budget	$3.0m	$10.2m	$7.3m	$10.1m	$3.0m	$3.5m	$1.5m	$1.5m	$1.5m	$1.5m

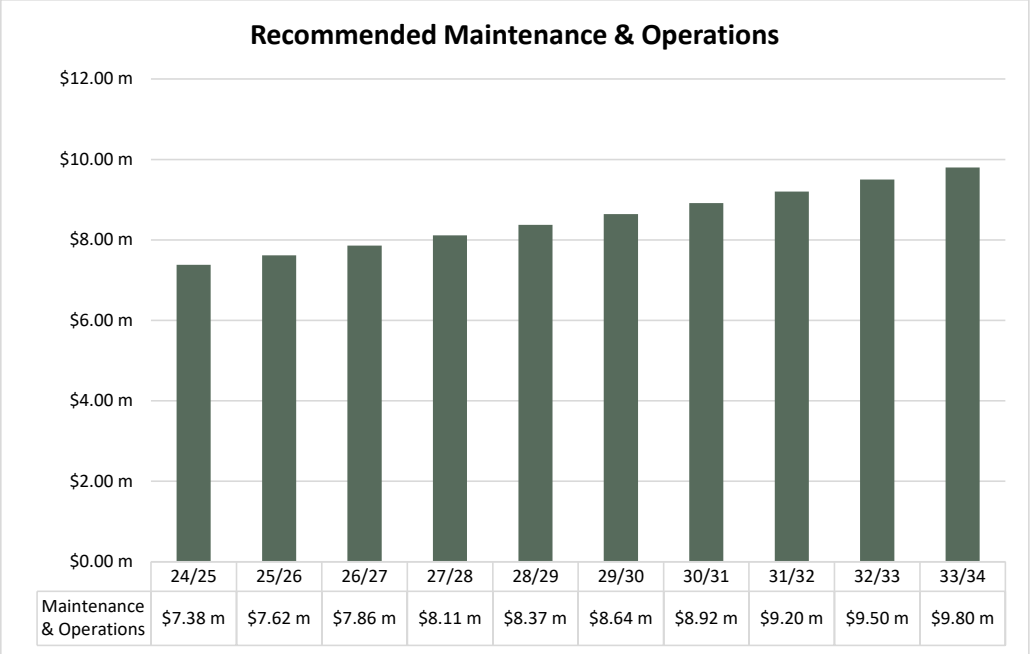
Figure 19: Recommended Renewal Expenditure, measured in millions of dollars.

7.2 Maintenance & Operations Forecast

To sustain the current Maintenance and Operations Level of Service whilst accommodating a growing asset base, annual maintenance & operations budget increases are required. The required maintenance and operations expenditure across the 10-year period is therefore forecast to be $100M.

The Long Term Financial Plan is unfortunately not able to accommodate the entirety of this desired maintenance and operations budget. This is largely as result of the funding model for the Water Fund not being structured such that maintenance and operations funding increases in line with asset base growth.

This will therefore be a key parameter included within an update of the Water Fund model in 2024/25.



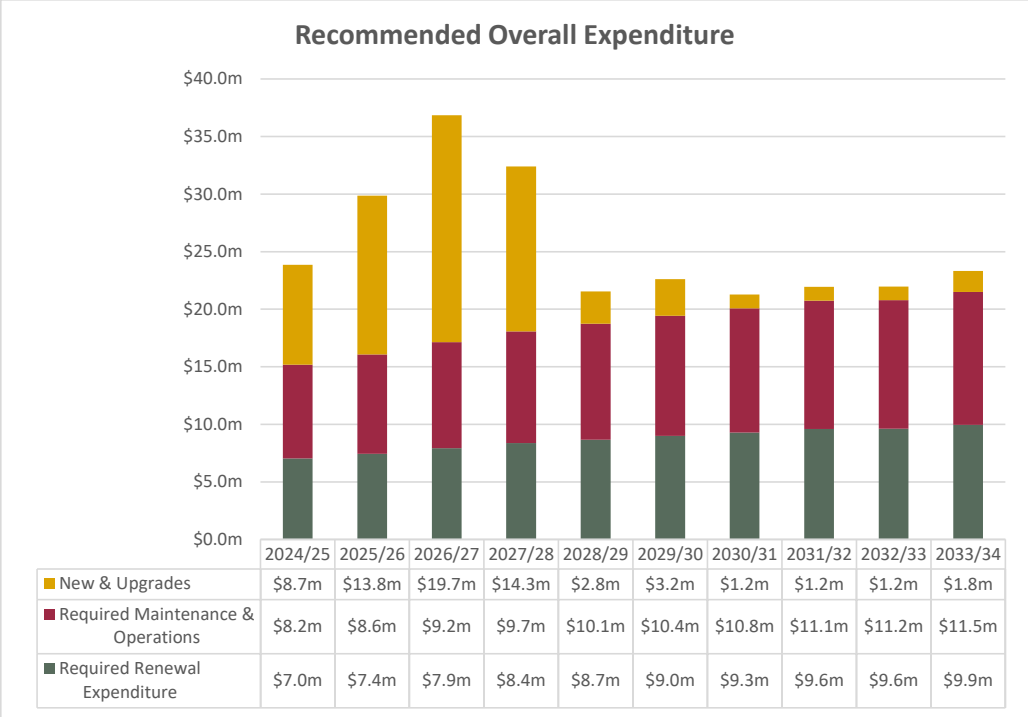
	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34
Maintenance & Operations	$7.38 m	$7.62 m	$7.86 m	$8.11 m	$8.37 m	$8.64 m	$8.92 m	$9.20 m	$9.50 m	$9.80 m

Figure 20 Recommended Maintenance & Operations.

7.3 Overall Forecast

The recommended overall expenditure is a combination of the new, upgrades & developer contributions from Section 6 and the recommended renewal, maintenance & operations expenditure from Section 7. Resulting in an overall recommended expenditure of $256M over 10 years as depicted in Figure 15.

It is however acknowledged that the full extent of this recommended expenditure cannot be accommodated within the Long Term Financial Plan. Future iterations of the Asset Management Plan will further investigate and identify potential solutions.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
New & Upgrades	$8.7m	$13.8m	$19.7m	$14.3m	$2.8m	$3.2m	$1.2m	$1.2m	$1.2m	$1.8m
Required Maintenance & Operations	$8.2m	$8.6m	$9.2m	$9.7m	$10.1m	$10.4m	$10.8m	$11.1m	$11.2m	$11.5m
Required Renewal Expenditure	$7.0m	$7.4m	$7.9m	$8.4m	$8.7m	$9.0m	$9.3m	$9.6m	$9.6m	$9.9m

Figure 21: Recommended Overall Expenditure, measured in millions of dollars.

8 Improvement Plan

Asset Planning is a journey of continuous improvement with there always being opportunities to further improve the accuracy of asset data, better understand community needs & expectations and more efficiently meet the service needs of the Shire. The below items are specific improvements that can be made to this document as well as the operation of Council.

No	Task	Responsibility	Timeline
1	Update GIS mapping layers with records of watermain failures and inspections	Assets	2024/25
2	Review construction year data and subsequent age based condition calculations	Assets	2024/25
3	Review and update Water Fund model	Assets	2024/25
4	Prepare Water Supply Resilience Plan	Assets	2024/25
5	Implement Technology One Strategic Assets Module	Assets	2024/25
6	Undertaking water system audit including water meter testing (bucket testing) and calibration.	Assets	2025/26
7	Develop and implement program for inspection and audit of bulk meters for detecting water loss.	Assets	2025/26
8	Linking Maintenance works to Asset Register and GIS layer.	Assets	2025/26
9	Update valuation methodology of assets from modrates to unit rates	Assets	2025/26
10	Comprehensive Valuation	Assets	2026/27
11	Formalise documentation of inspection and maintenance works.	Assets	2025/26
12	Analyse and identify risks and opportunities for water quality performance to ensure licence conditions are met.	Assets	2026/27
13	Review and update Shirewide Water Masterplan	Assets	2026/27

Table 13: Improvement Plan

Wingecarribee
SHIRE COUNCIL

Asset Management Plan – Open Spaces

We're with you

WINGECARRIBEE SHIRE COUNCIL

Document Name	Asset Management Plan – Open Spaces
Version No.	1
Council File Reference	[Insert departmental file number, generally the relevant electronic records management system subject reference]
Adoption Date	[Governance to insert]
Resolution Number	[Governance to insert]
Document Owner	Manager Assets
Responsible Branch	Assets
Responsible Business Unit	Assets Parks and Buildings
Review Schedule	Annually
Review Date	[Governance to insert]

Version	Adoption Date	Notes
1	TBC	First version of Asset Management Plan – Open Spaces

Contents

1 Executive Summary

This Asset Management Plan (AMP) is part of a suite of Portfolio AMPs, which together sit under the Asset Management Strategy (AMS). It is to be read in conjunction with the AMS and Four Year Capital Works Program.

This AMP provides an overarching document of Council's management of, and investment in, the Open Spaces Asset Class over a 10-year planning period.

Council manages an open spaces asset class of over 1,500 assets across a broad range of asset categories worth a combined $31M. The average condition of these structures is 2.2, which is defined as therefore being in 'good' condition.

The level of service that Council provides through this asset class can be described within the three categories of: Provision, Renewal, and Maintenance and Operations. What Council delivers through these levels of service are driven by consideration of: Risk Management, Community Satisfaction and Strategies and Masterplans. But is constrained by funding and availability of resourcing.

Review of the 2022 Community Satisfaction Survey shows that community satisfaction for parks, playgrounds and sporting facilities has been in consistent slight decline and it is evident that there is a community desire for an increased Council performance in the provision and maintenance across all areas of open space assets.

In accordance with these results, the Provision Level of Service details how the Capital Works Program features investment in several large new playspaces and the Maintenance and Operations Level of Service details several performance improvement initiatives currently in progress. The opportunity that a revised Developer Contributions Plan would offer is also noted.

In order to provide an analysis of financial investment required across the planning period, calculation of forecast asset base growth must be completed. Asset base growth is calculated through consideration of the value of the asset class growing as result of new and upgrade projects, assets contributed through development, development contributions plans and indexation, as well as subtracting any known asset disposals.

It is forecast that across the planning period the asset base will grow by $21M.

Recommended financial investment for the Renewal Level of Service and Maintenance and Operations Level of Service is calculated at $31M and $81M respectively. These have been calculated through aligning renewals with annual depreciation, and ensuring maintenance and operational budgets increase in step with asset base growth.

The Long-Term Financial Plan is unfortunately not able to accommodate the entirety of this desired financial investment, largely as result of asset base growth exceeding the Council rate peg.

This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure requirements. Future iterations of the Asset Management Plan will further investigate and identify potential solutions to this difficult situation.

Asset management is a journey of continuous improvement, and so the AMP concludes with a concise Improvement Plan detailing the asset management maturity tasks programmed for the years ahead.

2 Asset Systems & Structures

2.1 Asset Planning Framework

The Asset Management Planning Framework, as summarised Figure 1, integrates into the wider IP&R Framework and ensures Council performs the Asset Management functions of planning, coordinating, controlling, executing, monitoring and improving the activities associated with managing its assets.

In accordance with the Integrated Planning & Reporting (IP&R) Framework, which all NSW Local Governments are subject to, Council is required to prepare a suite of strategic documents – one being the Resourcing Strategy. It is through the Resourcing Strategy that the Asset Management Framework of Council is defined and endorsed.

The Asset Management Framework has three primary components:

1. Asset Management (AM) Policy defines Council's Asset Management objectives.
2. Asset Management Strategy (AMS): also known as a Strategic Asset Management Plan (SAMP), shows how Council will achieve the objectives of the AM Policy. It is a road map for the delivery of these asset management objectives in accordance with the principles set in the AM Policy. It is to be continually monitored and regularly reviewed, in alignment with the formulation of the Long-Term Financial Plan (LTFP) and the Delivery Program & Operational Plans adopted annually by Council.
3. Asset Management Plans (AMP): further explores the high-level summary contained in the AMS with a detailed analysis of inventory, risk, levels of service and sustainability undertaken. AMPS area developed for all major infrastructure asset classes, grouped by the type of function the assets serve – i.e., community assets or a specific business unit.
    a. Community assets
        i. Transport
        ii. Stormwater
        iii. Buildings and Aquatics
        iv. Open Space and Recreation
        v. Water
        vi. Wastewater
    b. Business units
        i. Cemeteries
        ii. Resource Recovery Centre
        iii. Southern Regional Livestock Exchange

The AMPs are continually reviewed, to ensure long-term sustainability of the Council services they support. They are informed by community consultation and will be used as core inputs into the development of Council's Long Term Financial Plan.

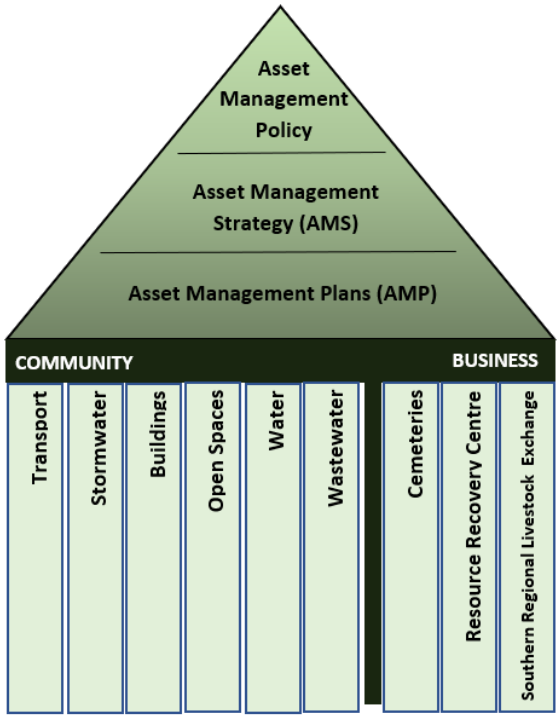


Figure 1: Asset management Planning Framework

2.2 Asset Planning Systems

Wingecarribee Shire Council utilises several databases and systems to deliver on asset planning requirements, specific to Park's assets. These databases and systems are summarised in *Table 1* below:

System	Description
Conquest	Asset register – inventory, condition & attributes
ArcGIS	Spatial data
Technology One – Finance	Budgeting, purchase orders, expenditure
Technology One – Enterprise Content Management (ECM)	Record keeping
Technology One – Customer Request Management (CRM)	Workflow management for customer requests
Pulse – Project Management	Scoping and project control for Capital Projects

Table 1: Asset Planning Systems

It is acknowledged that Council has embarked on a digital transformation journey, with Council executing a 10-year contract at the 19 October 2022 Council Meeting with Technology One. This contract will see all Technology One modules and additional options being made available to Council and being progressively implemented across the organisation. A 10-year roadmap for the implementation of the Technology One suite is currently being developed.

This will generate asset planning outcomes through modernisation and integration of the works management asset register and strategic asset modules. This will enable Council to model asset conditions that will result from 10 year funding scenarios, which will in turn enable data driven decision-making to achieve financial sustainability.

2.3 Organisational Structure

Wingecarribee Shire Council has adopted a centralised approach to Asset Planning with all asset management and network planning functions being consolidated within the Service and Project Delivery directorate. Management of operations and maintenance, as well as capital project delivery, are primarily distributed across the teams of Shire Presentation and Project Delivery.

The below figures detail the structure of these teams within the Service & Project Delivery Directorate, the Assets Team, as well as that of the Parks and Buildings Team.

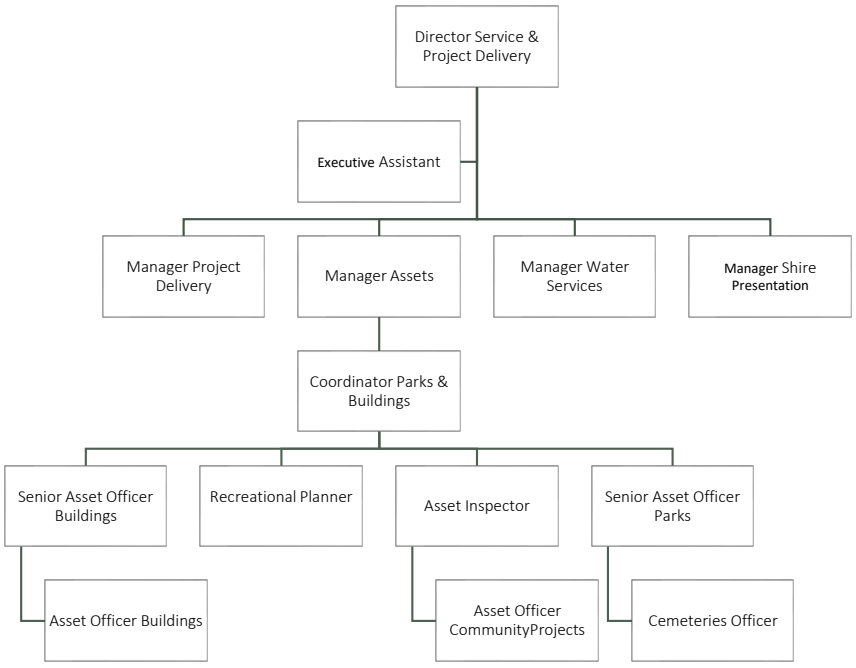


Figure 2 - Organisational Structure

3 Our Assets

3.1 Asset Class Inventory

Council's Open Spaces portfolio features a diverse range of infrastructure across several different land types.

The land can be consolidated into four main categories, with the following table providing a summary:

Land Type	Number of Sites	Total Area (h)
Community Parks	77	92
Sports Parks	30	101
Linear Parks	22	127
Bushland Reserves	35	2,737
TOTAL	164	3,057

Table 2 - Land Type Summary

Across this 3,057 hectares of land, over 1500 assets are provided with a combined value of over $38M.

The following table provides a summary of the asset categories within the Open Space Asset Class.

Asset Category	Number of Items	Replacement Value $
Park Furniture	379	3,379,830
Drainage Irrigation	51	1,168,808
Playspace Assets	63	2,734,375
Sport Facilities	141	12,173,837
Fitness Equipment	5	128,413
Sportsfield lighting	42	4,453,751
Fences Gates	317	3,373,895
Monuments	115	2,448,551
Ancillary Infrastructure	421	8,302,213
TOTAL	**1,531**	**38,163,672**

Table 3 - Asset Category Summary

Asset inventory in maintained and updated through three primary means:

- Recognition of constructed assets – both through Council delivered capital projects, but also assets dedicated to council through subdivision development.
- Ad-hoc Asset Inspections – inspections are regularly conducted in response to customer or internal requests, as well as part of project scoping phases.
- Scheduled Asset Inspections – all assets are to feature within a schedule of asset

inspections. The frequency of inspections would be commensurate to the rate of degradation of the asset, as well as consequence of failure and cost of inspection. The development of a comprehensive schedule of asset network inspections is identified as an Improvement in Section 8.

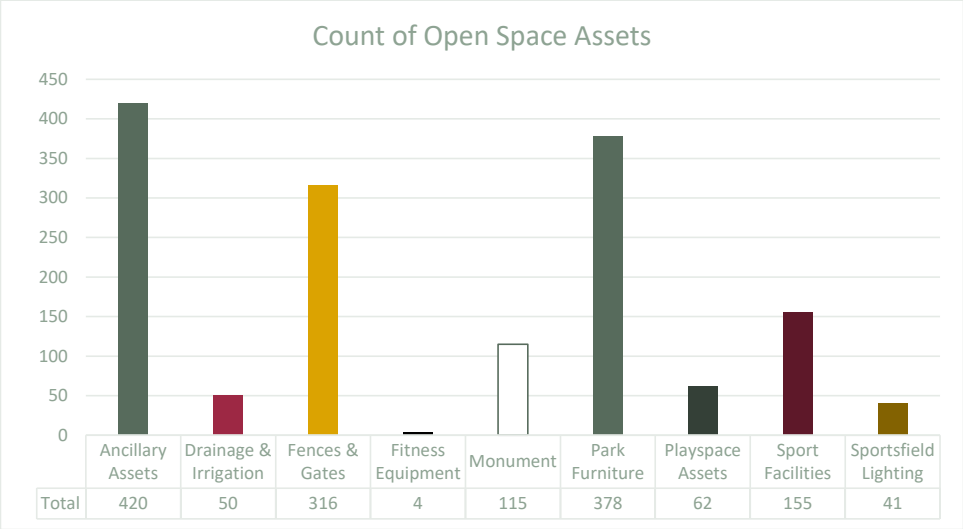


Figure 3 - Parks Assets by Count

Assets are valued in accordance with the detailed revaluations of asset classes and are undertaken in accordance with Australian Accounting Standards so a comprehensive revaluation of each asset class is undertaken at a minimum every five years. Outside of the comprehensive revaluation years, fair value assessments are to be undertaken on an annual basis for all asset classes. If the assessment identifies that a material change has occurred, the corresponding asset classes will indexed with an industry accepted indices.

A comprehensive valuation for open spaces was performed in the financial year 2020/21. Next valuation will fall on financial year 2025/26.

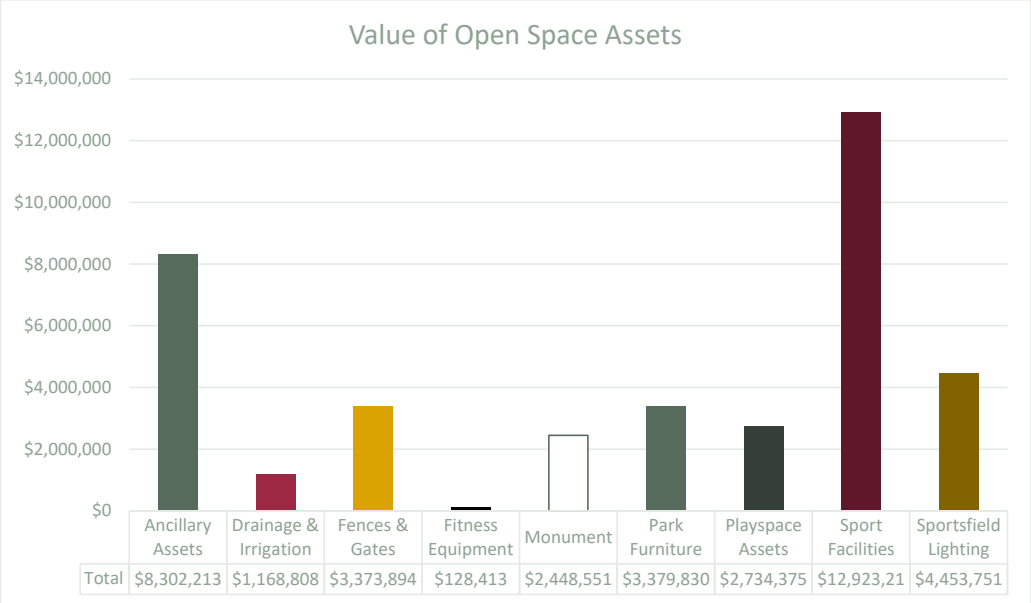


Figure 4 - Park Assets by Value

3.2 Asset Class Condition

Asset conditions are assessed as part of comprehensive network inspections, conducted on a rolling program. These assessments are undertaken in accordance with the relevant Practice Notes issued by the Institute of Public Works Engineering Australasia. The condition rating scale is 1-5:

1. As New / Excellent
2. Good / Satisfactory
3. Fair / Tolerable
4. Poor / Intolerable
5. Very Poor / Reconstruction Required

Asset condition by asset count and value is shown below in Figures 7 and 8. The average condition for each asset class is contained in Table 4.

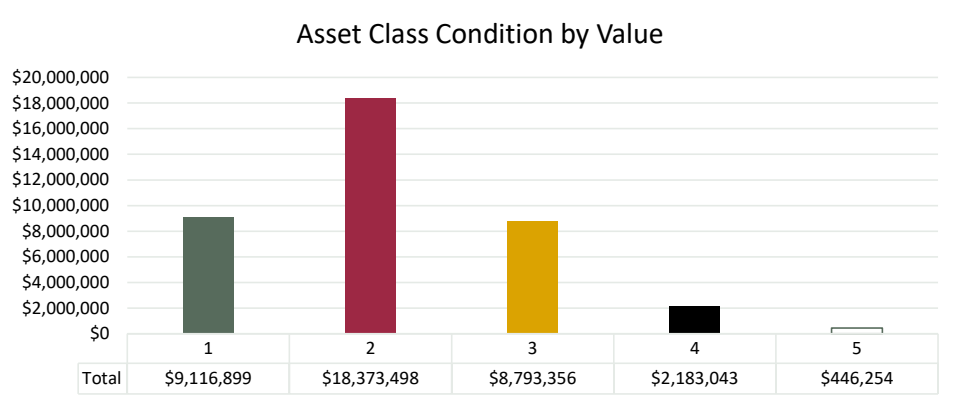
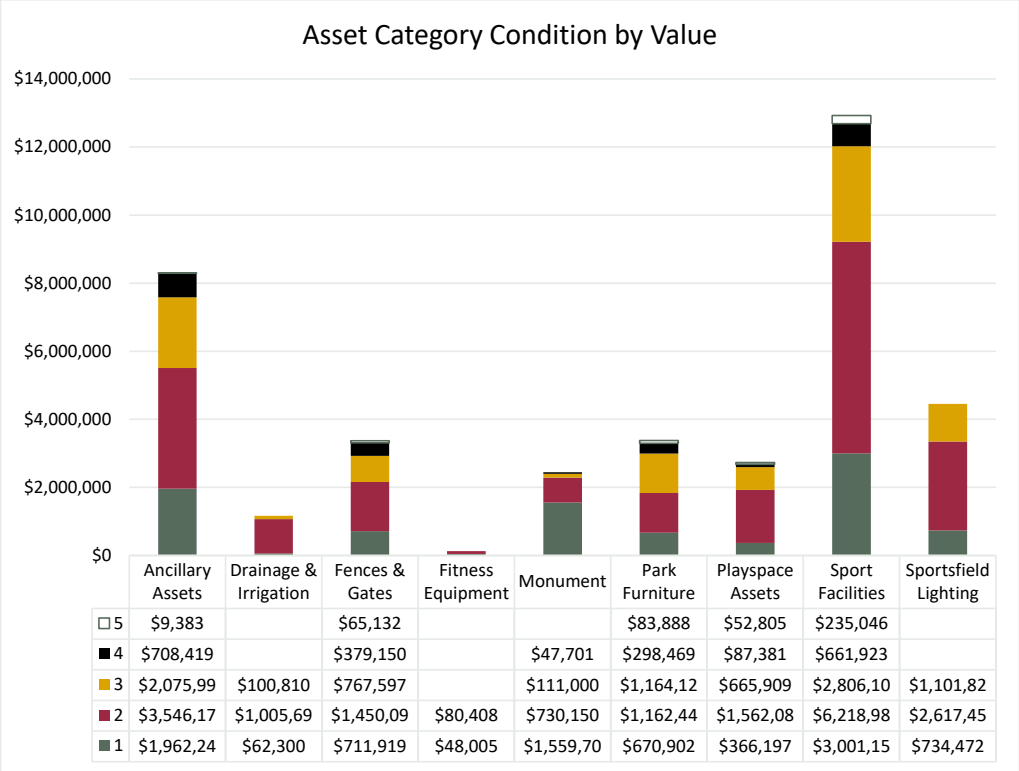


Figure 5 - Condition of Asset Class by Value



	Ancillary Assets	Drainage & Irrigation	Fences & Gates	Fitness Equipment	Monument	Park Furniture	Playspace Assets	Sport Facilities	Sportsfield Lighting
5	$9,383		$65,132			$83,888	$52,805	$235,046	
4	$708,419		$379,150		$47,701	$298,469	$87,381	$661,923	
3	$2,075,99	$100,810	$767,597		$111,000	$1,164,12	$665,909	$2,806,10	$1,101,82
2	$3,546,17	$1,005,69	$1,450,09	$80,408	$730,150	$1,162,44	$1,562,08	$6,218,98	$2,617,45
1	$1,962,24	$62,300	$711,919	$48,005	$1,559,70	$670,902	$366,197	$3,001,15	$734,472

Figure 6 - Asset Category condition by Value

The condition of Assets can be further understood by analysis of the overall condition of Park's assets and then subsequently by the sub-categorisation of the components into Park's groupings.

The overall average condition of Council's open spaces assets is good / satisfactory.

Average condition rating for building assets is 2.2

Asset Category	Average Condition by Count of Assets
Ancillary Assets	2.1
Drainage & Irrigation	1.9
Fences & Gates	2.4
Fitness Equipment	1.8
Monument	1.8
Park Furniture	2.3

Playspace Assets	2.4
Sport Facilities	2.4
Sportsfield Lighting	2.3
Total	**2.2**

Table 4 - Summary of Average Asset Condition

3.3 Asset Category Inventory

3.3.1 Sports Facilities

There are is a wide range of sports facilities within Council's open space network. The table below provides a summary of the facilities offered.

Sports Facilities	Suburb/ Village	No. of Fields
Soccer/Rugby Fields		
Jo Smith Playing Fields	Yerrinbool	2
Boronia Park	Hill Top	2
Mittagong Oval	Mittagong	1
Ironmines Oval	Mittagong	1
David Wood Playing Fields	Bowral	2
Stephens Park	Bowral	2
Eridge Park	Burradoo	2
Church Road	Moss Vale	2
Community Oval	Moss Vale	1
Hampden Park	Robertson	2
Exeter Oval	Exeter	1
Ferndale Oval	Bundanoon	2
Cricket		
Jo Smith Oval	Yerrinbool	1
Boronia Park	Hill Top	1
Welby Oval	Welby	1
Bradman Oval	Bowral	1
Brian Martin Oval	Bowral	1
Stephens Park	Bowral	2
Eridge Park	Burradoo	1
Lackey Park	Moss Vale	1
Tourist Road Oval	Glenquarry	1
Hampden Park	Robertson	1
Burrawang Oval	Burrawang	1
Bundanoon Oval	Bundanoon	1
Exeter Road	Exeter	1
Bill O'Reilly Oval	Wingello	1
Cricket Nets		
Boronia Park	Hill Top	3
Welby Oval	Welby	2
Bradman Oval	Bowral	4
Brian Martin Oval	Bowral	2

Stephens Park	Bowral	2
Lackey Park	Moss Vale	3
Hampton Park	Robertson	2
Exeter Road	Exeter	2
Bill O'Reilly Oval	Wingello	2
Athletics Field		
Eridge Park	Burradoo	1
Baseball		
Jurd Park	Colo Vale	1
Tennis Courts		
Mittagong Oval	Mittagong	2
Corlette Park	Moss Vale	5
Loseby Park	Bowral	8
Lake Alexandra	Mittagong	2
Burrawang Oval	Burrawang	2
Hampden Park	Robertson	3
Tourist Road Oval	Glenquarry	2
Penrose Park	Penrose	2
Jurd Park	Colo Vale	2
Bundanoon Oval	Bundanoon	3
Exeter Road	Exeter	2
Bill O'Reilly Oval	Wingello	2
Boronia Park	Hill Top	2
Netball Courts		
Eridge Park	Burradoo	6
David Woods Playing Fields	East Bowral	1
Bundanoon Oval	Bundanoon	1
Hockey		
Welby Heights	Welby	4
Burrawang Oval	Burrawang	1
Skate Parks		
Hampton Park	Robertson	1
Community Oval	Moss Vale	1
Loseby Park	Bowral	1
Bundanoon Oval	Bundanoon	1
Jo Smith Oval	Yerrinbool	1
Basketball Half-Courts		
Bundanoon Oval	Bundanoon	1
Casburn Park	Wingello	1
Hampden Park	Robertson	1
Loseby Park	Bowral	1
Jo Smith Oval	Yerrinbool	1

Remote Control Car Track		
Jo Smith Oval	Yerrinbool	1
Mountain Bike Parks		
Welby Trails	Welby	1
Cycling Velodrome		
Eridge Park	Burradoo	1
Horse/ Pony Clubs		
Berrima District Pony Club	Burradoo	1
Loop Line Pony Club	Colo Vale	1
Southern Villages Pony Club	Bundanoon	1
Wingello Pony Club	Wingello	
Bundanoon Carraige Club	Bundanoon	1
Croquet/ Boulles		
Exeter Oval	Exeter	1
Berrima Marketplace	Berrima	1
Off Leash Dog Parks		
Seymour Park	Moss Vale	1
Centennial Park	Bowral	1
Alexandra Square Park	Mittagong	1
Jordans Crossing	Bundanoon	1

Table 5 - Summary of Sports, Locations & Associated Fields

3.3.2 Recreational Walking Tracks

The Open Spaces asset class also includes the portfolio of walking tracks as identified within the recreational walking tracks strategy.

This details 28 walking tracks across 11 reserves for a total trail length of 64km.

Reserve	Number of Trails	Total Trail Length (km)
Berrima Weir Reserve	1	1.4
Bong Bong Common (Link to Cecil Hoskins Nature Reserve)	1	0.17
Gibbergunyah Reserve	3	6.2
Glow Worm Glen (Bundanoon Access)	2	1.2
Hammock Hill Reserve	2	2.15
Lake Alexandra Reserve	1	0.6
Mansfield Reserve	2	3.5
Mount Gibraltar Reserve	4	7.1
Mt Alexandra Reserve (primary access from Box Vale Trailhead)	3	20

Mt Alexandra Reserve (primary access from Lake Alexandra Trailhead)*	6	18.25
River Bend Reserve and Berrima River Reserve (Berrima)	2	2.7
Stone Quarry Walk Reserve (Berrima)	1	0.65
Grand Total	**28**	**63.92**

Table 6 - Summary of Recreational Walking Tracks

4 Drivers of Level of Service

Levels of Service (LoS) are comprised of four components: provision, renewal, maintenance, and operations, however, LoS is constrained by funding & resource availability. The fundamental drivers of LoS can be identified in three categories:

- Risk Management
- Community Satisfaction
- Strategies & Masterplans

4.1 Risk Management

Risk is the effect of uncertainty on Council's ability to achieve its objectives. Risk Management is the process of systematically identifying, monitoring, treating, and reporting these risks.

A Risk Assessment has been completed for the asset class, covering generic hazards that are typical across the entire asset network and consideration of Critical Assets.

4.1.1 Critical Assets

Critical assets are those that have a high consequence of failure in terms of community impact. By identifying critical assets and failure modes, an organisation can ensure that condition inspection programs, maintenance and capital expenditure plans are targeted to ensure that the risk of critical asset failure is minimised.

There are no critical assets within the Open Spaces asset class.

4.2 Risk Assessment Framework

Risk (R) Matrix		**Consequence (C)**				
		Severe	**Major**	**Moderate**	**Minor**	**Insignificant**
Likelihood (L)	**Almost Certain**	Extreme	Extreme	High	High	Moderate
	Likely	Extreme	Extreme	High	Moderate	Moderate
	Possible	Extreme	High	Moderate	Moderate	Low
	Unlikely	High	High	Moderate	Low	Insignificant
	Rare	High	Moderate	Low	Insignificant	Insignificant

Table 7 - Risk Assessment Matrix

Risk	Hazard	Inherent Risk			Treatment	Residual Risk			Implementation Status	Responsibility	Level of Service
		C	L	R		C	L	R			
Personal injury	Deteriorated open space assets	MAJ	POS	H	Renew assets in accordance with designated useful life	MIN	POS	M	Current	Assets	Renewal
					Complete open space inspections at regular intervals				Future	Assets	Operations
					Reactive maintenance of open space assets through CRM system.				Current	Shire Presentation	Operations
Personal injury	Compliance with statutory requirements	MAJ	POS	H	Inspection of playspaces in accordance with statutory requirements	MIN	POS	M	Current	Shire Presentation	Operations
Personal injury	Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources)	MOD	LIK	H	Ensure maintenance budgets increase with asset base growth	MOD	LIK	H	Future	Assets	Operations
Personal injury	Anti-social behaviour within parks and sportsfields	MOD	LIK	H	Ensure asset renewals and upgrade deliver passive surveillance and crime prevention through design outcomes.	MOD	LIK	H	Current	Assets	Provision, Renewal
Poor results as result of non-evidence based decision making	Poor quality asset inventory and performance data	MOD	LIK	H	Adopt approach of continuous improvement, with progressive implementation of Improvement Program (see Section 8)	INS	POS	L	Current	Assets	Operations
Inability for community to utilise ovals	Parks & sportsfields not functional from overgrown grass	MOD	LIK	H	Sportsfield mowing to be completed in accordance with mowing schedule	MIN	POS	M	Current	Shire Presentation	Operations
Personal Injury	Bushfires	MOD	LIK	H	Implement bushfire closure policy	MIN	POS	M	Current	Assets	Operations
					Ensure APZ are maintained				Current	Environment & Sustainability	Operations

Figure 7 - Risk Assessment

4.3 Community Satisfaction

Council's community satisfaction survey is undertaken biannually and tracks Council's performance in service delivery, identifies priority areas and evaluates community attitudes towards customer services, communication, and Council as an organisation.

The objectives of the community satisfaction survey process are to:

- Measure the importance of, and satisfaction with, services and facilities provided by Council
- Compare levels of satisfaction for Council's services and facilities with similar councils
- Assist Council in identifying service priorities for the community
- Evaluate Council's customer services and communication

The survey covers facilities and services provided by Council identifying both importance and satisfaction on a 5-point scale, with 1 = low and 5 = high.

The most recent community survey was conducted in 2022, with the results of the prior years also provided for comparison. The following table contains the items relevant to this asset management plan.

Council Service	Importance			Satisfaction			2022 Performance Gap
	2019	2021	2022	2019	2021	2022	
Provision and maintenance of local parks and gardens	4.21	4.35	4.15	3.46	3.39	3.31	17%
Provision and maintenance of playgrounds	4.23	4.24	3.98	3.52	3.43	3.15	17%
Provision and maintenance of sporting facilities	4.13	4.24	3.79	3.52	3.52	3.32	9%
Cycle paths and walking tracks	4.14	4.28	4.00	3.11	3.20	3.26	15%

Table 8 - Community Satisfaction Survey

In the table above, the 2022 Performance Gap is the difference between community importance and community satisfaction.

Trends that can be seen over the last few years is that, with the exception of cycle paths and walking tracks, community satisfaction for parks, playgrounds and sporting facilities has been in consistent decline.

It is evident that there is a community desire for an increased Council performance in the provision and maintenance across all areas of open space assets.

Resultant actions will be further explored in Chapter 5 Levels of Service.

4.4 Strategies & Masterplans

The third driver of Levels of Service can be broadly grouped as Strategies and Masterplans. Council prepares strategies and masterplans across all asset classes to ensure that network planning, implementation and maintenance is being conducted in a holistic, considered, and effective manner.

Each strategy and/or masterplan will directly inform one or more levels of service – be it by asset category or geographic location.

A list of strategies and masterplans that impact the levels of service for the Parks asset base of the Shire is provided in the table below.

Strategy/ Masterplan	Level of Service
Community & Recreation Facilities Strategy	Provision
2016 Parks Strategy	Provision
2020 Playspace Strategy	Provision and Renewal
2020 Recreational Walking Tracks Strategy	Provision and Renewal
Masterplans	Provision
Plans of Management	Provision

Table 9 - Summary of Masterplans and Strategies

5 Levels of Service

Levels of Service (LoS) are comprised of three components: provision, renewal, and maintenance & operations.

5.1 Provision

The provision LoS relates to what Council provides, how much and where. Council's current provision is that 164 parks and reserves, worth a combined $38M are managed for the community.

The Provision LoS is not consistent across the Shire as subdivisions & development are completed in accordance with the standards of the time – and these standards change with time. The Provision LoS for new subdivisions & development is therefore that which is stipulated in the documents which govern it, namely Council's:

- Local Environmental Plan
- Development Control Plan
- Engineering design and Construction Specifications
- Developer Contribution & Servicing Plans

That withstanding, due to the Level of Service Drivers described in Section 4, Council must be striving for progressive implementation of a consistent Provision Level of Service across the Shire. This is a difficult and expensive endeavour and so is primarily led by the implementation of the strategies and masterplans detailed in Section 4.4.

It is, however, recognised that as per the results from the 2022 community satisfaction survey, the community is generally not satisfied with Council's provision of open assets across the Shire.

Several significant capital projects have been completed, or are in progress, since the community satisfaction survey and so it is anticipated that this will see an uplift in community satisfaction. These projects are:

- Bong Bong Common Upgrade Project – delivery of new playspace and amenities, supported by 500m shared path loop. And upgrade of existing Burradoo Cycleway to include river link viewing platforms.

- Casburn Park Upgrade – significant upgrade of park to include village green, large playspace catering for all ages and sealed BMX pump track. Provision of pump tracks across the Shire was recognised as one the needs for the Shire. This will be the first facility of this type provided in the Wingecarribee.

- David Woods Playspace - delivery of a new playspace, supported by local philanthropy group The 4k. This facility will cater for all ages and provide a central adventure playspace, as well as learn to ride, ninja warrior and BMX pump track attractions.

It is funding availability that is the primary constraint on the provision of additional open space assets. Council own source revenue must first be allocated to asset renewal in order to maintain pace with the deterioration of the existing asset network. Provision of new assets is therefore heavily reliant on the receipt of grant funding opportunities.

Developer contributions also provides a funding option for new assets, however the current Open Spaces Contributions plan is quite restrictive and provides limited opportunity. However an upcoming revision of this document will enable the $8M in restricted funds to

be utilised to deliver further open spaces outcomes – which will in turn see a further uplift in community satisfaction.

5.2 Renewal

The Renewal LoS defines how often Council intends to replace existing assets with a Modern Engineering Equivalent Replacement Asset (MEERA), including disposal of the existing asset.

This renewal frequency is termed 'useful life' and adjusting this value has significant implications for annual depreciation, with asset use being a direct factor in its calculation. Annual investment in the capital renewal of assets should ideally equate to the value of annual depreciation. Although asset degradation and failure will not follow a straight line across financial years, failure to maintain asset renewal at the rate of annual depreciation will result in an overwhelming volume of renewal works in later years.

Adjustments to asset useful life also has impacts on required maintenance and operations expenditures. Shorter useful lives generally result in less required maintenance, all other factors being equal and vice versa.

Asset Category	Asset Type	Useful Life in years
Fencing	Chain Wire Fence Timber Rail Fence & Gates Metal Fence General & Gates Steel Fence Pool Style – Standard Wire Agricultural Fence	25-30
Bridges	Timber Foot Bridge Concrete Bridge Steel Foot Bridge	30-100
Synthetic Surfaces	Velodrome Surface Synthetic Sports Surface	10
Sports Courts	Concrete Sports Slab Dugouts – Basic Goal Posts Clay Court Surface Tennis Umpire Chair Tennis Net Posts Modular Sports Tile Basketball/ netball hoops	10-80
Retaining Wall	Stone blocks (manufactured &/or natural) Brick Retaining Wal &/or Edging Retaining Wall - Concrete (cast-in-situ) Retaining Wall – Timber	20-30
Lighting	Sportsfield Lighting Ovals	25
Furniture	BBQ's – Standard & High Quality Basketball Ring w Backboard Bike Rack Bin - Basic Bubblers - High Quality Fitness Equipment - Standard	20
	Fountain – Ornate	50

	Flagpole	40
Irrigation	Irrigation System Weather Station Irrigation Systems (Pipes, Sprinklers)	10-25
Playspace	Playground Equipment Plastic/Rubber Edging	20-25
	Softfall Material	10
Picnic/ Seating	Picnic Shelter Picnic Table & Chair Set Grandstand Seating	25
	Decking	25
	Hand Rail - Metal	40
Signage	Signage Valuation - Interpretive/Info Panel Scoreboards Signage Valuation - Timber Park Name	10-25
Other	Sandstone Blocks - Decorative	250
	Dog Waste Bag Dispenser	5

Table 10 - Useful Lives

The intent is therefore that all open space assets will be renewed prior to exceeding their designated useful life.

However, renewal works will also be based on asset condition. When an asset is found to be of Condition 4 or 5 then it will be programmed for renewal with the capital works program.

5.3 Maintenance & Operations

Maintenance and operation activities are completed in both a proactive and reactive fashion across the asset network. Many operational activities by their nature are more readily able to be scheduled and completed in a timely & controlled way. Maintenance activities are more difficult to deliver in scheduled fashion, with mature systems and full resourcing required to do so.

Maintenance and operations level of service will be provided under two categories: inspections and maintenance.

5.3.1 Inspections

Inspections will be of two categories. Scheduled inspection and reactive inspection.

- Scheduled inspection

As part of the risk management of the asset network, all assets are to be inspected at a regular interval. The frequency of the inspection will be commensurate to the magnitude of the network as well as the assets rate of decay. The following condition inspection frequencies have been adopted for the following asset categories:

Inspection Schedule Item	Frequency
Comprehensive Open Spaces Valuation	Every five years

Asset Condition Assessment		Two years
Playspaces	Comprehensive Inspection	Annually
	Defect Inspection	Quarterly

Table 11 - Asset Inspection Schedule

An important aspect of the scheduled inspection program are the Quarterly Playspace inspections. This inspection regime is completed by Shire Presentation and supported by standard documentation that ensures a consistent and comprehensive approach to managing our playspaces. A thorough checklist ensures that defects, damage, and safety issues are quickly noted and attended to, keeping playgrounds free of safety hazards for young children.

- Reactive inspection

Reactive inspections will be conducted as required in response to notification, or suspicion, of asset structural or performance failure. The reactive inspection will generally be an onsite visual inspection, however specialist consultants will engaged as required.

5.3.2 Maintenance

The annual maintenance and operations budget for the Open Space asset class is provided in the following table.

Asset Class	Annual Maintenance & Operations	
	$	as % of Asset Value
Open Spaces	$5,076,881	13%

Table 12 – Asset Class maintenance budget

This can be further broken down into the relevant subcategories of:

Asset Category / Service	2023/24 Maintenance & Operations Budget
Bushcare	$858,366
General Maintenance	$767,260
Outdoor Dining	$404,234
Park - Community - Service Level 1	$179,254
Park - Community - Service Level 2	$246,478
Park - Community - Service Level 3	$239,395
Park - Linear Park	$5,901
Park - Premier - Service Level 1	$197,305
Park - Premier - Service Level 2	$90,781
Park - Winifred West	$1,365
Sportsfields - General	$880,064
Sportsfields - Bradman Oval	$49,484
Sportsfields - Welby Heights	$10,000

Tree & Vegetation Management	$1,086,997
Tulip Time	$60,000

Table 13 - Maintenance and Operations Detailed Summary

Results from the recent community satisfaction survey show that the community is generally not satisfied with Council's maintenance performance across all asset categories of Open Spaces.

However, the difficulty faced is that maintenance and operations budgets are heavily constrained by both funding and resourcing availability. Although results of the recent community satisfaction survey indicate a performance gap in some areas, these constraints mean that solutions need to be found whilst maintaining existing budget levels.

Potential opportunities being investigated are a more strategic approach being adopted for maintenance, as well as programming & delivery of more effective capital renewal & upgrade projects.

To this end, there are several initiatives currently in progress:

- Shire Presentation has introduced QR codes in public spaces such as parks and sporting fields. QR codes are an easy way for the community to provide feedback. This initiative ensures suggestions may be considered, and issues can be rectified as quickly as possible.
- An approach of continuous improvement has been adopted for the scheduling of park and sportsfield mowing and landscaping. The aim is to see consistent improvement in scheduling whilst balances challenges such as staff shortages, budget restraints, and weather. Council is working hard to have in place productive processes that will enable the continued beautification of our floral parks, increase the useability of our sporting facilities, and ensure regular ground maintenance (mowing) of our vast parks and open spaces throughout the Shire.
- There is now scheduled fortnightly maintenance for mowing, trimming and blowing across the vast area of the Parks and Open Spaces portfolio. This 'small army' includes gardeners, horticulturalists and general labourers working to maintain the general upkeep of floral gardens, cycleways, playing fields, dog parks, as well as all parks and open spaces throughout the district.
- Tree Plotter asset system has now been adopted for the management of vegetation within the Shire. Data collection is in progress and, once complete, will enable the strategic management of our urban canopy. The ongoing collection of high-quality data will also help address the challenges to our urban trees from pests, diseases, climate-change, and development and help lead the way in which our urban tree management policy and strategy will be shaped.

6 Asset Base Growth

Council's asset base will expand over the next 10 years through committed and expected new & upgrade expenditure, assets contributed by development through conditions of consent, and the Developer Contributions & Servicing Plans. This growth can be decreased through asset disposals; however, no significant disposals are currently committed.

In this analysis, all future asset values, as well as planned and recommended expenditures, assume indexation rate of 3.0% per annum.

6.1 New & Upgraded Assets

The new and upgrade asset projects category covers those projects resourced by Council or grant funding, but excluding Development Contributions, that involve existing assets being enhanced or new assets being constructed.

This expenditure is partly derived from grant funded projects, however with grant funding only being reflected in Council's budget upon notification of success, grant funding does not impact the asset base growth calculation at this stage.

The table below summarises the new or upgrade projects that Council is known to be delivering within the 10 year window of this AMP. These projects are being funded by Council through the General Fund and grant funding.

Financial Year	Project Name	Value
2023/24	Jordan Crossing Dog Park	$125,000
2023/24	Balmoral Reserve Upgrade	$225,000
2023/24	Bong Bong Common Upgrade	$4,700,000
2023/24	Casburn Park Upgrade	$2,500,000
2024/25	Colo Vale Railway Park Upgrade	$327,000
2024/25	David Wood Playspace	$1,500,000

Table 14 - New & Upgrade Assets

6.2 Assets Contributed by Development through Conditions of Consent

As development occurs, particularly within the new living areas identified within the Wingecarribee Local Housing Strategy, it is intended that infrastructure be provided at a rate consistent with the Provision LoS in existing parts of the Wingecarribee Local Government Area.

With the Wingecarribee Local Housing Strategy setting an objective of a 50:50 split of infill and greenfield development, it is therefore forecast that only 50% of the annual population growth will result in asset base growth.

Reviewing the rate of contributed assets across 2021/22 and 2022/23, it is observed that the value of contributed assets is equivalent to 30% of this forecast population growth from greenfield development. Which is understood to be the result of assets contributed through this method generally being of a non-major nature. (e.g. sewer pipelines will be contributed through a development, but not another sewage treatment plant).

Financial Year	Population	Population Growth (from previous year)	Forecast Asset Base Growth
2023/24	53,615	1.1%	0.16%
2024/25	54,196	1.1%	0.16%
2025/26	54,776	1.1%	0.16%
2026/27	55,357	1.1%	0.16%
2027/28	55,975	1.1%	0.17%
2028/29	56,593	1.1%	0.17%
2029/30	57,212	1.1%	0.16%
2030/31	57,830	1.1%	0.16%
2031/32	58,448	1.1%	0.16%
2032/33	59,138	1.2%	0.18%

Table 15 - Forecast.ID Population Growth

6.3 Developer Contributions and Servicing Strategies

An important funding source for new infrastructure are Development Contributions collected under Section 7.11 and 7.12 of the Environmental Planning and Assessment Act. These contributions fund a significant proportion, though not all, of the infrastructure required by new development.

Council currently primarily levies contributions through the following plan relating to buildings.

- Open Space, Recreation, Community & Cultural Facilities 2013 to 2036

It is acknowledged that the infrastructure program within the plan is due for revision, with it being currently uncertain whether contributions are being received in line with expected forecasts – as well as whether the magnitude of Council co-funding detailed within the Plan remains financially viable.

As of 30 June 2023, $8M is currently held in reserve for the delivery of infrastructure items detailed within this plan. However it is acknowledged that the infrastructure program within the plan is due for revision, with it being currently uncertain whether contributions are being received in line with expected forecasts – as well as whether the magnitude of Council co-funding detailed within the Plan remains financially viable.

Several strategic studies have been completed or are in progress which will inform future updates to the plans, some of these strategic studies being:

- Community & Recreation Facilities Strategy
- Recreational Walking Tracks Strategy
- Integrated Transport Study

Therefore, only projects that currently feature within the 2024/25 to 2028/29 Capital Works Program which are funded by developer contributions are to be included within this section.

There are no projects within the 2024/25 to 2028/29 Capital Works Program which are funded by developer contributions.

6.4 Asset Disposals

Asset disposals entail the removal of an existing asset without replacing it with a similar asset. No such disposals are considered in this AMP. This may be examined in future revisions when considering the results of community engagement.

6.5 Asset Indexation

Indexation rate of 3.0% p.a has been applied across the 10-year forecast period. This aligns with the indexation rate adoption in the LTFP. The same rate has been adopted in this AMS to ensure that lifecycle costs and associated budgets are comparable in future financial years.

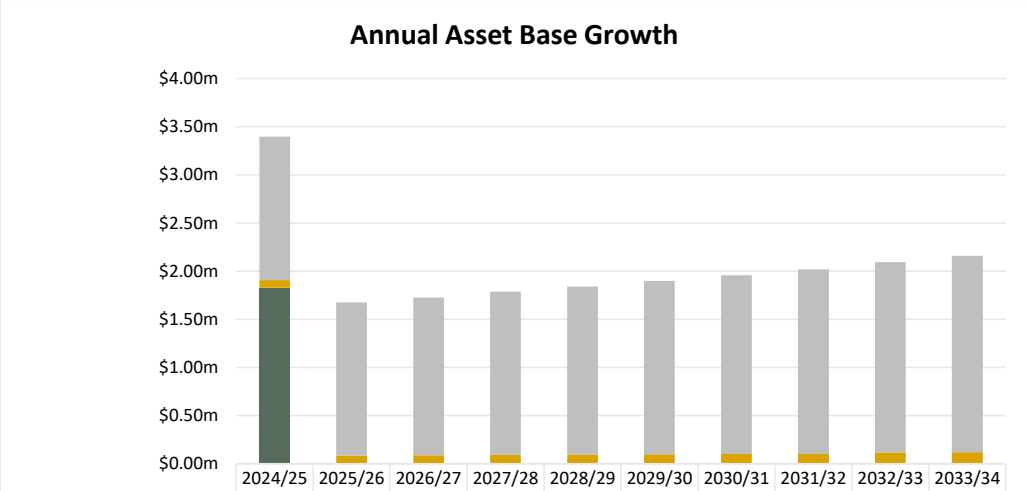
6.6 Asset Base Growth

Total asset base growth is comprised these components:

- Asset upgrades
- Assets contributed by development through conditions of consent
- Development Contributions
- Subtracting asset disposals
- Indexation

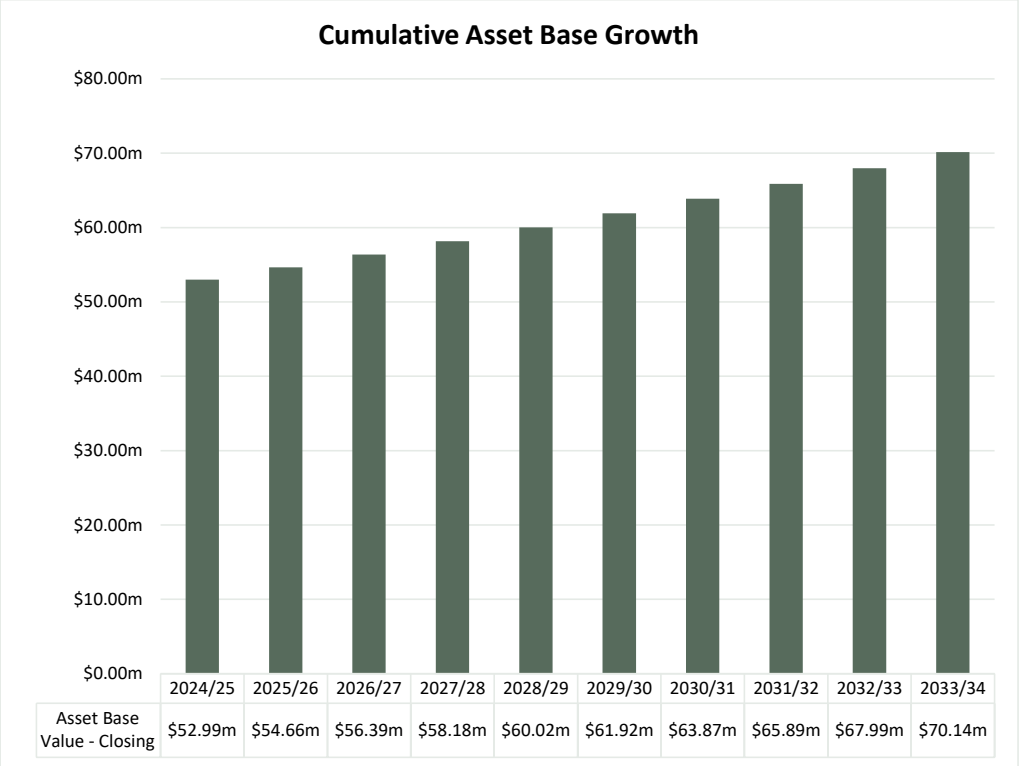
The following graphs illustrate the resultant annual and cumulative asset base growth.

Across the planning period of this AMP, it is forecast that the asset base will grow $21M.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Indexation	$1.49m	$1.59m	$1.64m	$1.69m	$1.75m	$1.80m	$1.86m	$1.92m	$1.98m	$2.04m
Disposals	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m
Conditions of Consent	$0.08m	$0.09m	$0.09m	$0.09m	$0.10m	$0.10m	$0.10m	$0.10m	$0.12m	$0.12m
Section 7.11 and 7.12	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m
New & Upgrades	$1.83m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m	$0.00m

Figure 8 - Annual Asset Base Growth



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Asset Base Value - Closing	$52.99m	$54.66m	$56.39m	$58.18m	$60.02m	$61.92m	$63.87m	$65.89m	$67.99m	$70.14m

Figure 9 - Cumulative Asset Base Growth

7 Financial Lifecycle Forecast

The Council assets described in Section 3, with the asset base growth forecast in Section 6, require resourcing across their lifecycle to achieve the LoS contained in Section 5.

The two main components are renewal expenditure, and maintenance and operations expenditure, which sum together to give the recommended overall expenditure on Council assets over the next 10 years.

7.1 Renewal Forecast

To ensure that satisfactory condition is maintained across the asset base and the Infrastructure Backlog Ratio benchmark is achieved, capital renewal works should be undertaken when assets reach the end of their useful lives. These capital renewal works involve disposing of the existing asset and constructing the MEERA.

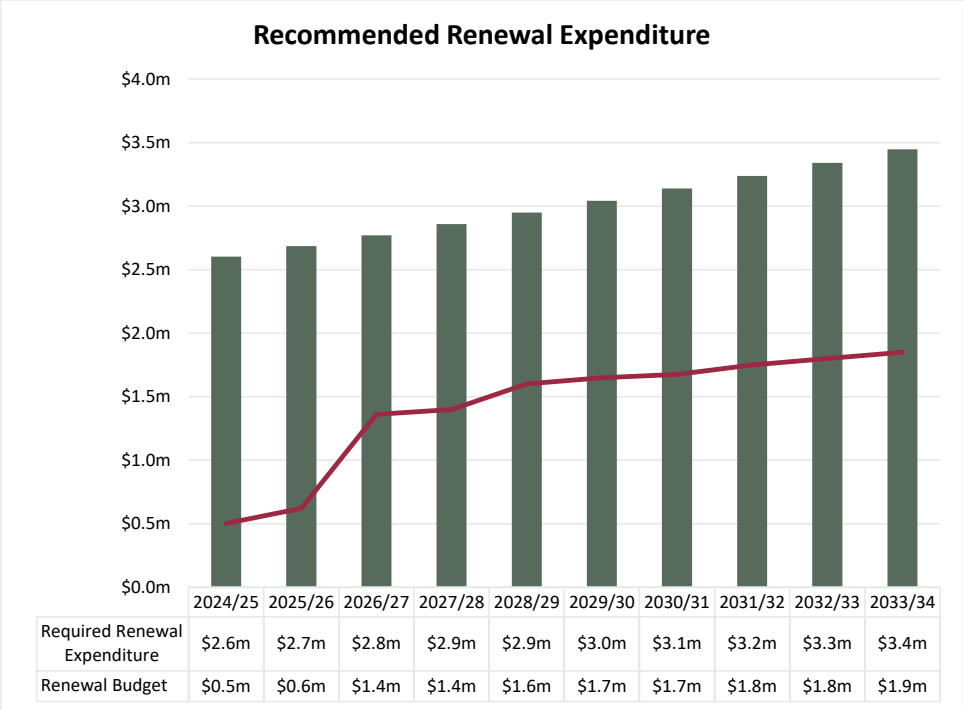
However, if the expiry of useful lives or asset conditions are solely relied upon to inform these recommended renewals, annual budgets fluctuate significantly, which creates difficulties from a resourcing perspective. Rather, it is better practice to average out the recommended renewal expenditure to reduce annual fluctuations. When future Delivery Programs are prepared, actual allocations to each asset class may vary depending upon the scale of individual projects.

The required renewal expenditure across the 10-year period is therefore forecast to be $31M. The Long Term Financial Plan is unfortunately not able to accommodate the entirety of this desired asset renewal budget. This is largely as result of asset base growth exceeding the Council rate peg.

Figure 9 shows the renewal budget featured in the Capital Works Program and Long Term Financial Plan, as well as the required renewal expenditure to align with asset depreciation. The Capital Works Program and Long Term Financial Plan currently can only accommodate $14.2M of open spaces asset renewal. This shortfall in asset renewal investment will result in a deterioration of asset condition and heighten future asset renewal investment requirements.

The comprehensive revaluation of the open spaces asset class in 2025/26 will provide an opportunity to review of asset useful lives and unit rates, ensure overly conservative figures have not been adopted.

Byond this, mitigation measures must be primarily based around seeking to diversify the revenue streams of Council, such that the limitations of the rate peg can be overcome, or reducing the overall asset base.



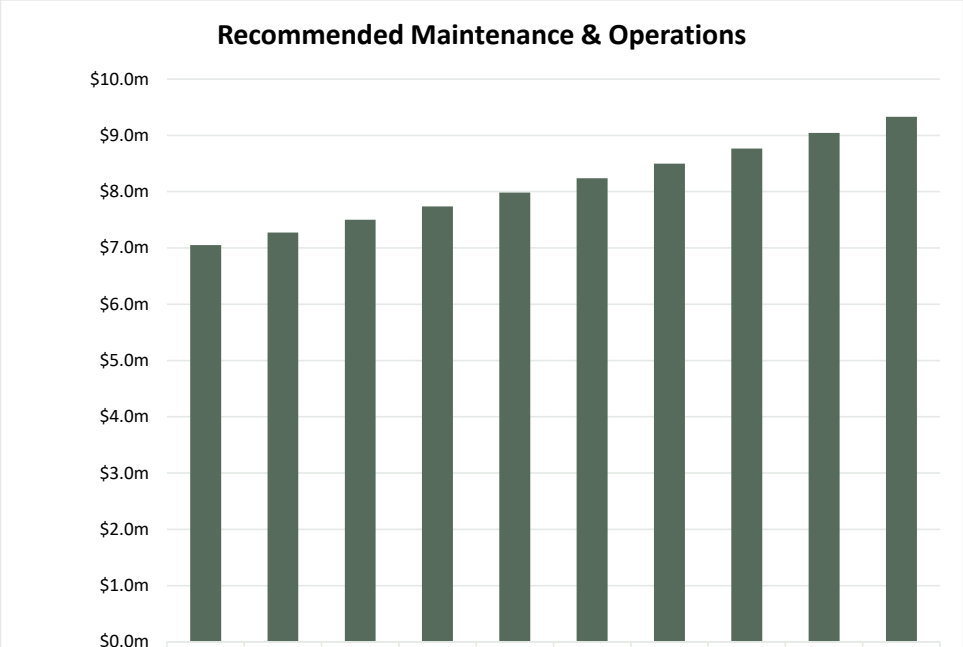
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Required Renewal Expenditure	$2.6m	$2.7m	$2.8m	$2.9m	$2.9m	$3.0m	$3.1m	$3.2m	$3.3m	$3.4m
Renewal Budget	$0.5m	$0.6m	$1.4m	$1.4m	$1.6m	$1.7m	$1.7m	$1.8m	$1.8m	$1.9m

Figure 10 - Required Renewal Expenditure

7.2 Maintenance & Operations Forecast

To sustain the current Maintenance and Operations Level of Service whilst accommodating a growing asset base, annual maintenance & operations budget increases are required. The required maintenance and operations expenditure across the 10 year period is therefore forecast to be $81M.

The Long Term Financial Plan is unfortunately not able to accommodate the entirety of this desired maintenance and operations budget. This is largely as result of asset base growth exceeding the Council rate peg. This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure requirements.



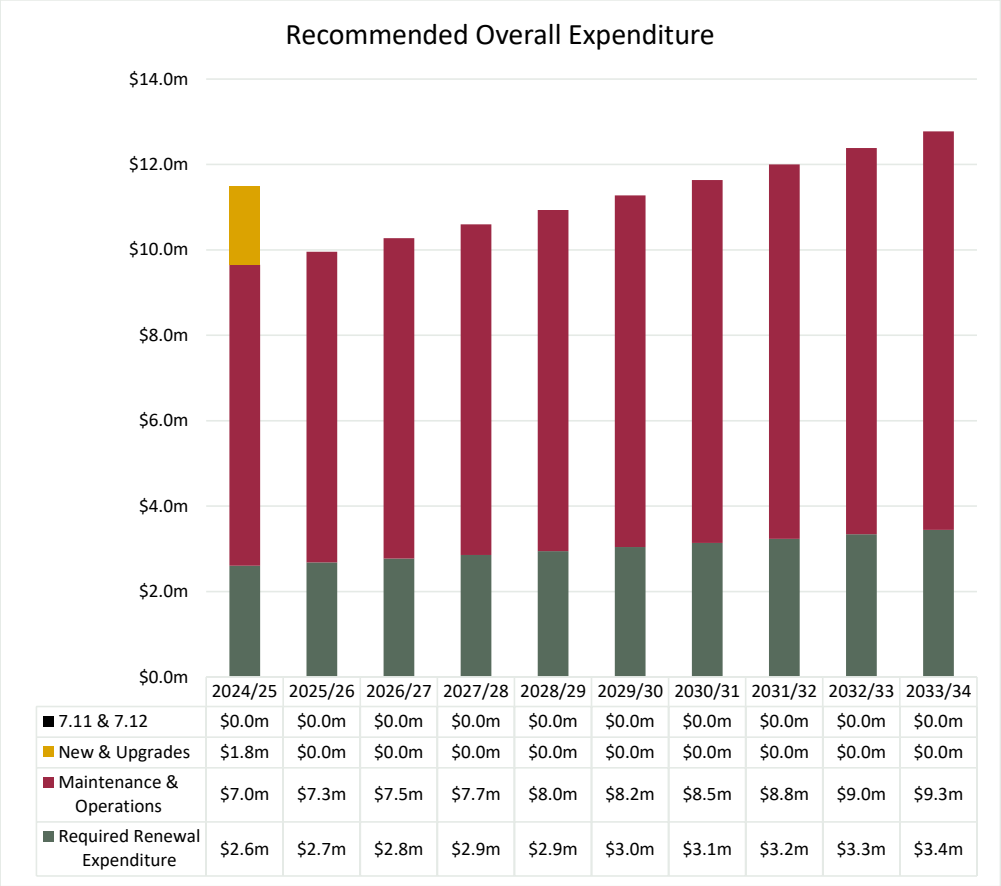
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Maintenance & Operations	$7.0m	$7.3m	$7.5m	$7.7m	$8.0m	$8.2m	$8.5m	$8.8m	$9.0m	$9.3m

Figure 11 - Required Maintenance & Operations Expenditure

7.3 Overall Forecast

The recommended overall expenditure is a combination of the new, upgrades & developer contributions from Section 6 and the recommended renewal, maintenance & operations expenditure from Section 7. Resulting in an overall recommended expenditure of $113.3M over 10 years as depicted in Figure below.

It is however acknowledged that the full extent of this recommended expenditure cannot be accommodated within the Long Term Financial Plan. Future iterations of the Asset Management Plan will further investigate and identify potential solutions.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
7.11 & 7.12	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
New & Upgrades	$1.8m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
Maintenance & Operations	$7.0m	$7.3m	$7.5m	$7.7m	$8.0m	$8.2m	$8.5m	$8.8m	$9.0m	$9.3m
Required Renewal Expenditure	$2.6m	$2.7m	$2.8m	$2.9m	$2.9m	$3.0m	$3.1m	$3.2m	$3.3m	$3.4m

Figure 12 - Recommended Overall Expenditure

8 Improvement Plan

Asset Planning is a journey of continuous improvement with there always being opportunities to further improve the accuracy of asset data, better understand community needs & expectations and more efficiently meet the service needs of the Shire.

To this end, an Asset Management Improvement Plan has been prepared to guide this journey of continuous improvement.

The below items are specific improvements that can be made to this document as well as the asset management maturity of Council.

Ranking	Improvement	Responsibility	Timeline
1	Update Parks Strategy (also revise naming to Parks Plan)	Assets	2024/25
2	Update Playspace Strategy (also revise naming to Playspace Plan)	Assets	2024/25
3	Complete audit of Sportsfield lighting and prepare Sportsfield Lighting Plan	Assets	2024/25
4	Prepare Masterplan for Lackey Park	Assets	2024/25
5	Prepare Masterplan for Hampton Park	Assets	2024/25
6	Prepare Masterplan for Bundanoon Oval	Assets	2024/25
7	Prepare Masterplan for Welby Mountain Bike Facility	Assets	2025/26
8	Prepare Masterplan for Loseby Park	Assets	2025/26
9	Prepare Masterplan for Eridge Park	Assets	2025/26
10	Prepare Masterplan for Yerrinbool Oval	Assets	2025/26
11	Prepare Masterplan for Mittagong Oval Precinct	Assets	2026/27
12	Prepare Masterplan for Community Oval	Assets	2026/27
13	Prepare Masterplan for Welby Heights Oval	Assets	2027/28
14	Prepare Masterplan for Bill O'Reilly Oval	Assets	2027/28

Table 16 - Asset Management Improvement Plan

Wingecarribee
SHIRE COUNCIL

Asset Management Plan – Buildings

We're with you

WINGECARRIBEE SHIRE COUNCIL

Document Name	Asset Management Plan - Buildings
Version No.	1
Council File Reference	[Insert departmental file number, generally the relevant electronic records management system subject reference]
Adoption Date	[Governance to insert]
Resolution Number	[Governance to insert]
Document Owner	Manager Assets
Responsible Branch	Assets
Responsible Business Unit	Assets Parks and Buildings
Review Schedule	Annually
Review Date	[Governance to insert]

Version	Adoption Date	Notes
1	TBC	First version of Asset Management Plan - Buildings

Table of Contents

1 Executive Summary

This Asset Management Plan (AMP) is part of a suite of Portfolio AMPs, which together sit under the Asset Management Strategy (AMS). It is to be read in conjunction with the AMS and Four Year Capital Works Program.

This AMP provides an overarching document of Council's management of, and investment in, the Buildings Asset Class over a 10-year planning period.

Council manages a buildings asset class of 325 structures across a broad range of asset categories, including aquatics, worth a combined $192M. The average condition of these structures is 2.1, which is defined as therefore being in 'good' condition.

The level of service that Council provides through this asset class can be described within the three categories of: Provision, Renewal, and Maintenance and Operations. What Council delivers through these levels of service are driven by consideration of: Risk Management, Community Satisfaction and Strategies and Masterplans. But is constrained by funding and availability of resourcing.

Review of the 2022 Community Satisfaction Survey shows that the public is mostly satisfied with the provision and operation of libraries, community halls and swimming pools. But it is evident that there is a community desire for improved performance in the maintenance of public toilets and the protection of heritage buildings.

In accordance with these results, the Renewal Level of Service details how the Capital Works Program features investment in renewal of public toilets and refurbishment of heritage significant buildings.

In order to provide an analysis of financial investment required across the planning period, calculation of forecast asset base growth must be completed. Asset base growth is calculated through consideration of the value of the asset class growing as result of new and upgrade projects, assets contributed through development, development contributions plans and indexation, as well as subtracting any known asset disposals.

It is forecast that across the planning period the asset base will grow by $77M.

Recommended financial investment for the Renewal Level of Service and Maintenance and Operations Level of Service is calculated at $37M and $78M respectively. These have been calculated through aligning renewals with annual depreciation, and ensuring maintenance and operational budgets increase in step with asset base growth.

The Long-Term Financial Plan is unfortunately not able to accommodate the entirety of this desired financial investment, largely as result of asset base growth exceeding the Council rate peg.

This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure requirements. Future iterations of the Asset Management Plan will further investigate and identify potential solutions to this difficult situation.

Asset management is a journey of continuous improvement, and so the AMP concludes with a concise Improvement Plan detailing the asset management maturity tasks programmed for the years ahead.

2 Asset Systems and Structures

2.1 Asset Planning Framework

The Asset Management Planning Framework, as summarised Figure 1, integrates into the wider IP&R Framework and ensures Council performs the Asset Management functions of planning, coordinating, controlling, executing, monitoring and improving the activities associated with managing its assets.

In accordance with the Integrated Planning and Reporting (IP&R) Framework, which all NSW Local Governments are subject to, Council is required to prepare a suite of strategic documents – one being the Resourcing Strategy. It is through the Resourcing Strategy that the Asset Management Framework of Council is defined and endorsed.

The Asset Management Framework has three primary components:

1. Asset Management (AM) Policy defines Council's Asset Management objectives.
2. Asset Management Strategy (AMS): also known as a Strategic Asset Management Plan (SAMP), shows how Council will achieve the objectives of the AM Policy. It is a road map for the delivery of these asset management objectives in accordance with the principles set in the AM Policy. It is to be continually monitored and regularly reviewed, in alignment with the formulation of the Long-Term Financial Plan (LTFP) and the Delivery Program and Operational Plans adopted annually by Council.
3. Asset Management Plans (AMP): further explores the high-level summary contained in the AMS with a detailed analysis of inventory, risk, levels of service and sustainability undertaken. AMPs are developed for all major infrastructure asset classes, grouped by the type of function the assets serve – i.e., community assets or a specific business unit.
    a. Community assets
        i. Transport
        ii. Stormwater
        iii. Buildings and Aquatics
        iv. Open Space and Recreation
        v. Water
        vi. Wastewater
    b. Business units
        i. Cemeteries
        ii. Resource Recovery Centre
        iii. Southern Regional Livestock Exchange

The AMPs are continually reviewed, to ensure long-term sustainability of the Council services they support. They are informed by community consultation and will be used as core inputs into the development of Council's Long Term Financial Plan.

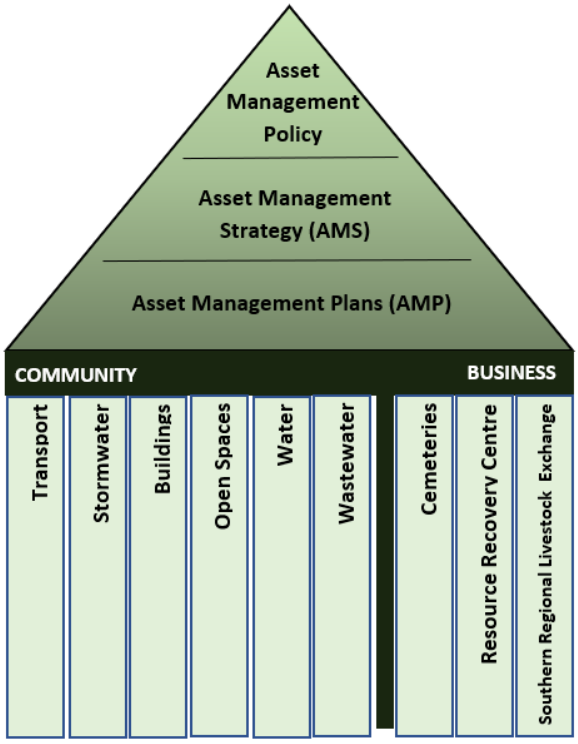


Figure 1: Asset management Planning Framework

2.2 Asset Planning Systems

Wingecarribee Shire Council utilises several databases and systems to deliver on asset planning requirements, specific to building assets. These databases and systems are summarised in Table 1 below:

System	Description
Conquest	Asset register – inventory, condition and attributes
ArcGIS	Spatial data
Technology One – Finance	Budgeting, purchase orders, expenditure
Technology One – Enterprise Content Management (ECM)	Record keeping
Technology One – Customer Request Management (CRM)	Workflow management for customer requests
Pulse – Project Management	Scoping and project control for Capital Projects

Table 1: Asset Planning Systems

It is however acknowledged that Council has embarked on a digital transformation journey, with Council executing a 10-year contract at the 19 October 2022 Council Meeting with Technology One. This contract will see all Technology One modules and additional options being made available to Council and them being progressively implemented across the organisation. A 10-year roadmap for the implementation of the Technology One suite is currently being developed.

This will generate asset planning outcomes through modernisation and integration of the works management asset register and strategic asset modules. This will enable Council to model asset conditions that will result from 10 year funding scenarios, which will in turn enable data driven decision-making to achieve financial sustainability.

2.3 Organisational Structure

Wingecarribee Shire Council has adopted a centralised approach to Asset Planning with all asset management and network planning functions being consolidated within the Assets Team. Management of operations and maintenance, as well as capital project delivery, are primarily distributed across the teams of Shire Presentation and Project Delivery.

However the provision of services through these assets is managed across the directorates of Council. The following table provides a summary of service managers across the organisation.

Service Manager	Asset / Facility
Manager Community Life and Libraries	Libraries
Manager Waste and Resource Recovery	Resource Recovery Centre
Manager Business and Property	Southern Regional Livestock Exchange
	Southern Highlands Visitor Information Centre
	Bowral Memorial Hall
Manager Water Services	Mittagong Works Depot
Manager Shire Presentation	Moss Vale Works Depot
	Aquatics

Table 2 - Service Managers

The below figures detail the structure of these teams within the Service and Project Delivery Directorate, the Assets Team, as well as that of the Parks and Buildings Team.

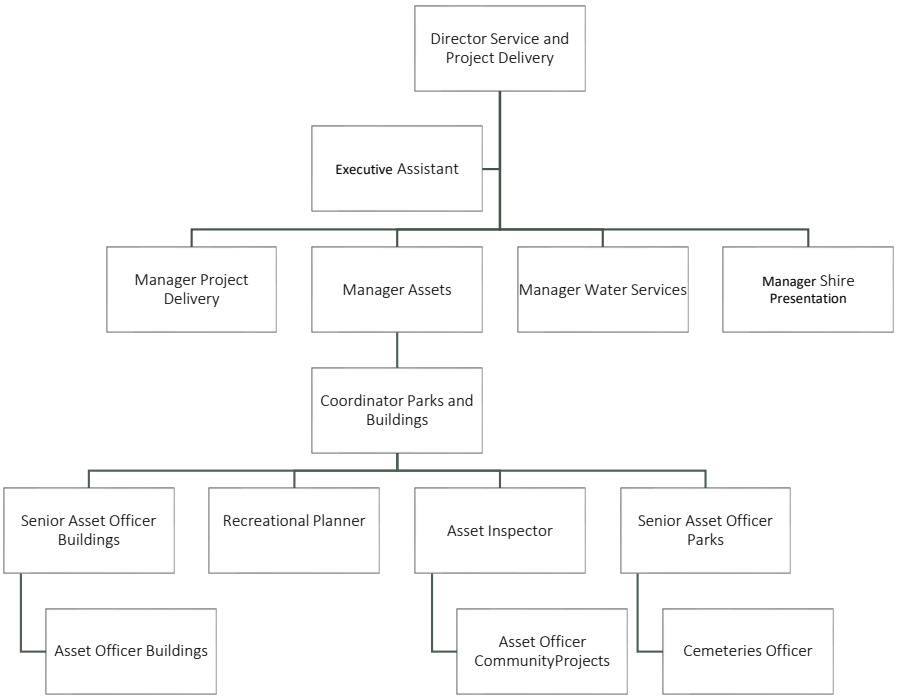


Figure 2 - Organisational Structure

These assets are utilised to deliver a broad range of functions or services to the community, many of which are managed by a nominated Service Manager. Service Managers are major stakeholders of assets related to their corresponding facility, and so the planning and delivery of these assets is done with extensive consultation and high collaboration.

3 Our Assets

3.1 Asset Class Inventory

Council manages a building asset register of 325 buildings covering a wide range facility types and purposes. The table below provides a summary of this building inventory:

Asset Category	Count of Structures	Replacement Value ($)
Administration, Operational Buildings	65	$ 44,544,971
Libraries*	2	$ 6,904,200
Community Buildings	33	$ 53,228,955
Commercial Buildings	32	$ 22,967,879
Childcare Buildings	19	$ 7,290,420
Emergency Buildings	32	$ 12,112,105
Public Toilets	33	$ 7,782,399
Sportfield Amenities and Clubrooms	45	$ 16,996,326
Sportfield and Parks Shelters	26	$ 1,153,458
Sportfield and Parks Storage Sheds	15	$ 880,931
Swimming Pools and Buildings	23	$ 18,019,005
TOTAL	**325**	**$ 191,880,649**

Table 3 - Asset Inventory Summary

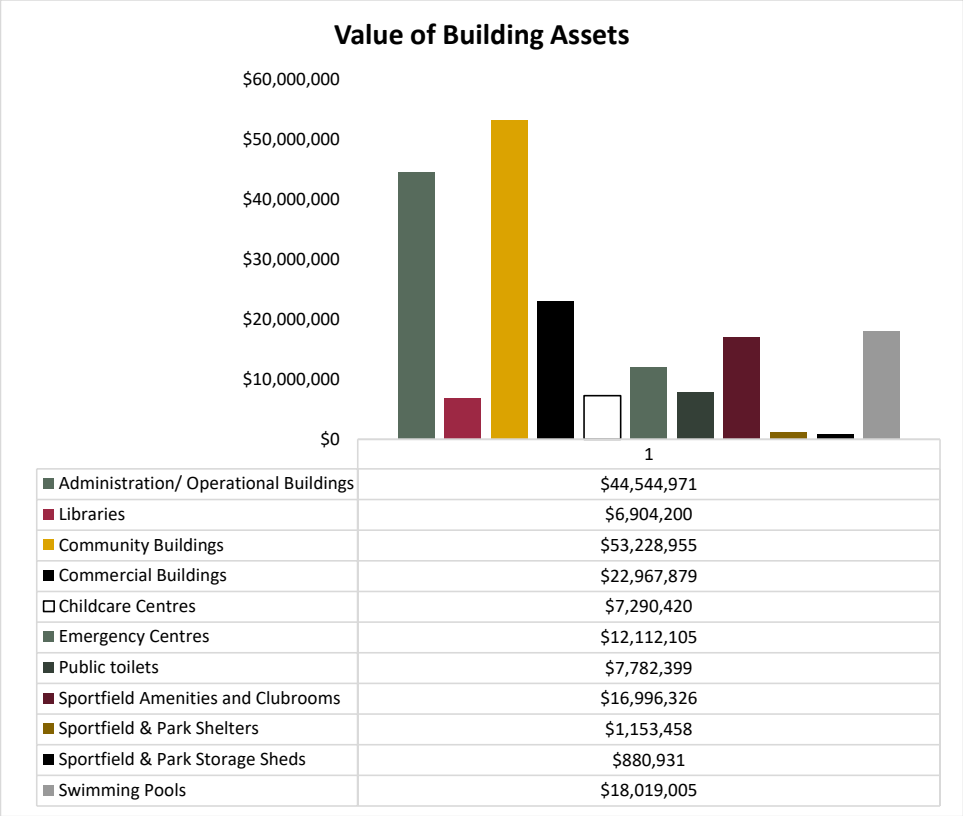
*Wingecarribee Shire has three libraries; Mittagong, Bowral and Moss Vale Library. Moss Vale library is located within the Civic Centre Building and therefore has not been counted as a separate building in the inventory. The value of the Moss Vale library is included in the overall value of the Civic Centre.

Several of these buildings are located on the same property and so these locations are considered 'centres'. As example:

- The 23 buildings of Asset Category 'Swimming Pools' are located across 4 swimming centres
- The 19 buildings of Asset Category 'Childcare Centres' are located across 6 childcare centres

The buildings asset register has a total value of $191.8M and can be further componentised into 2,246 building assets.

The following graphs provide a summary of asset category value.



Administration/ Operational Buildings	$44,544,971
Libraries	$6,904,200
Community Buildings	$53,228,955
Commercial Buildings	$22,967,879
Childcare Centres	$7,290,420
Emergency Centres	$12,112,105
Public toilets	$7,782,399
Sportfield Amenities and Clubrooms	$16,996,326
Sportfield & Park Shelters	$1,153,458
Sportfield & Park Storage Sheds	$880,931
Swimming Pools	$18,019,005

Figure 3 - Asset Category Value

Asset inventory in maintained and updated through three primary means:

- Recognition of constructed assets – both through Council delivered capital projects, but also assets dedicated to council through subdivision development.
- Ad-hoc Asset Inspections – inspections are regularly conducted in response to customer or internal requests, as well as part of project scoping phases.
- Scheduled Asset Inspections – all assets are to feature within a schedule of asset inspections.

Assets are valued in accordance with the detailed revaluations of asset classes and are undertaken in accordance with Australian Accounting Standards so a comprehensive revaluation of each asset class is undertaken at a minimum every five years. Outside of the comprehensive revaluation years, fair value assessments are to be undertaken on an annual basis for all asset classes. If the assessment identifies that a material change has occurred, the corresponding asset classes will indexed with an industry accepted indices.

A comprehensive valuation for buildings was performed in the financial year 2022/2023. Next valuation will fall on financial year 2027/2028.

3.2 Condition

Asset conditions are assessed as part of comprehensive network inspections, conducted on a rolling program. These assessments are undertaken in accordance with the relevant Practice Notes issued by the Institute of Public Works Engineering Australasia. The condition rating scale is 1-5:

1. As New / Excellent
2. Good / Satisfactory
3. Fair / Tolerable
4. Poor / Intolerable
5. Very Poor / Reconstruction Required

The overall condition of Buildings Asset is shown in figure 3. Asset condition by asset value are shown in Figure 4.

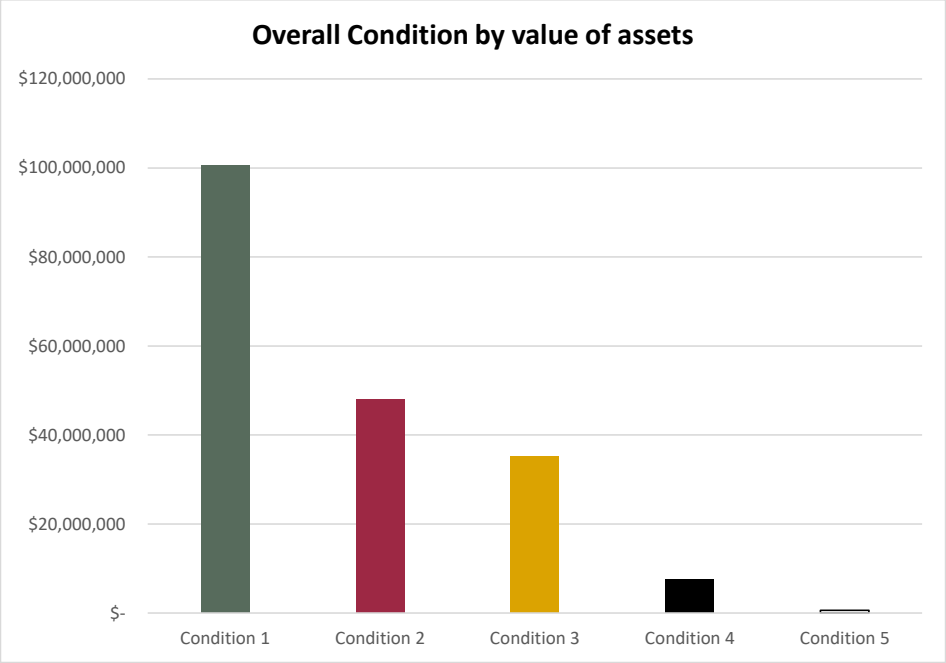
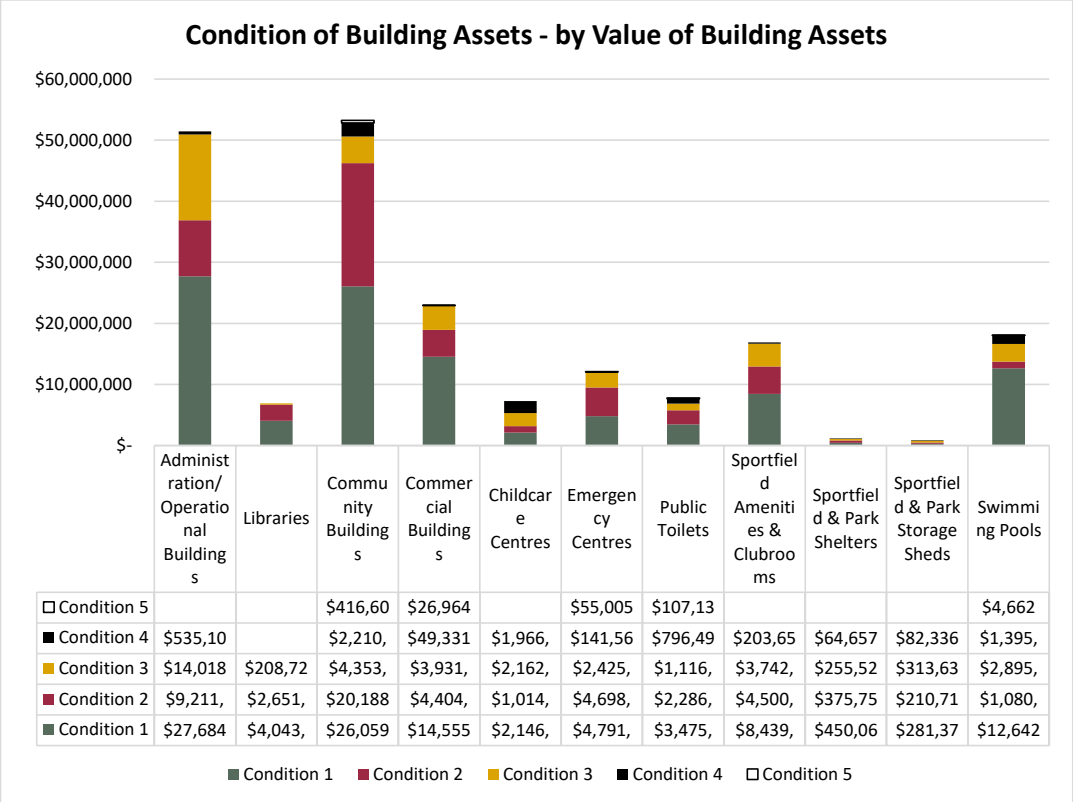


Figure 4- Asset Class Condition by Value



	Administration/ Operational Buildings	Libraries	Community Buildings	Commercial Buildings	Childcare Centres	Emergency Centres	Public Toilets	Sportfield Amenities & Clubrooms	Sportfield & Park Shelters	Sportfield & Park Storage Sheds	Swimming Pools
Condition 5			$416,60	$26,964		$55,005	$107,13				$4,662
Condition 4	$535,10		$2,210,	$49,331	$1,966,	$141,56	$796,49	$203,65	$64,657	$82,336	$1,395,
Condition 3	$14,018	$208,72	$4,353,	$3,931,	$2,162,	$2,425,	$1,116,	$3,742,	$255,52	$313,63	$2,895,
Condition 2	$9,211,	$2,651,	$20,188	$4,404,	$1,014,	$4,698,	$2,286,	$4,500,	$375,75	$210,71	$1,080,
Condition 1	$27,684	$4,043,	$26,059	$14,555	$2,146,	$4,791,	$3,475,	$8,439,	$450,06	$281,37	$12,642

Figure 5 - Asset Category Condition by Value

The overall average condition of Council's building assets is good / satisfactory.

Average condition rating for building assets is 2.1

Asset Category	Average Condition by Count of Assets
Administration/ Operational Buildings	2
Libraries	1.6
Community Buildings	2.1
Commercial Buildings	2
Childcare Centres	2.5
Emergency Centres	1.8
Public Toilets	1.9
Sportfield Amenities and Clubhouses	2.1
Sportfield and Park Shelters	2
Sportfield and Park Sheds	2.3
Swimming Pools	2.3
Overall	2.1

Table 4 - Average Asset Condition

3.3 Age Profile

The age compiled to date is actual for most buildings constructed prior to 1940 and after 1990. The age data for those buildings constructed between 1940 and 1990 is based upon estimates from physical inspection of the building and general knowledge. This explains the spikes on some years and may not represent a true depiction. It is certain, however, that most Council buildings were constructed between the years of 1960 and 2000.

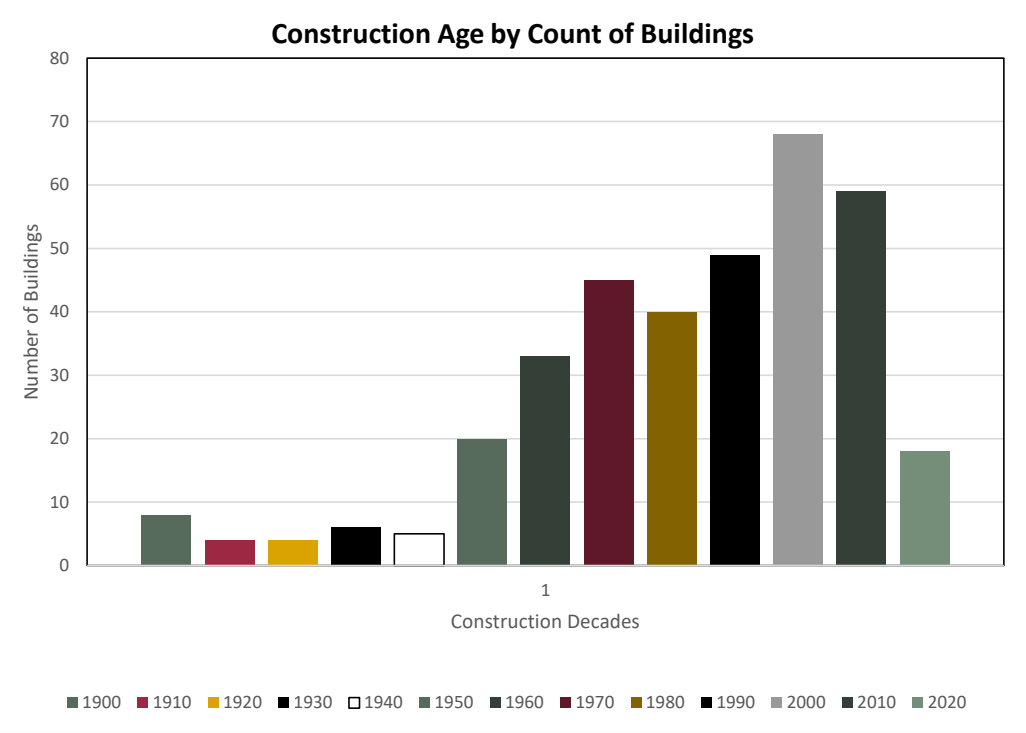


Figure 6 – Average Asset Construction Year

3.4 Asset Category Inventory

3.4.1 Accessibility of Public Toilets

Currently 43% of the public toilets in the Wingecarribee Shire Council are accessible. Council is committed to implementing its Public Toilet Strategy for the renewal of public toilet facilities.

As per Council's Disability Inclusion Action Plan 2022-2026 and the Building Code Australia, all new toilets will include an accessible toilet.

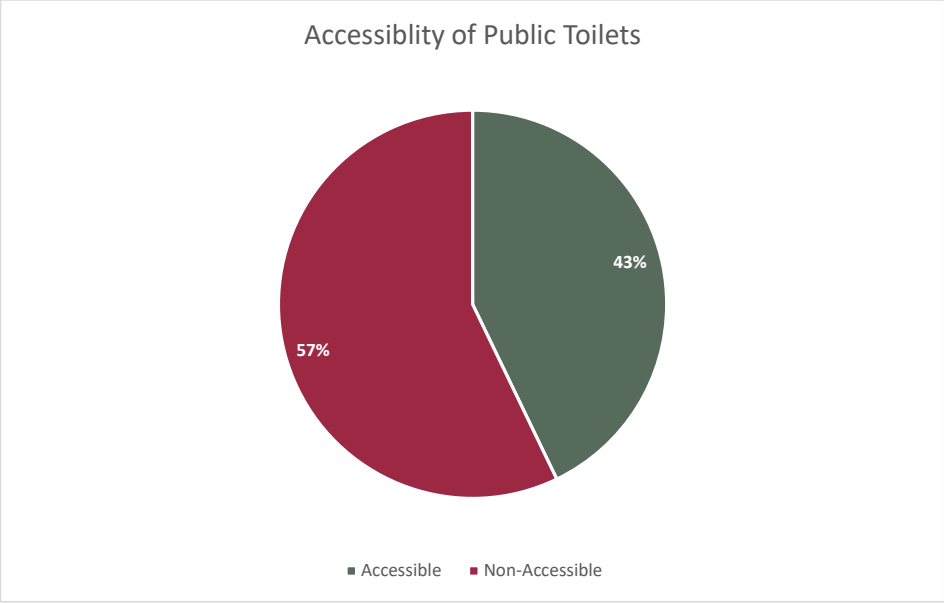


Figure 7 - Accessibility of Public Toilet Portfolio

3.4.2 Swimming Pools and Buildings

Swimming Pools consist of 4 Swimming Centres, namely Moss Vale Aquatic Centre, Bundanoon, Bowral and Mittagong Outdoor Swimming Centres. Each of the outdoor swimming centres have multiple structures, including the pool structures, pump sheds, kiosks, shade sail structures etc. and these are all counted towards the total number of buildings within the swimming pools asset category.

Asset Location	Structures
Bundanoon	25m Pool, Toddler Pool, Kiosk/ Amenities Building, Picnic Shelters, Shed, Shade Structures
Bowral	50m Pool, 25m Pool, Toddler Pool, Kiosk/ Amenities Building, Picnic Shelters, Shed, Shade Structures, Clubroom
Moss Vale	Aquatic Centre Building
Mittagong	Permanently Closed

3.4.3 Administration and Operational Buildings

Administration and Operational Buildings include the Civic Centre, Saleyards, Resource Recovery Centre, Animal Shelter, Libraries and Council Depots. It is important to note that each of the Council Depots have multiple sheds and workshops on site which all count towards the total number of operational buildings.

Asset	Structures
Civic Centre	Civic Centre Building including Library, Generator Shed
Saleyards	Main Building, Pump Sheds, Workshop, Machinery Sheds
Resource Recovery Centre	Main Building, Upcycle Centre, Workshops, Wash Bays, Composting Unit Building, Transfer Station, Storage Sheds, Office Building, Gate House Building
Animal Shelter	Animal Shelter Office Building, Cat Quarantine, Cattery Building, Dog Kennel Buildings
Moss Vale Depot	Main Office Building, Storage Sheds, Amenities Building, Workshops, Wash Bay
Mittagong Depot	Main Office Building, Storage Sheds, Amenities Building, Workshops, Wash Bay, Training Room Building

4 Drivers of Level of Service

Levels of Service (LoS) are comprised of four components: provision, renewal, maintenance and operations. Each LoS is constrained by funding and resource availability, however the fundamental drivers of LoS can be identified in three categories:

- Risk Management
- Community Satisfaction
- Strategies and Masterplans

4.1 Risk Management

Risk is the effect of uncertainty on Council's ability to achieve its objectives. Risk Management is the process of systematically identifying, monitoring, treating and reporting these risks.

Risk Assessment will identify potential hazards and select a treatment option to be implemented to control the generated risk. The resultant treatments will primarily fall within the categories of ensuring compliance with regulations and standards, adhering to a regime of systemic inspections, committing to a program of upgrades and ensuring proactive and reactive maintenance is completed.

This Risk Assessment will cover generic hazards that are typical across the entire asset network, however it also provides a closer analysis of Critical Assets.

4.1.1 Critical Assets

Critical assets are those that have a high consequence of failure in terms of community impact. By identifying critical assets and failure modes, an organisation can ensure that condition inspection programs, maintenance and capital expenditure plans are targeted to ensure that the risk of critical asset failure is minimised.

Council's critical assets in Building assets class include:

Administration / Operational Buildings – Civic Centre, RRC and Council Depots
Emergency operations – RFS and SES buildings

Table 5 - Critical Assets

4.2 Risk Assessment Framework

Risk (R) Matrix		Consequence (C)				
		Severe	Major	Moderate	Minor	Insignificant
Likelihood (L)	Almost Certain	Extreme	Extreme	High	High	Moderate
	Likely	Extreme	Extreme	High	Moderate	Moderate
	Possible	Extreme	High	Moderate	Moderate	Low
	Unlikely	High	High	Moderate	Low	Insignificant
	Rare	High	Moderate	Low	Insignificant	Insignificant

Table 6 - Risk Assessment Framework

Risk	Hazard	Inherent Risk			Treatment	Residual Risk			Implementation Status	Responsibility	Level of Service
		C	L	R		C	L	R			
Personal injury	Deteriorated building assets	**MAJ**	**POS**	**H**	Renew assets in accordance with designated useful life	**MIN**	**POS**	**M**	Current	Assets	Renewal
					Complete building inspections at regular intervals				Current	Assets	Operations
					Reactive maintenance of building assets through CRM system.				Current	Shire Presentation	Operations
Personal injury	Compliance with statutory requirements	**MAJ**	**POS**	**H**	Meeting testing and certification requirements of building components/items (fire safety, lifts etc)	**MIN**	**POS**	**M**	Current	Shire Presentation	Operations
Personal injury	Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources)	**MOD**	**LIK**	**H**	Ensure maintenance budgets increase with asset base growth	**MOD**	**LIK**	**H**	Future	Assets	Operations
Poor results as result of non-evidence based decision making	Poor quality asset inventory and performance data	**MOD**	**LIK**	**H**	Adopt approach of continuous improvement, with progressive implementation of Improvement Program (see Section 8)	**INS**	**POS**	**L**	Current	Assets	Operations
Damage due to increased extreme weather events.	Building Structure and components	**MOD**	**LIK**	**H**	Design principles to reduce impact of extreme weather events when undertaking new developments	**MIN**	**POS**	**M**	Current	Asset	Provision
Public health and hygiene	Poor water quality within swimming pools	**MOD**	**LIK**	**H**	Manage pool operations in accordance with statutory requirements	**MIN**	**POS**	**M**	Current	Shire Presentation	Operations

Table 7 - Risk Assessment

4.3 Community Satisfaction

Council's community satisfaction survey is undertaken biennially and tracks Council's performance in service delivery, identifies priority areas and evaluates community attitudes towards customer services, communication and Council as an organisation.

The objectives of the community satisfaction survey process are to:

- Measure the importance of, and satisfaction with, services and facilities provided by Council
- Compare levels of satisfaction for Council's services and facilities with similar councils
- Assist Council in identifying service priorities for the community
- Evaluate Council's customer services and communication

The survey covers facilities and services provided by Council identifying both importance and satisfaction on a 5-point scale, with 1 = low and 5 = high.

The most recent community survey was conducted in 2022, with the results of the prior years also provided for comparison. These community survey results have been considered within each Asset Management Plan and will be utilised to guide and inform the schedule of service reviews across the asset classes.

The following table contains the items relevant to this asset management plan.

Council Service	Importance			Satisfaction			2022 Performance Gap
	2019	2021	2022	2019	2021	2022	
Provision and operation of libraries	4.11	4.07	4.20	4.02	4.00	4.14	1%
Provision and maintenance of community halls	4.09	3.96	3.84	3.57	3.50	3.39	9%
Protecting heritage values and buildings	3.92	3.96	4.05	3.33	3.23	3.19	17%
Cleanliness and functionality of public toilets	4.15	4.32	4.03	3.39	3.46	3.31	14%
Provision and maintenance of swimming pools	3.95	4.03	3.50	3.61	3.11	3.24	5%

Table 8 - Comparison of Importance and Satisfaction in Council Building Services

In the table above, the 2022 Performance Gap is the difference between community importance and community satisfaction.

Trends that can be seen over the last few years is that the public is mostly satisfied with the provision and operation of libraries, community halls and swimming pools.

However it is evident that there is a community desire for an increased Council performance in the maintenance of public toilets and the protection of heritage buildings.

Resultant actions will be further explored in Chapter 5 Levels of Service.

4.4 Strategies and Masterplans

The third driver of Levels of Service can be broadly grouped as Strategies and Masterplans. Council prepares strategies and masterplans across all asset classes to ensure that network planning, implementation and maintenance is being conducted in a holistic, considered and effective manner.

Each strategy and/or masterplan will directly inform one or more levels of service – be it by asset category or geographic location.

A list of strategies and masterplans that impact the levels of service for the Buildings asset base of the Shire is provided in the table below.

Strategy/ Masterplan	Level of Service
2023 Community and Recreation Facilities Strategy	Provision
2017 Public Toilet Plan	Provision and Renewal
Disability Inclusion Action Plan 2022-2026	Provision
2016 Park Strategy	Provision and Operations and Maintenance
Site specific Masterplans	Provision

Table 9 - Strategies and Masterplans

5 Levels of Service

Levels of Service (LoS) are comprised of three components: provision, renewal and maintenance and operations.

5.1 Provision

The provision LoS relates to what Council provides, how much and where. Council's currently provides 325 structures, worth a combined $191M, to provide services for the community.

The Provision LoS is not consistent across the Shire as subdivisions and development are completed in accordance with the standards of the time – and these standards change with time. The Provision LoS for new subdivisions and development is therefore that which is stipulated in the documents which govern it, namely Council's:

- Local Environmental Plan
- Development Control Plan
- Engineering design and Construction Specifications
- Developer Contribution and Servicing Plans

That withstanding, due to the Level of Service Drivers described in Section 4, Council must be striving for progressive implementation of a consistent Provision Level of Service across the Shire. This is a difficult and expensive endeavour and so is primarily led by the implementation of the strategies and masterplans detailed in Section 4.4.

The provision level of service for the asset categories of the buildings asset class can be generally described as follows:

Asset Category	Provision Level of Service
Administration/ Operational Buildings	Business Cases
Library Buildings	Disability Inclusion Action Plan Library Strategy Note: Current strategy is in development, with final adoption anticipated in 2025.
Community Buildings	Disability Inclusion Action Plan Community and Recreation Facilities Strategy
Commercial Buildings	Pursuant to Lease agreements
Childcare Buildings	Pursuant to Lease agreements
Emergency Buildings	Collaboration with State Government Agencies
Public Toilets	Disability Inclusion Action Plan 2017 Public Toilet Strategy Note: This strategy will be revised and updated in 2024/25. The document will be correctly designated as a Plan and will include the delivery of a public toilet facility at Yerrinbool.

Sportfield Amenities	Disability Inclusion Action Plan Community and Recreation Facilities Strategy Provision of facilities within each sports field will be subject to site-based masterplan.
Swimming Pools	The provision of swimming pool centres will be subject to the outcomes of the 2023 Aquatics Plan and Business Case (currently in development). Provision of facilities within each centre will be subject to site-based masterplan and business case.

Table 10 - Provision Level of Service

5.2 Renewal

The Renewal LoS defines how often Council intends to replace existing assets with a Modern Engineering Equivalent Replacement Asset (MEERA), including disposal of the existing asset.

This renewal frequency is termed 'useful life' and adjusting this value has significant implications for annual depreciation, with asset useful being a direct factor in its calculation. Annual investment in the capital renewal of assets should ideally equate to the value of annual depreciation. Although asset degradation and failure will not follow a straight line across financial years, failure to maintain asset renewal at the rate of annual depreciation will result in an overwhelming volume of renewal works in later years.

Adjustments to asset useful like also has impacts on required maintenance and operations expenditures. Shorter useful lives generally result in less required maintenance, all other factors being equal and vice versa.

Summary of useful lives for the buildings asset categories are provided below:

Asset Category	Asset Type	Useful Life in years
Access Control	Access Control	15
Structure	Brick Structure (short and long life)	40-195
	Concrete Block Structure (short and long life)	40-195
	Fibre Cement Structure (short and long life)	28-175
	Metal Clad Structure (short and long life)	72-195
	Posts (short and long life)	10-55
	Timber Structure (short and long life)	35-195
Sub-Structure	Subfloor Concrete Structure (short and long life)	69-179
	Subfloor Fibre Cement	43
	Subfloor Timber	50-131

	Timber Structure	
Roof	Concrete Suspended Roof (short and long life)	40-104
	Glass Roof (short and long life)	40-80
	Metal Roof (short and long life)	28-80
	Shade cloth Roof (short and long)	4-8
	Slate Roof	80
Electrical Service	Electrical Service (short and long life)	40-105
Solar Panels	Solar Panels	25
Fire Service	Fire Service	15
Floor Coverings	Floor Coverings	10-36
HVAC Service	HVAC (Heating, Ventilation and Air-Conditioning)	15-46
Hydraulic Service	Hydraulic Service (short and long life)	44-115
Fit Out	Internal Finishes	26-75
Pool Structure	Concrete Structure	60
Pool Structure	Expansion Joints	10
Pool Structure	Pool Tiling	30
Pool Structure	Pool Grates	20

Table 11 - Renewal Level of Service

The intent is therefore that all building assets will be renewed prior to exceeding their designated useful life.

However, renewal works will also be based on asset condition. When an asset is found to be of Condition 4 or 5 it will then be programmed for renewal within the Capital Works program.

In accordance with the community satisfaction survey results, Council has committed funds in the 24/25 to 27/28 Capital Program for both heritage works and for public toilet renewal.

Stafford Cottage and the Old Bowral Town Hall will undergo refurbishment works to address long standing water ingress problems across 24/25 and 25/26. Renewal of public toilet facility at Lions Park Bowral is programmed for 26/27, with Berrima Camping Ground to then follow in 27/28.

5.3 Maintenance and Operations

Maintenance and operation activities are completed in both a proactive and reactive fashion across the asset network. Many operational activities by their nature are more readily able to be scheduled and completed in a timely and controlled way. Maintenance activities are more difficult to deliver in scheduled fashion, with mature systems and full resourcing required to do so.

Results from the recent community satisfaction survey show that the community is generally satisfied with Council's performance in relation to community halls, libraries and pools. However it is evident that there is a community desire for an increased Council performance in the maintenance of public toilets and the protection of heritage buildings.

Nevertheless, maintenance and operations budgets are heavily constrained by both funding and resourcing availability. Although results of the recent community satisfaction survey indicate a performance gap in some areas, these constraints mean that solutions need to be found whilst maintaining exist budget levels. Potential opportunities being investigated are a more strategic approach being adopted for maintenance, as well as programming and delivery of more effective capital renewal and upgrade projects.

Maintenance and operations level of service will be provided under two categories: inspections and maintenance.

5.3.1 Inspections

Inspections will be of two categories. Scheduled inspection and reactive inspection.

- Scheduled inspection

As part of the risk management of the asset network, all assets are to be inspected at a regular interval. The frequency of the inspection will be commensurate with the magnitude of the network as well as the assets rate of decay. Inspections will also run in line with commercial agreements for currently leased asset to algin maintenance with agreed terms of upkeep.

The following condition inspection frequencies have been adopted for the following asset categories:

Inspection Schedule Item	Frequency
Comprehensive Buildings Valuation	Every five years
Building Defect Inspections	Annually

Table 12 - Inspection Regime for Maintenance

Our current assets also undergo regulatory compliance inspections as per Australian standards, Safework NSW guidelines and current legislative requirements – for example:

Compliance Maintenance Inspections	Frequency
Lift Servicing	Monthly
Fire Equipment Maintenance	Every 6 months
RCD Testing	Annually
Wastewater Systems Maintenance (septic)	Annually
Defibrillator Maintenance	Annually
Roof Anchor Compliance	Annually
Automatic Door Servicing	Annually

Table 13 - Inspection Regime for Compliance

- Reactive inspection

Reactive inspections will be conducted as required in response to notification, or suspicion, of asset structural or performance failure. The reactive inspection will generally be an onsite visual inspection, however specialist consultants will be engaged as required.

5.3.2 Maintenance

The annual maintenance and operations budget for Buildings asset class is provided in the following table.

Asset Class	Annual Maintenance and Operations	
	$	as % of Asset Value
Buildings	$6,013,702	3%

Table 14- Asset Class maintenance budget

This can be further broken down into the relevant asset categories of:

Asset Category	Sum of Budget	Activities
Swimming Pools	$3,332,165	General maintenance requirements, including plant maintenance and servicing. Compliance maintenance to meet code, lifeguard duties, cost of goods, utilities. *Note:* A significant portion of this is covered through the lease arrangements of Moss Vale Aquatic Centre
Civic Centre	$460,906	All general maintenance requirements and compliance maintenance to meet code, cleaning and utilities
Community Halls/ Facilities	$1,732,479	All general maintenance requirements and compliance maintenance to meet code
Public Toilets	$392,950	All general maintenance requirements and cleaning
Emergency Services	$95,202	All general maintenance requirements and compliance maintenance to meet code

Table 15 - Asset Category maintenance budget

It is recognised that minor building maintenance works can at times be funded from the operational budgets of the Service Managers across Council – however these are opportunistic in nature and so are not included within the assessment of actual and forecast maintenance expenditure.

A large part of the buildings maintenance budget is expended on reactive maintenance. This includes items such as repairs of leaking roofs and windows, downpipes and guttering and some vandalism repair works.

However, proactive maintenance including planned testing and servicing is also being undertaken as part of the maintenance program. This includes items such as air conditioning maintenance, pest control, test and tag electrical appliances, solar panel maintenance and gutter cleaning.

Of these, achieving compliance with regulatory requirements is proving an ongoing challenge with current maintenance budgets not enabling all buildings to be brought in alignment with current standards.

Public Toilets are cleaned according to their service levels, as stated in the Public Toilet Strategy and are based on following categories:

Public Toilet Category	Cleaning Frequency
Premier and Civic	Cleaned twice daily
Community Service level 1	Cleaned once daily
Community Services level 2	Cleaned three times per week
Community Service level 3	Cleaned once per week
Sports Service level 2	Cleaned twice per week
Sports Service level 3	Cleaned once per week

Table 16 - Cleaning of Public Toilets

(There are no Service level 1 Sports Parks)

In addition to the above-mentioned cleaning schedule, each toilet receives an additional monthly clean.

6 Asset Base Growth

Council's asset base will expand over the next 10 years through committed and expected new and upgrade expenditure, assets contributed by development through conditions of consent, and the Developer Contributions and Servicing Plans. This growth can be decreased through asset disposals; however, no significant disposals are currently committed.

In this analysis, all future asset values, as well as planned and recommended expenditures, assume indexation rate of 3.0% per annum.

6.1 New and Upgraded Assets

The new and upgrade asset projects category covers those projects resourced by Council or grant funding, but excluding Development Contributions, that involve existing assets being enhanced or new assets being constructed.

This expenditure is partly derived from grant funded projects, however with grant funding only being reflected in Council's budget upon notification of success, grant funding does not impact the asset base growth calculation at this stage.

The table below summarises the new or upgrade projects that Council is known to be delivering within the 10-year window of this AMP. These projects are being funded by Council through the General Fund and grant funding.

Asset Class	Financial Year	Project Name	Value
Buildings	2023/24	Civic Centre EOC	$400,000
Buildings	2023/24	RFS Water Storage Tanks	$360,000
Buildings	2024/25	Yerrinbool Public Toilets	$300,000

Table 17 - New and Upgrade Assets

6.2 Assets Contributed by Development through Conditions of Consent

As development occurs, particularly within the new living areas identified within the Wingecarribee Local Housing Strategy, it is intended that infrastructure be provided at a rate consistent with the Provision LoS in existing parts of the Wingecarribee Local Government Area.

With the Wingecarribee Local Housing Strategy setting an objective of a 50:50 split of infill and greenfield development, it is therefore forecast that only 50% of the annual population growth will result in asset base growth.

Reviewing the rate of contributed assets across 2021/22 and 2022/23, it is observed that the value of contributed assets is equivalent to 30% of this forecast population growth from greenfield development. Which is understood to be the result of assets contributed through this method generally being of a non-major nature. (eg sewer pipelines will be contributed through a development, but not another sewage treatment plant).

Financial Year	Population Forecast	Population Growth	Forecast Asset Base Growth
2023/24	53,615	1.1%	0.16%
2024/25	54,196	1.1%	0.16%

2025/26	54,776	1.1%	0.16%
2026/27	55,357	1.1%	0.16%
2027/28	55,975	1.1%	0.17%
2028/29	56,593	1.1%	0.17%
2029/30	57,212	1.1%	0.16%
2030/31	57,830	1.1%	0.16%
2031/32	58,448	1.1%	0.16%
2032/33	59,138	1.2%	0.18%

Table 18 - Forecast.ID Population Growth

6.3 Developer Contributions and Servicing Strategies

An important funding source for new infrastructure are Development Contributions collected under Section 7.11 and 7.12 of the Environmental Planning and Assessment Act. These contributions fund a significant proportion, though not all, of the infrastructure required by new development.

Council currently primarily levies contributions through the following plan relating to buildings.

- Open Space, Recreation, Community and Cultural Facilities 2013 to 2036

As of 30 June 2023, $8M is currently held in reserve for the delivery of infrastructure items detailed within this plan. However, it is acknowledged that the infrastructure program within the plan is due for revision, with it being currently uncertain whether contributions are being received in line with expected forecasts – as well as whether the magnitude of Council co-funding detailed within the Plan remains financially viable.

Several strategic studies have been completed or are in progress which will inform future updates to the plans, some of these strategic studies being:

- Community and Recreation Facilities Strategy
- Integrated Transport Study

Therefore, only projects that currently feature within the 2024/25 to 2028/29 Capital Works Program which are funded by developer contributions are to be included within this section.

There are no projects within the 2024/25 to 2028/29 Capital Works Program which are funded by developer contributions.

6.4 Asset Disposals

Asset disposals entail the removal of an existing asset without replacing it with a similar asset. No such disposals are considered in this AMP. This may be examined in future revisions when considering the results of community engagement.

6.5 Asset Indexation

Indexation rate of 3.0% p.a has been applied across the 10 year forecast period. This aligns with the indexation rate adoption in the LTFP. The same rate has been adopted in

this AMS to ensure that lifecycle costs and associated budgets are comparable in future financial years.

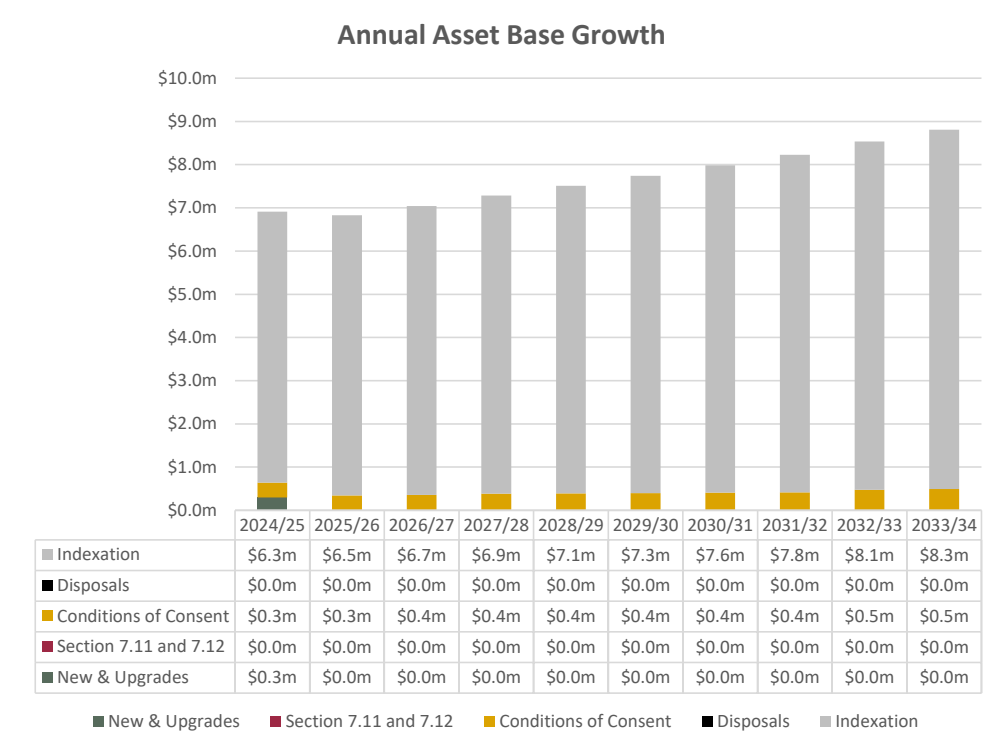
6.6 Asset Base Growth

Total asset base growth is comprised these components:

- Asset upgrades
- Assets contributed by development through conditions of consent
- Development Contributions
- Subtracting asset disposals
- Indexation

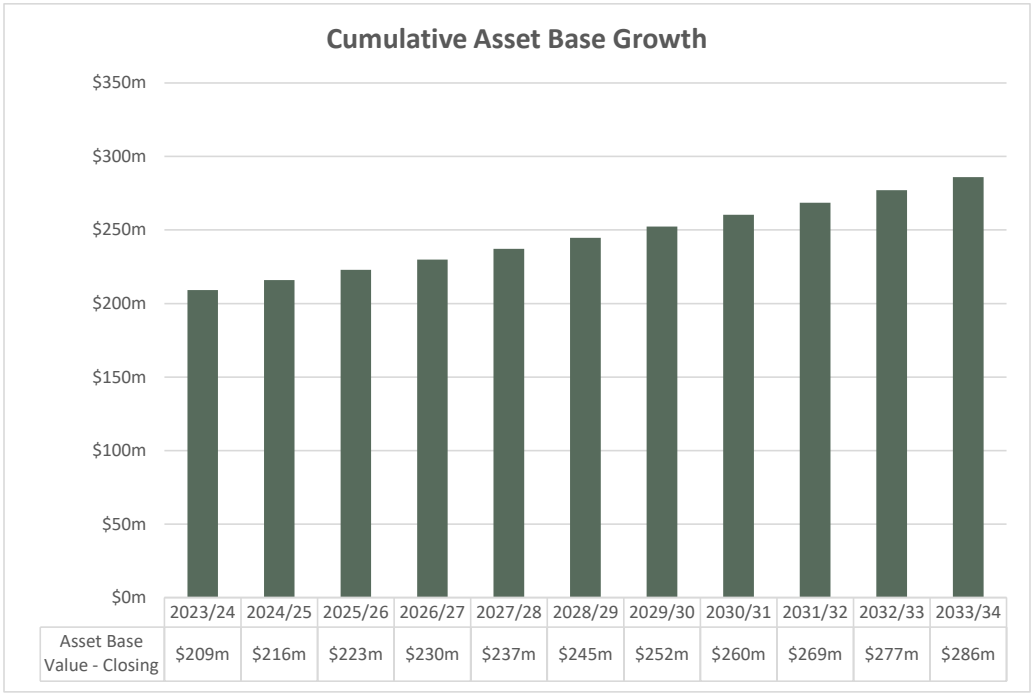
The following graphs illustrate the resultant annual and cumulative asset base growth.

Across the planning period of this AMP, it is forecast that the asset base will grow $77M.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Indexation	$6.3m	$6.5m	$6.7m	$6.9m	$7.1m	$7.3m	$7.6m	$7.8m	$8.1m	$8.3m
Disposals	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
Conditions of Consent	$0.3m	$0.3m	$0.4m	$0.4m	$0.4m	$0.4m	$0.4m	$0.4m	$0.5m	$0.5m
Section 7.11 and 7.12	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
New & Upgrades	$0.3m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m

Figure 8 - Annual Asset Base Growth



	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Asset Base Value - Closing	$209m	$216m	$223m	$230m	$237m	$245m	$252m	$260m	$269m	$277m	$286m

Figure 9 - Cumulative Asset Base Growth

7 Financial Lifecycle Forecast

The Council assets described in Section 3, with the asset base growth forecast in Section 6, require resourcing across their lifecycle in order to achieve the LoS contained in Section 5.

The two main components are renewal expenditure and maintenance and operations expenditure, which sum together to give the recommended overall expenditure on Council assets over the next 10 years.

7.1 Renewal Forecast

To ensure that satisfactory condition is maintained across the asset base and the Infrastructure Backlog Ratio benchmark is achieved, capital renewal works should be undertaken when assets reach the end of their useful lives. These capital renewal works involve disposing of the existing asset and constructing the MEERA.

However, if the expiry of useful lives or asset conditions are solely relied upon to inform these recommended renewals, annual budgets fluctuate significantly, which creates difficulties from a resourcing perspective. Rather, it is better practice to average out the recommended renewal expenditure in order to reduce annual fluctuations. When future Delivery Programs are prepared, actual allocations to each asset class may vary depending upon the scale of individual projects.

The required renewal expenditure across the 10-year period is therefore forecast to be $37M. The Long-Term Financial Plan is unfortunately not able to accommodate the entirety of this desired asset renewal budget. This is largely as result of asset base growth exceeding the Council rate peg.

Figure 9 shows the renewal budget featured in the Capital Works Program and Long-Term Financial Plan, as well as the required renewal expenditure to align with asset depreciation. In 2024/25 expenditure will well exceed that of annual depreciation given the significant projects of Animal Shelter and Moss Vale SES buildings, as well as the renewal component of the Civic Centre Backoffice Refurbishment project. However, in the years subsequent, funding returns to solely that of SRV and General Fund – which cannot meet the value of annual depreciation.

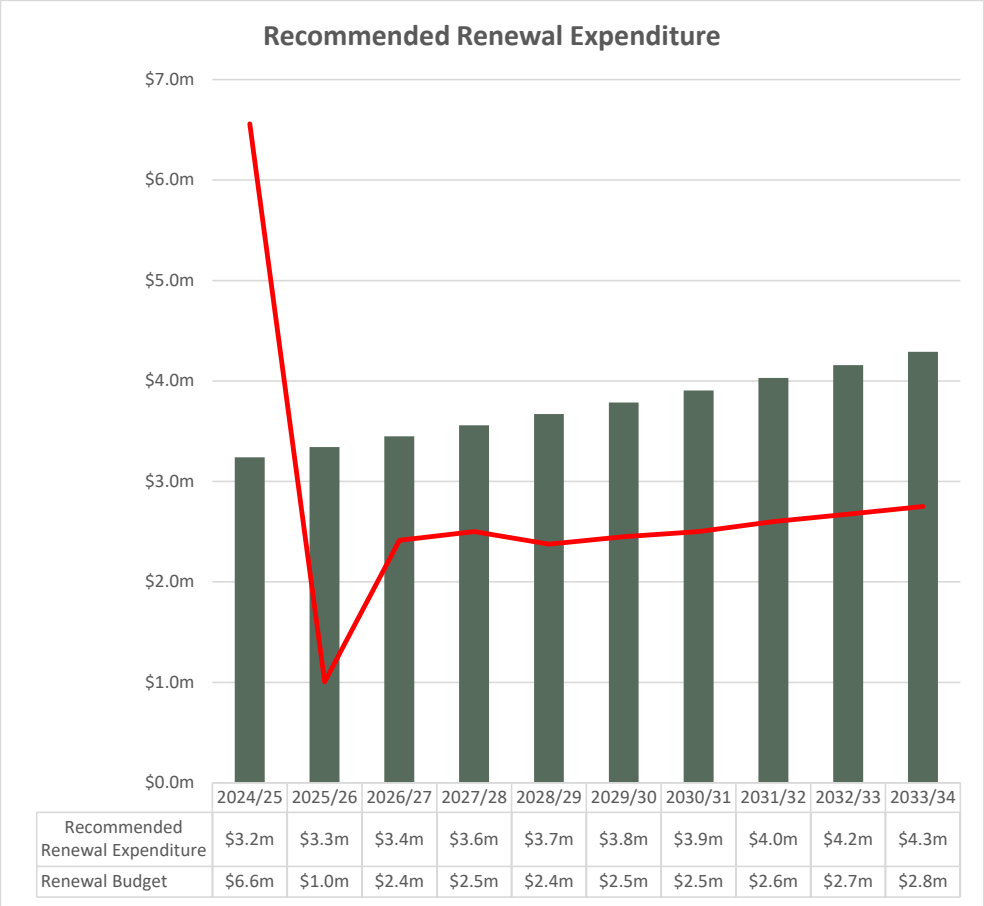
The Capital Works Program and Long-Term Financial Plan currently can only accommodate $28M of building asset renewal. This shortfall in asset renewal investment will result in a deterioration of asset condition and heighten future asset renewal investment requirements.

With a comprehensive revaluation of the buildings asset class completed in 2023/24, there is minimal opportunity in a repeated review of asset useful lives and unit rates.

Mitigation measures therefore must be primarily based around seeking to diversify the revenue streams of Council, such that the limitations of the rate peg can be overcome. Three such opportunities being actively pursued are:

- Grant funding opportunities
- Review of fees and charges associated buildings and swimming pools
- Leasing arrangements to include greater building management and maintenance responsibilities.

Review of building asset portfolio, to identify potential areas of optimisation.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Recommended Renewal Expenditure	$3.2m	$3.3m	$3.4m	$3.6m	$3.7m	$3.8m	$3.9m	$4.0m	$4.2m	$4.3m
Renewal Budget	$6.6m	$1.0m	$2.4m	$2.5m	$2.4m	$2.5m	$2.5m	$2.6m	$2.7m	$2.8m

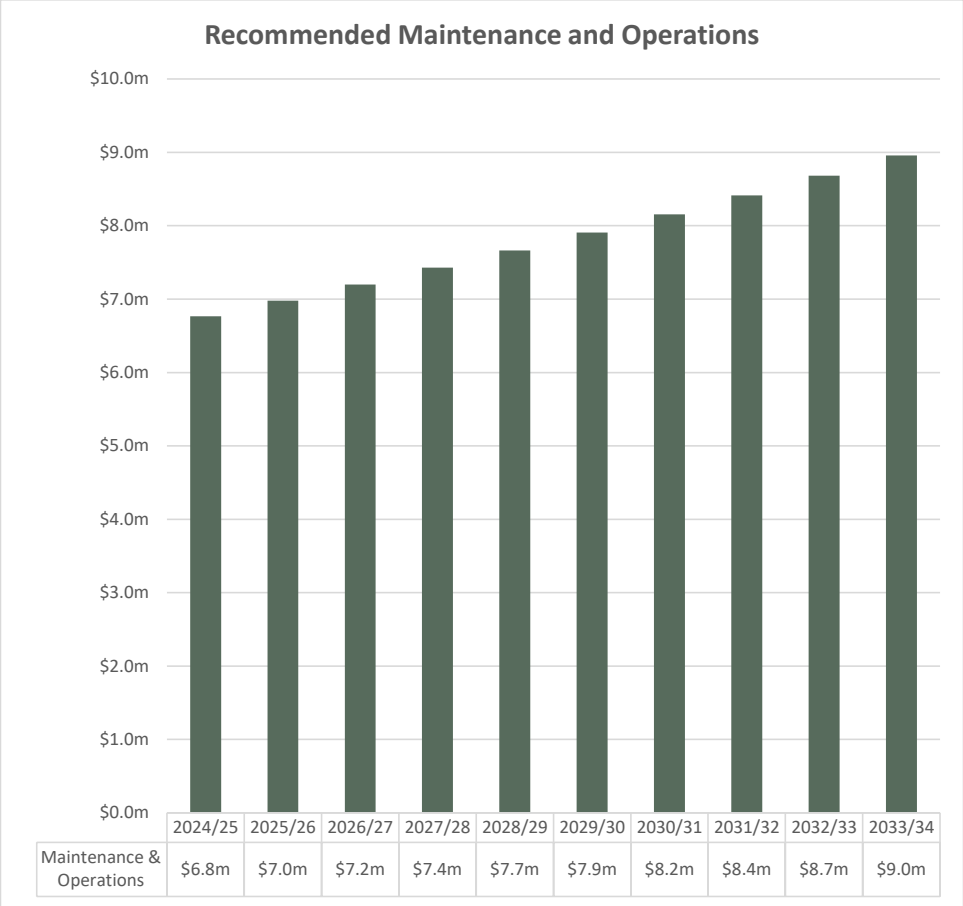
Figure 10 - Recommended Renewal Expenditure

7.2 Maintenance and Operations Forecast

To sustain the current Maintenance and Operations Level of Service whilst accommodating a growing asset base, annual maintenance and operations budget increases are required.

The required maintenance and operations expenditure across the 10-year period is therefore forecast to be $78M.

The Long-Term Financial Plan is unfortunately not able to accommodate the entirety of this desired maintenance and operations budget. This is largely as result of asset base growth exceeding the Council rate peg. This will therefore result in a lowering of levels of service and will prevent assets from reaching their desired useful life - which in turn increases renewal expenditure requirements.



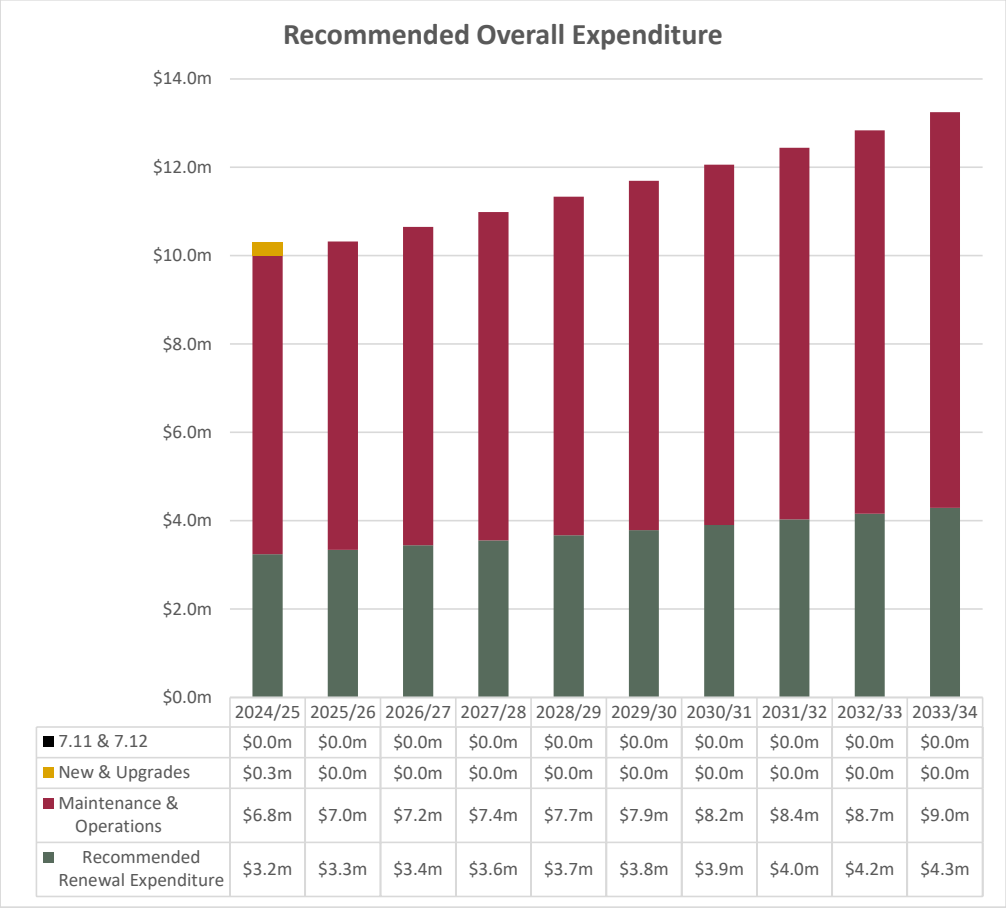
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Maintenance & Operations	$6.8m	$7.0m	$7.2m	$7.4m	$7.7m	$7.9m	$8.2m	$8.4m	$8.7m	$9.0m

Figure 11 - Recommended Maintenance and Operations Expenditure

7.3 Overall Forecast

The recommended overall expenditure is a combination of the new, upgrades and developer contributions from Section 6 and the recommended renewal, maintenance and operations expenditure from Section 7. Resulting in an overall recommended expenditure of $116M over 10 years.

It is however acknowledged that the full extent of this recommended expenditure cannot be accommodated within the Long Term Financial Plan. Future iterations of the Asset Management Plan will further investigate and identify potential solutions.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
7.11 & 7.12	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
New & Upgrades	$0.3m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m
Maintenance & Operations	$6.8m	$7.0m	$7.2m	$7.4m	$7.7m	$7.9m	$8.2m	$8.4m	$8.7m	$9.0m
Recommended Renewal Expenditure	$3.2m	$3.3m	$3.4m	$3.6m	$3.7m	$3.8m	$3.9m	$4.0m	$4.2m	$4.3m

Figure 12 - Recommended Overall Expenditure

8 Improvement Plan

Asset Planning is a journey of continuous improvement with there always being opportunities to further improve the accuracy of asset data, better understand community needs and expectations and more efficiently meet the service needs of the Shire.

To this end, an Asset Management Improvement Plan has been prepared to guide this journey of continuous improvement.

The below items are specific improvements that can be made to this document as well as the asset management maturity of Council.

Ranking	Improvement	Responsibility	Timeline
1	Revision of Public Toilet Strategy. - Rename to Public Toilet Plan	Assets	2024/25
2	Preparation of Aquatics Plan	Assets	2024/25
3	Business Case for Regional Aquatic Facility	Assets	2024/25
4	Compile/Prepare Drawings Register: - Community Buildings	Assets	2024/25
5	Business AMP: Resource Recovery Centre	Assets	2025/26
6	Business AMP: Saleyards	Assets	2025/26
7	Prepare standard designs: - Public Toilets and Sportsfield Amenities	Assets	2025/26
8	Compile/Prepare Drawings Register: - Administrative and Operational Buildings	Assets	2026/27
9	Compile/Prepare Drawings Register: - Commercial Buildings	Assets	2026/27
10	Compile/Prepare Drawings Register: - Emergency Buildings	Assets	2027/28
11	Compile/Prepare Drawings Register: - Childcare Centres	Assets	2027/28
12	Masterplans for Parks and Sportsfields – see Open Spaces AMP	Assets	See Open Spaces AMP

Table 19 - Asset Management Improvement Plan