

Bass Coast Shire Council

Road Asset Management Plan | 2024-2028





Acknowledgement of Country

Bass Coast Shire Council acknowledge the Bunurong as the Traditional Owners and Custodians of the lands and waters, and pays respect to their Elders past, present and emerging, for they hold the memories, the traditions, the culture and Lore.

Bass Coast Shire Council celebrates the opportunity to embrace and empower the Aboriginal and/or Torres Strait Island Communities in their diversity.

Bass Coast Shire Council will create opportunities for future recognition and respectful partnerships that will honour the Traditional Owners and Custodians, and Aboriginal and/or Torres Strait Islander Peoples.

Diversity and Inclusion

Diversity and Inclusion Bass Coast Shire Council is committed to providing communications and engagement that is welcoming, safe, accessible and inclusive for our community including First Nations, Culturally and Linguistically Diverse (CALD), Lesbian, Gay Bisexual, Transgender, Queer, Intersex and Asexual (LGBTQIA+) peoples, people with disability and of all ages.



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Document Control

Document ID: Roads Asset Management Plan

Version	Date	Status	Author	Summary of changes
1.0	23 May 2024	Draft	Raston N	Initial draft RAMP.
1.2	24 May 2024	Draft	Raston N / Simon H	Draft for public release.
1.3	27 June 2024	Draft	Raston N	Updated post public release
Adoption of the document Council Meeting - 17 July 2024				

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	Condition involves the use of a single integer between 1 and 5 to describe the ability of 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 Council's commitment to better practice asset management and provide principles for sound road assets 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.

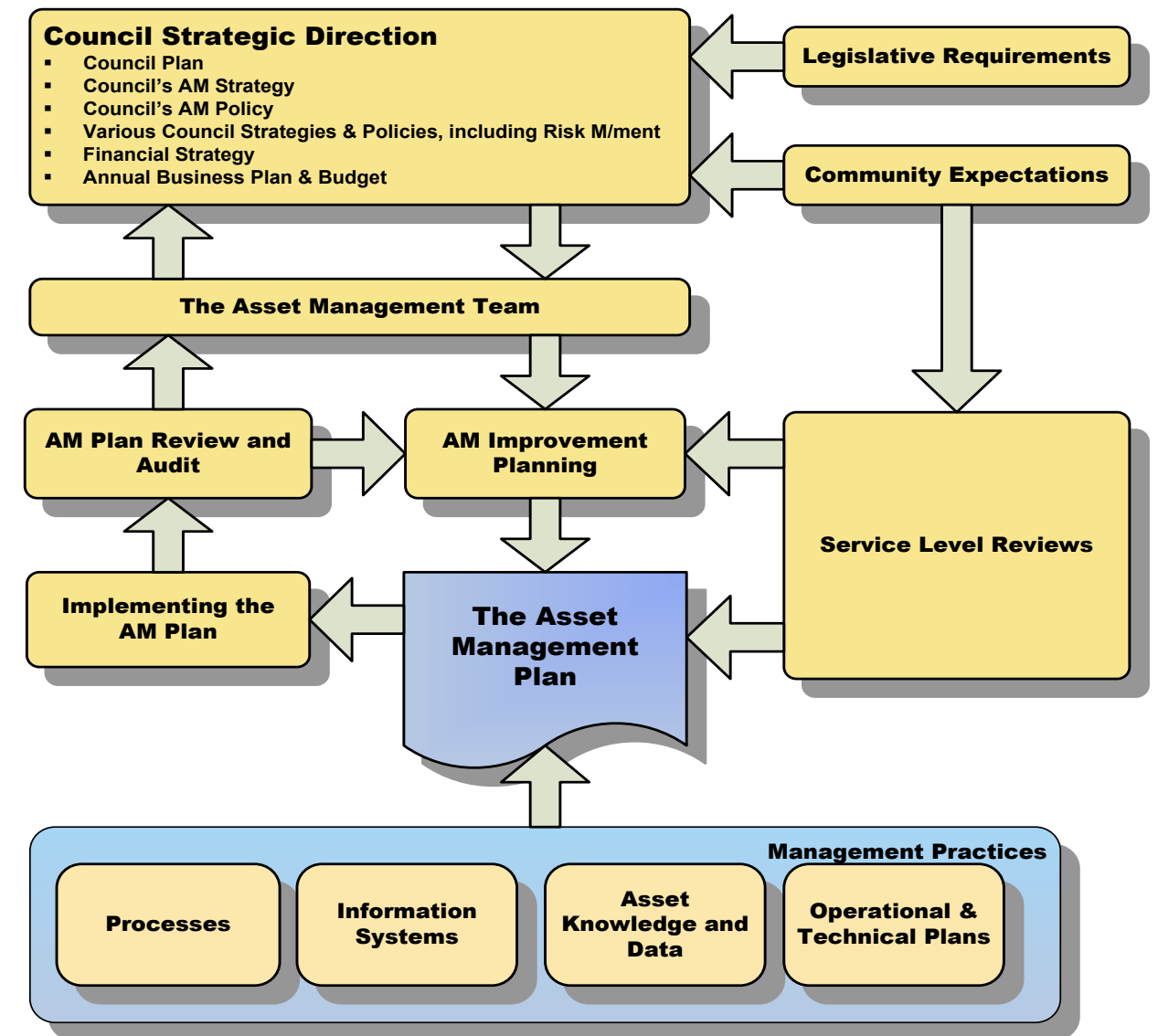


Figure 1 – Link between the DSAMP and Council's Strategic Planning Process

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 30 June 2024

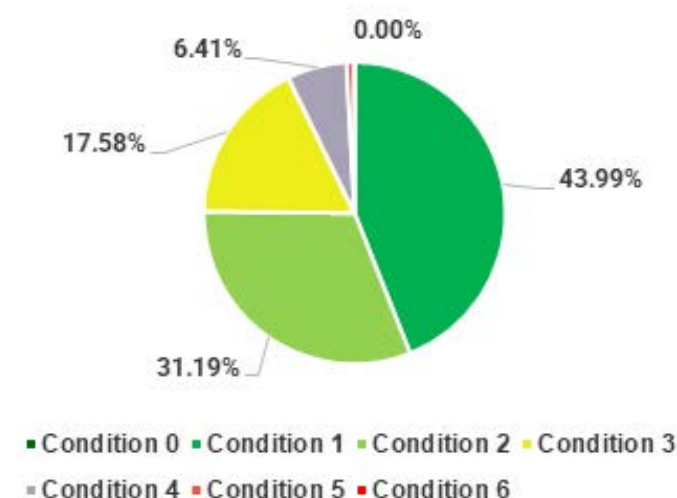
The following figures provide a high-level overview of the current condition (asset health) of all road assets owned and maintained by Council. The asset health is a numerical score assigned to sealed roads, unsealed roads and kerbs to represent their current performance (i.e. where is the asset on its lifecycle path). Utilising SAM modelling tool 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.

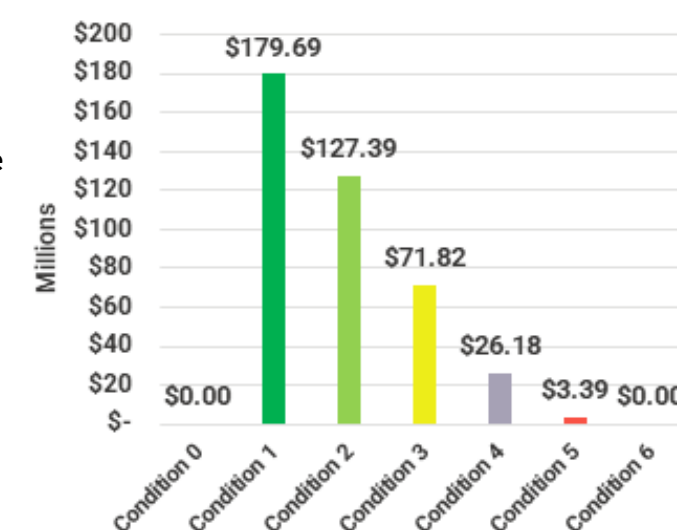
Sealed Roads

Asset Value	Road Segments	PVP Value	Average Condition (Asset health)
\$518.68M	3,609	\$30.37M	2.0 out of 6

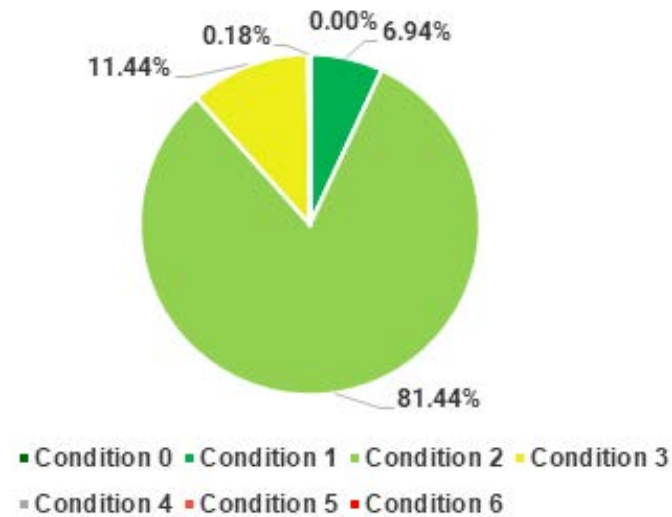
Sealed Roads Surface Condition Distribution (%)



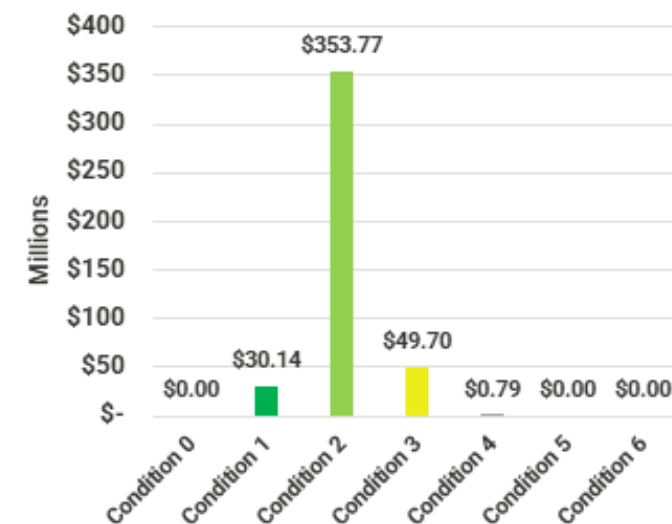
Sealed Roads Surface Condition Distribution by Replacement Value



**Sealed Roads
Pavement Condition
Distribution (%)**



**Sealed Roads
Pavement Condition
Distribution by
Replacement Value**

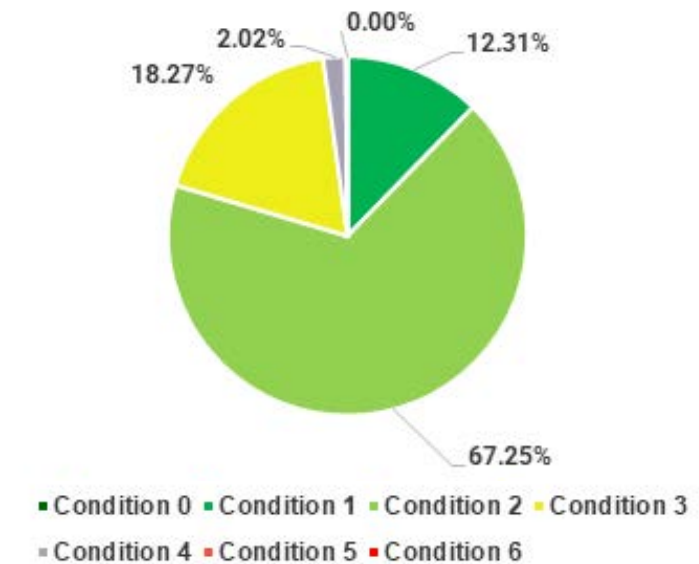


Overall, 75% of all sealed roads surfaces are in Good and Very Good condition. Sealed Road pavements are in better overall condition with 88% in Good and Very Good condition.

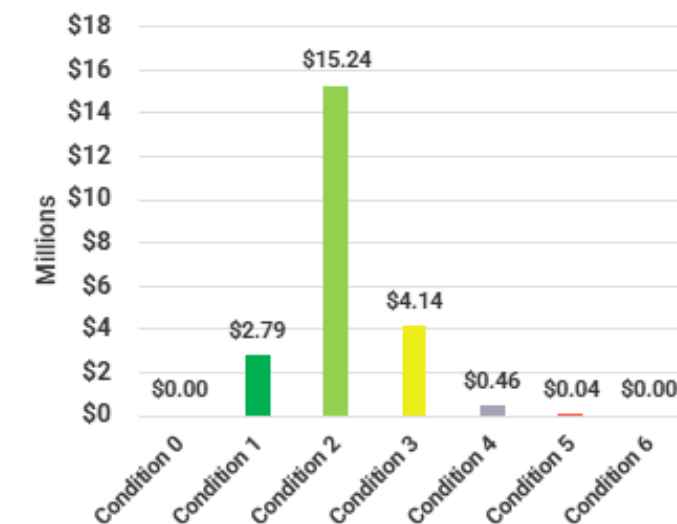
Unsealed Roads

Asset Value	Asset Component Quantities	Backlog Value	Average Condition (Asset health)
\$22.69M	1,078	\$0.49M	2.1 out of 6

**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

Asset Value	Asset Component Quantities	Backlog Value	Average Condition (Asset health)
\$143.07M	6,566	\$0.24M	2.5 out of 6

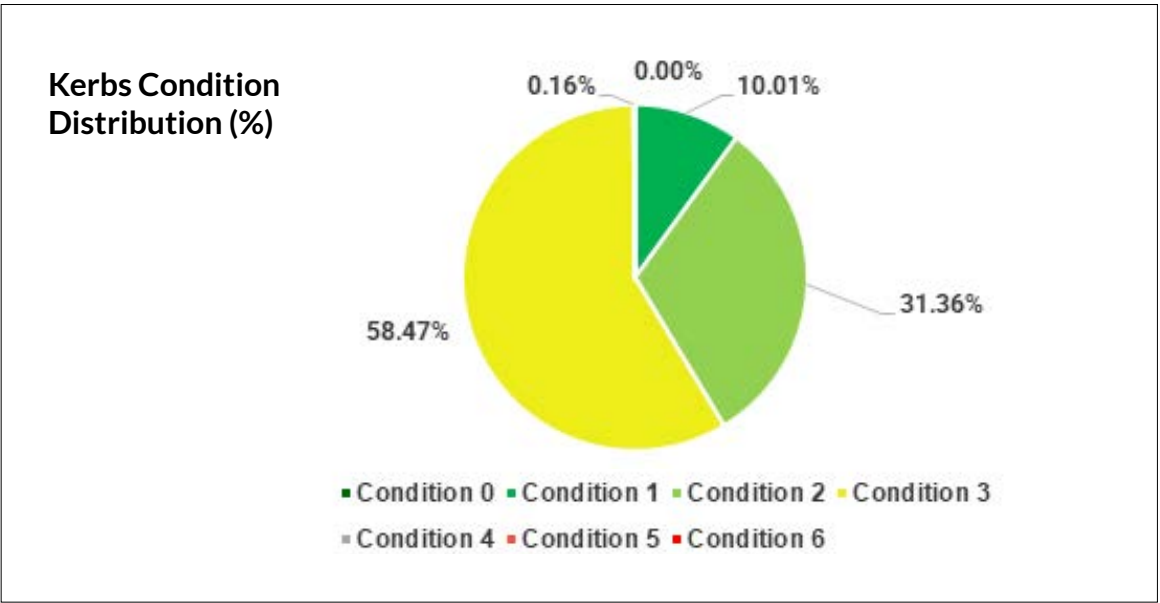
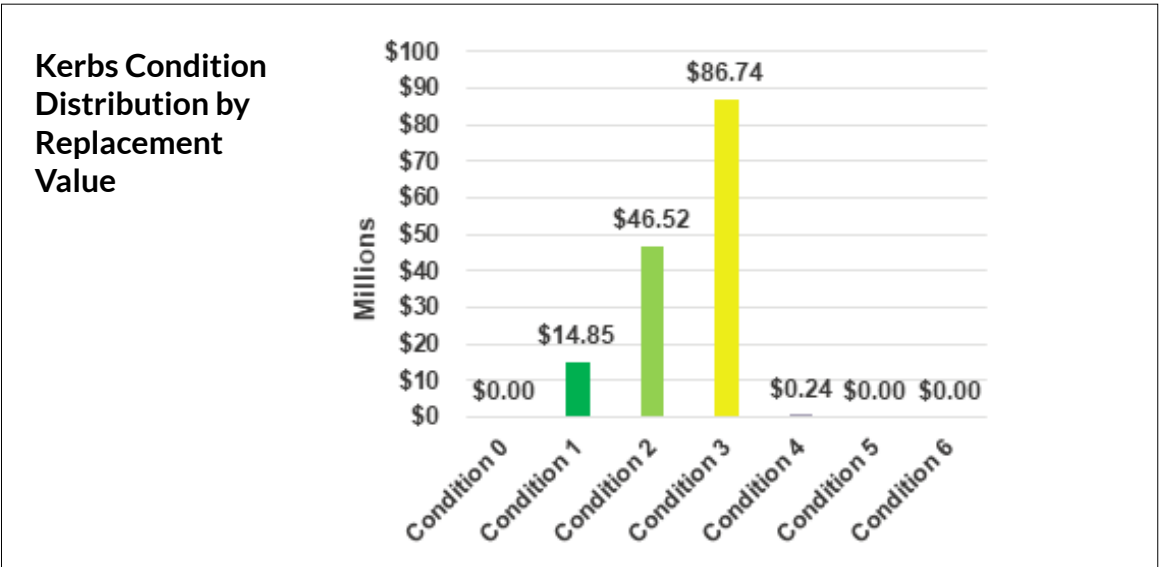


Figure 2 – State of Assets Snapshot as at FY2023

Currently 41% of Kerb Assets are in Good and Very Good condition. However, with around 58% of the network currently rated as Fair condition, these assets are likely to degrade into poor condition state over the next 15-20 years.

1.3 Asset Funding Levels

Section 6: Financial Summary in this RAMP recognises that Council has considered multiple SAM 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.

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 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 current levels of funding reflected in Council’s Long-Term Financial Plan (LTFP), relative to Council’s existing roads asset portfolio, have been determined as follows:

- Capital Renewal: \$39.06M; and
- Maintenance & Operations: \$37.51M or \$3.75 on average per annum.

The total capital funding (including renewals and upgrades) over 10 years is \$74.06M which is projected to be insufficient to enable the roads portfolio to achieve the required level of service targets. The percentage of road assets in poor and very poor condition (PVP) will increase from the current 4.54% to 10.74% in year 10, which is equivalent to PVP value increase from \$31.10M to \$73.5M.

The baseline capital funding (including renewals and upgrades) over 10 years is \$87.18M consisting of \$52.18M renewal and \$35M upgrades is the projected requirement to enable the roads portfolio to achieve the required level of service targets.

Council has noted that the existing maintenance and operations funding of \$3.75M per annum is insufficient to ensure road assets achieve their full useful lives. Due to financial constraints, Council is unable to perform good practice maintenance activities. A recent analysis indicates that an additional \$500K per annum is needed for maintenance funding. Inadequate maintenance activities will result in road assets deteriorating quicker therefore requiring earlier capital renewal that costs significantly more.

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.

In light of this, Council has commissioned SAM modelling that incorporated 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 SECCA¹.

¹ SECCA is a collaboration of nine councils in Victoria’s south-east making a regional response to climate change



The SAM model simulated the climate risk impacting high risk road assets by shortening useful lives and increasing treatment costs. The projected state of assets with climate impacts on road assets is as follows:

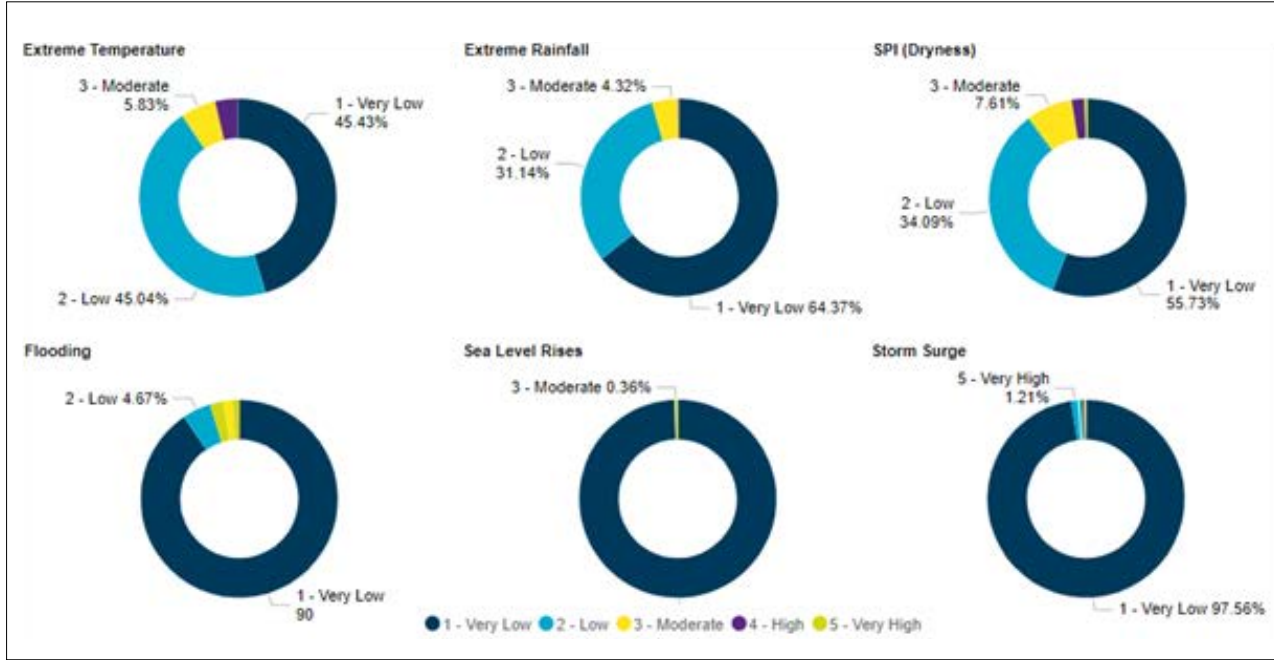


Figure 3 – State of Assets Report With Climate Impact Elements

Hot spot areas where road assets are more prone to be impacted by climate change risks are generally located on the coastline as depicted in the diagram below:



Figure 4 – Climate Impact Hot Spot Areas – Example: Roads Affected by Storm Surge

Council have considered eight scenarios as detailed: →

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 1(C) ² (Current LTFP Spend) + climate	What is the predicted future LoS measured in % PVP if Council allocates the current 2025 capital level of funding over the next 10 years, considering the potential impacts of climate change which necessitate higher treatment costs and shorter useful lives.
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 2(C) (-25% Spend of current LTFP) + climate	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, considering the potential impacts of climate change which necessitate higher treatment costs and shorter useful lives.
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% ³ .
Option 3(C) (Maintain Target LoS + Climate)	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%, considering the potential impacts of climate change which necessitate higher treatment costs and shorter useful lives.
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 ⁴ . It's an idealistic funding option where if the budget is unconstrained what exactly is needed to ensure all assets that meet intervention levels are treated.
Option 4(C) (Unconstrained Funding) + climate	What is the predicted future LoS if capital funding each year is unconstrained to treat all assets that meet intervention levels, considering the potential impacts of climate change which necessitate higher treatment costs and shorter useful lives. It's an idealistic funding option where if the budget is unconstrained what exactly is needed to ensure all assets that meet intervention levels are treated.

Table 2 - SAM Modelling Scenario

Factoring both the modelled lifecycle costs required based on Council's intervention levels (Technical Levels of Service) and road assets in identified hot spot areas are renewed or upgraded with climate resilient materials⁵, the model recommended Option 3(C) over the following 10 years which have been determined as follows:

- Capital Renewal: \$66.59M or \$6.66M on average per annum; and
- Maintenance & Operations: \$42.51M or \$4.25 on average per annum.

² (C) Means modelling scenario with climate impacts. In this case, using the same current budget has seen climate elements accelerated the degradation of assets in hot spot areas resulting in increased very poor condition in year 10.

³ The National State of Asset 2021 has on average 10% of local government infrastructure assets are in poor condition

⁴ It is noted that despite being unconstrained, some assets may slip into PVP because the intervention criteria have not yet been met.

⁵ Treatments may consider the use of polymer-modified binder, foamed asphalt, permeable pavements or geosynthetics technology.

The model recommended additional funding to the tune of \$13.12M over 10 years as a baseline to achieve the required level of service targets and an additional \$14.42M to ensure road assets in identified hot spot areas are renewed or upgraded with climate resilient materials.

Year	Current Renewal Funding	Modelled Additional Fund Required To Maintain Target LoS	Modelled Additional Funding Required DueTo Climate Impact	Maintain Target LoS + Climate
Total Over 10 Years	\$39,058,287	\$13,118,455	\$14,416,588	\$66,593,330
Average Per Year	\$3,905,828	\$1,311,846	\$1,441,659	\$6,659,333

Table 3 - Recommended 10-Year Funding Strategy Using Climate Impact Scenario

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

SAM Modelling Scenario	Total Treatment Cost (\$'M)	PVP Year 0 (%)	PVP Year 10 (%)	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)
Option 1 (Current LTFP Spend)	\$39.06	4.54%	10.74%	\$31.10	\$73.50
Option 1(C) (Current LTFP Spend) + climate	\$39.06	4.54%	12.01%	\$31.10	\$82.22
Option 2 (-25% Spend of current LTFP)	\$29.29	4.54%	12.24%	\$31.10	\$83.80
Option 2(C) (-25% Spend of current LTFP) + climate	\$29.28	4.54%	13.85%	\$31.10	\$94.79
Option 3 (Maintain Target LoS)	\$52.18	4.54%	8.20%	\$31.10	\$56.11
Option 3(C) (Maintain Target LoS + Climate)	\$66.59	4.54%	8.05%	\$31.10	\$55.10
Option 4 (Unconstrained Funding)	\$127.32	4.54%	4.19%	\$31.10	\$28.67
Option 4(C) (Unconstrained Funding) + climate	\$141.12	4.54%	5.78%	\$31.10	\$39.59

Table 4 - 10-Year Funding & Strategy Results - Funding Option

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 having more assets in Poor & Very Poor (PVP) condition over time would require significantly more operations funding to ensure the network is maintained and presented in a safe state.

Funding Option 1(C) incorporates the potential impacts of climate change, whereas Option 1 does not. This results in higher maintenance costs and worse asset conditions over time. The percentage of assets in PVP condition by Year 10 is higher in Option 1(C): 12.01% compared to Option 1: 10.74%, reflecting the deteriorative impact of climate change on road assets. In monetary terms, the PVP value is higher in Option 1(C) by \$8.72 million in year 10, indicating greater degradation due to climate impacts.

Funding Option 3(C), Maintain Target Levels of Service (LoS) + Climate, 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 and ensuring the PVP stays below 10% detailed under Section 3.5.2 - Technical Levels of Service. Whilst Option 1 does not account for climate change impacts, Option 3(C) includes climate change impacts, requiring more resilient treatments and is projected to incur a higher initial investment but better long-term outcomes. By considering climate change impacts, Option 3(C) ensures that the road network remains in better condition over time and offers a more sustainable approach by addressing climate resilience, which may reduce long-term costs associated with frequent repairs and severe degradation.

Option 3(C), Maintain Target LoS + Climate, 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.

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 (BPM), documenting the condition audit methodology for road assets. The BPM will support the RAMP.
- Ensure that new asset needs identified from the Precinct Structure Plans and studies are reflected in the RAMP and LTTP.
- 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 Plan⁶'. 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 that serve Council's transportation needs by providing an effective transport network to support safe and efficient movement, connecting people, industry and places.

⁶ Source: Bass Coast Long Term Financial Plan 2021-31

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 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 Department of Transport and Planning (DoTP). 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:

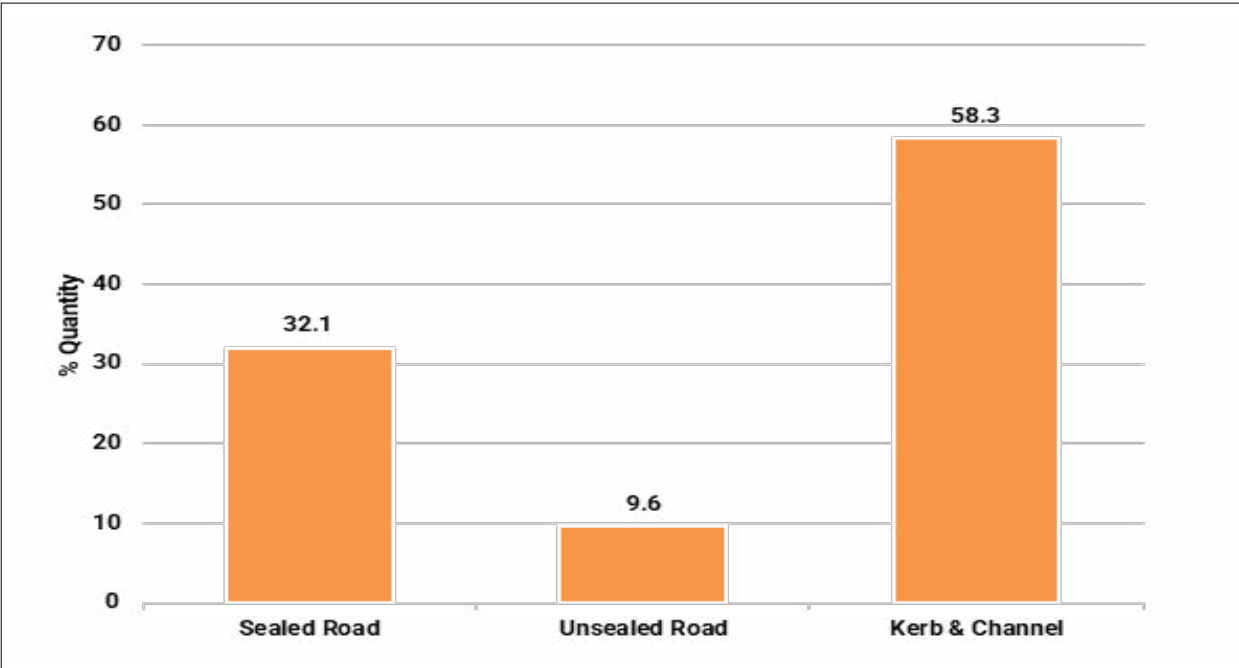


Figure 5 – Distribution of Road Assets by Quantity

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

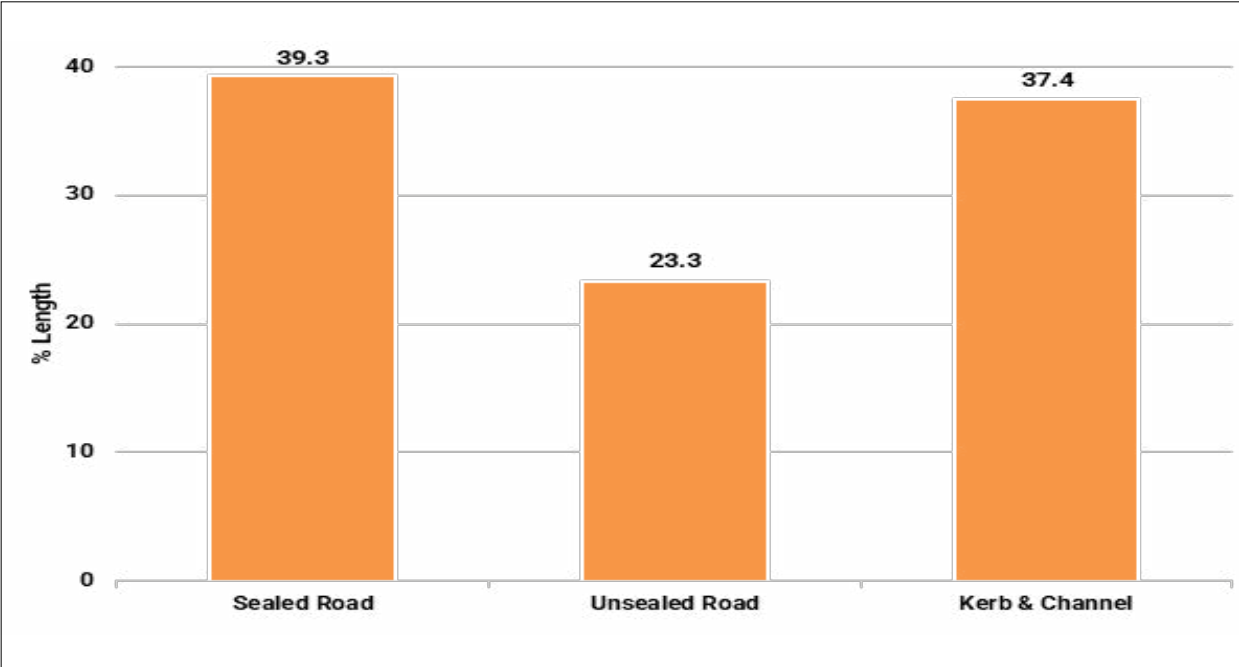


Figure 6 – Distribution of Roads Assets by Length

2.2.1 Asset Valuation

Council engaged the services of an external valuer who performed a revaluation assessment as at 30 June 2024.

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 2024⁷

The table above identifies the annual asset depreciation of Council’s road assets to be in the order of \$12.11M per annum. The average annual depreciation (asset consumption) is 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 due to 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.

⁷ Valuations details sourced from Roads Valuation Methodology & Report 30 June 2024

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 million⁸. The break-up of the asset type by replacement value is illustrated in Figure 7 – Road Assets by Asset Type Estimated Replacement Values.

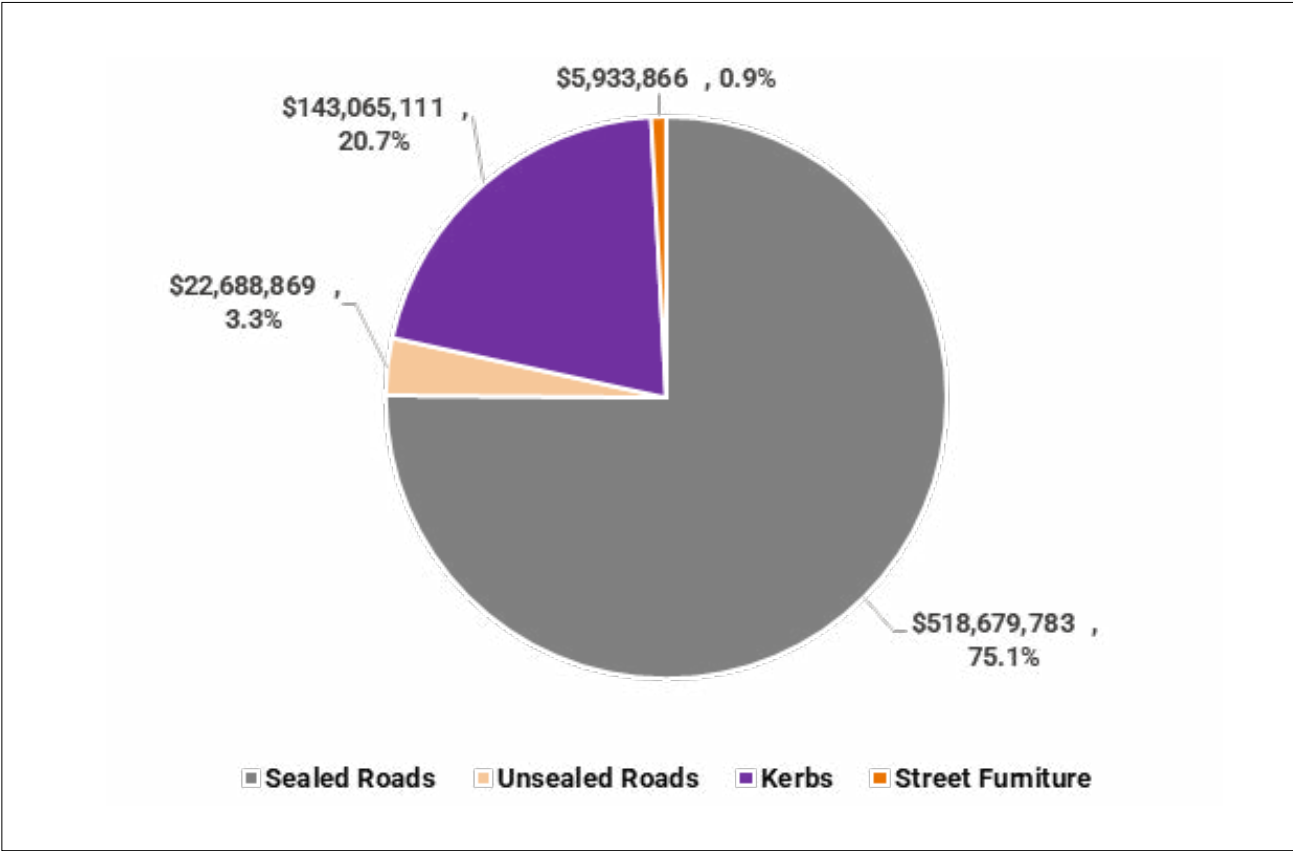


Figure 7 – Road Assets by Asset Type Estimated Replacement Values

⁸ 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 SAM life cycle modelling, all roads and kerbs within Council’s boundary have been assessed using detailed condition criteria, which have been configured in the SAM modelling tool 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 the latest condition assessed dataset, 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.

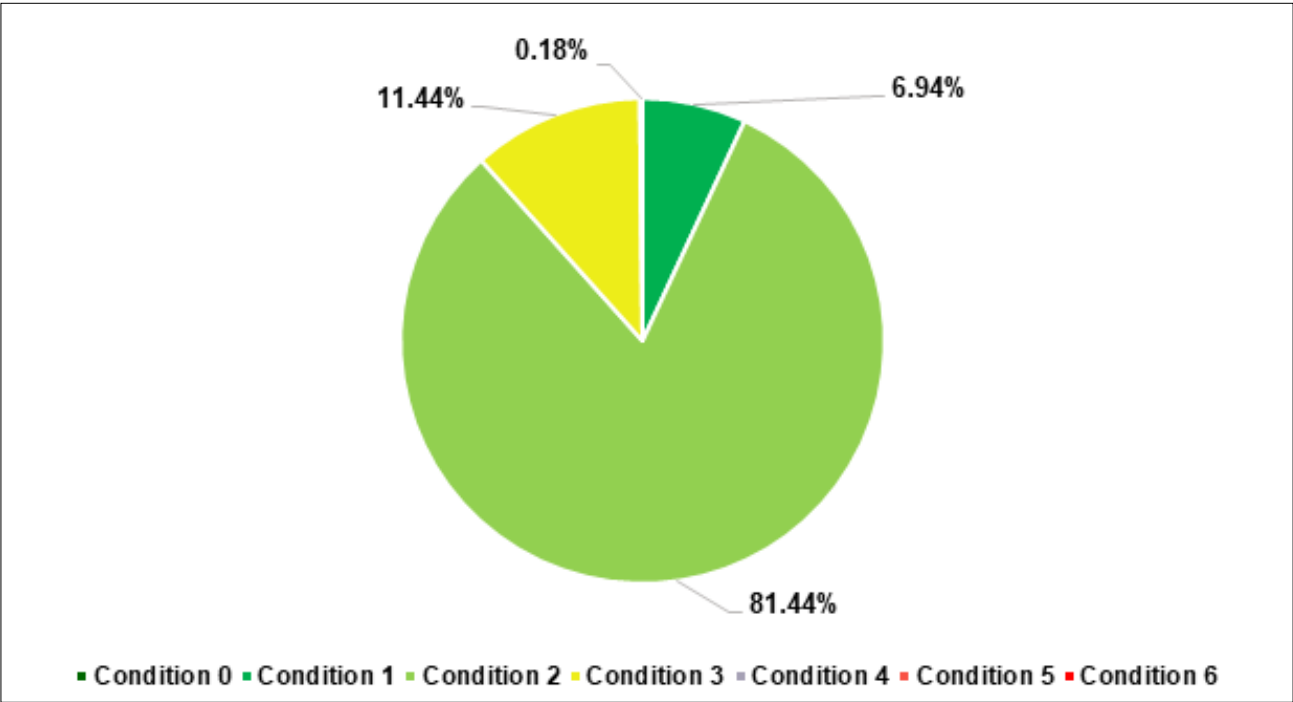


Figure 8 – Distribution of Sealed Road Conditions by Replacement Cost

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:

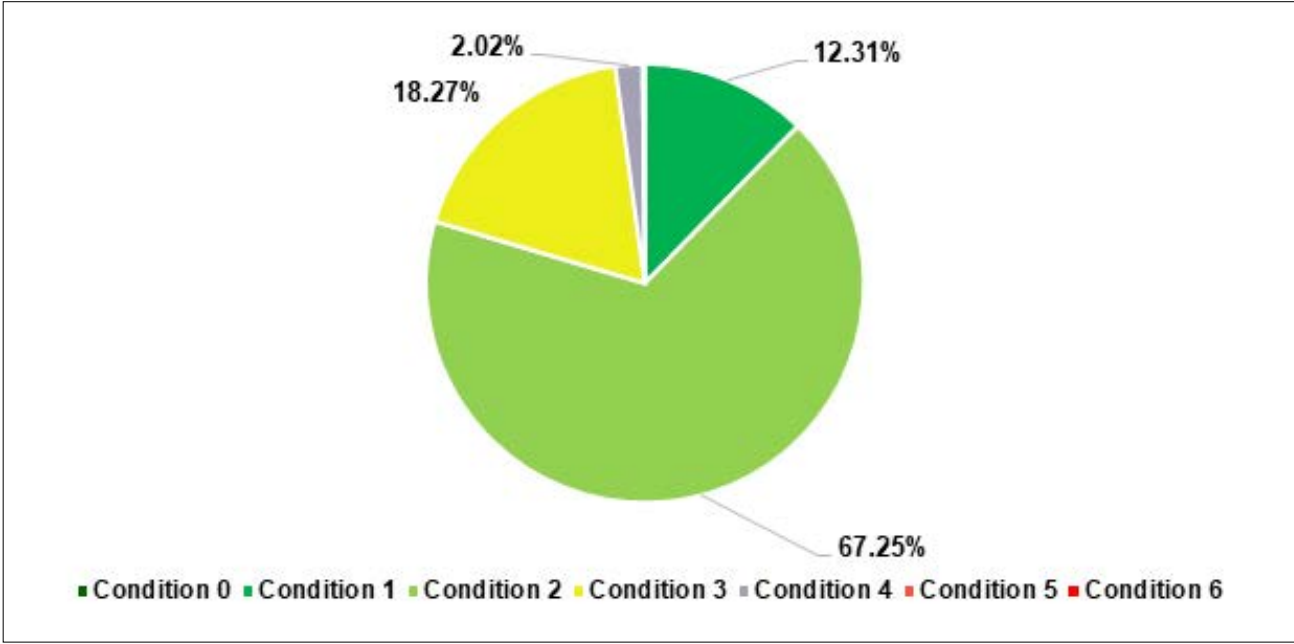


Figure 9 – Distribution of Unsealed Road Conditions by Replacement Cost

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:

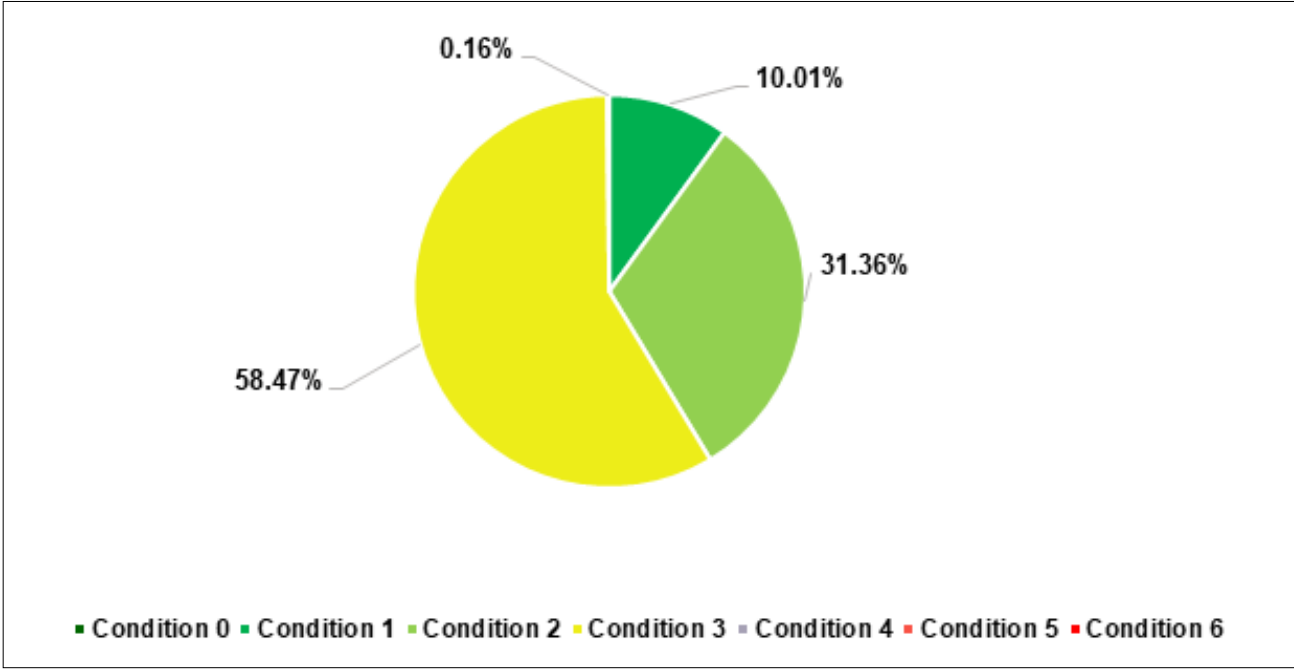


Figure 10 – Distribution of Kerb & Channel Conditions by Replacement Cost



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 and 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 SAM modelling tool. 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. The following table lists an example of the types of road safety and amenity upgrade activities undertaken by Council:

Activity Type	Prioritisation Method
Rural Road Upgrade	To reduce maintenance efforts on frequently used unsealed rural roads by upgrading to a sealed surface.
Traffic Control Structure	To improve traffic management and safety. This is typically pedestrian crossing facilities, traffic calming devices or other structures.
Roadside Safety Structures	To improve the safety of the road network through the installation of barriers or other structures adjacent to roads and paths
New Line Marking	To install line markings at sites for traffic management or safety improvements
Street Tree Planting	To enhance roadside amenities through the planting of appropriate vegetation in adjacent road reserves.
Car Park Improvement Plan	To improve car parking sites to increase amenity, accessibility and reduce maintenance costs by sealing existing car parks.

Table 8 - Type of Road Upgrade Activities

These upgrade activities can be integrated with identified renewal projects or external funding opportunities to enhance the functionality and capacity of assets. The Multi Criteria Assessment (MCA) framework which will be detailed in the Business Process Manual is utilised to prioritise and optimise these types of projects. The MCA is a weighted assessment that takes into account key parameters related to Community, Environmental Impact, Economic, Risk, Social, Asset Attributes and Design.

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.

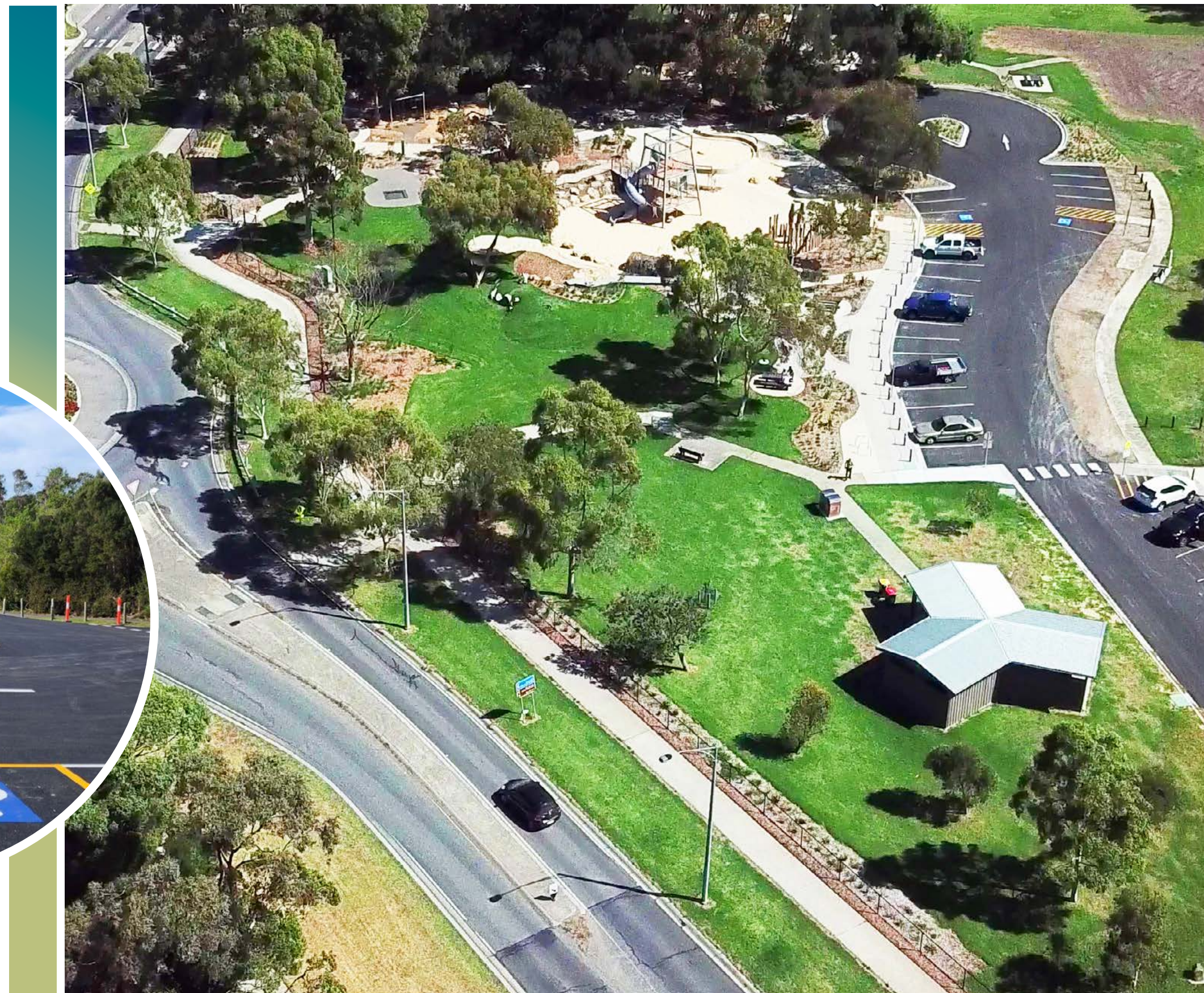
Council typically receives approximately 5 kilometres of sealed roads annually as gifted assets from developments. Additionally, around 1 kilometre of unsealed roads are upgraded to sealed roads through development contributions. With anticipated developments in suburbs like Wonthaggi, Grantville and 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 survey⁹, 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 9 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 9 - Summary of Core Measures

Figure 11 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.

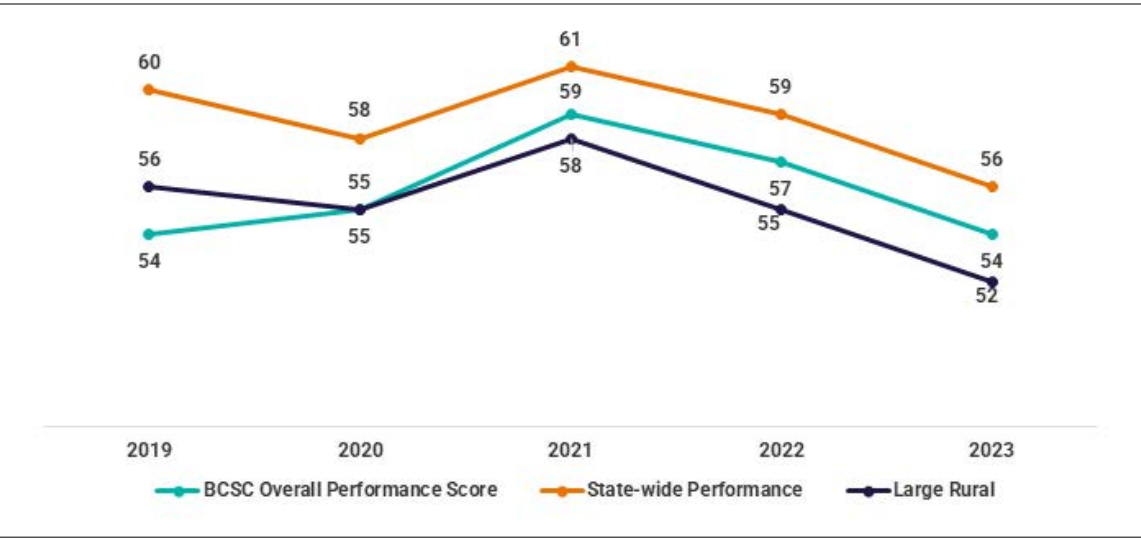


Figure 11 – Bass Coast Community Survey Satisfaction Overall Performance

⁹ 2023 Local Government Community Satisfaction Survey – Conducted by JWS Research

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. 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 over the page:



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 and business growth in harmony with our natural environment and sustainable values.	Ensure road networks are adequate, safe and contribute to the wellbeing of the community. 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 10 - 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.

Table 11 – Key Stakeholders

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	Supervision of Asset Management Planners, responsible for the development of AM policies, strategies and plans.
Coordinator Asset Management Systems	Provision of information, asset management information system and valuation data.
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.
Coordinator Roads	Provision of resources and planning regarding the maintenance of road assets.
Asset Planning Officer Roads	Developing renewal programs and managing budget expenditures for road renewal projects.
Roads Program Officer	Conducts road inspections to determine program priorities.
Coordinator Civil Construction and Team Leader – Civil	Day to day management of road renewal program which includes renewal works for sealed roads, unsealed roads and kerbs.
Customer Response Team Leader	Respond to customer requests and undertake reactive road maintenance and inspections.
Senior GIS Officer	Provision and maintenance of GIS for use by asset team and others.
Sustainable Transport and Movement Team	Planning future road upgrades, road safety, traffic and service management.
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.

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	Sets out role, purpose, responsibilities and powers of local governments including the requirement to develop, adopt and keep in force an Asset Plan. 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.
Road Management Act 2004 and associated Regulations and Codes of Practice	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 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 12 – 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	<p>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.</p> <p>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.</p>

Regulation / Standard / Guide	Requirement
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 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 13 – 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 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 14 – 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 ¹⁰ .
Customer Satisfaction	Road assets meet community needs.	>60 customer survey satisfaction.	Sealed Local Roads Score: 51.

...continued over the page.

¹⁰ 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
CUSTOMER LEVELS OF SERVICE			
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. <500 requests/complaints per annum for unsealed road maintenance. <100 requests/complaints per annum for kerb & channel maintenance. <100 requests/complaints per annum for renewals or upgrades.	266 requests 230 requests 20 requests 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.

Key Performance Measure	Level of Service	Performance Measure	2024 Performance
CUSTOMER LEVELS OF SERVICE			
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 15 – 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 four 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 - 2.17% Kerb and Channel – 0.16%

Table 16 – 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 17 - Demand Factors, Projections and Impact on Services.

Demand Factor	Present position	Projection																		
Population Growth	<p>The Bass Coast Shire population forecast for 2024 is 41,443 and is forecast to grow to 47,408 by 2036.</p> <p>Bass Coast Shire Estimated Population Growth</p> <table border="1"> <caption>Bass Coast Shire Estimated Population Growth</caption> <thead> <tr> <th>Year</th> <th>Population</th> <th>Percentage increase</th> </tr> </thead> <tbody> <tr> <td>2024</td> <td>41,443</td> <td>-</td> </tr> <tr> <td>2027</td> <td>42,351</td> <td>2.2%</td> </tr> <tr> <td>2030</td> <td>43,963</td> <td>6.1%</td> </tr> <tr> <td>2033</td> <td>45,644</td> <td>10.1%</td> </tr> <tr> <td>2036</td> <td>47,408</td> <td>14.4%</td> </tr> </tbody> </table> <p>Source: Population and household forecasts, prepared by forecast.id (informed decisions), March 2023.</p>	Year	Population	Percentage increase	2024	41,443	-	2027	42,351	2.2%	2030	43,963	6.1%	2033	45,644	10.1%	2036	47,408	14.4%	
Year	Population	Percentage increase																		
2024	41,443	-																		
2027	42,351	2.2%																		
2030	43,963	6.1%																		
2033	45,644	10.1%																		
2036	47,408	14.4%																		

Table 17 – 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 2036¹¹.

¹¹ Bass Coast Residential Market Supply Demand Assessment August 2022, by Urban Enterprise

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 18.

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 ¹² . A significant increase in traffic volume will necessitate the development and maintenance of well-planned road assets.
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 18 – Demand Drivers, Projections and Impacts on Services

¹² Source: Smarter Choices – Access and Movement Study, July 2020

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 19.

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 19 – 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 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 regard 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 \$12.1 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 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 a 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 20. Further opportunities will be developed in future revisions of this RAMP addressing customer service demands and asset maintenance and capital needs.

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>
Development of new residential subdivisions which can affect future traffic volumes	<p>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.</p>
Increased need for maintenance and renewal costs	<p>Review and document levels of services after consultation with the Service Managers and the community.</p> <p>Incorporate total asset lifecycle costings into asset management plans and new project budget bids.</p>
Providing a safe network	<p>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.</p>
Climate Change	<p>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.</p> <p>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.</p>

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 21 – 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 12.

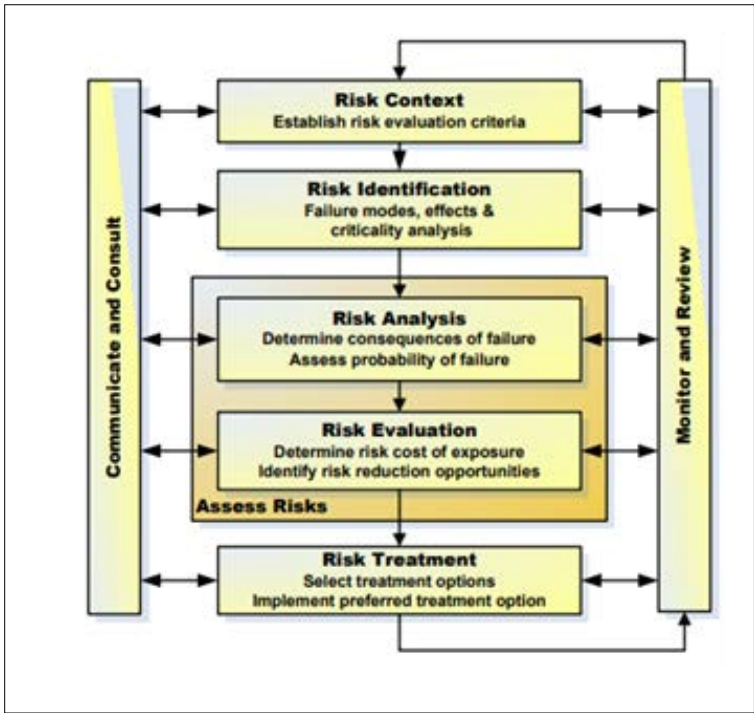


Figure 12 – Risk Management Process, Source: ISO31000:2018



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



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 21.

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.

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 over the page.

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 develop and deliver the renewal program and delaying decisions to dispose of road assets or undertake renewal works.	Failure to execute renewal works in a timely manner thereby creating a public safety risk or premature loss of an asset.	Medium	Establishing a continuous condition audit program followed by the development of renewal programs.	Low
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 22 – 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 SAM modelling tool.

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 SAM modelling tool, 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 and Climate Change Impacts Analysis

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 13.

Council has also simulated road assets condition outcomes and additional funding required due to the potential impacts of climate change which has seen an increased risk of extreme weather events including storm events, heatwaves, flooding, sea-level rise and fire events across the globe. The climate elements incorporated into SAM Modelling referenced the SECCA Infrastructure Asset Vulnerability Assessment (AVA)¹⁴.

The condition graph in Figure 13 illustrates the predicted results of the road asset portfolio modelling analysis for each of the different funding options. These funding options are described in Table 23 – SAM Modelling Scenario.

The current average condition¹⁵ 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 over the page.

¹⁴ Source: SECCA Asset Vulnerability Assessment Project First Pass Methods Report (Final 1.0) by Spatial Vision

¹⁵ The sum average of every asset within Council's roads asset portfolio covered under this RAMP.



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 1(C) ¹⁶ (Current LTFP Spend) + Climate	What is the predicted future LoS measured in % PVP if Council allocates the current 2025 capital level of funding over the next 10 years, considering the potential impacts of climate change which necessitate higher treatment costs and shorter useful lives.
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 2(C) (-25% Spend of current LTFP) + Climate	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, considering the potential impacts of climate change which necessitate higher treatment costs and shorter useful lives.
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% ¹⁷ .

SAM Modelling Scenario	Funding Option Description
Option 3(C) (Maintain Target LoS + Climate)	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%, considering the potential impacts of climate change which necessitate higher treatment costs and shorter useful lives.
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 ¹⁸ . It's an idealistic funding option where if the budget is unconstrained what exactly is needed to ensure all assets that meet intervention levels are treated.
Option 4(C) (Unconstrained Funding) + Climate	What is the predicted future LoS if capital funding each year is unconstrained to treat all assets that meet intervention levels, considering the potential impacts of climate change which necessitate higher treatment costs and shorter useful lives. It's an idealistic funding option where if the budget is unconstrained what exactly is needed to ensure all assets that meet intervention levels are treated.

Table 23 – SAM Modelling Scenario

¹⁶ (C) denotes modelling scenario with climate impacts. In this case, using the same current budget has seen climate elements accelerated the degradation of assets in hot spot areas resulting in increased very poor condition in year 10.

¹⁷ The National State of Asset 2021 has on average 10% of local government infrastructure assets are in poor condition

¹⁸ It is noted that despite being unconstrained, some assets may slip into PVP because the intervention criteria have not yet been met.

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

Financial Year	Option 1 - Current LTFP	Option 1(C) - Current LTFP	Option 2 - Current LTFP - 25%	Option 2(C) - Current LTFP - 25%	Option 3 - Maintain Condition	Option 3(C) - Maintain Condition	Option 4 - Unconstrained	Option 4(C) - Unconstrained
2024/25	3.9M	3.9M	2.9M	2.9M	5.2M	5.6M	12.5M	16.2M
2025/26	3.9M	3.9M	2.9M	2.9M	5.2M	6.2M	4.7M	4.5M
2026/27	3.9M	3.9M	2.9M	2.9M	5.2M	3.6M	4.1M	4.6M
2027/28	3.9M	3.9M	2.9M	2.9M	5.2M	5.0M	7.8M	10M
2028/29	3.9M	3.9M	2.9M	2.9M	5.2M	7.4M	21.3M	19.4M
2029/30	3.9M	3.9M	2.9M	2.9M	5.2M	7.4M	10.2M	11M
2030/31	3.9M	3.9M	2.9M	2.9M	5.2M	7.4M	4.9M	11.1M
2031/32	3.9M	3.9M	2.9M	2.9M	5.2M	7.4M	20.5M	20.5M
2032/33	3.9M	3.9M	2.9M	2.9M	5.2M	7.4M	23.9M	24.1M
2033/34	3.9M	3.9M	2.9M	2.9M	5.2M	7.4M	17.5M	19.8M
Total	39.1M	39.1M	29.3M	29.3M	52.2M	66.6M	127.3M	141.1M
Average per year	\$3.9	\$3.9	\$2.9	\$2.9	\$5.2	\$6.7	\$12.7	\$14.1

Table 24 – SAM Modelling Funding Profile Across All Financial Options

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

Financial Year	Option 1 - Current LTFP	Option 1(C) - Current LTFP	Option 2 - Current LTFP - 25%	Option 2(C) - Current LTFP - 25%	Option 3 - Maintain Condition	Option 3(C) - Maintain Condition	Option 4 - Unconstrained	Option 4(C) - Unconstrained
Dec 2023	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
2024/25	2.15	2.16	2.16	2.16	2.15	2.14	2.12	2.12
2025/26	2.17	2.17	2.18	2.17	2.15	2.15	2.13	2.13
2026/27	2.17	2.17	2.18	2.18	2.15	2.16	2.13	2.14
2027/28	2.19	2.19	2.20	2.20	2.18	2.19	2.15	2.16
2028/29	2.20	2.22	2.22	2.22	2.20	2.21	2.15	2.16
2029/30	2.23	2.24	2.24	2.25	2.22	2.23	2.16	2.17
2030/31	2.25	2.26	2.26	2.28	2.24	2.24	2.18	2.19
2031/32	2.30	2.32	2.32	2.34	2.29	2.27	2.16	2.18
2032/33	2.36	2.38	2.38	2.40	2.35	2.32	2.07	2.09
2033/34	2.42	2.43	2.45	2.46	2.38	2.31	2.01	2.06

Table 25 – Average Condition Across All Financial Options

The condition graph below Figure 13 illustrates the predicted results of the road asset portfolio modelling analysis for each of the different funding options.

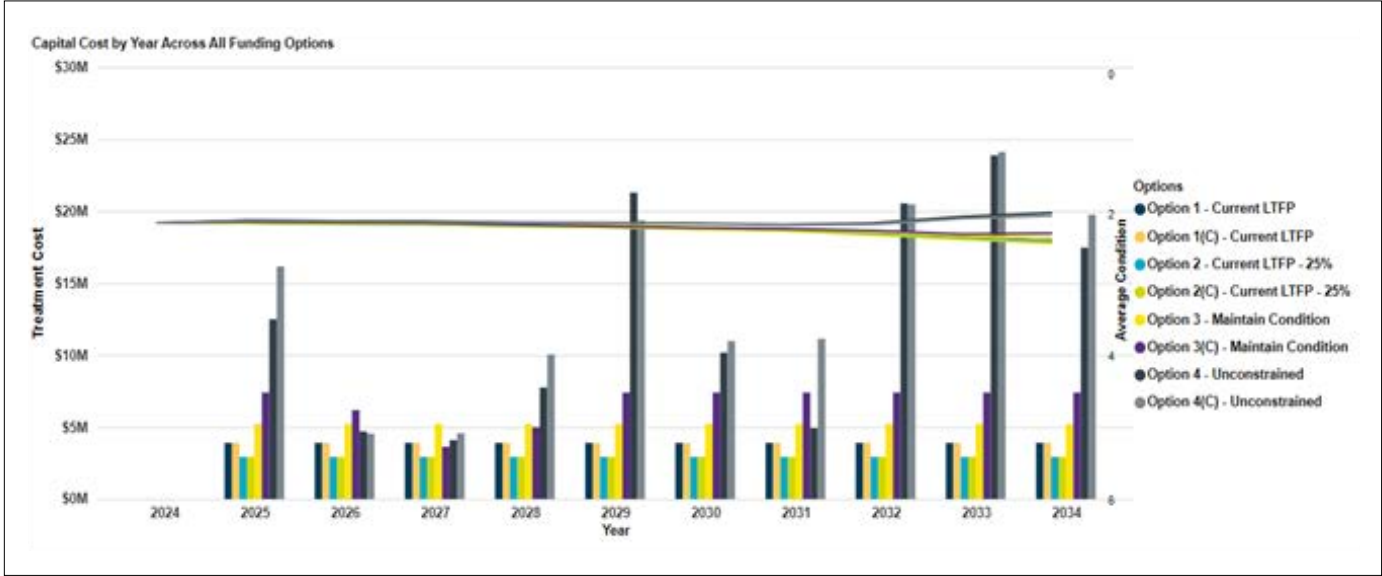


Figure 13 – Forecast 10-Year Capital Funding Analysis and Average Condition by Year

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

SAM Modelling Scenario	Total Treatment Cost (\$'M)	PVP Year 0 (%)	PVP Year 10 (%)	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)	Avg Cond Year 0	Avg Cond Year 10
Option 1 - Current LTFP	\$39.06	4.54%	10.74%	\$31.10	\$73.50	2.16	2.42
Option 1(C) - Current LTFP	\$39.06	4.54%	12.01%	\$31.10	\$82.22	2.16	2.43
Option 2 - Current LTFP - 25%	\$29.29	4.54%	12.24%	\$31.10	\$83.80	2.16	2.45
Option 2(C) - Current LTFP - 25%	\$29.28	4.54%	13.85%	\$31.10	\$94.79	2.16	2.46
Option 3 - Maintain Condition	\$52.18	4.54%	8.20%	\$31.10	\$56.11	2.16	2.38
Option 3(C) - Maintain Condition	\$66.59	4.54%	8.05%	\$31.10	\$55.10	2.16	2.31
Option 4 - Unconstrained	\$127.32	4.54%	4.19%	\$31.10	\$28.67	2.16	2.01
Option 4(C) - Unconstrained	\$141.12	4.54%	5.78%	\$31.10	\$39.59	2.16	2.06

Table 26 - SAM Modelling Funding Options - 10-Year Funding & Strategy Results



6.3 Forecast 10-Year Capital Renewal Funding

6.3.1 Option 1 - Current LTFP

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.

6.3.2 Option 1(C) - Current LTFP + Climate

Funding Option 1(C) incorporates the potential impacts of climate change which results in higher maintenance costs and worse asset conditions over time. The percentage of assets in PVP condition in Year 10 is higher in Option 1(C): 12.01% compared to Option 1: 10.74%, reflecting the deteriorative impact of climate change on road assets. In monetary terms, the PVP value of assets in Poor & Very Poor condition is higher in Option 1(C) by \$8.72 million in year 10, indicating greater degradation due to climate impacts.

6.3.3 Option 2 - Current LTFP - 25%

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 from 2.16 to 2.45 over the 10-year forecast period and generate a \$83.8M backlog of poor and very poor assets, which is an unsustainable financial position.

6.3.4 Option 2(C) - Current LTFP - 25% + Climate

Incorporating climate impact under Option 2(C) is projected to increase the backlog of poor and very poor assets to \$94.8M in year 10.

6.3.5 Option 3 - Maintain Condition

Funding Option 3 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 and ensuring the PVP stays below 10% detailed under Section 3.5.2 - Technical Levels of Service. 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.

6.3.6 Option 3(C) - Maintain Condition + Climate

Funding Option 3(C) that incorporated climate impact simulated the additional amount required to ensure the current levels of service is maintained into the future. This option 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 and ensuring the PVP stays below 10% detailed under Section 3.5.2 - Technical Levels of Service. The average annual funding requirement is projected to be \$1.4M more than Option 3 to ensure road assets impacted by climate change risks are renewed or upgraded with climate resilient materials for example the use of polymer-modified binder, foamed asphalt, permeable pavements or geosynthetics technology.

It is predicted that by adopting this funding option, the percentage of road assets in PVP is projected to be 8.0% in year 10. This is equivalent to PVP value of \$55.1M which is \$18.40M less than Option 1.

6.3.7 Option 4 - Unconstrained

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 improve road network average condition from 2.16 to 2.01 and a reduction in backlog assets from \$31.10M to \$28.7M in poor and very poor state over the 10-year forecast period. It is noted that despite being unconstrained, some assets may slip into PVP because the intervention criteria have not yet been met. This scenario requires additional funding of \$88.2M compared to Option 1 over the 10-year forecast period which is unrealistic when considering Council's current overall funding capacity.

6.3.8 Option 4(C) - Unconstrained + Climate

This scenario assumes unlimited funding each year to treat all assets that meet intervention levels, taking into account the impacts of climate change which necessitate higher treatment costs and shorter useful lives. This option is projected to increase the funding requirement to \$141.1M which is also unrealistic when considering Council's current overall funding capacity.

6.3.9 Recommendation

Option 3, projected to require \$5.2M per annum over the next 10 years, is recommended as the baseline capital renewal funding to ensure that Council's road assets are effectively managed and preserved, maintaining the PVP below 10%. Funding below this level will result in more road assets deteriorating to poor and very poor conditions, directly impacting community development. If this underfunding continues, the backlog will grow, necessitating substantial "catch-up" expenditure in the future. Additionally, deferred renewal increases the need for reactive maintenance as ageing assets deteriorate at an accelerating rate, requiring more frequent interventions to maintain safe road conditions.

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If the impacts of climate change are considered in future renewal works, this RAMP recommends Option 3(C), which requires an additional \$1.4M per annum, totalling \$6.7M per year over the next 10 years.

Council envisages to incorporate climate change impacts into modelling other asset classes. This enables Council to view holistically the total additional funding required to alleviate the impact of climate change and to perform trade off analysis between asset classes to balance the funding.

In summary, the recommended baseline funding requirements are as follows:

- Capital Renewal: \$52.17M or \$5.22M on average per annum; and
- Maintenance & Operations: \$42.51M or \$4.25 on average per annum.

If climate change impact is taken into consideration, the recommended funding requirements are set out below:

- Capital Renewal: \$66.59M or \$6.66M on average per annum; and
- Maintenance & Operations: \$42.51M or \$4.25 on average per annum.

¹⁹ Whilst Option 4(C) shows a lower spend compared to Option 4 over 10 years because it included enhanced risk mitigation strategies that focus on resilience and adaptation, such as using more durable materials or implementing design changes that better withstand climate impacts. These upfront investments can lead to savings in the long run by reducing the frequency and severity of repairs needed.

6.4 Forecast 10-Year Funding Analysis by Asset Type

6.4.1 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)	PVP for SCI Year 0	PVP for SCI Year 10	PVP for PCI Year 0	PVP for PCI Year 10	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)	SCI Year 0	SCI Year 10	PCI Year 0	PCI Year 10
Option 1	\$31.97	6.81%	9.85%	0.18%	5.78%	\$30.37	\$67.91	1.8	1.7	2.0	2.4
Option 1(C)	\$31.97	6.81%	10.77%	0.18%	6.65%	\$30.37	\$75.68	1.8	1.7	2.0	2.4
Option 2	\$23.97	6.81%	11.18%	0.18%	6.70%	\$30.37	\$77.66	1.8	1.9	2.0	2.4
Option 2(C)	\$23.97	6.81%	12.58%	0.18%	7.73%	\$30.37	\$88.24	1.8	1.9	2.0	2.4
Option 3	\$43.99	6.81%	6.92%	0.18%	4.77%	\$30.37	\$50.80	1.8	1.5	2.0	2.4
Option 3(C)	\$54.60	6.81%	6.92%	0.18%	4.49%	\$30.37	\$49.54	1.8	1.4	2.0	2.3
Option 4	\$95.55	6.81%	1.95%	0.18%	3.54%	\$30.37	\$23.89	1.8	0.8	2.0	1.9
Option 4(C)	\$91.87 ¹⁹	6.81%	4.12%	0.18%	3.89%	\$30.37	\$34.80	1.8	0.9	2.0	2.0

Table 27 – Sealed Roads SAM 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 inadequate level of service resulting 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 1(C)	Funding investment is \$31.97M over 10 years.	Over 10.8% 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 \$75.68M over 10 years.	This option reflects a slightly higher maintenance cost than Option 1 due to an increase in PVP. It also provides inadequate level of service and results in higher risks progressively over 10 years. When considering maintenance costs and increase in asset liability, this strategy costs a net total of \$3.88M 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 reduction in funding over 10 years.
Option 2(C)	Funding investment is \$23.97M over 10 years.	Over 12.6% of the road network will be in PVP for SCI and over 7.7% 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 \$88.24M over 10 years.	This option results in the highest increase in asset liability among all options. While it is the least expensive, it also presents the highest risks. When considering maintenance costs and increase in asset liability, this strategy costs a net total of -\$16.22M reduction in funding over 10 years.

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Financial Option	Funding over 10 years	Outcome Achieved over 10 years	Comments	Observations
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 \$30.37M to only \$50.80M 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 baseline pragmatic and moderate risk option.
Option 3(C)	Funding investment is \$54.60M over 10 years.	Over 6.9% of the road network will be in PVP for SCI and over 4.5% 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 increase from \$30.37M to only \$49.54M over 10 years.	The average condition is predicted to improve at an average network SCI of 1.4 by year 10. When considering maintenance costs and increase in asset liability, this strategy costs a net total of \$51.59M over 10 years. Similar to Option 3, this is a pragmatic and moderate risk option if climate impact is taken into account.
Option 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 \$116.51M 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.
Option 4(C)	Funding investment is \$91.87M over 10 years.	Over 4.1% of the road network will be in PVP for SCI and over 3.9% 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 slightly from \$30.37M to \$34.80M over 10 years.	The average condition is predicted to improve at an average network SCI and PCI of 0.9 and 2.0 by year 10. When considering maintenance costs and increase in asset liability, this strategy costs a net total of \$102.42M over 10 years.

Table 28 – Sealed Roads Financial Modelling Observations

6.4.2 Unsealed Roads

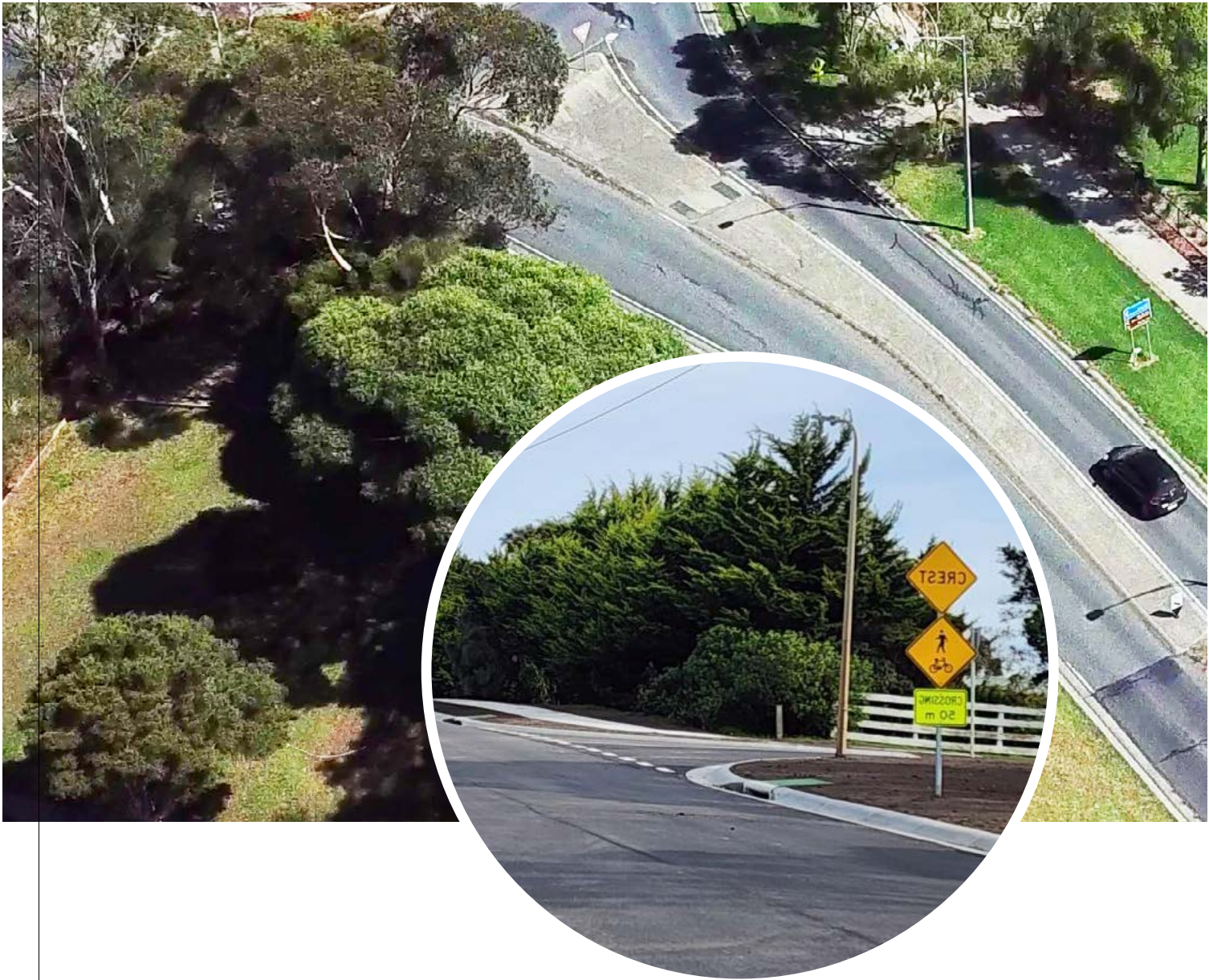
The current average PCI as at 2024 for the entire unsealed road portfolio is an average condition of 2.1, with condition state 1 representing Very Good and condition state 5 representing Very Poor.

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)	PVP Year 0 (%)	PVP Year 10 (%)	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)	PCI Year 0	PCI Year 10
Option 1	\$5.40	2.17%	2.33%	\$0.49	\$0.53	2.1	2.0
Option 1(C)	\$5.40	2.17%	6.52%	\$0.49	\$1.48	2.1	2.2
Option 2	\$4.05	2.17%	4.74%	\$0.49	\$1.07	2.1	2.1
Option 2(C)	\$4.05	2.17%	6.52%	\$0.49	\$1.48	2.1	2.2
Option 3	\$6.00	2.17%	2.33%	\$0.49	\$0.53	2.1	1.9
Option 3(C)	\$9.80	2.17%	3.41%	\$0.49	\$0.77	2.1	1.9
Option 4	\$28.78	2.17%	0.00%	\$0.49	\$0.00	2.1	0.8
Option 4(C)	\$46.26	2.17%	0.00%	\$0.49	\$0.00	2.1	0.8

Table 29 – Unsealed Roads SAM Modelling Funding Options - Strategy Comparison



As at 2024, the unsealed road network portfolio consists of some 2.17% 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 2.17% 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 1(C)	Funding investment is \$5.40M over 10 years.	6.52% of the road network will be in PVP for PCI by year 10 compared to 2.17% in 2024.	Increases current asset liability (unsealed roads in PVP condition) from \$0.49M to \$1.48M over 10 years.	This option, while maintaining the same treatment cost as Option 1, leads to a significant increase in asset liability due to climate impact on unsealed roads. This reflects a higher risk and a poor state of the network over 10 years. The net strategy cost is \$14.35M 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 2.17% 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 \$13.31M 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 1.
Option 2(C)	Funding investment is \$4.05M over 10 years.	6.52% of the road network will be in PVP for PCI by year 10 compared to 2.17% in 2024.	Increases current asset liability (unsealed roads in PVP condition) from \$0.49M to \$1.48M over 10 years.	This option, similar to Option 2, shows a higher risk with poor state assets over 10 years due to climate impact on unsealed roads. The net strategy cost is \$12.96M over 10 years.

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Financial Option	Funding over 10 years	Outcome Achieved over 10 years	Comments	Observations
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 2.17% 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.
Option 3(C)	Funding investment is \$9.80M over 10 years.	3.41% of the road network will be in PVP for PCI by year 10 compared to 2.17% in 2024.	Increases current asset liability (unsealed roads in PVP condition) from \$0.49M to \$0.77M over 10 years.	This option, while more expensive takes into account climate impact on unsealed roads. The net strategy cost is \$18.80M over 10 years. Similar to Option 3, this is a pragmatic and moderate risk option if climate impact is taken into account.
Option 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 2.17% for PCI in 2024.	Improves current asset liability. Unsealed roads in PVP condition decreases to \$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.
Option 4(C)	Funding investment is \$46.26M over 10 years.	0% of the road network will be in PVP for PCI by year 10 compared to 2.17% in 2024.	Improves current asset liability. Unsealed roads in PVP condition decrease to \$0 over 10 years.	This option represents the highest level of investment, leading to the best possible road conditions. However, it is unrealistic in terms of Council's financial and operational capacity. The net strategy cost is \$50.36M over 10 years.

Table 30 – Unsealed Roads Financial Modelling Observations

6.4.3 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 noting that no climate modelling has been undertaken for the kerb and channel asset portfolio at this stage.

SAM Modelling Scenario	Total Treatment Cost (\$'M)	PVP Year 0 (\$'M)	PVP Year 10 (\$'M)	Avg Kerb Cond Year 0	Avg Kerb Cond Year 10
Option 1	\$1.69	\$0.24	\$5.06	2.5	2.5
Option 2	\$1.27	\$0.24	\$5.07	2.5	2.5
Option 3	\$2.19	\$0.24	\$4.79	2.5	2.5
Option 4	\$2.99	\$0.24	\$4.79	2.5	2.5

Table 31 – Kerb and Channel SAM 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.

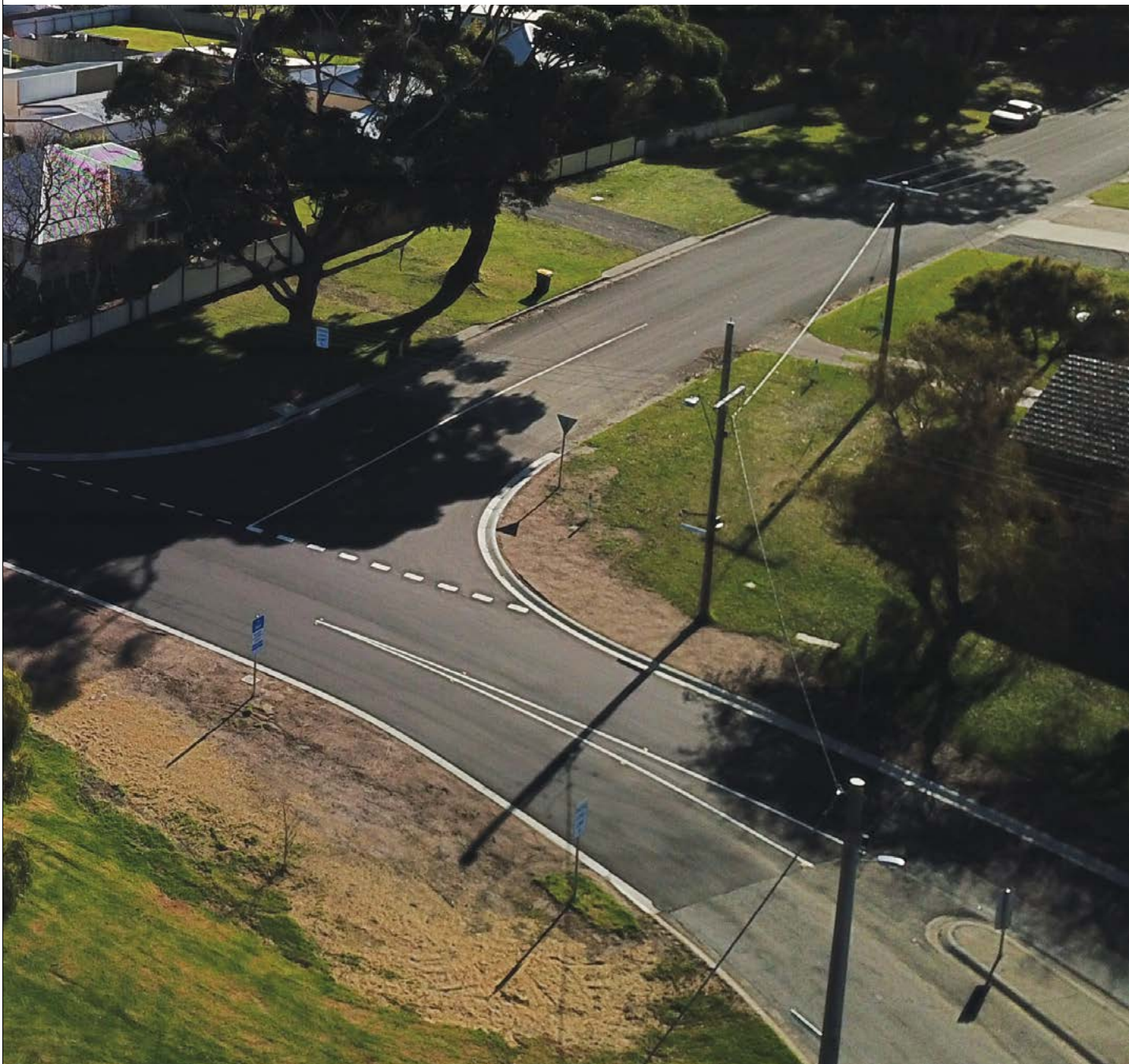


Table below details the financial modelling observations for Council’s kerb and channel:

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>

Table 32 – Kerb and Channel Financial Modeling Observations

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.

6.5 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 32 – 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 33 – 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 Table 34 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
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

Key Assumption	Risk of Change to Assumption / Impact to Model
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 four year cyclic basis and incorporated into the Operational budget.	Low
Current human resource plan will not change in the near future.	Low

Table 34 – 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.

Ratio	Description	Calculation	Target
1.	Develop a Roads Business Process Manual (BPM), documenting the condition audit methodology for road assets. The BPM will support the RAMP.	Coordinator AM	Dec-24
2.	Ensure that new asset needs identified from the Precinct Structure Plans and studies are reflected in the RAMP and LTFP.	Coordinator AM, Finance Manager	Jun-25
3.	Progress the interface between works and finance systems to ensure the cost of maintenance is linked to assets.	Finance / Coordinator Asset System / Coordinator AM	Dec-26
4.	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	Dec-25
5.	Analyse current road maintenance activities to determine the baseline maintenance requirement to preserve the road network lifecycle.	Coordinator AM / Roads Coordinator	Dec-26
6.	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	Dec-26
7.	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	Dec-26
8.	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	Dec-27
9.	Progress asset inventory checks and condition inspections of all street furniture on Council's road network.	Coordinator AM / Roads Coordinator / Coordinator Asset System	Dec-25

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Ratio	Description	Calculation	Target
10.	Council 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.	Coordinator AM / Finance	Ongoing
11.	Council to review financial forecasts annually as better data becomes available, update and submit any supporting budget bids.	Coordinator AM / Finance	Ongoing
12.	Review capital works program to consider alternative low-cost treatments driven by cost benefit analysis.	Coordinator AM / Roads Coordinator	Ongoing
13.	Investigate the integration of regular traffic counts data into Council's corporate asset register in order to provide utilisation data for prioritising renewal works.	Coordinator Asset System / Coordinator AM	Ongoing
14.	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
15.	Continue to investigate alternate renewal treatments to reduce renewal costs or significantly extend useful life of road assets.	Coordinator AM / Roads Coordinator	Ongoing
16.	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
17.	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
18.	Continue to annually review the asset management software forecasting results for significant changes and adjust capital funding submissions if necessary.	Coordinator AM / Coordinator Asset System	Ongoing

Table 35 – 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 6.4.1.



Bass Coast Shire Council

Road Asset Management Plan | 2024-2028

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