ASSET MANAGEMENT PLAN

TRANSPORT

2025

GANNAWARRA
Shire Council

Document Control	Asset Management Plan – Asset Register Method
Document ID :	

Rev No	Date	Revision Details	Author	Reviewer	Approver
V1.11	May 2021	Update	IPWEA		
V1.12	August 2023	Update to asset valuation terminology	IPWEA		
V1.13	June 2024	Update Appendix D.4 – Renewal Plan	IPWEA		
V1.14	September 2024	Update and align to ISO 550XX:2024	IPWEA		
V1.15	January 2025	Minor restructure and messaging improvement	IPWEA		
V1.16	February 2025	Revised messaging to align with LTFP	IPWEA		
V2.00	July 2025	GSC Draft Plan for Public consultation	DB		

NAMS+ offers several Asset Management templates.

The asset owner can choose the template that best suits their circumstances.

The structure and content of this template is aligned to the International Infrastructure Management Manual and the ISO 550xx and 31000 series of standards. In some instances, the asset owner may choose to reformat/restructure content or only use the Executive Summary. IPWEA takes no responsibility for the end product.

This Asset Management Plan should be prepared in line with the Strategic Asset Management Plan (also referred to as an AM Strategy) and AM Policy and used to inform the Long-Term Financial Plan.

Contents

1.0 EXECUTIVE SUMMARY

Our community relies on a diverse portfolio of infrastructure assets including transport, stormwater, buildings and open space valued at approximately $426M.

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

1.1 Purpose of the Plan

The AM Plan aims to:

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

This AM Plan details information about 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 20 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

The "Transport" assets include:

- Roads (Sealed, Unsealed and Natural Surface)
- Kerb & Channel
- Bridges (Road and Footpath)
- Footpaths (incl. urban concrete paths and natural surface / gravel trails)
- Car Parks

The above infrastructure assets have replacement value estimated at $318,558,109.

1.3 Levels of Service

This plan covers the infrastructure assets that provide transport infrastructure services.

Current levels of service are based on Gannawarra Shire Council's Road Management Plan, which outlines the inspection frequencies, intervention levels and response times for different road hierarchies. These standards reflect historical practices, available resources, asset criticality and community expectations.

The allocation in the planned budget is sufficient to continue providing these services at current levels for the planning period.

The main service consequences of the planned budget are:

- Renewal works will need to be prioritised, with some lower-priority assets experiencing delayed intervention.
- Network upgrades and service expansions are constrained, and typically dependent on external funding opportunities.
- Asset condition and service levels for minor local roads and older footpath segments may gradually decline where maintenance demand exceeds available resources.

1.4 Future Demand

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

- Population growth and demographic change, resulting in increased use of local road networks and active transport infrastructure, particularly in and around townships.
- Heavy vehicle movements associated with agriculture and freight, accelerating the deterioration of rural roads originally not designed for high axle loads.

- Climate change, including more frequent and intense rainfall events, increasing flood damage and maintenance requirements for roads and culverts.
- Community expectations for safety, accessibility and amenity, including demand for more sealed roads, kerb and channel and accessible footpaths in rural and semi-urban areas.
- Limited funding for infrastructure upgrades, requiring prioritisation of works and potential trade-offs between asset classes or locations.

Strategies to manage these demands are discussed in Section 4.0.

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 10-year Long-Term Financial Plan (LTFP).

Furthermore, when Gannawarra Shire Council commits to the upgrade of existing and 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 $78033696 or $7803369 on average per year.

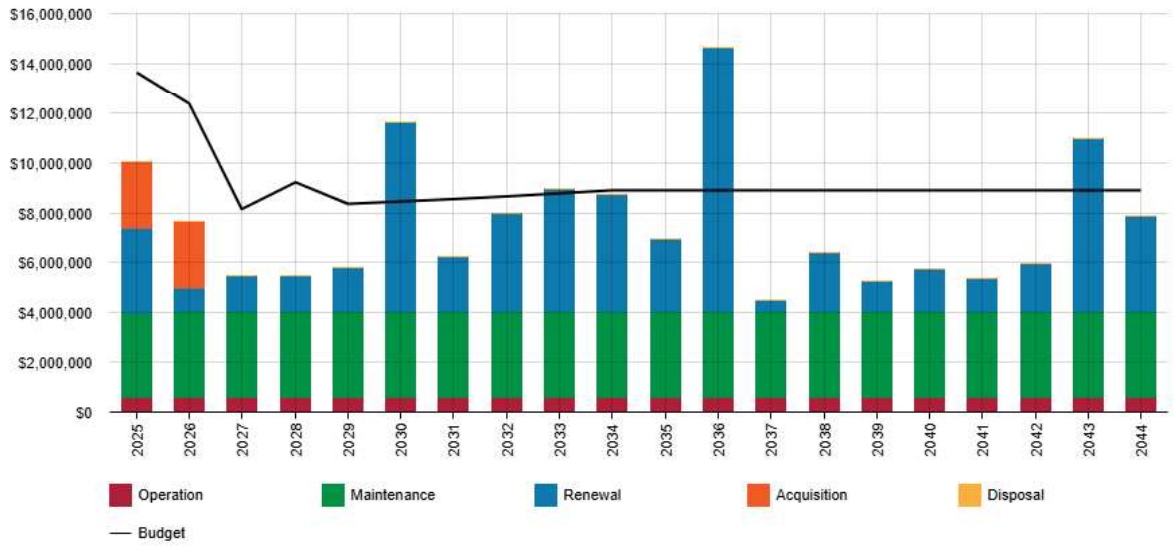
Depreciation is excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is $95239376 or $9523938 on average per year which is approximately 122.05% of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends 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.

The 10-year LTFP results in a surplus of $1720569 on average per year of the forecast lifecycle costs required to provide services. This is shown in the figure below.



Forecast Lifecycle Costs and Planned Budgets

Amounts are shown in real values (i.e., current values, net of inflation).

We plan to provide Transport services for the following:

- Operation, maintenance, renewal and acquisition of Transport infrastructure assets to meet service levels set by Gannawarra Shire Council in annual budgets.
- Implement the budgeted activities within the 10-year planning period.

1.5.3 What we cannot do

We currently do allocate enough budget to sustain services at the proposed standard including the provision of new assets. Works and services that cannot be provided under present funding levels are:

- Major upgrades or redevelopment of transport infrastructure assets.
- Council-funded expansion of the transport assets network to meet new or emerging community demands.
- Entering into large-scale, multi-year maintenance or service contracts beyond essential operational needs.
- Delivery of new assets or major enhancements is generally dependent on the availability of external grant funding.

1.6 Risk Management

The planned budget is sufficient to continue to manage risks in the medium term.

The main risk consequences are:

- Deterioration of ageing assets, posing safety risks to users.
- Injury to the public due to unidentified hazards / reputational and liability risks, public claims or complaints.
- Reduced service levels or amenity, resulting from delayed maintenance or asset failures.

Strategies and actions to manage these risks are discussed in Section 6.0.

1.7 Financial Summary

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

The 10-year LTFP is $9523938 on average per year providing affordable and sustainable services for the foreseeable future. This indicates that 122.05% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the LTFP.

Asset values are forecast to increase as additional assets are added into service.

1.8 Monitoring and Improvement Program

Key assumptions made in this AM Plan are:

- Forecast is in “today’s” (2025 / 26) dollars.
- Staffing needs are resourced adequately – for Asset data work and Operational & Maintenance tasks,
- No significant changes to Legislation / Standards will occur over the planning period.

The Asset Register Method was used to forecast the renewal lifecycle costs for this AM Plan.

This AM Plan is based on high level-of-confidence information.

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

- Transport assets condition assessment program implemented to inform renewal planning and prioritisation.
- Annual reviews of the Renewal and Replacement Program as part of the review / preparation of the 10-year Capital Works Program, and individual projects are assessed for inclusion and prioritisation in the Annual Capital Works Program.
- Approach to risk management reviewed and additional attribute data collection is considered / implemented to enhance decision-making.
- Asset Management Plan to be reviewed on a four-yearly basis, aligned with the condition assessment program and the statutory requirements.

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.

The AM Plan is to be read with the Gannawarra Shire Council planning documents. This should include the Asset Management Policy and Strategy, where developed, along with the following planning documents:

- Other related Asset Management Plans
- Delivery Program and Operational Plan
- 2025-2029 Gannawarra Shire Council Plan
- Long Term Financial Plan

Comment on the current status of Asset Management in the Organisation.

The infrastructure assets covered by this AM Plan include roads, bridges, footpaths, kerb & channel and car parks. For a detailed summary of the assets covered in this AM Plan refer to Table in Section 5.

These assets are used to provide transport infrastructure services.

The infrastructure assets included in this plan have a total replacement value of $318558109.

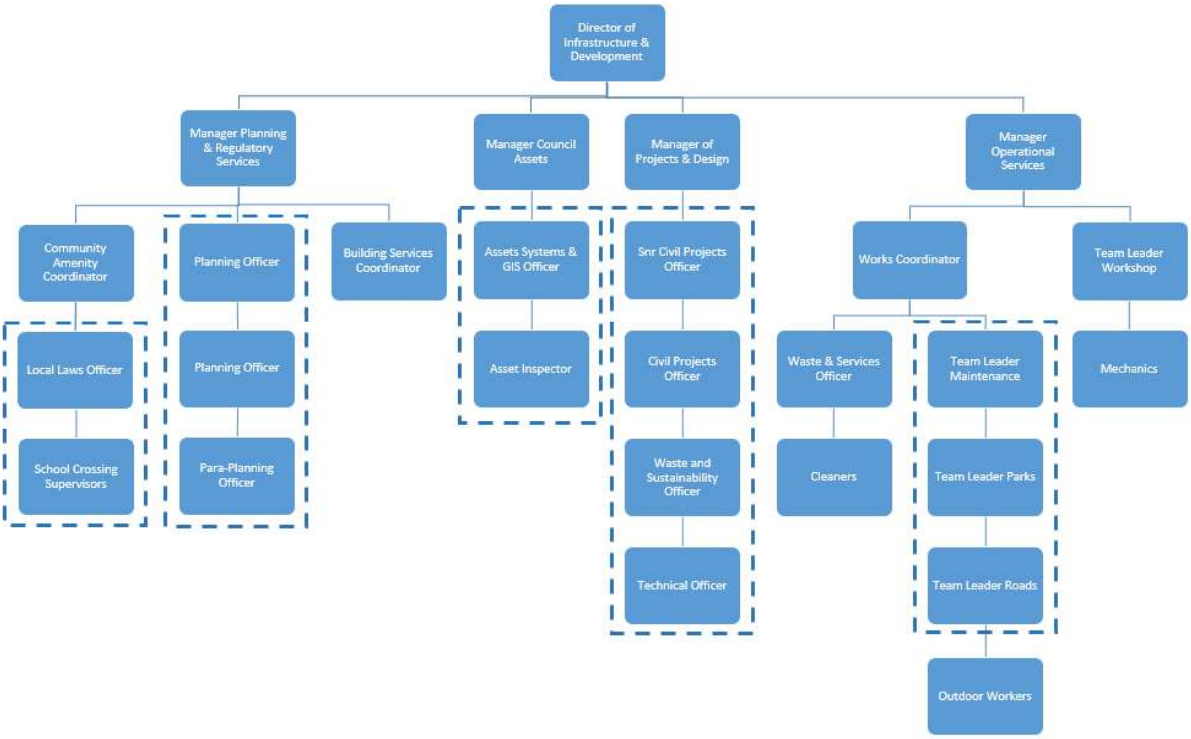
Key stakeholders in the preparation and implementation of this AM Plan are shown in Table 2.1.

Table 2.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Gannawarra Shire Council (Councillors)	■ Represent needs of community/shareholders. ■ Allocate resources to meet planning objectives in providing services while managing risks. ■ Ensure service sustainable.
Gannawarra Shire Council - CEO	■ Key accountability for all aspects of service operation / delivery. ■ Allocate resources to meet the organisation's objectives in providing services while managing risks.
Gannawarra Shire Council - Director Infrastructure and Development	■ Oversight of Transport assets. ■ Provide strategic direction in the management of assets. ■ Ensure agreed checks and reporting frameworks are adhered to and enforced.
Gannawarra Shire Council - Asset Officers	■ Custodian of Asset data, responsible for keeping data up to date. ■ Preparation and implementation of AMP.
Gannawarra Shire Council – Works Depot & Field Workgroups	■ Operation & Maintenance delivery to meet agreed levels of service. ■ Refer critical issues to senior management for attention.
State & Federal government (Authorities / Agencies)	■ Guidelines provision and approvals. ■ Service delivery support (funding grants / guidance). ■ Reinstatement support following natural disaster impairment.
Local Community, Businesses and General Public	■ Key service Customer. ■ Provision / source of data for further planning. ■ Service performance and defects reporting.

Key Stakeholder	Role in Asset Management Plan
Visitors to the Shire	■ Service performance and defects reporting. ■ "Fresh eyes" feedback provision.
Council's Insurer	■ Asset related incident support. ■ Funding coverage for service reinstatement.
Emergency Agencies (Police, Fire, Ambulance, VICSES)	■ Emergency incidents investigation / resolution.

Our organisational structure for service delivery from infrastructure assets is detailed below.



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 organization over time.
- **Alignment**: asset management aligns financial, technical and operational decisions with the organizational objectives, promoting vertical and horizontal coordination.
- **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 the Gannawarra Shire Council.

Council collects the performance information via the Local Government Community Satisfaction Survey. Table 3.1 summarises the results from our 2025 Community Satisfaction Survey.

Table 3.1: Customer Satisfaction Survey Levels

Performance Measure	Satisfaction Level				
	Very Satisfied	Fairly Satisfied	Satisfied	Somewhat satisfied	Not satisfied
The condition of sealed local roads in your area over the last 12 months?				✓	

3.2 Strategic and Corporate Goals

This AM Plan is prepared under the direction of the Gannawarra Shire Council vision, goals and objectives.

Our vision is:

- Our community is proud, connected and inclusive, and we actively seek opportunities that enhance lifestyle and liveability.
- Gannawarra is growing and is economically diverse, with unique tourism destinations, cultural and natural assets.
- We recognise and appreciate the value of the natural environment and how it connects our communities. We are resilient to a changing environment through innovation and collaboration.

Strategic goals have been set by the Gannawarra Shire Council. The relevant goals and objectives and how these are addressed in this AM Plan are summarised in Table 3.2.

Table 3.2: Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in the AM Plan
GOAL 1: LIVEABILITY	Prioritise maintenance, renewal and improvement of assets including local roads, footpaths, and community infrastructure that support accessibility and safety.	Detailing of financial performance ratios including asset renewal funding ratio and lifecycle finding ratio.
GOAL 1: LIVEABILITY	Support vibrant town centres by maintaining amenity and enabling businesses and community events.	Asset service categories (service levels) support the work to maintain town centres transport assets.
GOAL 2: GROWTH	Support local businesses, employment pathways, digital connectivity and attract strategic investment.	Road hierarchy and investment planning ensure freight and transport links are maintained to support agriculture, industrial development, and strategic connectivity.
GOAL 2: GROWTH	Promote tourism and events that showcase Gannawarra.	Strategic upgrades to transport corridors and access routes to tourism hubs improve safety and appeal for visitors, enhancing tourism potential.

GOAL 3: SUSTAINABILITY	Manage Council's budget responsibly by delivering cost-effective services, pursuing new revenue opportunities, and ensuring long-term financial sustainability.	Providing options to achieve goals including balancing budgets, reducing levels of service and the risk consequences of both.
GOAL 3: SUSTAINABILITY	Protect our environment and prepare our community for a changing climate.	Climate resilience considerations are incorporated into asset renewal and new infrastructure planning.

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the Transport service are outlined in Table 3.3.

Table 3.3: Legislative Requirements

Legislation	*Requirement*
Local Government Act 2020 (Vic)	Establishes the powers and responsibilities of Councils, including the requirement to develop and maintain long-term financial and asset management plans to ensure sustainable service delivery across the transport network.
Road Management Act 2004 (Vic)	Establishes Council's role as the coordinating road authority. Requires development of a Road Management Plan outlining inspection regimes, maintenance responsibilities, and service levels for roads and associated assets.
Transport Integration Act 2010 (Vic)	Provides the legislative framework for integrated transport planning across Victoria. Councils must align road and transport infrastructure with state objectives of safety, sustainability, and network integration.
Heavy Vehicle National Law (Victoria) Act 2013	Regulates the use of heavy vehicles on local roads. Councils must assess road asset suitability and manage permits to support freight access while maintaining asset integrity.
Transport (Compliance and Miscellaneous) Act 1983 (Vic)	Supports safety and regulatory oversight of public transport infrastructure, including Council-managed assets such as bus stops and interchanges.
Occupational Health and Safety Act 2004 (Vic)	Requires identification and mitigation of risks to workers and the public during construction, operation, and maintenance of transport assets.
Disability Discrimination Act 1992 (Cth)	Mandates that transport infrastructure, including footpaths and pedestrian facilities, is designed and maintained to be accessible to all users in accordance with relevant disability access standards.
Charter of Human Rights and Responsibilities Act 2006 (Vic)	Imposes obligations to consider human rights in decisions relating to transport planning and infrastructure, particularly regarding access, safety, and public participation.
Crown Land (Reserves) Act 1978 (Vic)	Where road or transport assets are located on Crown land, Councils must comply with use, licensing, and development restrictions under this Act.
Planning and Environment Act 1987 (Vic)	Regulates land use and development approvals affecting transport infrastructure. Council must consider zoning overlays and planning controls in asset development and upgrade projects.

Legislation	*Requirement*
Environment Protection Act 2017 (Vic)	Introduces the General Environmental Duty, requiring Council to minimise environmental harm from transport projects, including noise, dust, and runoff during works.
Flora and Fauna Guarantee Act 1988 (Vic)	Councils must consider the presence of listed species and ecological communities when planning transport works that may disturb native vegetation or habitats.
Climate Change Act 2017 (Vic)	Requires consideration of climate change risks in transport planning and infrastructure delivery. Councils must ensure road assets are resilient to increased temperature, rainfall variability, and flooding.
Subdivision Act 1988 (Vic)	Governs the provision of road infrastructure in new developments. Requires developers to construct roads to Council standards before asset handover.
Road Safety Act 1986 (Vic)	Mandates that roads and associated assets are designed, maintained, and operated to minimise safety risks to road users. Supports the Safe System approach to road design.
Road Rules Victoria	Enforceable under the Road Safety Act, Councils must ensure that all road signs, markings, and pedestrian facilities comply with current road rules and safety regulations.

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: Customer Values

Service Objective: Provide safe, reliable and accessible transport network that meets the needs of the community.

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Safe and accessible transport assets	Community Satisfaction Survey results. Number of customer reports related to potholes, signage or unsafe conditions.	Consistent but marginally low levels of satisfaction with the state of transportation assets. Mixed feedback due to shared management responsibilities with VicRoads over roads network.	Improvement expected via better communications and improvement focus. Reactive maintenance (grading / patching) to continue addressing defects within statutory timeframes.
Smooth and reliable travel surfaces	Community feedback and condition data.	Condition data indicates that on average good condition is maintained. Complaints fluctuate seasonally for unsealed assets. Mixed feedback due to shared management responsibilities with VicRoads over roads network.	Surfacing condition to remain stable through renewals programs.

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Timely and responsive maintenance	Average time to respond to road and footpath issues reported by the public.	Priority issues with timeframes governed by the Road Management Plan are generally resolved within the allocated timeframes. Perceived delays on non-critical items.	Performance to remain consistent with the Road Management Plan targets.
Clear traffic and directional signage	Public feedback on wayfinding, line marking and sign visibility. Number of customer requests.	Current data indicates generally positive feedback, some faded signs exists in low-traffic areas and some instances of no signage in rural / low traffic areas.	Existing levels to be maintained, targeted minor improvements driven by asset inspections / utilisation data.
Provision for all road users	Coverage and connectivity for pedestrians, cyclists, vehicles, and heavy freight.	Growing expectations for shared paths and separated bike lanes in urban areas.	Gradual improvement with new acquisitions / upgrades, major upgrades dependent on state or federal support.
Fair and equitable service provision	Asset renewal distribution across towns and rural areas	Some perception of uneven investment between towns and remote localities	Strategic prioritisation aims to improve perceived equity in service delivery.
Community awareness and engagement	Communication on asset condition, maintenance works, closures, and renewals / upgrades.	Public notified via website, signage, and social media for major projects.	Communications expected to improve via Road Focus Group engagement and future Public GIS capabilities.

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?

In Table 3.5 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 3.5: Customer Level of Service Measures

Type of Measure	*Level of Service*	*Performance Measure*	*Current Performance*	*Expected Trend Based on Planned Budget*
Condition	Sealed roads are maintained in good condition	% of sealed road network in good or better condition (Condition 1–3)	~80% of network in good or better condition based on last condition assessment (2024)	Condition profile likely to remain stable.
	Unsealed roads are maintained to minimise roughness and potholes	Number of grading cycles per year per road class	Target cycles achieved on main roads, lower-priority roads experience seasonal deterioration	Service level expected to be maintained, no improvement without increased funding
	Bridges are structurally sound and safe	% of bridge structures rated as good or better (Condition 1–3)	Over 90% rated satisfactory or better (most structures inspected in last 5 years)	Trend stable if current inspection and minor renewal program maintained
	Footpaths are in safe and serviceable condition	% of footpaths network in good or better condition (Condition 1–3)	Over 70% of network in good or better condition based on last condition assessment (2024)	Condition profile likely to remain stable.
	Kerb and channel assets are functional and in fair condition	% of kerb and channel assessed as fair or better	Over 95% of assets in good or better condition based on last condition assessment (2024)	Condition profile likely to remain stable.
	Confidence levels		High	High
Function	Roads, bridges, and kerbs provide appropriate function for transport and drainage	% of roads and bridges meeting modern functional requirements (e.g. width, load capacity)	Functional gaps on some rural routes	Limited improvement expected without external funding or network upgrades
	Footpaths meet mobility and accessibility standards	% of network with compliant width, gradients, and DDA crossings	Gaps in network connectivity and DDA accessibility	Minor improvements expected through renewals and pedestrian safety planning
	Confidence levels		Medium	Medium
Capacity	Road and bridge network supports expected volumes and loading	Number of network restrictions due to load / width limits	Isolated bridge and road sections with load limits	Some improvement expected, high-cost bridge upgrades are subject to external grant funding availability
	Footpath and shared path network supports pedestrian use	Numbers of identified gaps in high-use areas	Uneven distribution, some high-demand areas underserved	Gradual improvement as upgrade projects delivered, upgrades are subject to external grant funding availability
	Kerb and channel supports stormwater function and pedestrian accessibility	Number of drainage-related complaints linked to kerb condition	Some local ponding and access issues noted by residents	Minor improvements expected where drainage / kerb upgrades are being delivered.
	Confidence levels		Medium	Medium

3.6 Technical Levels of Service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section 5) 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 the service outcomes.[3]

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 Measure	Current Performance*	Recommended Performance **
TECHNICAL LEVELS OF SERVICE				
Acquisition	Support population growth and improve road network connectivity.	Kilometres of new road or footpath constructed.	New assets delivered on an as-needed basis via developer contributions.	Strategic expansion in line with growth and demand forecasts.
	Provide infrastructure to support active transport and safety improvements.	Number of new pedestrian crossings or other safety treatments.	Limited acquisition unless tied to external grant-funded capital programs.	Fund targeted safety upgrades via external grants where possible.
		Budget	$540000	$540000
Operations	Ensure safety and functionality of transport network through inspections, cleaning, and minor servicing.	% of inspections completed within schedule.	Routine inspections of roads and footpaths undertaken. Reactive servicing when issues arise.	Maintain current service levels.
	Address urgent safety issues (e.g. critical defects, fallen signs, debris).	Average response time to high-priority issues.	High-priority risks are generally addressed within acceptable timeframes.	Maintain responsiveness aligned with the RMP, seek further efficiencies through AM System upgrades.
		Budget	$604010	$609518
Maintenance	Preserve asset condition and prevent early deterioration through patching, edge repairs and vegetation control.	% of defects repaired within intervention timeframes.	Reactive maintenance dominates, with backlog in some rural areas for low-priority concerns.	Maintain current levels of responsiveness, implement minor proactive maintenance where feasible.
	Undertake periodic grading of unsealed roads.	Grading cycle compliance for unsealed roads.	Grading occurs, but not always within optimal frequency due to weather and resourcing constraints.	Maintain current service levels.
		Budget	$3422728	$3457612

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

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Renewal	Replace assets that have reached the end of their useful life or are in poor condition.	m² / l.m. of transport assets renewed annually.	Renewal rate aligns with long-term model.	Prioritise renewals based on risk, usage, and asset condition.
	Reconstruct sealed roads with structural failures.	m² of reconstructed pavement annually.	Some reconstructions deferred due to funding pressures.	Focus on most critical assets with higher levels of failure risks.
		Budget	$4957200	$3196239
Disposal	Rationalise redundant or duplicated assets no longer serving functional needs.	Number of assets decommissioned or removed.	No disposals are planned.	Disposals driven by need / demand analysis.
		Budget	$0	$0

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

Drivers affecting demand include things such as population change, regulations, changes in demographics, seasonal factors, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

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

4.2 Demand Forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.3.

4.3 Impacts and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

The impact on service delivery will be 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.

Opportunities identified to manage demand are shown in Table 4.3. Further opportunities will be developed in future revisions of this AM Plan.

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population / demographic change	Modest growth in main townships, limited rural increase.	Continued growth in Kerang, Cohuna and Koondrook.	Greater use of transport assets, need for new or upgraded assets.	Monitor growth areas, prioritise assets through planning and grant funding options.
Community expectation change	Community seeking safer, modern and higher-quality assets.	Ongoing demand for asset upgrades and safety enhancements.	Upgrades required to meet DDA standards and community demands.	Assess demands against available utilisation data. Prioritise assets through planning and grant funding options.
Climate Change	More intense rainfall and hotter summers.	Continued climate variability and extreme weather events.	Impacts on deterioration / rate of consumption.	Integrate climate resilience measures into asset renewals.
Ageing Infrastructure	Some transport assets are reaching end of useful life.	Continued asset deterioration without adequate renewal investment.	Increased maintenance demand, reduced service quality or usability.	Condition assessment based renewal planning, prioritise renewals based on risk and usage.

4.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 5.4.

Acquiring new assets will commit the Gannawarra Shire Council to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 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.

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	Projection	Impact on services	Climate Change Management Plan
Increased frequency of extreme rainfall	More intense and frequent storm events and flash flooding	Accelerated pavement deterioration, flooding and erosion of road shoulders and culverts	Design upgrades for improved drainage, increase culvert capacity, and prioritise flood-prone areas
Extended periods of extreme heat	More days above 40°C, longer heatwaves	Softening of road surfaces, rutting in asphalt pavements, safety concerns	Use heat-resistant materials, review pavement design specs, increase monitoring during heat events
Bushfire risk near transport corridors	Higher incidence of fire events affecting roadside areas	Damage to roadside assets, signage, vegetation loss, restricted access during recovery	Establish clear vegetation buffers where possible, integrate fire recovery into planning
Ground movement and soil instability	Increased soil drying and contraction during drought cycles	Pavement cracking, subsidence of unsealed roads, culvert misalignment	Monitor subsurface movement, use stabilisation treatments, prioritise repairs in unstable zones

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 risk	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Sealed Roads	Increased temperature and prolonged heat	Use heat-resistant asphalt mixes review binder grades for thermal performance	Monitor pavement for rutting and softening, prioritise reseals with high-temp-tolerant materials
Unsealed Roads	Intense rainfall and surface erosion	Incorporate crowning and table drains.	Increase grading frequency and drainage improvements in affected areas
Bridges and Culverts	Increased flooding frequency and intensity	Elevate design flood levels, design for higher flow volumes with robust materials	Conduct structural reviews, retrofit with flood-tolerant features as part of renewal programs

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

Roadside Drainage	Blockages from storm surges and debris	Increase pipe and swale capacity, apply climate-adjusted BoM data in designs	Intensify inspection and cleaning schedules, install debris traps at key inlets
Footpaths and Shared Paths	Pavement lifting due to tree roots and heat induced soil movements	Design alignments away from large tree root zones, use flexible, heat-stable materials	Implement root barrier retrofits, resurface with climate-suitable paving materials
Car Parks (sealed)	Heat build-up, flooding, and surface damage	Use light-coloured, permeable surfaces, optimise designs	Improve drainage capacity, consider retrofitting with permeable surfaces during renewals

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

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the Gannawarra Shire Council plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation 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., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).
    - **Renewal –** the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement).
- **Operating**
    - **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc.)
    - **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., road patching, unsealed road grading, building and structure repairs).
    - **Disposal –** the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).

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	Dimension	Replacement Value
Roads (Sealed and Unsealed)	2,260 km	$208,799,200
Kerb & Channel	156 km	$45,713,038
Bridges (road and footpath)	68 No.	$46,596,485
Footpaths (incl. tracks and trails)	93 km	$15,969,226
Car Parks	1442 No. (Spaces)	$1,480,160
TOTAL		**$318,558,109**

The age profile of the assets included in this AM Plan are shown in Figure 5.1.1.

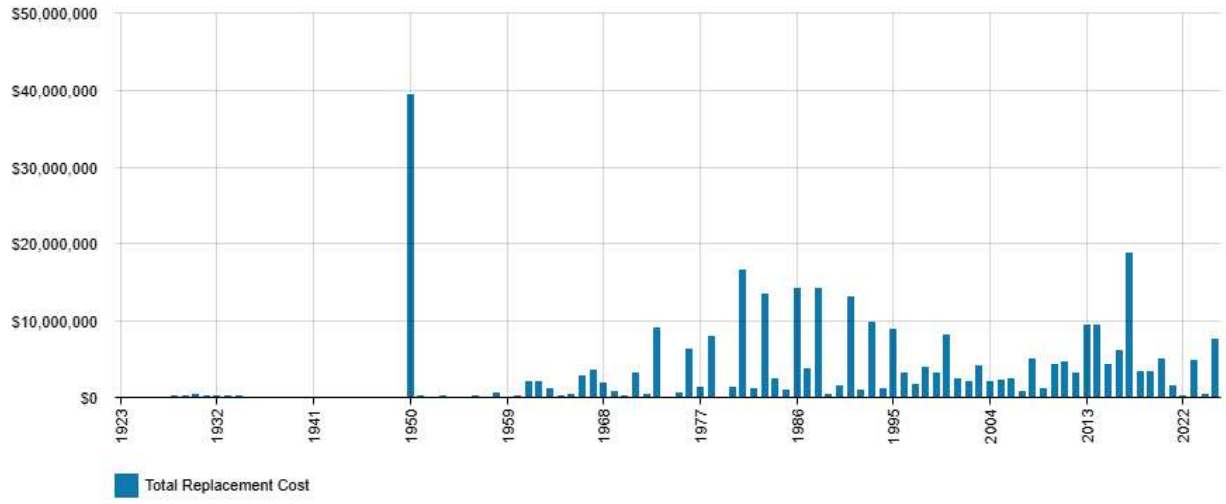


Figure 5.1.1: Asset Age Profile

Amounts are shown in real values (i.e., current values, net of inflation).

According to the figure above, the majority of transport assets have been 1950 and the current year. The spike in 1950 is due to this being the hypothetical acquisition year of all formation road components.

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
Older road segments	Surface deterioration, including potholes and cracking, leading to reduced ride quality.
Unsealed road network	Prone to washouts and dust generation, impacting safety and environmental quality.

Shared paths and trails	Inconsistent surfaces and lack of lighting reduce usability and safety after hours.
Rural intersections	Limited signage and sight distance increase the risk of vehicle conflicts.
Aged bridges / culverts	Structural limitations may restrict heavy vehicle access and reduce network resilience.
Roadside vegetation zones	Overgrowth can obscure signs, reduce clearance, and damage pavement edges.

The above service deficiencies were identified from transport assets reviews and applied professional judgment.

5.1.3 Asset condition

Condition is currently monitored via a formal condition assessment by an external consultancy delivered of all sealed / gravel roads, bridges, footpaths and kerb & channel assets every 3 - 5 years.

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
0	**Not Assessed**
1	**Very Good**: free of defects, only planned and/or routine maintenance required
2	**Good**: minor defects, increasing maintenance required plus planned maintenance
3	**Fair**: 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 our assets is shown in Figure 5.1.3.

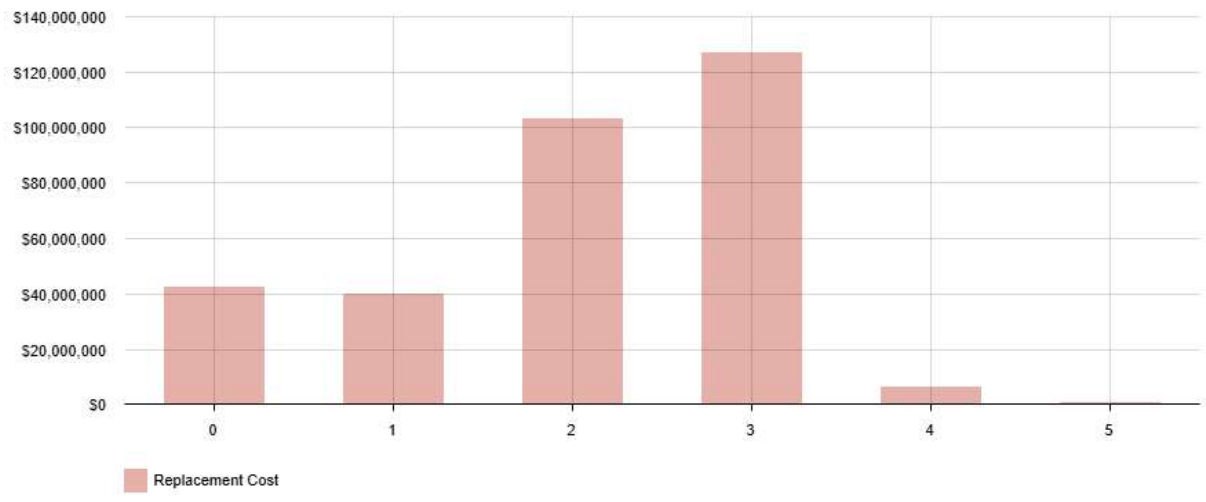


Figure 5.1.3: Asset Condition Profile

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

The condition distribution summarises the outcome of the recent condition assessment and indicates acceptable service provision with a small portion of assets in unsatisfactory condition.

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, street sweeping, asset inspection, and utility costs.

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 operating. Examples of typical maintenance activities include pipe repairs, asphalt patching, and equipment repairs.

The trend in maintenance budgets are shown in Table 5.2.1.

Table 5.2.1: Maintenance Budget Trends

Year	Maintenance Budget $
2024 / 25	$3,422,728
2025 / 26	$3,422,728
2026 / 27	$3,422,728

Maintenance budget levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. 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 and service risks considered in the Infrastructure Risk Management Plan.

Reactive maintenance is carried out in accordance with response levels of service detailed in the current Gannawarra Shire Council Road Management Plan, supplemented by staff using experience and judgement for lower-priority maintenance tasks.

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 service hierarchy is shown is Table 5.2.2.

Table 5.2.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Road / Bridge - Link	All Weather Access – high use / strategic route
Road / Bridge - Collector	All Weather Access – intermediate use
Road / Bridge - Access-Major	All Weather Access – low use / residential property access
Road / Bridge - Access-Minor	Dry Weather Only – very low use / rural non-residential access
Footpath – Category 1	Pedestrian access – High and Commercial Use Areas
Footpath – Category 2	Pedestrian access – Strategic and Intermediate Use Areas
Footpath – Category 3	Pedestrian access – Residential Areas
Footpath – Category 4	Pedestrian access – Non-Residential Natural Surface Footways
Kerb & Channel	Effective stormwater conveyance and edge definition for sealed roads
Car Parks	Fit-for-purpose off-road parking supporting adjacent land use

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 operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

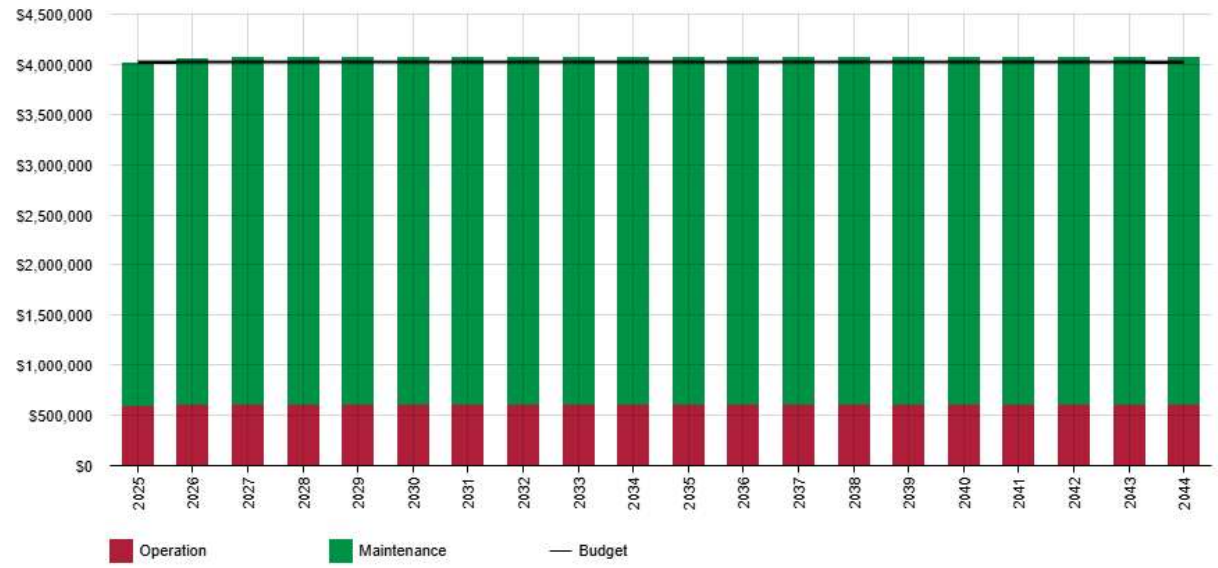


Figure 5.2: Operations and Maintenance Summary

Amounts are shown in real values (i.e., current values, net of inflation).

Council is currently maintaining a funding level for transport assets maintenance and operations that is aligned with the forecast requirement.

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 in the Lifecycle Model.

- 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 typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.3. Asset useful lives were last reviewed on February 2015 (Road Asset Management Plan – February 2015, Gannawarra Shire Council)[6]

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
Road Seal	17 years
Road Asphalt	25 years

[6] Enter Reference to Report documenting Review of Useful Life of Assets

Concrete Pavement	100 years
Road Pavement - Sealed	100 years
Road Pavement - Unsealed	25 years
Road Pavement – Natural Surface	100 years
Footpath	100 years
Kerb & Channel	80 years
Bridge	100 years

The estimates for renewals in this AM Plan were based on the Asset Register Method.

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 (e.g. replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a playground).[7]

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.[8]

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.3.1.

Table 5.3.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Asset condition is poor or very poor, based on inspection or modelling	30%
Asset services a high-use or high-risk area (e.g. schools, hospitals, town centre)	25%
Safety risk or recorded incidents have been linked to the asset	20%
Opportunity to coordinate with other planned works or strategic projects	15%
Community complaints or repeated maintenance requirements	10%
Total	**100%**

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. A detailed summary of the forecast renewal costs is shown in Appendix D.

[7] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[8] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Figure 5.3.2: Forecast Renewal Costs

Amounts are shown in real values (i.e., current values, net of inflation).

Available data indicates that routine annual asset renewals will continue across the 20-year planning horizon to maintain the serviceability of transport infrastructure.

5.4 Acquisition Plan

Acquisition reflects are 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 the Gannawarra Shire Council.

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 the Entities needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1: Acquired Assets Priority Ranking Criteria

Criteria	Weighting
Supports improved connectivity or safety on strategic transport routes (e.g. link or collector roads)	30%
Addresses known service gaps or access issues in underserved areas (e.g. new subdivisions, known access issues)	25%
Aligns with broader Council strategies, land use planning or external funding availability	20%
Improves transport equity and accessibility (e.g. for pedestrians, cyclists, mobility users)	15%
Supports climate resilience or network redundancy (e.g. alternative routes, flood-safe access)	10%
Total	**100%**

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised / summarized in Figure 5.4.1 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

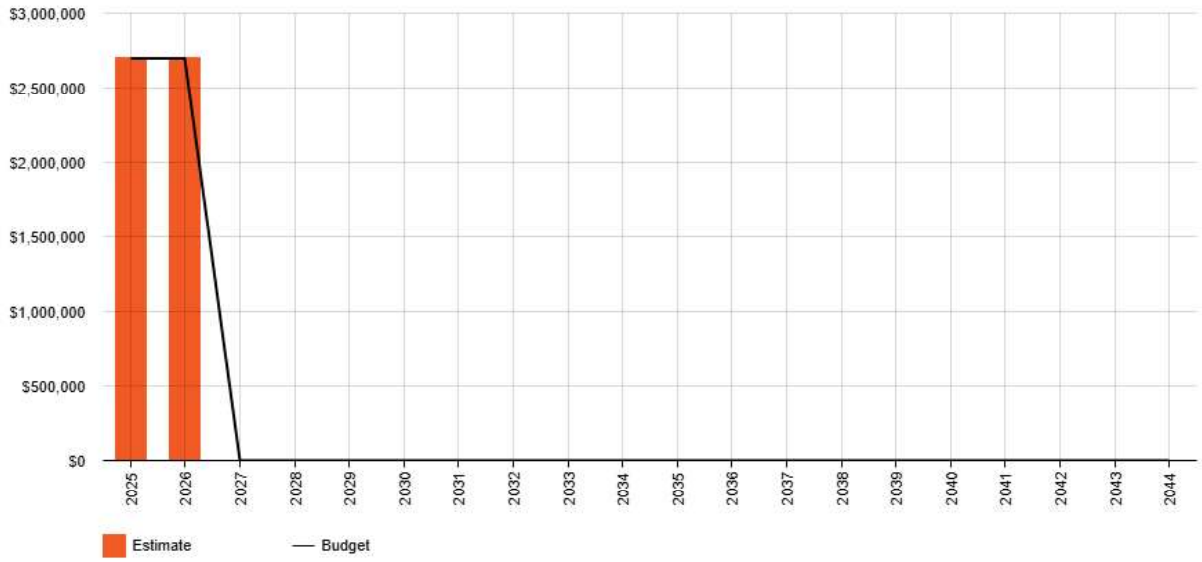


Figure 5.4.1: Acquisition (Constructed) Summary

Amounts are shown in real values (i.e., current values, net of inflation).

When the Gannawarra Shire Council commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long term sustainability. 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 the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.4.2.

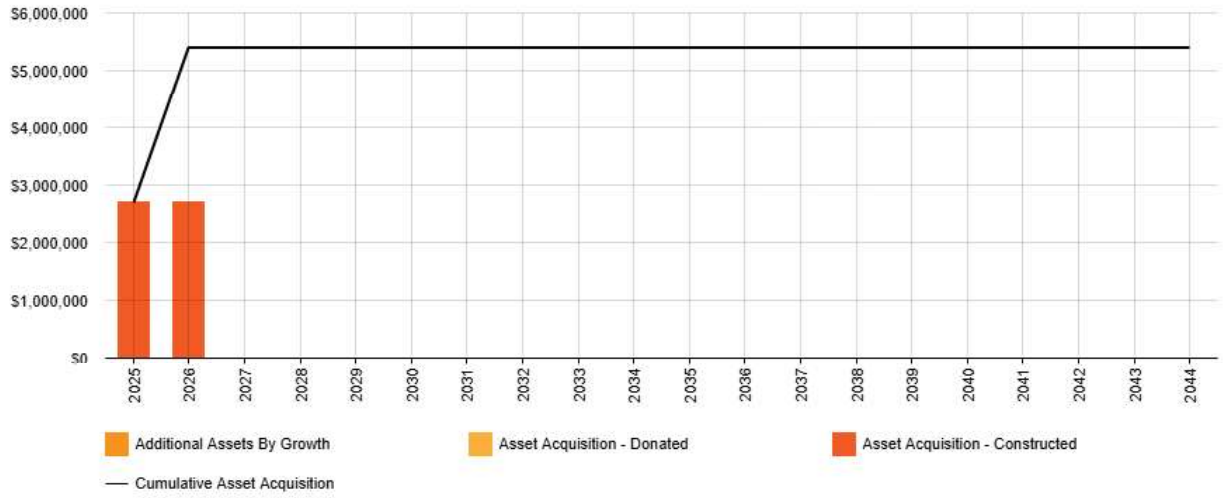


Figure 5.4.2: Acquisition Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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.

The forecast acquisition costs over the planning period are closely aligned with the proposed new capital budget allocations. These are currently limited to Cohuna Waterfront Stage 2 assets acquisitions (all being subject to the availability of external grant funding.). Additional acquisitions may occur during the period if approved by Council, however, delivery of these works is highly dependent on the availability of external grant funding.

5.5 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.5. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 5.5. Any costs or revenue gained from asset disposals is included in the long-term financial plan.

Table 5.5: Assets Identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
No disposals identified in this plan	Nil	Nil	$0	$0

5.6 Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 5.6. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

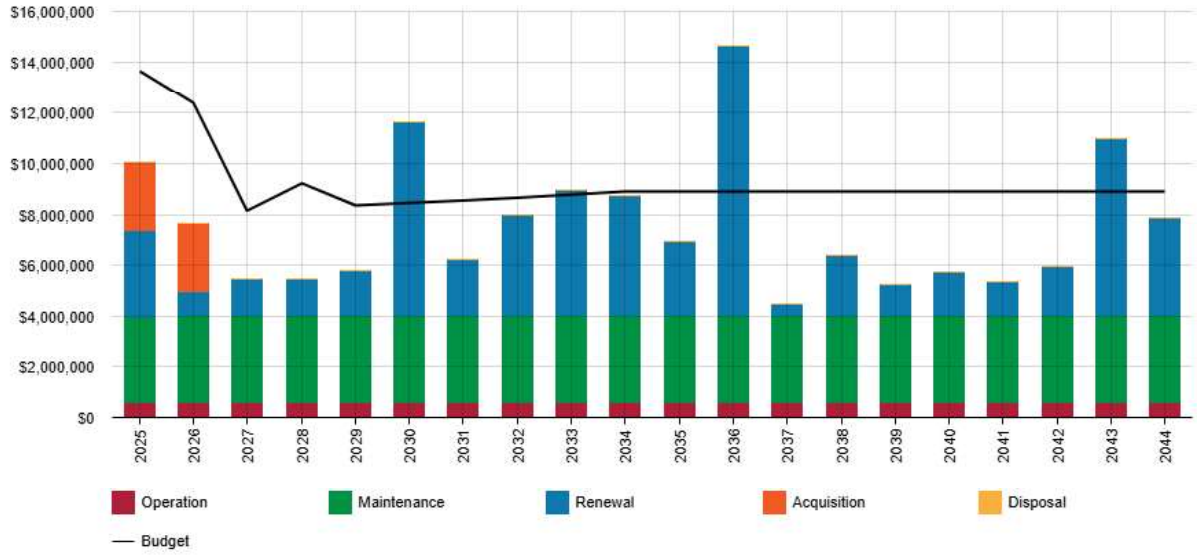


Figure 5.6: Lifecycle Summary

Amounts are shown in real values (i.e., current values, net of inflation).

While the overall budget allocation is sufficient to sustain service delivery across the transport network, cost spikes associated with asset groups reaching end-of-life will need to be managed. These will be addressed through a proactive renewal program informed by condition data forecasting. Although no critical deficiencies are currently evident, ongoing prioritisation of renewals will be required to mitigate the moderate risk of gradual service decline due to ageing infrastructure or emerging performance issues.

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'[9].

An assessment of risks[10] 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	Impact
High-use roads	Pavement failure due to structural fatigue or water ingress	Traffic disruption, reduced access for emergency services, increased accident risk.
Key bridges and culverts	Structural failure or scour during flood events	Loss of connectivity, restricted freight movement, public safety risks.
High use sealed intersections	Surface degradation or pavement failures	Increased risk of crashes, compromised traffic flow and turning movements.
School zone pedestrian crossings	Asset wear, faded line marking, or signage failure	Reduced safety for students and pedestrians during peak school times.
Shared user paths (bike/pedestrian trails)	Surface cracking, tree root damage, or poor drainage	Injury risk to users, potential liability claims, reduced accessibility, discouragement of active transport use.
Bus route roads	Pavement rutting or edge breakdown	Service delays or detours, increased wear on public transport fleet.
Kerb & channel	Failure or blockage	Localised flooding, ponding on roads, deterioration of pavements.
Town centre footpaths	Slab heaving, cracking, or surface unevenness	Injury risk to users, potential liability claims, impacts to mobility-impaired users.

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.

[9] ISO 31000:2009, p 2

[10] REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

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.

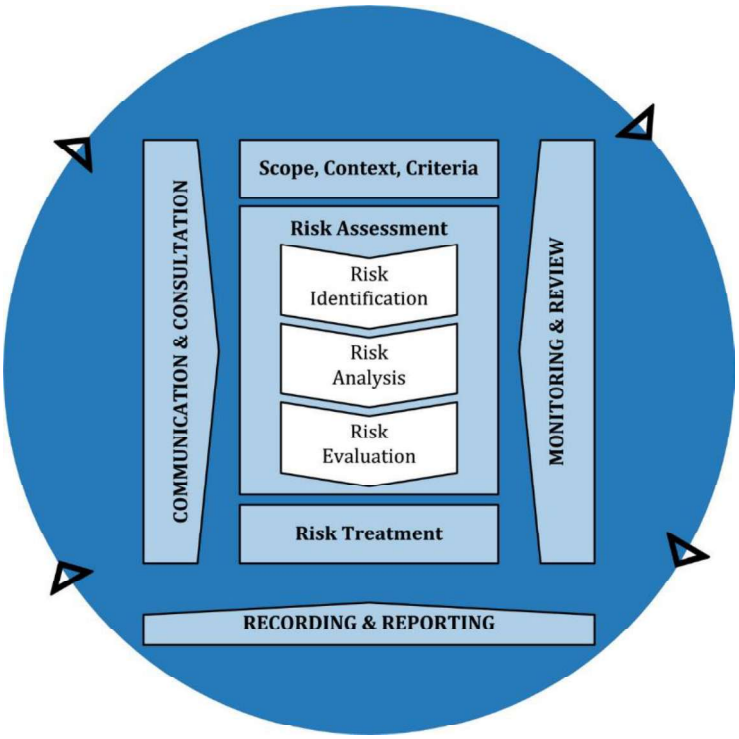


Fig 6.2 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

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[11] 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.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the Gannawarra Shire Council.

[11] REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

Table 6.2: Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Sealed roads on high-use routes	Pavement failure leads to unsafe driving conditions and road closures	High	Routine inspections, patching, resealing, and targeted reconstruction	Medium	Included in Renewal budgets
Unsealed rural access roads	Erosion or scouring during rainfall causes loss of access or vehicle damage	High	Grading program, re-sheeting cycle, drainage improvements	Medium	Included in Maintenance / Renewal budgets
Timber and aging road bridges	Structural failure results in route closure or safety hazard	High	Scheduled inspections, load-limit enforcement, staged replacements	Medium	$100,000–$5M (site-specific capital program)
Footpaths	Surface defects cause trip incidents or limit mobility access	High	Condition assessments, targeted renewals, and reactive repairs based on service requests	Medium	Included in Operational budgets
Older kerb & channel assets	Poor drainage or structural issues lead to road edge degradation	Medium	Replacement during road renewal or standalone kerb renewals	Low	Included in Renewal budgets
Older car parks	Surface or lighting failure impacts usability and safety	Medium	Proactive maintenance and minor works program	Low	$40,000 annually for resheeting, line marking, lighting works

Note * The residual risk is the risk remaining after the selected risk treatment plan is implemented.

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.

Our current measure of resilience is shown in Table 6.3 which includes the type of threats and hazards and the current measures that the organisation takes to ensure service delivery resilience.

Table 6.3: Resilience Assessment

Threat / Hazard	Assessment Method	Current Resilience Approach
Flooding of roads and culverts	Review of historical flood mapping, local flood studies, and inspection records	Medium
Extreme heat causing pavement deformation	Visual inspections, temperature trend analysis and pavement performance monitoring	Medium
Increased heavy vehicle traffic	Traffic count data, visual condition audits	Medium

Threat / Hazard	Assessment Method	Current Resilience Approach
Bushfire impact on road corridors	GIS overlay with CFA bushfire prone areas and network criticality analysis	Low
Data gaps in asset register	Gap analysis in GIS and asset management system	High

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:

- No new assets to be acquired without external grant funding.
- Renewals will have to be prioritised – due dates for some renewals will have to be advanced or pushed out.

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:

- Increased deterioration of road surfaces, leading to reduced ride quality, safety concerns, and more reactive maintenance.
- Minor delays in renewing ageing transport infrastructure, resulting in higher long-term costs and elevated risk of structural failure.
- Reduced network accessibility, particularly in rural or flood-prone areas, due to deferred upgrades or minor road improvements.
- Increased community complaints and reduced satisfaction from road users, especially where asset conditions visibly decline or access is disrupted.

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:

- Higher likelihood of road, bridge, or footpath failure - particularly in ageing assets, leading to safety hazards and unplanned emergency works.
- Greater susceptibility to service disruptions during extreme weather events due to delayed maintenance.
- Deterioration of asset condition beyond economic repair thresholds, resulting in escalated renewal costs and reduced network performance.
- Risk of non-compliance with regulatory, accessibility, or design standards, which may expose Council to liability or reputational damage.

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 in line with the financial strategy.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

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

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[12] 155.09%

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 155.09% of the funds required for the optimal renewal of assets.

The forecast renewal works along with the planned renewal budget, and the cumulative shortfall where one exists, is illustrated in Appendix D.

Lifecycle Funding Ratio – 10-year financial planning period

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide the levels of service to the community over a 10 year period. This provides input into 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 operations, maintenance and renewal costs over the 10 year planning period is $7263369 average per year.

The 10-year LTFP is $8983938 on average per year giving a 10 year funding surplus of $1720569 per year. This indicates that 123.69% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude depreciation and the acquisition of new and upgrade of existing assets.

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 1.0 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.

Forecast costs are shown in 2025/26 dollar values.

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

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2025	2700000	604010	3422728	3306573	0
2026	2700000	607250	3443248	913844	0
2027	0	610490	3463768	1391104	0
2028	0	610490	3463768	1372492	0

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

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2029	0	610490	3463768	1710819	0
2030	0	610490	3463768	7566821	0
2031	0	610490	3463768	2161152	0
2032	0	610490	3463768	3948568	0
2033	0	610490	3463768	4912390	0
2034	0	610490	3463768	4678629	0
2035	0	610490	3463768	2833900	0
2036	0	610490	3463768	10565200	0
2037	0	610490	3463768	390185	0
2038	0	610490	3463768	2309136	0
2039	0	610490	3463768	1168795	0
2040	0	610490	3463768	1634815	0
2041	0	610490	3463768	1291707	0
2042	0	610490	3463768	1845285	0
2043	0	610490	3463768	6914373	0
2044	0	610490	3463768	3822755	0

7.2 Valuation Forecasts

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at fair value at cost to replace service capacity (in accordance with the AASB 13 Fair Value Measurement standard).

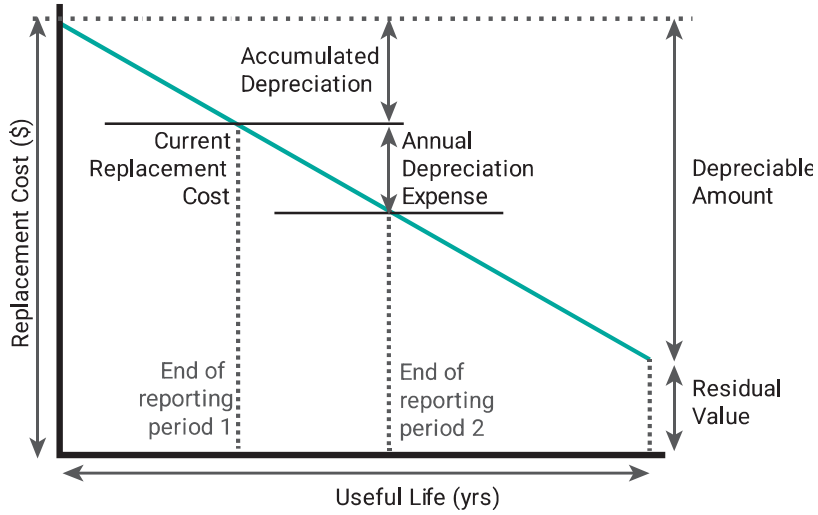


Figure 7.2.1: Valuation Terminology

Replacement Cost (Gross)	$318558109
Depreciable Amount	$318558109
Current Replacement Cost[13]	$228571110
Annual Depreciation Expense	$4748042.0

Asset values are forecast to increase as additional assets are added into service.

Acquiring new assets will add to existing operations, maintenance, future renewal, and depreciation expenses.

[13] Also reported as Written Down Value, Carrying or Net Book Value.

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. The source of the data is Confirm Asset Management System and Synergy Financial System.

8.1.2 Asset management data sources

This AM Plan also utilises asset management data. The source of the data is the Gannawarra Shire Council's GIS and Confirm Asset Management systems which control the Asset Registers and store all asset maintenance / operational records including customer requests.

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:

- Forecast is in "today's" (2025 / 26) dollars.
- Staffing needs are resourced adequately – for Asset data work and Operation & Maintenance tasks.
- No significant changes to Legislation / Standards occur over the planning period.

Assets requiring renewal are identified from either the asset register or an alternative method.

- The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal,
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge. When doing so, the forecast remaining useful life in the asset register should be adjusted where necessary.

The Asset Register Method was used to forecast the renewal lifecycle costs for this AM 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. [14]

Table 8.3.1: 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%

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

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 8.3.2.

Table 8.3.2: Data Confidence Assessment for Data used in AM Plan

Data	Confidence Assessment	Comment
Demand drivers	Medium	Climate change well documented. Population growth based on ABS Data.
Growth projections	Medium	Based on ABS data
Acquisition forecast	Medium	Based on CAPEX projects plan
Operation forecast	High	Based on Asset Registers
Maintenance forecast	High	Based on Asset Registers
Renewal forecast - Asset values	High	Based on Asset Registers / Condition data
- Asset useful lives	High	Based on Asset Register and Condition Assessment 2024 data
- Condition modelling	High	Straight line (U/L based) projections
Disposal forecast	Medium	Data is based on verbal reports

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

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 Asset Register and segmentation for alignment with VicMap (data reconciliation) and suitability for modelling.	Asset Management Team	Internal staff time, capable AM system	FY 2026/27
2	Enhance Transport asset data accessibility to public via GIS tools.	Asset Management Team	Internal staff time	FY 2026/27
3	Implement a renewal modelling tool for Transport asset lifecycle analysis.	Asset Management Team	Internal staff time, funding availability	FY 2027/28

4	Establish capitalisation process to capture asset handover from capital (upgrade / subdivision) works.	Asset Management Team	Internal staff time, capable AM system	FY 2026/27
5	Develop and apply risk / criticality ranking to Transport assets.	Asset Management Team	Internal staff time, capable AM system	FY 2026/27
6	Implement a centralised Asset Management System (AMS) to consolidate asset data and improve accessibility.	Asset Management Team	Software procurement, training resources	FY 2026/27
7	Integrate asset management with financial planning by aligning AMPs with the Long-Term Financial Plan (LTFP).	Finance and Asset Management Teams	Internal staff time, staff collaboration	FY 2026/27
8	Integrate Asset Management System (AMS) with Financial System to improve alignment of asset and budget data.	IT, Finance and Asset Management Teams	Internal staff time, software procurement	FY 2028/29
9	Implement GIS-based Asset Mapping Enhancements for accurate spatial asset representation and analysis.	Asset Management Team	GIS software, Internal staff time for data validation	FY 2026/27
10	Improve data collection, review and update asset inventory to improve data accuracy and completeness.	Asset Management Team	Internal staff time, GIS/AM system access	FY 2028/29

8.5 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The 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. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AM Plan has a maximum life of 4 years and is due for complete revision and updating within 12 months of Gannawarra Shire Council 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 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM 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 achieving the Organisational target (this target is often 90 – 110%).

9.0 REFERENCES

- IPWEA, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/iimm
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- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/pn12-1
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- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8
- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- ISO, 2018, ISO 31000:2018 Risk management – Guidelines
- Gannawarra Shire Council Plan and Budget.

10.0 APPENDICES

Appendix A Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source
The key assumptions are that the current financial climate will not improve, growth projections are sufficiently accurate and strategic plans / priorities will remain in-place with no substantial alterations.

A.2 – Acquisition Project Summary
The project titles included in the lifecycle forecast are included here:

- Cohuna Waterfront Stage 2 - $5,400,000

A.3 – Acquisition Forecast Summary

Table A3 - Acquisition Forecast Summary

Year	Constructed	Donated	Growth
2025	2700000	0	0
2026	2700000	0	0
2027	0	0	0
2028	0	0	0
2029	0	0	0
2030	0	0	0
2031	0	0	0
2032	0	0	0
2033	0	0	0
2034	0	0	0
2035	0	0	0
2036	0	0	0
2037	0	0	0
2038	0	0	0
2039	0	0	0
2040	0	0	0
2041	0	0	0
2042	0	0	0
2043	0	0	0
2044	0	0	0

Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source

Assumptions and relevant information relating to the Operation Forecast:

- Reactive tasks from community requests or weather events are included in forecasts.
- Assumes stable in-house staffing and contractor availability.
- Assumes current service levels are maintained throughout the forecast period.
- Includes operational costs for new assets listed in Acquisition Forecast.
- No major savings assumed, minor efficiencies expected through digital tools.
- Based on the current register data
- Forecast costs are in “today’s” (2025 / 26) dollars.

B.2 – Operation Forecast Summary

Table B2 - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2025	604010	3240	604010
2026	604010	3240	607250
2027	604010	0	610490
2028	604010	0	610490
2029	604010	0	610490
2030	604010	0	610490
2031	604010	0	610490
2032	604010	0	610490
2033	604010	0	610490
2034	604010	0	610490
2035	604010	0	610490
2036	604010	0	610490
2037	604010	0	610490
2038	604010	0	610490
2039	604010	0	610490
2040	604010	0	610490
2041	604010	0	610490
2042	604010	0	610490
2043	604010	0	610490
2044	604010	0	610490

Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source

Assumptions and relevant information relating to the Maintenance Forecast:

- Reactive tasks from community requests or weather events are included in forecasts.
- Assumes stable in-house staffing and contractor availability.
- Forecast supports maintaining current maintenance service standards.
- Assumes existing routine and cyclic maintenance schedules remain unchanged.
- Includes maintenance costs for new assets listed in Acquisition Forecast.
- No major savings assumed, minor efficiencies expected through digital tools.
- Based on the current register data
- Forecast costs are in “today’s” (2025 / 26) dollars.

C.2 – Maintenance Forecast Summary

Table C2 - Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2025	3422728	20520	3422728
2026	3422728	20520	3443248
2027	3422728	0	3463768
2028	3422728	0	3463768
2029	3422728	0	3463768
2030	3422728	0	3463768
2031	3422728	0	3463768
2032	3422728	0	3463768
2033	3422728	0	3463768
2034	3422728	0	3463768
2035	3422728	0	3463768
2036	3422728	0	3463768
2037	3422728	0	3463768
2038	3422728	0	3463768
2039	3422728	0	3463768
2040	3422728	0	3463768
2041	3422728	0	3463768
2042	3422728	0	3463768
2043	3422728	0	3463768
2044	3422728	0	3463768

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

Assumptions and relevant information relating to the Renewal Forecast:

- Useful lives and the current degradation profile align with the average performance of the assets
- The condition assessment data accurately reflects the condition profile and renewal needs of the network
- Renewals are scheduled primarily on condition ratings, supported by visual inspections.
- Renewal of assets driven by low-risk defects will be deferred to align with condition deterioration forecast.

D.2 – Renewal Project Summary

The project titles included in the lifecycle forecast are included here:

- Transport asset components deemed to be in poor condition.
- Safer Local Roads - $2,000,000
- Flood Betterment Works - $1,050,000

D.3 – Renewal Forecast Summary

Table D3 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2025	3306573	6923000
2026	913844	5646000
2027	1391104	4146000
2028	1372492	5211000
2029	1710819	4351000
2030	7566821	4451000
2031	2161152	4546000
2032	3948568	4646000
2033	4912390	4766000
2034	4678629	4886000
2035	2833900	4886000
2036	10565200	4886000
2037	390185	4886000
2038	2309136	4886000
2039	1168795	4886000
2040	1634815	4886000
2041	1291707	4886000
2042	1845285	4886000
2043	6914373	4886000
2044	3822755	4886000

Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source
Assumptions and relevant information relating to the Disposal Forecast:

- No disposals are anticipated during this planning period

E.2 – Disposal Project Summary
The project titles included in the lifecycle forecast are included here.

- No disposals are anticipated during this planning period

E.3 – Disposal Forecast Summary

Table E3 – Disposal Activity Summary

Year	Disposal Forecast	Disposal Budget
2025	0	0
2026	0	0
2027	0	0
2028	0	0
2029	0	0
2030	0	0
2031	0	0
2032	0	0
2033	0	0
2034	0	0
2035	0	0
2036	0	0
2037	0	0
2038	0	0
2039	0	0
2040	0	0
2041	0	0
2042	0	0
2043	0	0
2044	0	0

Appendix F Budget Summary by Lifecycle Activity

The assumptions relating to the Planned Budget estimates:

- The funding is allocated based on the annual asset depreciation and high-level estimates.
- The project timing to construct Cohuna Waterfront Stage 2 is realistic / attainable and (grant) funding will become available.
- Operational and maintenance forecast costs are in “today’s” (2025 / 26) dollars.
- Forecast budgets do not currently include provision for climate resilience driven major redesigns or upgrades of existing assets (unless integrated within planned upgrade projects).
- Renewal forecasts are prioritised by asset condition and risks, assuming no asset impairments or other major unforeseen failures will be occurring.

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition	Operation	Maintenance	Renewal	Disposal	Total
2025	2700000	604010	3422728	6923000	0	10949738
2026	2700000	604010	3422728	5646000	0	9672738
2027	0	604010	3422728	4146000	0	8172738
2028	0	604010	3422728	5211000	0	9237738
2029	0	604010	3422728	4351000	0	8377738
2030	0	604010	3422728	4451000	0	8477738
2031	0	604010	3422728	4546000	0	8572738
2032	0	604010	3422728	4646000	0	8672738
2033	0	604010	3422728	4766000	0	8792738
2034	0	604010	3422728	4886000	0	8912738
2035	0	604010	3422728	4886000	0	8912738
2036	0	604010	3422728	4886000	0	8912738
2037	0	604010	3422728	4886000	0	8912738
2038	0	604010	3422728	4886000	0	8912738
2039	0	604010	3422728	4886000	0	8912738
2040	0	604010	3422728	4886000	0	8912738
2041	0	604010	3422728	4886000	0	8912738
2042	0	604010	3422728	4886000	0	8912738
2043	0	604010	3422728	4886000	0	8912738
2044	0	604010	3422728	4886000	0	8912738