

Structures Asset Management Plan 2024-2028

Bass Coast Shire Council

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Document Control

Document History

Version	Date	Status	Author	Summary of changes
0.1	20/06/2025	Draft	Raston N	Initial draft StAMP
0.2				
1.0				

Definitions

Explanation of definitions and acronyms used in this plan.

Term/Acronym	Definition
AASB	Australian Accounting Standards Board
AM Strategy	Asset Management Strategy
AMSC	Asset Management Steering Committee
Backlog	The quantum of assets that meet the intervention levels but cannot be funded
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
PSP	Precinct Structure Plan
SAM	Strategic Asset Management
StAMP	Structures Asset Management Plan

1 Executive Summary

1.1 The purpose of the Plan

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

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

The StAMP defines the state of Council's structures 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 StAMP is to be read in conjunction with Council's Asset Management Strategy. Figure 1 below outlines the linkages between Council's strategic planning processes and the process for the development of AM Plans.

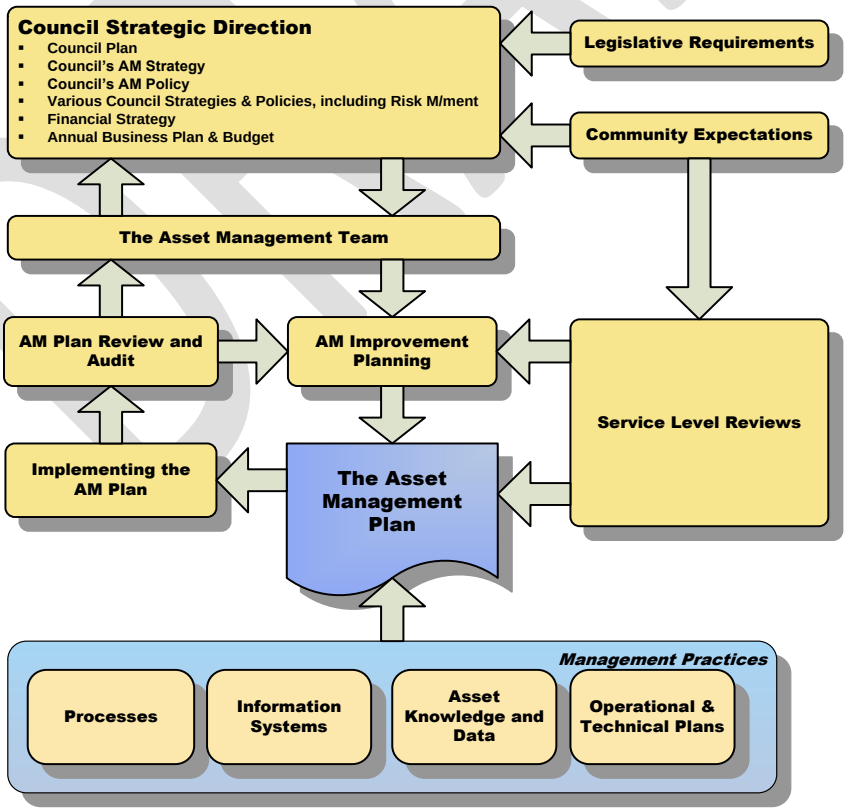


Figure 1 – Linkage between the StAMP and Council's Strategic Planning Process

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 and open space 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

The breakdown of Council's Structures by Asset Type as at 30 June 2024 is set out in the diagram below:

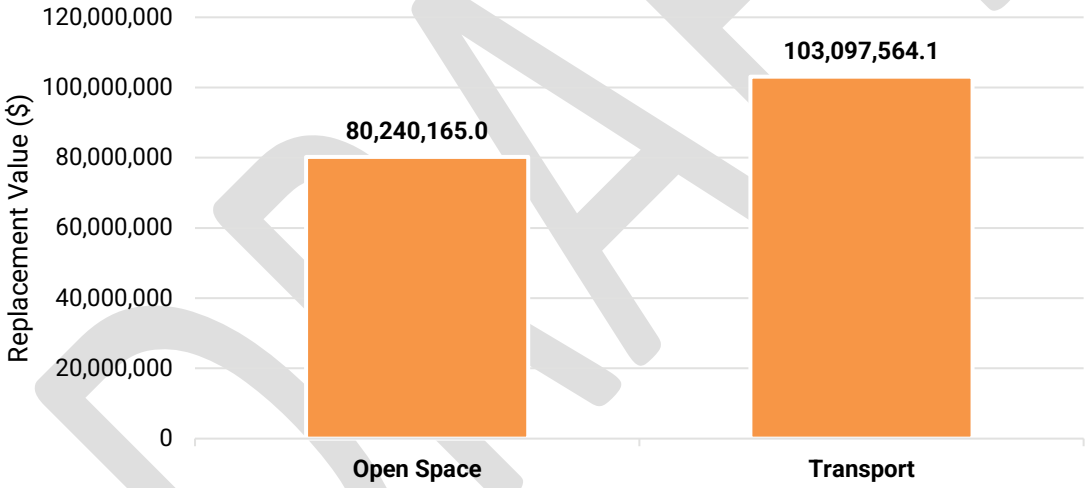


Table 1 – Replacement Value (Unaudited) as at 30th June 2024

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

Refer to Table 9 – Asset Condition Rating Guidelines for condition definitions.

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Structures

$183.34M	1,194	$5.76M	2.3 out of 6
Asset Value	Structures	PVP Value	Average Condition (Asset health)

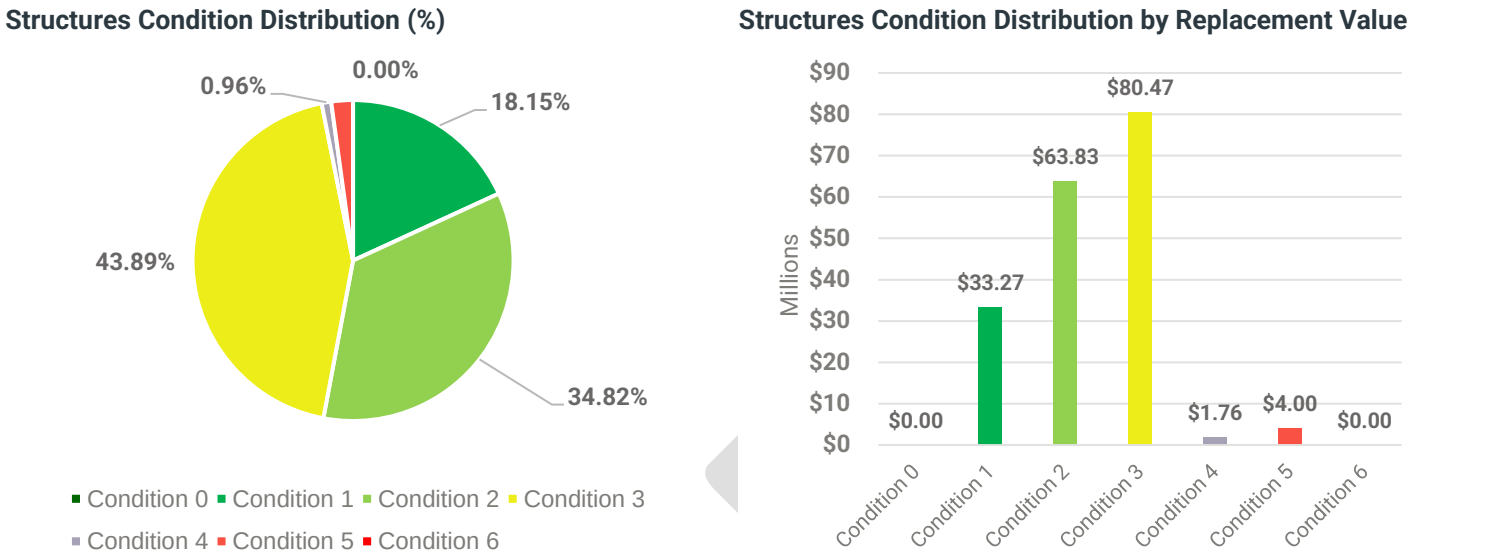


Figure 2 – State of Assets Snapshot as at FY2023

Currently over half, ie 52.96% of Structures are in Good and Very Good condition, followed by 43.89% in Moderate condition and 3.14% in Poor and Very Poor condition.

1.3 Asset Funding Levels

Section 6: Financial Summary in this StAMP 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. Council have considered four scenarios as detailed below:

SAM Modelling Scenario	Funding Option Description
Option 1 (Current LTFP Spend)	What is the predicted future LoS measured in % PVP if Council allocates the current 2025 capital level of funding over the next 10 years.
Option 2 (-25% Spend of current LTFP)	What is the predicted future LoS measured in % PVP if Council allocates a 25% reduction of the current 2025 capital level of funding over the next 10 years.
Option 3 (Maintain Target LoS)	How much capital funding is required to maintain the target LoS measured by % PVP by year 10. Focus on maintaining the percentage of the asset portfolio in PVP below 5%[1].
Option 4 (Zero PVP)	What is the predicted future LoS if capital funding each year is unconstrained to treat all assets that meet intervention levels.

Table 2 – SAM Modelling Scenario

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

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

SAM Modelling Scenario	Total Treatment Cost ($'M)	Total Maintenance Cost ($'M)	PVP Year 0 (%)	PVP Year 10 (%)	PVP Year 0 ($'M)	PVP Year 10 ($'M)
Option 1	$14.96	$5.62	3.14%	6.38%	$5.76	$11.69
Option 2	$11.22	$7.12	3.14%	8.43%	$5.76	$15.46
Option 3	$19.00	$5.46	3.14%	4.38%	$5.76	$8.02
Option 4	$26.54	$5.35	3.14%	0.00%	$5.76	$0.00

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

Option 4, Zero PVP, is the recommended funding scenario. The detailed analysis can be found in Section 6: Financial Summary of this StAMP.

Over the following 10 years, Council proposes to commit over $2.7M via its capital works program to deliver major upgrade works such as bridge, major culvert upgrades and marine structures, 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 increased structures funding, the predicted lifecycle costs required based on Council's intervention levels (Technical Levels of Service) over the following 10 years have been determined as follows:

- Capital Renewal: $26.54M or $2.65M on average per annum; and
- Maintenance: $5.35M or $0.54M on average per annum.

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

Year	Proposed Renewal Funding	Proposed Maintenance Funding
24/25	$1,999,627	$556,736
25/26	$1,999,929	$551,971
26/27	$1,999,945	$540,984
27/28	$1,999,967	$535,484
28/29	$2,099,834	$533,981
29/30	$2,299,996	$533,339
30/31	$2,340,469	$532,996
31/32	$3,199,909	$533,604
32/33	$3,904,410	$522,374
33/34	$4,694,093	$513,259
Grand Total	**$26,538,179**	**$5,354,728**

Table 4 – Proposed 10-Year Funding Strategy

Analysis of the current allocated funding (Option 1) of $14.96M 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 $5.76M to $11.69M, representing a rise of $5.93M. The consequences of this scenario include a greater number of assets in a deteriorated condition over time, which poses increased risks to users and would require substantially more operational funding to ensure the network is maintained in a safe and serviceable state.

Funding Option 3, aimed at maintaining Target Levels of Service (LoS), is projected to require $19.00M over a 10-year period to maintain the network condition with a target PVP of less than 5%. While this option results in an increase in future asset liability from $5.76M to $8.0M, it remains $3.67 million lower than that of Option 1.

Funding Option 4, Zero PVP, estimated at $26.54M over a 10-year period, is considered the preferred funding option. This option ensures that no structures remain in poor or very poor condition, thereby mitigating risks to the community. Additionally, it would reduce future liabilities from $5.76M to zero. The annual difference in funding requirements between Option 4 and Option 3 is $754K

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 Structures Business Process Manual (BPM), documenting the condition audit methodology for structures. The BPM will support the StAMP.
- Develop a formal system of managing the priority of critical structures using key drivers such as asset type, size, capacity, utilisation and location. Prioritising critical assets must, however, have respect for the overall risk rating and severity of defects for the individual structures. This will be included in the Structures BPM
- Ensure that the new asset requirements identified in the Precinct Structure Plans and studies are accurately incorporated into both the StAMP and LTFP. Additionally, assess whether structures earmarked for upgrades meet the standards outlined in the Integrated Transport Strategy. This involves establishing a priority freight network to meet the demands of increased freight tasks and guiding future investments in bridge upgrades or alternative routes to bypass bridges or major culverts with limited load-carrying capacity. This assessment provides a strong rationale for securing funding through government grants.

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- Establish a clear delineation between asset manager and service manager responsibilities for the management of Council structures. This involves the development, communication, and acceptance of defined roles and responsibilities to ensure effective risk management across all Council structures.
- Develop cattle underpass management framework to improve the safety of road network.
- Progress the interface between works and finance systems to ensure the cost of maintenance is linked to assets.
- 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.
- Council to review financial forecasts annually as better data becomes available, update and submit any supporting budget bids.
- Review capital works program to consider alternative low-cost treatments driven by cost benefit analysis.
- Investigate the integration of regular traffic counts data into Council's corporate asset register in order to provide heavy vehicle utilisation data for prioritising renewal works.
- Review expenditure classifications and coding practices applied to maintenance activities to ensure all renewal expenditures are correctly classified. Following this, put forward estimated structures operation and maintenance and cost of doing business budget submissions taking into account changes in portfolio size and composition. This comprehensive approach will enable the Council to accurately understand and manage the true lifecycle costs.
- Continue to investigate alternate renewal treatments to reduce renewal costs or significantly extend the useful life of structures.
- 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.
- Consider implementing community education and engagement regarding structures, to identify and measure performance in delivering this service to the community.
- Ensure that operational staff responsible for bridge inspections are adequately trained to undertake Level 1 Routine Maintenance Inspections

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2 Asset Class Information

2.1 Background

Council's structures, 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 and safety.

New and upgraded structures and project candidates are identified in the Bass Coast Long Term Financial Plan[2]. 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 Structures Asset Management Plan (StAMP) is a newly developed asset management plan that consolidates the management of structures traditionally covered under the Road Asset Management Plan (RAMP) and the Open Space Asset Management Plan (OSAMP). The primary impetus for creating StAMP is to address risk from all perspectives affecting the management of Council's structures through a dedicated plan.

The StAMP includes road bridges, major culverts, pedestrian bridges, marine structures (e.g. jetties, pontoons and boat ramps), sea walls, revetments, retaining walls, elevated boardwalks, stairs and open space structures (e.g. flagpoles, sports fields posts, artworks, memorials and walls). These structures serve several critical functions for Council, including:

- **Transportation**: Providing an effective transport network to support safe and efficient movement.
- **Environmental Protection**: Protecting shorelines from wave action and erosion, preserving habitats, and preventing land loss.
- **Landslide and Erosion Prevention**: Stabilising slopes and preventing soil erosion to protect infrastructure and landscapes.
- **Safety and Continuity**: Preventing soil from encroaching onto transportation routes, ensuring safe and uninterrupted travel.
- **Flood Risk Mitigation**: Directing water away from vulnerable areas, such as building foundations and roadways, to reduce flood risks.

[2] Source: Bass Coast Long Term Financial Plan 2021-31

2.1.1 Structures Included in this AM Plan

The structures considered in this Structures Asset Management Plan (StAMP), are described as structures that are directly associated with Council's local road network and open space, for which Council is responsible & or the road authority.

In all, this StAMP covers over 1,194 structures consisting of bridges & major culverts, marine structures, seawalls & revetments, retaining walls, elevated boardwalks & stairs, and open space structures as set out in the tables below. The quantities reported encompass assets utilised in the 2024 structures SAM Modelling, incorporating both existing assets and those gifted or constructed. This approach ensures a comprehensive and current representation of the asset portfolio in this StAMP.

The table below presents a breakdown of structures by Asset Class:

Asset Class	Quantity
Transport	415
Open Spaces	779
Total	**1,194**

Table 5 – Structures Quantity by Asset Class

The breakdown of structures by Asset Category is detailed below:

Asset Category	Quantity
Marine Structures	66
Bridge	160
Culvert	148
Public Artwork	137
Retaining Wall	263
Boardwalk	87
Jetty	17
Cattle Underpass	20
Pedestrian Bridge	81
Open Space Furniture	192
Pontoon	10
Park Infrastructure	6
Street Furniture	6
Fences	1
Total	**1,194**

Table 6 – Structures Quantity by Asset Category

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A detailed list of all structures for which Council has included in this StAMP is recorded in Council's Asset Register.

2.1.2 Structures Exclusions

The StAMP outlines structures directly under the purview of Council's local road network and open space. However, certain structures are excluded from this plan, including but not limited to:

1. Private Structures: Structures owned and managed by private entities or individuals.
2. State Infrastructure: Structures falling under the jurisdiction of state authorities, VicRoads and the Department of Environment, Land, Water and Planning (DELWP).
3. Temporary Structures: Structures intended for temporary use or with a limited lifespan.

These exclusions are determined based on various factors including ownership, jurisdictional responsibility, and the strategic objectives of the StAMP.

2.1.3 Structures 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 StAMP, it is noted that Council's Asset Register is up to date.

2.2 Current State of the Assets

The percentage distribution of Council's 1,194 road asset portfolio by quantity is illustrated in the figure below:

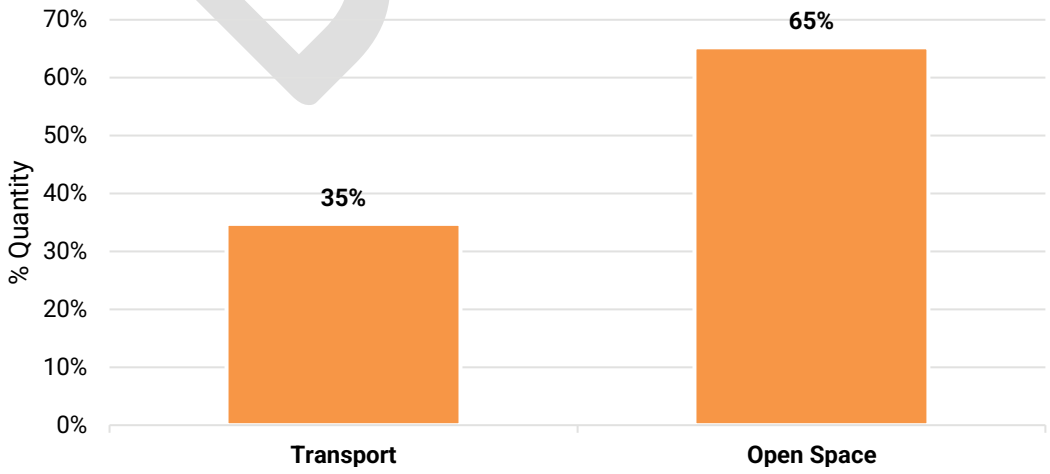


Figure 3 – % Distribution of Structures by Percentage Quantity

The percentage distribution of Council's road $183.34M asset portfolio by replacement cost is set out below:

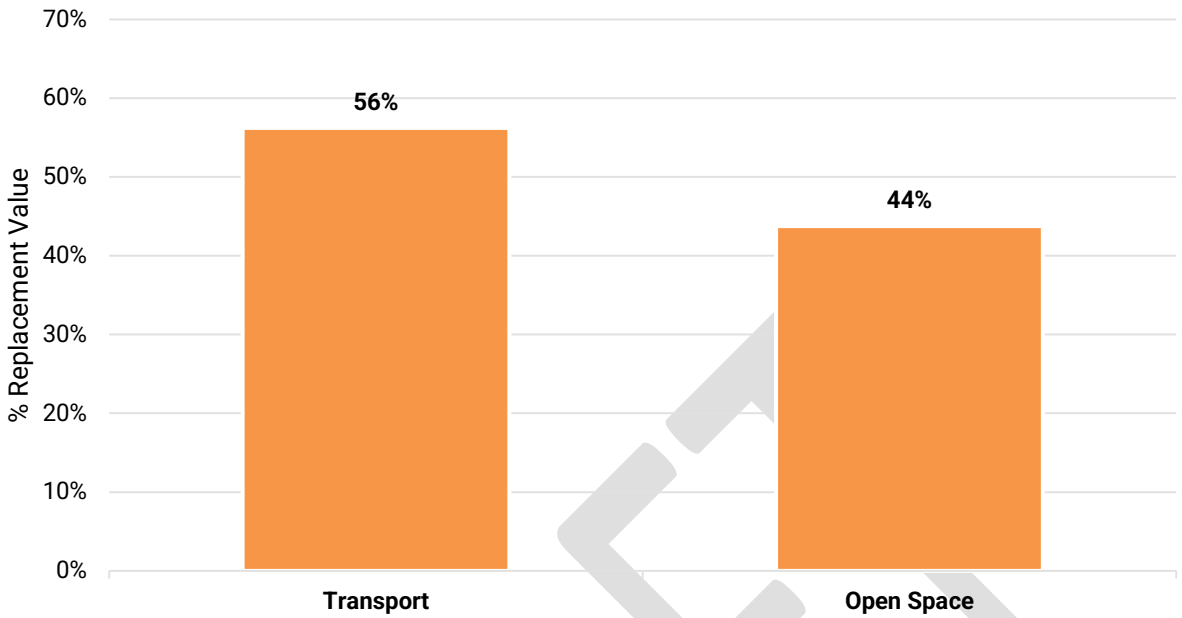


Figure 4 – % Distribution of Structures by Replacement Cost

2.2.1 Structures Modelled Value

Given that this StAMP is the first iteration, Council has included an improvement action in Section 7 to conduct a revaluation assessment of structures consolidated from transport and open space in the next financial year. At the time of preparing this plan, the SAM modelled values have been utilised. The breakdown based on asset class is as follows:

Asset Class	Replacement Cost ($)
Transport	103,097,564
Open Spaces	80,240,165
Total	**183,337,729**

Table 7 – SAM Modelled Value (Unaudited) by Asset Class as at 30th June 2024

The breakdown based on asset category is detailed in the table below:

Asset Category	Replacement Cost ($)
Marine Structures	57,366,644
Bridge	51,795,803
Culvert	43,766,550
Public Artwork	5,646,615
Retaining Wall	4,661,906
Boardwalk	4,560,196
Jetty	3,869,599

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Cattle Underpass	3,761,620
Pedestrian Bridge	3,728,442
Open Space Furniture	2,532,569
Pontoon	1,404,561
Park Infrastructure	174,621
Street Furniture	45,149
Fences	23,455
Total	**183,337,729**

Table 8 – SAM Modelled Value (Unaudited) by Asset Category as at 30th June 2024

Council's structures portfolio will depreciate over time. Depreciation is considered a measure of the wearing out or other loss of value of structures that arises from their use, the passage of time, or obsolescence due to environmental changes.

While depreciation has traditionally been a key metric for asset management, it is recognised that it has limitations in providing a comprehensive 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 structures are primarily influenced by many factors which also include capacity and functionality concerns, rather than the typical end-of-life asset renewals. This insight positions Council at the forefront of innovative asset management practices, as we proactively address challenges with a sustainability-driven perspective.

2.2.2 Current Replacement Costs

The total value of structures for which Council is responsible and included in this StAMP is currently estimated at $183.34 million[3]. The break-up of the asset type by replacement value is illustrated in Figure 5 – Structures by Asset Class Estimated Replacement Values.

[3] Replacement cost estimated from 2024 unaudited revaluation structures dataset from Open Space and Trasnport, plus all new assets gifted / constructed assets post the revaluation.

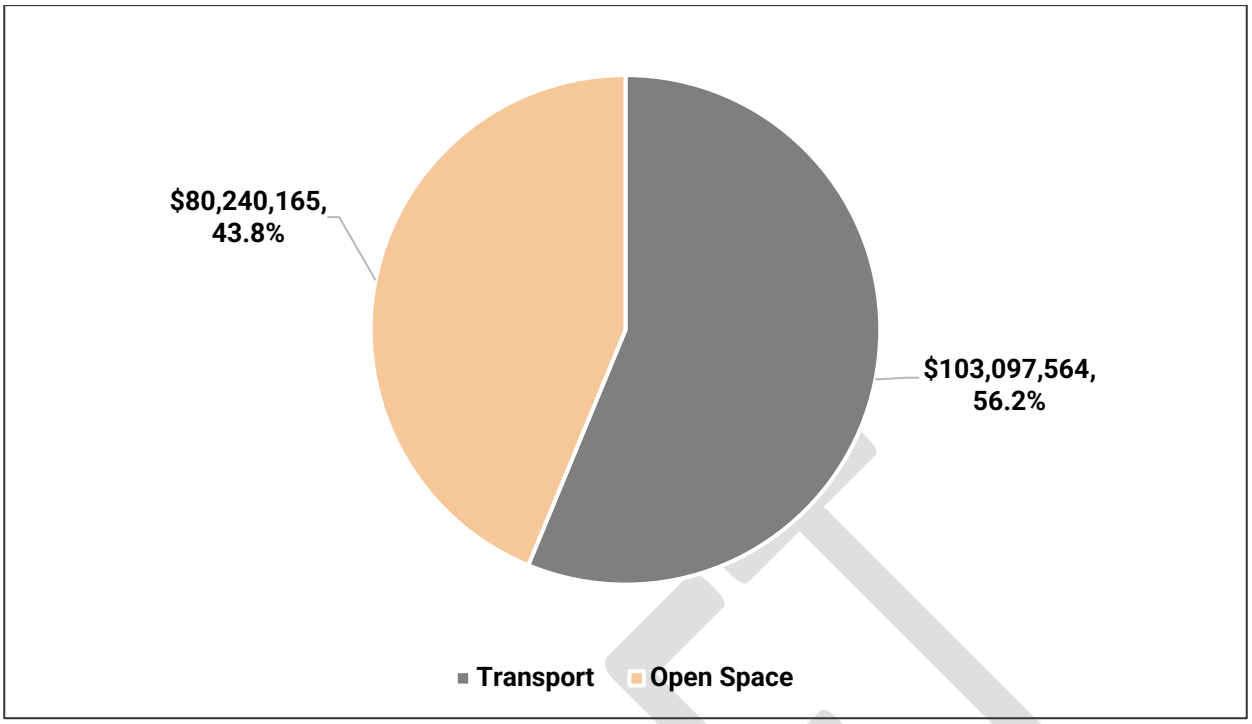


Figure 5 – Structures by Asset Class Estimated Replacement Values

2.2.3 Condition Assessment

Council has adopted a comprehensive condition assessment methodology to identify structural defects, enabling the development and planning of forward capital renewal programs and informing the Long-Term Financial Plan (LTFP) requirements. The condition audit of all local structures is conducted by both Council staff and external contractors, utilising the latest survey techniques to collect condition data that informs this plan.

The assessment process includes[4]:

- Surface Examination: Inspect visible surfaces of the bridge for signs of damage, deterioration, and wear, such as cracks, spalling, corrosion, and deformation.
- Component Check: Assess critical components, including decks, beams, girders, piers, abutments, bearings, and expansion joints.
- Condition Rating: Assign condition ratings to bridge components based on observed deficiencies and test results, typically using standardized rating systems.

For complex structures like bridges, the assessment involves multiple levels of inspection:

- Level 1 Inspection: Conducted by internal staff.
- Level 2 Inspection: Conducted by accredited Level 2 inspectors or Bridge Engineers.
- Level 3 Inspection: Conducted by Principal Bridge Engineers.

[4] Detailed information can be found in Structures Business Process Manual

Conducting a comprehensive condition assessment of bridges ensures the safety and reliability of bridge infrastructure, supports informed decision-making for maintenance and funding, and prolongs the service life of these critical assets.

For the purpose of SAM life cycle modelling, all structures within Council's boundary have been assessed using detailed condition criteria. These criteria have been configured in the SAM modelling tool to drive the rule base, specifying appropriate treatments and projected renewal years.

Typically, network wide condition assessments (Level 2) are undertaken on a four year cycle (coinciding with the financial revaluations) and used to identify where structures are within their defined useful lives at any given point in time. The latest condition audit for structures within open space was completed in late 2023.

The condition rating system is summarised in Table 9 – Asset Condition Rating . This table provides an overall view with regard to a standardised and consistent approach to applying an overall condition score for Council's structures.

Condition	Rating	Description
0	New	Brand new asset or recently rehabilitated to as new condition. Only cyclical routine maintenance is required.
1	Very Good	Structure that is in excellent overall condition however is not new and providing its intended level of service.
2	Good	Structure 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 provides a good level of service.
3	Fair	Structure 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	Structure that is in poor overall condition with moderate to high deterioration evident. Substantial maintenance is required to keep the asset serviceable. Structure 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	Structure that is in extremely poor condition or obsolete. The structure 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 the following 1-2 years
6	End of Life	Stucture has physically failed and/or has no availability.

Table 9 – Asset Condition Rating Guidelines

2.2.4 Current Asset Performance

Based on the latest condition assessed dataset, Council's existing structures are estimated to be in good condition with over half 52.96% of Structures in Good and Very Good condition as shown in the figures below. Refer to Table 9 – Asset Condition Rating Guidelines provides further details on the condition descriptions.

Of the 1,194 existing structures, the average condition is 2.3 out of 6, with condition 0 representing an asset in brand new condition and condition 6 representing an asset that has failed or exceeded its design life.

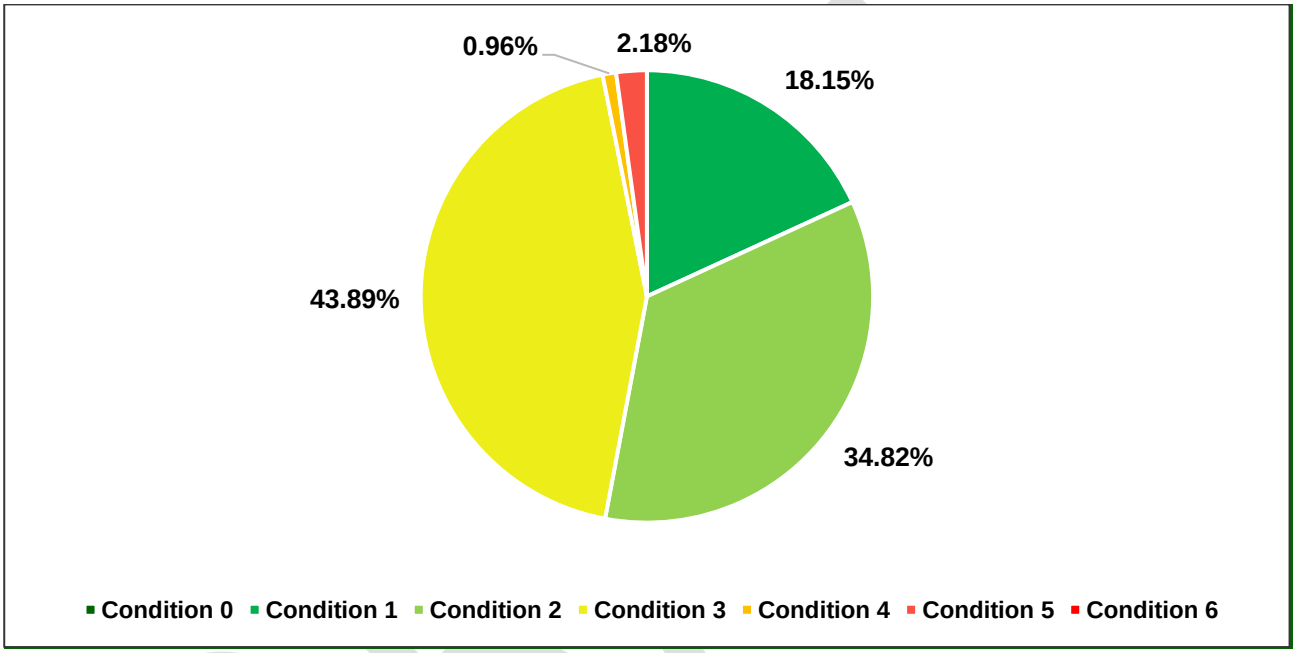


Figure 6 – Distribution of Structure Condition by Replacement Cost

The breakdown based on asset class is as follows:

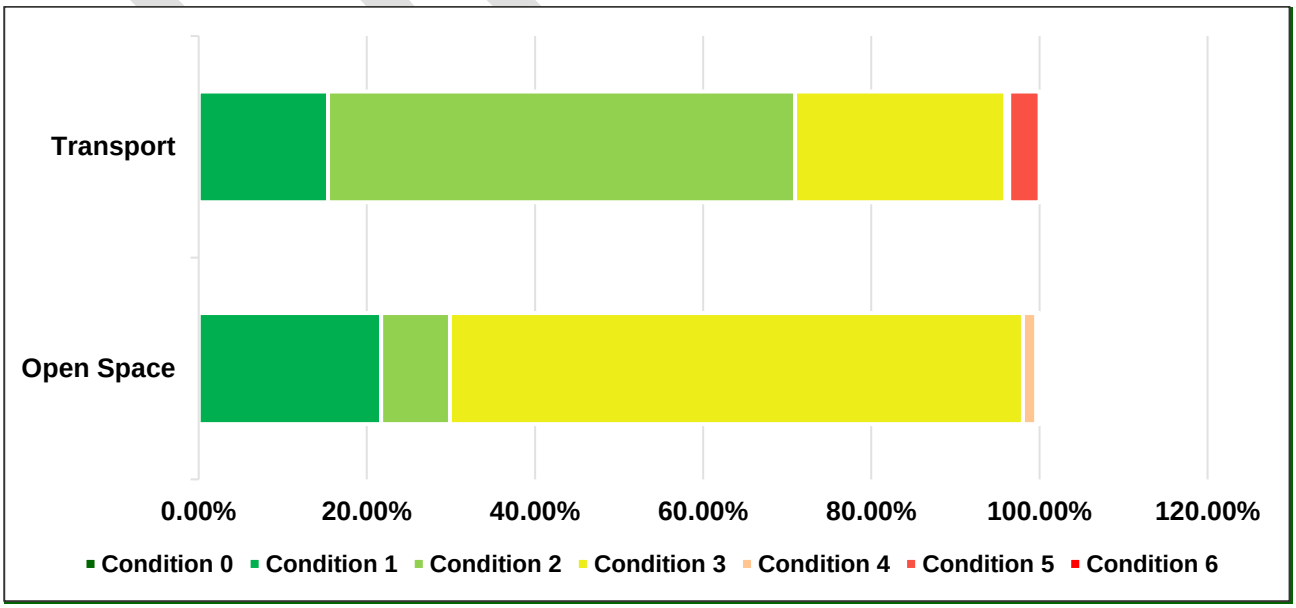


Figure 7 – Distribution of Structure Condition by Replacement Cost and Asset Class

The breakdown based on asset category is detailed in the bar chart below:

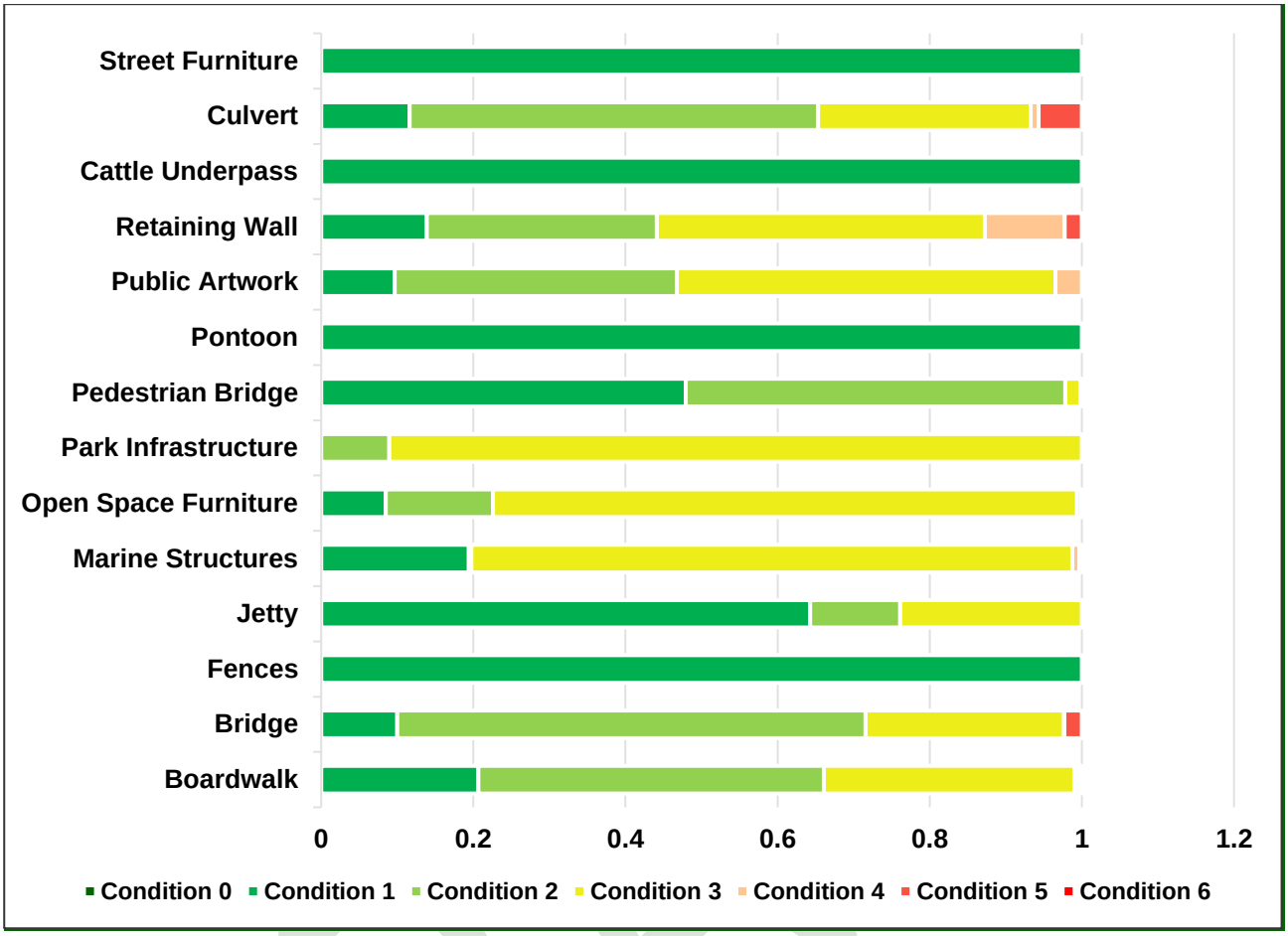


Figure 8 – Distribution of Structure Condition by Replacement Cost and Asset Category

2.3 Lifecycle Management

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

2.3.1 Operations & Maintenance Plan

Operations activities can be described as activities that are delivered on a day-to-day basis necessary to meet levels of service delivery requirements. Operational activities can include service delivery items such as the removal of debris and basic cleaning of structures within the road and open space 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. sealing cracks, repairing joints, and repainting steel components to prevent corrosion) 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 and more detailed activities are documented in the Structures Business Process Manual. 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 focusing on the strategic renewal and replacement of structure components or entire structures to maintain safety and functionality over the long term will return the degraded service capability of the asset back to its original designed capability or modern-day equivalent. This involves a systematic evaluation of each structure's condition, performance history, and projected future demands to determine the optimal timing for renewal or replacement activities. By prioritising these actions, Council can address critical structural deficiencies, incorporate modern engineering advancements, and ensure that the structures meet current and future transportation needs.

Central to the renewal activities is the use of comprehensive condition assessments and lifecycle analysis. These assessments involve detailed inspections and advanced diagnostic techniques, such as non-destructive testing and structural health monitoring, to evaluate the integrity and remaining service life of structure components. The data collected informs the decision-making process, allowing for the identification of components that are nearing the end of their useful life or have become obsolete due to changes in load requirements or safety standards. Integrating SAM modelling and risk assessment ensures that renewal and replacement activities are both timely and cost-effective.

The rule bases which reflect the policy decisions that Council will employ to determine when they will select structures for inclusion in their capital works program are currently documented in Council's SAM modelling tool. Council plans to document this information in the Structures Business Process Manual and is noted in the improvement action plan.

Renewed structures will be designed in accordance with relevant Australian Standards, depending on the structure type as follows:

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- AS 5100 – Bridge Design, Infrastructure Design Manual (IDM) and relevant industry standards and guidelines such as VicRoads Technical Publications and Austroads Guides for bridges, major culverts and retaining walls.
- Victorian Boating Facility Design Guidelines for marine structures
- Siting and Design Guidelines for structures on the Victorian Coast

Renewed assets will generally be replaced at the current contemporary standard unless identified as requiring upgrade through Council's transport and open space 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 aimed at enhancing the capacity, functionality, and resilience of the structures to:

- Meet evolving transportation demands
    - Upgrade existing bridges and major culverts to accommodate increased traffic volumes, heavier loads and new transport modes
- Ensure structural integrity and safety
    - Ageing Infrastructure: Marine structures, like jetties, pontoons, boat ramps, seawalls and revetments, are exposed to harsh environmental conditions that can accelerate wear and tear. When regular inspections reveal significant deterioration or structural deficiencies that compromise safety, upgrades become necessary.
    - Damage and Wear: Physical damage from storms, collisions, or excessive wear and tear from regular use can necessitate upgrades to restore structural integrity and ensure safety.
- Ensure environmental and regulatory compliance.
    - Environmental Regulations: Changes in environmental laws and regulations may require upgrades to marine structures to mitigate environmental impact, such as improving waste management systems or installing pollution control technologies.
    - Climate Resilience: With rising sea levels and more frequent severe weather events due to climate change, enhancing the resilience of marine structures to withstand these conditions is critical.

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.

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A key component of the Upgrade/Expansion Plan is the identification and prioritisation of structures that require enhancements. This involves a thorough analysis of traffic data, load ratings, and structural conditions to pinpoint structures that are currently overburdened or expected to face significant increases in usage. Advanced modelling tools and studies are employed to predict future traffic patterns and assess the impacts of proposed upgrades. This research and proper planning enables the formulation of targeted upgrade projects that can effectively alleviate congestion, improve load capacity, and extend the operational lifespan of structures.

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 structures:

- Garry Rd – Culvert upgrade
- Almurta Glen Forbes Rd - Culvert upgrade from dual cell steel pipe to a box culvert
- Walker Rd - Culvert upgrade from 1200mm to 1950mm
- Schier Rd – Bridge upgrade

2.3.4 Creation/Acquisition Plan

New structures 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 $1.0 million worth of structures annually as gifted assets from developments. Over the last three years, the majority of the gifted assets are retaining walls, major culverts and boardwalks. With anticipated developments in suburbs like Wonthaggi, Grantville, and Inverloch, it's estimated that Council will receive even more structures 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 structures, however discussions are ongoing to identify any structures not accessible to the public that could be removed from Council's asset register.

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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.

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3 Levels of Service

3.1 Customer Research and Expectation

The most recent customer satisfaction survey[5], 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 10 shows Councils performance index scores where 100 represents excellent and 50 representing average across core measures relevant to this STAMP are as follows:

Focus Areas	2019	2020	2021	2022	2023
Overall performance	54	55	59	57	54

Table 10 –Summary of Core Measures

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

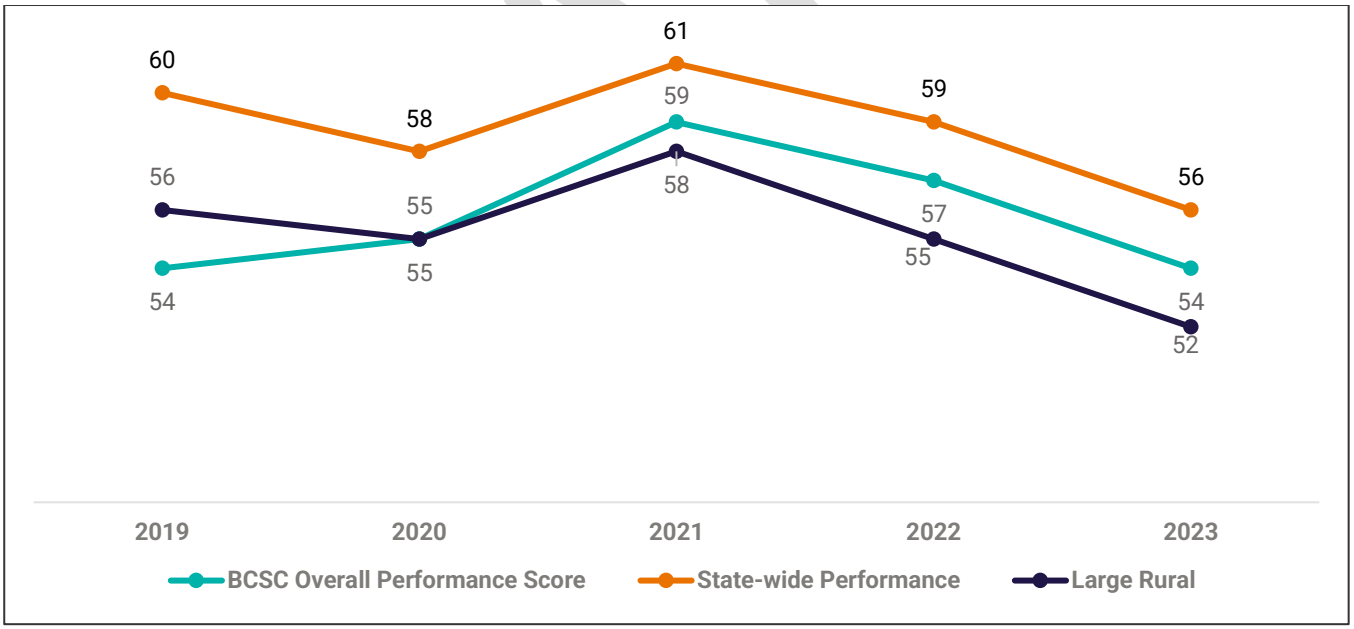


Figure 9 – Bass Coast Community Survey Satisfaction Overall Performance

The survey results indicate Council's Overall Performance Score from 2019 to 2023 shows variability, starting at 54 in 2019, peaking at 59 in 2021, and returning to 54 in 2023. Throughout this period, Council's scores were generally lower than the state-wide

[5] 2023 Local Government Community Satisfaction Survey – Conducted by JWS Research

performance scores, which ranged from 60 in 2019 to 56 in 2023. Compared to the large rural category, which had scores ranging from 56 in 2019 to 52 in 2023, Council's performance was slightly lower initially but surpassed large rural scores in 2021 to 2023.

Section 3.2 illustrates how Council's management of its structures 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 STAMP 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 STAMP are detailed in the table below:

Strategic Objective	Outcome	How Strategic Objectives are addressed in the STAMP
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 Incorporating environmentally sustainable materials and construction practices in bridge and structure projects to minimise environmental impact.
Healthy Community	An inclusive community that embraces its lifestyle and supports health and wellbeing.	Ensuring accessibility and safety of bridges and structures to promote active transportation and connectivity, enhancing overall community health 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 structures that are fit for purpose and well maintained which provide community links to recreational, business, services, social and cultural spaces. Delivery of Council's Structures Renewal Capital Works program. Designing and maintaining bridges, major culverts and open space structures that facilitate safe and easy access to public spaces, enhancing social cohesion and community interaction.

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Strategic Objective	Outcome	How Strategic Objectives are addressed in the STAMP
Growing our Economy	Progressing opportunities for visitation economy and business growth in harmony with our natural environment and sustainable values.	Structures are monitored to meet the current and future needs of the community. Upgrading and expanding identified bridges, major culverts and open space structures to support increased tourism and business activities while preserving environmental and cultural values. 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. Planning and implementing bridge, major culvert and open space structure projects that accommodate future growth without compromising the area's unique character and natural beauty.
Leading for our Community	Demonstrating leadership through good governance, transparency and accountability.	Employing best practices in asset management, ensuring transparency in project planning and execution, and engaging with the community for input and feedback. Asset management has the long-term goal of providing services that meet community expectations most cost-effectively. This STAMP 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 11 - 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 STAMP.

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.

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Stakeholder Group	Role or Involvement
Internal Stakeholders	
The Council	Custodian of the asset, with Councillors representing the residents and setting strategic direction as per the Corporate & Operational Plans.
Executive Team	To ensure that Asset Management policy and strategy are being implemented as adopted, and to ensure that long-term financial needs to sustain the assets for the services they deliver are advised to Council for its strategic & financial planning processes.
Manager Infrastructure Delivery	Provision of budgets, expenditure, issues re renewal, upgrade and new expenditure.
Coordinator Asset Management	Provision of information in relation to Asset Management. Identify the development of structure strategies.
Coordinator Asset Management Systems	Provision of information, asset management information system and valuation data.
Asset Management Systems Team	Inputting and maintaining structures 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 structures.
Development Services Coordinator	Approval of bridge and structure plans within land developments.
Asset Accountant	Provision of financial information.
Roads Coordinator	Provision of resources and planning regarding the maintenance of bridges and major culverts.
Open Space Coordinator	Provision of resources and planning regarding the maintenance of open space structures.
Roads and Open Space Asset Officers	Day to day management of the renewal program which includes renewal works for structures within the road and open space reserve.
Response Team Leader	Response to customer requests in relation to structure customer requests.
Coordinator GIS	Provision and maintenance of GIS for use by asset team and others.
Coordinator Growth Areas	Planning for future developments and in particular infrastructure provision to service those developments.
External Stakeholders	
Community	General users of structures within the road and open space reserves.
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 structures.
Council's Insurer	Insurance and risk management issues.

Table 12 – Key Stakeholders

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3.4 Legislative Requirements

There are many legislative requirements relating to the management of Council assets. Legislative requirements that impact the delivery of Council structure 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
Heritage Act 1995	Provides for the protection and conservation of places and objects of cultural heritage significance and the registration of such places and objects.
Crown Land (Reserves) Act 1978	Provides for the reservation of Crown Lands for certain purposes including the management of such reserves and their purposes.

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Legislation	Requirement
National Parks And Wildlife Act 1974	The objective of this Act is: (a) the conservation of nature, including, but not limited to, the conservation of: (i) habitat, ecosystems and ecosystem processes, and (ii) biological diversity at the community, species and genetic levels, and (iii) landforms of significance, including geological features and processes, and (iv) landscapes and natural features of significance including wilderness and wild rivers, (b) the conservation of objects, places or features (including biological diversity) of cultural value within the landscape.

Table 13: Legislation Relevant to the Management of Structures

Regulations, Standards & Guidelines - requirements that impact the delivery of Council's structure 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 structure standards.
Local Government (Planning and Reporting) Regulations 2020	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. 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.
ISO 55000 Suite, 2014	The International Organization for Standardization's ISO 55000:2014 Asset Management (ISO 55000) provides a global guide to better practice in asset management, including asset information management. ISO 55000 specifies that entities should align information requirements to asset management needs and risks, along with requirements for collecting, managing, evaluating, and ensuring consistency and availability of information for asset management decision-making.
Australian Accounting Standards Board (AASB)	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: AASB 116 Property, Plant & Equipment – prescribes requirements for recognition and depreciation of property, plant and equipment assets. AASB 136 Impairment of Assets – aims to ensure that assets are carried at amounts that are not more than their recoverable amounts. AASB 1021 Depreciation of Non-Current Assets – specifies how depreciation is to be calculated. AAS 1001 Accounting Policies – specifies the policies that an organisation is to have for recognition of assets and depreciation.

Regulation / Standard / Guide	Requirement
	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.
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 14: Regulations & Standards Relevant to Management of Structures

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 15: Policies Relevant to Management of Structures

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3.5 Level of Service

The levels of service documented in this StAMP 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 StAMP are detailed as follows:

Key Performance Measure	Level of Service	Performance Measure	2024 Performance
CUSTOMER LEVELS OF SERVICE			
Safety	Structures are routinely inspected for hazards and risk free	No. of reportable incidents due to structure defects per year <= 2	Nil
Availability and Accessibility	Structures will be available and accessible	95% Compliance. In the instance where a structure 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 within the road reserve[6] 1 unplanned closure within the open space[7]
Customer Satisfaction	Structures meet community needs	>60 customer survey satisfaction	Sealed Local Roads Score: 51[8]
Quality	Structures renewal program is funded and completed	Completion of the program within the financial year	100% of renewal program value delivered
Quality	Ensure Council's structures are well managed	Condition assessments (Level 2) every four years and routine maintenance inspection (Level 1) as per schedule	Completion of condition audits as scheduled
Quantity	Renewal Program	Development of an annual renewal program	Developed within the prescribed time frame

[6] 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.

[7] Elevated stairs near the Inverloch Bowling Club

[8] Structures positioned within the road reserve will impact the Sealed Local Roads Score justifying the relevance for inclusion in 2024 performance

Key Performance Measure	Level of Service	Performance Measure	2024 Performance
Quality	Well maintained and suitable structures	<100 requests/complaints per annum for structure maintenance	Nil
		<100 requests/complaints per annum for renewals or upgrades	1 request
Responsiveness	Response time to customer requests	> 80% of all requests adequately responded to within the target	100% of requests adequately responded
Cost effectiveness	A commitment to continually provide services in the most cost effective manner	Lifecycle costs are captured within structure modelling work	100% compliance
Environment	Protection of environment and cultural values	Minimal loss of biodiversity, erosion impact or loss of cultural heritage values	No regulatory enforceable action

Table 16 - 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 structures every four years.	Average Condition to be in condition 2 (out of 6) or better.	Structures Average Condition - 2.3
Quality	Structures are maintained to an acceptable level.	Lesser than 10% of the total network in condition poor and very poor	% structures in condition poor and very poor - 3.14%
Criticality	Application of criticality scores on structures. The criticality assessment will be developed as part of the Structures BPM	Each structure must be assigned a criticality score. Structures with a high criticality score should not fall below poor condition.	To be measured

Table 17 - Technical Levels of Service

4 Future Demand

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

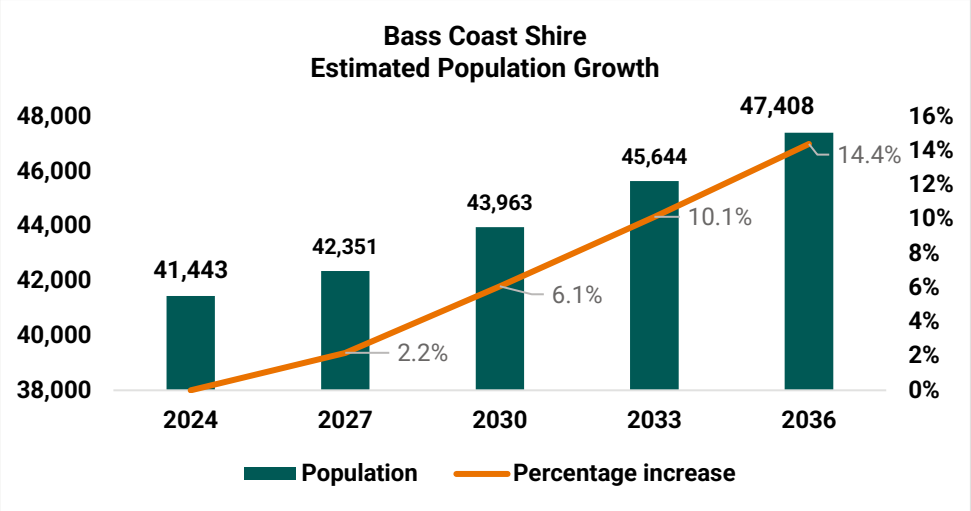
4.1 Demand Drivers

Drivers affecting structure demand include factors such as population change, changes in demographics, technological changes, regulatory changes and environmental changes. Structures 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 18 - Demand Factors, Projections, and Impact on Services.

Demand Factor	Present position	Projection
Population Growth	The Bass Coast Shire population forecast for 2024 is 41,443 and is forecast to grow to 47,408 by 2036.	



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

Table 18 - Demand Factors, Projections, and Impact on Services

The emerging needs of population growth suggests that demand will require additional new structures in greenfield developments and upgraded structures 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 2036[9].

The emerging needs of the population growth suggest that demand for structures will need to cater for demand drivers over the following 10 years as illustrated in Table 19.

Demand Driver	Impact on Services
Increase in population.	Population growth will primarily be supported by greenfield development, resulting in an increase in structures transferred to the Council. Additionally, all of the Council's bridges and major culverts will experience higher traffic volumes and increased utilisation of open space structures. Heavy vehicle use is expected to increase on strategic routes adding load to bridges and major culverts.
Ageing structures	Ageing bridges, major culvert assets and open space structures will result in reduced levels of service and increased risk of failure. To maintain essential service standards and ensure public safety, these assets will necessitate timely renewal or rehabilitation.
Increased legal load limits and freight movements	In recent years, organisations such as Container Transport Alliance Australia have been advocating for increases in the legal load limits for heavy vehicles, including a notable 20% increase in 2015. Consequently, there is a reasonable expectation of higher load regimes in the future. The anticipated rise in freight volumes, coupled with the shift to vehicles with higher axle loadings, will place additional strain on the Council's bridges and major culverts, potentially reducing the useful lives. The growth of freight movements, tourism and development within Wonthaggi has increased demand and conflict on the local transport network plus adding pressure to structures[10].
Changes in Traffic Composition	Expected changes in traffic composition involving heavier vehicle loads than those anticipated in the original design and provision of bridges. Increased demand on bridges to cater for transport vehicles operating at Higher Mass Limits will most likely shorten the useful life of structures.
Congested roads	Through rapid growth Wonthaggi is facing traffic safety challenges, heavy vehicle movement through the town centre, and parking difficulties, all of which are putting pressure on the town's future growth and liability[11]. A significant increase in traffic volume will necessitate the development and maintenance of well-planned structures along with other road infrastructures.

[9] Bass Coast Residential Market Supply Demand Assessment August 2022, by Urban Enterprise

[10] Council seeks $1 million for the detailed study and design of the Wonthaggi Alternative Freight Route.

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

Demand Driver	Impact on Services
Climate change will lead to a higher risk of extreme weather events such as storms, heatwaves, flooding, sea-level rise, and fire events.	More challenging conditions for the maintenance of Council assets. Increased potential for scouring around the foundations and approaches of bridges and structures during long periods of drought and intense storm events, leading to faster deterioration of structures. Potential for trees to fall and damage existing structures during significant storms. Bridges, major culverts and open space structures will experience an increase in flood damage, increased structural and foundation damage through increased geotechnical effects and more generally an accelerated degradation of materials and structures through increased temperature and solar radiation. Implementing climate risk impact assessments will help determine the effects on structure's performance and longevity.
Sustainability	Introducing new sustainability technology when renewing and upgrading structures will ensure that ratepayers' dollars go further meaning the cost savings can be put towards improving additional structures.

Table 19 – Demand Drivers, Projections and Impacts on Services

4.3 Changes in Technology

Council is continuously monitoring new asset treatments that may be available to increase the life of its structure assets. Technological changes that could affect the delivery of services covered by this StAMP are documented in Table 20.

Technological Change	Effect on Service Delivery
Level 1 and Level 2 Bridge Inspection Using Mobile Application	The availability of bridge inspection applications on smartphones can streamline inspection processes, enhance data collection efficiency, and improve maintenance planning.
Advanced Materials	The use of high-performance materials such as ultra-high-performance concrete (UHPC) and fiber-reinforced polymers can significantly extend the lifespan of bridges, major culverts and open space structures.
Climate Resilient Engineering	Development and implementation of design standards that account for climate change can ensure structures are more resilient to extreme weather events and changing environmental conditions.
Smart Sensors and Monitoring Systems	Implementation of smart sensors for real-time monitoring of structural health can provide early warnings of potential issues, reducing maintenance costs and preventing failures.
Drone Technology	The use of drones for inspection and maintenance can enhance safety, reduce inspection times, and provide detailed imagery for better assessment of structural conditions.
Automated and Robotic Maintenance	Robotic systems for tasks such as painting, cleaning, and minor repairs can increase efficiency and reduce the need for manual labour in hazardous environments.
3D Printing	3D printing technology for bridge components and repair parts can speed up construction and repair processes, reduce costs, and allow for customized solutions.

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Sustainable and Green Technologies	Incorporation of sustainable materials and green technologies can reduce environmental impact and improve the sustainability of bridge and structure management.
Enhanced Design Software	Advanced software for structural analysis and design can improve the accuracy and efficiency of bridge and structure planning, leading to better long-term performance.
Artificial Intelligence and Machine Learning	Artificial Intelligence and machine learning can optimise maintenance schedules, predict failure points, and improve decision-making in asset management.

Table 20 – 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 circa $11 million worth of new structures 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 $3 million via its capital works program to deliver upgrade works on bridges, major culverts and open space structures 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 StAMP.

With the commitment of new structures growth, it is reasonable to anticipate that Council's structures replacement value will increase from $183 million as at 2024 to approximately $194 million by 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.

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4.5 Climate Change

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

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

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

Council envisages the next iteration LTFP modelling will incorporate climate impacts factoring extreme temperature, extreme rainfall, flooding, sea level rises, dryness and storm surge which were sourced from the Infrastructure Asset Vulnerability Assessment (AVA) report by SECCA[12]. The LTFP model will simulate climate risks affecting high-risk assets by shortening their useful lives and increasing treatment costs. This approach acknowledges the necessity of selecting these assets for capital renewal works and incorporating future enhancements to address climate change impacts. Such enhancements may include using durable materials that are resistant to temperature fluctuations, moisture, and other environmental stresses to improve the longevity of structures. Additionally, incorporating design features such as elevated structures to prevent damage from rising sea levels and storm surges, use of flexible materials and nature-based solutions will help structures better endure temperature fluctuations and other climate-related stresses

4.6 Demand Management Plan

The demand for structures 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 which also encompass good service provision of bridges and major culverts have scored high as a priority for increased services by Council.

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

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 21. Further opportunities will be developed in future revisions of this StAMP addressing customer service demands and asset maintenance and capital needs.

Service Activity	Demand Management Plan
Increase in demand for bridges, major culverts and open space structures	Conduct network analysis and modelling of high-traffic zones, as well as proposed new developments, to assess their impact on the current network. Develop an Integrated Transport Strategy that identifies potential modal shifts such as increased cycling, walking and use of public Transport. Integrate findings into the prioritisation criteria of the Forward Capital Works Manage existing assets efficiently, upgrade assets where necessary, and plan for new asset provision to meet the growing demand. Develop design guidelines that consider future demand factors and good design principles.
Changes requested to existing services	Review and adjust current service levels based on community feedback and changing needs, ensuring resources are allocated effectively to high-priority areas.
Development of new residential subdivisions which can affect future traffic volumes	Plan and design infrastructure to accommodate increased traffic volumes, integrating scalable and flexible design solutions for future growth. All new developments will be managed through the planning and engineering subdivision process with Development Control Plans enabling contributions from new developments allocated to upgrade existing transport assets, where impacted as a result of new developments.
Increased need for maintenance and renewal costs	Implement proactive maintenance strategies and prioritise renewal projects to extend asset lifespan and optimise lifecycle costs. Incorporate total asset lifecycle costings into asset management plans and new project budget bids.
Providing a safe network	Enhance safety features of bridges and structures, conduct regular inspections and maintenance, and use advanced materials and technologies to improve resilience.
Climate Change	Incorporate climate resilience into asset design and management, using durable materials and nature-based solutions to mitigate the impacts of extreme weather. 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.
Regulation and/or restriction on the type of use	Implement restrictions on certain types of vehicles accessing the road network Introduce load limits to extend the useful life of structures and ensure public safety

Table 21 - Demand Management Plan Summary

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5 Risk Management Planning

5.1 Asset Criticality / Hierarchy

Critical assets are those with a high consequence of failure or reduction in service, not necessarily a high probability of failure. Identifying these assets and their critical failure modes is essential to effectively target and refine maintenance plans, capital expenditure plans, and investigative activities.

The following failure modes are considered when determining asset criticality and its contribution to service delivery:

- **Structural**: Evaluates the physical condition of the asset, including deterioration, service potential, and remaining life.
- **Capacity/Utilisation**: Assesses the level of under- or overcapacity relative to the required service level to determine remaining life or timing for renewal.
- **Level of Service Failures**: Considers reliability and performance targets, such as achieving desired levels of service.
- **Obsolescence**: Accounts for technological changes or lack of replacement parts that make assets uneconomic to operate or maintain.
- **Cost or Economic Impact**: Evaluates the cost of maintaining and operating an asset against its economic return or customer willingness to pay.

Understanding these failure modes allows for better planning to mitigate the impacts of potential events.

Critical Assets	Failure Mode	Impact
Structures at various locations	Structural condition and capacity	Structure condition and/or capacity may not cater to demand, accelerated deterioration due to increased vehicle loadings

Table 22 – Critical Assets

By identifying critical assets and their failure modes, condition inspection programs, maintenance, and capital expenditure plans can be precisely targeted to the critical areas, ensuring efficient use of resources and maintaining service levels.

A formal system of managing the priority of critical structures will be developed using key drivers such as asset type, size, capacity, utilisation, obsolescence, impact and location. Prioritising critical assets must, however, have respect for the overall risk rating and severity of defects for the individual structures. This will be developed and included in the Structures BPM

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5.2 Risk Management Plan

Council's Risk Management Plan[13] sets the overall framework for addressing risk within the framework of ISO31000-2018. The Risk Management Plan outlines Council's commitment to manage its resources and responsibilities in a manner which is intended to minimise harm or loss. The elements of this framework are illustrated in Figure 10.

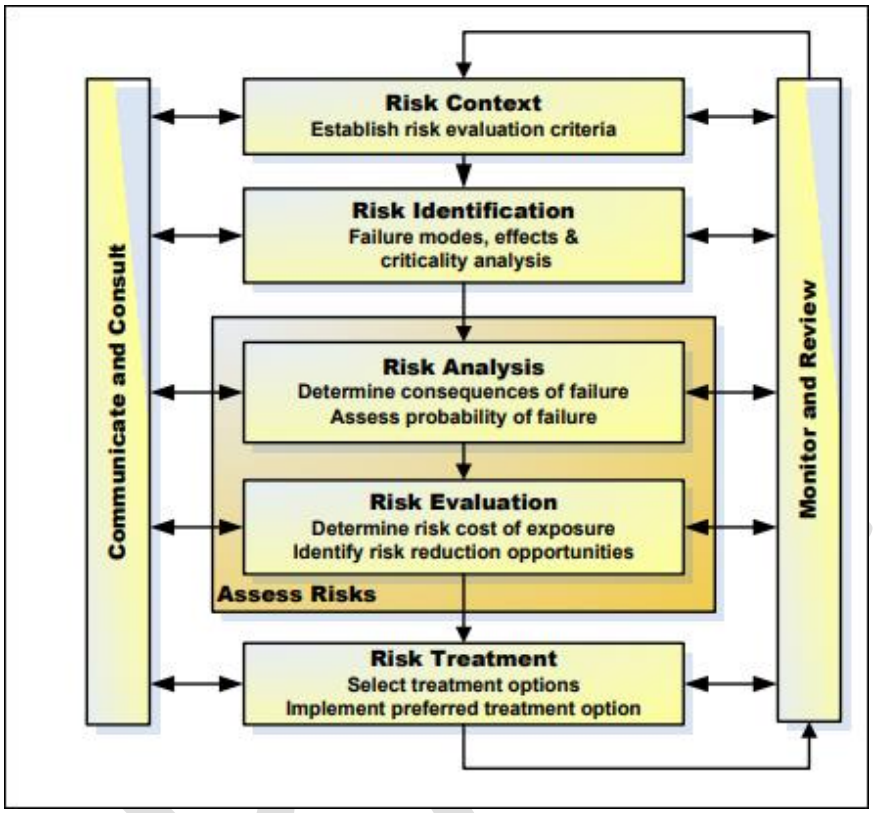


Figure 10 – Risk Management Process, Source: ISO31000:2018

5.3 Risks Assessment

Risk assessment for structures involves the systematic process of identifying, analysing, and evaluating risks associated with the management of these assets. The goal is to understand potential threats to the integrity, functionality, and longevity of structures and to develop strategies to mitigate these risks. This ensures the safety, reliability, and sustainability of the structures while optimising resources and maintaining service levels.

One of the key items in risk assessment is to know the criticality of each structure. 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

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

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 structures has identified the critical risks that will result in significant loss, 'financial shock 'or a reduction in service.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action), and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment cost after the selected treatment plan are implemented is shown in the table below.

Hazard, Service or Asset at Risk	What Can Happen	Risk Rating	Risk Treatment Plan	Residual Risk
Structures deteriorate to a lesser service standard and higher risk situation	Rudimentary asset management practices do not support effective decision making	High	Update data for structures Develop service strategy to inform objectives and outcomes Implement asset management systems improvements	Low
Damage to bridges and major culverts as a result of major storm events	Extreme weather events	High	Continue to refine asset data Implement Climate Change Action Plan for Bass Coast 2020-2030 Climate resilience considered at the project planning stage Implement targeted structure improvements to mitigate impacts from storm events	Low
Collapse or damage to structures	Overloading and or oversized vehicle use Poor structural condition Lack of maintenance Severe weather events	High	Condition survey is undertaken and renewal works programmed. Bridges assessed for load limits. Maintenance inspection and works programming.	Moderate
Structure asset lives not being maximised	Due to a lack of renewal and maintenance funding	High	Review funding allocations made to the maintenance and renewal of structures Address any funding shortfalls through an appropriate financial strategy	Low
Delays from bridge closure or diversions	Bridge collapse Bridgeworks Load limits Width restrictions Flooding	High	Condition survey is undertaken and renewal works programmed. Level of service for: - Load Limits - Flooding access	Low

Hazard, Service or Asset at Risk	What Can Happen	Risk Rating	Risk Treatment Plan	Residual Risk
Impact of climate change on structures	Climate change may affect the useful life of an asset. Increased extreme events can impact different structure 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 structures and the forecast impacts on asset useful lives	Low

Table 23 – Critical Risks and Treatment Plan

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6 Financial Summary

The provision of adequate financial resources ensures that Council's structures are appropriately managed and preserved. Financial provisions below requirements will lead to more structures 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 structures deteriorate at increasing rates and require more reactive interventions to keep the structures in a safe operating state.

6.1 Forecasted Funding Requirements

The section shows the output of modelling the deterioration of Council's structures portfolio using SAM modelling tool.

This process typically involves setting up life cycle paths for each structure 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 structure portfolio renewal requirements and to predict the future condition of these assets under varying funding scenarios.

6.2 Funding Scenarios

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

The current average condition as at 2024 for the structures portfolio is an average condition of **2.34 out of 6**. Refer to Table 9 – Asset Condition Rating Guidelines for condition descriptions.

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Council had considered four scenarios as detailed below:

SAM Modelling Scenario	Funding Option Description
Option 1 (Current LTFP Spend)	What is the predicted future LoS measured in % PVP if Council allocates the current 2025 capital level of funding over the next 10 years.
Option 2 (-25% Spend of current LTFP)	What is the predicted future LoS measured in % PVP if Council allocates a 25% reduction of the current 2025 capital level of funding over the next 10 years.
Option 3 (Maintain Target LoS)	How much capital funding is required to maintain the target LoS measured by % PVP by year 10. Focus on maintaining the percentage of the asset portfolio in PVP below 5%[14].
Option 4 (Zero PVP)	What is the predicted future LoS if capital funding each year is unconstrained to treat all assets that meet intervention levels.

Table 24 – SAM Modelling Scenario

6.3 Forecast 10-Year Funding

6.3.1 Overall Summary

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

The predicted lifecycle costs based on Council's intervention levels (Technical LOS) over the following 10 years (represented by Option 4) have been determined as follows:

- Capital Renewal: $26.54M or $2.65M on average per annum; and
- Maintenance: $5.35M or $0.54M on average per annum.

Funding Option 1 which models the current allocated funding (Option 1) of $14.96M 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 poor and very poor assets (PVP) increase from $5.76M to $11.69M, representing a rise of $5.93M. The consequences of this scenario include a greater number of assets in a deteriorated condition over time, which poses increased risks to users and would require substantially more operational funding to ensure the structures are maintained in a safe and serviceable state.

Funding Option 2 models the scenario of a reduced capital spend of -25% per annum. The outcome of this model shows that the percentage of PVP assets will grow from the current 3.14% to 8.43% over the 10-year forecast period equating to an increase in liability from

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

$5.76M to $15.5M, which is an unsustainable financial position. The consequences of this scenario include an increasing number of assets falling into disrepair over time, which heightens risks for users and necessitates significantly more operational funding to maintain the structure's safety and serviceability.

Funding Option 3, aimed at maintaining Target Levels of Service (LoS), is projected to require $19.00M over a 10-year period to maintain the network condition with a target PVP of less than 5%. While this option results in an increase in future asset liability from $5.76M to $8.0M, it remains $3.67 million lower than that of Option 1.

Funding Option 4, is regarded as the preferred funding option as it aims to remove all structures in PVP, estimated at $26.54M over a 10-year period. This option ensures that no structures remain in poor or very poor condition, thereby mitigating risks to the community. The average condition will improve from the current 2.34 to 2.00 over the 10-year forecast period. Additionally, it would reduce future liabilities from $5.76M to zero. The annual difference in funding requirements between Option 4 and Option 3 is $754K

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

Financial Year	Option 1 ($'M)	Option 2 ($'M)	Option 3 ($'M)	Option 4 ($'M)
2024/25	$1.45	$1.09	$1.90	$2.00
2025/26	$1.46	$1.09	$1.90	$2.00
2026/27	$1.47	$1.10	$1.90	$2.00
2027/28	$1.48	$1.11	$1.90	$2.00
2028/29	$1.49	$1.12	$1.90	$2.10
2029/30	$1.50	$1.12	$1.90	$2.30
2030/31	$1.51	$1.13	$1.90	$2.34
2031/32	$1.52	$1.14	$1.90	$3.20
2032/33	$1.53	$1.15	$1.90	$3.90
2033/34	$1.54	$1.16	$1.90	$4.69
Total	**$14.96**	**$11.22**	**$19.00**	**$26.54**

Table 25 – SAM Modelling Funding Profile Across All Financial Options

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

Financial Year	Option 1	Option 2	Option 3	Option 4
May 2024	2.34	2.34	2.34	2.34
2024/25	2.31	2.33	2.30	2.30
2025/26	2.30	2.32	2.28	2.27
2026/27	2.28	2.30	2.24	2.23
2027/28	2.25	2.28	2.21	2.20
2028/29	2.24	2.28	2.19	2.17
2029/30	2.24	2.29	2.18	2.15
2030/31	2.24	2.29	2.16	2.13
2031/32	2.26	2.33	2.18	2.12
2032/33	2.26	2.33	2.16	2.05
2033/34	2.27	2.35	2.17	2.00

Table 26 – Average Condition Across All Financial Options

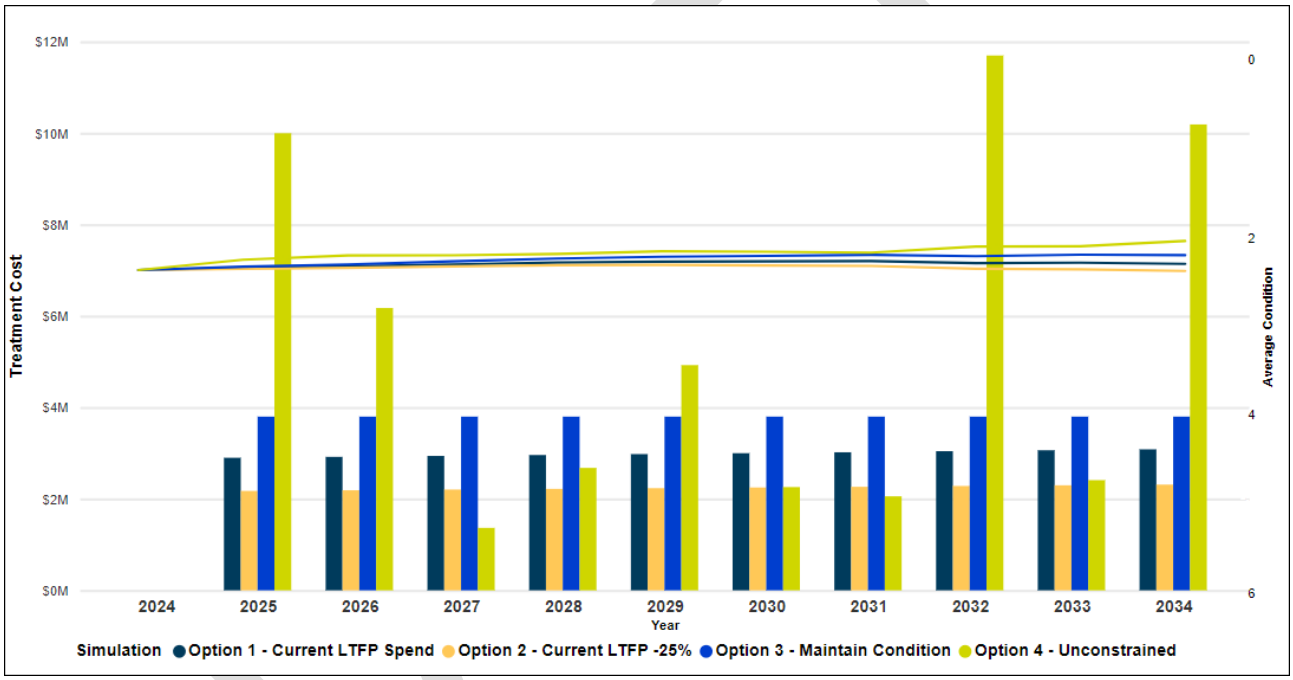


Figure 11 – Forecast 10-Year Capital Funding Analysis and Average Condition by Year

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

SAM Modelling Scenario	Total Treatment Cost ($'M)	Total Maintenance Cost ($'M)	PVP Year 0 (%)	PVP Year 10 (%)	PVP Year 0 ($'M)	PVP Year 10 ($'M)
Option 1	$14.96	$5.62	3.14%	6.38%	$5.76	$11.69
Option 2	$11.22	$7.12	3.14%	8.43%	$5.76	$15.46
Option 3	$19.00	$5.46	3.14%	4.38%	$5.76	$8.02
Option 4	$26.54	$5.35	3.14%	0.00%	$5.76	$0.00

Table 27 –10-Year Funding & Strategy Results - Funding Option

The table below details the financial modelling observations for Council's structures:

Financial Option	Funding over 10 years	Outcome Achieved over 10 years	Comments	Observations
Option 1	Funding investment is $14.96M over 10 years.	Around 6.38% of the structures will be in PVP by year 10 compared to 3.14% in 2024.	Increases current asset liability (structures in PVP) from $5.76M to $11.69M in year 10.	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 structures will result in the average condition improved to 2.27 in year 10. However the asset in PVP increases by $5.93M over the 10 year period. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of $26.50M over 10 years. This Option demonstrates a less favourable outcome compared to the funding alternatives presented by Option 4.
Option 2	Funding investment is $11.22M over 10 years.	Around 8.43% of the structures will be in PVP by year 10 compared to 3.14% in 2024. This is a similar outcome when compared to Option 1.	Increases current asset liability (structures in PVP) from $5.76M to $15.46M in year 10.	Reduction in spending will cause the PVP to increase by $9.69M. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of $28.02M over 10 years. Hence this option illustrates that a reduction in structure funding will result in a worse level of service while also increasing our asset liability and that the Net Strategy result.
Option 3	Funding investment is $19.00M over 10 years.	Around 4.38% of the structures will be in PVP by year 10 compared to 3.14% in 2024. This is a better outcome when compared to Options 1 & 2.	Increases current asset liability (structures in PVP) from $5.76M to $8.02M in year 10.	The percentage PVP is predicted to remain below 5% in year 10. When we take into account the maintenance costs and increase in asset liability, this strategy costs a net total of $26.72M over 10 years.
Options 4	Funding investment is $26.54M over 10 years.	Zero structures in PVP at year 10 compared to 3.14% in 2024, a better outcome when compared to Options 1 & 2.	Reduced current asset liability (structures in PVP) from $5.76M to zero in year 10.	This option eliminates all structure risk, as no structures will be in a poor or very poor state. When factoring in maintenance costs and the reduction in asset liability, this strategy totals $26.13M over 10 years. Although it has the highest capital cost, it results in the lowest maintenance costs and addresses all backlogs, making it the preferred option for balancing investment and risk mitigation.

In the longer term, due to the anticipated future demand for renewing structures currently in moderate condition (approximately $80.5M worth of assets in condition 3), it is expected that many of these will deteriorate to poor and very poor condition beyond the 10-year forecast period. Therefore, additional funding will be essential to address this future liability and ensure the timely renewal of these structures.

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6.4 Financial Ratios

Asset management ratios provide insight into an organisation's performance and success in managing its assets. Council's asset management ratios for its asset portfolio calculated as at 30 June 2023 are shown in Table 28 – 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%	TBD[15]
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.	1-2%	0.29%

Table 28 – Key Asset Management Ratios

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[15] This will be calculated once a new group for Structures is established in the financial reporting system. This will form part of the improvement action under this StAMP

7 Plan Improvement and Monitoring

This section outlines how Council will measure its asset management performance. The identified action items in Table 30 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 StAMP 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 structures will be identified via PSPs and studies and funding sought from grants and/or developer contributions. As identified, these will be incorporated into future StAMP revisions.	Medium
Capital renewal treatments are like for like and do not account for additional costs to upgrade and/or utilise new technologies and materials.	Medium to Low
Asset register currency pertaining to condition and asset performance.	Low
Asset register currency pertaining to asset quantities.	Low
Network strategic condition inspections will be funded on a four year cyclic basis and incorporated into the Operational budget.	Low
Current human resource plan will not change in the near future.	Low

Table 29 – Key Assumptions made in StAMP and Risks of Change

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7.2 Improvement Plan

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

Task No	Improvement Items	Responsibility	Timeline
1.	Develop a Structures Business Process Manual (BPM), documenting the condition audit methodology for structures. The BPM will support the StAMP.	Coordinator AM	Dec-25
2.	Develop a formal system of managing the priority of critical structures using key drivers such as asset type, size, capacity, utilisation and location. Prioritising critical assets must, however, have respect for the overall risk rating and severity of defects for the individual structures. This will be included in the Structures BPM	Coordinator AM	Jun-25
3.	Ensure that the new asset requirements identified in the Precinct Structure Plans and studies are accurately incorporated into both the StAMP and LTFP. Additionally, assess whether structures earmarked for upgrades meet the standards outlined in the Integrated Transport Strategy. This involves establishing a priority freight network to meet the demands of increased freight tasks and guiding future investments in bridge upgrades or alternative routes to bypass bridges or major culverts with limited load-carrying capacity. This assessment provides a strong rationale for securing funding through government grants.	Coordinator AM / Finance Manager / Coordinator Transport	Jun-25
4.	Establish a clear delineation between asset manager and service manager responsibilities for the management of Council structures. This involves the development, communication, and acceptance of defined roles and responsibilities to ensure effective risk management across all Council structures.	AM Steering Committee	Ongoing
5.	Develop cattle underpass management framework to improve the safety of road network.	Coordinator AM	Ongoing
6.	Progress the interface between works and finance systems to ensure the cost of maintenance is linked to assets.	Finance Manager / Coordinator Asset System / Coordinator AM	Dec-26
7.	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
8.	Council to review financial forecasts annually as better data becomes available, update and submit any supporting budget bids.	Coordinator AM / Finance Manager	Ongoing
9.	Review capital works program to consider alternative low-cost treatments driven by cost benefit analysis.	Coordinator AM / Coordinator Roads	Ongoing
10.	Investigate the integration of regular traffic counts data into Council's corporate asset register in order to provide heavy vehicle utilisation data for prioritising renewal works.	Coordinator Asset System / Coordinator AM	Ongoing

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11.	Review expenditure classifications and coding practices applied to maintenance activities to ensure all renewal expenditures are correctly classified. Following this, put forward estimated structures operation and maintenance and cost of doing business budget submissions taking into account changes in portfolio size and composition. This comprehensive approach will enable the Council to accurately understand and manage the true lifecycle costs.	Coordinator Asset System / Coordinator AM	Ongoing
12.	Continue to investigate alternate renewal treatments to reduce renewal costs or significantly extend the useful life of structures.	Coordinator AM / Coordinator Roads	Ongoing
13.	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
14.	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
15.	Consider implementing community education and engagement regarding structures, to identify and measure performance in delivering this service to the community.	Coordinator AM / Coordinator Asset System	Ongoing
16.	Ensure that operational staff responsible for bridge inspections are adequately trained to undertake Level 1 Routine Maintenance Inspections	Coordinator Roads / Coordinator Open Space	Ongoing

Table 30 – Improvement Actions

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7.3 Monitoring and Review Procedures

The STAMP has a planning horizon of 10 years, and it is based on details documented within the Asset Management Strategy. The StAMP 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 StAMP 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 StAMP 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 0.

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