City of Mount Gambier

# Infrastructure Asset Management Plan 2023-2032

June 2022

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# 1 SUMMARY

### **1.1** A summary of the road assets used to provide this service are:

- Sealed road 229.2 km
- Kerb and Channel length of 453 km
- Constructed footpath area of 121km
- Carpark area of 72,940m<sup>2</sup>
- Traffic Light Sets at 19 locations
- 466 drainage bores.

### 1.2 What does it Cost?

The total dollar value of the annual consumption of the road and drainage asset category is \$3,390,000 (i.e. annual depreciation expense for 2020/21). Council's goal for annual expenditure is to match this value so that no gap exists between the annual depreciation cost and the actual budget expenditure.

Council needs to continue to seek additional funding sources through Government grants to ensure any funding gap is manageable in the long term.

### 1.3 Plans for the Future

Council plans to operate and maintain the road network to achieve the following strategic objectives:

- Ensure the road network is maintained at a safe and functional standard as set out in this Infrastructure and Asset Management Plan.
- Provide for renewed infrastructure and access standards that meet the demands and expectations of the community in a financially sustainable environment.
- Maintain integration and functionality of local roads with state roads to ensure continuity of freight networks.
- Require service standards for newly created infrastructure acquired through land development and residential expansion to be complimentary with existing asset standards.

#### Quality

Roads assets will be maintained in a reasonable condition. Defects found or reported that are outside our service standard will be repaired. See our level of service chart below as continuous improvements milestones. Council will also continue to work on a detailed maintenance response manual to better manage the service demand and expectation.

#### Function

Our intent is that a 'fit for purpose' road network is maintained in partnership with other levels of government and stakeholders.

Road asset attributes will be maintained (subject to funding) at a safe level and associated signage and equipment be provided as needed to ensure public safety. We need to ensure the key functional objectives are met:

- Council will endeavour to provide free flowing and unrestricted travel between destinations and locations to all recognised modes of transport and associated user groups.
- Ensure accidents are minimised and only minor consequences occur from accidents.

The main functional consequence of the road network not being able to cater for free flowing and unrestricted traffic is delays to industry and the local community which is likely to decrease quality of life and increase the potential for accidents to occur through driver frustration. Consequently, this is likely to impose additional financial and social burdens onto the community.

#### Safety

We inspect all roads regularly and prioritise and repair defects in accordance with our inspection schedule to ensure they are safe.

### 1.4 The Next Steps

The actions resulting from this Infrastructure and Asset Management Plan are:

- Ensure the road network is regularly inspected and any defects rectified in a timely manner to ensure public safety and to mitigate against public risk.
- To provide for renewal of assets and the creation of new road assets and associated infrastructure in a sustainable manner.
- To plan for growth of the City in a manner that is supported by a fit for purpose road network.

# 2 INTRODUCTION

### 2.1 Background

This Infrastructure and Asset Management Plan is designed to:

- Provide responsive management of assets (and services provided from assets)
- Ensure compliance with regulatory requirements
- Assist in securing funding required to provide agreed levels of service

The Infrastructure and Asset Management Plan is to be read with the associated planning documents including:

- City of Mount Gambier Strategic Plan 2020-2024
- City of Mount Gambier Long Term Financial Plan
- Council's Annual Business Plan and Budget
- Asset Accounting Policy
- Asset Management Policy A900
- Land Development Policy L130
- Road Pavement Excavation and Reinstatement of Policy R270

This Infrastructure and Asset Management Plan covers the entire road network and associated traffic control devices within the City of Mount Gambier including local roads, collector roads and boundary roads. Whilst it references and links to assets owned by both state and federal governments, it does not include these assets in the Plan.

Asset Category	Current Value (\$)
Bores & Pits	5,668,080.59
Carparks	7,437,691.51
Footpaths	16,111,488.73
Kerb & Channel	39,248,959.13
Road Pavement	35,753,536.64
Retaining Walls	194,318.88
Road Surface (Seals)	10,608,722.58
Road Safety Barriers	31,371.63
Sub Pavement	801,835.01
Traffic Lights	1,419,032.40
TOTAL	117,275,037.1

#### Table 1 - Assets covered by this Plan as at 30 June 2020

Key stakeholders in the preparation and implementation of this Infrastructure and Asset Management Plan are:

- City of Mount Gambier
- Tourism sector
- Ratepayers and tenants
- Business Sector

- Transport Industry
- District Council of Grant and its community
- State and Federal Government (funding partners and regulators)

### 2.2 Goals and Objectives of Asset Management

The Council exists to provide services to its community. Some of these services are provided by infrastructure assets. Council has acquired infrastructure assets by 'purchase', by contract, construction by Council staff and by transfer of assets constructed by developers and others.

Council's goal in managing infrastructure assets is to meet the agreed level of service in the most costeffective manner for present and future consumers. The key elements of infrastructure asset management are:

- Taking a life cycle approach
- Developing cost-effective management strategies for the long term
- Providing a defined level of service and monitoring performance
- Understanding and meeting the demands of growth through demand management and infrastructure investment
- Managing risks associated with asset failures
- Sustainable use of physical resources
- Continuous improvement in asset management practices.<sup>1</sup>

### 2.3 Plan Framework

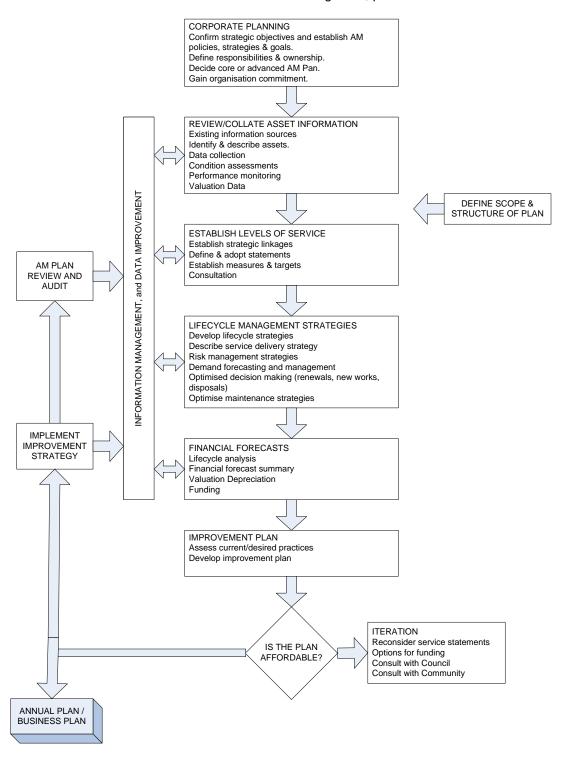
Key elements of the Plan are

- Levels of service specifies the services and levels of service to be provided by Council.
- Future demand how this will impact on future service delivery and how this is to be met.
- Life cycle management how Council will manage its existing and future assets to provide the required services.
- Financial summary what funds are required to provide the required services.
- Asset management practices.
- Monitoring how the Plan will be monitored to ensure it is meeting Council's objectives.
- Asset management improvement plan.

A road map for preparing an Infrastructure and Asset Management Plan is shown below.

<sup>&</sup>lt;sup>1</sup> IIMM 2006 Sec 1.1.3, p 1.3

Road Map for preparing an Infrastructure and Asset Management Plan Source: IIMM Fig 1.5.1, p 1.11



# 3 LEVELS OF SERVICE

### 3.1 Customer Research and Expectations

Council's anecdotal evidence (primarily based on the number of complaints received) suggests that current service levels are seen by the community as acceptable.

### 3.2 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and State regulations. These include:

Table 2 - Legislativ	e Requirements
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Legislation	Requirement
Local Government Act	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long-term financial plan supported by Infrastructure and Asset Management Plans for sustainable service delivery.
Road Traffic Act	Provides Councils the power to install, maintain, operate, alter or remove traffic control devices on roads under their care and control

### 3.3 Current Levels of Service

Council has defined service levels in two terms.

Community Levels of Service relate to how the community receives the service in terms of safety, quality, function, quantity, reliability, responsiveness, cost/efficiency and legislative compliance.

Supporting the community service levels are operational or technical measures of performance developed to ensure that the minimum community levels of service are met. These technical measures relate to service criteria such as:

Service Criteria Quality Quantity Availability Safety Technical measures may relate to Smoothness of roads Area of parks per resident Distance from a dwelling to a sealed road Number of injury accidents

Council's current service levels are detailed in Table 3.3.

 Table 3.3. Current Service Levels

Key Performance Measure	Level of Service	Performance Measure Process	Performance Target	Current Performance
COMMUNITY LEV	ELS OF SERVICE			
Quality	ality Provide a smooth ride on a surface that is clearly delineated		Less than 5 per month per road segment	Less than 5 per month on any one segment
Function	Ensure that the road meets user requirements for travel time and availability	Customer complaints relating to travel time and availability	Less than 2 per month	Less than 2 per month
Safety	Provide safe suitable roads free from hazards	Number of injury accidents	Less than 3 per annum per location	Less than 3 per annum per location
TECHNICAL LEVE	LS OF SERVICE			
Condition	Carry out routine maintenance on potholes	Number of pothole complaints	Less than 5 per month	Less than 5 per month
Accessibility	Provide unrestricted access to residential, commercial and industrial sectors of the City	Limit property access from road works and maintenance works	Less than 60 minutes for minor maintenance works. Less than 2 days for major reconstruction works	70 minutes for minor works and 2.5 days for major works

Safety	Provide clear safe signage and line marking	,	Less than 5% of signs defective. Less than 5% of line marking	Less than 5% of signs defective 10% of line marking not
			not clearly visible	clearly visible

### 3.4 Desired Levels of Service

At present, indications of desired levels of service are obtained from various sources including residents' feedback to Councillors and staff, service requests and correspondence. Council will be undertaking a review in order to quantify all desired levels of service. This work will be incorporated in future revisions of this Infrastructure and Asset Management Plan.

# 4 FUTURE DEMAND

### 4.1 Demand Forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, agricultural and industry practices, environmental awareness, etc.

Demand factor trends and impacts on service delivery are summarised in Table 4.1.

Demand factor	Present position	Projection	Impact on services
Population	27,421 (30 <sup>th</sup> June 20121)	1% growth	Moderate residential growth. Increased traffic on collector roads
Demographics	Ageing population	2 to 3% growth	Increase in aged care accommodation
Climate change	Substantial bicycle network	Significant growth in bicycle network and associated infrastructure	Increase in bike paths, dedicated bus lanes and crossing facilities
	Adequate public transport systems	Increased public transport	in road network

Table 4.1 Demand Factors, Projections and Impact on Services

### 4.2 Changes in Technology

Technology changes are forecast to have an effect on the delivery of services covered by this Plan (eg. road reconstruction methodology) and will also likely improve customer feedback and advice to Council (eg. Web based communication to Council, smart phone technology).

### 4.3 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this Infrastructure and Asset Management Plan.

#### Table 4.3 Demand Management Plan Summary

Service Activity Demand Management Plan

Traffic control devices (roundabouts, signals)	Revise traffic management plan every 5 years (major revision), and annual update
Improve boundary roads and collector roads	Continue with boundary roads program Upgrade designated collector roads
Public Carpark	Work towards an effective and affordable city wide public transport system to reduce on street and off street public car parking demand.
Footpath and Shared path	Adopt a city-wide Shared path network strategy and audit to activate CBD and recreational areas. Promote "cultural drive" towards more walking and cycling as a commuting means Audit and compliance review of existing infrastructure for accessibility and adopt future works programme towards upgrading existing non-compliance asset to comply accessible standards.

#### New Assets from Growth 4.4

Where new assets are required for growth, these will be constructed by developers and donated to Council or constructed / acquired by Council. The growth financial model forecasts asset values acquired from developers or constructed by Council over the next 20 years.

Acquiring these new assets will commit Council to fund ongoing operations and maintenance costs for the period that the service provided from the assets is required and also capital renewal costs for assets required beyond their useful life. These future costs are identified and considered in developing forecasts of future operating and maintenance costs.

#### 5 LIFECYCLE MANAGEMENT PLAN

The Lifecycle Management Plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in section 3) while optimising life cycle costs.

#### 5.1 **Background Data**

#### 5.1.1 **Physical Parameters**

The assets covered by this Infrastructure and Asset Management Plan are shown below:

- Road sub pavement
- Road surface (seal)

Road pavement

Traffic control devices

Kerb and channel

Drainage

- Constructed footpaths / nature strips
- Carparks

Generally, the road assets mentioned above are in good condition although asset ages vary considerably across the City. Council has limited data on the age profile of its asset stock and will be revising condition data for most road asset categories. Council uses the condition data to set future works programs and to prepare risk control strategies.

Note: Comprehensive condition or age data currently does not exist for Council's drainage assets but is currently being developed.

#### 5.1.2 Asset Capacity and Performance

Council's services are generally provided to meet design standards where these are available.

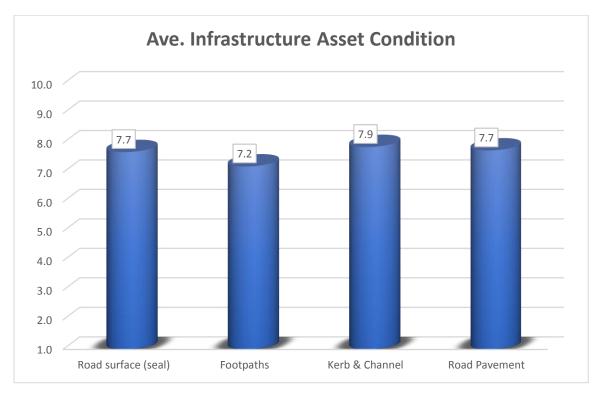
#### 5.1.3 Asset Condition

The condition profile of Council's road assets as of April 2022 is shown below.

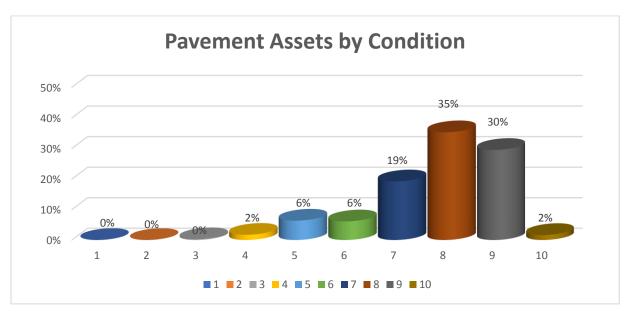
Condition is measured using a 0 – 10 rating system.<sup>2</sup>

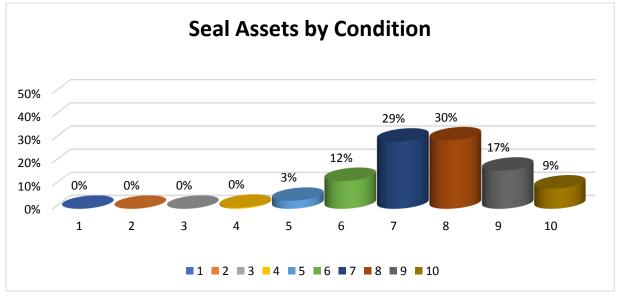
Rating	Description of Condition
10	Excellent condition: Only planned maintenance required. New asset.
8	Very good: Minor maintenance required plus planned maintenance.
6	Good: Significant maintenance required.
5	Average condition. Significant maintenance required.
4	Failing: Significant renewal/upgrade required (start of rapid deterioration).
<2	Poor: Unserviceable. Asset renewal or disposal required.

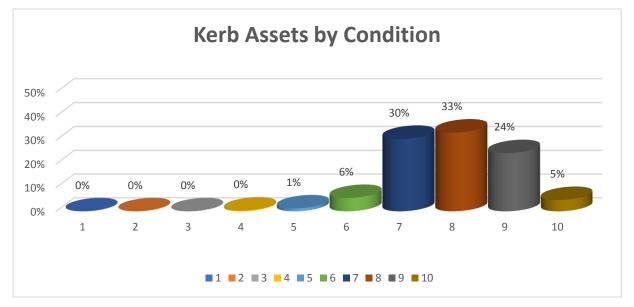
#### Fig 3. Asset Condition Profiles

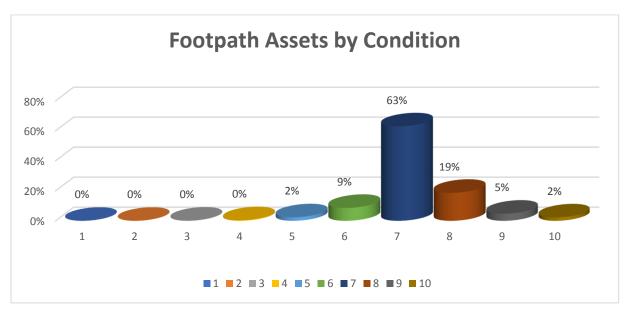


<sup>2</sup> IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned')









#### 5.1.4 Asset Valuations

The value of assets as at 1<sup>st</sup> July 2021 covered by this Infrastructure and Asset Management Plan is summarised below. Assets are valued at green field rates.

Current Replacement Cost	\$162,607,404
Net Fair Value	\$117,275,037
Annual Depreciation	\$3,390,000
Accumulated Depreciation	\$45,332,367

### 5.2 Risk Management Plan

An assessment of risks associated with service delivery from infrastructure assets identifies critical risks to Council. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

### 5.3 Routine Maintenance Plan

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again. This function is essential to the long-term sustainability of the network and is one of several maintenance functions that **should receive priority in Council's annual budget**.

#### 5.3.1 Maintenance Plan

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including road resealing, repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

Current maintenance expenditure levels are considered to be marginally below adequate to maintain current service levels. Future revision of this Infrastructure and Asset Management Plan will include linking required maintenance expenditures with required service levels as a means to further manage assets in a sustainable manner.

Assessment and prioritisation of reactive maintenance is currently undertaken by Council staff using experience and judgement.

#### 5.3.2 Standards and Specifications

Maintenance work is carried out in accordance with the following Standards and Specifications:

- Current Australian and Industry Standards
- Council Policy Road Pavement Excavation and Reinstatement of (revised 2017)
- Council Policy Land Division (revised 2018)
- Civil Contractors Federation Guidelines
- Work Health Safety Act and Regulations

### 5.4 Renewal / Replacement Plan

Renewal expenditure is major work which does not increase the asset's design capacity 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 upgrade/expansion or new works expenditure.

#### 5.4.1 Renewal Plan

Assets requiring renewal are identified from estimates of remaining life obtained from the asset register through the *'Renewal Model'*. Candidate proposals are inspected to verify accuracy of remaining life estimate and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is based on asset condition and is then adopted ultimately by Council.

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

Examples of low-cost renewal include footpath asphalt overlay versus complete reconstruction of a bitumen footpath. This method provides a better level of service than currently available at a smaller renewal cost than complete reconstruction, and also provides an extended asset life which matches current service levels.

#### 5.4.2 Renewal Standards

Renewal work is carried out in accordance with the following Standards and Specifications.

• Current Australian and Industry Standards

- Council's Road Pavement Excavation and Reinstatement of
- Council's Land Division Policy
- Civil Contractors Federation Guidelines
- Work Health Safety Act and Regulations

#### 5.4.3 Summary of Future Renewal Expenditure

Projected future renewal expenditures are forecast to increase over time as the asset are consumed. The costs are summarised in Fig 5.

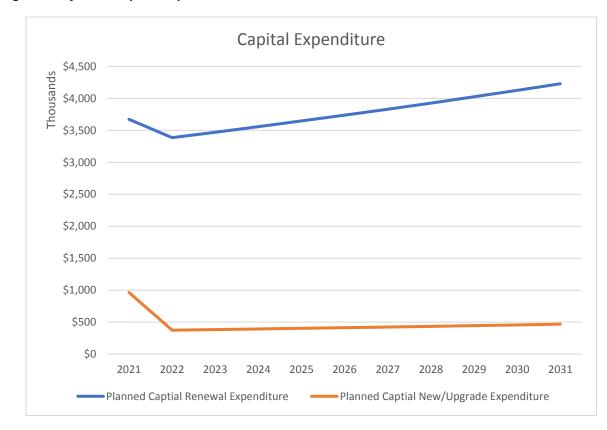


Fig 5. Projected Capital Expenditure

Renewals are to be funded from Council's capital works program and grants where available. This is further discussed in Section 6.2.

### 5.5 Creation / Acquisition / Upgrade Plan

New works are those works that create a new asset that did not previously exist or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development. These assets from growth are considered in Section 4.4.

#### 5.5.1 Selection Criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. Council ultimately makes the decision on priority ranking of new assets based on this information.

#### 5.5.2 Standards and Specifications

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

#### 5.5.3 Summary of Future Upgrade / New Assets Expenditure

New assets and services are to be funded from Council's capital works program and grants where available. This is further discussed in Section 6.2.

### 5.6 Disposal Plan

Currently there are no assets in the road category that are listed for disposal.

# 6 FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this Infrastructure and Asset Management Plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

### 6.1 Financial Statements and Projections

#### 6.1.1 Sustainability of Service Delivery

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium-term costs over the 10 year financial planning period.

#### 6.1.2 Long Term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset consumption (depreciation expense). The annual life cycle cost for the services covered in this Infrastructure and Asset Management Plan is \$3,390,000.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan (2020) is \$3,171,200.

A gap between life cycle costs and life cycle expenditure gives an indication as to whether present consumers are paying their share of the assets that are consumed each year. The purpose of this Infrastructure and Asset Management Plan is to identify levels of service that the community needs and can afford and develop the necessary long-term financial plans to provide the service in a sustainable manner.

#### 6.1.3 Medium term – 10 Year Financial Planning Period

This Infrastructure and Asset Management Plan identifies the estimated maintenance and capital expenditures required to provide an agreed level of service to the community over a 20-year period for input into a 10 year financial plan and funding plan to provide the service in a sustainable manner.

This may be compared to existing or planned expenditures in the 20-year period to identify any gap. In a core Infrastructure and Asset Management Plan, a gap is generally due to increasing asset renewals or underfunding of capital renewal programs.

### 6.2 Key Assumptions made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this Infrastructure and Asset Management Plan and in preparing forecasts of required operating and capital expenditure and asset values. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this Infrastructure and Asset Management Plan are:

- Asset condition and age has been determined based on engineering knowledge, best available data and previous asset deterioration rates. Some asset categories such as road seals have more accurate data available than other asset categories such as drainage infrastructure. However, current asset age can be reasonably determined by reverse engineering from total asset life and current asset condition.
- Straight line depreciation of asset condition has been assumed but the asset condition tends to drop off significantly towards the end of the asset life. This sharp drop off will impact on funding requirements needed to maintain asset stock in a reasonable condition and therefore Council's approach is to renew assets before this sharp drop in asset condition.
- This Infrastructure and Asset Management Plan was put together based on the information at hand at the time of preparing the Plan.
- It is assumed that there will be minimal effect to asset service and delivery from future technological changes.
- Projected renewals are assumed to increase in value at a rate of 2.5% per annum. Any variation from 2.5% can affect the cumulative gap significantly (the data presented in this report is very sensitive to this assumption).

## 7 PLAN IMPROVEMENT AND MONITORING

### 7.1 Performance Measures

The effectiveness of the Infrastructure and Asset Management Plan can be measured in the following ways:

- The degree to which the required cashflows identified in this Infrastructure and Asset Management Plan are incorporated into Council's LTFP and Community Plan;
- The degree to which 1-10 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the Infrastructure and Asset Management Plan.

### 7.2 Monitoring and Review Procedures

This Infrastructure and Asset Management Plan will be reviewed during annual budget preparation and amended to recognise any changes in service levels and/or resources available to provide those services as a result of the budget decision process.

The Plan has a maximum life of 4 years and is due for revision and updating within 2 years of each Council election.

# 8 **REFERENCES**

The City of Mount Gambier Futures Paper

City of Mount Gambier Strategic Plan 2020-2024

City of Mount Gambier Annual Business Plan and Budget

DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney, <u>www.ipwea.org.au</u>

# 9 Appendices

# 9.1 Infrastructure Asset Management Plan

	Infrastructure Asset Management Plan - 2022-2031									
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Renewal	3,710,056	3,456,868	3,460,193	3,652,994	3,463,794	3,465,712	3,467,755	3,469,712	3,471,721	3,473,782
Upgrade/new	549,000	374,000	374,000	374,000	374,000	374,000	374,000	374,000	374,000	374,000
TOTAL	4,259,056	3,830,868	3,834,193	4,026,994	3,837,794	3,839,712	3,841,755	3,843,712	3,845,721	3,847,782