



Road Asset Management Plan 2024-2034

Bass Coast Shire Council

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Document Control

Document History

Version	Date	Status	Author	Summary of changes
0.1	23/05/2025	Draft	RN	Initial draft RAMP.
0.2	24/05/2024	Draft	RN/SH	Draft for release to public.
1.0				

Definitions

Explanation of definitions and acronyms used in this plan.

Term/Acronym	Definition
AASB	Australian Accounting Standards Board
AM Strategy	Asset Management Strategy
AMSC	Asset Management Steering Committee
Backlog	The quantum of assets that meet the intervention levels but cannot be funded
RAMP	Roads Asset Management Plan
BPM	Business Process Manual
Condition or Service State	The service state involves the use of a single integer between 1 and 5 to describe the ability for the asset in question to fulfill its function; where 1 is very good and 5 is very poor.
IIMM	International Infrastructure Management Manual
ISO55000	55000 Series, International Suite of Asset Management Standards
LTFP	Long-Term Financial Plan
LoS	Levels of Service
Net Strategy Cost	Total cost lifecycle scenario strategy. Calculation; Total Capital Cost over 20 Years + Total Maintenance & Operational Cost over 10 Years – Backlog Movement Over 20 Years.
Non-current assets	Physical and intangible infrastructure assets, including information and communication technology (ICT) assets, controlled by the organisation
PVP	Assets that are in Poor or Very Poor Condition
PCI	Pavement Condition Index
PSP	Precinct Structure Plan
SAM	Strategic Asset Management
SCI	Surface Condition Index

1 Executive Summary

1.1 The purpose of the Plan

The purpose of this Road Asset Management Plan (RAMP) is to inform Bass Coast Shire's (Council) commitment to better practice asset management and provide principles for sound road asset investment decision making.

The RAMP documents the overall integrated planning framework to guide and improve Council's long-term strategic management of its road assets to cater for the community's required levels of service relating to road availability, accessibility, quality, quantity, safety, responsiveness, environment sustainability and cost effectiveness into the future as detailed in Section 3.5 Level of Service.

The RAMP defines the state of Council's road assets as at the 2024 Financial Year, the 10-year funding required to achieve Council's adopted asset performance targets and planned asset management activities over a 10-year planning period.

This RAMP is to be read in conjunction with Council's Asset Management Strategy. Figure 1 outlines the linkages between Council's strategic planning processes and the process for the development of AM Plans.

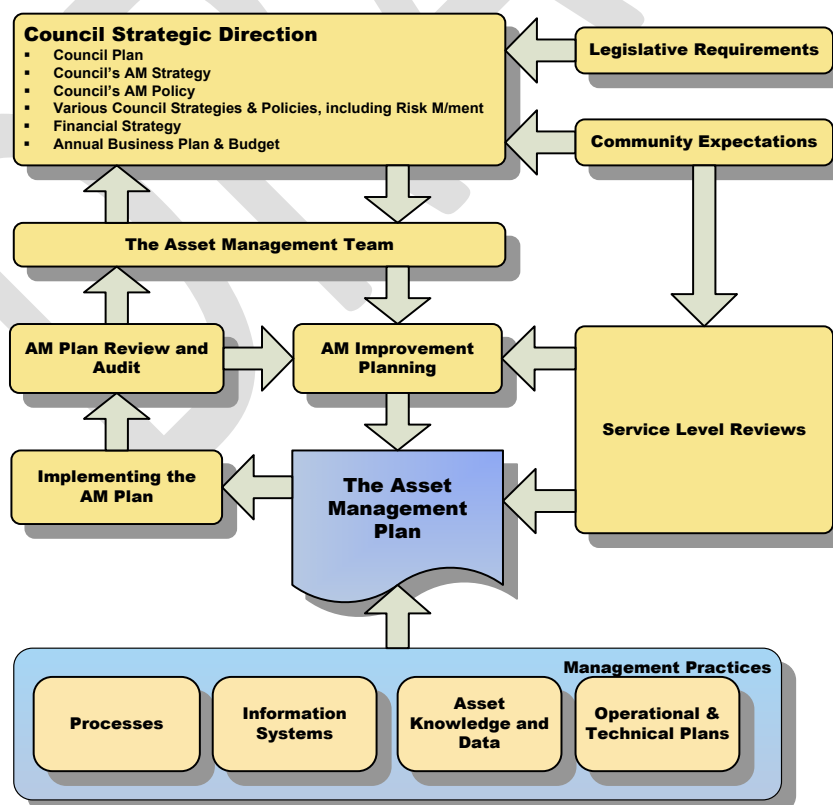


Figure 1 – Linkage between the RAMP and Council's Strategic Planning Process

Asset Management Plans (AM Plans) provide guidance to the Council Plan and the Strategic Resource Plan. These long-term plans set the short-term funding levels available which, in turn, refine the AM Plans and provide input to the Annual Budget. From this, the Capital Works Program for infrastructure maintenance and renewals is developed.

Council's role is to locally govern all residents, visitors and ratepayers, and provide a range of programs and services that meet the needs of the community. This role as it relates to transport assets is described through Council Plan Community Aspiration for Access and Movement:

We have equal access to a carefully planned, reliable, expansive and innovative transport network. We can move freely and easily within Bass Coast and beyond.

1.2 Current State of Council's Assets

Council engaged the services of an external valuer who performed a revaluation assessment as at 30 June 2024 which is set out in the table below:

Asset Type	Replacement Cost	Accumulated Depreciation	Fair Value	Annual Depreciation
Sealed Road	\$518,679,783	\$120,981,334	\$397,698,449	\$7,739,472
Unsealed Road	\$22,688,869	\$7,636,740	\$15,052,129	\$2,238,797
Kerb & Channel	\$143,065,111	\$47,231,703	\$95,833,408	\$1,788,867
Street Furniture	\$5,933,866	\$1,785,994	\$4,147,872	\$340,053
Totals	\$690,367,629	\$177,635,771	\$512,731,858	\$12,107,189

Table 1 - Assets Valuations Unaudited as at 30th June 2024

The following figures provide high-level overview of the current condition (asset health) of all road assets owned and maintained by Council. The asset health is a numerical score assigned to sealed roads, unsealed roads and kerbs to represent their current performance (i.e. where is the asset on its lifecycle path). Utilising predictive modelling software and techniques, Council was able to simulate each asset's degradation (the way it moves from one condition state to another throughout its lifecycle) to predict when assets will fail and require future treatment intervention.

Refer to Table 7 – Asset Condition Rating Guidelines for condition definitions.

Sealed Roads

\$518.68M

3,609

\$30.37M

2.0 out of 6

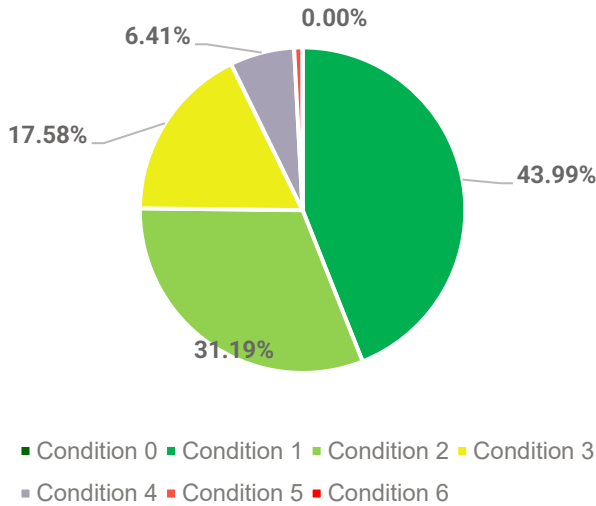
Asset Value

Road Segments

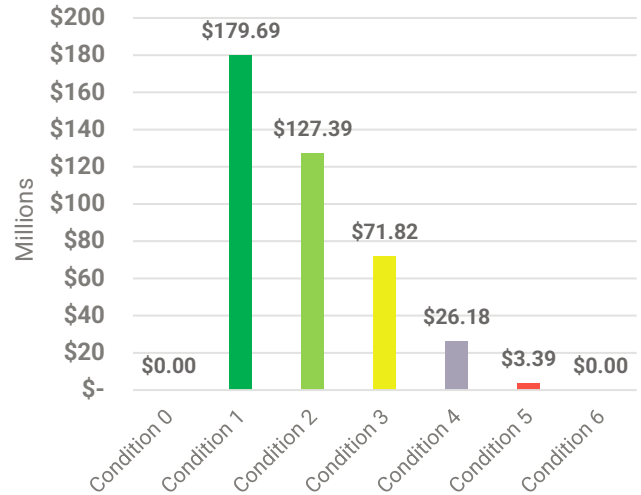
PVP Value

Average Condition (Asset health)

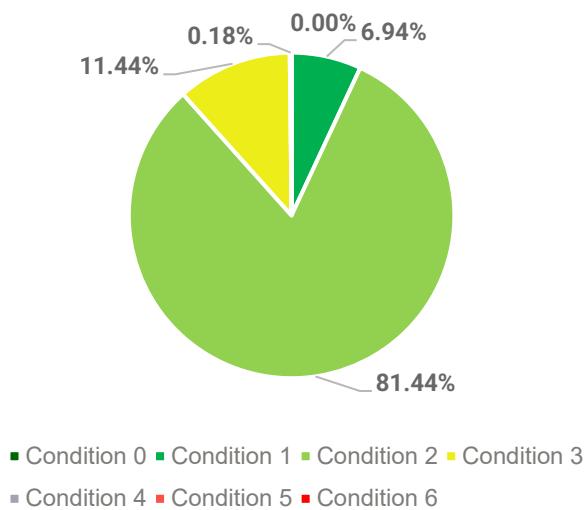
Sealed Roads Surface Condition Distribution (%)



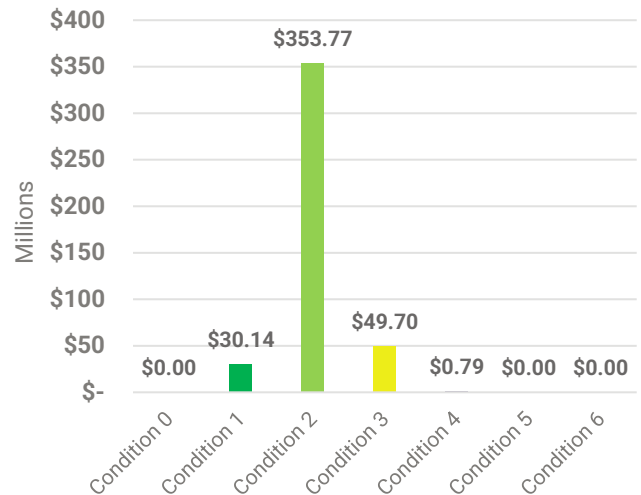
Sealed Roads Surface Condition Distribution by Replacement Value



Sealed Roads Pavement Condition Distribution (%)



Sealed Roads Pavement Condition Distribution by Replacement Value

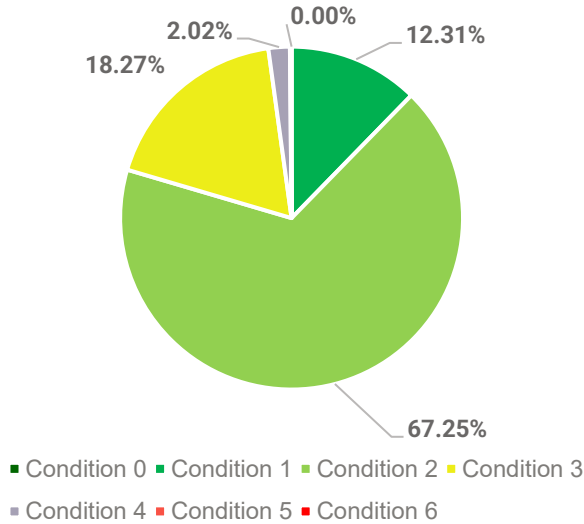


Overall, 75% of all sealed roads surfaces are in Good and Very Good condition. Sealed Road pavements are in better overall condition with 88% in Good and Very Good condition.

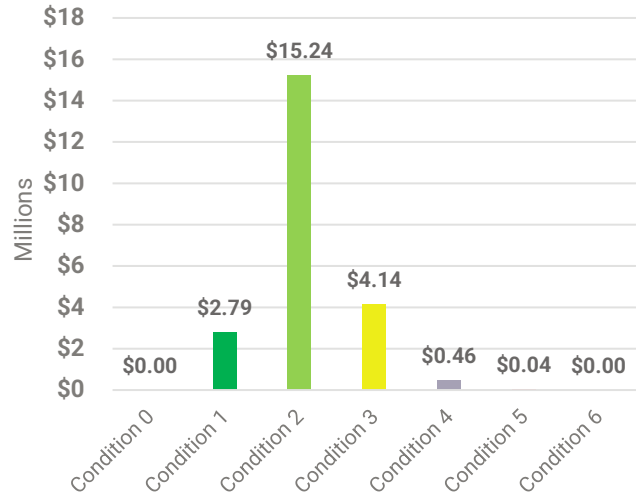
Unsealed Roads

\$22.69M	1,078	\$0.49M	2.1 out of 6
Asset Value	Road Segments	PVP Value	Average Condition (Asset health)

Unsealed Roads Condition Distribution (%)



Unsealed Roads Condition Distribution by Replacement Value

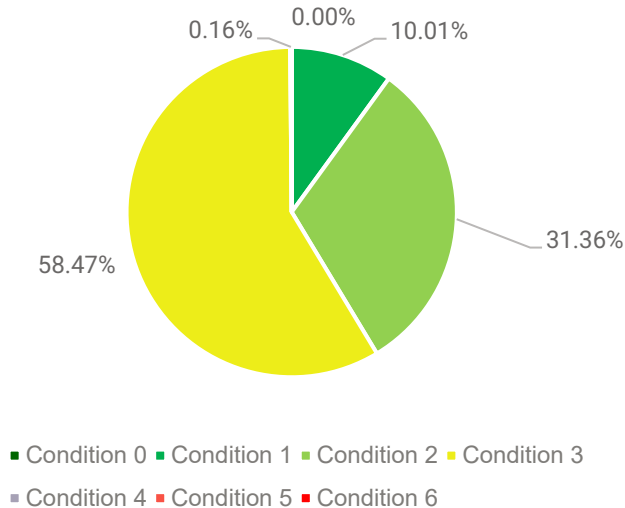


Currently 79% of Unsealed Road Pavements are in Good and Very Good condition.

Kerb and Channel

\$143.07M	6,566	\$0.24M	2.5 out of 6
Asset Value	Kerb Segments	PVP Value	Average Condition (Asset health)

Kerbs Condition Distribution (%)



Kerbs Condition Distribution by Replacement Value

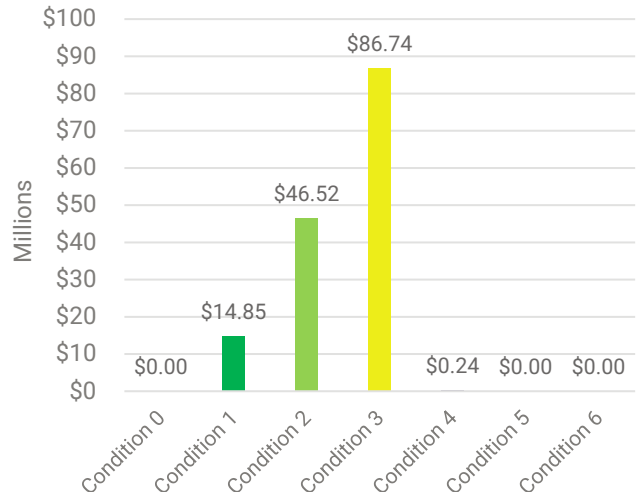


Figure 2 – State of Assets Snapshot as at FY2023

In contrast however, 41% of Kerb Assets are in Good and Very Good condition, with over 58% in Poor condition which represents a growing number of assets close to moving into “backlog” of Poor and Very poor condition as they degrade over time.

1.3 Asset Funding Levels

Section 6: Financial Summary in this RAMP recognises that Council has considered multiple strategic predictive modelling scenarios in the process of deriving its 10-year long-term financial budget, in line with the guiding principles of best practice asset management.

Council have considered four scenarios as detailed below:

SAM Modelling Scenario	Funding Option Description
Option 1 (Current LTFP Spend)	What is the predicted future LoS measured in % PVP if Council allocates the current 2025 capital level of funding over the next 10 years.
Option 2 (-25% Spend of current LTFP)	What is the predicted future LoS measured in % PVP if Council allocates a 25% reduction of the current 2025 capital level of funding over the next 10 years.
Option 3 (Maintain Target LoS)	How much capital funding is required to maintain the target LoS measured by % PVP by year 10. Focus on maintaining the percentage of the asset portfolio in PVP below 10% ¹ .
Option 4 (Unconstrained Funding)	What is the predicted future LoS if capital funding each year is unconstrained to treat all assets that meet intervention levels ² .

Table 2 – SAM Modelling Scenario

The projected average condition and quantum assets in a poor and very poor condition (PVP) based on four funding options considered are set out below:

SAM Modelling Scenario	Total Treatment Cost (\$'M)	Total Maintenance Cost (\$'M)	PVP Year 0 (%)	PVP Year 10 (%)	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)
Option 1	\$39.06	\$27.74	4.54%	10.74%	\$31.10	\$73.50
Option 2	\$29.29	\$28.58	4.54%	12.24%	\$31.10	\$83.80
Option 3	\$52.18	\$26.89	4.54%	8.20%	\$31.10	\$56.11
Option 4	\$127.32	\$19.17	4.54%	4.19%	\$31.10	\$28.67

Table 3 – 10-Year Funding & Strategy Results - Funding Option

Option 3, Maintain Target LoS, is the recommended funding scenario. The breakdown based on Sealed Roads, Unsealed Roads and Kerbs can be found in Section 6: Financial Summary of this RAMP.

Over the following 10 years, Council is committing over \$35M via its capital works program to deliver major upgrade works such as roads widening and upgrade from unsealed to

¹ The National State of Asset 2021 has on average 10% of local government infrastructure assets are in poor condition

² It is noted that despite being unconstrained, some assets may slip into PVP because the intervention criteria have not yet been met.

sealed or spray seal to asphalt, to cater for current and future population growth. This expenditure will be funded via a combination of Council's general rate revenue, developer contributions and government grants.

In addition to the upgrading of roads funding, the predicted lifecycle costs required based on Council's intervention levels (Technical Levels of Service) over the following 10 years have been determined as follows:

- Capital Renewal: \$52.18M or \$5.22M on average per annum; and
- Maintenance: \$26.89M or \$2.69M on average per annum.

The table below provides the breakdown of the **proposed** renewal and maintenance funding strategy for 2024-2034.

Year	Proposed Renewal Funding	Proposed Maintenance Funding
24/25	\$5,217,802	\$2,645,567
25/26	\$5,216,098	\$2,655,927
26/27	\$5,218,585	\$2,723,068
27/28	\$5,214,438	\$2,880,492
28/29	\$5,218,960	\$2,853,809
29/30	\$5,219,128	\$2,789,150
30/31	\$5,218,683	\$2,741,644
31/32	\$5,219,558	\$2,608,371
32/33	\$5,218,944	\$2,458,378
33/34	\$5,214,546	\$2,528,671
Grand Total	\$52,176,742	\$26,885,077

Table 4 – Proposed 10-Year Funding Strategy

Analysis of the current allocated funding (Option 1) of \$39.06 million over a 10-year period is forecasted to be inadequate in arresting the rate of asset deterioration. This option would result in a slightly worsened average network condition compared to the current state. Additionally, it would lead to a future liability increase from \$31.10M to \$73.50M, representing a \$42.4M rise. The implications of this scenario of more assets in worse condition over time, would require significantly more operations funding to ensure the network is maintained and presented in a safe state.

Funding Option 3, Maintain Target Levels of Service (LoS), is regarded as the preferred funding model, as it demonstrates Council's ability to maintain the network condition, with the average network condition in 10 years predicted to remain relatively stable. Despite incurring an asset liability, it is \$17.39M less than Option 1. The predicted future asset

liability increases from \$31.10M to \$56.11M. Hence, spending \$52.18M (Option 3) in capital over 10 years compared to \$39.06M (Option 1) ensures a better return on investment.

1.4 Monitoring and Improvement Program

The improvement action items identified can be found in Section 7.2 Improvement Plan. A summary of actions is set out below:

- Develop a Roads Business Process Manual which incorporates documentation of condition audit methodology for road assets.
- Ensure that new asset needs identified from the Precinct Structure Plans and studies are reflected in the RAMP and LTFP.
- Progress the interface between works and finance systems to ensure the cost of maintenance is linked to assets.
- Conduct a trial of permeable concrete paving as part of the Council's strategy to reduce stormwater runoff in urban areas such as CBDs and back lanes.
- Analyse current road maintenance activities to determine the baseline maintenance requirements to preserve the road network lifecycle.
- Review whether roads requiring upgrades meet the standards outlined in the Integrated Transport Strategy. This assessment provides strong justification for securing funding through government grants.
- Ensure that funds allocated annually for road assets are exclusively used for road related projects and maintenance activities, preventing any redirection to other asset types.
- Progress the development of an Operational Plan that incorporates procedures and methodologies of how the operational activities are delivered on the ground and costed. The Operational Plan is to support the RAMP.
- Progress asset inventory checks and condition inspections of all street furniture on Council's road network.
- Continue to review strategic prediction models annually and renewal costs annually to ensure that approved renewal budgets will continue to cover the cost of like for like replacements.
- Continue to review financial forecasts annually as better data becomes available, update and submit any supporting budget bids.
- Review capital works programs to consider alternative low-cost treatments driven by cost benefit analysis.
- Investigate the integration of regular traffic count data into Council's corporate asset register in order to provide utilisation data for prioritising renewal works.
- Review expenditure classifications and coding practices applied to maintenance activities to ensure all renewal expenditures are correctly classified. This enables Council to understand the true lifecycle cost

- Continue to investigate alternate renewal treatments to reduce renewal costs or significantly extend the useful life of road assets.
- Annually put forward estimated road assets operations and maintenance and cost of doing business budget submissions taking into account changes in portfolio size and make-up.
- Continue to annually update the data entered into the asset management system to incorporate changes due to renewal works undertaken and any significant asset degradation.
- Continue to annually review the asset management software forecasting results for significant changes and adjust capital funding submissions if necessary.

2 Asset Class Information

2.1 Background

Council's road assets, provide a vital service to the local and neighbouring communities. These assets represent a significant investment by Council and are of vital importance to providing its residents and businesses with quality services.

New and upgrade road assets and project candidates are identified in the 'Bass Coast Long Term Financial Plan⁵. This strategy provides an assessment of community asset needs based on a range of indicators (such as stakeholder engagement, strategic locations and traffic count) to identify priorities for existing and future community asset needs to 2031.

The Road Asset Management Plan (RAMP) includes all sealed roads, unsealed roads and kerbs & channels which serve Council's transportation needs by providing an effective transport network to support safe and efficient movement, connecting people, industry and places.

2.1.1 Road Assets Included in this AM Plan

The road assets considered in this Road Asset Management Plan (RAMP), are described as including all assets directly associated with Council's Local road network, for which Council is the responsible road authority.

In all, this RAMP covers over 11,253 road assets consisting of sealed roads, unsealed roads, kerb & channel and street furniture as set out in the table below. The quantities reported

⁵ Source: Bass Coast Long Term Financial Plan 2021-31

encompass assets utilised in the 2024 road assets revaluation, incorporating both existing assets and those gifted or constructed post-revaluation. This approach ensures a comprehensive and current representation of the asset portfolio in this RAMP.

Asset Type	Quantity	Length (km)
Sealed Road	3,609	625.6
Unsealed Road	1,078	370.5
Kerb & Channel	6,566	595.4
Street Furniture	1,733	-
Total	11,253	996.1

Table 5 – Road Assets Quantity by Asset Type

A detailed list of all road assets for which Council has included in this RAMP are recorded in Council's Asset Register.

2.1.2 Road Asset Exclusions

Council is not responsible for roads and kerb & channel assets located on designated declared main roads as these are owned and maintained by VicRoads. Private roads, laneways, rights of way and car parks are also excluded from this RAMP.

2.1.3 Road Assets Information Management

All information pertaining to location, type, dimensions, materials, known constructed dates and condition of these assets are recorded and stored in Council's Asset / Finance Register in TechOne®. At the time of preparing this RAMP, it is noted that Council's Asset Register is up to date.

2.2 Current State of the Assets

The distribution of Council's 11,253 road asset portfolio by quantities is illustrated in the figure below:

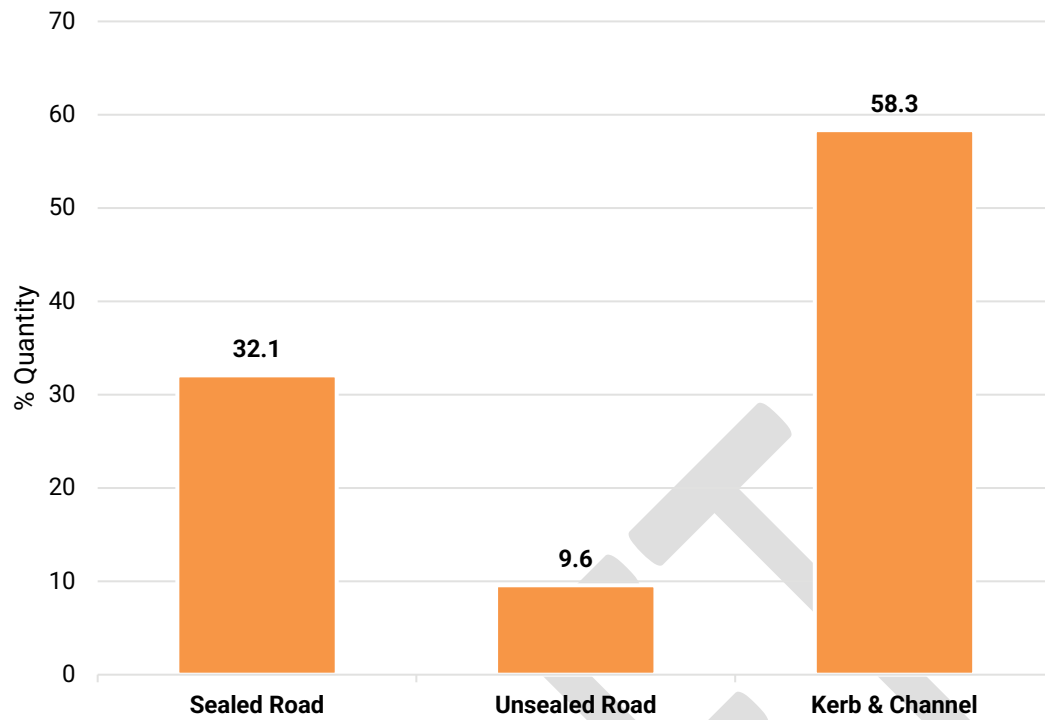


Figure 3 –Distribution of Road Assets by Quantity

The distribution of Council's road asset portfolio by length is set out below:

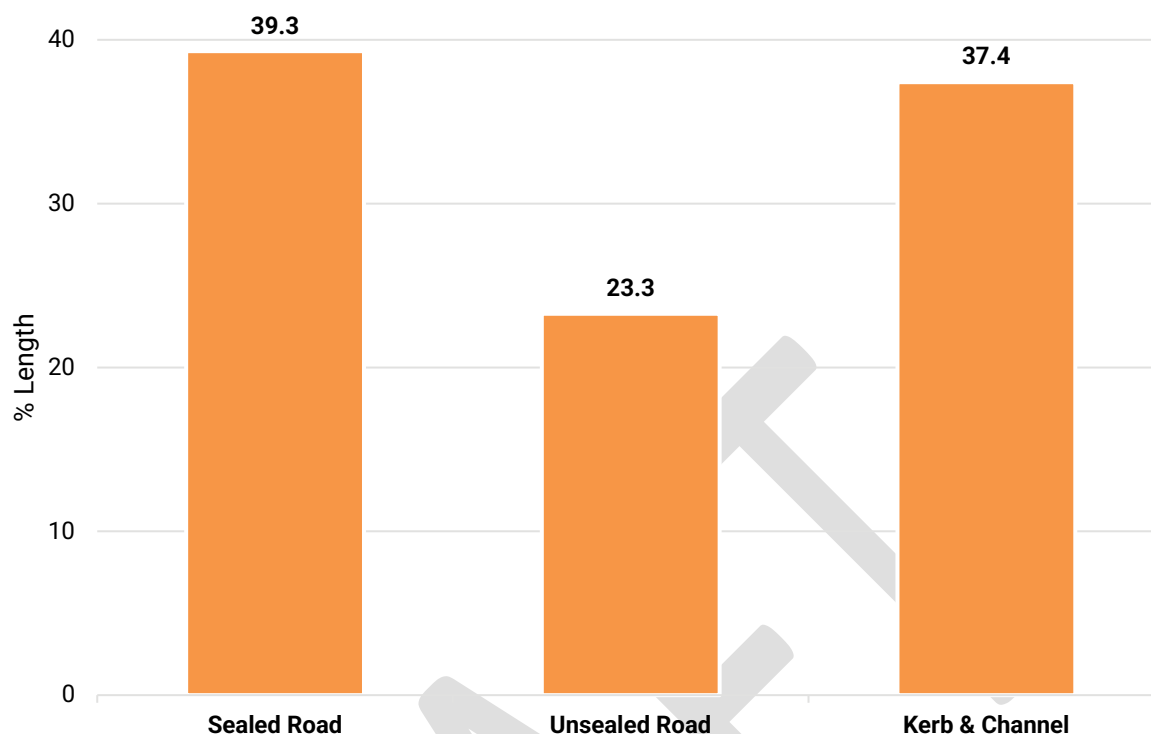


Figure 4 – Distribution of Roads Assets by Length

2.2.1 Asset Valuation

Council engaged the services of an external valuer who performed a revaluation assessment as at 30 June 2024, however at the time of preparing this plan, the asset values had not been uploaded into Council's finance system.

Asset Type	Replacement Cost	Accumulated Depreciation	Fair Value	Annual Depreciation
Sealed Road	\$518,679,783	\$120,981,334	\$397,698,449	\$7,739,472
Unsealed Road	\$22,688,869	\$7,636,740	\$15,052,129	\$2,238,797
Kerb & Channel	\$143,065,111	\$47,231,703	\$95,833,408	\$1,788,867
Street Furniture	\$5,933,866	\$1,785,994	\$4,147,872	\$340,053
Totals	\$690,367,629	\$177,635,771	\$512,731,858	\$12,107,189

Table 6 - Assets Valuations Unaudited as at 30th June 2024⁶

The table above identifies the annual asset depreciation of Council's road assets to be in the order of \$11.77M per annum. The average annual depreciation (asset consumption) is

⁶ Valuations details sourced from Roads Valuation Methodology & Report 30 June 2024

considered a measure of the wearing out or other loss of value of the asset that arises from its use, the passing of time or obsolescence environmental changes.

While depreciation has been a traditional yardstick for asset management, it is recognised that it has limitations in offering a holistic understanding of asset health. Modern practices advocate for a more nuanced and sustainable approach, emphasising the importance of strategic lifecycle modelling and planning in developing long-term financial projections.

Council acknowledges sustainability-based analyses over the conventional reliance on depreciation figures by recognising that future funding requirements for road assets are primarily influenced by many factors which also include capacity and functionality concerns, rather than the typical end-of-life asset renewals. This insight positions Council at the forefront of innovative asset management practices, as we proactively address challenges with a sustainability-driven perspective.

2.2.2 Current Replacement Costs

The total value of road assets for which Council is responsible and included in this RAMP is currently estimated at \$690 million⁷. The break-up of the asset type by replacement value is illustrated in Figure 5 – Road Assets by Asset Type Estimated Replacement Values.

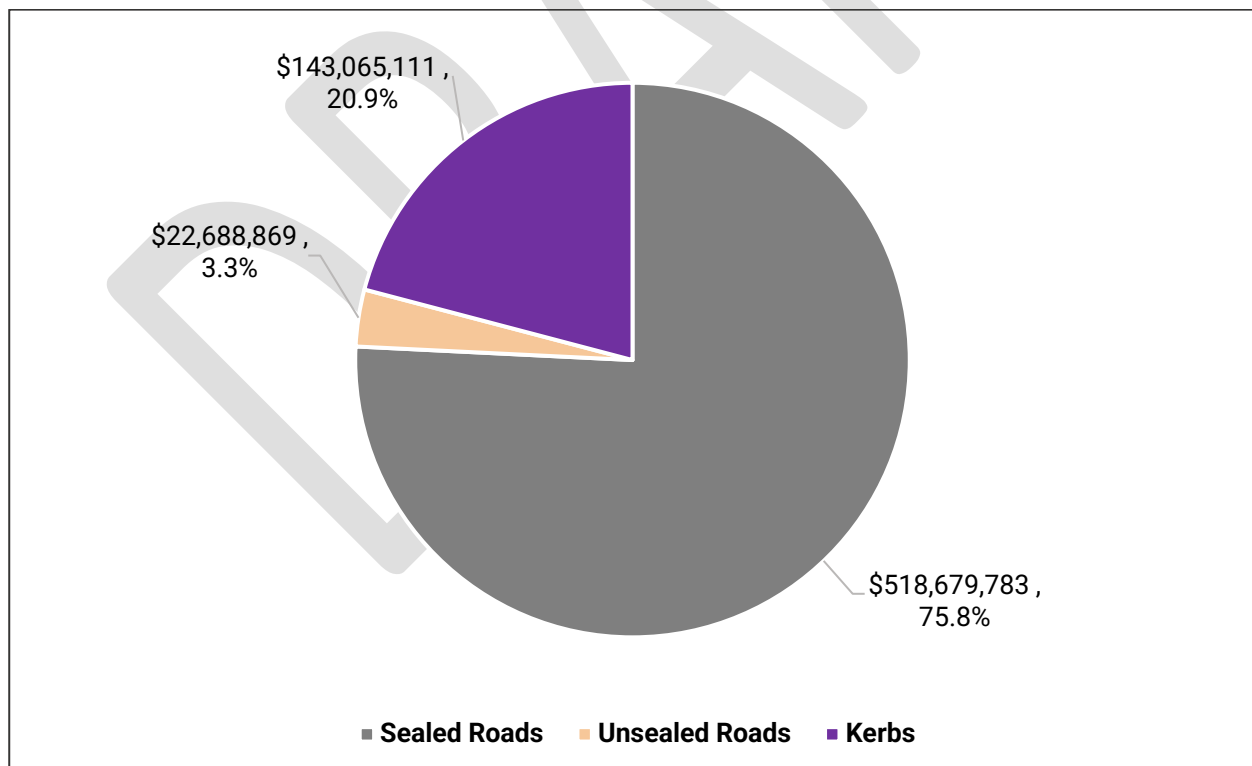


Figure 5 – Road Assets by Asset Type Estimated Replacement Values

⁷ Replacement cost estimated from 2024 unaudited revaluation dataset, plus all new assets gifted / constructed assets post the revaluation.

2.2.3 Condition Assessment

Council has adopted a detailed condition assessment methodology to identify road and kerb defects that will enable Council to develop and plan for its forward capital renewal programs and inform the LTFP needs. Council uses external contractors to carry out the detailed audit of all local road assets using the latest automated survey techniques to collect condition data that informs this plan.

For the purpose of predictive life cycle modelling, all roads and kerbs within Council's boundary have been assessed using detailed condition criteria, which have been configured in the predictive modelling software to drive the rule base (i.e. when a particular defect is present and meets a certain extent, what treatment be applied).

The detailed condition criteria for sealed roads comprises of linear cracking, crocodile cracking, ravelling, local surface defects, rutting and roughness.

Typically within sealed road asset management, as more than one defect indicator is used to assess the road network condition, the results of these condition distresses are normalised and converted into a Pavement Condition Index (PCI) and Surface Condition Index (SCI) to ensure that there is consistency across the asset network portfolio.

The PCI score is driven by the condition of distresses in the road pavement such as crocodile cracking, pavement defects, rutting and roughness.

The SCI score is driven by the condition of distresses of the road surface that includes distresses such as ravelling, linear cracking, flushing and local surface defects.

A sealed road with an SCI or PCI in condition 1 is considered to reflect the highest level of service and an asset component in very good condition. A road with an SCI or PCI in condition 5 is considered to reflect the lowest level of service and an asset component in very poor condition. A road with an SCI or PCI of 6 has exceeded its designed useful life and has no service potential and/or closed to the public.

For unsealed roads, a single PCI rating is applied using criteria that comprises of factors such as depressions, corrugations, gravel loss and potholes.

An unsealed road with a PCI in condition 1 is considered to reflect the highest level of service and an asset in very good condition, while a PCI in condition 5 is considered to reflect the lowest level of service and an asset in very poor condition. An unsealed road with a PCI of

6 has exceeded its designed useful life and has no service potential and/or closed to the public.

The condition criteria for kerb and channel comprises of a single condition criteria that considers factors such as cracking, depressions, vertical displacement and rotation and represented as a condition index using the Average Kerb Condition.

Typically, network wide condition assessments are undertaken on a four year cycle (coinciding with the financial revaluations) and used to identify where road assets are within their defined useful lives at any given point in time. The latest condition audit for sealed roads, unsealed roads and kerbs was completed in late 2023.

The condition rating system is summarised in Table 7 – Asset Condition Rating . Table 7 provides an overall view with regards to a standardised and consistent approach to applying an overall condition score for Council’s road asset stock.

Condition	Rating	Description
0	New	Brand new asset or recently rehabilitated to as new condition. Only cyclical routine maintenance is required.
1	Very Good	A road asset that is in excellent overall condition however is not new and providing its intended level of service.
2	Good	A road asset that is in good overall condition with some possible early stages of slight deterioration evident which is minor in nature and causing no serviceability issues. No indicators of any future obsolescence and providing a good level of service.
3	Fair	A road asset that is in fair overall condition with some deterioration evident, which may be slight or minor in nature and causing some serviceability issues. Providing an adequate level of service with no signs of immediate or short-term obsolescence.
4	Poor	A road asset that is in poor overall condition with moderate to high deterioration evident. Substantial maintenance required to keep the asset serviceable. Asset will need to be renewed, upgraded or disposed of in the near future. This is reflected via inclusion in the 10 year Capital Works Plan.
5	Very Poor	A road asset that is in extremely poor condition or obsolete. The asset no longer provides an adequate level of service and/or immediate remedial action required to keep the asset in service in the near future. Requires renewal or upgrade works within following 1-2 years
6	End of Life	Road asset has physically failed and/or has no availability.

Table 7 – Asset Condition Rating Guidelines

2.2.4 Current Asset Performance

Based on available sampled visual data, Council's existing road assets are estimated to be in good condition as shown in the figures below. Refer to Table 7 – Asset Condition Rating Guidelines provides further details on the condition descriptions.

Of the 3,609 existing sealed road sections totalling some 625.5kms in length, the average condition is 2.0 out of 6, with condition 0 representing an asset in brand new condition and condition 6 representing an asset that has failed or exceeded its design life.

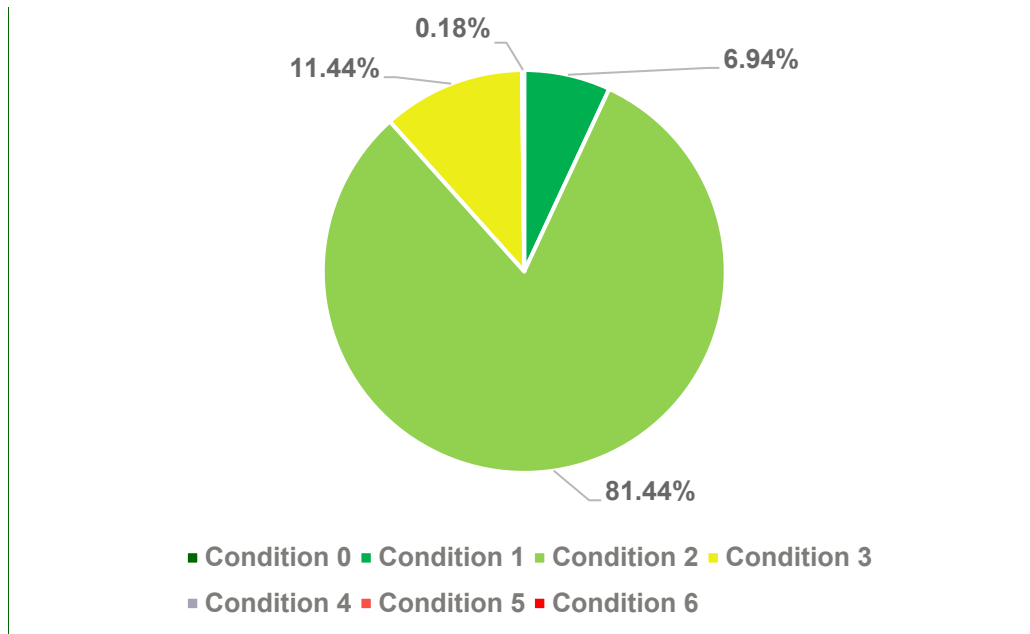


Figure 6 – Distribution of Sealed Road Conditions by Replacement Cost

There are 1,078 unsealed road segments totalling some 370.5kms in length with an average condition of 2.1 out of 6. The condition distribution is as follows:

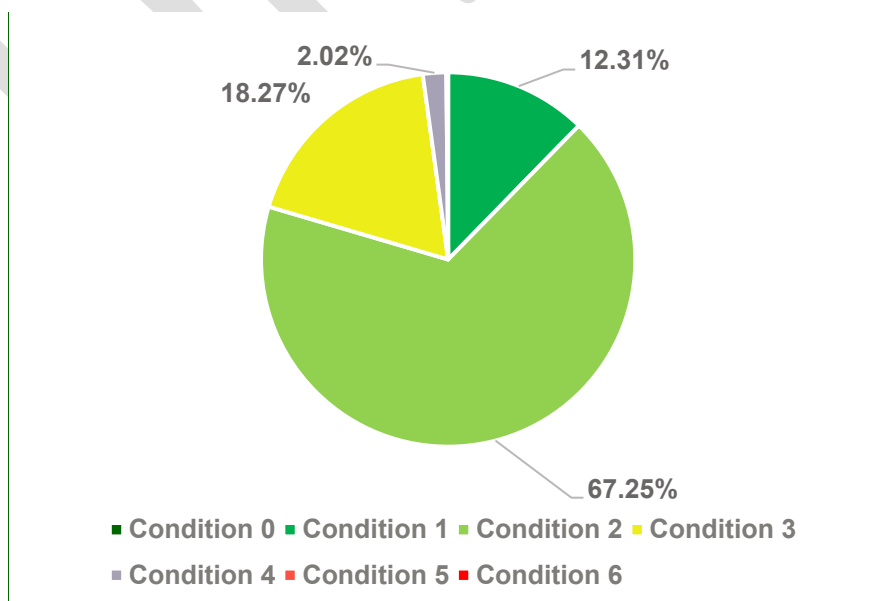


Figure 7 – Distribution of Unsealed Road Conditions by Replacement Cost

There are 6,566 kerbs & channel assets totalling some 595.4kms in length with an average condition of 2.5 out of 6. The condition distribution is set out below:

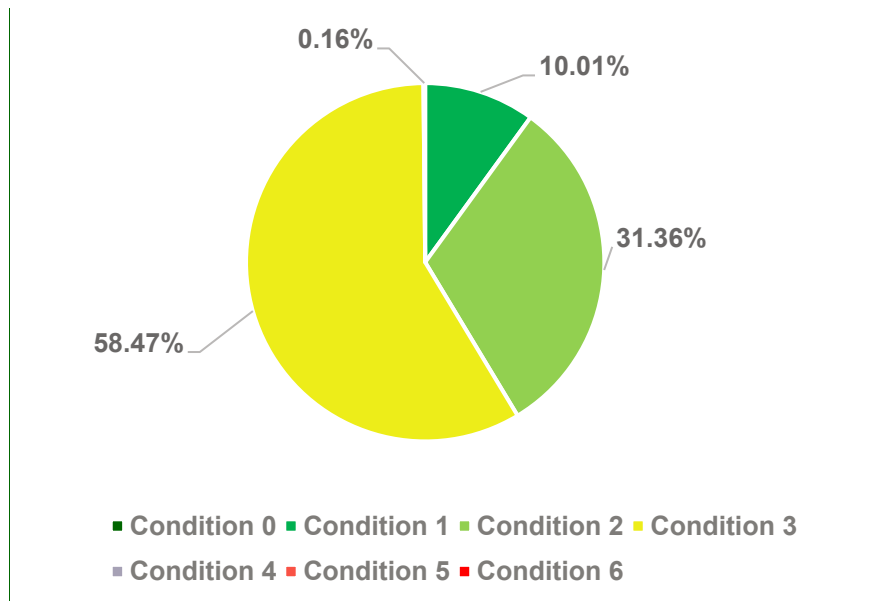


Figure 8 – Distribution of Kerb & Channel Conditions by Replacement Cost

2.3 Lifecycle Management

Life Cycle Management is an essential component of any good asset management plan. This section of the RAMP identifies the processes required to effectively manage, maintain, renew and upgrade Council's road assets.

2.3.1 Operations & Maintenance Plan

Operations activities can be described as activities that are delivered on a day-to-day basis necessary to meet levels of service delivery requirements. Operational activities can include service delivery items such as the removal of debris and cutting of grass within the road reserve. Operational activities also include proactive and reactive inspections, undertaken by in-house technical staff and/or specialist contractors. Operations activities do not improve the condition of assets.

Over time, minor faults can occur within the road network. Council addresses the repairs and maintenance of these faults (i.e. pothole repairs and crack sealing) on the basis of defined intervention levels and response times. The intervention level defines the condition, state or risk level associated with an asset, i.e. the point in time at which the asset is considered to be below an acceptable level of service. Maintenance is scheduled as soon as the asset reaches this point.

Response time defines a reasonable time frame within which the community can expect Council to remedy the defect. The intervention levels and response times are documented in Council's Road Management Plan 2022. The Road Management Plan is reviewed on a 4-yearly cycle in conjunction with the development of the Council Plan.

2.3.2 Renewal/Replacement Plan

Activities such as renewal, rehabilitation and reconstruction will return the degraded service of an asset back to its original condition. Renewal activities such as resurfacing an existing road with a new asphalt seal or replacing an existing failed kerb and channel will return the degraded service capability of the asset back to its original designed capability or modern-day equivalent.

Renewal and replacement strategies are based on the most current asset condition inspections available to Council at the time of developing the forward works programs. The rule bases which reflect the policy decisions that Council will employ to determine when they will select road assets for inclusion in their capital works program are currently documented in Council's predictive modelling software. Council plans to document this information in the roads business process manual and is noted in the improvement action plan.

Renewed road assets will be designed in accordance with relevant Australian Standards, the Infrastructure Design Manual (IDM) and relevant industry standards and guidelines such as VicRoads Technical Publications and Austroads Guides. Renewed assets will generally be replaced at the current contemporary standard unless identified as requiring upgrade through Council's transport strategies.

2.3.3 Upgrade/Expansion Plan

Upgrade and expansion works are associated with improving service levels beyond the original designed capability or modern-day equivalent i.e. widening a 2-lane roadway to include wider lanes and sealed shoulders. Additionally, expansion works include activities that extend the capacity of an existing asset, to provide higher levels of service and/or meet changes in asset resilience requirements. Upgrade/expansion is different to renewal/replacement which only improves the degraded service capability within the boundaries of the original designed capability.

Upgrade/expansion of existing assets will be identified from various sources such as traffic engineering studies, transport strategies, Precinct Structure Plans, councillor or community requests.. Verified proposals are identified and ranked utilising Council's Capital Works

Evaluation Tool and scheduled in future works programmes. These upgrade projects are heavily reliant on external grant funding. Over the next 10 years Council will be seeking grant opportunities in order to upgrade the following rural roads:

- Grantville Glen Alvie Rd between Loch Kernot Rd and Loch Wonthaggi Rd.
- Rhyll Newhaven Rd between Hasting St and Harbison Rd.
- Archies Creek Rd from town to Loch Wonthaggi Rd.
- Berry's Beach Rd between Ventnor Beach Rd and Ventnor Rd.
- Loch Wonthaggi Rd between Baum Rd and Daly Rd.

2.3.4 Creation/Acquisition Plan

New road assets are typically acquired from developers. New assets required to meet population growth demands will be typically acquired from land developments and constructed by private developers who then gift these assets to Council.

Council typically receives approximately 5 kilometres of sealed roads annually as gifted assets from developments. Additionally, around 1 kilometre of unsealed roads are upgraded to sealed roads through development contributions. With anticipated developments in suburbs like Wonthaggi, Grantville, and Inverloch, it's estimated that Council will receive even more road assets as gifted over the next decade.

2.3.5 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition, relocation or transfer of ownership. At present, there are no plans to dispose of any road assets, however discussions are ongoing to identify any roads not accessible to the public that could be removed from Council's register of Public Roads and asset register.

2.4 Leadership and Accountability

Council's Asset Management Policy 2022-2026 defines at a high level, the roles and responsibilities within Council for asset management. In addition, an Asset Management Steering Committee (AMSC) has been drawn from across Council senior staff to coordinate asset management activities and related matters across the organisation.

3 Levels of Service

3.1 Customer Research and Expectation

The most recent customer satisfaction survey⁸, which was conducted in 2023, asks the opinions of local people about the place they live, work and play and offers councils a long-term measure of how they are performing. The table and graph below illustrate BCSC comparing favourably with other Victorian Councils and most favourably with other Large Rural municipalities.

The summary of core measures in table 8 shows Councils performance index scores where 100 represents excellent and 50 representing average across core measures relevant to this RAMP are as follows:

Focus Areas	2019	2020	2021	2022	2023
Sealed Local Roads	53	55	55	54	51
Overall performance	54	55	59	57	54

Table 8 –Summary of Core Measures

Figure 9 illustrates the satisfaction with Council’s overall performance between 2019 to 2023 and provides a comparison performance with the State-wide average and large rural municipalities.

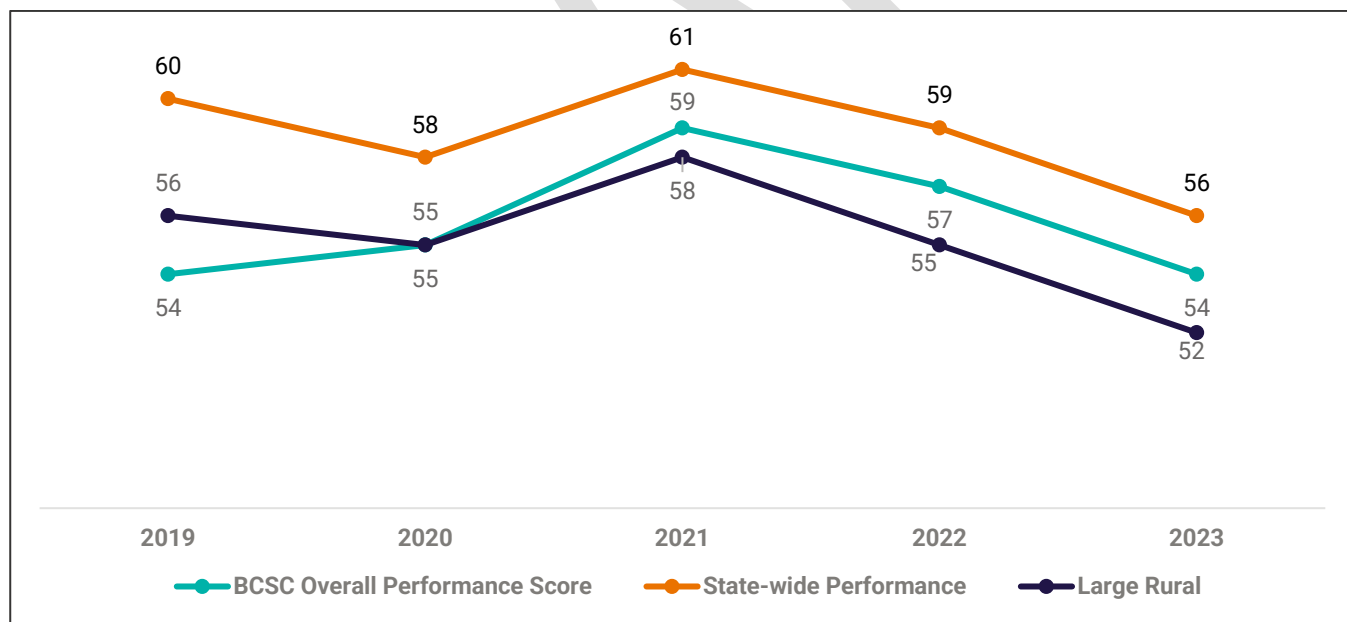


Figure 9 – Bass Coast Community Survey Satisfaction Overall Performance

The survey results identify that the sealed local roads category is classified as the lowest three performing areas. The results indicate a decline in score from 54 in 2022 to 51 in 2023.

⁸ 2023 Local Government Community Satisfaction Survey – Conducted by JWS Research

It is also noted that Council performs on par with the Large Rural group average in all service areas, and significantly higher in sealed local roads, where it also outperforms the State-wide average. This is a positive result.

Section 3.2 illustrates how Council's management of its road assets will be aligned to achieve the community's interests.

3.2 Strategic and Corporate Goals Alignment

The Council Plan 2021-25 sets out six strategic objectives to make Bass Coast the place that the community wants it to be. The Council Plan 2021-25 describes what these strategic objectives are, why they are important and the actions we will take to ensure we address the key challenges and opportunities we will face.

This RAMP is prepared and aligned with these strategic objectives and has been aligned to deliver cost-effective, transparent, realistic, and affordable service levels in accordance with community expectations.

Relevant Council goals and objectives and how these are addressed in this RAMP are detailed in the table below:

Strategic Objective	Outcome	How Strategic Objectives are addressed in the RAMP
Protecting our Natural Environment	Building resilience and protecting and enhancing our natural assets.	Ensure protection of the environment underpins Council's development, projects and decisions Provision of environmentally sensitive design for capital works, built assets management, civil and landscape infrastructure planning.
Healthy Community	An inclusive community that embraces its lifestyle and supports health and wellbeing.	Highlights any roads in the present road network that can be enhanced to provide improved accessibility to key sporting and recreational facilities within the municipality. Ensure a safe and efficient movement network for travel. Implement the Council's Climate Change Action Plan 2020-2030 by incorporating climate factors into strategic asset modelling to simulate climate impact analysis for decision making.
Our Places	Strengthening the connection between people and the public places they share.	Provision of road assets that are fit for purpose and well maintained which provide community links to recreational, business, services, social and cultural spaces. Delivery of Council's Roads Renewal Capital Works program.
Growing our Economy	Progressing opportunities for visitation economy	Ensure road networks are adequate, safe and contribute to the wellbeing of the community.

Strategic Objective	Outcome	How Strategic Objectives are addressed in the RAMP
	and business growth in harmony with our natural environment and sustainable values.	Road network is monitored to meet the current and future needs of the community. Engage in regional participation and collaboration to strategize for enhanced infrastructure within and connecting vital employment precincts, activity hubs, and residential zones.
Sustainable Development	Prepare for growth while ensuring the intrinsic values and character of Bass Coast are retained.	Provision of 10-year capital works programs in order to reduce asset renewal gap and to ensure that assets are fit for the purpose they were intended for.
Leading for our Community	Demonstrating leadership through good governance, transparency and accountability.	Asset management has the long-term goal of providing services that meet community expectations most cost-effectively. This RAMP describes proactive approaches to asset management, and the use of data to inform decision-making. Provision of 10-year capital improvement programs in order to reduce asset renewal gap and to ensure that assets are fit for the purpose they were intended for. Improve and centralise the coordination, collection, and provision of research and data to support Council's future planning endeavours.

Table 9 - Council's Strategic Objectives and how these are addressed in this Plan

3.3 Key Stakeholders

Assets controlled by Council are utilised by a broad cross-section of the community. It is critical that assets are maintained and renewed based on need and fit for purpose. Asset users are key stakeholders of this RAMP.

The table below identifies stakeholders where consultation is necessary when Council seeks input in relation to the determination of Levels of Service and intervention levels.

Stakeholder Group	Role or Involvement
Internal Stakeholders	
The Council	Custodian of the asset, with Councillors representing the residents and setting strategic direction as per the Corporate & Operational Plans.
Executive Team	To ensure that Asset Management policy and strategy are being implemented as adopted, and to ensure that long-term financial needs to sustain the assets for the services they deliver are advised to Council for its strategic & financial planning processes.
Manager Infrastructure Delivery	Provision of budgets, expenditure, issues re renewal, upgrade and new expenditure.
Coordinator Asset Management	Provision of information in relation to Asset Management. Identify the development of road strategies.
Coordinator Asset Management Systems	Provision of information, asset management information system and valuation data.

Stakeholder Group	Role or Involvement
Asset Management Systems Team	Inputting and maintaining road assets data into the AM information system.
Manager Infrastructure Maintenance	Management of budgets, expenditures, and maintenance related issues.
Coordinator Civil Design	Specialist advice on the design and development of road assets.
Development Services Coordinator	Approval of road plans within land developments.
Asset Accountant	Provision of financial information.
Roads Coordinator	Provision of resources and planning regarding the maintenance of road assets.
Roads Asset Officer	Day to day management of road renewal program which includes renewal works for sealed roads, unsealed roads and kerbs.
Response Team Leader	Response to customer requests in relation to road customer requests.
Coordinator GIS	Provision and maintenance of GIS for use by asset team and others.
Coordinator Growth Areas	Planning for future developments and in particular infrastructure provision to service those developments.
External Stakeholders	
Community	General users of the road network.
Service Providers	Those external bodies or agencies that provide services to the community.
Civil contractors	Provision of the required/agreed level of maintenance services for asset components.
State & Federal Government Depts	Periodic provision of advice, instruction and support funding to assist with management of the road network.
Council's Insurer	Insurance and risk management issues.

Table 10 – Key Stakeholders

3.4 Legislative Requirements

There are many legislative requirements relating to the management of Council assets. Legislative requirements that impact the delivery of Council road services include:

Legislation	Requirement
Local Government Act 2020	<p>Sets out role, purpose, responsibilities and powers of local governments including the requirement to develop, adopt and keep in force an Asset Plan.</p> <p>The scope of the Asset Plan is a period of at least the next 10 financial years and must include information about maintenance, renewal, acquisition, expansion, upgrade, disposal and decommissioning in relation to each class of infrastructure asset under the control of the Council.</p>
Road Management Act 2004 and associated Regulations and Codes of Practice	<p>The purpose is to establish a coordinated management system for public roads that will promote safe and efficient State and local public road networks and the responsible use of road reserves for other legitimate purposes, such as the provision of utility services. Defines the responsible authorities for all roads within the state. It makes Council the controlling authority for Public Local Roads, Boundary Roads and parts of Declared</p>

Legislation	Requirement
	Roads within the municipal area and it is therefore responsible for managing the infrastructure assets within them.
Victorian Road Safety Act 1986	Safety requirements relating to the use and operation of the road network.
Victorian Road Safety Regulations 2009	Sets out regulations for implementing the Road Safety Act
Transport Act 1983	Sets up structure for the provision and regulation of public and commercial transport.
Native Title Act 1993	To provide for the recognition and protection of native title as well as establish ways in which future dealings affecting native title may proceed and to set standards for the dealings
Victorian Planning and Environment Act 1987	The purpose of this Act is to establish a framework for planning the use, development and protection of land in Victoria in the present and long-term interests of all Victorians.
Occupational Health and Safety Act (Vic) 2004 & Occupational Health and Safety Regulations 2007	Governs the key principles, rights and duties in relation to occupational health and safety.
Environment Protection Act 1970	The purpose of this Act is to create a legislative framework for the protection of the environment in Victoria having regard to the principles of environmental protection.
Disability Act (Vic) 2006	The Disability Act establishes a framework for providing support and services to people with disabilities throughout Victoria.
Workplace Health & Safety Act 2011	The objective of this Act is to prevent a person's death, injury or illness from being caused by a workplace, by a relevant workplace area, by work activities, or by plants or substances for use at a relevant place

Table 11: Legislation Relevant to the Management of Road Assets

Regulations, Standards & Guidelines - requirements that impact the delivery of Council's road services are outlined below.

Regulation / Standard / Guide	Requirement
Bass Coast Planning Scheme	Provides a framework in which decisions about the use and development of land in Bass Coast, and allows for the implementation of State, regional and local policies affecting land use, and in particular new road standards.
Local Government (Planning and Reporting) Regulations 2020	<p>The Local Government (Planning and Reporting) Regulations 2020 have replaced and substantially replicated the Local Government (Planning and Reporting) Regulations 2014, by prescribing the information to be included in the Council Plan, budget, and annual report, as well as continuing to provide a mandatory system of performance reporting for all councils.</p> <p>The only variations in the Regulations 2020 reflect the new strategic plans being introduced by the Local Government Act 2020, specifically the four-year budget, and the 10-year Financial Plan.</p>
ISO 55000 Suite, 2014	The International Organization for Standardization's ISO 55000:2014 Asset Management (ISO 55000) provides a global guide to better practice in asset management, including asset information management.

Regulation / Standard / Guide	Requirement
	ISO 55000 specifies that entities should align information requirements to asset management needs and risks, along with requirements for collecting, managing, evaluating, and ensuring consistency and availability of information for asset management decision-making.
Australian Accounting Standards Board (AASB)	<p>Provides direction and guidance on the financial and reporting expectations of entities, to ensure a consistent approach to accounting records. The following regulations apply to Council:</p> <p>AASB 116 Property, Plant & Equipment – prescribes requirements for recognition and depreciation of property, plant and equipment assets.</p> <p>AASB 136 Impairment of Assets – aims to ensure that assets are carried at amounts that are not more than their recoverable amounts.</p> <p>AASB 1021 Depreciation of Non-Current Assets – specifies how depreciation is to be calculated.</p> <p>AAS 1001 Accounting Policies – specifies the policies that an organisation is to have for recognition of assets and depreciation.</p> <p>AASB 1041 Accounting for the reduction of Non-Current Assets – specifies the frequency and basis of calculating depreciation and revaluation basis used for assets; and</p> <p>AAS 1015 Accounting for acquisition of assets – method of allocating the value to new assets on acquisition.</p>
All other relevant Australian Standards	AS/NZ Standards such as Risk Management Standard.
All Local Laws and relevant policies of the Organisation	Construction standards, Maintenance contracts, etc.
Asset Management Accountability Framework 2016 (AMAF)	The Department of Treasury and Finance's (DTF), AMAF establishes a flexible and non-prescriptive set of requirements which aim to ensure Victorian public sector Accountable Officers manage asset portfolios appropriately. The AMAF, although not compulsory for Victorian councils, provides useful guidance on how councils can manage their asset information. The AMAF sets out that agencies must maintain asset information both financial and non-financial to support asset planning, and performance monitoring and reporting.
International Infrastructure Management Manual, Sixth Edition, IPWEA, V6.0, 2020	The IIMM has been developed with public and private sector industry input from Australia, New Zealand, United States Canada, South Africa and the United Kingdom to promote best management practice for all infrastructure assets.

Table 12: Regulations & Standards Relevant to Management of Road Assets

The following is a summary of policies relevant to this asset class. Many of these policies are available from Council.

Policy	Requirement
Asset Management Policy for Infrastructure Assets 2022-2026	The Policy acknowledges Council's commitment to asset management and provides a consistent asset management approach with clear principles and guidelines in order to manage Council's assets for the current and future community. It establishes a framework to ensure a structured, coordinated, cost

Policy	Requirement
	effective and financially sustainable approach to asset management across the organisation.
Risk Management Plan	Sets the overall framework for ongoing and systematic identification, assessment and management of risk within the framework of ISO 31000-2018, Risk Management - Guidelines.
Asset Recognition Guidelines 2016	Provides consistent guidelines, in accord with relevant Accounting Standards and State Government Policy, regarding which Council assets are to be capitalised (as opposed to expensed).
Asset Valuation & Revaluation Policy	Provides direction for the development of Guidelines for the financial valuation of assets, under the control of Council, including the initial recognition, valuation and subsequent revaluation together with the frequency of revaluation of those assets. The Policy's associated guidelines are to assist Council's commitment to sustainable long term financial planning.
Road Management Plan 2022	This document addresses the requirements of a Road Management Plan as defined by the Road Management Act 2004, and in doing so provides road users and the community with an overview of road management policy and practices of Bass Coast Shire Council.

Table 13: Policies Relevant to Management of Road assets

3.5 Level of Service

The levels of service documented in this RAMP reflect the current levels of service provided by Council, for the benefit of the community, in the context of Council's financial and human resources, whilst meeting its Statutory requirements.

The levels of service that have been adopted are considered reasonable as demonstrated by industry standards and benchmarks.

3.5.1 Customer Levels of Service

Council's Customer LoS that have been adopted as a result of this RAMP are detailed as follows:

Key Performance Measure	Level of Service	Performance Measure	2024 Performance
CUSTOMER LEVELS OF SERVICE			
Availability and Accessibility	Road assets will be available and accessible during normal operating business hours	95% Compliance. In the instance where a road is closed to users for reasons such as maintenance, upgrading, renewal or a Council related public event or non-Council events, then appropriate notification shall be given to relevant users in accordance with Council's public information policy.	2 unplanned closures ⁹
Customer Satisfaction	Road assets meet community needs	>60 customer survey satisfaction	Sealed Local Roads Score: 51
Quality	Road renewal program funded and completed	Completion of the program within the financial year	90% of renewal program value delivered
Quality	Ensure Council's road assets are well managed	Condition assessments every four years and on as needed basis and completion of the annual capital relating to Council's road assets	Completion of condition audits every four years
Quantity	Renewal Program	Development of annual renewal program	Developed within the prescribed time frame
Quality	Well maintained and suitable road network	<400 requests/complaints per annum for sealed road maintenance	266 requests
		<500 requests/complaints per annum for unsealed road maintenance	230 requests

⁹ Loch Kernot Road is partially closed to the public due to the poor condition of a culvert. Currently under construction, and Council anticipates that the road will be fully reopened by the end of the financial year. Kongwak Rd was closed due to culvert failure risk which has been renewed and reopened to traffic.

Key Performance Measure	Level of Service	Performance Measure	2024 Performance
		<100 requests/complaints per annum for kerb & channel maintenance	20 requests
		<100 requests/complaints per annum for renewals or upgrades	60 requests
Safety	Road assets are routinely inspected for hazards and risk free	No. of reportable incidents due to road defects per year <= 2	Nil
Responsiveness	Response time to customer requests	> 80% of all requests adequately responded to within target	87% of requests adequately responded
Cost effectiveness	A commitment to continually provide services in the most cost effective manner	Lifecycle costs are captured within road modelling work	100% compliance
Environment	A commitment to continually improve environmental efficiencies, and promote sustainability	Aim to reduce the use of natural resources when constructing new/existing assets.	Not currently measured.

Table 14 - Customer Levels of Service

3.5.2 Technical Levels of Service

Supporting the community service levels are operational or technical measures of performance.

Technical service measures are linked to annual budgets covering operations, maintenance, renewal and upgrade activities as defined in the Lifecycle Management Section.

Key Performance Measure	Level of Service	Performance Measure	2024 Performance
TECHNICAL LEVELS OF SERVICE			

Condition	Condition assessment of road assets every 3 years.	Average Condition to be in condition 2 (out of 6) or better.	Sealed Road - 2.0 Unsealed Road - 2.1 Kerb and Channel - 2.5
Quality	Road assets are maintained to an acceptable level.	Lesser than 10% of the total network in condition poor and very poor	Sealed Road – PCI (0.18%), SCI (7.24%) Unsealed Road - 2.18% Kerb and Channel – 0.16%

Table 15 - Technical Levels of Service

4 Future Demand

This section identifies the effect of expected growth and consequent demand on Council's road asset infrastructure. Forecasting future demand is essential in determining lifecycle management for assets. The management of road assets within the municipality is directly affected by growth in the number of assets and growth in the number of developments.

4.1 Demand Drivers

Drivers affecting road assets demand include factors such as population change, changes in demographics, technological changes and environmental changes. Road assets within the Council area must serve both the local resident population needs as well as the commuter and visitor needs.

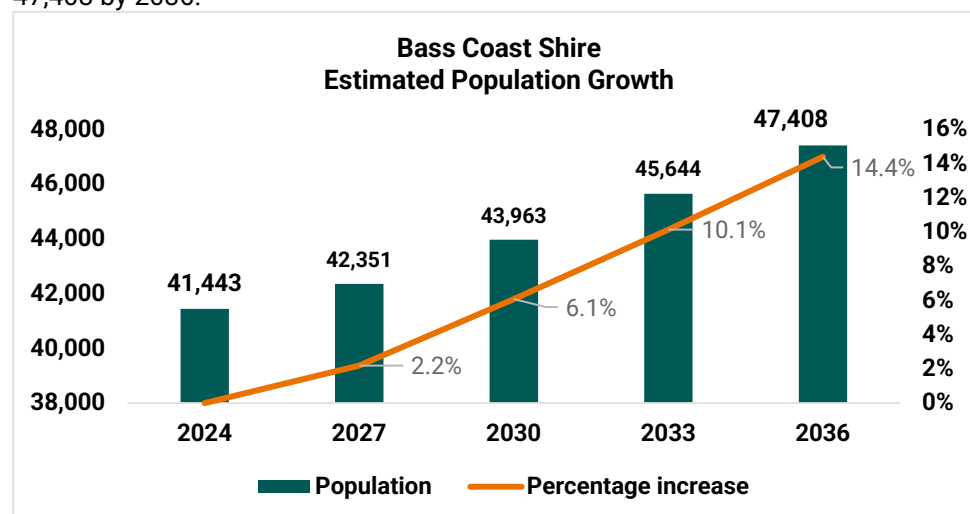
4.2 Demand Forecasts

Bass Coast Shire has long been a popular tourist and holiday home destination and is now one of several peri-urban municipalities in Victoria that has been attracting strong demand for permanent resident housing. The present position and projection for demand drivers due to population growth that may impact future service delivery and utilisation of assets are identified and documented in Table 16 - Demand Factors, Projections, and Impact on Services.

Demand Factor	Present position	Projection
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Population Growth

The Bass Coast Shire population forecast for 2024 is 41,443 and is forecast to grow to 47,408 by 2036.



Source: Population and household forecasts, prepared by forecast.id (informed decisions), March 2023.

Table 16 - Demand Factors, Projections, and Impact on Services

The emerging needs of population growth suggests that demand will require additional new roads in greenfield developments and upgraded road assets in areas of infill development over the following 10 years to support this growth. Over the past 5 years, Bass Coast has experienced an average of 648 dwelling approvals per annum. Over the next 15 years, projections indicate that between 534 – 656 additional dwellings will be required per year, resulting in the need for approximately 10,000 additional dwellings in the Shire by 2036¹⁰.

The emerging needs of the population growth suggest that demand for road assets will need to cater for demand drivers over the following 10 years as illustrated in Table 17.

Demand Driver	Impact on Services
Increase in population.	Population growth will primarily be supported by greenfield development, resulting in an increase in road assets transferred to the Council. Additionally, all of the Council's road assets will experience higher traffic volumes.
Congested roads	Through rapid growth Wonthaggi is facing traffic safety challenges, heavy vehicle movement through the town centre, and parking difficulties, all of which are putting pressure on the town's future growth and liability ¹¹ . A significant increase in traffic volume will necessitate the development and maintenance of well-planned road assets.

¹⁰ Bass Coast Residential Market Supply Demand Assessment August 2022, by Urban Enterprise

¹¹ Source: Smarter Choices – Access and Movement Study, July 2020

Demand Driver	Impact on Services
Climate change will lead to a higher risk of extreme weather events such as storms, heatwaves, flooding, sea-level rise, and fire events.	The risk of structural damage from extreme weather events will rise, leading to faster deterioration of road assets. Implementing climate risk impact assessments will help determine the effects on road performance and longevity.
Sustainability	Introducing new sustainability technology when renewing and upgrading roads will ensure that ratepayers' dollars go further meaning the cost savings can be put towards improving additional roads.

Table 17 – Demand Drivers, Projections and Impacts on Services

DRAFT

4.3 Changes in Technology

Council is continuously monitoring new asset treatments that may be available to increase the life of its transportation assets. Technological changes that could affect the delivery of services covered by this RAMP are documented in Table 18.

Technological Change	Effect on Service Delivery
Road wearing surface quality	Bitumen manufacturers continually innovate to meet modern demands, adapting to higher traffic volumes and evolving environmental conditions. These advancements may extend the useful life of roads, reducing maintenance needs. Additionally, products like warm asphalt mixes offer the added benefit of minimising environmental impact.
Road pavement materials	Innovative techniques such as stabilising agents may enhance the durability and extend the lifespan of pavement materials.
Video inspection for asset data capture, followed by transfer of this information into Council's GIS.	The GIS allows for the verification of asset location and condition, minimising the necessity for reactive inspections.
Vehicle design and construction	The adoption of lighter materials and design of Performance Based Truck Standards in vehicle manufacturing, leading to reduced axle loading, could potentially increase the longevity of pavements.
Recycled materials	By continuing to use recycled materials, there will be a benefit in terms of reduction in greenhouse gas emissions and reliance on our natural resources.
Trenchless technology	Trenchless methodologies will have a positive impact on Council's assets, as the integrity of the road or pathway is not compromised when installing/replacing services within the road reserve.
Permeable concrete	The primary purpose of permeable paving is to ease the burden on ageing and overloaded drainage systems. This is achieved by either quickly dispersing rainwater into the ground or gradually releasing it through retention and slow seepage.

Table 18 – Changes in technology and forecasted effect on service delivery

4.4 New Assets from Growth

Currently Council has a population of around 41,443 which is set to grow to around 47,408 by 2036. Due to this population growth and development, Council is expecting to be gifted 60kms of new road assets over the next 10 years necessary to service this growth.

Additionally, the Wonthaggi North East Precinct Structure plan which was gazetted on 18 Jan 2024 will guide the town's growth from 8,000 to 20,000 residents through the construction of approximately 5000 new homes over the next 30 years across 444 hectares. Over 5000 homes are expected to be established in the precinct over the next 30-50 years.

Council is currently proposing to commit over \$17 million via its capital works program to deliver major road upgrade works such as road widening and upgrade to sealed, to cater for current and future population growth. This expenditure will be funded via a combination of Council's general rate revenue, developer contributions and government grants. As additional information becomes available with regards to new growth and development areas, Council will continue to identify the community infrastructure needs via Precinct Structure Plans and these will be included in future revisions of this RAMP.

With the commitment of new road assets growth, it is reasonable to anticipate that Council's road assets replacement value will increase from \$684 million as at 2024 to approximately \$749 million by 2034. The current annual depreciation is also expected to increase from \$11.8 million per annum to \$12.8 million per annum by year 2034.

When new assets are acquired, or assets are expanded or upgraded, this results in an increase in commitment of annual operational and maintenance funding to ensure continued service delivery of the asset over its lifecycle.

4.5 Climate Change

Climate change has seen an increased risk of extreme weather events including storm events, heatwaves, flooding, sea-level rise and fire events across the globe. Council has declared a Climate Emergency and adopted a Climate Change Action Plan with a vision that our homes, buildings and infrastructure are comfortable, efficient and resilient to the impacts of climate change.

Climate change is expected to significantly impact road assets by intensifying precipitation patterns and increasing the frequency of extreme weather events. The increase of rainfall patterns may lead to a surge in runoff leading to more localised flooding and damaging Council's existing road assets.

Whilst Council's Climate Action Plan will help minimise our footprint, it is recognised that further work is required to identify and address the impacts of climate change on Council's road asset network.

Council envisages the next iteration LTFP modelling will incorporate climate impacts factoring extreme temperature, extreme rainfall, flooding, sea level rises, dryness and storm surge which were sourced from the Infrastructure Asset Vulnerability Assessment (AVA)

report by SECCA¹². The LTFP model will simulate the climate risk impacting high risk assets by shortening useful lives and increasing treatment costs, recognising the need that as these assets are selected for capital renewal works, that future enhancements to address climate change impacts such using durable pavement materials that are resistant to temperature fluctuations, moisture, and other environmental stresses to improve the longevity of roads. Alternatively, incorporating design features such as increased road elevation, wider shoulders, reinforced structures and nature-based solutions can help roads better withstand climate-related hazards like flooding, landslides, and heatwaves.

4.6 Demand Management Plan

The demand for road assets at Council will increase proportionally with the predicted population growth and predicted demographic changes. This is also in line with the community expectation where provisions of road services have scored high as priority for increased services by Council.

Demand for new services will be managed through a combination of managing existing assets, upgrading 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 19. Further opportunities will be developed in future revisions of this RAMP in relation to customer service demands and asset maintenance and capital.

Service Activity	Demand Management Plan
Increase in demand for road assets	<p>Conduct network analysis and modelling of high-traffic zones, as well as proposed new developments, to assess their impact on the current network.</p> <p>Develop an Integrated Transport Strategy that identifies potential modal shifts such as increased cycling, walking and use of public Transport.</p> <p>Integrate findings into the prioritisation criteria of the Forward Capital Works</p> <p>Support the development of alternative transportation options in residential and commercial areas.</p>
Changes requested to existing services	<p>Residents who typically move to Bass Coast from other urban local government areas, typically expect all residential and local roads to be sealed. Educate residents and communicate service levels, upgrade programs and financial capacity.</p>

¹² SECCA is a collaboration of nine councils in Victoria's south-east making a regional response to climate change

Development of new residential subdivisions which can affect future traffic volumes	All new developments will be managed through the planning and engineering subdivision process with Development Control Plans enabling contributions from new developments allocated to upgrade existing transport assets, where impacted as a result of new developments.
Increased need for maintenance and renewal costs	Review and document levels of services after consultation with the Service Managers and the community. Incorporate total asset lifecycle costings into asset management plans and new project budget bids.
Providing a safe network	Continue traffic management initiatives and processes such as the local road safety improvement program to address high-risk intersections and other locations in the road network.
Climate Change	Utilise the latest research and climate projections to periodically reassess climate risk to Council's assets, and to include best practice climate adaptation principles in the AM Plan. Road assets will need to be built and renewed to a standard that may require different materials, methods of construction and other innovative treatments and approaches.

Table 19 - Demand Management Plan Summary

5 Risk Management Planning

5.1 Asset Criticality / Hierarchy

In order to ensure that appropriate management, engineering standards and planning practices are applied to Council's road assets, a hierarchy system is applied in accordance with the International Infrastructure Management Manual and based on the asset's function.

The hierarchy adopted by Council for road assets takes into account the varying risk and service levels associated with the road asset portfolio and is documented in Section 10 of the Road Management Plan 2022. The hierarchies are summarised as follows:

Asset Types	Hierarchy	Definition
Roads, Kerbs, Carparks	Link	Provides a strategic link between arterial roads, suburbs, commercial areas, major housing areas or to a defined destination. Provides access to tourist facilities or industrial centres and may include regional links.
	Collector	Provides a primary connection into residential urban areas. Provides a connection between rural link and arterial roads in rural areas. Typically caters for service and heavy vehicles as well as access to properties.
	Access Level 1	Provides access to local residences or secondary access to commercial areas.
	Access Level 2 & 3	Provides access and secondary access to local residences and properties.

Table 20 - Asset Hierarchy for Road Assets

Council has developed a Criticality Assessment of the road asset network.

5.2 Risk Management Plan

Council's Risk Management Plan¹³ sets the overall framework for addressing risk within the framework of ISO31000-2018. The Risk Management Plan outlines Council's commitment to manage its resources and responsibilities in a manner which is intended to minimise harm or loss. The elements of this framework are illustrated in Figure 10.

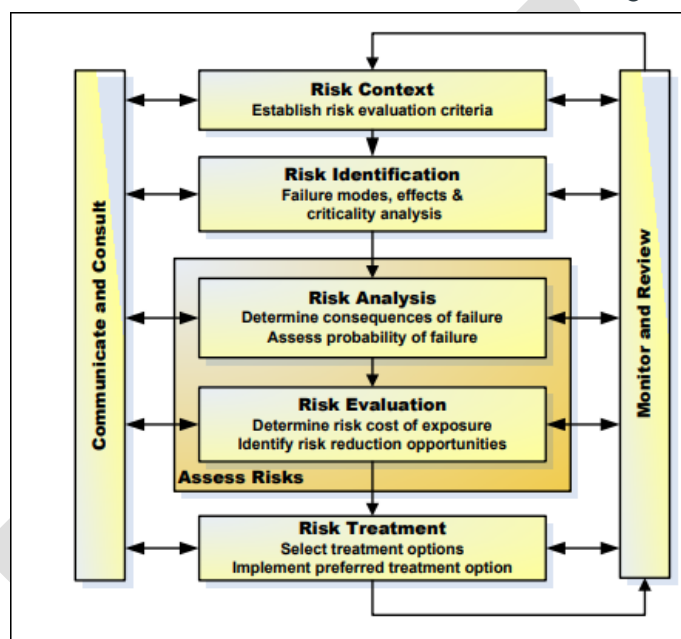


Figure 10 – Risk Management Process, Source: ISO31000:2018

5.3 Risks Assessment

Council has developed an asset criticality, giving higher importance to risk assessment and the appropriate levels of inspection and maintenance for each classification as documented in Table 20.

Table 10.6 of the Road Management Plan 2022 outlines the range of defects in the road network and specifies the intervention levels at which the Council deems remediation or mitigation necessary.

¹³ <https://www.basscoast.vic.gov.au/about-council/strategies-and-policies/plans>

Critical assets are those which have a high consequence of failure causing significant loss or reduction of service. Similarly, critical failure modes are those which have the highest consequences. By identifying critical assets and failure modes, investigative activities, condition inspection programs, maintenance and capital expenditure plans can be targeted at the critical areas. Activities may include items such as increased inspection frequency and higher maintenance intervention levels.

5.3.1 Risk Plan

An assessment of risks associated with service delivery from Council's road assets has identified the critical risks that will result in significant loss, 'financial shock' or a reduction in service.

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 cost after the selected treatment plan are implemented is shown in the table below.

Hazard, Service or Asset at Risk	What Can Happen	Risk Rating	Risk Treatment Plan	Residual Risk
Rapid population growth	Rapid population growth leads to increased traffic, which in turn shortens the useful life of our pavements and raises the standards required for pavements in residential areas adjacent to the growth front.	Low	Adjusted the useful lives of pavements for urban collectors accordingly. This adjustment is a crucial factor in modelling pavement degradation, predicting future deterioration, and planning for upcoming capital works.	Low
Growth within the Wonthaggi North-East Precinct is guided by a Structure Plan, which, however, does not provide funding for upgrading key collector roads outside the PSP	Council is observing rapid deterioration on these and other collector roads, with limited success in compelling developers to undertake these upgrades. The success rate stands at approximately 30%.	Medium	Council will need to address early pavement failures and consider like-for-like renewal with stronger pavements.	Low
Lack of planning to	Failure to execute renewal works in a timely manner	Medium	Establishing a continuous condition audit program	Low

Hazard, Service or Asset at Risk	What Can Happen	Risk Rating	Risk Treatment Plan	Residual Risk
develop and deliver the renewal program and delaying decisions to dispose of road assets or undertake renewal works.	thereby creating a public safety risk or premature loss of an asset		followed by the development of renewal programs.	
Insufficient funding allocated to asset renewals	Service levels decline, unprotected assets (e.g., pavements) degrade faster than anticipated, user safety declines, and resident unrest.	High	Prioritise renewal of 'protective' assets (i.e. seals), review conditions and funding annually, monitor network performance and consider a Special Rate Variation.	Low
Road accidents	Vehicle accidents and damage to vehicles as a result of road defects	High	Network inspection program in line with remedial works programs (annual resealing and crack sealing programs)	Low
Impact of climate change on road assets	Climate change may have an effect on the useful life of an asset. Increased extreme events can impact different assets in different ways.	Low	Monitor condition of assets. Considerations made when designing new or upgraded infrastructure to review material/product selection. Investigate options to conduct Climate Risk Assessments for road assets and the forecast impacts on asset useful lives	Low
Unit rates variation	Unit rates for infrastructure may exceed forecasted estimates due to unforeseen circumstances (Oil and Gas prices impact road asphalt)	Medium	Works programming as proposed under this plan. Scope and cost estimate works on a forward works program. Undertake technical inspection of each road prior to programming resealing works. Annual review of unit rates to inform future budgets.	Low

Table 21 – Critical Risks and Treatment Plan

6 Financial Summary

The provision of adequate financial resources ensures that Council's road assets are appropriately managed and preserved. Financial provisions below requirements will lead to more road assets deteriorating to very poor condition. This will have a direct impact on community development and if prolonged the backlog will increase resulting in substantial needs for "catch-up" expenditure imposed on the community in the future. Additionally, deferred renewal results in increased and escalating reactive maintenance as aged assets deteriorate at increasing rates and require more reactive interventions to keep the road in a safe operating state.

6.1 Forecasted Funding Requirements

The section shows the output of modelling the deterioration of Council's road assets portfolio using predictive modelling software.

This process typically involves setting up life cycle paths for each road asset, along with their inspected condition, identifying the appropriate treatments and unit rates to deliver these treatments and configuring the treatment rule base (matrices based on selected condition criteria that when matched will drive a treatment).

By utilising the above process and setting up the criteria and logic within the predictive modelling software, it is possible to model the future costs of Council's road asset portfolio renewal requirements and to predict the future condition of these assets under varying funding scenarios.

6.2 Funding Scenarios

The 2024 strategic modelling analysis predicts the deterioration of Council's road assets by calculating the results of different funding options, utilising core datasets that are current as at 2024. The length of time predicted for each funding option is for a period of 10 years until the year 2034. The results of the analysis have been graphed in **Figure 11**.

The current average condition as at 2024 for the roads asset portfolio is an average condition of 2.16 out of 6. Refer to Table 7 – Asset Condition Rating Guidelines for condition descriptions.

Council had considered four scenarios as detailed below:

SAM Modelling Scenario	Funding Option Description
Option 1 (Current LTFP Spend)	What is the predicted future LoS measured in % PVP if Council allocates the current 2025 capital level of funding over the next 10 years.
Option 2 (-25% Spend of current LTFP)	What is the predicted future LoS measured in % PVP if Council allocates a 25% reduction of the current 2025 capital level of funding over the next 10 years.
Option 3 (Maintain Target LoS)	How much capital funding is required to maintain the target LoS measured by % PVP by year 10. Focus on maintaining the percentage of the asset portfolio in PVP below 10% ¹⁴ .
Option 4 (Unconstrained Funding)	What is the predicted future LoS if capital funding each year is unconstrained to treat all assets that meet intervention levels ¹⁵ .

Table 22 – SAM Modelling Scenario

6.3 Forecast 10-Year Funding

6.3.1 Overall Summary

Council has considered multiple scenarios in the process of deriving its 10-year long-term financial plan budget, in line with the best practice asset management standards.

The predicted lifecycle costs based on Council's intervention levels (Technical LOS) over the following 10 years (represented by Option 3) have been determined as follows:

- Capital Upgrade / Renewal: \$52.18M or \$5.22M on average per annum.
- Maintenance: \$26.89M or \$2.69M on average per annum.

Funding Option 1 models spending the same amount of capital allocated in 2025 each year projected into the future over the following 10 years, will not be enough to arrest the rate of asset deterioration. This option results in a worse average network condition of 2.42 when compared to the current average network condition and results in an increase in future liability of \$73.50M from \$31.10M which is an increase of \$42.4M, affecting the return on investment of this financial strategy negatively.

Funding Option 2 models the scenario of a reduced capital spend of -25% per annum. The outcome of this model shows that the average condition of the road network will grow much worse to on average 2.45 over the 10-year forecast period and generate a \$83.8million backlog of poor and very poor assets, which is an unsustainable financial position.

¹⁴ The National State of Asset 2021 has on average 10% of local government infrastructure assets are in poor condition

¹⁵ It is noted that despite being unconstrained, some assets may slip into PVP because the intervention criteria have not yet been met.

Funding Option 3 is regarded as the preferred funding model, as it demonstrates the ability to maintain current levels of service in the network condition, with the average network condition in 10 years predicted to remain relatively stable. This Option however also results in a higher asset liability of poor and very poor assets at \$56.11M, but this is \$17.39 less than Option 1 - current funding. The predicted future asset liability increases from \$31.10M to \$56.11M in this scenario.

Spending \$52.18M (Option 3) in capital over 10 years compared to \$39.06M (Option 1) ensures a better return on investment. The higher liability is attributed to the fact that, although the asset count remains constant, the assets that were in conditions 1 and 2 at the start have mostly shifted into the condition 3 and 4 states at the end of year 10. This funding solution requires an additional \$13.1million over the 10-year forecast period, or an additional 1.31million per annum more than currently budgeted.

Funding Option 4 models the scenario of intervening at the ideal point for every asset when it falls due for renewal treatment. This is an idealistic scenario and would produce a much-improved overall condition of the road network with a slight improvement in average condition to 2.01 and a reduction in backlog assets to \$28.67million in poor and very poor state over the 10-year forecast period. This scenario requires an additional funding of \$88million over the 10-year forecast period which is unrealistic when considering Council's current overall funding capacity.

The funding profile across all the financial options is set out in the table below:

Financial Year	Option 1 (\$'M)	Option 2 (\$'M)	Option 3 (\$'M)	Option 4 (\$'M)
2023/24	\$3.90	\$2.93	\$5.22	\$12.49
2024/25	\$3.91	\$2.93	\$5.22	\$4.70
2025/26	\$3.91	\$2.93	\$5.22	\$4.09
2026/27	\$3.91	\$2.93	\$5.21	\$7.75
2027/28	\$3.91	\$2.93	\$5.22	\$21.29
2028/29	\$3.91	\$2.93	\$5.22	\$10.17
2029/30	\$3.91	\$2.93	\$5.22	\$4.94
2030/31	\$3.91	\$2.93	\$5.22	\$20.54
2031/32	\$3.91	\$2.93	\$5.22	\$23.88
2032/33	\$3.91	\$2.93	\$5.21	\$17.46
Total	\$39.06	\$29.29	\$52.18	\$127.32

Table 23 – Predictive Modelling Funding Profile Across All Financial Options

The average condition across all the financial options is set out in the table below:

Financial Year	Option 1	Option 2	Option 3	Option 4
May 2024	2.16	2.16	2.16	2.16
2024/25	2.15	2.16	2.15	2.12

Financial Year	Option 1	Option 2	Option 3	Option 4
2025/26	2.17	2.18	2.15	2.13
2026/27	2.17	2.18	2.15	2.13
2027/28	2.19	2.20	2.18	2.15
2028/29	2.20	2.22	2.20	2.15
2029/30	2.23	2.24	2.22	2.16
2030/31	2.25	2.26	2.24	2.18
2031/32	2.30	2.32	2.29	2.16
2032/33	2.36	2.38	2.35	2.07
2033/34	2.42	2.45	2.38	2.01

Table 24 – Average Condition Across All Financial Options

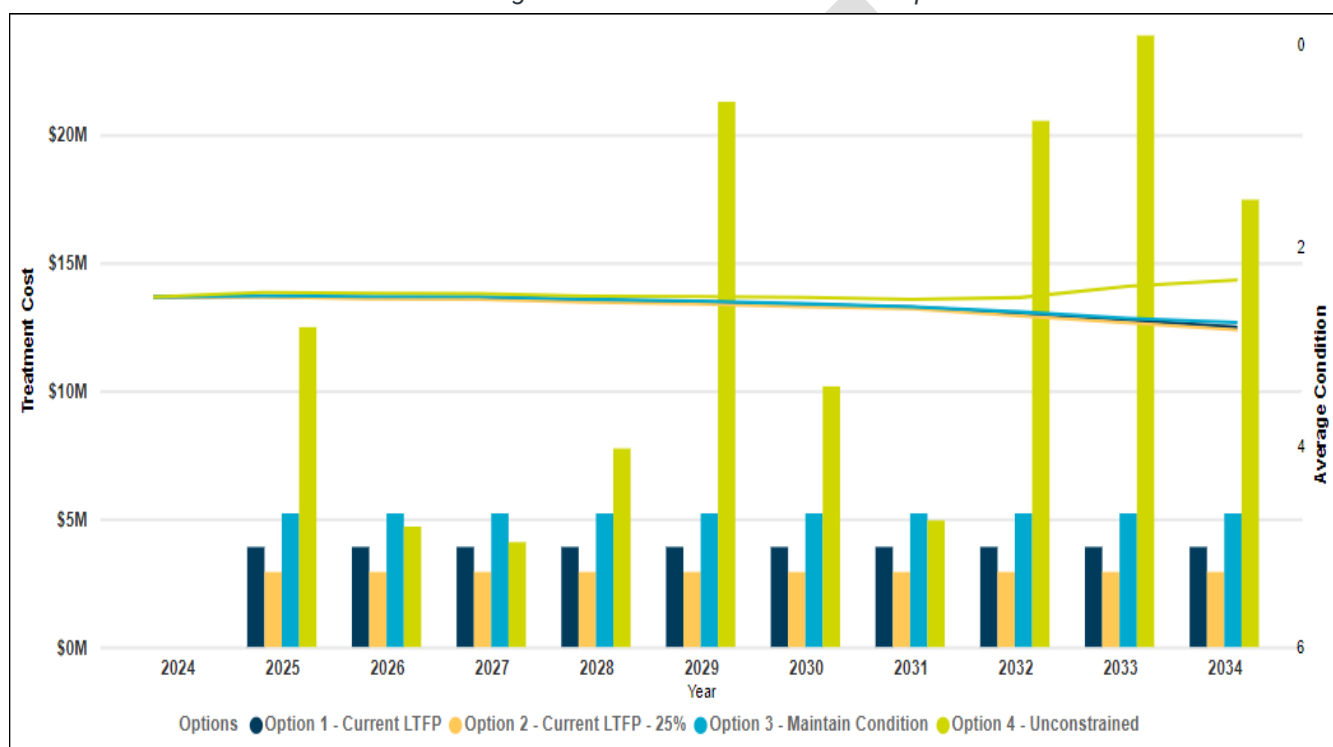


Figure 11 – Forecast 10-Year Capital Funding Analysis and Average Condition by Year

The strategy comparison outcomes of the financial options that have been modelled are detailed in the table below:

SAM Modelling Scenario	Total Treatment Cost (\$'M)	Total Maintenance Cost (\$'M)	PVP Year 0 (%)	PVP Year 10 (%)	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)
Option 1	\$39.06	\$27.74	4.54%	10.74%	\$31.10	\$73.50
Option 2	\$29.29	\$28.58	4.54%	12.24%	\$31.10	\$83.80
Option 3	\$52.18	\$26.89	4.54%	8.20%	\$31.10	\$56.11
Option 4	\$127.32	\$19.17	4.54%	4.19%	\$31.10	\$28.67

Table 25 – 10-Year Funding & Strategy Results - Funding Option

6.3.2 Sealed Roads

The current average SCI and PCI as at 2024 for the entire sealed road portfolio is an average condition of 1.8 and 2.0 respectively, with condition state 1 representing Very Good and condition state 5 representing Very Poor.

The desired future level of service delivered by Council regarding the sealed road network should consider maintaining current levels of service into the future, as a minimum.

The strategy comparison outcomes of the financial options that have been modelled are detailed in the Table below.

SAM Modelling Scenario	Total Treatment Cost (\$'M)	Total Maintenance Cost (\$'M)	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)	SCI Year 0	SCI Year 10	PCI Year 0	PCI Year 10
Option 1	\$31.97	\$17.15	\$30.37	\$67.91	1.8	1.7	2.0	2.4
Option 2	\$23.97	\$17.65	\$30.37	\$77.66	1.8	1.9	2.0	2.4
Option 3	\$43.99	\$16.47	\$30.37	\$50.80	1.8	1.5	2.0	2.4
Option 4	\$95.55	\$14.48	\$30.37	\$23.89	1.8	0.8	2.0	1.9

Table 26 – Sealed Roads Predictive Modelling Funding Options - Strategy Comparison

As at 2024, the sealed road network portfolio consists of some 7% SCI and 0.2% PCI in condition 4 (poor) and 5 (very poor), with an average network condition SCI and PCI condition 1.8 and 2.0 respectively, with condition state 1 representing Very Good and condition state 5 representing Very Poor.

The hypothetical cost to undertake capital works on these assets in Poor and Very Poor condition would cost around \$30.37 million (referred to as the asset liability amount).

Table below details the financial modelling observations for Council's sealed roads:

Financial Option	Funding over 10 years	Outcome Achieved over 10 years	Comments	Observations
Option 1	Funding investment is \$31.97M over 10 years.	Over 9.9% of the road network will be in PVP for SCI and over 5.8% for PCI by year 10 compared to 6.82% for SCI and 0.2% for PCI in 2024.	Increases current asset liability (sealed roads in PVP condition) from \$30.37M to over \$67.91M over 10 years.	This option reflects the current 2025 spend into the future over the next 10 years. While the funding is less than that of Option 3 and more than Option 2, it provides an adequate level of service. However, this Option still results in higher risk progressively as the network will be in a very poor state of assets over 10 years. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$11.58M over 10 years.
Option 2	Funding investment is \$23.97M over 10 years.	Over 11.2% of the road network will be in PVP for SCI and over 6.7% for PCI by year 10 compared to 6.82% for SCI and 0.2% for PCI in 2024.	Increases current asset liability (sealed roads in PVP condition) from \$30.37M to \$77.66M over 10 years.	Whilst this option costs less, it still results in very high risk progressively as the network will be in a very poor state of assets over 10 years. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of -\$5.67M over 10 years.
Option 3	Funding investment is \$43.99M over 10 years.	Over 6.9% of the road network will be in PVP for SCI and over 4.8% for PCI by year 10 compared to 6.82% for SCI and 0.2% for PCI in 2024.	Improves current asset liability. Sealed roads in PVP condition increase from \$50.80M to only \$55.70M over 10 years.	The average condition is predicted to improve at an average network SCI of 1.5 by year 10. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$40.03M over 10 years. Balancing between investment and risk mitigation, positions this option as a pragmatic and moderate risk option.
Options 4	Funding investment is \$95.55M over 10 years.	Over 2.0% of the road network will be in PVP for SCI and over 3.5% for PCI by year 10 compared to 6.82% for SCI and 0.2% for PCI in 2024.	Improves current asset liability. Sealed roads in PVP condition decrease to around \$23.89M by year 10.	The average condition is predicted to improve at an average network SCI and PCI of 0.8 and 1.9 by year 10. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$116.52M over 10 years. This funding Option requires substantial investment and serves as a 'what-if' funding was unconstrained. This type of funding would not align with Council's financial priorities and/or available capacity to fund this option and human resources to deliver all these projects.

Table 27 – Sealed Roads Financial Modelling Observations

6.3.3 Unsealed Roads

The current average PCI as at 2024 for the entire unsealed road portfolio is an average condition of 2.1, with condition state 1 representing Very Good and condition state 5 representing Very Poor.

The desired future level of service delivered by Council regarding the unsealed road network should consider maintaining current levels of service into the future, as a minimum.

The strategy comparison outcomes of the financial options that have been modelled are detailed in the Table below.

SAM Modelling Scenario	Total Treatment Cost (\$'M)	Total Maintenance Cost (\$'M)	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)	PCI Year 0	PCI Year 10
Option 1	\$5.40	\$9.49	\$0.49	\$0.53	2.1	2.0
Option 2	\$4.05	\$9.84	\$0.49	\$1.07	2.1	2.1
Option 3	\$6.00	\$9.33	\$0.49	\$0.53	2.1	1.9
Option 4	\$28.78	\$3.61	\$0.49	\$0.00	2.1	0.8

Table 28 – Unsealed Roads Predictive Modelling Funding Options - Strategy Comparison

As at 2024, the unsealed road network portfolio consists of some 2.18% of unsealed roads with a PCI in condition 4 (poor) and 5 (very poor), with condition state 1 representing Very Good and condition state 5 representing Very Poor.

The hypothetical cost to undertake capital works on these assets in PVP condition would cost around \$0.49 million (referred to as the asset liability amount).

Table below details the financial modelling observations for Council's unsealed roads:

Financial Option	Funding over 10 years	Outcome Achieved over 10 years	Comments	Observations
Option 1	Funding investment is \$5.40M over 10 years.	Just under 3% (2.3%) of the road network will be in PVP for PCI by year 10 compared to 2.18% in 2024.	Increases current asset liability (unsealed roads in PVP condition) from \$0.49M to just over \$0.53M over 10 years.	This option reflects the current 2025 spend into the future over the next 10 years. The option informs us that current funding levels on the unsealed road network will result in adequate future level of service. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$14.85M over 10 years.
Option 2	Funding investment is \$4.05M over 10 years.	Over 4.7% of the road network will be in PVP for PCI by year 10 compared to 2.18% for PCI in 2024.	Increases current asset liability (unsealed roads in PVP condition) by \$0.58M, from \$0.49M to \$1.07M over 10 years.	Whilst this option costs less, it still results in a higher risk progressively as the network will be in a very poor state of assets over 10 years. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$13.30M over 10 years. Hence this option illustrates that a reduction in unsealed roads funding will result in a worse level of service while also increasing our asset liability and that the Net Strategy result is very similar to that of Option 2.
Option 3	Funding investment is just over \$6.00M over 10 years.	2.3% of the road network will be in PVP for PCI by year 10 compared to 2.18% in 2024.	The current asset liability is predicted to slightly increase (unsealed roads in PVP condition) by \$0.04M, from \$0.49M to \$0.53M over 10 years.	The average condition is predicted to slightly improve at an average network PCI of 1.9 out of 5 by year 10. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$15.29M over 10 years. This option is very similar to Option 1 and illustrates that balancing between investment and risk mitigation, positions both options as pragmatic and moderate risk options.
Options 4	Funding investment is \$28.78M over 10 years.	0% of the road network will be in PVP for PCI by year 10 compared to 2.18% for PCI in 2024.	Improves current asset liability. Unsealed roads in PVP condition decreases to around \$0 over 10 years.	Very high funding maintains the unsealed road network in very good condition state over 10 years. The PCI is predicted to improve to 0.8 out of 5 over 10 years. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$32.88M over 10 years. This funding Option requires substantial investment and serves as a 'what-if' funding was unconstrained. This type of funding would not align with Council's financial priorities and/or available capacity to fund this option and human resources to deliver all these projects.

Table 29 – Unsealed Roads Financial Modelling Observations

6.3.4 Kerbs

The current average condition as at 2024 for the entire kerb and channel asset portfolio is an average condition 2.5, with condition state 1 representing Very Good and condition state 5 representing Very Poor.

The desired future level of service delivered by Council regarding the kerb and channel network should consider maintaining current levels of service into the future, as a minimum.

The strategy comparison outcomes of the financial options that have been modelled are detailed in the Table below.

SAM Modelling Scenario	Total Treatment Cost (\$'M)	Total Maintenance Cost (\$'M)	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)	Avg Kerb Cond Year 0	Avg Kerb Cond Year 10
Option 1	\$1.69	\$1.09	\$0.24	\$5.06	2.49	2.49
Option 2	\$1.27	\$1.09	\$0.24	\$5.07	2.49	2.54
Option 3	\$2.19	\$1.08	\$0.24	\$4.79	2.49	2.52
Option 4	\$2.99	\$1.07	\$0.24	\$4.79	2.49	2.50

Table 30 –Kerb and Channel Predictive Modelling Funding Options - Strategy Comparison

As of 2024, approximately 0.16% of the kerb and channel network portfolio is considered to be in Condition State 4 (Poor).

The hypothetical cost to undertake capital works on these assets in PVP condition would cost around \$0.24 million (referred to as the asset liability amount). Notably, despite the longer expected useful life of this asset type, around 58% of the network is currently rated as Fair, suggesting that these assets are likely to degrade into poor condition state over the next 15-20 years, which is beyond the current 10-year forecast period.

Table below details the financial modelling observations for Council's kerb and channel:

Financial Option	Funding over 10 years	Outcome Achieved over 10 years	Comments	Observations
Option 1	Funding investment is \$1.69M over 10 years.	Around 3.4% of the kerb and channel network will be in poor condition by year 10 compared to 0.16% for average condition in 2024.	Increases current asset liability (kerb and channel in poor condition) from \$0.24M to just over \$5.06M over 10 years.	<p>This option reflects the current 2025 spend into the future over the next 10 years. The option informs us that current funding levels on the kerb and channel network will result in the average condition maintained at 2.5 over 10 years.</p> <p>When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$2.04M over 10 years.</p> <p>This Option demonstrates a less favourable outcome compared to the funding alternatives presented by Options 3 and 4.</p>
Option 2	Funding investment is \$1.27M over 10 years.	Around 3.3% of the kerb and channel network will be in poor condition by year 10 compared to 0.16% for average condition in 2024. This is a similar outcome when compared to Option 1.	Increases current asset liability (kerb and channel in poor condition) from \$0.24M to just over \$5.07M over 10 years.	<p>When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$2.47M over 10 years. Hence this option illustrates that a reduction in kerb and channel funding will result in a worse level of service while also increasing our asset liability and that the Net Strategy result is very similar to that of Options 1 and 3.</p>
Option 3	Funding investment is \$2.19M over 10 years.	Around 3.2% of the kerb and channel network will be in poor condition by year 10 compared to 0.16% for average condition in 2024. This is a better outcome when compared to Options 1 & 2.	Increases current asset liability (kerb and channel in poor condition) from \$0.24M to just over \$4.79M over 10 years.	<p>The average condition is predicted to remain at an average network average condition of 2.5 out of 5 by year 10.</p> <p>When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$1.28M over 10 years.</p> <p>This option illustrates that balancing between investment and risk mitigation, positions both options as pragmatic and moderate risk options.</p>
Options 4	Funding investment is \$2.99M over 10 years.	Around 3.2% of the kerb and channel network will be in poor condition by year 10 compared to 0.16% for average condition in 2024, a better outcome when compared to Options 1 & 2.	Increases current asset liability (kerb and channel in poor condition) from \$0.24M to just over \$4.79M over 10 years.	<p>The average condition is predicted to remain at an average network average condition of 2.5 out of 5 by year 10.</p> <p>When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of \$0.48M over 10 years.</p> <p>This funding Option requires substantial investment and serves as a 'what-if' funding was unconstrained. This type of funding would not align with Council's financial priorities and/or available capacity to fund this option and human resources to deliver all these projects.</p>

Longer term however, because of the expected future demand to renew kerb assets in poor state and the risk of consequential failure to the adjacent road pavements, additional funding is required for kerb renewal to arrest this future liability beyond the 10-year forecast period.

6.4 Financial Ratios

Asset management ratios provide insight into an organisation's performance and success in managing its assets. Council's asset management ratios for its asset portfolio calculated as at 30 June 2023 are shown in Table 31 – Key Asset Management Ratios.

Ratio	Description	Calculation	Target	2024 Performance
Asset Renewal Funding Ratio	The extent with regards to how the organisation is funding their capital works program when comparing allocated capital works expenditure with the desired expenditure which has been derived from prediction modelling and/or service level agreements.	Funded capital expenditure on renewals divided by the planned/desired capital expenditure.	>75%	100%
Remaining Service Index Ratio	The overall health of the organisation's asset stock in terms of measuring past asset consumption, via the amount of accumulated depreciation. The lower this ratio is, the more the asset stock has been consumed, which also indicates that not enough capital expenditure has been allocated to the asset.	Written down value (fair value of the portfolio) divided by the total current replacement value.	>70%	74%
Maintenance Sustainability Ratio	Measures the level of maintenance funding spent per annum, as a % of asset replacement value on the asset portfolio.	Total maintenance funding per annum / Total Replacement Value, expressed as a percentage.	2-5%	0.39%

Table 31 – Key Asset Management Ratios

7 Plan Improvement and Monitoring

This section outlines how Council will measure its asset management performance. The identified action items in

Task No	Improvement Items	Responsibility	Timeline
1.	Develop a Roads Business Process Manual	Coordinator AM	December 2024
2.	Documentation of condition audit methodology for road assets in the Business Process Manual. The Business Process Manual supports the RAMP.	Coordinator AM	December 2024
3.	Ensure that new asset needs identified from the Precinct Structure Plans and studies are reflected in the RAMP and LTFP.	Coordinator AM, Finance Manager	June 2025
4.	Progress the interface between works and finance systems to ensure the cost of maintenance is linked to assets.	Finance / Asset System Lead / Coordinator AM	December 2026
5.	Conduct a trial of permeable concrete paving as part of the Council's strategy to reduce stormwater runoff in urban areas, such as CBDs and back lanes.	Coordinator AM / Development Engineer	December 2025
6.	Analyse current road maintenance activities to determine the baseline maintenance requirement to preserve the road network lifecycle.	Coordinator AM / Roads Coordinator	December 2026
7.	Review whether roads requiring upgrades meet the standards outlined in the Integrated Transport Strategy. This assessment provides strong justification for securing funding through government grants.	Coordinator AM / Transport Coordinator	December 2026
8.	Ensure that funds allocated annually for road assets are exclusively used for road related projects and maintenance activities, preventing any redirection to other asset types	Coordinator AM, Finance Manager	December 2026
9.	Progress the development of an Operational Plan that incorporates procedures and methodologies of how the operational activities are delivered on the ground and costed. The Operational Plan is to support the RAMP.	Coordinator AM	December 2027
10.	Progress asset inventory checks and condition inspections of all street furniture on Council's road network.	Coordinator AM / Roads Coordinator / Asset System Lead	December 2025
11.	Council to review strategic prediction models annually and renewal costs annually to ensure	Coordinator AM / Finance	Ongoing

	that approved renewal budgets will continue to cover the cost of like for like replacements.		
12.	Council to review financial forecasts annually as better data becomes available, update and submit any supporting budget bids.	Coordinator AM / Finance	Ongoing
13.	Review capital works program to consider alternative low-cost treatments driven by cost benefit analysis.	Coordinator AM / Roads Coordinator	Ongoing
14.	Investigate the integration of regular traffic counts data into Council's corporate asset register in order to provide utilisation data for prioritising renewal works.	Asset System Lead / Coordinator AM	Ongoing
15.	Review expenditure classifications and coding practices applied to maintenance activities to ensure all renewal expenditures are correctly classified. This enables Council to understand the true lifecycle cost	Coordinator AM / Roads Coordinator	Ongoing
16.	Continue to investigate alternate renewal treatments to reduce renewal costs or significantly extend useful life of road assets.	Coordinator AM / Roads Coordinator	Ongoing
17.	Annually put forward estimated road assets operations and maintenance and cost of doing business budget submissions taking into account changes in portfolio size and make-up.	Coordinator AM / Roads Coordinator	Ongoing
18.	Continue to annually update the data entered into the asset management system to incorporate changes due to renewal works undertaken and any significant asset degradation.	Coordinator AM / AM System Officer	Ongoing
19.	Continue to annually review the asset management software forecasting results for significant changes and adjust capital funding submissions if necessary.	Coordinator AM / Asset System Lead	Ongoing

Table 33 will enable Council to improve its asset management capability, to enhance asset value and deliver more for stakeholders while balancing cost, risk and performance.

7.1 Assumptions

The key assumptions made in this RAMP and risks that these may change are shown below.

Key Assumption	Risk of Change to Assumption / Impact to Model
The allocation of renewal funds have been based on the asset replacement costs developed as part of the valuations in June 2024.	Medium to Low
Maintenance funding levels will be progressively increased to represent as a minimum, 2% of the asset base replacement value.	High

Key Assumption	Risk of Change to Assumption / Impact to Model
The funding needs for new &/or upgrade road assets will be identified via PSPs and studies and funding sought from grants and/or developer contributions. As identified, these will be incorporated into future RAMP revisions.	Medium
Capital renewal treatments are like for like and do not account for additional costs to upgrade and/or utilise new technologies and materials.	Medium to Low
Asset register currency pertaining to condition and asset performance.	Low
Asset register currency pertaining to asset quantities.	Low
Network strategic condition inspections will be funded on a 3-4 year cyclic basis and incorporated into the Operational budget.	Low
Current human resource plan will not change in the near future.	Low

Table 32 – Key Assumptions made in RAMP and Risks of Change

7.2 Improvement Plan

The Asset Management Improvement Plan which is set out below details the key improvement tasks. Completion of these tasks will improve Council's asset management capabilities for this asset class.

Task No	Improvement Items	Responsibility	Timeline
20.	Develop a Roads Business Process Manual	Coordinator AM	December 2024
21.	Documentation of condition audit methodology for road assets in the Business Process Manual. The Business Process Manual supports the RAMP.	Coordinator AM	December 2024
22.	Ensure that new asset needs identified from the Precinct Structure Plans and studies are reflected in the RAMP and LTFP.	Coordinator AM, Finance Manager	June 2025
23.	Progress the interface between works and finance systems to ensure the cost of maintenance is linked to assets.	Finance / Asset System Lead / Coordinator AM	December 2026
24.	Conduct a trial of permeable concrete paving as part of the Council's strategy to reduce stormwater runoff in urban areas, such as CBDs and back lanes.	Coordinator AM / Development Engineer	December 2025
25.	Analyse current road maintenance activities to determine the baseline maintenance requirement to preserve the road network lifecycle.	Coordinator AM / Roads Coordinator	December 2026
26.	Review whether roads requiring upgrades meet the standards outlined in the Integrated Transport Strategy. This assessment provides strong justification for securing funding through government grants.	Coordinator AM / Transport Coordinator	December 2026
27.	Ensure that funds allocated annually for road assets are exclusively used for road related projects and maintenance activities, preventing any redirection to other asset types	Coordinator AM, Finance Manager	December 2026
28.	Progress the development of an Operational Plan that incorporates procedures and methodologies of how the operational activities are delivered on the ground and costed. The Operational Plan is to support the RAMP.	Coordinator AM	December 2027
29.	Progress asset inventory checks and condition inspections of all street furniture on Council's road network.	Coordinator AM / Roads Coordinator / Asset System Lead	December 2025
30.	Council to review strategic prediction models annually and renewal costs annually to ensure	Coordinator AM / Finance	Ongoing

	that approved renewal budgets will continue to cover the cost of like for like replacements.		
31.	Council to review financial forecasts annually as better data becomes available, update and submit any supporting budget bids.	Coordinator AM / Finance	Ongoing
32.	Review capital works program to consider alternative low-cost treatments driven by cost benefit analysis.	Coordinator AM / Roads Coordinator	Ongoing
33.	Investigate the integration of regular traffic counts data into Council's corporate asset register in order to provide utilisation data for prioritising renewal works.	Asset System Lead / Coordinator AM	Ongoing
34.	Review expenditure classifications and coding practices applied to maintenance activities to ensure all renewal expenditures are correctly classified. This enables Council to understand the true lifecycle cost	Coordinator AM / Roads Coordinator	Ongoing
35.	Continue to investigate alternate renewal treatments to reduce renewal costs or significantly extend useful life of road assets.	Coordinator AM / Roads Coordinator	Ongoing
36.	Annually put forward estimated road assets operations and maintenance and cost of doing business budget submissions taking into account changes in portfolio size and make-up.	Coordinator AM / Roads Coordinator	Ongoing
37.	Continue to annually update the data entered into the asset management system to incorporate changes due to renewal works undertaken and any significant asset degradation.	Coordinator AM / AM System Officer	Ongoing
38.	Continue to annually review the asset management software forecasting results for significant changes and adjust capital funding submissions if necessary.	Coordinator AM / Asset System Lead	Ongoing

Table 33 – Improvement Actions

7.3 Monitoring and Review Procedures

The RAMP has a planning horizon of 10 years, and it is based on details documented within the Asset Management Strategy. The RAMP will be reviewed and updated in the year following Council general elections, as required by the Local Government Act (LGA) 2020 Section 92.4.

This RAMP will be reviewed and amended to recognise any changes in service levels, needs arising from PSP and master plans and/or resources available to provide those services as a result of the budget decision process.

7.4 Performance Measures

The effectiveness of this RAMP can be measured and monitored based on annual strategic Council indicators as follows:

- The performance of Council against the Levels of Service documented in Section 3.5; and
- Performance against the Asset Management Ratios documented in Section 6.3.2.