

GLAMORGAN SPRING BAY COUNCIL



ASSET MANAGEMENT PLAN

ROAD INFRASTRUCTURE



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This revision 3 has concentrated on asset values and renewal projections and aligned the financial information more closely to actual asset condition. Additionally, Bridges have been removed to their own asset management plan.

This Asset Management Plan is a supporting document used to inform Council's overarching Strategic Asset Management Plan.

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1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

This Asset Management Plan details information on how Council manages its road infrastructure assets with the exception of Bridges which have been moved to their own plan. It details actions required to provide an agreed level of service in the most cost-effective manner, while outlining associated risks. The plan defines the services to be provided, how the services are provided and what funds are required to provide over the 20 year planning period. The Asset Management Plan will link to a Long-Term Financial Plan which typically considers a 10 year planning period.

1.2 Asset Description

This plan covers all Council owned or maintained road infrastructure assets.

The road infrastructure network comprises:

Asset Category	Length/Number of Assets	Replacement Value
<i>Land under roads</i>	<i>(non-depreciable)</i>	<i>\$12,853,000</i>
<i>Road Formation</i>	<i>(non-depreciable)</i>	<i>\$23,915,000</i>
Sealed Roads	179.153 km	\$41,922,772
Unsealed Roads	201.470 km	\$16,587,512
Footpaths	28.71 km (nominal)	\$4,988,911
Kerb and channel	76.670 km	\$10,561,006
TOTAL	-	\$110,828,201

This second version of the plan will reflect upgrades made to the knowledge of the asset class and is reflected in updated renewal values, increased asset category quantities, reviewed and where necessary, revised asset lives. The above infrastructure assets have significant total replacement value estimated at \$110,828,201. For the purposes of this plan the value placed on land under roads or formation of road is excluded as these assets do not require renewal. The total asset value calculated for renewal then is **\$74,060,201**.

1.3 Levels of Service

The allocation in the planned budget is insufficient to continue providing existing services at current levels over the planning period.

The main service consequences of the planned budget are:

- Many assets in very poor condition are overdue for renewal, however they can only gradually be renewed over the planning period with the planned budget. This means some assets will remain in a very poor condition for several years before they are able to be renewed.
- This in turn, causes damage and increased capital cost for repair of other assets which rely on the integrity of the other assets to achieve their service life.
- Currently there is insufficient budget allocation to resource proper asset management.
- There is an increase in the risks faced by Council (refer 1.6.3).

1.4 Future Demand

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

- Climate change, and associated increase in frequency of extreme weather events like flooding and land slip
- Upgrades to Tasmanian Municipal Standard Drawings

- Increased tourism
- Increased development

These demands will be approached using a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand (where required). Demand management practices may also include a combination of non-asset solutions, insuring against risks and managing failures.

- Identify list of strategic improvements to reduce the risk of ongoing damage due to increased frequency of extreme weather events
- Identify upgrades required to meet with current municipal standard drawings, prioritise these accordingly, and include in the planned budget
- Tourist numbers to be monitored over the next five years
- Development Engineer resource on staff and dedicated to practical design and best outcomes for donated assets

1.5 Lifecycle Management Plan

1.5.1 What does it Cost?

The forecast lifecycle costs necessary to provide the services covered by this Asset Management Plan includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the Asset Management Plan may be prepared for a range of time periods, it typically informs a Long-Term Financial Plan period of 10 years. Therefore, a summary output from the Asset Management Plan is the forecast of 10-year total outlays, which for road infrastructure assets is estimated as **\$33,632,256** or **\$3,363,225** on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is **\$35,907,720** or **\$3,590,772** on average per year as per the Planned Budget. This is **106.77%** of the cost to sustain the current level of service at the lowest lifecycle cost.

The infrastructure reality is that only what is funded in the Long Term Financial Plan can be provided and there is a backlog of works to road seal and pavement repair that will increase if not resolved sooner rather than later. The informed decision making depends on the Asset Management Plan emphasising the consequences of Planned Budgets on the service levels provided and risks.

The anticipated Planned Budget for Road Infrastructure provides a surplus of **\$227,547** on average per year of the forecast lifecycle costs required to provide services in the Asset Management Plan, compared with the Planned Budget currently included in the Long Term Financial Plan. This is shown in the figure below.

Forecast Lifecycle Costs and Planned Budgets

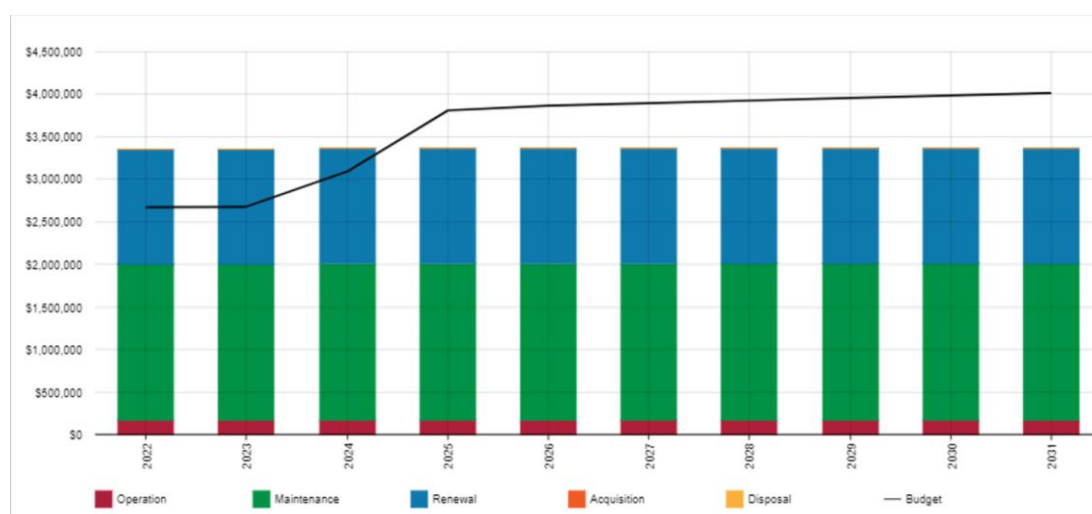


Figure values are in current dollars.

We plan to provide Road Infrastructure services for the following:

- Operation, maintenance, renewal and acquisition of roadway assets, endeavouring to meet service levels set by Council in annual budgets.
- Within the next 10 years the following scheduled renewals are forecast: \$7.1M reseal of roads, \$1.51M kerb and Channel and \$0.7M of footpaths. Renewal of unsealed road pavements and pavement under seals is \$4.1M

1.6.2 What we cannot do

We currently allocate enough budget to sustain these services at the proposed standard over the long term but not to provide new services being sought. There is also significant backlog of bitumen sealing totalling \$2.4M with a further \$2M falling due next year. The delay in funding these works is causing damage to pavements bringing forward costs for repairs that may have been avoided with more timely funding. Works and services that cannot be provided under present funding levels are:

- We cannot resolve the backlog of road renewals and maintenance at the rate required meaning the level of service of sealed roads will continue to decline in the first five years of the renewal program.
- We cannot afford to underfund the renewal of assets as they fall due. The outcome of this strategy is to witness an increasing decline in the standard of council's road infrastructure and an increasing cost of repair.
- We cannot acquire new assets where there is no planned budget assigned to service the full lifecycle costs (acquisition, operation, maintenance, renewal and disposal) over the planning period.

1.6.3 Managing the Risks

Our present budget levels are insufficient to continue to manage many risks in the medium term.

The main risk consequences are:

- Loss of knowledge due to loss of key staff
- Reduced level of service due to underfunding
- Recurrent damage to assets due to increased frequency of flood events
- Reduced level of service due to acquisition life cycle costs not accounted for in the planned budget
- Inefficient use of funds for maintenance and renewal works due to lack of a strategic works plan

We will endeavour to manage these risks by:

- Developing a succession plan for key staff, documenting knowledge and improved record keeping
- Ensure prioritised maintenance, renewals and acquisitions are budgeted for (works plan)
- Improve vulnerable assets
- Minimising asset acquisitions and ensuring lifecycle costs are considered prior to acquiring new assets

1.7 Asset Management Planning Practices

Key assumptions made in this Asset Management Plan are:

- External funding (grants) will continue to be a major source of funding for renewals, noting a known gradual reduction in some of these grants over the planning period.
- Financial data used in the development of this plan was from the end of the 2021-22 financial year, with some amendments made based on asset condition assessment data received in November 2020.
- No additional major road infrastructure assets are acquired by Council in the next 10 year period (excluding donated assets related to new subdivisions). If this changes the Asset Management Plan is to be updated to reflect this.

- Several gross assumptions were required in the derivation of planned budget and lifecycle forecast figures. This is due to the quality of financial information currently available.
- Professional judgement has been applied in the absence of good quality data, however where applied, it has been noted for improvement in Section 8.0.

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

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

A combination of the Asset Register and Alternate Method was used to forecast the renewal lifecycle costs for this Asset Management Plan.

The estimated confidence level for and reliability of data used in this Asset Management Plan is considered to be in the **Low to Medium** range (refer Table 7.5.1).

1.8 Monitoring and Improvement Program

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

- Develop strategic maintenance and capital works programs for upcoming years. Use to inform Asset Management Plan and Long Term Financial Plan updates
- Carry out comprehensive asset inspections and rating within two years to inform a future AMP update
- Improve confidence in financial data used in Long Term Financial Plan and Asset Management Plan
- Assess yearly performance (budgeted vs. actual costs) and update Asset Management Plan and Long Term Financial Plan accordingly
- Update useful lives in *MyData*, based on condition assessment data
- Estimate date built/last renew date and renewal costs for assets with missing asset register information, improve confidence in renewal costs
- Increase accuracy of budget breakdown to include acquisitions, maintenance, operations, renewals and disposals
- Community/Council consultation required to ensure appropriate levels of service are being provided (reduce/improve level of service accordingly)
- Continually improve correlation between Long Term Financial Plan and Asset Management Plan
- Increase overall confidence and maturity of Asset Management Plan

2.0 Introduction

2.1 Background

This Asset Management Plan communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period.

The Asset Management Plan is to be read with Council's Asset Management Policy and Strategic Asset Management Plan, along with other key planning documents:

- Long Term Financial Strategy
- Long Term Financial Plan
- Glamorgan Spring Bay Council's 10-year Strategic Plan 2020-2029

Council is in the process of modernising its asset management practices to ensure they adhere to the *Local Government Act 1993*. Part of this process is the development of asset management plans, such as this document, and the above mentioned strategic documents.

This Asset Management Plan covers all Council road infrastructure assets. For a detailed summary of the assets covered in this Asset Management Plan refer to Table 5.1.1 in Section 5.

The road infrastructure network comprises:

- Sealed Roads
- Unsealed Roads
- Footpaths
- Kerb and channel

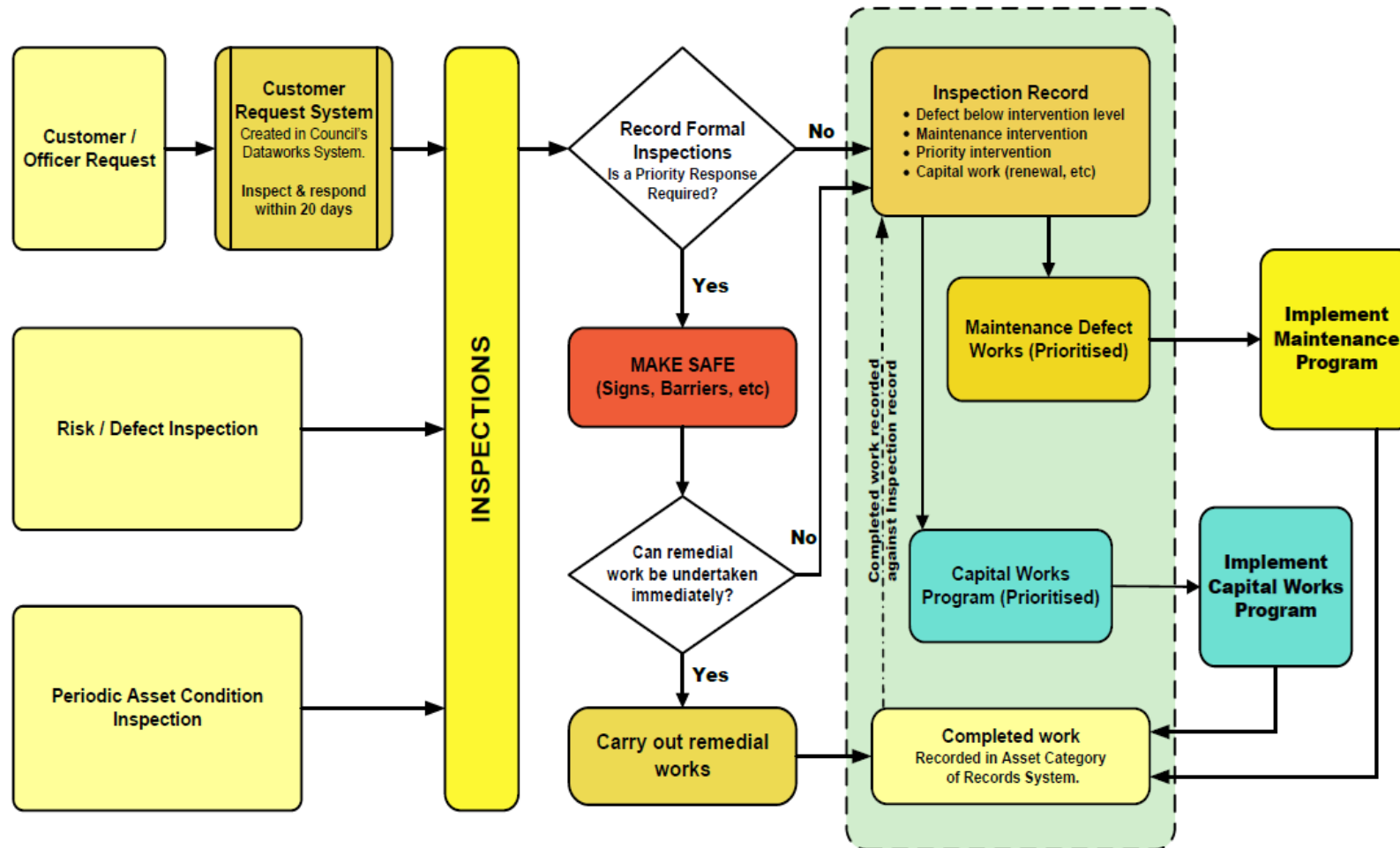
The road infrastructure assets included in this plan have a total replacement value of **\$74,060,200**. For the purposes of this plan there is no value placed on land under roads.

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

Table 2.1: Key Stakeholders in the Asset Management Plan

Key Stakeholder	Role in Asset Management Plan
Councillors	<ul style="list-style-type: none"> ■ Represent needs of community/shareholders, ■ Allocate resources to meet planning objectives in providing services, while managing risks, ■ Ensure service is sustainable, ■ Make informed decisions, in the best interests of the community.
General Manager	<ul style="list-style-type: none"> ■ Maintain a proactive approach to holistic asset management practices and ensure staff do the same. ■ Inform Councillors to enable educated decisions to be made.
Infrastructure Management Team	<ul style="list-style-type: none"> ■ Maintain a proactive approach to holistic asset management practices. ■ Ensure the Asset Management Plan is used and updated regularly. ■ Inform Councillors to enable educated decisions to be made.
General Public	<ul style="list-style-type: none"> ■ Report shortcomings, damage, safety concerns and other issues with current road infrastructure.

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



2.2 Goals and Objectives of Asset Ownership

Council's core business is to provide services to its community. Some of these services are provided by road infrastructure assets. We have acquired road infrastructure assets through purchase, contract, construction by Council staff, and by donation of assets constructed by others to meet increased levels of service.

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a Long Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are:

- Levels of service – specifies the services and levels of service to be provided,
- Risk Management,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 ¹
- ISO 55000²

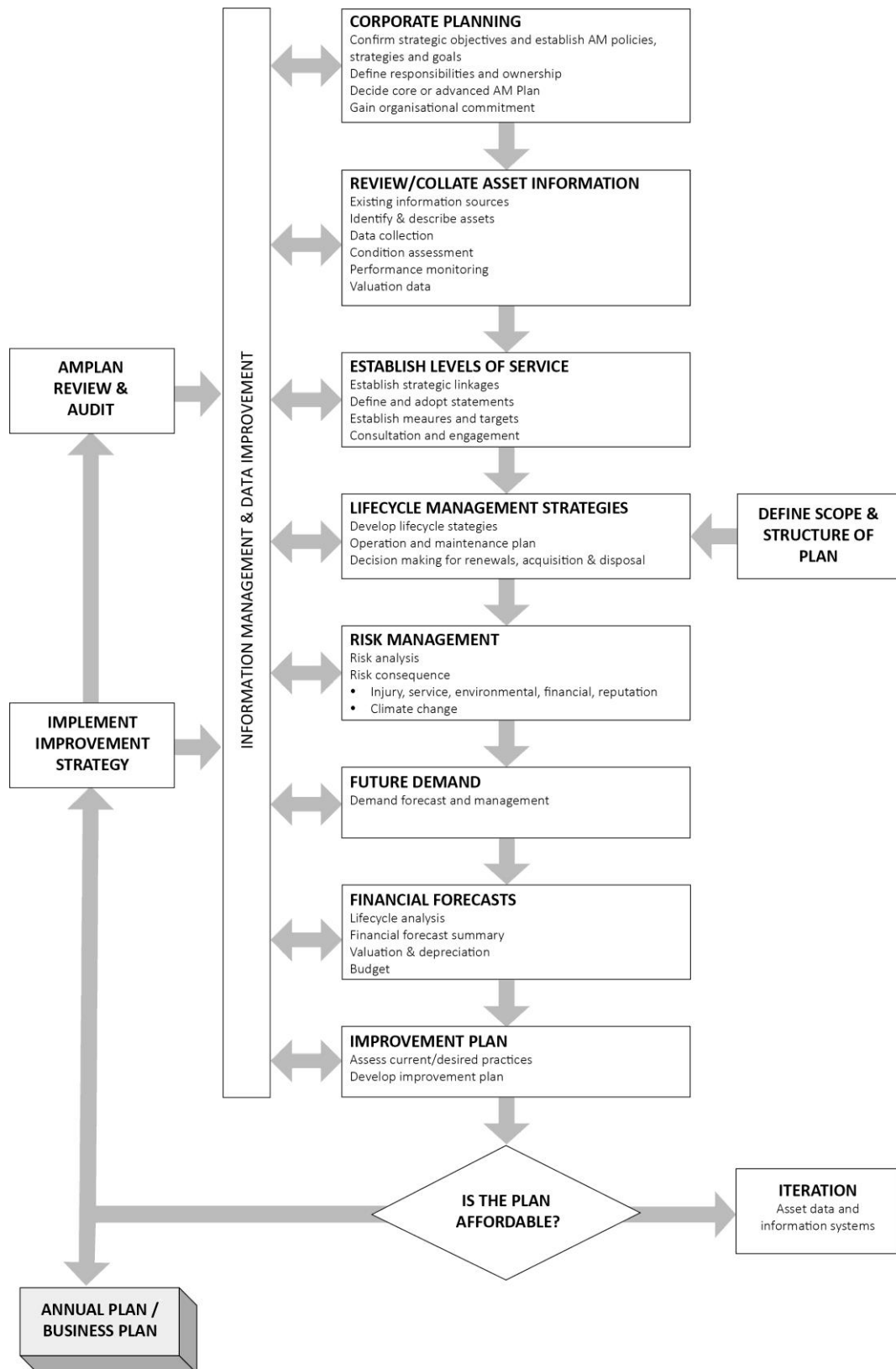
A road map for preparing an Asset Management Plan is shown below.

¹ Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2 | 13

² ISO 55000 Overview, principles and terminology

Road Map for preparing an Asset Management Plan

Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



3.0 LEVELS OF SERVICE

3.1 Customer Research and Expectations

This Asset Management Plan is prepared to facilitate consultation prior to adoption of levels of service by Council. Future revisions of the Asset Management Plan will incorporate customer consultation on service levels and costs of providing the service. This will assist Council and stakeholders in matching the level of service required, service risks and consequences with the customer's ability and willingness to pay for the service.

Council undertakes community consultation for proposed developments. Council also receives vast community feedback on the services and facilities it provides. Budget submissions are invited from local committees and community groups for Council consideration. Council's customer request system is used to determine trends in community expectations. This information is used in developing key planning documents and in allocation of budget resources.

3.2 Strategic and Corporate Goals

This Asset Management Plan is prepared under the direction of the Council's vision, mission, goals and objectives.

Our vision is:

Glamorgan Spring Bay, a welcoming community which delivers sustainable development, appreciates and protects its natural environment and facilitates a quality lifestyle.

Our mission is:

Represent and promote the interests of the communities in our municipality.

- ***Provide sound community governance, practices and processes.***
- ***Plan, implement and monitor services according to our agreed priorities and available resources.***
- ***Seek and secure additional funds, and grants to augment our finances.***
- ***Manage the finances and administer the Council.***
- ***Establish and maintain mutually beneficial strategic partnerships with State and Federal Government and private businesses and industry.***

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

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

Goal	Objective	How Goal and Objectives are addressed in the Asset Management Plan
To provide safe and reliable road infrastructure for the community to enjoy.	Maintain and develop road infrastructure to appropriate standards.	Continue to develop and maintain regular inspection of asset condition, defects and develop maintenance and capital works programs for inclusion in the Asset Management Plan. Refer Section 8.0.
Good Governance	Provide asset management services in a sustainable manner. Deliver services effectively and efficiently.	Completion, adoption and review of asset management plans (this plan)
Appropriate service levels	Identify current service levels and target sustainable levels	An ongoing task that will be monitored and improved. Refer Section 8.

Improved risk management	Identify and address all known high risk items relating to road infrastructure assets	Implement a structured approach to identify and manage significant risks. Refer Section 6.
Financial sustainability	Identify financial inefficiencies	Implement a structured approach to identifying financial inefficiencies.

3.3 Legislative Requirements

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

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a Long Term Financial Plan supported by asset management plans for sustainable service delivery.
Work Health and Safety Act 2012	Sets out the roles and responsibilities to secure the health, safety and welfare of persons at work.
Vehicle and Traffic Act 1999	Details rules, responsibilities and enforcement.
Road and Jetties Act 1935	Provides for the appointment of a Commissioner of Highways and provisions for the construction and maintenance of roads and associated assets.
Australian Road Rules	The Australian Road Rules are incorporated into the State Traffic Regulations under the Road Traffic Act.

3.4 Customer Values

Service levels are defined in three ways, customer values, customer levels of service and technical levels of service.

Customer Values indicate:

- what aspects of the service is important to the customer,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

Table 3.4: Customer Values

Service Objective:			
Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
A safe road infrastructure network	Number of customer service requests	Some safety concerns raised from community	Expected to remain similar to existing, however isolated improvements to be identified and targeted for improvement.
A smooth riding road infrastructure network	Number of customer service requests	Regular customer service requests regarding condition of several unsealed rural roads	Expected to remain similar to existing

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Condition How good is the service? What is the condition or quality of the service?

Function Is it suitable for its intended purpose? Is it the right service?

Capacity/Use Is the service over or under used? Do we need more or less of these assets?

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

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

Table 3.5: Customer Level of Service Measures

Type of Measure	Level of Service	Performance Measure	Current Performance – 2020 measures	Expected Trend Based on Planned Budget
Condition	Quality of road infrastructure network	Conditions in asset register	59 % of overall asset replacement value in 'Very Good' or 'Good' condition 25 % of overall asset replacement value in 'Fair' condition 16 % of overall asset replacement value in 'Poor' or 'Very Poor' condition	Considered to deteriorate over the planning period
	Confidence levels		Medium (professional judgement supported by data sampling)	Low (professional judgement with no data evidence)
Function	Appropriate road infrastructure in accordance with relative standards	Staff assessment and number of customer service requests	Road infrastructure generally consistent with municipal or other relevant standards, with some assets requiring improvement.	Only high priority assets that have been identified are likely to be improved over planning period, hence a gradual improvement to these assets only.
	Confidence levels		Low (professional Judgement with no data evidence)	Low (professional judgement with no data evidence)
Capacity	Appropriate amount/dimensions of road infrastructure assets	Number of customer service requests and road traffic counter data	Based on customer service requests and demand drivers, existing service level considered adequate	Expected to remain similar to existing
	Confidence levels		Medium (Professional judgement supported by data sampling)	Low (Professional judgement with no data evidence)

3.6 Technical Levels of Service

Technical Levels of Service – To deliver the customer values, and impact the achieved Customer Levels of Service, there are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

- **Acquisition** – the activities to provide a higher level of service (e.g. widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).
- **Operation** – the regular activities to provide services (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc).

- **Maintenance** – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. road patching, unsealed road grading, building and structure repairs),
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally provided (e.g. road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.³

Table 3.6 shows the activities expected to be provided under the current 10 year Planned Budget allocation, and the forecast activity requirements being recommended in this Asset Management Plan.

Table 3.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
TECHNICAL LEVELS OF SERVICE				
Acquisition	Acquire assets that align with Council's core purpose	Number of acquisitions	Council acquires assets generally on availability of external funding (state/federal) or via developer contribution (e.g. new subdivision road, footpath etc.)	Only acquire assets that align with Council's core purpose and that Council can afford to maintain, operate, renew and/or dispose of (must consider full asset lifecycle costs)
		Budget	<i>\$0 per year</i>	<i>\$0 per year</i>
Operation	Keep roads and footpaths clear of debris – e.g. street sweeping and keeping drains clear.	Number of customer service requests	Varying frequency based on a number of factors, but primarily weather. (Street sweeping occurs twice yearly on average)	Current performance is considered adequate based on user feedback
	Provide timely emergency response to assist public and minimise disruption caused by temporary loss of use of asset	Community feedback	User feedback suggests current performance is adequate	Current performance is considered adequate based on user feedback
		Budget	<i>\$Incorporated in Operations and Maintenance values</i>	<i>\$ Incorporated in Operations and Maintenance values</i>
Maintenance	Keep road infrastructure assets serviceable	Frequency of maintenance	Combination of reactive maintenance (weather and customer service	Planned maintenance program be developed based on condition and road hierarchy.

³ IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
			request dependent) and informal maintenance program.	Additional grader operator required to maximise use of machinery (grader) and increase amount of roads maintained each year.
	Keep road infrastructure assets safe.	Frequency of maintenance	Reactive minor repairs and minor upgrades are undertaken	Planned maintenance program be developed based on condition and road hierarchy. Additional grader operator required to maximise use of machinery (grader) and increase amount of roads maintained each year.
		Budget Includes Operations	<i>\$2,006,000 per year (average over 10 years)</i>	<i>\$2,006,000 per year (average over 10 years)</i>
Renewal	Ensure road infrastructure assets remain in a serviceable condition	Frequency of renewal	Assets are renewed on a priority basis depending on asset condition and customer service requests, but rarely planned more than a year in advance – no formal schedule of works/work plan	Works schedule developed and a strategic renewal plan developed for planning period (using renewal priority ranking criteria – refer Table 5.3.1), updated yearly.
	Ensure road infrastructure assets remain in accordance with current standards	Frequency of renewal (including component renewal – e.g. bridge guardrail)	Assets are renewed on a priority basis depending on asset condition and customer service requests, but rarely planned more than a year in advance – no formal schedule of works/work plan	Works schedule developed and a strategic renewal plan developed for planning period (using renewal priority ranking criteria – refer Table 5.3.1), updated yearly.
		Budget	<i>\$1,351,000 per year</i>	<i>\$1,351,000 per year</i>
Disposal	Identify assets and activities that do not align with Council's core purpose	Number of assets and activities identified for disposal	No disposals are currently planned	Continue to monitor assets for potential disposals that do not align with Council's core purpose.
	Dispose of assets and activities that do not align with Council's core purpose	Number of identified asset and activity disposals undertaken	No disposals are currently planned	Continue to monitor assets for potential disposals that do not align with Council's core purpose.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
		Budget	<i>\$0 per year</i>	<i>\$0 per year</i>

Note: * Current activities related to Planned Budget.

** Expected performance related to forecast lifecycle costs.

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology growth and customer priorities will change over time.

4.0 FUTURE DEMAND

4.1 Demand Drivers

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

4.2 Demand Forecasts

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

Population of the Glamorgan Spring Bay Local Government Area was last estimated in 2021 to be 5012. Figure 4.2 below shows the projected population over the planning period. Analysis of this figure shows a slight projected rise in population to approximately 5,350 around 2030 and then a gradual decline to around 5,070 at the end of the planning period (2041). Hence, it is anticipated that there will be little need for change to the adopted 'Levels of Service' relating to population growth.

Glamorgan/Spring Bay Projections – Medium Series

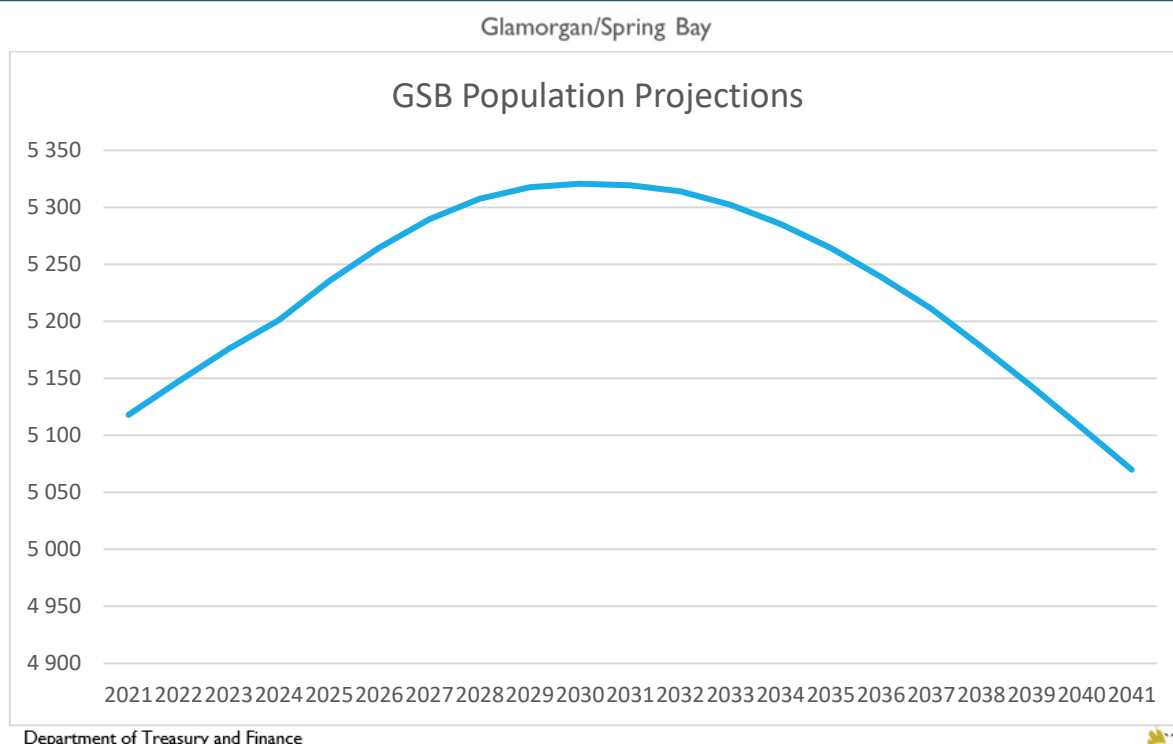


Figure 4.2 – Department of Treasury and Finance – Glamorgan Spring Bay population projections (medium series).

It is considered that the existing capacity of the road network is sufficient to meet demands over the planning period.

However, there are some specific concerns for Council at present, these being:

(a) **Impact of increased National Park visitation** – over time traffic volumes have significantly increased on what were once either Local Access (Category 3) or Limited Local Access (Category 4) Roads into National Parks (refer Table 5.2.2 for road hierarchy classifications). There are two national parks where this is of concern, being, Douglas-Apsley National Park and Freycinet National Park. The related roads are Rosedale Road, Friendly Beaches Road and Freycinet Drive. These roads now carry traffic volumes equivalent to a Link (Category 1) or

Collector (Category 2) roads with an associated increase in maintenance costs. The design standard of these roads is often less than that required for a Link or Collector type road. Over 90 % of traffic on these roads are visitors to the National Parks, however no direct form of income or contribution is provided to Council to offset the associated increased costs to Council. It is recommended that this is sought from the state government.

(b) Maintenance of Limited Local Access Roads (Category 4 – refer Table 5.2.2) – where Council maintains a road or section of road serving a small number of properties, especially where this is only one or two properties. This generally refers to longer roads of several hundreds of metres, or kilometres, in length, where there is a significant maintenance cost to Council.

(c) Forest harvesting - where the harvesting of forests generates significant increased volumes of heavy vehicles (log trucks) on specific roads. The additional loadings placed on these roads results in increased maintenance costs and the premature failure of pavements, especially during wet periods. Roads identified where this is occurring are – Buckland Road, Nugent Road, Levendale Back Road, and Cutting Grass Road.

4.3 Demand Impact and Demand Management Plan

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

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

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

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	5,012 people in 2021.	Refer Figure 4.2	The change is not foreseen to impact services	No impact to services, hence management plan is not required.
Demographic	Median age of 57 years (2021)	Increase in median age to approx. 65 years by 2041	The change is not foreseen to impact services	No impact to services, hence management plan is not required.
Climate change	Experiencing more extreme weather patterns and events	Continue to experience increased frequency and intensity of extreme weather events	Increased maintenance and renewal costs due to flood damage.	Identify list of strategic improvements to reduce the risk of ongoing damage.
Upgrade in Tasmanian Municipal Standard Drawings	Currently unaudited	Some upgrades required over planning period	Increased renewal costs to meet with current standards	Identify upgrades required to meet with current municipal standards, prioritise these accordingly and include in the planned budget
Tourism	Tourist region (domestic and international visitors)	Tourist visitation expected to increase over planning period	Increased safety, signage and overall standard of road infrastructure	To be monitored over next five years

4.4 Asset Programs to meet Demand

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

Acquiring new assets will commit Council to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the Long Term Financial Plan (Refer to Section 5).

4.5 Climate Change Adaptation

The impacts of climate change will have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Plan, climate change can be considered as both a future demand and a risk.

How climate change impacts on assets varies depending on the location and the type of services provided, as does the way in which we respond and manage those impacts.⁴

As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 4.5.1

Table 4.5.1 Managing the Impact of Climate Change on Assets and Services

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Increased frequency and intensity of extreme rainfall events	Upgrade to some road infrastructure assets required	Increased drainage upgrade and maintenance costs	Prioritise susceptible sites for improvement works to reduce vulnerability
Sea level rise	0.24 m (2050) and 0.92 m (2100) sea level rise (planning allowances)	Serviceability of some road infrastructure assets threatened by projected sea level rise	Develop a register of assets likely to be affected by the projected sea level rise and plan for resilience building when due for renewal.

Additionally, the way in which we construct new assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint

Table 4.5.2 summarises some asset climate change resilience opportunities.

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

Table 4.5.2 Building Asset Resilience to Climate Change

New Asset Description	Climate Change impact on these assets?	Build Resilience in New Works
Roads	Increased flood damage	Flood resilient road renewals where practicable
Open Drains	Construct to higher standard	More rock lined drains to combat erosion and rework

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this Asset Management Plan.

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing life cycle costs.

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this Asset Management Plan are shown in Table 5.1.1.

Table 5.1.1: Assets covered by this Plan

Asset Category	Length/Number of Assets	Replacement Value
Sealed Roads	179.153 km	\$41,922,772
Unsealed Roads	201.470 km	\$16,587,512
Footpaths	28.71 km (nominal)	\$4,988,911
Kerb and channel	76.670 km	\$10,561,006
TOTAL	-	\$74,060,201

All figure values are shown in current day dollars.

The age profile of the assets included in this Asset Management Plan would normally be shown in Figure 5.1.1. below, however due to construction dates of road infrastructure assets being largely unknown, this graph is not shown. This is noted for improvement in Section 8.0. This graph would normally outline past peaks of investment that may require peaks in renewals in the future.

Figure 5.1.1: Asset Age Profile

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5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there are insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Old Coach Road, Wielangta Road, Rheban Road, Sand River Road	Road lane width reduced due to collapse of internal corner shoulders
Friendly Beaches Road – Coles Bay Road intersection	Deficient intersection, requires safety improvements.
Numerous roads	Pavement failures increasing in frequency and severity creating hazardous conditions, reducing trafficable speed
Council wide	Open drain functionality failures due to frequent repeat storm events

The above service deficiencies were identified from staff knowledge, the recent condition assessment undertaken by *Pitt&Sherry* (October 2020) and user feedback.

5.1.3 Asset condition

The most recent condition assessment of Council roads, footpaths, kerb and channel was undertaken by *Pitt&Sherry* in October 2020. This involved driving (and walking for footpaths) the extent of the Council road network, photographing the complete road network and assigning condition based on visual inspection. This condition assessment was then fed back into Council's *myData* asset management system. This type of comprehensive road condition assessment has not been undertaken by Council in recent times, however Council will endeavour to undertake a comprehensive condition assessment every four years, hence the next will be due in 2024.

Condition is measured using a 1 – 5 grading system⁵ as detailed in Table 5.1.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the Asset Management Plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.1.3: Condition Grading System

Condition Grading	Description of Condition
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor defects, increasing maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, higher order cost intervention likely
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required

The condition profile of all road infrastructure assets is shown in Figure 5.1.3.

Figure 5.1.3: Asset Condition Profile (all Road Infrastructure assets) (not updated from 2020)

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

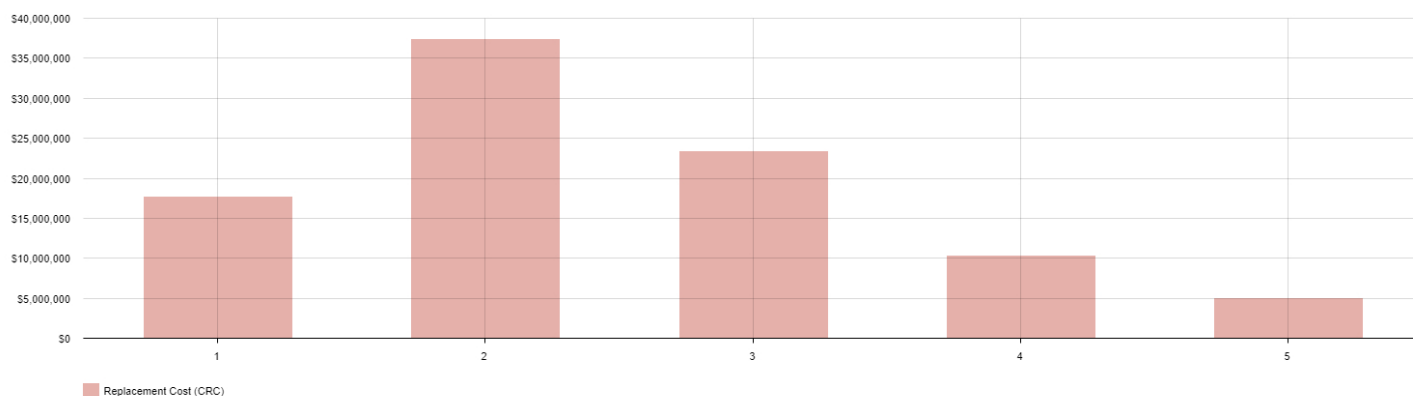


Figure 5.1.3 shows approximately **59 %** of Council's total road infrastructure asset value is in '**very good**' or '**good**' condition (refer Table 5.1.3), **25 %** in '**fair**' condition, and **16 %** in a '**poor**' or '**very poor**' condition. There is approximately **\$5M** of asset value currently in '**very poor**' condition that is overdue for renewal.

All figure values are shown in current day dollars.

5.2 Operations and Maintenance Plan

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

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pothole or patch repairs, minor timber bridge deck works and grading of unsealed roads.

The trend in maintenance budgets are shown in Table 5.2.1.

Table 5.2.1: Operation and Maintenance Budget Trends

Year	O&M Budget \$
2021-22	\$1,844,995
2022-23	\$2,006,697
2023-24	\$2,006,697

Subject to increasing the capital renewal budget, maintenance budget levels are considered to be adequate to meet long-term projected service levels, which may be less than or equal to current service levels. Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified and are highlighted in this Asset Management Plan. Reference should also be made to Council's Risk Management Policy and Risk Management Strategy (adopted in June 2020).

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

Asset hierarchy

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The hierarchy includes the asset class and component used for asset planning and financial reporting and service level hierarchy used for service planning and delivery.

The service hierarchy is shown in Table 5.2.2. Refer Appendix G for further details.

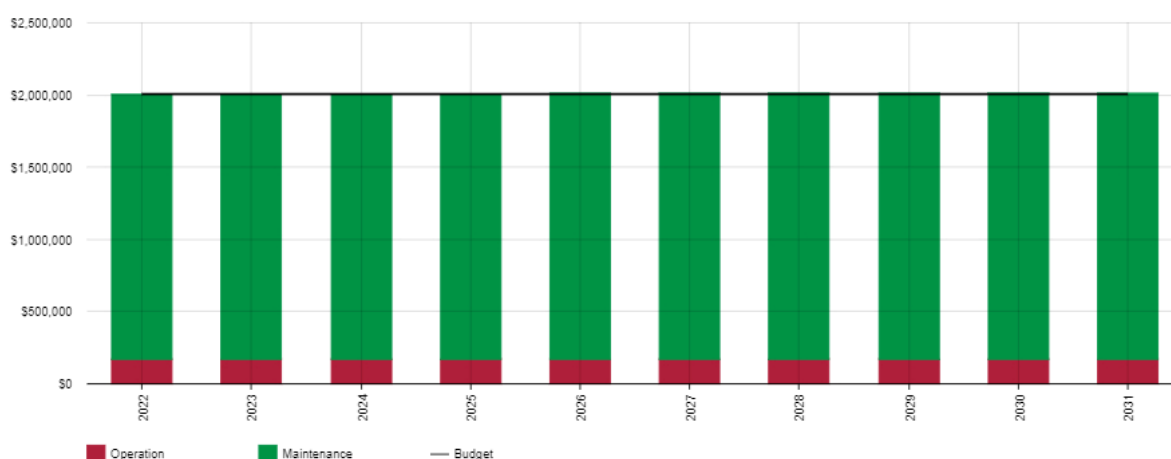
Table 5.2.2: Asset Service Hierarchy

Service Hierarchy	Definition	Service Level Objective
Category 0 – Arterial Road	Department of State Growth 'arterial' roads, which generally form 'main roads' through townships where they form part of highway or 'A' transport routes. These include the Tasman Highway (including through townships), Lake Leak Road, Coles Bay Road and Freestone Road.	<ul style="list-style-type: none"> These <u>are not</u> Council roads.
Category 1 – Link Road (Refer Appendix G for example)	Council's most important roads. Highest traffic volumes roads which link significant areas in the municipality, but are generally limited to roads within each of the townships (excludes Category 0 roads). Higher number of heavy vehicles use these roads.	<ul style="list-style-type: none"> Functionality – Must function as intended at all times, with no down time tolerated. Financial – Maximum efficiency of maintenance is required, to minimise expenditure in achieving the desired outcomes.
Category 2 – Collector Road (Refer Appendix G for example)	Carry moderate volumes of traffic and provide access by linking urban areas to Link (Category 1) and Arterial (Category 0) roads. They may also provide links between the various Collector roads. They generally carry limited through traffic.	<ul style="list-style-type: none"> Functionality – Must function as intended at all times, with a low probability of interruption to service. Financial – Primary aim is to maximise the long term economic performance of the asset. Renewal and maintenance planning should ensure level of service is maintained.
Category 3 – Local Access Road (Refer Appendix G for example)	Those roads whose primary function is to provide access to a number of properties and they cater for relatively short distance travel to higher Category 0-2 roads.	<ul style="list-style-type: none"> Functionality – Minor failures/defects, excluding those which bring a threat to safety or security, can be tolerated. Financial - Primary aim is to maximise the long term economic performance of the asset. Renewal and maintenance planning should be in a strategic framework, and decision taken on a life cycle basis.
Category 4 – Limited Local Access Road (Refer Appendix G for example)	Those roads whose primary function is to provide access to a small number of properties, sometimes even just one property, and have minimal traffic (less than Local Access Roads). Generally these are 'no through roads'.	<ul style="list-style-type: none"> Functionality – Minor failures/defects, excluding those which bring a threat to safety or security, can be tolerated. Financial – Single vehicle access only. Limitation of short term maintenance costs is the primary objective.

Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.2 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 5.2: Operations and Maintenance Summary



All figure values are shown in current day dollars.

As can be seen in Figure 5.2, maintenance cost forecasts are equal to the planned budget.

Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) should be included in Section 6.0 of this plan where this poses a ‘high’ or ‘very high’ risk to Council – Refer Table 6.2.

5.3 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (current replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.3. Asset useful lives were last reviewed in November 2020. It is to be noted that these are typical values and individual values in asset registers vary.

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
Sealed road surfaces	15 years
Unsealed road pavement	12 years
Sealed road base	90 years
Unsealed road sub-base	180 years
Footpaths	70 years

Kerb and channel	70 years
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The estimates for renewals in this Asset Management Plan were based on the asset register.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a playground).⁶

It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.⁷

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

Table 5.3.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Condition	25 %
Usage/demand	25 %
High maintenance costs that could be reduced significantly by renewal	30 %
Risk/safety/failure consequence	20 %
Total	100%

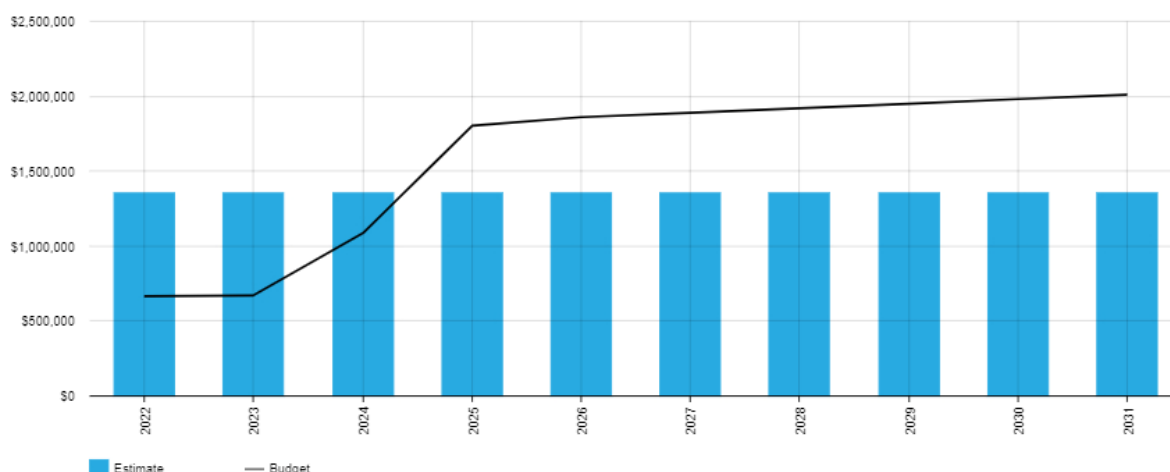
5.4 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.4.1. A detailed summary of the forecast renewal costs is shown in Appendix D.

Figure 5.4.1: Forecast Renewal Costs

⁶ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

⁷ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.



All figure values are shown in current day dollars.

The forecast renewal costs are greater than the proposed renewal budget in the short term however over the planning period funding will catch up and the renewal backlog can be addressed, this is highlighted in Figure 5.4.1.

The lifecycle forecast is essentially the total foreseen renewal costs over the planning period, divided by the planning period (20 years) to give an annual average. There are numerous assets that are currently overdue or due for renewal and are in very poor condition, however Council cannot afford to renew all these assets at once, so they are to be prioritised and then gradually renewed over the planning period. This will mean a number of assets will remain in a very poor condition for several more years, until renewal works can be undertaken.

5.5 Acquisition Plan

Acquisitions are new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, social or environmental needs. Assets may also be donated to Council (e.g. roads, kerbs, footpaths etc. associated with a new subdivision).

5.5.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to Council's needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.5.1.

Table 5.5.1: Acquired Assets Priority Ranking Criteria

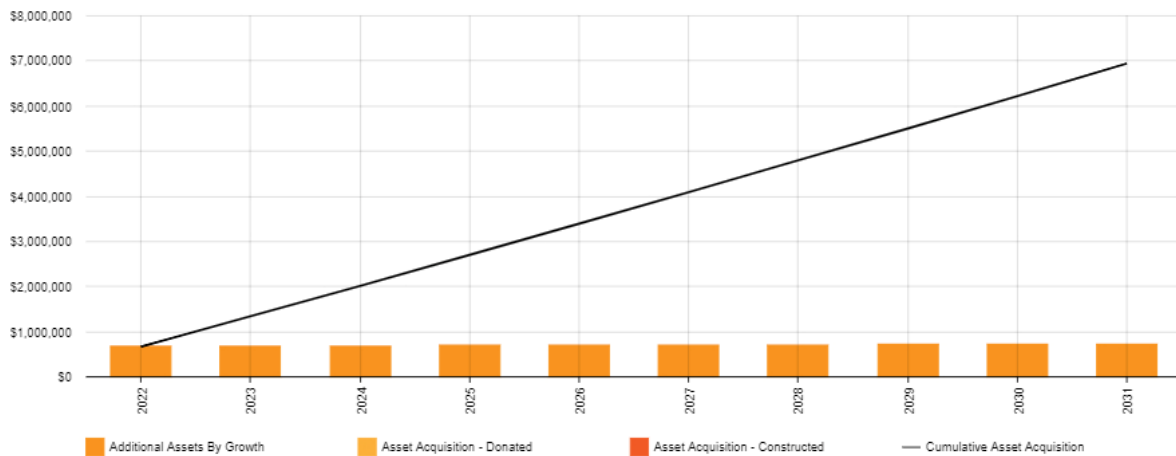
Criteria	Weighting
Is the acquisition in line with Council's core purpose?	30 %
Necessity/demand	25 %
Are lifecycle costs known and funds available in planned budget?	25 %
Risk consequence of not providing	20 %
Total	100%

Summary of future asset acquisition costs

There are currently no acquisitions for road infrastructure assets forecasted over the planning period, hence no budget has been assigned to asset acquisition.

When Council commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by Council. The cumulative value of all acquisition work, including assets that are constructed by Council and assets donated by others are shown in Figure 5.5.2.

Figure 5.5.2: Acquisition Summary



All figure values are shown in current dollars.

Expenditure on new assets and services in the capital works program will be accommodated in the Long Term Financial Plan, but only to the extent that there is available funding.

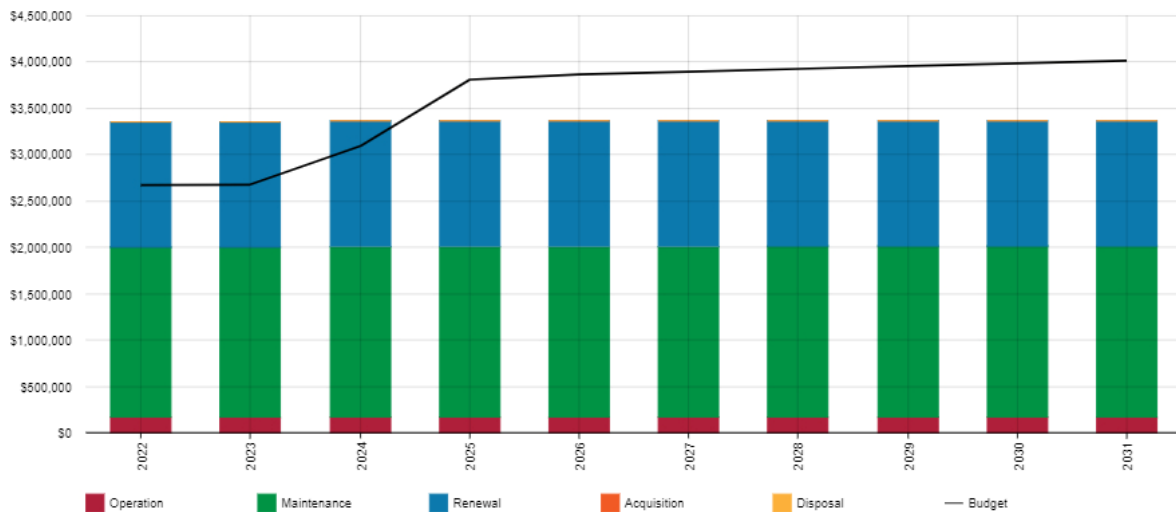
Though not noted in this plan, Council will likely have some 'constructed' acquisitions over the planning period, however these are estimated to mostly be things like road widening of an existing road, or sealing a previously unsealed road (a new component to an existing asset). These acquisition costs are currently unknown however some allowance for this is included in the planned budget for renewals. Once known these forecasts acquisition costs (constructed) should be separated out in future revisions of this plan.

Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 5.5.3. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

Figure 5.5.3: Lifecycle Summary



All figure values are shown in current day dollars.

As can be seen in Figure 5.5.3, the forecasted lifecycle costs exceed the planned budget (black line) in the short term. The forecast lifecycle costs for renewal is the main reason for the shortfall between the planned budget and the lifecycle costs.

5.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 5.6. Any costs or revenue gained from asset disposals is included in the Long Term Financial Plan.

Table 5.6: Assets Identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
Nil	N/A	N/A	N/A	N/A

6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’⁸.

An assessment of risks⁹ associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 6.1. Failure modes may include physical failure, collapse or essential service interruption.

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
Link roads and collector roads	Flooding, land slips, defects etc.	Essential transport services disrupted

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 Risk Assessment

The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

⁸ ISO 31000:2009, p 2

⁹ Refer GSBC Risk Management Policy and GSBC Risk Management Strategy (June 2020)

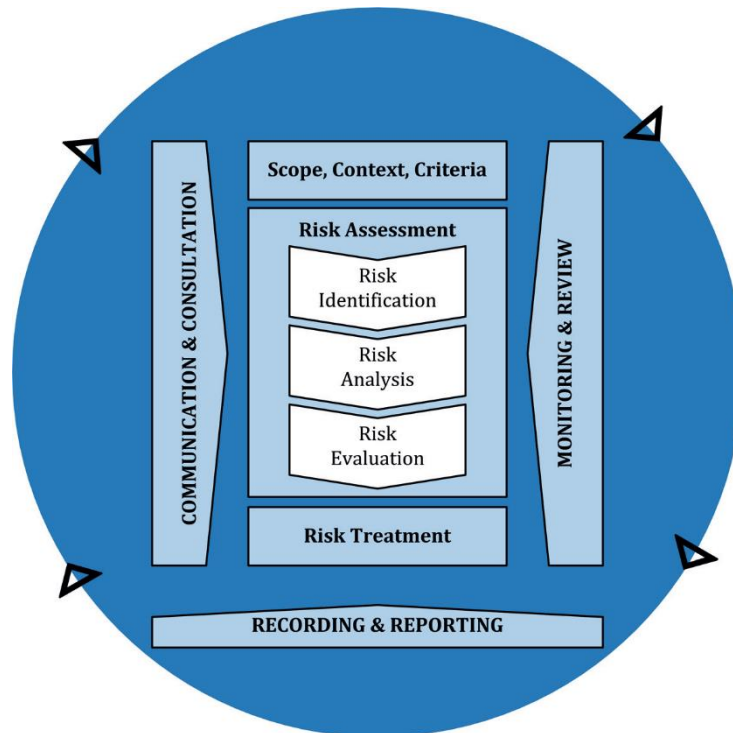


Fig 6.2 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks¹⁰ associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

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

¹⁰ Refer GSBC Risk Management Policy and GSBC Risk Management Strategy (June 2020)

Table 6.2: Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Road Infrastructure	Loss of key staff/knowledge	H	Develop a succession plan, document knowledge and improve record keeping	L	\$75,000
Road Infrastructure	Underfunding (deterioration of asset condition) and lack of staff to undertake proper asset management.	H	Ensure prioritised renewal/acquisition works	L	\$1,350,000 annual renewal
Road Infrastructure	Increased frequency of flood damage to assets	H	Improve vulnerable assets	M	\$1,000,000
Road Infrastructure	Council are gifted assets with life cycle costs not accounted for in Long Term Financial Plan	H	Ensure lifecycle costs are considered (and detailed independent engineering report sought) prior to accepting and seek contribution from previous owner where appropriate	L	\$5,000
Road infrastructure	Comprehensive condition assessment every 4 years	H	Maintain and renew assets based on condition assessments and hierarchy. Develop strategic work plan	L	\$80,000

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

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Resilience recovery planning, financial capacity, climate change risk assessment and crisis leadership.

We do not currently measure our resilience in service delivery. This will be included in future iterations of the Asset Management Plan.

6.4 Service and Risk Trade-Offs

The decisions made in adopting this Asset Management Plan are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 What we cannot do

There are some operations, maintenance and capital works (acquisition and renewal) that are unable to be undertaken within the next 10 years. These include:

- We cannot undertake road renewals and maintenance at the rate required to maintain the current level of service.
- We cannot afford to undertake patching type maintenance work on a large number of roads instead of using this money for full renewal of a lower number of higher priority roads. A long term works plan, based on priority weightings shown in Table 5.3.1 is required.
- We cannot acquire assets where there is no planned budget assigned to service the full lifecycle costs (acquisition, operation, maintenance, renewal and disposal) over the planning period. A recent example of this is the acquisition of Wielangta Road.

6.4.2 Service trade-off

If there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, then this will result in service consequences for users. The service consequences will generally be a reduction in level of service provided.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- A reduction to the level of service provided
- Reputational consequences

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

7.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this Asset Management Plan. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the Asset Management Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years), and
- Medium term forecast costs/proposed budget (over 10 years of the planning period).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio¹¹ **106.77%**

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 106.77% of the funds required for the optimal renewal of assets.

The forecast renewal work along with the proposed renewal budget, and the cumulative shortfall, is illustrated in Appendix D.

Medium term – 10 year financial planning period

This Asset Management Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is **\$3,363,226** on average per year.

The proposed (budget) operations, maintenance and renewal funding is **\$3,590,720** on average per year giving a 10 year funding surplus of **\$227,546** per year. This indicates that **106.77%** of the forecast costs needed to provide the services documented in this Asset Management Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the Asset Management Plan and ideally over the 10 year life of the Long Term Financial Plan.

7.1.2 Forecast Costs (outlays) for the Long Term Financial Plan

Table 7.1.2 shows the forecast costs (outlays) required for consideration in the 10 year Long Term Financial Plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the Long Term Financial Plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the Asset Management Plan (including possibly revising the Long Term Financial Plan).

¹¹ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

We will manage the 'gap' by developing this Asset Management Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community.

Forecast costs are shown in 2020/21 financial year dollar values.

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

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2022	0	\$173,000	\$1,833,695	\$1,351,000	0
2023	0	\$173,000	\$1,834,895	\$1,351,000	0
2024	0	\$173,000	\$1,836,105	\$1,351,000	0
2025	0	\$173,000	\$1,837,327	\$1,351,000	0
2026	0	\$173,000	\$1,838,559	\$1,351,000	0
2027	0	\$173,000	\$1,839,803	\$1,351,000	0
2028	0	\$173,000	\$1,841,058	\$1,351,000	0
2029	0	\$173,000	\$1,842,324	\$1,351,000	0
2030	0	\$173,000	\$1,843,601	\$1,351,000	0
2031	0	\$173,000	\$1,844,890	\$1,351,000	0
2032	0	\$173,000	\$1,844,890	\$1,351,000	0
2033	0	\$173,000	\$1,844,890	\$1,351,000	0
2034	0	\$173,000	\$1,844,890	\$1,351,000	0
2035	0	\$173,000	\$1,844,890	\$1,351,000	0
2036	0	\$173,000	\$1,844,890	\$1,351,000	0
2037	0	\$173,000	\$1,844,890	\$1,351,000	0
2038	0	\$173,000	\$1,844,890	\$1,351,000	0
2039	0	\$173,000	\$1,844,890	\$1,351,000	0
2040	0	\$173,000	\$1,844,890	\$1,351,000	0
2041	0	\$173,000	\$1,844,890	\$1,351,000	0

7.2 Funding Strategy

The proposed funding for assets is outlined in the Council's budget and Long Term Financial Plan.

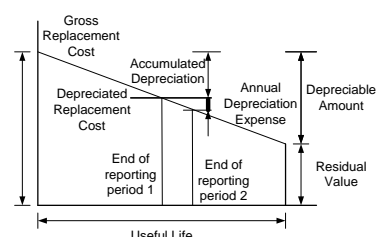
The financial strategy of Council determines how funding will be provided, whereas the Asset Management Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset valuations

The best available estimate of the value of road infrastructure assets included in this Asset Management Plan is shown below:

Replacement Cost (Current/Gross)	\$74,060,200
Depreciable Amount	\$74,060,200
Depreciated Replacement Cost ¹²	\$46,137,424
Annual Depreciation Expense	\$1,443,441



7.3.2 Valuation forecast

Asset values are forecast to slightly increase over the planning period as additional assets are acquired by Council (generally donated from land developers as new sub-division road infrastructure assets are constructed, or as new assets constructed by Council).

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

7.4 Key Assumptions Made in Financial Forecasts

In compiling this Asset Management Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this Asset Management Plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this Asset Management Plan are:

- Assume external funding (grants) will continue to be a major source of funding for renewals and major maintenance, noting a known gradual reduction in some of these grants over the planning period.
- Financial data used in the development of this plan was from the end of the 2019-20 financial year, with some amendments made based on asset condition assessment data received in November 2020.
- Assume no additional major road infrastructure assets will be acquired by Council in the next 10 year period (excluding assets related to new subdivisions). If this changes the Asset Management Plan is to be updated to reflect this.
- No major acquisitions are to be undertaken during the planning period without full condition and detailed lifecycle costing knowledge and allocation in planned budget to meet these costs.
- Several gross assumptions were required in the derivation of planned budget and lifecycle forecast figures. This is due to the quality of financial information currently available.
- Professional judgement has been applied in the absence of good quality data, however where applied, it has been noted for improvement in Section 8.0.
- All figures are presented in current day dollars.

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this Asset Management Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on an A - E level scale¹³ in accordance with Table 7.5.1.

¹² Also reported as Written Down Value, Carrying or Net Book Value.

¹³ IPWEA, 2015, IIMM, Table 2.4.6, p 2 | 71.

Table 7.5.1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate $\pm 2\%$
B. High	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate $\pm 10\%$
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated $\pm 25\%$
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy $\pm 40\%$
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this Asset Management Plan is shown in Table 7.5.2.

Table 7.5.2: Data Confidence Assessment for Data used in Asset Management Plan

Data	Confidence Assessment	Comment
Demand drivers	Medium	Requires Council input, review and acceptance
Growth projections	High	State government provided projections used
Acquisition forecast	Low	Several gross estimates and assumptions made. Requires review on provision and improvement of financial data
Operation forecast	Low	Several gross estimates and assumptions made. Requires review on provision and improvement of financial data
Maintenance forecast	Low	Several gross estimates and assumptions made. Requires review on improvement of financial data
Renewal forecast - Asset values	Low to Medium	Based on Assetic/MyData database
- Asset useful lives	Low to Medium	Work needed in this area to validate data
- Condition modelling	Medium	Based on 2020 <i>Pitt&Sherry</i> (road, footpath, kerb) condition assessments – no seal assessment included
Disposal forecast	High	No disposals are currently forecasted over the planning period

The estimated confidence level for and reliability of data used in this Asset Management Plan is considered to be **Low** to **Medium** (refer Table 7.5.1).

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices¹⁴

8.1.1 Accounting and financial data sources

This Asset Management Plan utilises accounting and financial data. The source of the data is Council's financial management system XERO.

8.1.2 Asset management data sources

This Asset Management Plan also utilises asset management data. The source of the data is generally from Council's asset management software *MyData*, but also utilises data from *MapInfo* (Geographic Information System), and individual asset registers.

8.2 Improvement Plan

It is important that Council recognise areas of their Asset Management Plan and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this Asset Management Plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Council to take on partial management of road, footpath, kerb and channel assets in <i>MyData</i> software (previously done by Brighton Council).	Director of Infrastructure	Technical Officer/External consultant assistance	July 2023
2	Develop maintenance and capital works programs for upcoming year. Use to inform Asset Management Plan and Long Term Financial Plan updates.	Director of Infrastructure, Works Manager, Works Supervisor	Accountant, Works Manager, Works Supervisor	June 2023
3	Assess yearly performance (budgeted vs. actual costs) and update Asset Management Plan and Long Term Financial Plan accordingly.	Director of Infrastructure	General Manager, Accountant, Director of Infrastructure	July 2023
4	Increase accuracy of budget breakdown to include acquisitions, maintenance, operations, renewals and disposals. Aim for better transparency.	Accountant	Accountant, Director of Infrastructure	September 2023
5	Estimate date built/last renew date and renewal costs for assets with missing information. Improve confidence in renewal costs.	Director of Infrastructure	Technical Officer/External consultant	September 2023
6	Improve confidence in financial data used in Long Term Financial Plan and Asset Management Plan – this is foreseen to involve improved recording of acquisition, operations, maintenance, renewal and disposal asset lifecycle activities within XERO (accounting software) so accurate costs can be developed.	Accountant	Accountant, Director of Infrastructure Works Manager, Works Supervisor	December 2023

¹⁴ ISO 55000 Refers to this as the Asset Management System

7	Community/Council consultation required to ensure appropriate levels of service are being provided (reduce/improve level of service accordingly)	General Manager	Internal	June 2024
8	Undertake detailed condition assessment of roads, footpaths, kerb and channel	Director of Infrastructure	Asset Management Engineer (not currently funded)	October 2024
9	Continually improve correlation between Long Term Financial Plan and Asset Management Plan. (Conduct regular meetings of responsible persons – aim for 'high' confidence level)	General Manager, Accountant, Director of Infrastructure	General Manager, Accountant, Director of Infrastructure	Ongoing
10	Continue to update useful lives in <i>MyData</i> , based on condition assessment data.	Director of Infrastructure	Director of Infrastructure, Technical Officer	Ongoing
11	Increase confidence and maturity of Asset Management Plan	Director of Infrastructure	Internal	Ongoing

8.3 Monitoring and Review Procedures

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

The Asset Management Plan will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long Term Financial Plan or will be incorporated into the Long Term Financial Plan once completed.

The Asset Management Plan has a maximum life of 4 years and is due for complete revision and updating within 6 months of each Council election.

8.4 Performance Measures

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

- The degree to which the required forecast costs identified in this Asset Management Plan are incorporated into the Long Term Financial Plan,
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the Asset Management Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the organisational target (this target is often 90 – 100%).

9.0 REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
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- IPWEA, 2020 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2012, Practice Note 6 Long Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, <https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6>
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- ISO, 2014, ISO 55000:2014, Overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- '10-year Strategic Plan 2020-2029'
- '2020-2021 Annual Plan' (incl. budget).

10.0 APPENDICES

Appendix A Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source

A key assumption in the writing of this Asset Management Plan is that no major standalone acquisitions are forecast to be undertaken during the planning period. Given future demand (discussed in Section 4), Council's current financial position and available budget, a strategy of minimising acquisitions (for road infrastructure assets) over the planning period is recommended.

The 'donated' acquisition forecast summary estimate is based on the completion (by others/developer) of a moderate sized subdivision each year over the planning period (for cost estimate purposes the asset replacement cost for the Aqua Sands Drive subdivision in Swansea were used (road, footpath, kerb).

Several gross estimates and assumptions were required to be made in the acquisition forecast figures due to the quality of financial and forecast information currently available. This has been noted for improvement in Section 8.0.

A.2 – Acquisition Project Summary

Currently unknown – refer to A.1.

A.3 – Acquisition Forecast Summary

Table A3 displays the forecast acquisition value each year over the planning period.

Table A3 - Acquisition Forecast Summary

Year	Constructed	Donated	Growth
2022	0	\$666,542	0
2023	0	\$672,541	0
2024	0	\$678,594	0
2025	0	\$684,701	0
2026	0	\$690,863	0
2027	0	\$697,081	0
2028	0	\$703,355	0
2029	0	\$709,685	0
2030	0	\$716,072	0
2031	0	\$722,517	0
2032	0	\$728,399	0
2033	0	\$734,618	0
2034	0	\$740,837	0
2035	0	\$747,056	0
2036	0	\$753,275	0
2037	0	\$759,494	0
2038	0	\$765,713	0
2039	0	\$771,932	0
2040	0	\$778,151	0
2041	0	\$784,370	0

Appendix B Operation Forecast

The present collection mechanisms for costs are not sufficiently developed to separate costs into categories for a detailed analysis of operations and maintenance.

B.1 – Operation Forecast Assumptions and Source

Several gross estimates and assumptions were required to be made in the operation forecast figures due to the quality of financial information currently available (poor tracking of operational costs relating to road infrastructure assets). This has been noted for improvement in Section 8.0.

B.2 – Operation Forecast Summary

Table B2 displays the forecast operation and maintenance costs each year over the planning period and includes costs for 'Additional Operation Forecast' which is a percentage of the 'donated' asset acquisitions value forecast over the planning period and this represents additional funds required to 'operate' these acquired assets.

Table B2 - Operation & Maintenance Forecast Summary

Year	Operation and Maintenance Forecast
2022	1,833,695
2023	1,834,895
2024	1,836,105
2025	1,837,327
2026	1,838,559
2027	1,839,803
2028	1,841,058
2029	1,842,324
2030	1,843,601
2031	1,844,890
2032	1,846,067
2033	1,847,310
2034	1,848,554
2035	1,849,798
2036	1,851,042
2037	1,852,286
2038	1,853,530
2039	1,854,773
2040	1,856,017
2041	1,857,261

Appendix C Maintenance Forecast (see combined data of Appendix B)

The present collection mechanisms for costs are not sufficiently developed to separate costs into categories for a detailed analysis of operations and maintenance.

C.1 – Maintenance Forecast Assumptions and Source

Several gross estimates and assumptions were required to be made in the maintenance forecast figures due to the quality of financial information currently available (poor tracking of maintenance costs relating to road infrastructure assets). This has been noted for improvement in Section 8.0.

C.2 – Maintenance Forecast Summary

Table C2 displays the forecast maintenance costs each year over the planning period. Note the 'Additional Maintenance Forecast' is a percentage of the 'donated' asset acquisitions value forecast over the planning period and this represents additional funds required to maintain these acquired assets.

Table C2 - Maintenance Forecast Summary

The present collection mechanisms for costs are not sufficiently developed to separate costs into categories for a detailed analysis of operations and maintenance.

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

The renewal forecast of \$1,351,683 per year is based on the total sum of the forecasted renewal costs averaged over the planning period. This includes the renewal of all assets over their useful life. Refer also improvement plan in Section 8.0.

D.2 – Renewal Project Summary

The below combined values are extracts from the road infrastructure asset registers and show assets that have reached the end of their useful life and create a backlog. Further professional judgement will be required in prioritising the individual road segment renewals over the planning period, refer also Table 5.3.1.

All figures shown are in current day dollars.

- Road seal: \$2.318M due or overdue for renewal
- Road Seal: \$1.973M additional fall due for renewal in 2013

D.3 – Renewal Forecast Summary

Table D3 displays the forecast renewal costs and planned budget each year over the planning period. The renewal forecast is \$225,000 (per year) higher than the forecast renewal budget.

Table D3 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2022	\$1,351,000	\$665,433
2023	\$1,351,000	\$670,722
2024	\$1,351,000	\$1,088,790
2025	\$1,351,000	\$1,804,092
2026	\$1,351,000	\$1,860,776
2027	\$1,351,000	\$1,889,972
2028	\$1,351,000	\$1,919,751
2029	\$1,351,000	\$1,950,126
2030	\$1,351,000	\$1,981,109
2031	\$1,351,000	\$1,351,000
2032	\$1,351,000	\$1,351,000
2033	\$1,351,000	\$1,351,000
2034	\$1,351,000	\$1,351,000
2035	\$1,351,000	\$1,351,000
2036	\$1,351,000	\$1,351,000
2037	\$1,351,000	\$1,351,000
2038	\$1,351,000	\$1,351,000
2039	\$1,351,000	\$1,351,000
2040	\$1,351,000	\$1,351,000
2041	\$1,351,000	\$1,351,000

D.4 –Renewal Plan

A formal works plan is yet to be developed, however high priority major renewals that are forecast to occur over the next 10 years are:

Within the next 10 years the following scheduled renewals are forecast: \$7.1M reseal of roads, \$1.51M kerb and Channel and \$0.7M of footpaths. Renewal of unsealed road pavements and pavement under seals is \$4.1M

Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source

Through discussion with key staff and further analysis of the asset register, no major disposals with foreseen costs to Council are forecast to occur over the planning period.

E.2 – Disposal Project Summary

No major disposals with foreseen costs to Council are forecast to occur over the planning period.

E.3 – Disposal Forecast Summary

Table E3 displays the disposal forecast and disposal budget over the planning period. No major disposals with foreseen costs to Council are forecast to occur over the planning period, hence the zero values shown.

Table E3 – Disposal Activity Summary

Year	Disposal Forecast	Disposal Budget
2022	0	0
2023	0	0
2024	0	0
2025	0	0
2026	0	0
2027	0	0
2028	0	0
2029	0	0
2030	0	0
2031	0	0
2032	0	0
2033	0	0
2034	0	0
2035	0	0
2036	0	0
2037	0	0
2038	0	0
2039	0	0
2040	0	0
2041	0	0


Appendix F Budget Summary by Lifecycle Activity

Several gross estimates and assumptions were required to be made in the development of the planned budget figures shown in Table F1. This was due to the quality of financial information currently available (poor breakdown in planned budgets specifically relating to the below lifecycle activities (acquisition, operation, maintenance, renewal, disposal). This has been noted for improvement in Section 8.0.


Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition	Operation & Maintenance	Renewal	Disposal	Total
2022	0	\$2,006,695	\$1,351,000	0	\$3,357,695
2023	0	\$2,007,895	\$1,351,000	0	\$3,358,895
2024	0	\$2,009,105	\$1,351,000	0	\$3,360,105
2025	0	\$2,010,327	\$1,351,000	0	\$3,361,327
2026	0	\$2,011,559	\$1,351,000	0	\$3,362,559
2027	0	\$2,012,803	\$1,351,000	0	\$3,363,803
2028	0	\$2,014,058	\$1,351,000	0	\$3,365,058
2029	0	\$2,015,324	\$1,351,000	0	\$3,366,324
2030	0	\$2,016,601	\$1,351,000	0	\$3,367,601
2031	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2032	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2033	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2034	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2035	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2036	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2037	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2038	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2039	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2040	0	\$2,017,890	\$1,351,000	0	\$3,368,890
2041	0	\$2,017,890	\$1,351,000	0	\$3,550,000

Appendix G Road Hierarchy Descriptions

Glamorgan Spring Bay Road Hierarchy	Functional Description
State Arterials Freeways and Primary Arterials	<p>Function is to carry the heaviest volumes of traffic, including commercial vehicles, and provide the principal routes for traffic flows in and around the municipality.</p> <p>These Arterials come under the jurisdiction of DSG and as such maintenance of the road pavement and surface is <u>not</u> the responsibility of Council.</p>
Link Road Hierarchy Category 1	<p>Those roads whose main function is to form the principal avenue of communication for movements between key towns, and direct connections between significant commercial / forestry sites and important centres.</p>  <p><i>Example: Buckland Woodsdale Road</i></p>

Glamorgan Spring Bay Road Hierarchy	Functional Description
<p>Collector Road</p> <p>Hierarchy Category 2</p>	<p>Carry moderate volumes of traffic and provide access by linking urban areas to Link and Arterial roads. They may also provide links between the various Collector roads. They generally carry limited through traffic.</p>  <p><i>Example: Charles Street, Orford</i></p>
<p>Local Access Road</p> <p>Hierarchy Category 3</p>	<p>Those roads whose primary function is to provide access to rural properties and they cater for relatively short distance travel to higher level roads.</p>  <p><i>Example: Swanwick Road</i></p>

Glamorgan Spring Bay Road Hierarchy	Functional Description
<p>Limited Local Access Road</p> <p>Hierarchy Category 4</p>	<p>Those roads whose primary function is to provide access to rural properties but they have minimal traffic (less than Local Access Roads). They receive minimal maintenance (less than annual). Single vehicle access and low speed, generally 30 kph</p>  <p><i>Example: Ferndale Road, Bicheno</i></p>