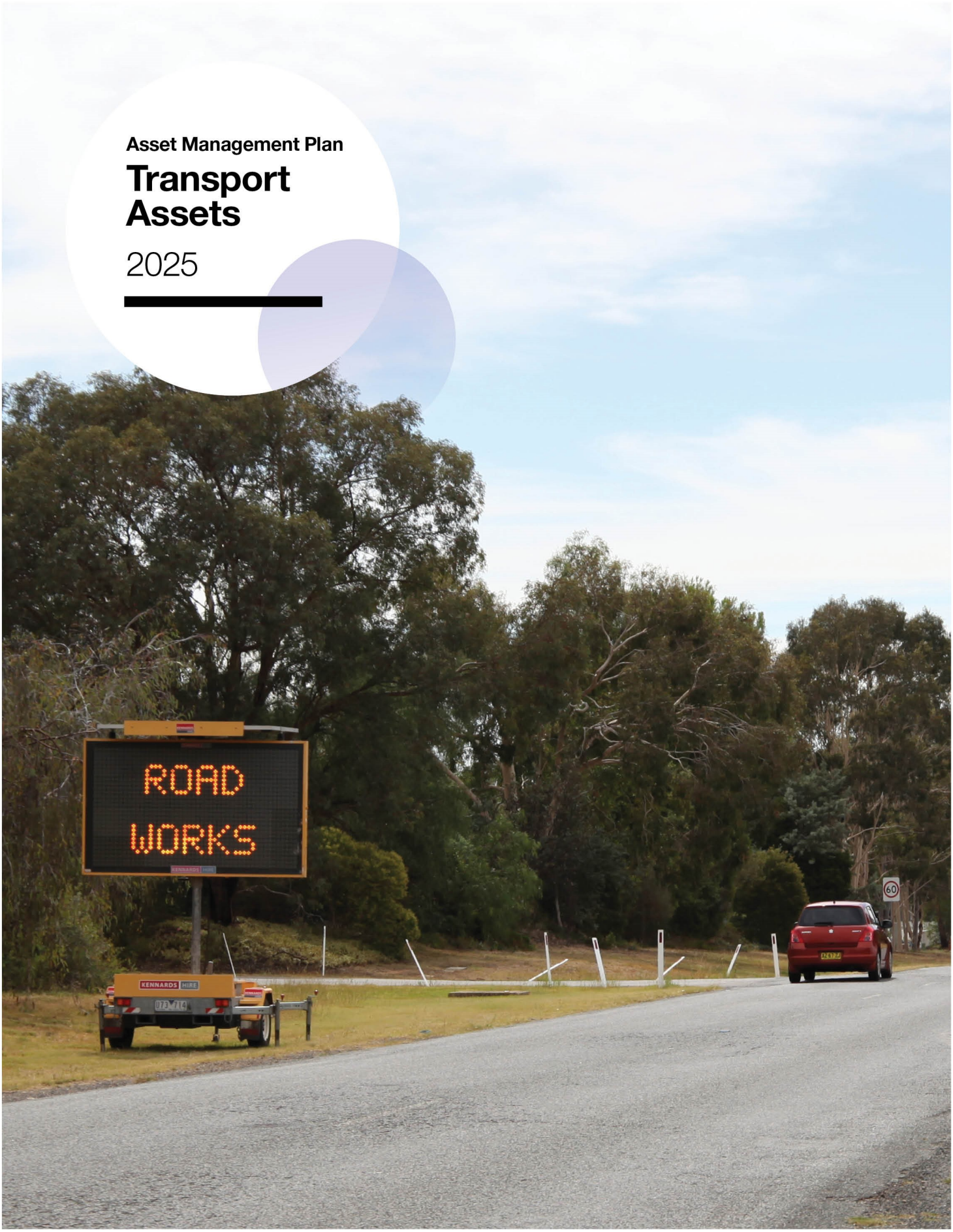
Asset Management Plan

Transport Assets

2025



City of
Wagga Wagga

Contents

1.0 EXECUTIVE SUMMARY

1.1 Purpose of the Plan

Asset Management Plans (AM Plan) provide a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands.

This AM Plan aims to:

- Provide a systematic approach to asset management.
- Address critical risks associated with ageing infrastructure and limited funding.
- Ensure infrastructure supports the community's social, economic, and environmental goals.

This AM Plan details information about Wagga Wagga City Council's (Council) transport assets with key actions required to maintain service levels, optimise lifecycle costs, and support long term financial sustainability.

The plan defines the services, how they are provided and what funds are required to provide the services over the next 10-year planning period. The AM Plan expenditure forecasts inform the Long Term Financial Plan which typically considers a 10-year planning period.

1.2 Asset Description

Council's transport assets consist of assets that help provide efficient and effective movement of the Community throughout the Local Government Area (LGA).

Table 1.2: Transport Assets

Asset Category	Quantity	Replacement Value
Bridges (including pedestrian, vehicle and rail bridges)	94	$114,900,591
Bus and Taxi Shelters	63	$966,185
Carparks	89	$15,197,395
Culverts	3,253	$50,264,187
Footpaths and Shared Paths	339kms	$76,538,798
Kerb and Gutter	788kms	$67,630,628
Sealed Roads	1,240kms	$861,481,576
Unsealed Roads	1,080kms	$89,875,118
TOTAL		**$1,276,854,478**

1.3 Levels of Service

The allocation in the planned budget is insufficient to provide the required maintenance, renewal and acquisition levels identified in this AM Plan.

The main service consequences of the planned budget are:

- Renewal of transport assets cannot be undertaken as required or as they come due.
- Upgrade of existing and construction of new transport assets cannot occur without receipt of additional grant funding.

1.4 Future Demand

The factors influencing future demand and the impacts they have on service delivery are created by:

- Population, demographic and technological changes
- Seasonal and economic factors including climate change
- Land development and planning regulatory changes
- Shifts in community expectations

1.5 Lifecycle Management Plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on Council's 10-year Long Term Financial Plan (LTFP).

Furthermore, when Council commits to the upgrade of existing assets and the acquisition of new assets, future operations, maintenance and renewal costs including depreciation will increase.

1.5.1 What does it Cost?

The lifecycle costs necessary to provide the services covered by this AM Plan include operations, maintenance, renewal and upgrade of existing assets, and the acquisition of new assets to meet demand. Disposal of assets is also considered.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $655,140,220 or $40,815,336 on average per year.

Depreciation is excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10 years of the LTFP is $408,153,359 or $40,815,336 on average per year, which is approximately 62% of the required cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making relies on the AM Plan emphasising the consequences of planned budgets on the service levels provided and communicating the residual risks. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

We plan to provide the following services over the 10-year period of this AM Plan:

- Operate, maintain, renew and acquire transport assets to meet the service levels set in annual budgets
- Renew and upgrade transport assets across the planning period.

1.5.3 What we cannot do

We currently do not allocate enough budget to sustain services at the proposed standard including the provision of new assets.

The 10-year LTFP results in a shortfall of $24,698,686 on average per year of the forecast lifecycle costs required to provide services.

Works and services that cannot be provided under present funding levels are:

- Maintain all bridges, carparks, culverts, sealed roads and unsealed roads to the level detailed in this plan.
- Conducting Level 3 bridge assessments on the entire bridge network.
- Renew all transport assets in conditions 4 and 5 or as they come due.

1.6 Risk Management

The planned budget is insufficient to continue to manage risks of the transport network in the medium term.

The main risk consequences are:

- Potentially dissatisfied members of the community.
- Periodic increased maintenance requirements on the affected assets.
- Lower travelling speeds on roads and/or greater risk of road accidents through driver inattention on road sections with identified functional deficiencies.
- Increased Insurance claims.

1.7 Financial Summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

Two keys indicators of sustainable service delivery that are considered in this AM Plan are the Asset Renewal and Lifecycle Funding ratios. Based on the required costs and planned budget for providing transport services outlined in this plan, the forecast indicators for this planning period are:

- Asset Renewal Funding Ratio – 48%
- Lifecycle Funding Ratio – 62%

Asset values are forecast to increase as additional assets are added to the transport network.

1.8 Assumptions and Improvement Planning

Key assumptions made in this AM Plan are:

- Assets are consumed at a constant rate over the pre-defined standard useful lives recorded in Council's asset management system for each of the asset categories.
- Present service levels will remain constant for the life of the plan.
- Present levels of expenditure (and the relative distribution of planned and reactive maintenance, and capital renewals & new/upgrades) will remain constant for the life of the plan.

The Alternate method has been used to forecast the renewal lifecycle costs for this AM Plan.

This AM Plan is based on a high level of confidence in the asset data.

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

- Develop and improve Council's overall asset management maturity, practices and processes
- Develop condition based renewal models for each transport asset category.
- Develop required maintenance costs and required maintenance activities for transport assets.

2.0 INTRODUCTION

2.1 Background

This AM Plan communicates the actions and necessary funds required to sustainably deliver services through the careful management of assets for the foreseeable future.

This AM Plan is to be read in conjunction with Council's planning documents. This should include the Asset Management Policy and Strategy along with the following planning documents:

- Community Strategic Plan (CSP) 2050
- Long Term Financial Plan 2025-2026
- Local Strategic Planning Statement (LSPS) – Planning for the future: Wagga Wagga 2040
- Wagga Wagga Integrated Transport Strategy and Implementation Plan (WWITS) 2040
- Wagga Wagga Local Infrastructure Contribution (LICP) Plan 2019 – 2034

The infrastructure assets included in this plan have a total replacement value of $1,276,854,478 as at 30 June 2024.

Key stakeholders in the preparation and implementation of this AM Plan are shown in Table 2.1.

Table 2.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Wagga Wagga City Council (Councillors)	▪ Represent the needs of the community, ▪ Allocate resources to meet planning objectives in providing services while managing risks, ▪ Ensure service sustainability.
General Manager and Executive staff	Direct and support Council staff in balancing of agreed service levels and financial ability to provide these services.
Federal Member	Represent community interest within the Federal seat of Riverina.
State Member	Represent community interest within the State seat of Wagga Wagga.
Council staff	▪ Deliver the agreed levels of service for infrastructure assets for the members of the Wagga Wagga community ▪ Maintain a proactive approach to using asset management practices and processes to make informed decisions
Wagga Wagga Community Members (including residents and businesses)	Report perceived shortcomings, damage and safety concerns with current infrastructure within the LGA.
Federal & State Government Authorities and Agencies	▪ Provide input into overall infrastructure performance in conjunction with infrastructure under their jurisdiction. ▪ Provide financial support through grants and contributions to allow Council to achieve its asset renewal, maintenance and operational goals.
National Heavy Vehicle Regulator	Drive sustainable improvement to safety, productivity and efficiency outcomes across the heavy vehicle transport sector.
Transport for NSW	Traffic and funding interactions between State, Regional and Local roads.

2.2 Principles, Goals and Objectives of Asset Management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time.
- **Alignment**: asset management aligns financial, technical and operational decisions with organisational objectives.
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a Long Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

3.0 LEVELS OF SERVICE

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer Research and Expectations

This AM Plan is prepared to facilitate consultation prior to adoption of levels of service by Council. Council has conducted local government satisfaction surveys since 2006. The survey samples residents on the levels of satisfaction with Council services and their importance.

The results of these surveys are interpreted into a quadrant analysis. This analysis combines the stated needs of the community and addresses Council's performance in relation to these needs.

Figure 3.1 below outlines the results of the most recent Community Satisfaction survey undertaken in 2024.

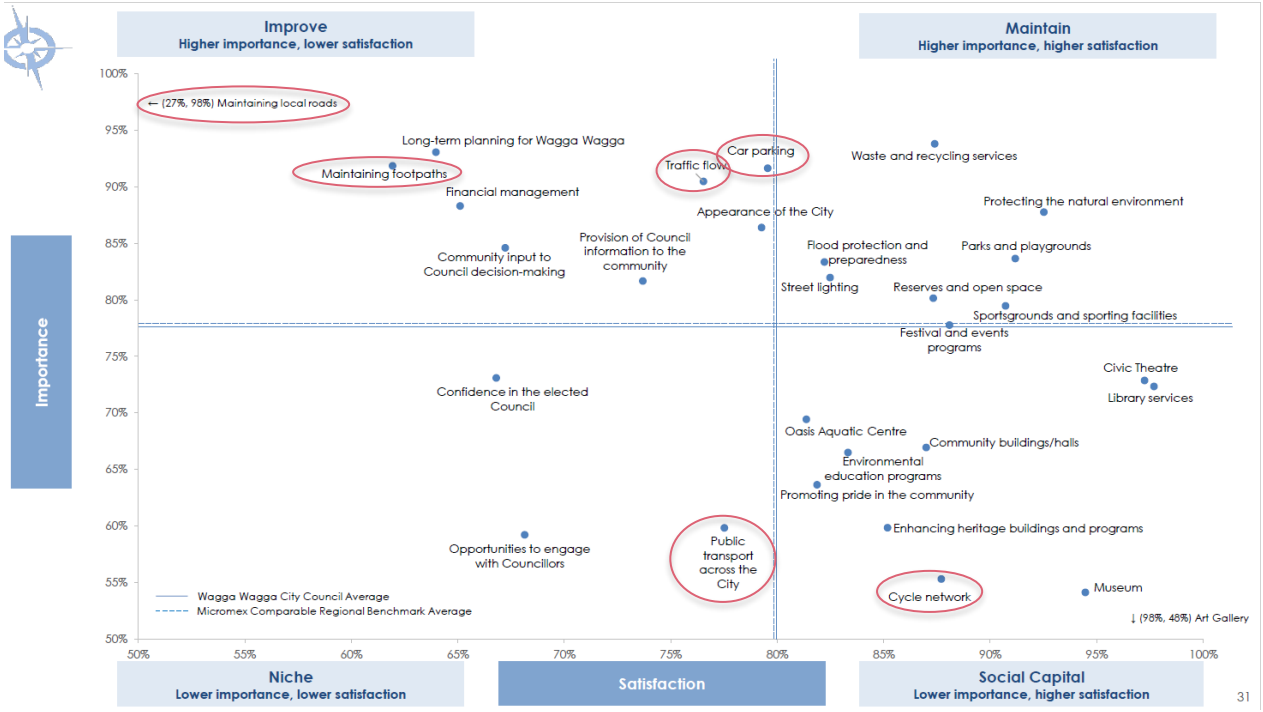


Figure 3.1: Community Satisfaction Survey 2024

The 2024 Community Satisfaction survey highlighted the following in relation to Council's transport network:

- Maintaining local roads had an importance rating of 98% and a satisfaction rating of 27%
- Maintaining footpaths had an importance rating of 92% and a satisfaction rating of 62%
- Car parking had an importance rating of 92% and a satisfaction rating of 80%
- Cycle network had an importance rating of 55% and a satisfaction rating of 88%
- Public transport across the City had an importance rating of 60% and a satisfaction rating of 78%
- Traffic flow had an importance rating of 90% and a satisfaction rating of 77%

When compared to the previous 2021 survey, the importance ratings of the transport related services have remained relatively steady. Satisfaction ratings for maintaining local roads and public transport across the city decreased in the 2024 survey, whilst Community satisfaction for car parking and the cycle network observed an increase. Satisfaction in all other transport services has remained stable.

3.2 Strategic and Corporate Goals

This AM Plan is prepared in conjunction with the future vision outlined in Council's Community Strategic Plan (CSP) 2050, "*Wagga Wagga - a vibrant, growing and sustainable regional city*". The Community Strategic Plan 2050 identifies four (4) strategic focus areas developed in consultation with the community:

- Vibrant – Wagga Wagga is a vibrant place to live, work and visit. We foster a thriving cultural, social, and recreational life, where health, creativity, diversity and our rich cultural heritage is valued, and people feel safe and secure within our community.
- Growing – Wagga Wagga is a progressive regional city with a strong economic future for our Local Government Area and wider region. Wagga Wagga is the Southern Regional Capital of NSW.
- Sustainable – We plan for future generations with a focus on sustainability. We protect the environment and embrace best practice as we move towards net zero emissions for the community and Council.
- Regional Leader – Wagga Wagga is a regional leader. We lead by example and set the standard for innovation, collaboration and resilience driving progress. Our approach is underpinned by good governance and planning.

Within each of these focus areas, the CSP outlines objectives and indicators which will allow Council to further define what the community's long-term vision will look like one it is realised and how we are going to measure the success of each of the focus areas and their objectives.

Asset Management Planning at Council aligns with both the Growing and Regional Leader strategic focus areas within the Community Strategic Plan 2050 and particularly the following objectives and strategies:

- Enabling Infrastructure – Wagga Wagga has a real focus on enabling infrastructure to catalyse and underpin growth.
    - Provide essential infrastructure, including sewer, roads, key housing enabling infrastructure to support growth.
    - Deliver critical community infrastructure to facilitate growth and attract business.
- Planning for the future – Wagga Wagga has sound planning for the future of Wagga Wagga.
    - Adopt a sound approach to strategic planning to ensure that we are preparing for future growth requirements of the city.

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of Council's transport asset services are outlined in Table 3.3.

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Local Government (General) Regulation 2021	Sets out roles, purposes, responsibilities and powers of local government, in addition to those set out in the Local Government Act 1993, including integrated planning and reporting guidelines.
Environmental Planning & Assessment Act 1979	Requirement for Local Environmental Plans and Development Control Plans. Provides for Council control of development of towns and approval of infrastructure expansion.
Roads Act 1993 No 33	Provides authority to Council for administration and development of roads and streets.

Legislation	Requirement
Australian Accounting Standards	Provide the conceptual framework and standards for accounting and financial reporting.
Work Health and Safety Act 2011	Impacts all operations in relation to safety of workers and the public. Council's responsibility to ensure health, safety and welfare of employees and others at places of work.
Work Health and Safety Regulation 2017	Sets out the specific duties for managing hazards and risks to ensure health, safety and welfare.

3.4 Customer Values

Service levels are defined in three ways, customer values, customer levels of service and technical levels of service.

Customer Values indicate:

- What aspects of the service is important to the customer,
- Whether they see value in what is currently provided and
- The likely trend over time based on the current budget provision

Table 3.4 outlines the current customer feedback received on Council's transport assets from the Community Satisfaction Survey held in 2024.

Table 3.4: Customer Values

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Maintaining local roads	Community Satisfaction Survey 2024	Importance – 98% Satisfaction – 27%	Satisfaction expected to increase
Maintaining footpaths	Community Satisfaction Survey 2024	Importance – 92% Satisfaction – 62%	Satisfaction expected to increase
Car parking	Community Satisfaction Survey 2024	Importance – 92% Satisfaction – 80%	Expected to remain steady
Cycle network	Community Satisfaction Survey 2024	Importance – 55% Satisfaction – 88%	Expected to remain steady
Public transport across the City	Community Satisfaction Survey 2024	Importance – 60% Satisfaction – 78%	Expected to remain steady
Traffic flow	Community Satisfaction Survey 2024	Importance – 90% Satisfaction – 77%	Satisfaction expected to increase

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

Table 3.5 outlines the current condition performance (as at 30 June 2024) of Council's transport assets.

Table 3.5: Customer Level of Service Measures

Type of Measure	Level of Service	Performance Measure	Current Performance
Condition	Bridges in conditions 4 and 5 are renewed	Condition ratings	Condition 1 – 5.90% Condition 2 – 81.71% Condition 3 – 8.57% Condition 4 – 3.82% Condition 5 – 0.00%
Condition	Bus and Taxi Shelters in conditions 4 and 5 are renewed	Condition ratings	Condition 1 – 0.88% Condition 2 – 40.43% Condition 3 – 41.15% Condition 4 – 10.01% Condition 5 – 7.52%
Condition	Carparks in conditions 4 and 5 are renewed	Condition ratings	Condition 1 – 17.00% Condition 2 – 58.69% Condition 3 – 22.88% Condition 4 – 1.43% Condition 5 – 0.00%
Condition	Culverts in conditions 4 and 5 are renewed	Condition ratings	Condition 1 – 3.70% Condition 2 – 28.80% Condition 3 – 47.42% Condition 4 – 17.86% Condition 5 – 2.22%
Condition	Footpaths and Shared Paths in conditions 4 and 5 are renewed	Condition ratings	Condition 1 – 20.54% Condition 2 – 31.58% Condition 3 – 44.31% Condition 4 – 3.38% Condition 5 – 0.19%
Condition	Kerb and Gutter in conditions 4 and 5 are renewed	Condition ratings	Condition 1 – 12.71% Condition 2 – 67.13% Condition 3 – 20.05% Condition 4 – 0.10% Condition 5 – 0.00%
Condition	Sealed Roads Surfaces in conditions 4 and 5 are renewed	Condition ratings	Condition 1 – 32.81% Condition 2 – 20.22% Condition 3 – 21.84% Condition 4 – 20.32% Condition 5 – 4.80%
Condition	Sealed Roads Pavements in conditions 4 and 5 are renewed	Condition ratings	Condition 1 – 8.15% Condition 2 – 63.59% Condition 3 – 26.72% Condition 4 – 1.52% Condition 5 – 0.01%
Condition	Unsealed Roads in conditions 4 and 5 are renewed	Condition ratings	Condition 1 – 4.59% Condition 2 – 63.82% Condition 3 – 29.60% Condition 4 – 1.61% Condition 5 – 0.38%

3.6 Technical Levels of Service

To deliver on the customer values, and impact Customer Levels of Service, Council has a number of operational and technical measures of performance. These measures relate to the lifecycle activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Service and asset managers plan, implement and control technical service levels to influence service outcomes.[3]

[3] IPWEA, 2015, IIMM, p 2|28.

Table 3.6 shows the lifecycle activities related to the current 10-year planned budget, and the forecast costs recommended in this AM Plan.

Table 3.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Description	Required Costs	Planned Budget	Funding Ratio
Acquisition	Footpath and Shared Path construction and upgrades	Construction of new footpaths and shared paths and upgrades to the Wiradjuri Walking Track.	$15,168,479	$2,624,181	17%
	Amundsen Bridge Construction	Construction of Amundsen bridge linking Boorooma.	$1,114,547	$1,114,547	100%
	Southern Growth Area – Plumpton Road North and South	Duplication of Plumpton Road including intersection upgrades.	$62,128,546	$62,128,546	100%
	Red Hill Road Upgrades	Proposed widening of Red Hill Rd including possible intersection treatments.	$6,458,723	$6,458,723	100%
	Mates Gully Road Upgrade	Upgrade to Mates Gully Rd, north of Tarcutta.	$3,684,000	$3,684,000	100%
	Boorooma St Upgrades	Proposed widening of Red Hill Rd including possible intersection treatments.	$4,695,575	$4,695,575	100%
	Estella Road Upgrade	Upgrade works on Estella Road to the west of Estella Public School.	$700,000	$0	0%
	Farrer Road Upgrade	Completion of road upgrades previously commenced.	$4,181,529	$4,181,529	100%
	Glenfield Road Corridor Works	Proposed upgrade works along this busy corridor.	$19,159,955	$19,159,955	100%
	Gregadoo Road Corridor Works	Upgrade works to Gregadoo Road and intersection treatments.	$3,736,130	$3,736,130	100%
	Pine Gully Road Corridor Works	Upgrade works to Pine Gully Road and intersection treatments.	$9,071,547	$6,138,809	68%
	Livestock Marketing Centre – New Circulating Road	Proposed new partial road at this facility.	$2,036,693	$2,036,693	100%
		Total Acquisition	**$132,135,724**	**$115,958,668**	**88%**

Lifecycle Activity	Purpose of Activity	Activity Description	Required Costs	Planned Budget	Funding Ratio
Maintenance	Maintain bridge assets across the LGA	Conduct maintenance on assets as required across the bridge network.	$1,110,279 average per year	$371,163 average per year	33%
	Maintain carpark assets across the LGA	Conduct maintenance on assets as required across the carparks network.	$190,648 average per year	$58,760 average per year	31%
	Maintain culverts across the LGA	Conduct maintenance on assets as required across the culvert network.	$958,393 average per year	$471,438 average per year	49%
	Maintain footpaths and shared paths across the LGA	Conduct maintenance on assets as required across the footpath network.	$506,119 average per year	$633,029 average per year	125%
	Maintain sealed roads across the LGA	Conduct maintenance on assets as required across the sealed roads network.	$9,491,766 average per year	$6,597,819 average per year	70%
	Maintain unsealed roads across the LGA	Conduct maintenance on assets as required across the unsealed roads network.	$3,527,157 average per year	$3,148,883 average per year	89%
		Total Maintenance	**$157,843,608**	**$115,277,993**	**73%**
Renewal	Bridge assets in conditions 4 and 5 are renewed	Develop a renewal plan based on the current replacement cost of each bridge asset.	$438,965 average per year	$0 average per year	0%
	Carpark assets in conditions 4 and 5 are renewed	Develop a renewal plan based on the current replacement cost of each carpark.	$21,728 average per year	$0 average per year	0%
	Culvert assets in conditions 4 and 5 are renewed	Develop a renewal plan based on the current replacement cost of each culvert asset.	$1,009,334 average per year	$936,769 average per year	93%
	Footpaths and Shared Paths in conditions 4 and 5 are renewed	Develop a renewal plan based on the current replacement cost of each footpath and shared path asset.	$3,854,732 average per year	$282,122 average per year	7%
	Kerb and Gutter assets in conditions 4 and 5 are renewed	Develop a renewal plan based on the current replacement cost of each kerb and gutter asset.	$724,850 average per year	$724,850 average per year	100%

Lifecycle Activity	Purpose of Activity	Activity Description	Required Costs	Planned Budget	Funding Ratio
	Sealed Roads in conditions 4 and 5 are renewed	Develop a renewal plan based on the current replacement cost of each sealed road.	$25,553,909 average per year	$13,263,814 average per year	52%
	Unsealed Roads in conditions 4 and 5 are renewed	Develop a renewal plan based on the current replacement cost of each unsealed road.	$4,912,572 average per year	$2,484,113 average per year	51%
		Total Renewal	**$365,160,888**	**$176,916,677**	**48%**

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged that circumstances such as technology and customer priorities will change over time.

4.0 FUTURE DEMAND

Future demand refers to the anticipated need for infrastructure services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand Drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. The factors influencing future demand are created by:

- Population, demographic and technological changes
- Seasonal and economic factors including climate change
- Land development and planning regulatory changes
- Shifts in community expectations

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

Demand for infrastructure is generated predominantly through either an increased utilisation of existing infrastructure brought about by the factors above or the requirement for new infrastructure to meet the needs of growth in new development.

The demand created by these two circumstances requires analysis to consider the ramifications to existing infrastructure networks and the ability of these networks to cope with the increased infrastructure. This analysis applies in all cases ranging from new subdivisions creating an increased load on existing networks, to changes in existing areas leading to increasing or decreasing utilisation and demand on infrastructure assets.

4.2 Impacts and Demand Management Plan

The impact on service delivery is managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

A demand management plan will be considered as part of future revisions of this AM Plan.

4.3 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed.

Acquiring new assets will commit Council to ongoing operations, maintenance and renewal costs. These future costs and expenses are identified and considered in developing future forecasts for the long term financial plan.

4.4 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk that needs to be managed.

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts.[4]

As a minimum we consider how to manage our existing assets given potential climate change impacts for our region such as dual purpose usage of existing assets.

[4] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Risk and opportunities identified to date are shown in Table 4.5.1

Table 4.5.1 Managing the Impact of Climate Change on Assets and Services

Climate change risk	Impact on services	Climate Change Management Plan
Increased hot days and average temperatures	Increases in hot days and an increase in average temperatures lead to an urban heat island effect causing public health issues and decreased use of facilities such as shared paths and footpaths, bus stops and carparks. Increases in hot days and an increase in average temperatures lead to fatigue and degradation of materials and surfaces resulting in increased cost of maintenance and renewals.	Increase urban canopies along footpaths and shared paths. Increase shading at bus stops and within car parks. Implement actions from the Active Travel Plan and Street Tree Strategy. Utilise materials and designs for pavements and surfaces that are highly resistant to high temperatures.
Increased intensity of storm events and increased flooding	Increased intensity of storm events and increased flooding leads to decreased access as well as degradation of materials and surfaces resulting in increased cost of maintenance and renewals.	Implement actions from the Floodplain Risk Management Plan. Utilise materials and designs for pavements that are highly resistant to inundation. Retain flood paths in new developments.

Additionally, the way in which we construct new and upgrade existing assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Table 4.5.2 summarises opportunities to build climate change resilience into new and existing assets.

Table 4.5.2 Building Climate Change Resilience into New and Existing Assets

Asset Description	Climate Change Impact	Resilience Plan
Road network across the LGA	Rainfall intensity increases.	Current and future designs must use the latest Australian Rainfall and Runoff design events which have been updated with improved real event data.
	Increased duration of dry periods and drought.	Longer periods of dry pavements on sealed roads may extend the assets useful life particularly in low lying areas. Unsealed roads need moisture to bind the materials together. Drier weather conditions accelerate the rate at which material comes loose and corrugations and dust forms. Grading can also make road conditions worse when done in dry conditions. Synthetic binding polymers can be applied to assist.

The impact of climate change on new and existing assets is evolving and new opportunities will be considered in future revisions of this AM Plan.

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service throughout their entire lifecycle, from acquisition to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

- **Capital**
    - **Acquisition** – the activities to provide a higher level of service (e.g. widened road) or a new service that did not exist previously (e.g. new bridge).
    - **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g. road reconstruction).
- **Operating**
    - **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations
    - **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to provide service for its planned life (e.g. pothole and surface patching).
    - **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary.

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.0.

Figure 5.0: Asset Lifecycle Activities

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this AM Plan are shown in Table 5.1.1.

Table 5.1.1: Assets covered by this Plan

Asset Category	Quantity	Replacement Value
Bridges (including pedestrian, vehicle and rail bridges)	94	$114,900,591
Bus and Taxi Shelters	63	$966,185
Carparks	89	$15,197,395
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Sealed Roads	1,240kms	$861,481,576
Unsealed Roads	1,080kms	$89,875,118
TOTAL		**$1,276,854,478**

All quantities and values shown above are as at 30 June 2024.

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Glenfield Road/Pearson Street	▪ High volumes of traffic connecting the University, Northern Growth Area, Lloyd, Springvale and the CBD ▪ Intersections have high wait times and traffic congestion ▪ Major drainage issues increasing the risk of flooding.
Gobbagombalin Bridge (NSW Government)	High volumes of traffic to/from the University, CBD, Bomen Industrial Estate and to new estate developments.
Bourke Street	Pedestrian crossing safety.
Edward Street underpass (NSW Government)	▪ Height limitations ▪ Hindrance for heavy trucks trying to pull away under heavy load.
Roundabouts across the City	Contemporary safety standards for pedestrians and bike riders require geometric modification of the roundabout including entries/exits, median widths.
Wagga Wagga Base Hospital	Hospital accessibility, traffic flows, pedestrian safety and precinct parking availability.
Pine Gully Road	Road width and safety concerns for pedestrians and bike riders.

Location	Service Deficiency
Old Narrandera Road/ Olympic Highway (NSW Government)	Traffic flows are congested as local traffic from the Northern Growth Area enters the Olympic Highway from Old Narrandera Road.
Plumpton Road/Plunkett Drive/Gregadoo Road	Traffic flows are congested for local traffic and access to Mater Dei School, Mater Dei Catholic College and The Grange Lifestyle Village.
Red Hill Road	Traffic flows from Kooringal Road to Glenfield Road are reportedly restricted and the duplication of Red Hill Road will improve the efficiency.

The above service deficiencies were identified from community consultation undertaken for the Wagga Wagga Integrated Transport Study (WWITS) in 2016 and by Council staff.

5.1.3 Asset condition

The condition of Council's transport assets is currently monitored through a combination of internal and external resources. External condition assessments of transport assets are undertaken every 3-5 years in line with the asset revaluation process. The most recent condition assessments were undertaken in 2023.

Condition is measured using a 1 – 5 grading system[5] as detailed in Table 5.1.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.1.3: Condition Grading System

Condition Grading	Description of Condition
1	**Excellent**: free of defects, only planned and/or routine maintenance required
2	**Good**: minor defects, increasing maintenance required plus planned maintenance
3	**Average**: defects requiring regular and/or significant maintenance to reinstate service
4	**Poor**: significant defects, higher order cost intervention likely
5	**Very Poor**: physically unsound and/or beyond rehabilitation, immediate action required

The condition profile of Council's transport assets, by asset category, is shown in Figure 5.1.3.

[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

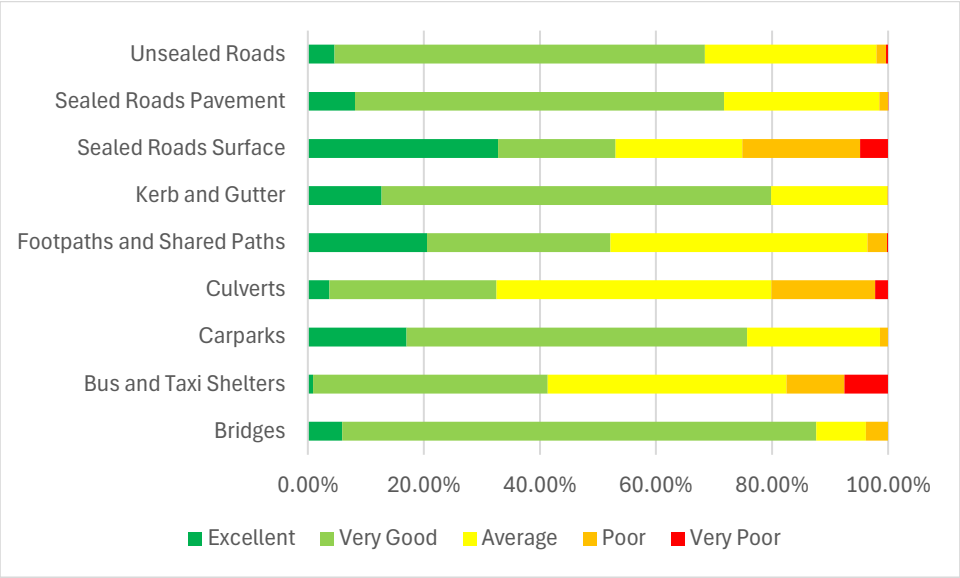


Figure 5.1.3: Asset Category Condition Profile

5.2 Maintenance Plan

Maintenance includes all activities necessary for ensuring an asset remains in an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities for transport assets include asphalt patching, pothole repairs, and footpath grinding.

Maintenance budget levels for transport assets are considered to be inadequate to meet the projected service level forecasts identified in this AM Plan. Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified and are highlighted in this AM Plan.

Asset hierarchy

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.

The asset service hierarchy is shown is Table 5.2.2.

Table 5.2.2: Asset Service Hierarchy

Asset Category	Asset Components
Bridges	Assets are recognised as a single component.
Bus and Taxi Shelters	Assets are recognised as a single component.
Carparks	Sealed carparks are recognised as three separate components: ▪ Formation ▪ Pavement ▪ Surface Unsealed carparks are recognised as two separate components: ▪ Formation ▪ Pavement
Culverts	Assets are recognised as two separate components: ▪ Culvert ▪ Headwalls

Asset Category	Asset Components
Footpaths and Shared Paths	Assets are recognised as a single component.
Kerb and Gutter	Assets are recognised as a single component.
Sealed Roads	Assets are recognised as three separate components: ▪ Formation ▪ Pavement ▪ Surface
Unsealed Roads	Assets are recognised as two separate components: ▪ Formation ▪ Pavement

Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of, the forecast operation and maintenance costs are expected to decrease. Figure 5.2 shows the forecast maintenance costs relative to the proposed maintenance planned budget.

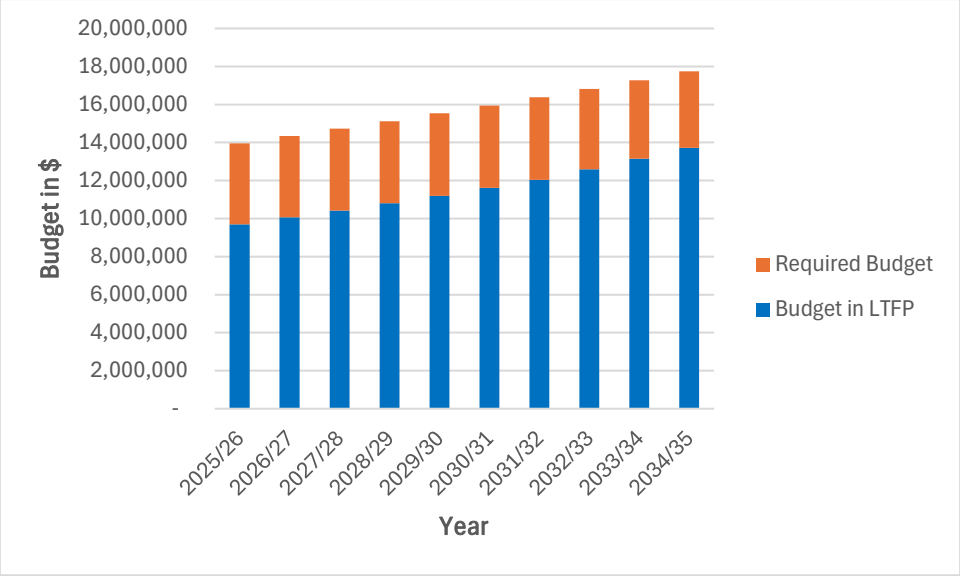


Figure 5.2: Maintenance Summary

The allocation in the planned budget is insufficient to undertake the proposed maintenance levels of service identified in this plan over the planning period. The following tables provide the forecast maintenance costs against the planned budget over the planning period.

Bridge Assets

Year	Forecast Costs	Planned Budget
2025/26	$981,961	$309,741
2026/27	$1,008,474	$321,999
2027/28	$1,035,703	$334,743
2028/29	$1,063,667	$347,993
2029/30	$1,092,386	$361,769
2030/31	$1,121,880	$376,091
2031/32	$1,152,171	$390,982

Year	Forecast Costs	Planned Budget
2032/33	$1,183,279	$406,464
2033/34	$1,215,228	$422,559
2034/35	$1,248,039	$439,291
Total	**$11,102,786**	**$3,711,633**

Carpark Assets

Year	Forecast Costs	Planned Budget
2025/26	$168,614	$46,837
2026/27	$173,167	$49,104
2027/28	$177,842	$51,499
2028/29	$182,644	$54,030
2029/30	$187,575	$56,706
2030/31	$192,640	$59,537
2031/32	$197,841	$62,531
2032/33	$203,183	$65,699
2033/34	$208,669	$69,053
2034/35	$214,303	$72,604
Total	**$1,906,476**	**$587,599**

Culvert Assets

Year	Forecast Costs	Planned Budget
2025/26	$847,629	$391,146
2026/27	$870,515	$406,792
2027/28	$894,019	$423,064
2028/29	$918,157	$439,986
2029/30	$942,948	$457,586
2030/31	$968,407	$475,889
2031/32	$994,554	$494,925
2032/33	$1,021,407	$517,573
2033/34	$1,048,985	$541,291
2034/35	$1,077,308	$566,128
Total	**$9,583,928**	**$4,714,380**

Footpaths and Shared Paths

Year	Forecast Costs	Planned Budget
2025/26	$447,625	$527,757
2026/27	$459,711	$547,439
2027/28	$472,123	$567,866
2028/29	$484,871	$589,066
2029/30	$497,962	$611,068
2030/31	$511,407	$633,904
2031/32	$525,215	$657,605

Year	Forecast Costs	Planned Budget
2032/33	$539,396	$693,303
2033/34	$553,960	$731,114
2034/35	$568,916	$771,169
Total	**$5,061,186**	**$6,330,290**

Sealed Roads

Year	Forecast Costs	Planned Budget
2025/26	$8,394,778	$5,617,487
2026/27	$8,621,437	$5,821,596
2027/28	$8,854,216	$6,011,745
2028/29	$9,093,280	$6,220,396
2029/30	$9,338,798	$6,421,946
2030/31	$9,590,946	$6,651,911
2031/32	$9,849,902	$6,890,617
2032/33	$10,115,849	$7,169,801
2033/34	$10,388,977	$7,443,756
2034/35	$10,669,479	$7,728,934
Total	**$94,917,662**	**$65,978,188**

Unsealed Roads

Year	Forecast Costs	Planned Budget
2025/26	$3,119,514	$2,600,729
2026/27	$3,203,741	$2,704,758
2027/28	$3,290,242	$2,812,949
2028/29	$3,379,079	$2,925,466
2029/30	$3,470,314	$3,042,485
2030/31	$3,564,012	$3,164,184
2031/32	$3,660,241	$3,290,752
2032/33	$3,759,067	$3,463,704
2033/34	$3,860,562	$3,645,916
2034/35	$3,964,797	$3,837,891
Total	**$35,271,570**	**$31,488,834**

5.3 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Assets requiring renewal are identified from one of two approaches.

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or

- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

The useful lives of transport assets range from 10 to 150 years. These asset useful lives were last reviewed in 2023. Table 5.3 outlines the current useful lives of Council's transport assets.

Table 5.3: Useful Lives of Transport Assets

Asset Category	Useful Life
Bridges	25 to 150 years
Bus and Taxi Shelters	20 years
Carparks	10 to 100 years (based on each component)
Culverts	60 years
Footpaths and Shared Paths	15 to 80 years
Kerb and Gutter	80 to 100 years
Sealed Roads	15 to 80 years (based on each component)
Unsealed Roads	10 years

The estimates for renewals in this AM Plan were based on the Alternate Method, using the cost to renew any transport assets in conditions 4 and 5.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate, or
- To ensure the infrastructure is of sufficient quality to meet the service requirements.[6]

It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[7]

Council does not currently have a current renewal ranking criteria for its transport assets. It is proposed to review and refine this as an improvement for future AM Plans.

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.3.2.

[6] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

[7] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

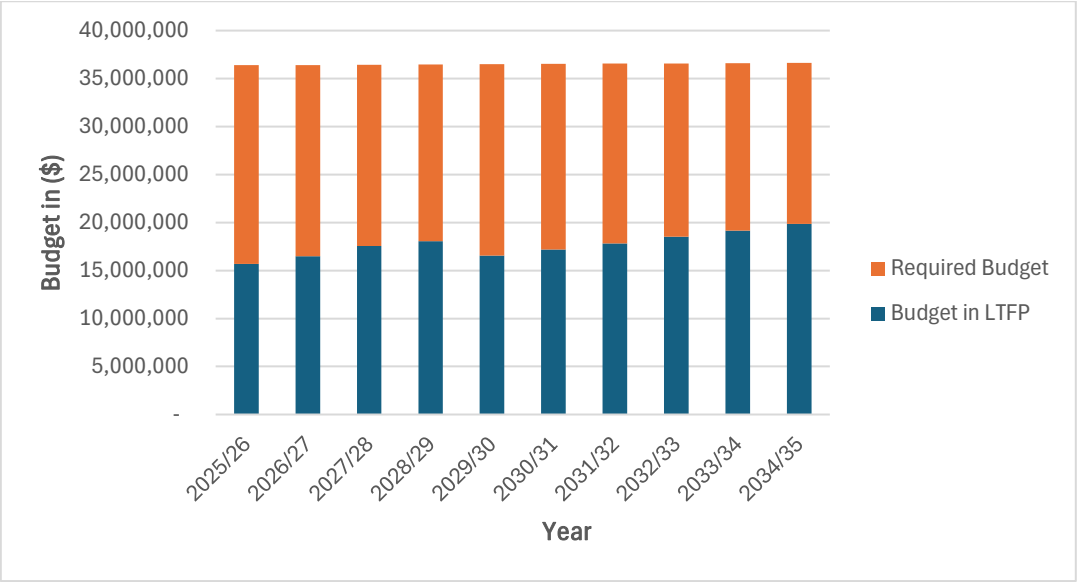


Figure 5.3.2: Forecast Renewal Costs

The allocation in the planned budget is insufficient to undertake the proposed renewal levels of service identified in this plan over the planning period. The following tables provide the forecast annual renewal costs against the planned budget over the planning period.

Bridge Assets

Year	Forecast Costs	Planned Budget
2025/26	$438,965	$0
2026/27	$438,965	$0
2027/28	$438,965	$0
2028/29	$438,965	$0
2029/30	$438,965	$0
2030/31	$438,965	$0
2031/32	$438,965	$0
2032/33	$438,965	$0
2033/34	$438,965	$0
2034/35	$438,965	$0
Total	**$4,389,649**	**$0**

Carpark Assets

Year	Forecast Costs	Planned Budget
2025/26	$21,728	$0
2026/27	$21,728	$0
2027/28	$21,728	$0
2028/29	$21,728	$0
2029/30	$21,728	$0
2030/31	$21,728	$0
2031/32	$21,728	$0
2032/33	$21,728	$0
2033/34	$21,728	$0
2034/35	$21,728	$0
Total	**$217,277**	**$0**

Culvert Assets

Year	Forecast Costs	Planned Budget
2025/26	$1,009,334	$788,094
2026/27	$1,009,334	$819,119
2027/28	$1,009,334	$849,884
2028/29	$1,009,334	$880,649
2029/30	$1,009,334	$913,875
2030/31	$1,009,334	$948.430
2031/32	$1,009,334	$984,367
2032/33	$1,009,334	$1,021,742
2033/34	$1,009,334	$1,060,612
2034/35	$1,009,334	$1,100,915
Total	**$10,093,335**	**$9,367,688**

Footpaths and Shared Paths

Year	Forecast Costs	Planned Budget
2025/26	$3,854,732	$242,000
2026/27	$3,854,732	$250,000
2027/28	$3,854,732	$258,320
2028/29	$3,854,732	$266,973
2029/30	$3,854,732	$275,972
2030/31	$3,854,732	$285,331
2031/32	$3,854,732	$295,064
2032/33	$3,854,732	$305,186
2033/34	$3,854,732	$315,714
2034/35	$3,854,732	$326,662
Total	**$38,547,316**	**$2,821,221**

Kerb and Gutter

Year	Forecast Costs	Planned Budget
2025/26	$603,870	$603,870
2026/27	$628,622	$628,622
2027/28	$653,767	$653,767
2028/29	$678,912	$678,912
2029/30	$706,068	$706,068
2030/31	$734,310	$734,310
2031/32	$763,682	$763,682
2032/33	$794,229	$794,229
2033/34	$825,998	$825,998
2034/35	$859,038	$859,038
Total	**$7,248,497**	**$7,248,497**

Sealed Roads

Year	Forecast Costs	Planned Budget
2025/26	$25,553,909	$11,980,944
2026/27	$25,553,909	$12,651,164
2027/28	$25,553,909	$13,558,347
2028/29	$25,553,909	$13,910,271
2029/30	$25,553,909	$12,241,451
2030/31	$25,553,909	$12,698,279
2031/32	$25,553,909	$13,173,115
2032/33	$25,553,909	$13,666,671
2033/34	$25,553,909	$14,141,534
2034/35	$25,553,909	$14,616,366
Total	**$255,539,092**	**$132,638,141**

Unsealed Roads

Year	Forecast Costs	Planned Budget
2025/26	$4,912,572	$2,067,981
2026/27	$4,912,572	$2,154,476
2027/28	$4,912,572	$2,240,655
2028/29	$4,912,572	$2,326,834
2029/30	$4,912,572	$2,419,907
2030/31	$4,912,572	$2,516,703
2031/32	$4,912,572	$2,617,371
2032/33	$4,912,572	$2,722,066
2033/34	$4,912,572	$2,830,949
2034/35	$4,912,572	$2,944,187
Total	**$49,125,722**	**$24,841,130**

5.4 Acquisition Plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to Council.

Forecast acquisition costs for the 10-year planning period are summarised in Figure 5.4.1.

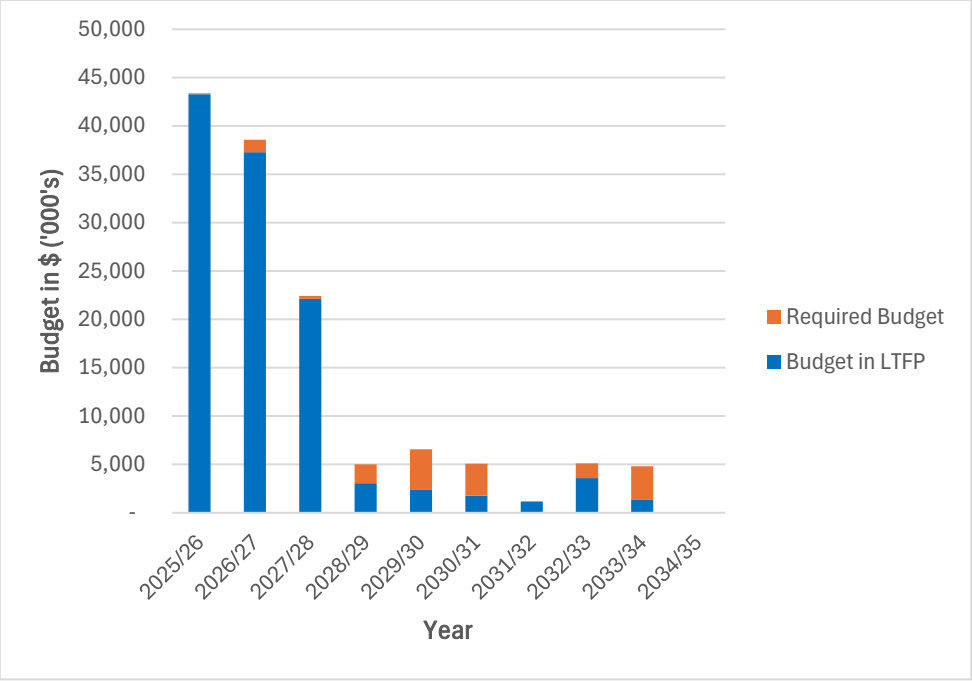


Figure 5.4.1: Acquisition Summary

Council has a number of new and upgraded transport projects identified for consideration within the 10-year planning period. There is an identified shortfall within these proposed projects and some of these will not be able to commence without the receipt of significant grant funding from other levels of government.

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to Council's needs.

When Council commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by Council.

Expenditure on new assets and services in the capital works program will be accommodated in the long term financial plan, but only to the extent that there is available funding.

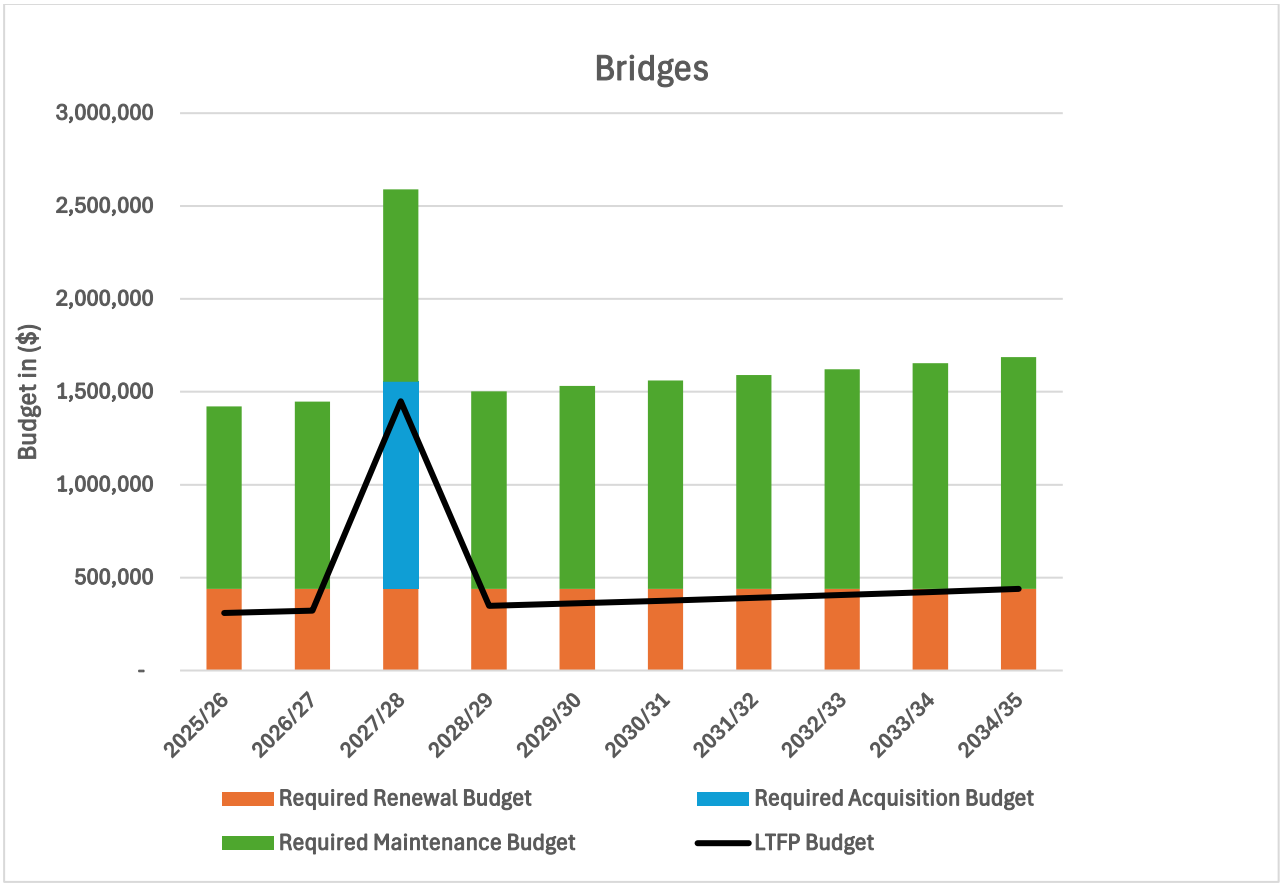
5.5 Disposal Plan

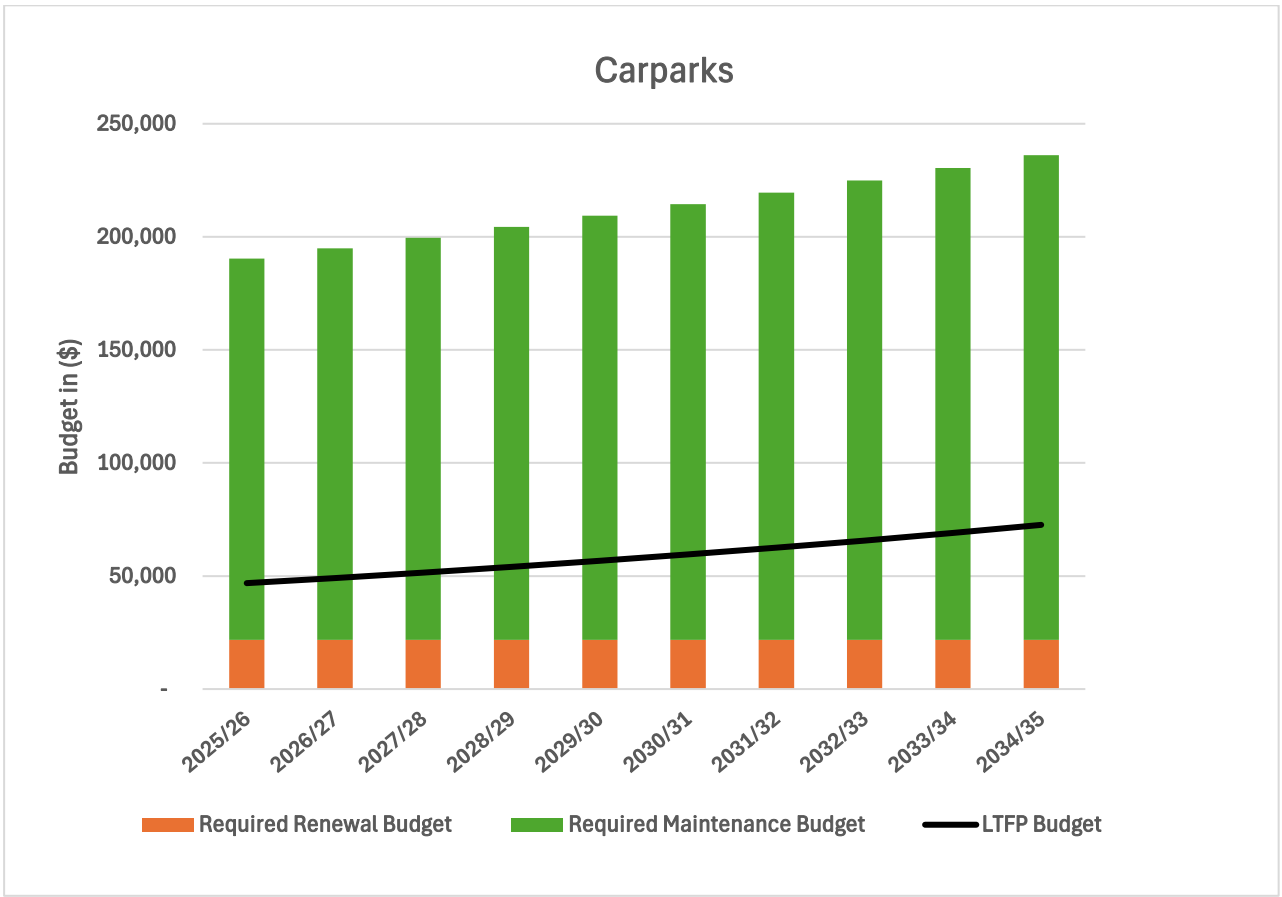
Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. At this time, there is no plan to dispose of any transport assets within the network.

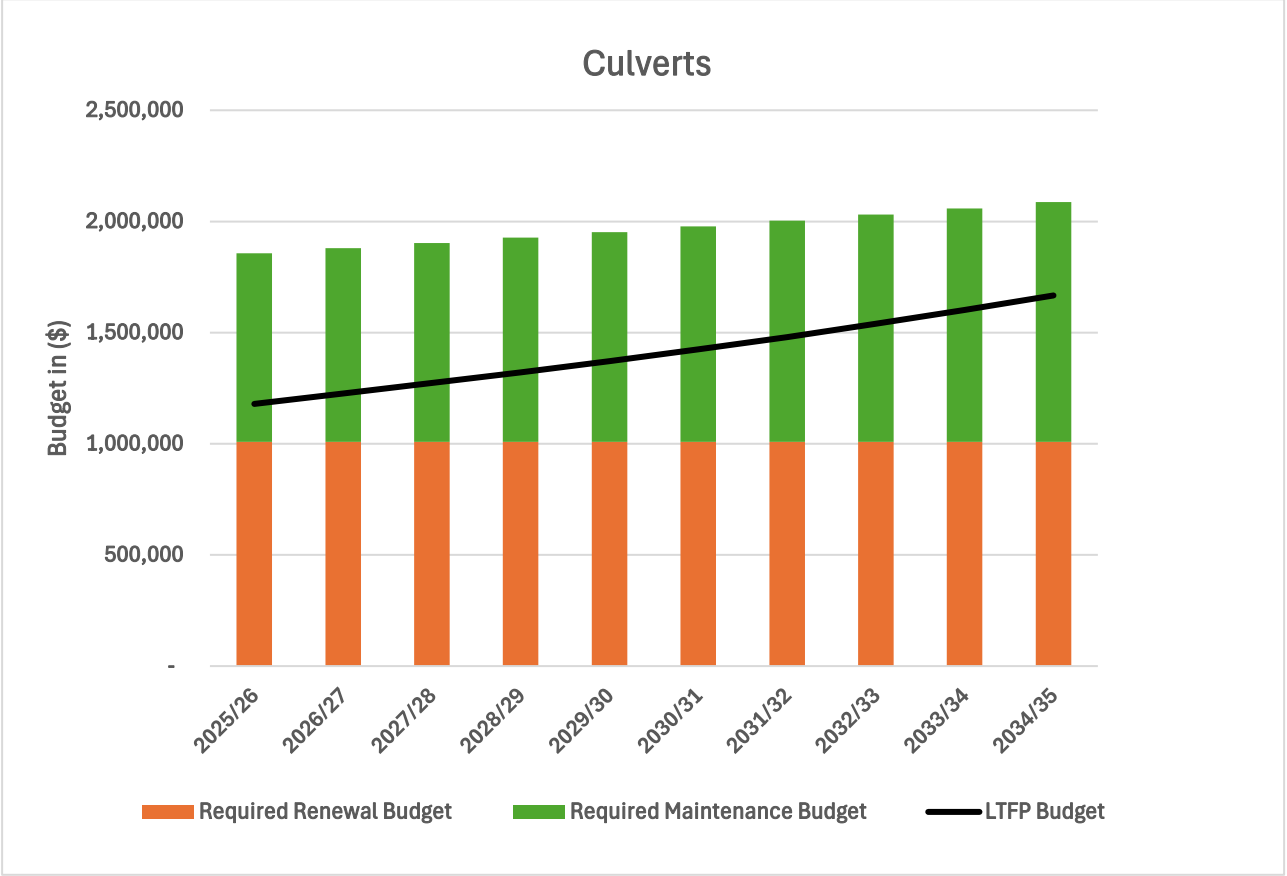
5.6 Summary of Lifecycle Costs and Planned Budget

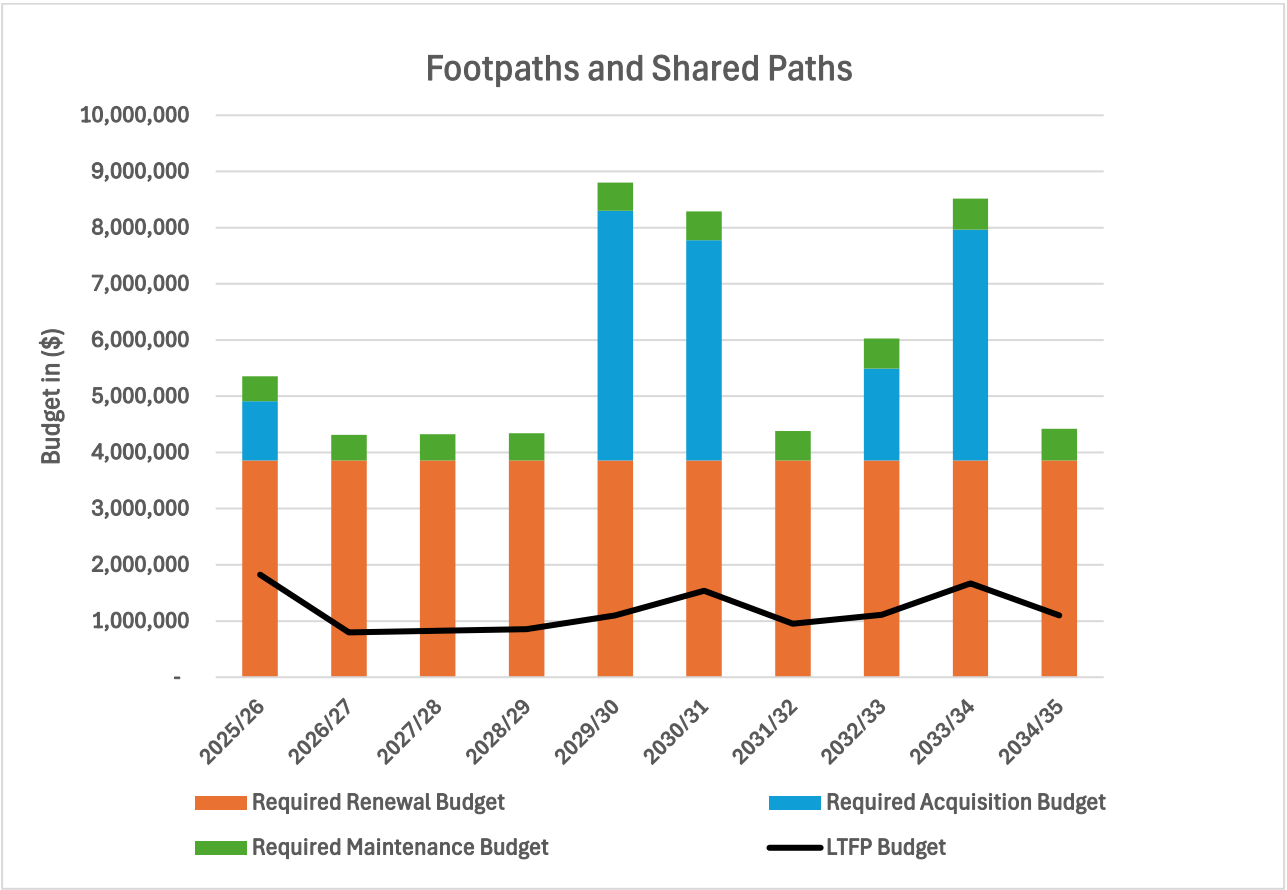
The financial projections from this asset management plan are shown in Figures 5.6.1. These projections include forecast costs for acquisition, maintenance and renewal. These forecast costs are shown for each transport asset category relative to the proposed budget for the planning period.

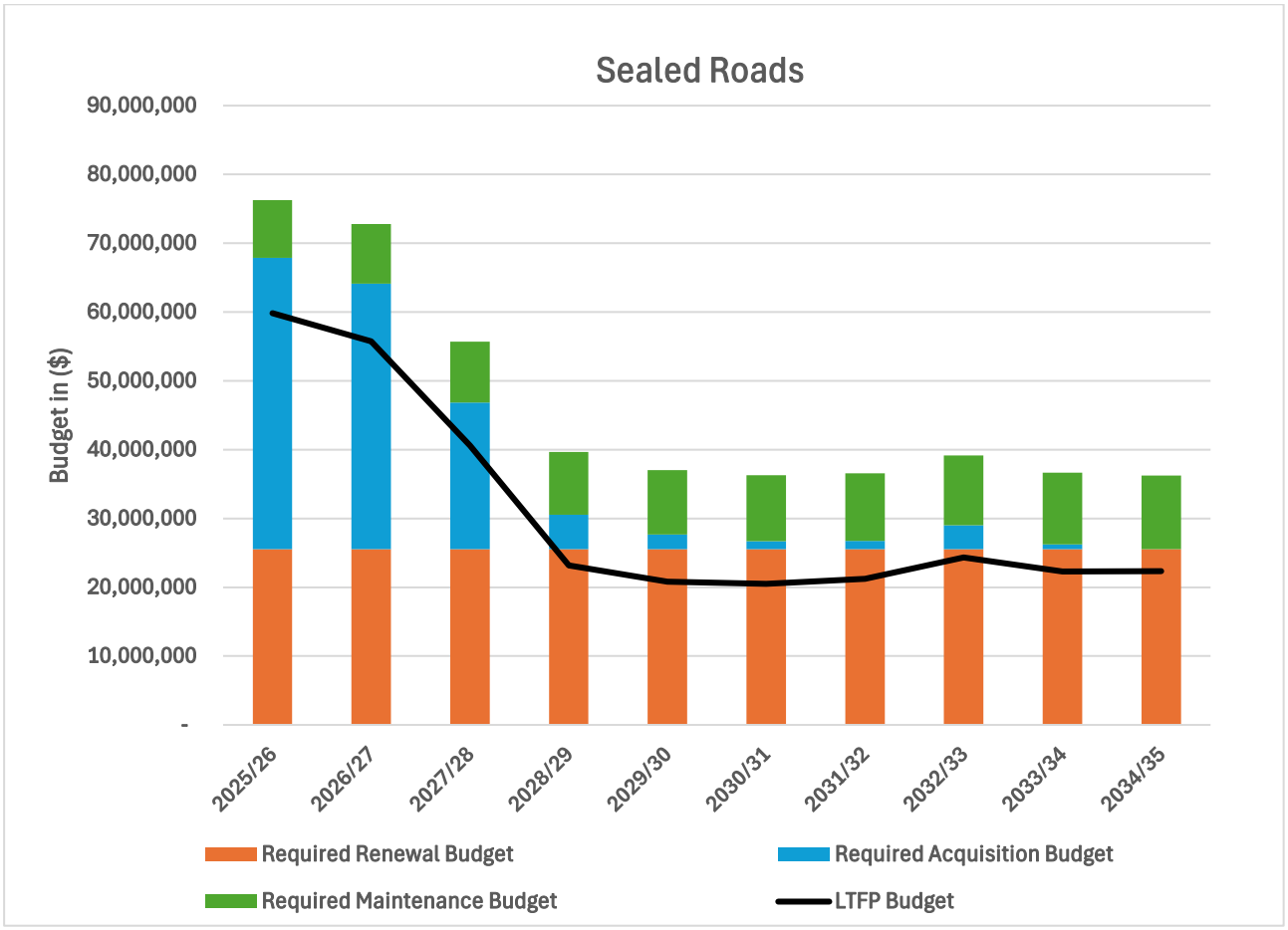
Figure 5.6.1: Lifecycle Costs and Planned Budget Summary

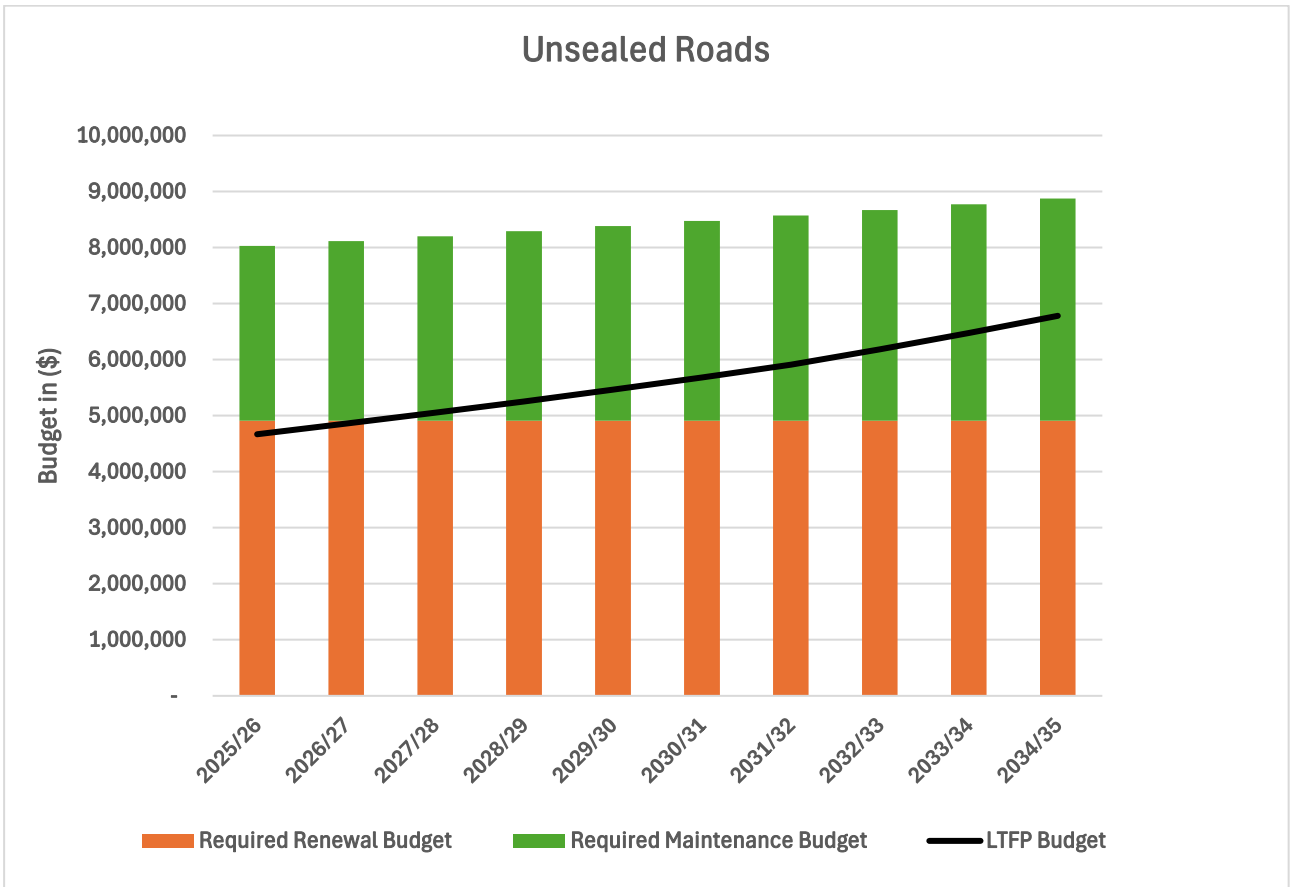





Culverts
2,500,000
2,000,000
1,500,000
1,000,000
500,000
-
Budget in ($)
2025/26
2026/27
2027/28
2028/29
2029/30
2030/31
2031/32
2032/33
2033/34
2034/35
Required Renewal Budget
Required Maintenance Budget
LTFP Budget


Footpaths and Shared Paths
10,000,000
9,000,000
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
-
Budget in ($)
2025/26
2026/27
2027/28
2028/29
2029/30
2030/31
2031/32
2032/33
2033/34
2034/35
Required Renewal Budget
Required Acquisition Budget
Required Maintenance Budget
LTFP Budget


Sealed Roads
90,000,000
80,000,000
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
-
Budget in ($)
2025/26
2026/27
2027/28
2028/29
2029/30
2030/31
2031/32
2032/33
2033/34
2034/35
Required Renewal Budget
Required Acquisition Budget
Required Maintenance Budget
LTFP Budget


Unsealed Roads
10,000,000
9,000,000
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
-
Budget in ($)
2025/26
2026/27
2027/28
2028/29
2029/30
2030/31
2031/32
2032/33
2033/34
2034/35
Required Renewal Budget
Required Maintenance Budget
LTFP Budget

6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[8].

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 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	Treatment Plan
Gobbagombalin Bridge	Flooding - no access would be available into the city from the north.	Residents to be provided with services and supplies from other centres.
Road Access into North Wagga	Flooding - no access would be available into the city from North Wagga.	Evacuate the North Wagga Area as per the Flood Management Plan Manual.

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 Risk Assessment

The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

[8] ISO 31000:2018, p 2

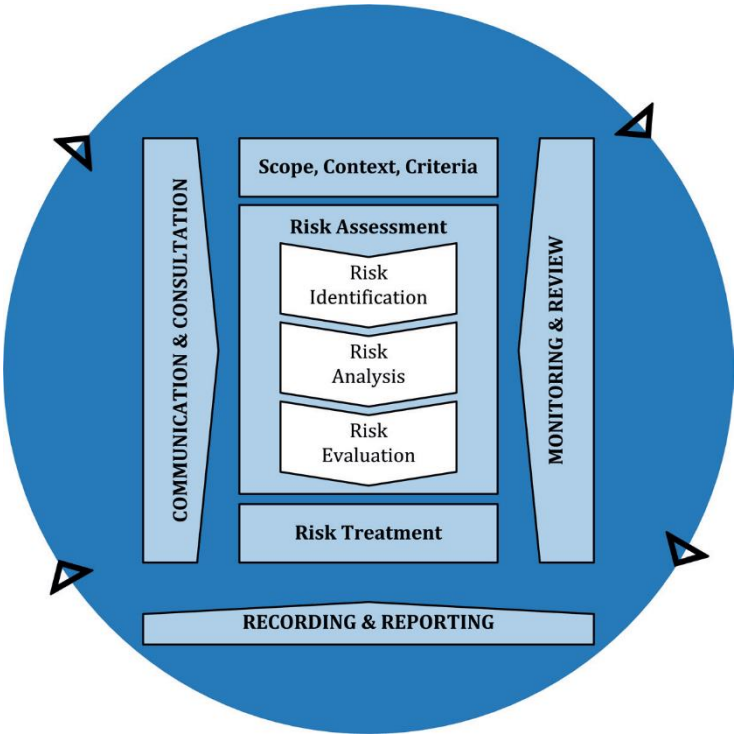


Figure 6.2 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Resilience recovery planning, financial capacity, climate change risk assessment and crisis leadership.

We do not currently measure our resilience in service delivery. This will be considered for future iterations of the AM Plan.

6.4 Service and Risk Trade-Offs

The decisions made in adopting this AM Plan are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 What we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Maintain all bridges, carparks, culverts, sealed roads and unsealed roads to the level detailed in this plan.
- Conducting Level 3 bridge assessments on the entire bridge network.
- Renew all transport assets in conditions 4 and 5 or as they come due.

6.4.2 Service trade-off

If there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- Bridges, carparks, culverts, sealed roads and unsealed roads will deteriorate faster than expected of they are not adequately maintained.
- Bridge renewal plans will not be based on structural testing data.
- Bridges, carparks, footpaths, shared paths and cycleways in condition 4 and 5 will not be renewed and in extreme circumstances they may be required to be taken out of service.
- Sealed road pavement will not be renewed and therefore the cracking, rutting and roughness of these sealed roads is expected to worsen.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Potentially dissatisfied members of the community.
- Periodic increased maintenance requirements on the affected assets.
- Lower travelling speeds on roads and/or greater risk of road accidents through driver inattention on road sections with identified functional deficiencies.
- Increased Insurance claims.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

7.0 FINANCIAL SUMMARY

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures.

7.1 Sustainable Service Delivery

7.1.1 Financial Indicators

There are two key indicators of sustainable service delivery that are considered in the AM Plan for this service area. The two indicators are the:

- Asset Renewal Funding Ratio (planned renewal budget / forecast renewal outlays for the next 10 years), and
- Lifecycle Funding Ratio (planned lifecycle budget for the next 10 years / forecast lifecycle outlays for the next 10 years identified in the AM Plan).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[9] **48%**

Table 7.1.1 shows the Asset Renewal Funding Ratio for each asset category included within this AM Plan.

Table 7.1.1: Asset Renewal Funding Ratio

Asset Category	Funding Ratio
Bridges	0%
Carparks	0%
Culverts	93%
Footpaths and Shared Paths	7%
Kerb and Gutter	100%
Sealed Roads	52%
Unsealed Roads	51%

The overall Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 48% of the funds required for the optimal renewal of assets across all transport asset categories.

Lifecycle Funding Ratio – 10-year financial planning period

This AM Plan identifies the forecast operations, maintenance, renewal and acquisition costs required to provide the levels of service to the community over a 10-year period. This provides input into the 10-year Long Term Financial Plan (LTFP) aimed at providing the required services in a sustainable manner.

This forecast work can be compared to the planned budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast maintenance, acquisition and renewal costs over the 10-year planning period is $655,140,220 or $65,514,022 on average per year.

[9] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

The funding made available in the first 10 years of the LTFP is $408,153,359 or $40,815,336 on average per year, giving a 10-year funding shortfall of $24,698,686 per year. This indicates that **62%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget.

Providing sustainable and affordable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 100% for the first years of the AM Plan and ideally over the 10-year life of the Long Term Financial Plan.

7.1.2 Forecast Costs (outlays) for the Long Term Financial Plan

Table 7.1.2 shows the forecast costs (outlays) required for consideration in the 10-year long term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the long term financial plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan and/or financial projections in the LTFP.

We will manage any 'gap' by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Table 7.1.2: Forecast Costs (Outlays) for the Long Term Financial Plan

Year	Acquisition	Maintenance	Renewal
2025/26	$43,362,163	$13,960,121	$36,395,109
2026/27	$38,593,172	$14,337,045	$36,419,861
2027/28	$22,424,262	$14,724,145	$36,445,006
2028/29	$5,000,000	$15,121,697	$36,470,151
2029/30	$6,581,718	$15,529,983	$36,497,307
2030/31	$5,074,478	$15,949,292	$36,525,549
2031/32	$1,174,668	$16,379,923	$36,554,549
2032/33	$5,116,623	$16,822,181	$36,585,468
2033/34	$4,808,641	$17,276,380	$36,617,237
2034/35	$0	$17,742,842	$36,650,277
Total	**$132,135,724**	**$157,843,608**	**$365,160,888**

7.2 Valuation Forecasts

The best available estimate of the value of assets included in this AM Plan are shown below.

The assets included within this plan are valued at fair value:

Current Replacement Cost $1,276,854,478

Depreciable Amount $1,073,365,750

Net Carrying Amount[10] $875,924,067

Annual Depreciation Expense $21,553,509

[10] Also reported as Written Down Value.

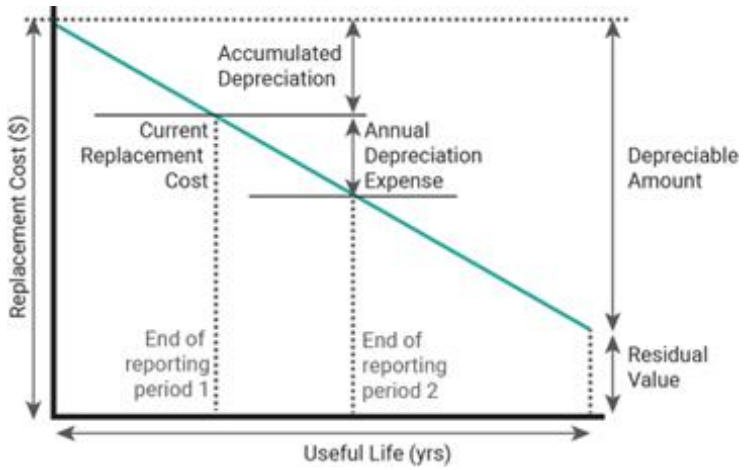


Figure 7.2.1: Valuation Terminology

Asset values are forecast to increase as additional assets are added to Council's asset base. Acquiring new assets will add to existing operations, maintenance, future renewal, and depreciation expenses.

8.0 ASSUMPTIONS AND IMPROVEMENT PLANNING

8.1 Data and Information Sources

8.1.1 Accounting and financial data sources

This AM Plan utilises accounting and financial data sourced from its Technology One finance system and myData asset management software.

8.1.2 Asset management data sources

This AM Plan utilises asset management data sourced from Council's myData asset management software.

8.2 Key Assumptions

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the forecasts.

Key assumptions made in this AM Plan are:

- Assets are consumed at a constant rate over the pre-defined standard useful lives recorded in Council's asset management system for each of the asset categories.
- Present service levels will remain constant for the life of the plan.
- Present levels of expenditure (and the relative distribution of planned and reactive maintenance, and capital renewals & new/upgrades) will remain constant for the life of the plan.

8.3 Forecast Reliability and Confidence

The forecast demands, costs, planned budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date. Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual. [11]

Table 8.3: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B. High	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate ± 10%
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%

[11] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Confidence Grade	Description
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be of High confidence.

8.4 Improvement Plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AM Plan is shown in Table 8.4.

Table 8.4: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Develop required maintenance costs and required maintenance activities for transport assets.	Senior Financial Accountant	Staff time	Short term
2	Develop condition based renewal programs for each of the transport asset categories.	Senior Financial Accountant	Staff time	Medium term
3	Develop a renewal ranking criteria for each of the transport asset categories.	Manager Civil Operations Senior Financial Accountant	Staff time	Medium term
4	Review and update the current road hierarchy	City Engineering	Staff time	Long term
5	Develop an asset hierarchy for footpaths and carparks.	Manager Civil Operations	Staff time	Medium term

8.5 Monitoring and Review Procedures

This AM Plan will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. The forecast costs and proposed budget are incorporated into the Long Term Financial Plan or will be incorporated into the Long Term Financial Plan.

The AM Plan has a maximum life of 4 years and is due for complete revision and updating within 12 months of each Local Government election.

8.6 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the Long Term Financial Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieves the Office of Local Government benchmark target (greater than 100%).

9.0 REFERENCES

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