

# Asset Management Plan – Transport





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## Contents

1	Exe	cutive Summary1
2	Ass	et Systems and Structures
	2.1	Asset Planning Framework
	2.2	Asset Planning Systems 4
	2.3	Organisational Structure5
3	Our	Assets7
	3.1	Overall Inventory7
	3.2	Overall Condition 10
	3.3	Road Condition and Inventory Detail13
	3.4	Roads and Potential Asbestos Contamination15
	3.5	Crown Roads 17
4	Driv	vers of Level of Service
	4.1	Risk Management 19
	4.2	Community Satisfaction 24
	4.3	Strategies and Masterplans 25
5	Lev	els of Service
	5.1	Provision Level of Service
	5.2	Renewal Level of Service 27
	5.3	Maintenance and Operations Level of Service
6	Ass	et Base Growth
	6.1	New and Upgraded Assets 32
	6.2	Assets Contributed by Development through Conditions of Consent
	6.3	Developer Contributions and Servicing Strategies
	6.4	Asset Disposals
	6.5	Asset Indexation
	6.6	Asset Base Growth
7	Fina	ancial Lifecycle Forecast
	7.1	Renewal Forecast
	7.2	Maintenance and Operations Forecast
	7.3	Overall Forecast
8	Imp	provement Plan



# 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

1 |Wingecarribee Shire Council



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.



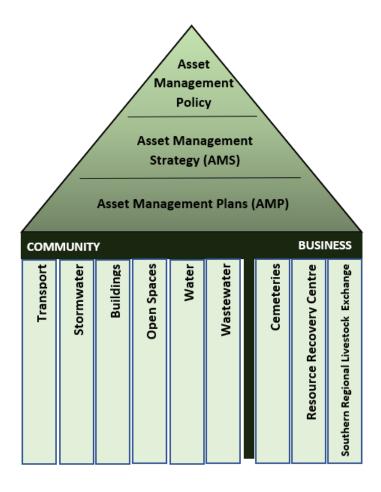


Figure 1: Asset management Planning Framework

## 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.

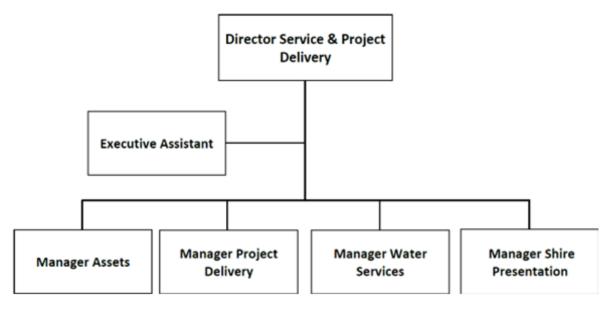


Figure 2: Service and Project Delivery Directorate



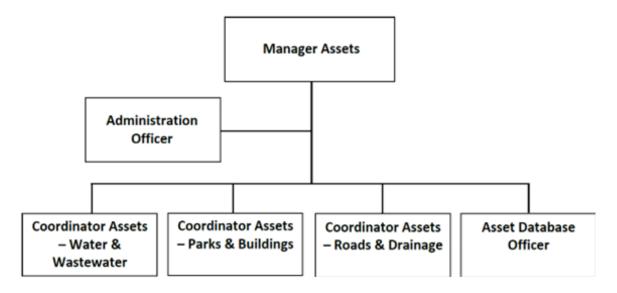


Figure 3: Assets Team Structure

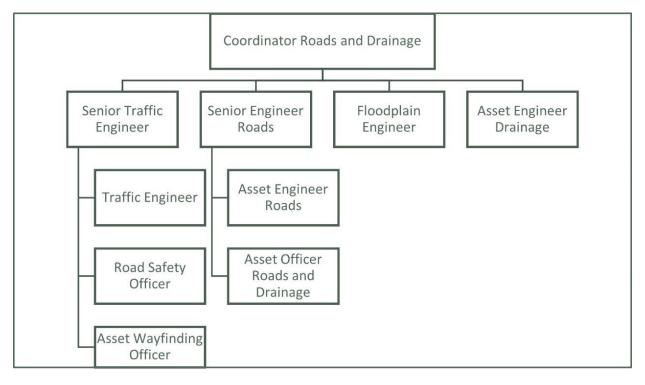


Figure 4: Roads and Drainage Team Structure



# 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 (\$)
		Sealed	794.30	Km	\$704,817,511
		Unsealed	247.4	Km	\$119,889,532
Roads	Local Roads	Lower Order Roads	41.5	Km	-
	Regional Roads	Sealed	92.3	km	\$117,313,890
	Regional Roads	Unsealed	24.9	km	\$14,019,721
	Shoulders (State	e Roads)	702	km	\$2,498,391
	Strategic Trails		29.85	km	-
Fire Trails	Tactical Trails		31.83	km	-
	Management Trails		18.53	km	-
Carparks	Carparks		76,500	m²	\$10,554,614
Bridges	Bridges		59	item	\$47,433,271
bridges	Footpath Bridges		5	item	\$1,920,038
Footpaths	Cycle paths		78	km	\$17,282,882
Tootpaths	Footpaths		170	km	\$37,947,266
Kerb and Gutter	Kerb and Gutter		457	km	\$62,040,856
	Crash Barriers		29.3	km	\$7,296,198
	Kerb Extensions	(Necking)	70	item	\$491,303
	Medians		8,039	m <sup>2</sup>	\$2,594,732
Traffic Facilities	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

7 |Wingecarribee Shire Council



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.

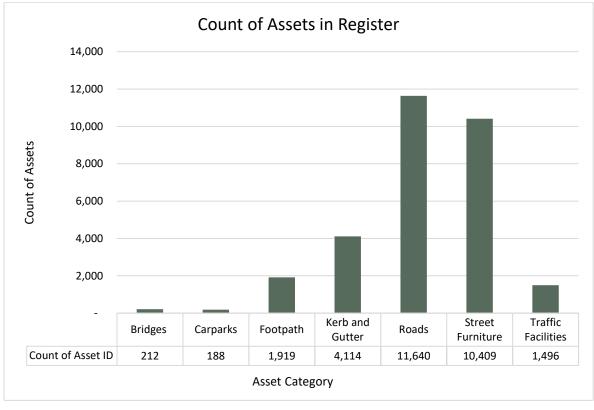
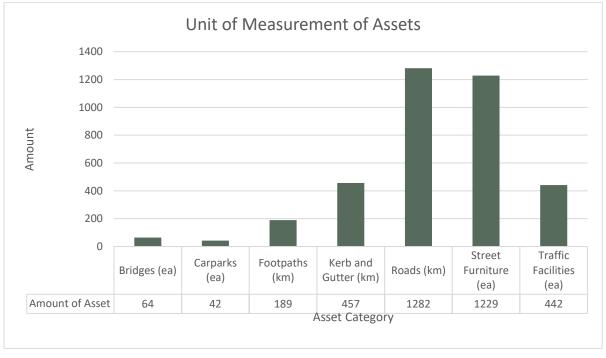


Figure 5: Count of Assets in Register

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

<sup>8 |</sup>Wingecarribee Shire Council





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.



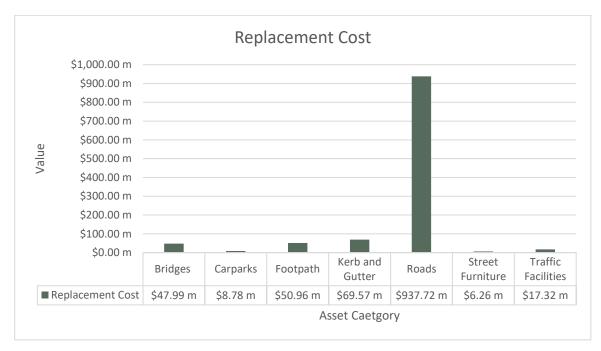


Figure 7: Value of Transport Assets

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



Asset Management Plan - Transport

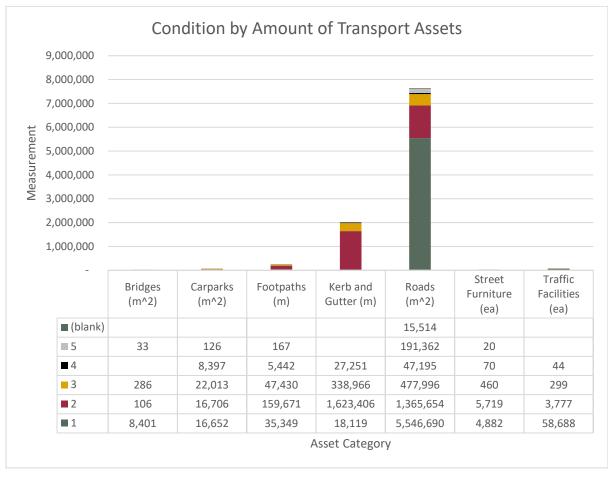


Figure 8: Condition by Count of Transport Assets



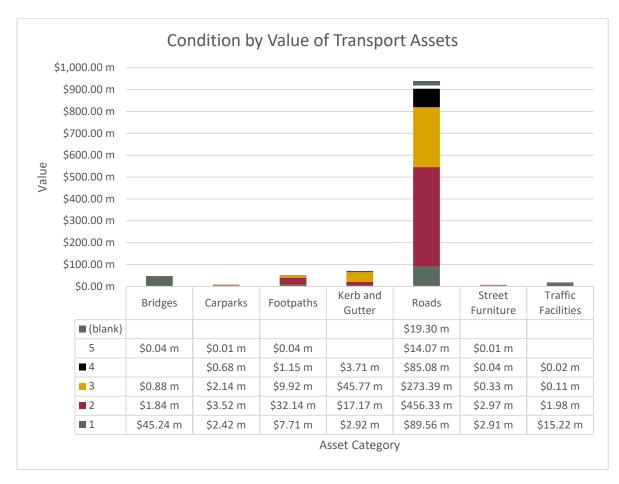


Figure 9: Condition by Value of Transport Assets

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	Kerb and Gutter			
	Sealed Roads	Surface	2.12	
		Pavement	2.33	
Roads - Categorised		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.

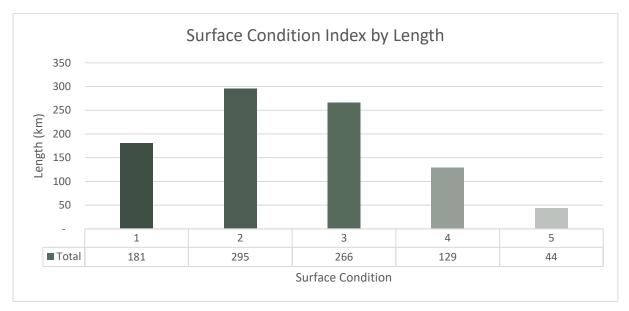


Figure 10: Surface condition by length.





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.

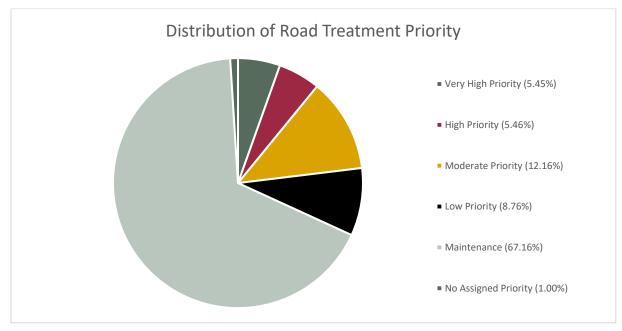


Figure 12: Distribution of repair priorities



Asset Management Plan - Transport

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)	Canyonleig h	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



#### Asset Management Plan - Transport

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	Greenhills Rd	Lutwyche Creek
	Redhills Road	Unnamed Creek
secondary route available)	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				
	MR264 – Jamberoo Mountair	n Road			
	MR569 – Bundanoon Road				
	MR372 – Taylor Ave/Berrima	a Road			
Regional Roads (significant	MR7639 – Station St				
roads that link Council's local roads to the state road network)	MR258 – Wombeyan Caves Road				
	MR7635 – Wilson Drive				
	MR645 – Old Hume Highway (New Berrima to Medway)				
	MR7636 – Penrose Road				
	Old South Road				
	Eridge Park Road				
	Old Hume Highway				
Local Roads (High traffic, Council owned roads that	Old Bowral Road				
provide economic benefits, or	Lyell Street				
act as a direct route between State and Regional Roads)	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.

Dic	k (P) Matrix	Consequence (C)						
Risk (R) Matrix		Severe	Major	Moderate	Minor	Insignificant		
(ר)	Almost Certain	Extreme	Extreme	High	High	Moderate		
_	Likely	Extreme	Extreme	High	Moderate	Moderate		
ihood	Possible	Extreme	High	Moderate	Moderate	Low		
Likeli	Unlikely	High	High	Moderate	Low	Insignificant		
	Rare	High	Moderate	Low	Insignificant	Insignificant		

Table 6 - Risk Assessment Framework



#### Asset Management Plan - Transport

#### 4.1.4 Risk Assessment

Risk Hazard		Inherent Risk		Risk	Treatment		sidual	Risk			Level of
RISK	Hazaro	С	L	R	Treatment		L	R	ation Status	Responsibilit Y	Service
					Undertake proactive network inspections.				Future	Assets	Operations
	Deteriorated or poor quality:	мор	LIK	н	Reactive maintenance of paths through CRM and Work order system (e.g., grinding of trip hazards)	мор	RAR		Current	Shire Presentation	Maintenance
	Footpaths				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
					Undertake proactive network inspections.				Future	Assets	Operations
2	Deteriorated or poor quality:  Sealed Roads	MOD			Reactive maintenance of sealed roads through CRM system (e.g., pothole repair)			L	Current	Shire Presentation	Maintenance
ıl inju			POS	м	Allocate Block grant funding to repair poor condition segments of regional roads, managing the critical asset.	MOD	RAR		Current	Assets	Renewal
ersona					Prioritised renewal of poor condition road wearing surfaces and pavements.				Current	Assets	Renewal
Pe	Deterioreted				Undertake proactive network inspections.				Future	Assets	Operations
	Deteriorated or poor quality:	MOD	POS	M (e.g., maintenance grading) Prioritised renewal of poor of	Reactive maintenance of unsealed roads through CRM system (e.g., maintenance grading)	MOD	D RAR	L	Current	Shire Presentation	Maintenance
	Unsealed Roads.				Prioritised renewal of poor condition unsealed pavements in conjunction with the Shire Presentation team.				Current	Assets	Renewal
					Undertake proactive network inspections.				Future	Assets	Operations
	Deteriorated or poor quality:	MOD	UNL	м	Undertake level 3 bridge inspections on bridges with defects to ensure the asset can carry heavy vehicles. Implement load limits if not.	MOD	RAR	L	Current	Assets	Operation
	Bridges				Reactive maintenance through Council's CRM system				Current	Shire Presentation	Maintenance

**22** | Wingecarribee Shire Council



## Asset Management Plan - Transport

Ris	Hazard	Inh	erent	Risk	Treatment -		idual	Risk	Implement ation	Branch Responsibilit	Level of
RISI	ΠαΖαιά	С	L	R			L	R	Status	y	Service
					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 = 1 ow 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			S	atisfactio	2022	
Council Service	2019	2021	2022	2019	2021	2022	Performance Gap
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
	Bowral	Provision
Town Centre Masterplans	Mittagong	Provision
	Moss Vale	Provision
	Bowral	Provision
	Mittagong	Provision
Pedestrian Access and Mobility Plans (PAMPs)	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 will be renewed in accordance with their designated hierarchy/categorisation, eg:		
Roads	Asset Management Plan - Roads	<ul> <li>Unsealed roads will be renewed as unsealed roads</li> <li>Lower order road will be maintained as lower order roads.</li> </ul>		
	Asbestos Management	The 18 road segments identified within the Asbestos Management Plan will be managed in accordance with this Plan.		
	Plan	Consideration will be given to the sealing of the nine 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.		



Asset Management Plan - Transport

Footpaths	Pedestrian Access and Mobility Plans	New footpath or shared path connections will not be considered unless they are contained	
	Cycling Strategy	within a PAMP or the 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

27 |Wingecarribee Shire Council



	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.



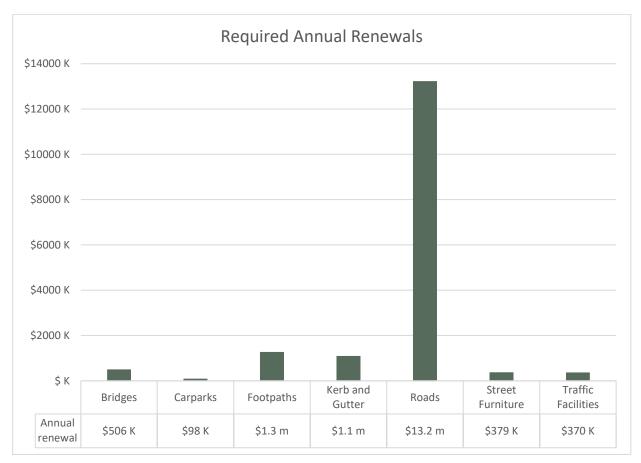


Figure 13: Required Asset Renewals

## 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	\$7,464,603	0.7%		

Table 12 - Asset Class Maintenance

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



Asset Management Plan - Transport

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	\$7,464,603

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<sup>2</sup>.

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

32 |Wingecarribee Shire Council



Asset Management Plan - Transport

#### 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.



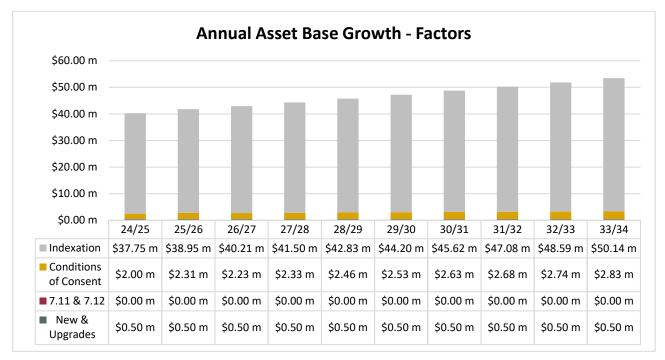


Figure 14: Annual Asset Base Growth – Factors

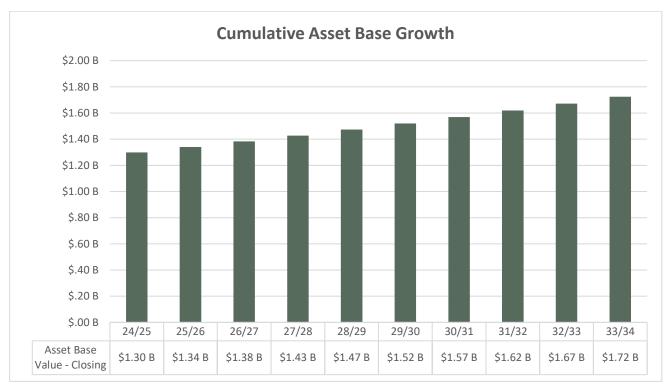


Figure 15: Cumulative Asset Base Growth, measured in billions of dollars.



# 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.



Asset Management Plan - Transport

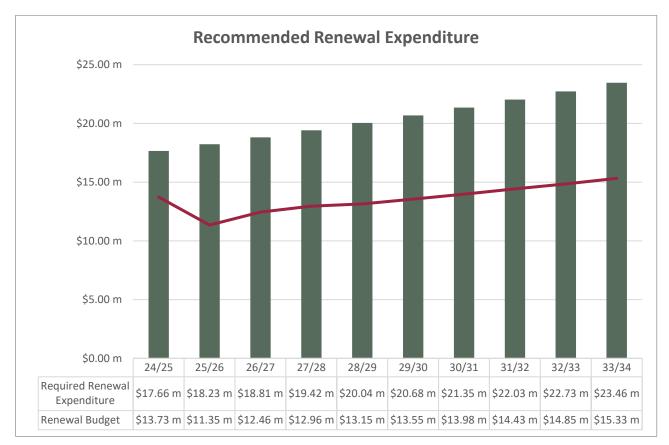


Figure 16: Recommended Renewal Expenditure, measured in millions of dollars.

## 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 \$95.5M.

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.



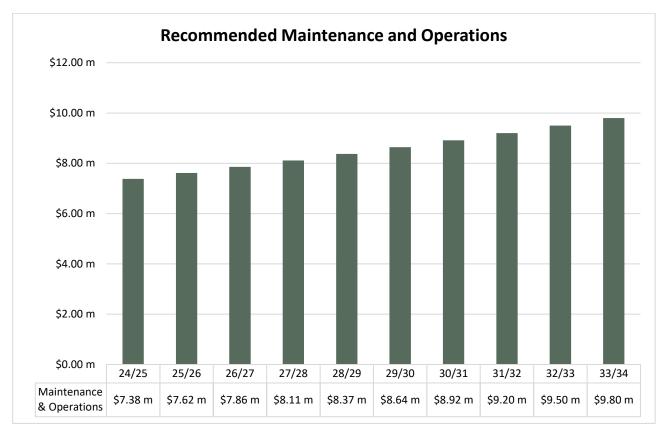


Figure 17 Recommended Maintenance and Operations.

# 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.



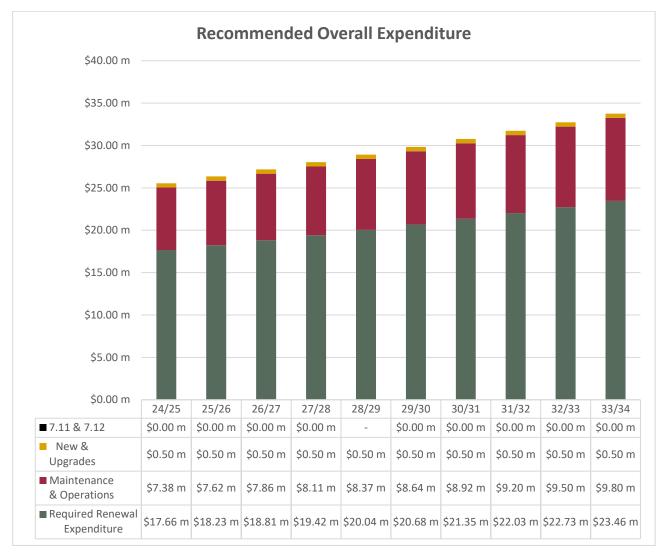


Figure 18: Recommended Overall Expenditure, measured in millions of dollars.



# 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