

APPENDIX B – TRANSPORT – ASSET MANAGEMENT PLAN

This asset management plan covers the portfolio of transport assets that deliver a wide range of services to the Lismore City Council community.

This Asset Management Plan includes all of Council's Sealed, Unsealed, Bridges, Pathways, Culverts, Traffic Management Devices and Other Road assets.

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

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

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

B1.1 PURPOSE OF THIS PLAN

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

This plan includes the following scope of management:

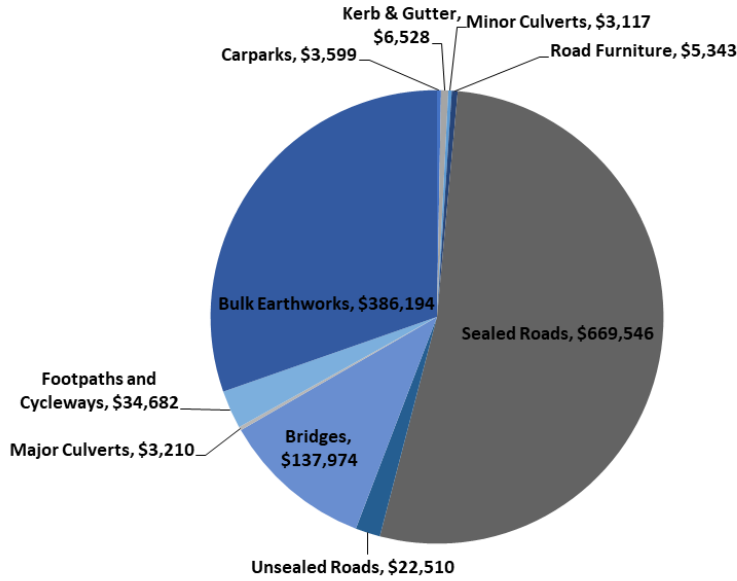
- asset inventory, values and condition
- asset-based levels of service
- demand and service management
- risk management
- development of the long-term financial plan (LTFP) for the maintenance and renewal of transport assets.

B1.2 PORTFOLIO OVERVIEW

Figure 1 Transport AMP Portfolio Overview

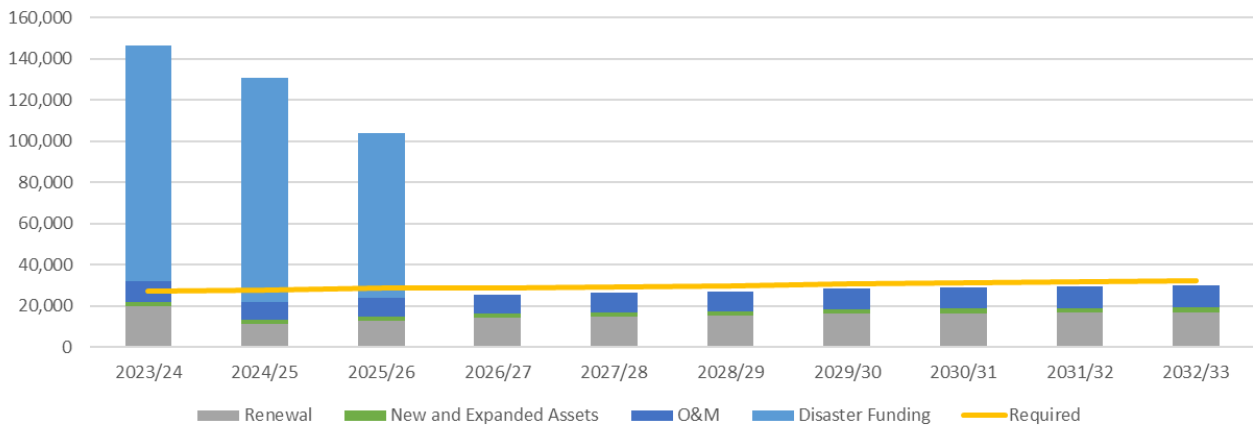
Asset Class ▾

TRANSPORT ASSET PORTFOLIO VALUE \$ 000'S



Infrastructure Ratios	Budget 2023/24	Estimated 2032/33	Funding gap \$ 000's	
Infrastructure renewals ratio	757.46%	78.65%	Yr 1	\$116,663
			5 Yr Average	\$56,554
			10 Yr Average	\$26,076
Infrastructure Backlog Ratio	6.56%	3.45%	Yr 1	(-\$39,773)
			5 Yr Average	(-\$18,227)
			10 Yr Average	(-\$15,273)
Infrastructure Maintenance Ratio	137.11%	122.41%	Yr 1	\$2,749
			5 Yr Average	\$1,779
			10 Yr Average	\$1,804
Total Funding Gap			Yr 1	\$79,639
			5 Yr Average	\$40,107
			10 Yr Average	\$12,607

Transport Asset Portfolio Expenditure \$ 000's



B1.3 ASSET CLASS SUMMARY

Following the 2022 Floods, Council is currently in the process of undertaking a technical assessment of the condition of its roads network. This will provide greater clarity on the scope of damage caused by the event as well as whether recent renewal techniques have resulted in greater resiliency and longer asset lives for Council's infrastructure. Overall Council is confident in its transport infrastructure data and needs to ensure that CAPEX funding aligns with the renewal requirements of the portfolio, there are concerns, however that the condition and backlog may be understated due to the impacts of the floods.

B1.4 ASSET INVENTORY, VALUES AND CONDITION

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

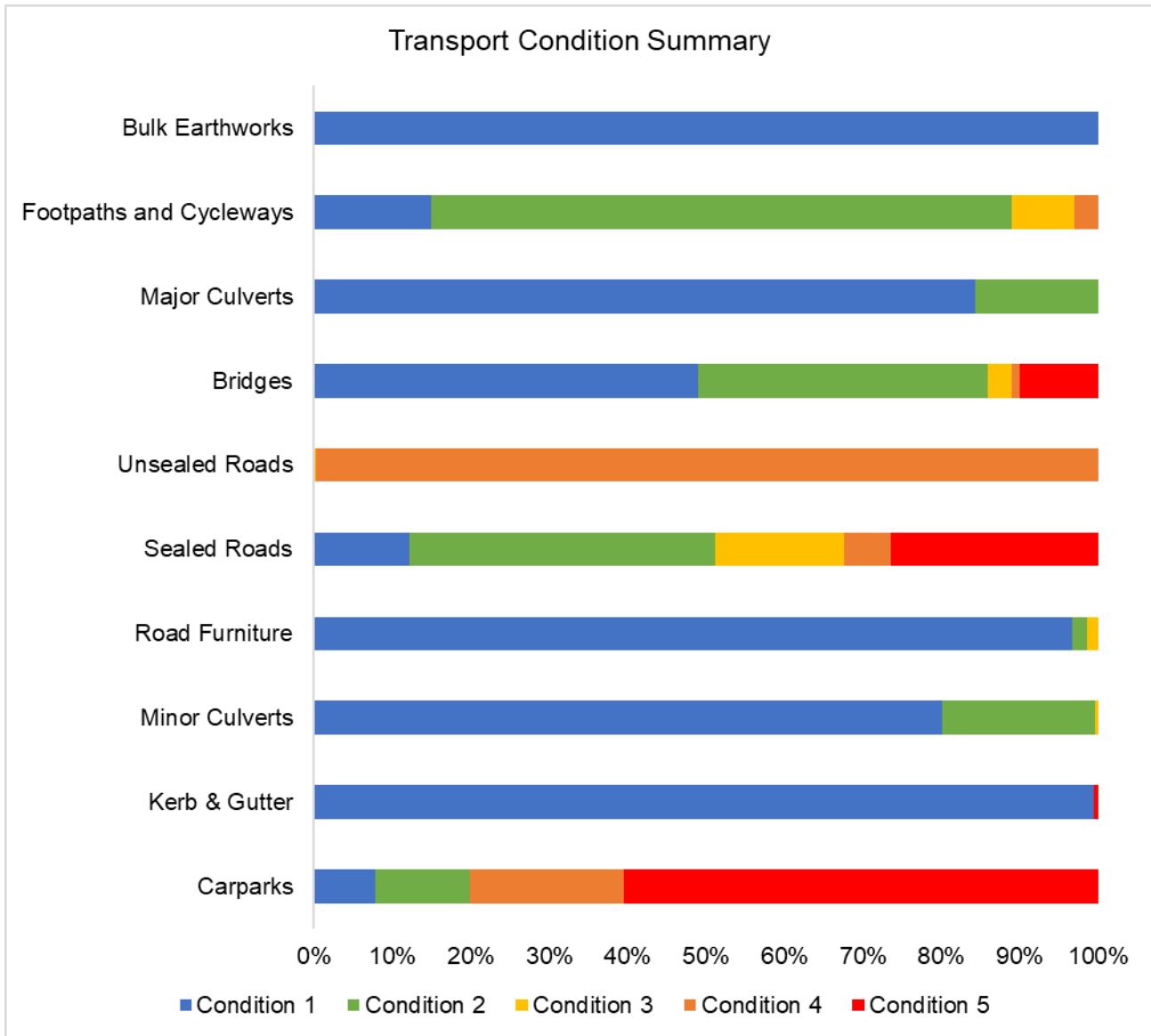
Table 1 Transport Inventory

Asset Class	Asset	Unit of Measure	Units
Roads	Arterial	KM	143
Roads	Collector	KM	139
Roads	Local	KM	522
Roads	Unsealed Roads	KM	411
Bridges	Bridges	No.	116
Bridges	Major Culverts	No.	19
Roads	Carparks (Road Reserve)	No.	16
Roads	Kerb & Gutter	KM	314
Roads	Minor Culverts	KM	2.8
Roads	Road Furniture	No.	124
Roads	Traffic Management Devices	No.	165
Pathways	Cycleways	KM	29
Pathways	Footpaths	KM	76

Table 2 Transport Portfolio Valuation

Asset	Gross Replacement Cost \$000's	Written Down Value \$000's	Annual Depreciation \$000's	Condition 1	Condition 2	Condition 3	Condition 4	Condition 5
Roads	\$713,852	\$400,386	-\$15,921	14%	37%	15%	9%	25%
Bridges	\$137,974	\$76,392	-\$1,407	49%	37%	3%	1%	10%
Footpaths	\$34,682	\$24,531	-\$448	15%	74%	8%	3%	0%
Bulk Earthworks	\$386,194	\$386,194	\$0	100%	0%	0%	0%	0%

Figure 2 Transport Condition Summary



B1.5 ROLES AND RESPONSIBILITIES

Council has adopted the following roles and responsibilities matrix for its Transport assets.

Table 3 Transport Roles and Responsibilities

Position	Role	Asset Class	Responsibilities	Functions
Manager Assets	Asset Owner	Roads Bridges Footpaths	This position takes ownership responsibility for the management of assets and is usually responsible for policy and over all asset strategy	<ul style="list-style-type: none"> Establish long term policy and strategy Establish existing demand for assets Establish future demand for assets (type and standard) Establish long term community expectation Implement policy and strategy for existing assets Establish community asset service level Ensure integration of asset management into Council's community, delivery and operational plans & resourcing Strategy Maintain and develop asset systems and reporting Ensure asset accounting is accurate and maintained, and asset valuation, Develop capital works prioritisation Develop capital works program Liaison with the organisation as a whole on asset matters
Asset Engineer	Asset Custodian	Roads Bridges Footpaths	This position is the technical expert and has responsibility for collecting and maintaining asset data, determining works programs and maintenance strategies etc.	<ul style="list-style-type: none"> Develop and oversee capital works and maintenance program Handover and documentation Control budgets Develop asset plans Asset condition rating Risk management Data custodian – Hierarchy, level of detail Recommendation of asset disposal and renewal 4yr program
Roads Delivery Manager	Asset Delivery – CAPEX/OPEX Service Delivery – Operations	Roads Bridges Footpaths	Responsible for the day-to-day maintenance, operations and services delivered by assets as well as the delivery of capital works	<ul style="list-style-type: none"> Controls asset use, in line with policy Deliver programmed and reactive maintenance, internal/external Deliver and / or manage capital works Manage all operations and service delivery functions Manage service user expectations Deliver adopted levels of service

B1.6 ASSET BASED LEVELS OF SERVICE

Table 4 Transport Levels of Service

Key performance indicator	Level of service	Performance measurement process	Target performance	Current performance
Accessibility	The road network is convenient, offers choices of travel, and is available to the whole community	Continuous monitoring as part of operational activities	No bridges with loading or dimension restrictions.	
		Footpath and Cycleway network continues to expand in accordance with Council's strategies	% of residents and businesses think that the network is adequate to carry the vehicles and loadings required is increasing.	
Quality/condition	The local road network is strategically and efficiently maintained, renewed and upgraded	Backlog ratio for roads	Renewals carried out in accordance with investment strategy and target backlog of 2% within ten years. 95% of asset in satisfactory condition or better.	
	Footpaths and Cycleways are in good condition and are fit for purpose	Condition assessment and operational reviews	95% of assets in satisfactory condition or better.	
Reliability/responsiveness	Council is responsive to the needs of its residents and asset users	Council's customer request system	90% of requests are completed within Council's customer charter.	
Customer satisfaction and involvement	Condition of local sealed roads	Community satisfaction survey	Gap between importance and performance decreases.	
	Condition of unsealed roads	Community satisfaction survey	Gap between importance and performance decreases.	
	The condition of local streets and footpaths in your area	Community satisfaction survey	Gap between importance and performance decreases.	
Sustainability	Transport assets meet financial sustainability ratios	Consumption ratio	Between 50% and 75%.	
		Renewal funding ratio	Between 90% and 110%.	
		Long term funding ratio	Between 95% and 105%.	
Health & safety	The network feels safe to use and is regarded safe in comparison to other similar networks	Annual inspections, operational reports and safety audits	Decrease reported safety incidents resulting from road design as factor. Three-year annual average traffic accidents are decreasing.	
Affordability	Access to facilities and services is affordable and cost effective	Review of service agreements and benchmark with other councils	Total maintenance and operating cost per km is in line with benchmarking against comparable regional councils.	

B1.7 FUTURE DEMAND

Demand for new or increased services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management.

Demand management practices include non-asset solutions, insuring against risks and managing failures.

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

Currently there is significant uncertainty around the way forward following the devastating 2022 floods, with guidance being sought around any 'planned retreat' and potential relocation of households and infrastructure. In the short-term, Council's 'new' & 'upgraded' infrastructure will address the damage sustained during the flood events as well as focus on replacing assets with 'resilient' infrastructure where appropriate. As further guidance and a better understand of expected growth in the LGA is attained, Council will incorporate demand strategies to address the key growth drivers in the next iteration of council's asset management plans.

Table 5: Future demand

Demand factor	Impact on assets
Internal Migration	Council will need to regularly assess whether the current portfolios are fit for purpose and have the functionality and capacity to provide the current range of services and any additional services required into the future.
Increasing costs	Will be a requirement to continue to maximise service delivery within the funding limitations, particularly with grant funding delivering 'like for like' replacement for assets damaged during the 2022 flood events. It is likely that these assets will have to be 'upgraded' to deliver a resilient level of service.
Environment and climate	It is likely that the frequency, severity and intensity of natural disaster events will increase, and Council will need to plan its infrastructure accordingly.

B1.8 LIFECYCLE – MAINTENANCE STRATEGY

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition, including regular ongoing day-to-day work necessary to keep assets functioning but excluding rehabilitation or renewal. It is the operating expenditure required to ensure that the asset reaches its expected useful life. Typically, this can be categorised as:

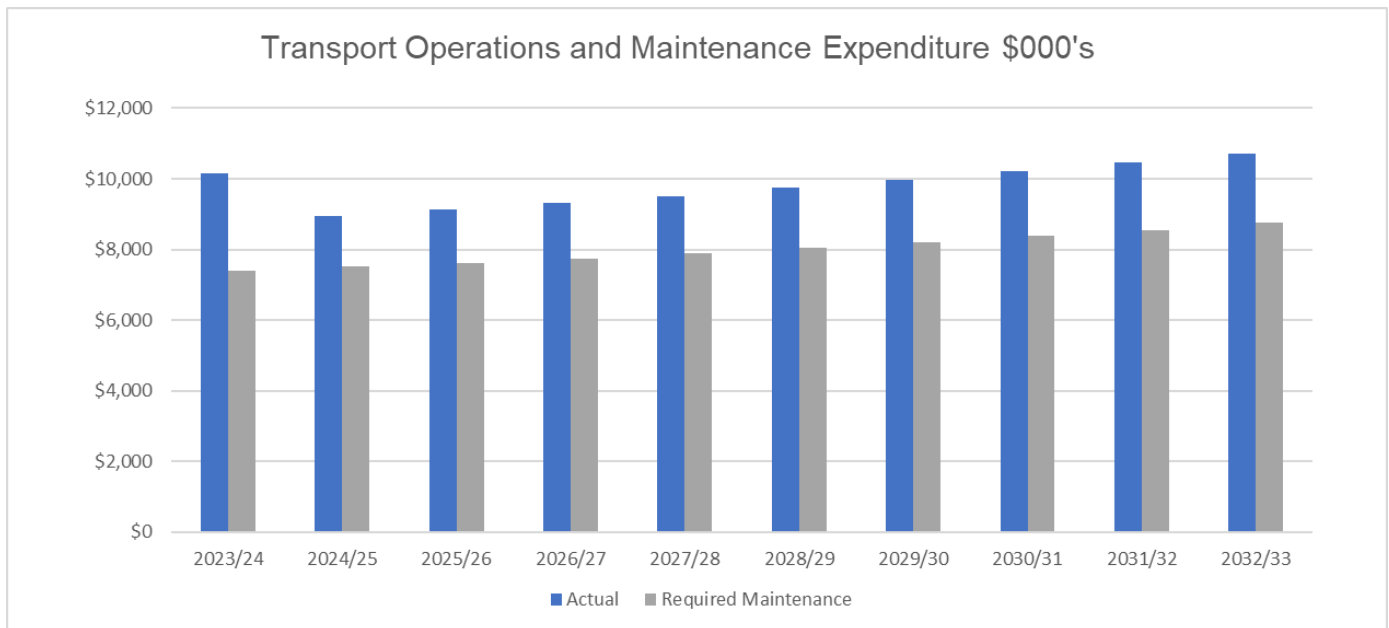
- Operations - regular activities to provide services such as public health, safety and amenity
- Reactive Maintenance - work on breakdowns, failures and or damaged assets that are not operating or are about to fail on an ad hoc basis.
- Planned Proactive and Cyclical Maintenance – works identified through scheduled maintenance/asset inspections whereby assets are not operating as designed or to 100% capacity.

Council’s maintenance programs are currently documented in its Roads Operational Management Plan (ROMP) whereby there is a significant focus on proactive maintenance through regular defect inspections particularly on assets in poor condition. Council’s current expenditure splits on its operational expenditure are as follows:

Table 6 OPEX Proportional Split

Asset	21’ Proactive Maintenance	21’ Reactive Maintenance
Transport Assets	75%	25%

Figure 3 Transport OPEX Projections



Council compared its budgeted/actual OPEX expenditure for its Transport portfolio against similarly categorised councils by the Office of Local Government. This showed that Council has adequate funds and budget allocated to maintain and look after these portfolios. It should be noted that the Emergency Repair and Clean-up costs following the 2022 Flood events have been excluded from this comparison.

Further detailed review of expenditure on maintenance cost centres is required to ensure that expenditure on Transport Assets is captured correctly as some of the actual expenditure above may actually be capital expenditure (renewal)

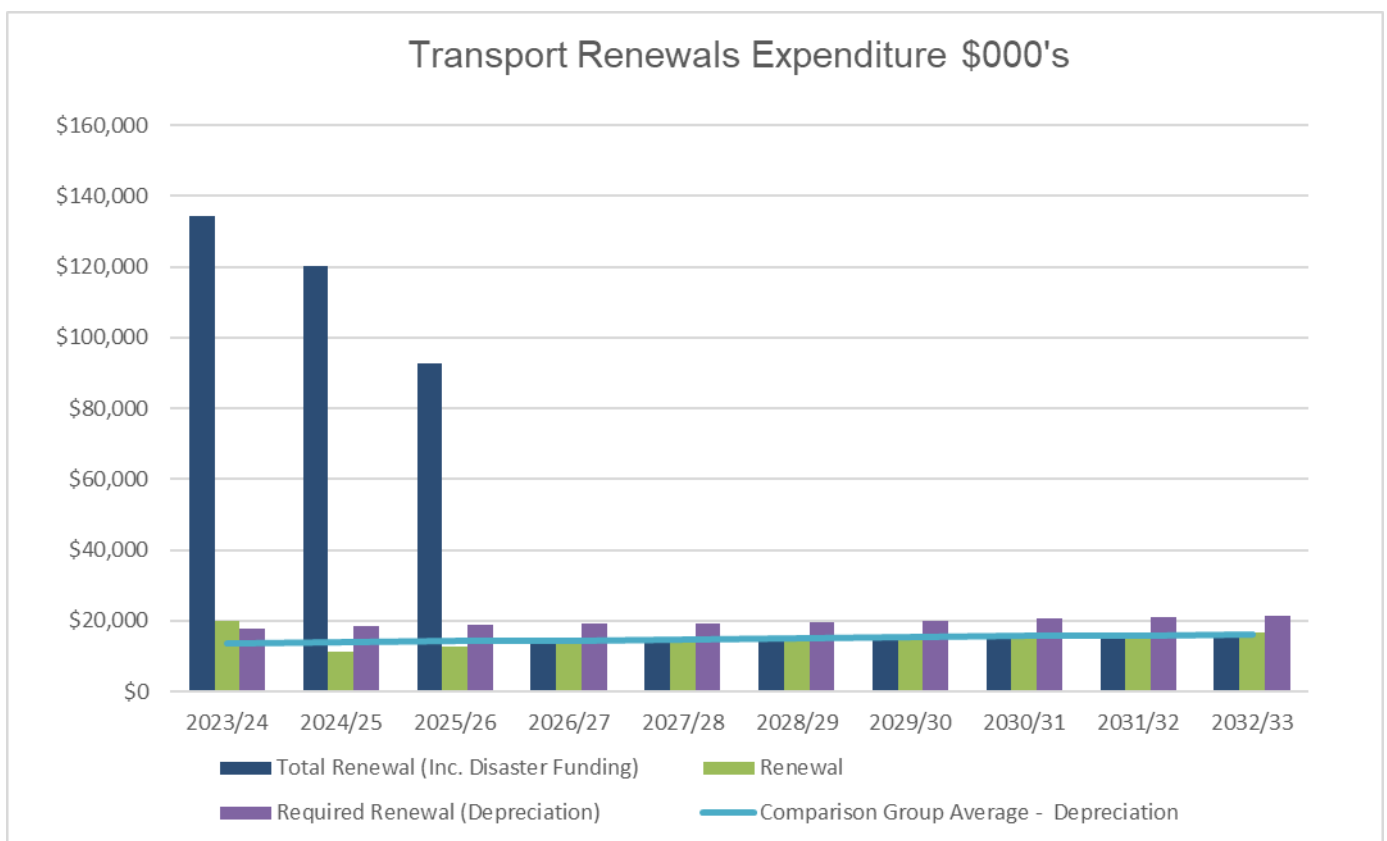
B1.9 LIFECYCLE – RENEWAL/REPLACEMENT STRATEGY

Council currently uses ‘low-cost’ renewal methods where practical. The aim of ‘low-cost’ renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than the full replacement cost.

Pavement renewals are addressed in the form of road pavement in-situ rehabilitation. For example, a pavement stabilisation additive may be incorporated into the existing pavement via the use of a road reclaimer. The pavement is then re-compacted and sealed. Renewing or “Resealing” existing road surfaces at the optimum time reduces the amount of “reactive” pothole patching required and extends the life of the underlying pavement. Footpath renewals are based on the risk that the asset poses to pedestrians. Concrete footpath and cycleway deterioration is generally the result of tree root damage. Asphalt footpath and cycleway deterioration consists of age deterioration causing surface irregularities which may be caused by tree root damage.

Capital works programs are currently developed based on the condition and remaining life of assets. When assets are flagged as approaching end of life, an inspection is undertaken to validate the remaining life of an asset and then is programmed into Council’s capitals works program accordingly.

Figure 4 Transport CAPEX Projections



Council compared its budgeted/actual CAPEX expenditure for its Transport portfolio against its annual depreciation requirements. This showed that Council currently had not budgeted adequate funds to meet the required level of funding and it is anticipated that the condition of these assets are likely to continue to degrade. Further, Council also compared its depreciation against similarly categorised councils by the OLG which showed that Council depreciates its assets at a rate greater than that of the comparison group.

The preliminary estimates of Council’s disaster recovery funding have been included in this iteration of the financial projections. There may be significant potential short-term funding to renew damage sustained in the 2022 flood event however whilst reducing the backlog over the life of this plan does not fully address the long term backlog within Council’s Transport assets.

B1.10 EXPENDITURE PROJECTIONS

Table 7 Transport Expenditure Projections

Budget Gap by Asset Group (\$,000s)		2022/23 (Budget)	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
Transport	Actual											
	Renewal	23,304	19,907	11,153	12,681	14,140	14,766	14,987	16,024	16,273	16,527	16,787
	Disaster Funding	21,700	114,500	109,000	80,000	0	0	0	0	0	0	0
	New and Expanded Assets	13,077	1,748	1,833	1,998	2,044	2,106	2,120	2,224	2,240	2,257	2,275
	Maintenance and Operations	8,385	10,157	8,958	9,138	9,323	9,513	9,740	9,973	10,212	10,457	10,708
	Total Expenditure	66,466	146,312	130,944	103,817	25,507	26,384	26,847	28,221	28,725	29,241	29,770
	Required											
	Required Renewal (Depreciation)	18,167	17,744	18,487	18,765	19,046	19,332	19,718	20,113	20,515	20,925	21,344
	New and Expanded Assets	13,077	1,748	1,833	1,998	2,044	2,106	2,120	2,224	2,240	2,257	2,275
	Required O&M	7,113	7,408	7,517	7,629	7,742	7,897	8,054	8,215	8,379	8,546	8,747
	Total	38,357	26,900	27,837	28,391	28,833	29,334	29,892	30,552	31,134	31,729	32,366
	Overall (GAP)	28,109	119,412	103,107	75,426	-3,326	-2,950	-3,046	-2,331	-2,410	-2,488	-2,596
	Overall (GAP) excluding Disaster Funding	6,409	4,912	-5,893	-4,574	-3,326	-2,950	-3,046	-2,331	-2,410	-2,488	-2,596
	Comparison Group – Depreciation	13,806	13,485	14,050	14,261	14,474	14,691	14,985	15,285	15,591	15,902	16,221
	Comparison Group - Total	33,996	22,641	23,399	23,887	24,261	24,694	25,159	25,724	26,210	26,706	27,242
	Comparison Overall (GAP)	32,470	123,671	107,545	79,930	1,246	1,690	1,688	2,497	2,515	2,535	2,527

Figure 5 Transport Sustainability Ratios*

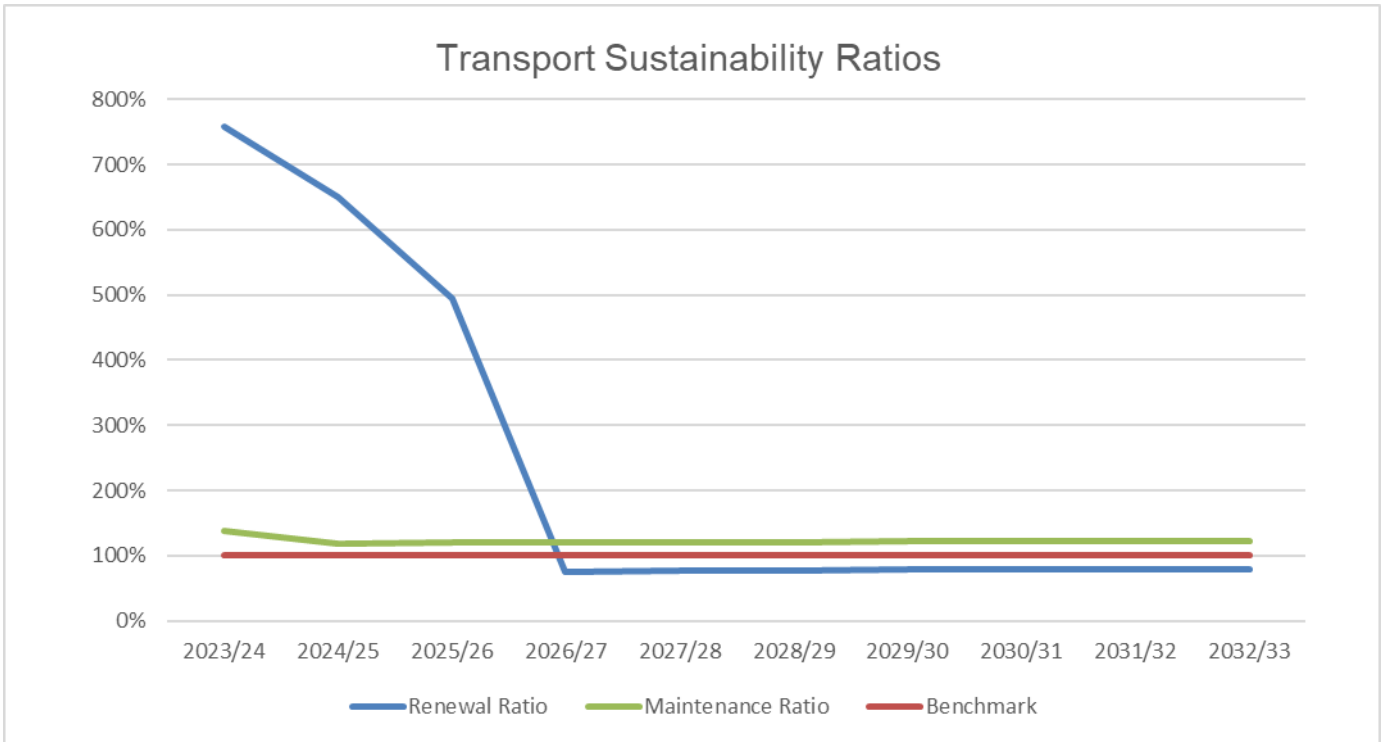
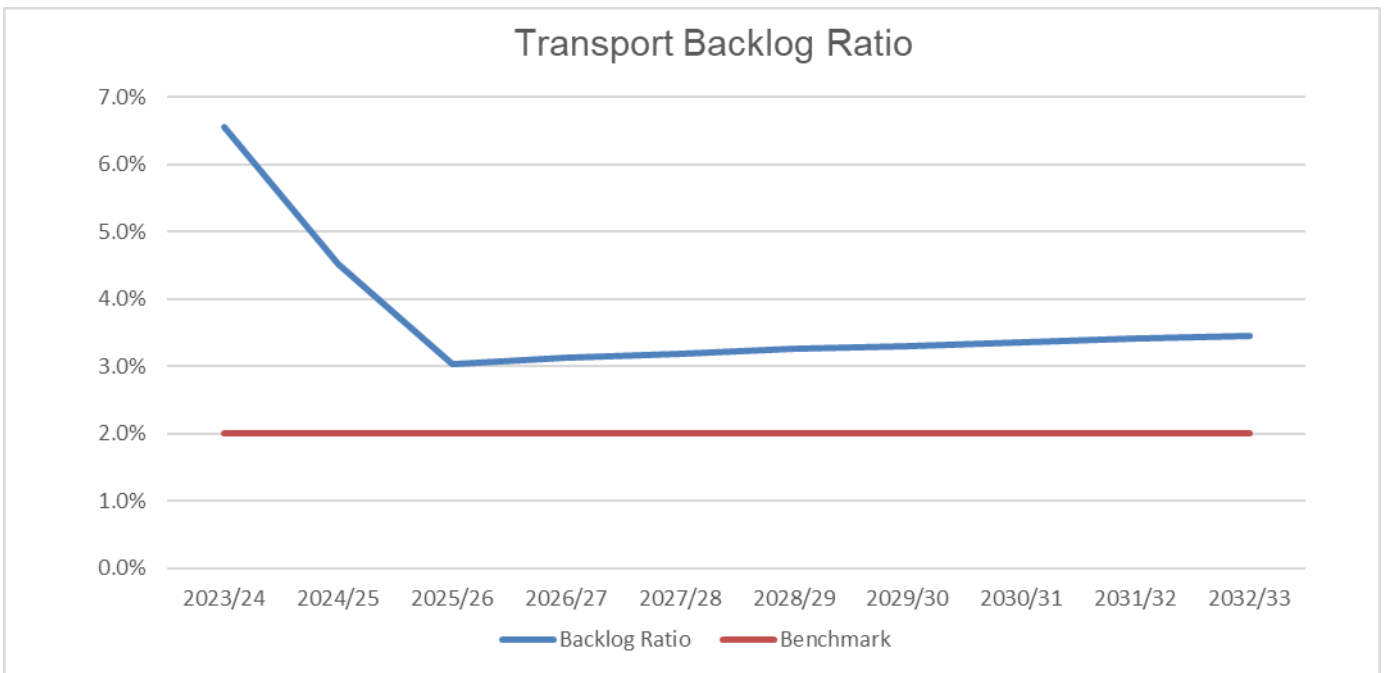


Figure 6 Transport Backlog Ratio*



B1.11 CRITICAL ASSETS

Critical assets are those assets that are likely to result in a more significant financial, environmental and social cost in terms of impact on organisational objectives. By identifying critical assets and critical failure modes, organisations can target and refine investigative activities, maintenance plans and capital expenditure plans at critical areas. Council is currently in the process of assessing and documenting the criticality of its transport portfolio.

The following attributes are currently being considered as part of this analysis:

Table 8 Critical Asset Analysis

	High	Medium	Low
Road classification	Arterial	Primary Collector/Local Collector	Local Access
Waterway area	Roads near or parallel to waterways	Road runs perpendicular to waterways	Road near retention/treatment system
Emergency services	Police Ambulance	RFS, NSWFB, SES	Airfield, Council Depot
Schools	40km zones		
Bus routes	School Bus Routes		
Accident history	Fatality	Accidents (hospitalisation)>5	
Commercial/Industrial	Roads to Energy Supply/Distribution Facilities	Roads to Quarry/Waste/Water Supply/Treatment Facilities	Roads to Administration (Essential Services)
Isolated communities	Only one road providing access to or from a community		

B1.12 RISK MANAGEMENT

Council utilises a corporate risk framework which aligns with ISO 31000:2018. The framework has been adopted for Council's transport assets and highlights the strategic risks which impact Council's asset portfolio.

Table 9 Strategic Risk Management

Risk Description	What can Happen	Risk Rating		Risk Treatment Plan
		Inherent	Residual	
Failure of completed construction / maintenance works / roads / bridges / footpath networks caused by inadequate construction research, forecasting & design, inadequate and/or contaminated construction supplies, workforce capability skillset, quality management systems	Council subjected to regulatory violations and fines; reputational damage; property damage, litigation, grants and financial loss, public harm, injury and/or death.	Extreme	High	<ul style="list-style-type: none"> • Adopted Guiding Principles for interaction and communication between program areas within Infrastructure Services. • Quality management systems for construction activities (Lot Register, Inspection Test Plans, Non-conformance Reporting etc.). • Staff training (Road Construction Workshops) and formal qualification in Civil Construction required for specific staff (Leading Hands, Team Leader, Coordinators). • Review of Environmental Factors, including site investigations and testing prior to disturbance. • On site testing and inspection of supplied quarry material. • Testing and design process that includes external preparation of REF's, consultation with internal and external stakeholders including construction staff and quality assurance through checking of processes and designs by more senior staff before being issued for construction. • Compliance Inspections at 6 monthly and yearly Level 1 & Level 2 Bridge condition inspections carried out and works programmed accordingly to rectify defects. • A panel of project managers has been appointed to provide additional resources as required and staff have received training in contract management e.g., GC21.

B1.13 CONFIDENCE LEVELS

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

Table 10: Asset data confidence scale

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

Summary of confidence in asset data for all asset classes is detailed in the table below.

Table 11: Asset data confidence rating

Asset class	Inventory	Condition	Age	Overall
Transport (Roads, Bridges, Footpaths)	Reliable	Acceptable	Reliable	Reliable

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

B1.14 IMPROVEMENT PLAN

Council is currently in the process of recovering from the 2022 flood and determining the way forward for its community and the LGA and as such has been operationally focused to ensure the day-to-day functions of councils can get back on track following the impacts of the natural disaster. Future iterations of this asset management plan will focus on a more strategic approach to managing the Transport portfolios. The improvement plan below sets out the pathway for Council to achieve this.

Table 12 Improvement Plan

Action	Priority	Responsible	Timing
Asset knowledge and data			
Council to develop and document guidelines and adopt a consistent approach for condition and defect assessment.	M	Assets	02/05/2024
Council to undertake technical condition data collection for Councils' roads assets	H	Assets	30/09/23
Asset knowledge processes			
Strategic asset planning processes			
Council to review adopted road renewal treatments as part of capital program	H	Assets	30/03/24
Council to review long-term (ten-year) lifecycle costing requirements including CAPEX and OPEX as well as the depreciation and maintenance requirements of transport portfolio.	H	Assets Finance	30/03/24
Council to develop comprehensive maintenance and renewal strategy for the management of its assets.	H	Assets	30/03/24
Council to review current service levels and SLAs and develop outcome-based service levels which align with IP&R Framework.	H	Assets Operations	30/03/25
Council to engage community on developed service levels.	H	Assets	30/09/25
Council to undertake risk and criticality assessment of its asset portfolios. In particular assets likely to be impacted by natural disasters and develop a suite of potential intervention/treatment options to increase asset resilience.	H	Assets Operations	30/09/23
Operations and maintenance work practices			
Council is to implement a maintenance management system that records maintenance activity outputs against defined assets.	H	Internal	30/09/24
Following criticality assessment, Council to develop management strategies for critical infrastructure.	H	Assets Operations	30/09/24
Information systems			
Organisational context			
Council to undertake an in-depth workforce review of asset management roles and responsibilities and ensuring that all functions of asset management are covered and are being carried out.	H	Executive	30/09/23

B1.15 CAPITAL WORKS PROGRAM

Refer to 2023/24 Adopted Budget by program.