GLAMORGAN SPRING BAY COUNCIL

ORDINARY COUNCIL MEETING - 15 DECEMBER 2020

ATTACHMENTS

GLAMORGAN SPRING BAY COUNCIL

ASSET MANAGEMENT PLAN

BUILDINGS

DRAFT

Adopted: ***** 2020

Document Control	Asset Management Plan - Buildings

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

Contents

1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

This Asset Management Plan details information on how Council manages its building infrastructure assets. 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 buildings and facilities, including land. These assets are used to provide a wide range of services to the community.

The buildings network comprises:

Asset Category	Number of Assets	Replacement Value
Council administration offices, work depots and sheds/garages	25	$3,351,000
Community halls	8	$6,032,430
Community building facilities	19	$8,890,380
Public toilet blocks	20	$2,691,000
Residential houses/units	8	$1,266,800
Recreation ground buildings	12	$3,157,292
Shelters (BBQ, picnic, bus, info, out-door stage etc.)	27	$534,500
Other structures	1	$10,000
SUB-TOTAL	**120**	**$25,933,402**
Land	75	$6,362,500
TOTAL	**195**	**$32,295,902**

The above infrastructure assets have replacement value estimated at $25,933,402 for buildings and $6,362,500 for land.

1.3 Levels of Service

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

The main service consequences of the Planned Budget are:

- There is currently no allowance in the planned budget for a preventative maintenance program to be established and undertaken. Hence it is expected that the condition of buildings will slowly deteriorate over the planning period.

1.4 Future Demand

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

- A relatively stable population over the planning period (no forecasted population growth)
- An aging demographic
- Climate change
- Upgrades in building standards and regulations

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

- Identify upgrades required to meet with current accessibility standards and ensure these are included in the planned budget.
- Aim to implement a planned preventative maintenance programme to lessen the risk of damage or increased deterioration of building assets due to more frequent extreme weather events (climate change).

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 Planning period of 10 years. Therefore, a summary output from the Asset Management Plan is the forecast of 10 year total outlays, which for buildings is estimated as **$11,887,110** or **$1,188,711** on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is **$10,850,000** or **$1,085,000** on average per year as per the Planned Budget. This is **91.28 %** 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. 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 buildings leaves a shortfall of **$103,711** 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

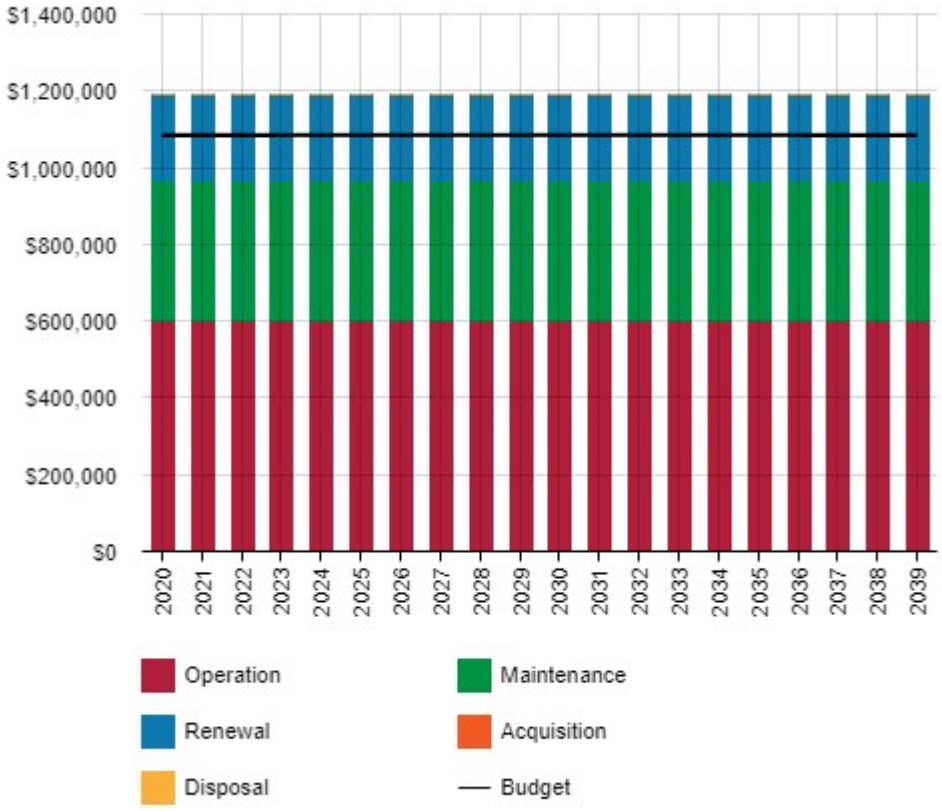


Figure Values are in current dollars.

We plan to provide building infrastructure services for the following:

- Operation, maintenance and renewal of buildings to meet levels of service set by Council.
- Within the next 10 years the following major renewals (>$50,000) are forecasted: Swansea Courthouse including outbuildings; Spring Beach toilet block; Orford Esplanade toilet block; Coles Bay library and medical Room; Triabunna Council Works Depot; Swansea Recreation Ground club rooms, toilet block and visitor change rooms; Bicheno Recreation Ground toilet block; Swansea Saltwater Creek toilet block; Triabunna Recreation Ground toilet block; Swansea Jubilee Beach toilet block.

1.6.2 What we cannot do

We currently do **not** allocate enough budget to sustain these services at the proposed standard or to provide all new services being sought. Works and services that cannot be provided under present funding levels are:

- Acquisition, maintenance and operation of any new building assets
- A preventative maintenance program

1.6.3 Managing the Risks

Our present budget levels are insufficient to successfully manage all identified risks in the medium term.

The main risk consequences are:

- Loss of knowledge due to loss of key staff
- Absence of an asbestos register for Council buildings

- Lack of preventative maintenance program and subsequent reduction in useful life of the building assets

We will endeavour to manage these risks by:

- Developing a succession plan for key staff (currently unfunded) and improve record keeping
- Developing an asbestos register for Council buildings
- Establish and undertake a preventative maintenance program (currently unfunded)

1.7 Asset Management Planning Practices

Key assumptions made in this Asset Management Plan are:

- No acquisitions are to be undertaken during the planning period.
- Several 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.

Assets requiring renewal are identified from either the asset register, an alternative method, or a combination of the two.

- 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 method and the 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:

- Council to form a position on disposal of assets providing limited value to the community.
- Asset management staff and accounting staff to adopt and use singular asset register.
- Assess yearly performance (budgeted vs. actual costs) and update Asset Management Plan and Long Term Financial Plan accordingly.
- Develop an annual maintenance and capital works program for upcoming year. Use to inform Asset Management Plan and Long Term Financial Plan updates.
- Improve confidence in financial information used in Asset Management Plan and Long Term Financial Plan.
- Improve accuracy of budget breakdown to include detailed information on maintenance, operations and renewals.
- 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.

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.

The infrastructure assets covered by this Asset Management Plan include all Council owned or maintained buildings and facilities (including land). These assets are used to provide a variety of services to the community.

For a detailed summary of the assets covered, refer to Table 5.1.1.

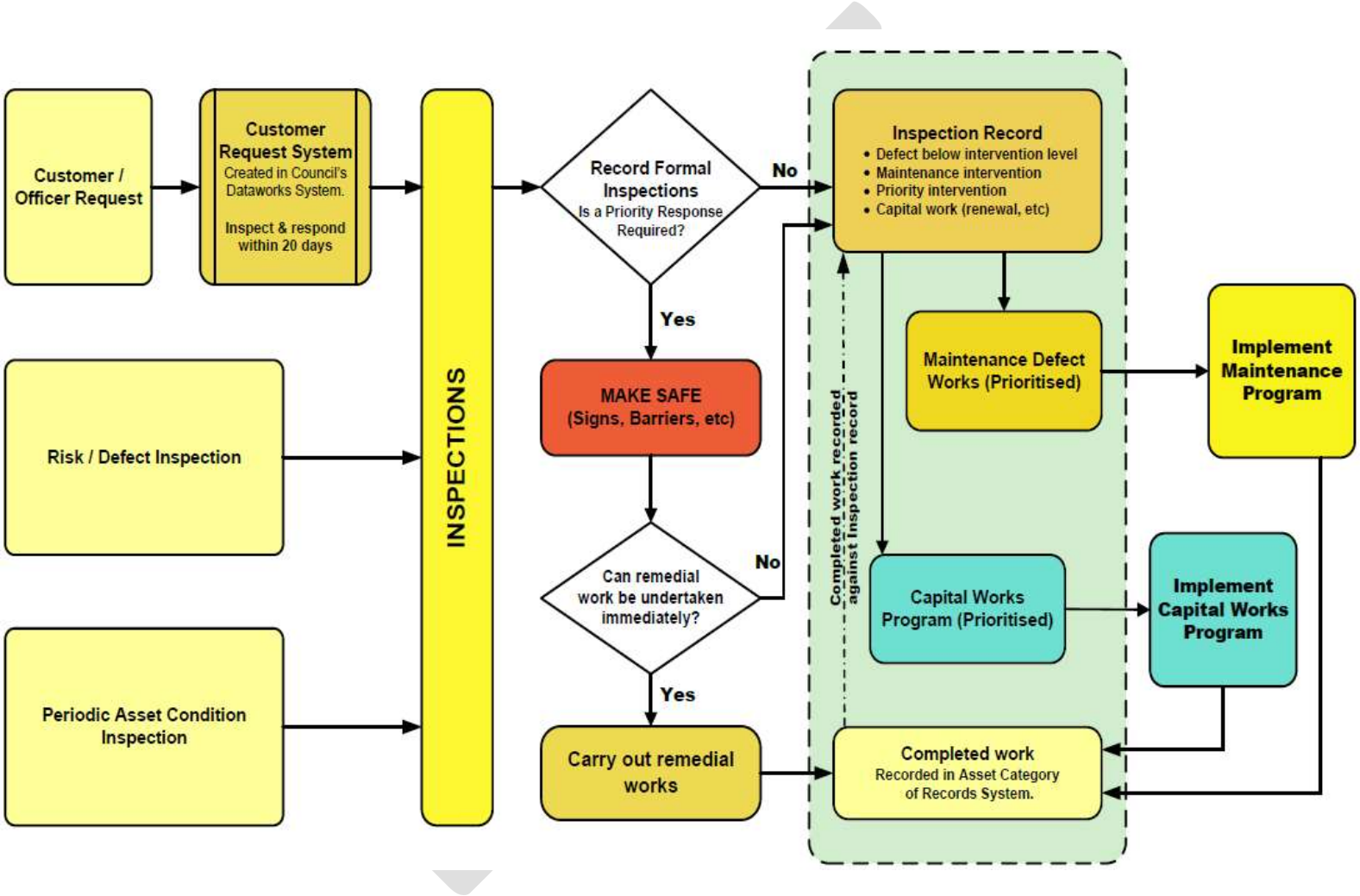
The infrastructure assets included in this plan have a total replacement value of **$32,295,902.**

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	■ 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	■ Maintain a proactive approach to holistic asset management practices and ensure staff do the same. ■ Inform Councillors to enable educated decisions to be made.
Manager – Building Infrastructure	■ 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	■ Report shortcomings, damage, safety concerns and other issues with current building infrastructure.
Community Groups	■ Assist with the maintenance, planning and performance of relevant building infrastructure.
Users	■ Providing input for the management and upkeep of the building asset stock.

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



2.2 Goals and Objectives of Asset Ownership

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.

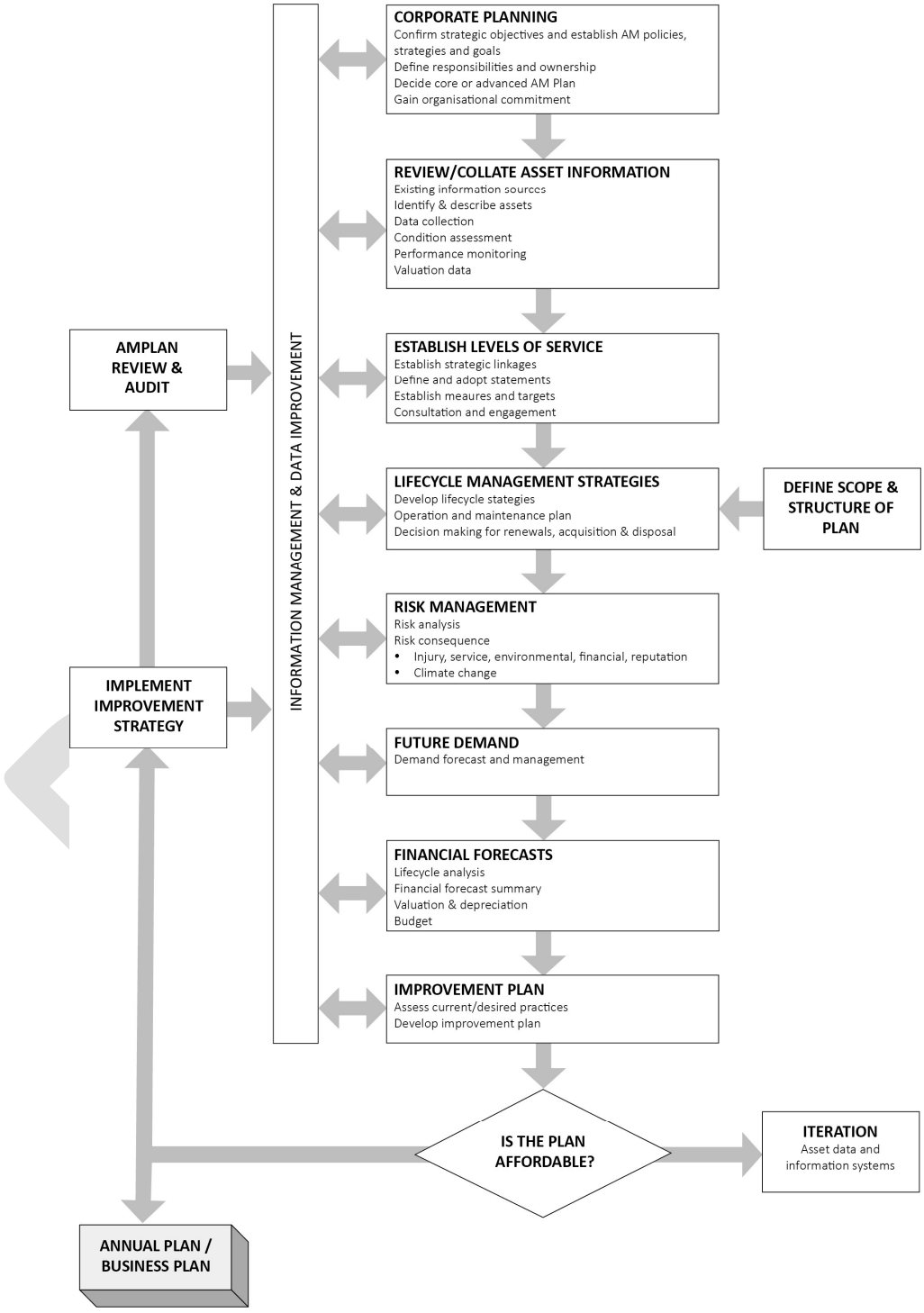
Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 [1]
- ISO 55000[2]

[1] Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2| 13
[2] ISO 55000 Overview, principles and terminology

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

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 district 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 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 building infrastructure for the community to enjoy.	Maintain and develop building 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 plan (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 significant risks to building 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 level of service for Council's building infrastructure 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.
Building Act 2016 & Building Regulations 2016	Legislates the process and requirements for building works.
National Construction Code	New building works and upgrades/renovations to comply with the NCC. The NCC defines the standards for particular building types.
Director's Specified List	The Building Act requires a number of matters to be specified by the Director of Building Control, this document contains a full list of building requirements.
Work Health and Safety Act 2012	Legislates the requirements for design and building works. Sets out the roles and responsibilities to secure the health, safety and welfare of persons at work.

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**
Clean buildings and facilities	Number of works requests	Generally good user feedback	Expected to remain similar to existing
Accessible buildings and facilities	Number of customer service requests	Generally good user feedback. Small number of buildings require accessibility improvements	Expected to slightly improve
Suitable and safe buildings and facilities	Number of customer service requests	Generally good user feedback	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) 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	Expected Trend Based on Planned Budget
Condition	Quality of Council owned buildings and facilities	Conditions in asset register	**65 %** of overall building replacement value in **'Very Good'** or **'Good'** condition **24 %** of overall building replacement value in **'Fair'** condition **11 %** of overall building replacement value in **'Poor'** or **'Very Poor'** condition	Expect reduction in poor condition rating due to planned renewals over planning period, and a gradual reduction in condition of remainder
	Confidence levels		Medium (professional judgement supported by data sampling)	Medium (professional judgement supported by data sampling)
Function	Appropriate and compliant Council buildings and facilities	Staff assessment and number of customer service requests	Majority of buildings considered compliant, with improvements required for a small number of assets	Required improvements to be gradually undertaken during planning period, hence a gradual improvement
	Confidence levels		Medium (professional judgement supported by data sampling)	Medium (professional judgement supported by data sampling)
Capacity	Appropriate number of accessible buildings and facilities	Number of customer service requests (including community groups)	Based on requests, existing service level considered adequate or even potentially too high	Expected to remain similar to existing
	Confidence levels		Medium (professional judgement supported by data sampling)	Medium (professional judgement supported by data sampling)

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 has historically acquired assets generally on availability of external funding. No acquisitions are currently scheduled during the planning period.	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	*$0 per year*	*$0 per year*
Operation	Keep buildings and facilities clean (e.g. public toilets and BBQ's)	Frequency of cleaning	High use public facilities cleaned daily, Monday to Friday. Increased to seven days a week in peak season.	Current performance is considered adequate based on user feedback
	Keep buildings and facilities operational and accessible	User feedback	User feedback suggests current performance is adequate	Current performance is considered adequate based on user feedback
		Budget	*$600,000 per year*	*$600,000 per year*
Maintenance	Keep buildings and facilities safe.	Frequency of maintenance	Reactive minor repairs and minor upgrades are undertaken	Reactive minor repairs, minor upgrades, and a planned preventative maintenance programme
	Keep buildings and facilities serviceable	Frequency of maintenance	Reactive minor repairs and minor upgrades are undertaken	Reactive minor repairs, minor upgrades, and a planned preventative maintenance programme
		Budget	*$265,000 per year*	*$365,000 per year*

[3] IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Renewal	Ensure buildings are in good condition for use	Frequency of renewal	Buildings are renewed on a priority basis, depending on building type, condition, hierarchy etc.	Current performance is considered adequate based on condition of Council buildings and forecasted renewals
	Ensure buildings remain modern and compliant with current standards	Frequency of renewal (including component renewal)	Buildings are renewed on a priority basis, depending on building type, condition, hierarchy etc.	Current performance is considered adequate based on condition of Council buildings and forecasted renewals
		Budget	*$305,200 per year (average over 10 years)*	*$305,200 per year (average over 10 years)*
Disposal	Identify assets and activities that do not align with Council's core purpose	Number of assets and activities identified for disposal	Some potential disposals have been identified	Develop a list of potential asset and activity disposals for Council assessment
	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	Develop a plan for, and dispose of, identified assets following Council approval
		Budget	*$0 per year*	*$0 per year*

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 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 2018 to be 4,528. 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 4,600 around 2025 and then a gradual decline to around 4,300 at the end of the planning period (2039). Hence, it is anticipated that there will be little need for change to the adopted 'Levels of Service' relating to population growth over the planning period.

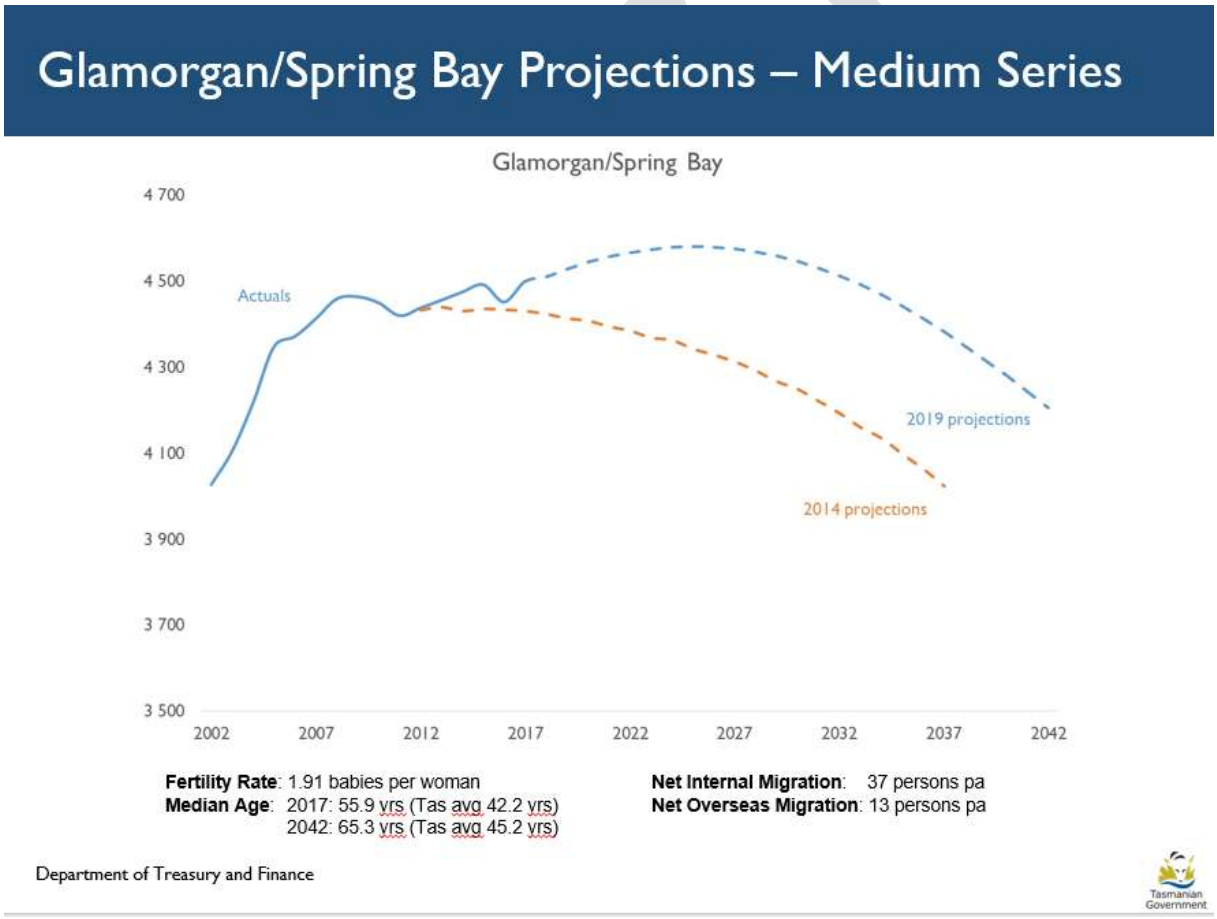


Figure 4.2 – Department of Treasury and Finance – Glamorgan Spring Bay population projections (medium series).

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. 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	4,528 people in 2018.	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 55.9 years (2017)	Increase in median age to approx. 65 years by 2039	Aging population expected to demand improved accessibility to Council buildings	Identify upgrades required to meet with current accessibility standards and ensure these are included in the planned budget
Climate change	Experiencing more extreme weather patterns and events	Continue to experience increased frequency and intensity of extreme weather events	May require increased maintenance of buildings to reduce risk of extreme weather related damage	Aim to implement a planned preventative maintenance programme
Upgrade in building standards/ regulations	Most buildings have been upgraded to modern standards	Some upgrades required over planning period	Increased upgrade costs to enable buildings to meet current standards	Identify upgrades required to meet with current building standards and ensure these are included in the planned budget

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 Planning process 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

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

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
Temperature extremes (hotter summers)	More demand for temperature controlled and well insulated buildings	Increased energy usage and costs	Fewer buildings of higher quality, or allowance for improved temperature control/insulation.
Increased frequency and intensity of extreme rainfall events	Increased stormwater drainage capacity	Increased roof/site drainage upgrade costs	Prioritise sites requiring upgrades (generally older buildings, or buildings with known stormwater drainage issues)
Sea level rise	0.24 m (2050) and 0.92 m (2100) sea level rise (planning allowances)	Serviceability of some coastal building 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.

Table 4.5.2 Building Asset Resilience to Climate Change

New Asset Description	Climate Change impact on these assets?	Build Resilience in New Works
Council buildings	Sea level rise/flooding	Floor levels to satisfy flood modelling and projected sea level rise.

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

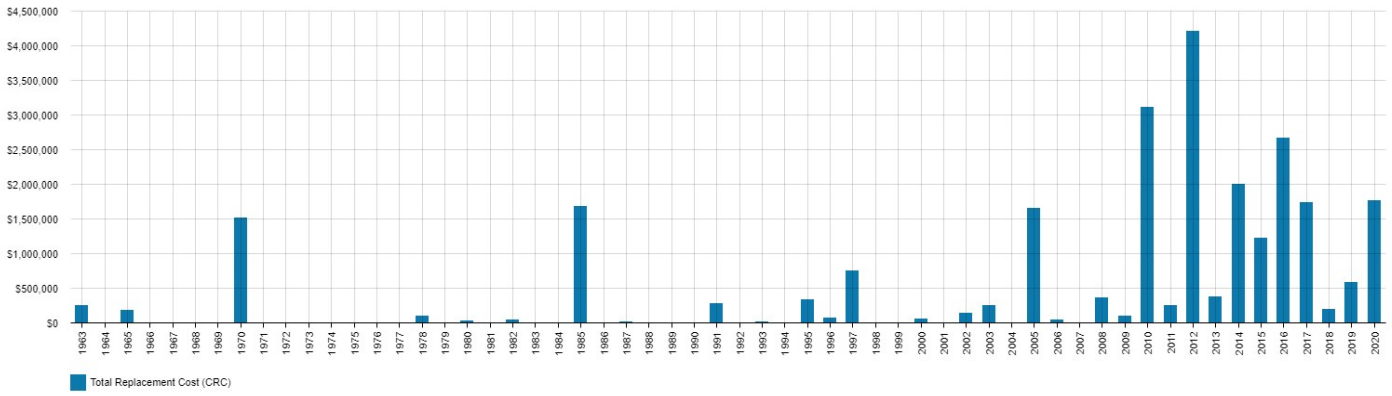
The assets covered by this Asset Management Plan are shown in Table 5.1.1.

Table 5.1.1: Assets covered by this Plan

Asset Category	Number of Assets	Replacement Value
Council administration offices, work depots and sheds/garages	25	$3,351,000
Community halls	8	$6,032,430
Community building facilities (medical centres, emergency services buildings, museum, visitor information centres, libraries, community hub, surf life saving facilities, child care centres, RSL etc.)	19	$8,890,380
Public toilet blocks	20	$2,691,000
Residential houses/units	8	$1,266,800
Recreation ground buildings/structures	12	$3,157,292
Shelters (BBQ, picnic, bus, info, out-door stage etc.)	27	$534,500
Other structures	1	$10,000
SUB-TOTAL	**120**	**$25,933,402**
Land	75	$6,362,500
TOTAL	**195**	**$32,295,902**

The age profile of the assets included in this Asset Management Plan are shown in Figure 5.1.1.

Figure 5.1.1: Asset Age Profile



All figure values are shown in current day dollars.

The above asset age profile shows age of assets based on build or major renewal year. The build or major renewal year is displayed on the horizontal axis, and asset value on the vertical axis. As can be seen, the majority of Council's building asset value has been renewed in the past 15 years. This is the result of a strong building renewal program during this time.

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
Coles Bay Library	Building in poor physical condition
Swansea Courthouse and ancillary structures	Building (heritage) requires renewal reworks.
Spring Beach Toilet Block	Renewal to current standard required, or demolish toilet block and reduce level of service (there is a nearby public toilet at Our Park).
Buckland Community Hall	Disability access upgrades required (In-progress, grant money received)
Esplanade Toilet Block, Orford (Millingtons Beach Conservation Area)	Renewal to current standard required
Triabunna Works Depot – main building	Building in poor physical condition, renewal works required
Several other minor structures (shelters, sheds etc.)	In poor physical condition, renewal works required

The above service deficiencies were identified from the Manager - Building Infrastructure's routine inspection program.

5.1.3 Asset condition

Council currently endeavours to undertakes annual building maintenance inspections and risk assessments for all Council owned buildings. A recent reduction in staff under the Manager - Building Infrastructure has meant these inspections are not currently being undertaken annually. The purpose of these visual inspections is to identify defects and risk issues which can then be included in an annual planned and preventative maintenance

program. Programmed and preventative maintenance is vital for extending the useful life of building components and elements to their full potential.

Condition is measured using a 1 – 5 grading system[5] 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 our assets is shown in Figure 5.1.3.

Figure 5.1.3: Asset Condition Profile

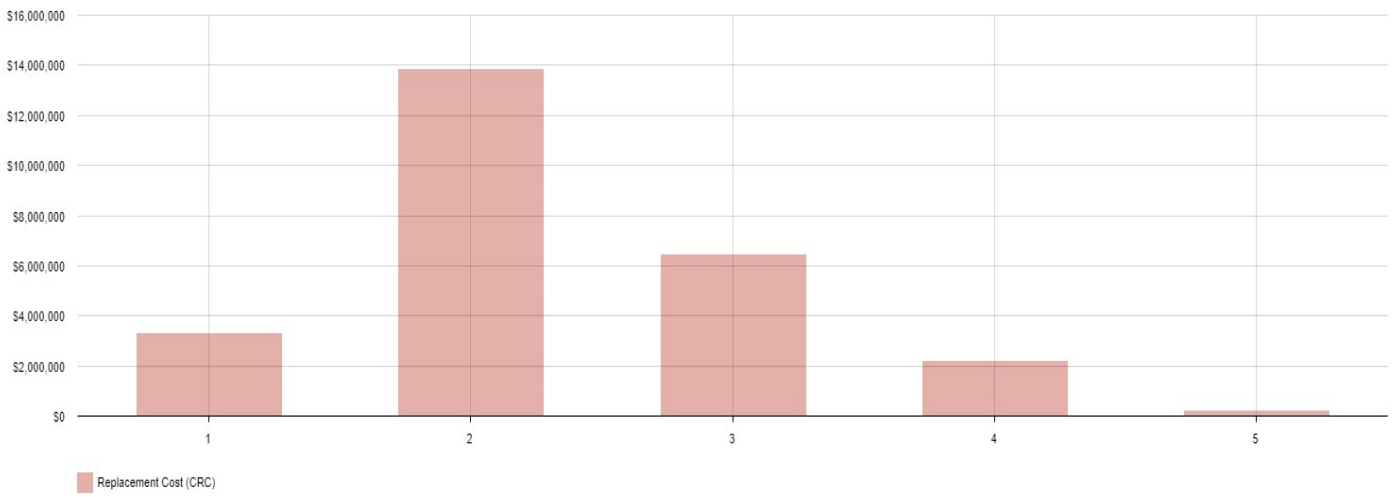


Figure 5.1.3 shows approximately 65 % of Council's total building asset value (excluding land) is in 'very good' or 'good' condition (refer Table 5.1.3), with only 11 % in a 'poor' or 'very poor' condition. It is to be noted that the majority of buildings in 'poor' or 'very poor' condition are low importance assets. Figure 5.1.3 is reflective of Council's targeted building infrastructure renewal works completed over the past decade.

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 cleaning, street sweeping, asset inspection, and utility costs.

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

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 pipe repairs, asphalt patching, and equipment repairs.

The trend in maintenance budgets are shown in Table 5.2.1.

Table 5.2.1: Maintenance Budget Trends

Year	Maintenance Budget $
2019-20	$371,000
2020-21	$265,000
2021-22	$265,000

Maintenance budget levels are considered to be adequate to meet 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 is Table 5.2.2.

Table 5.2.2: Asset Service Hierarchy

Service Hierarchy	Definition	Service Level Objective
Category 1 – Critical	High use business critical facilities essential to service delivery, (e.g. main buildings used to run the Council's operations)	■ **Aesthetics** – As new or highest quality reasonably achieved. ■ **Functionality** – All elements must function as intended at all times, with no down time tolerated during periods of intended use. ■ **Legislative Requirements** – All legal responsibility must be met. ■ **Financial** – Maximum efficiency of maintenance and cleaning operations is required, to minimise expenditure in achieving the desired outcomes.
Category 2 – High	High use facilities essential to service delivery, (e.g. buildings which are used for Council business purposes).	■ **Aesthetics** – Minor signs or deterioration when viewed closely may be acceptable. No deterioration when viewed form normal distance. Some deterioration may be tolerated for short period of time. ■ **Functionality** – All elements must function as intended during periods of intended use, with a low probability of failure.

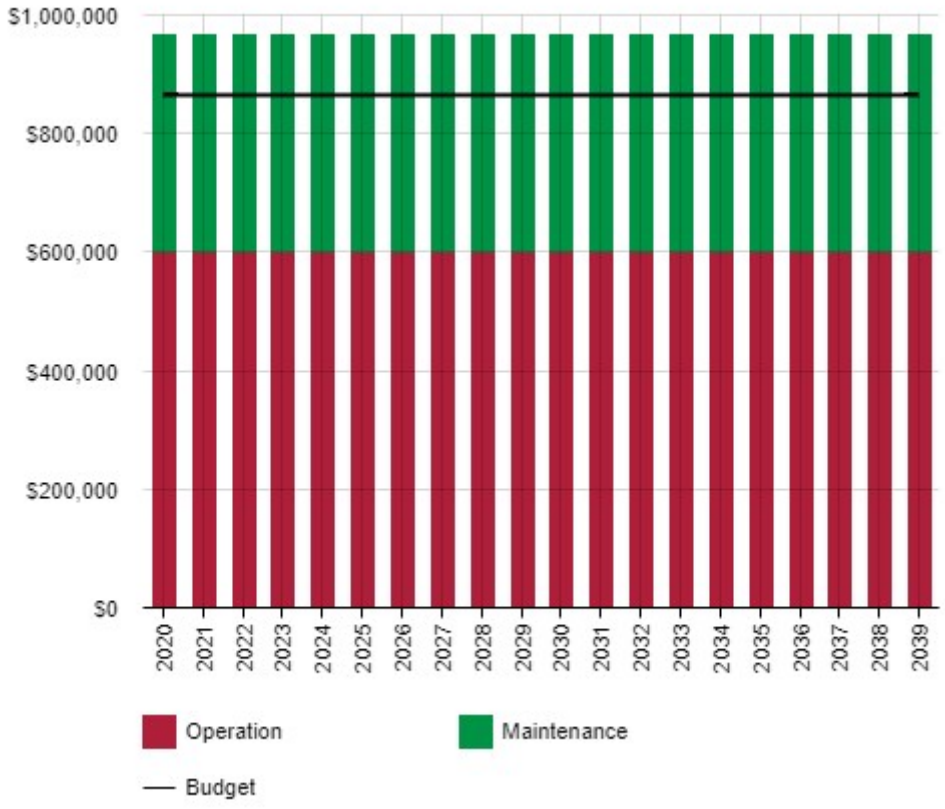
		■ **Legislative Requirements** – All legal responsibility must be met. ■ **Financial** – Primary aim is to maximise the long term economic performance of the facility. Refurbishments, equipment replacements and maintenance planning should be above current standards to provide a high level of service and aesthetics.
Category 3 – Moderate	Moderate use and key facilities important to service delivery (e.g. major Council buildings that have a predominant community use focus).	■ **Aesthetics** – Some minor signs of deterioration when viewed from normal distance are acceptable. ■ **Functionality** – All required elements should function as intended during period of intended use. Minor failures, excluding those which bring a threat to safety or security, can be tolerated. ■ **Legislative Requirements** – All legal responsibility must be met. ■ **Financial** - Primary aim is to maximise the long term economic performance of the facility. Refurbishments, equipment replacements and maintenance planning should be in a strategic framework, and decision taken on a life cycle basis.
Category 4 – Low	Low use facilities that are not critical to service delivery (e.g. minor Council buildings that have a community use focus or are used by community groups).	■ **Aesthetics** – Some signs of deterioration are acceptable. ■ **Functionality** – All elements requirement should function as intended during periods of intended use. Minor failures, excluding those which bring a threat to safety or security, can be tolerated. ■ **Legislative Requirements** – All legal responsibility must be met. ■ **Financial** – Limitation of short term maintenance costs is the primary objective.
Category 5 – Infrequent use	Infrequently used buildings or facilities	■ **Aesthetics** – Not important. ■ **Functionality** – No requirement to retain any functional performance except to avoid degradation of asset value. ■ **Legislative Requirements** – All legal responsibility must be met. ■ **Financial** – Limitation of 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 $100,000 above the planned budget. This highlights that Council does not currently have sufficient planned budget to undertake forecast operation and maintenance. The difference is specifically related to the lack of funds currently in the planned budget (nominally $100,000 per year) to undertake preventative maintenance on building assets. A lack of preventative maintenance generally leads to a more rapid deterioration of building components and an increase in reactive maintenance costs.

When acquiring assets over the planning period, it is expected for operation and maintenance costs to also increase, however as no acquisitions are currently forecasted over the planning period these costs remains constant in Figure 5.2.

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 it 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 October 2020.

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
Council administration offices, work depots and sheds/garages	80 years (50 years for sheds/garages)
Community halls	80 years
Community building facilities (medical centres, emergency services buildings, museum, visitor information centres, libraries, community hub, surf life saving facilities, child care centres, RSL etc.)	75 years
Public toilet blocks	25 years
Residential houses/units	75 years
Recreation ground buildings	75 years
Shelters (bbq, picnic, bus, info, out-door stage etc.)	30 years
Other buildings/structures	15 years

The estimates for renewals in this Asset Management Plan were based on a combination of both the asset register and alternate methods.

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

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

- 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

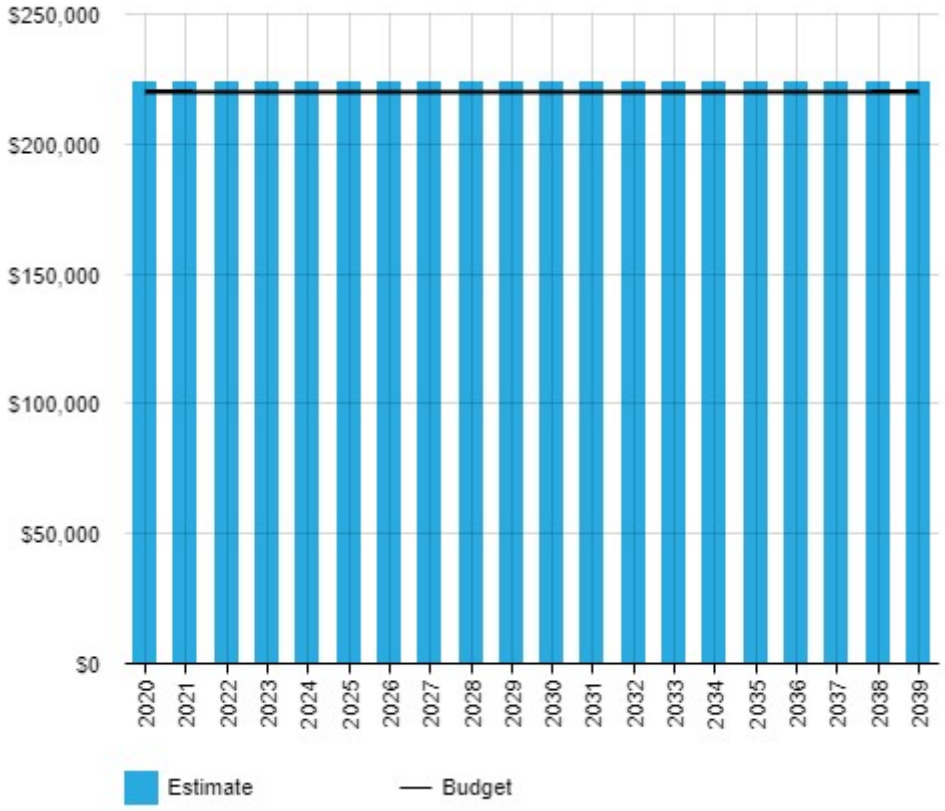
Criteria	Weighting
Condition	30 %
Usage/demand	30 %
High operation & maintenance costs that could be reduced significantly by renewal	20 %
Risk/failure consequence	20 %
Total	**100%**

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. Further detail of specific renewals identified in the asset register and a summary of the forecast renewal costs and year is shown in Appendix D.

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

Figure 5.4.1: Forecast Renewal Costs



All figure values are shown in current day dollars.

The forecast renewal costs essentially match the proposed renewal budget over the planning period.

There are currently no deferred building renewals forecasted. Deferred renewal (assets identified for renewal and not scheduled in capital works programs) should be included in Section 6.0 of this plan where it poses a 'high' or 'very high' risk to Council – refer Table 6.2.

5.5 Acquisition Plan

Acquisition relates to 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 the Council.

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 the 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 building infrastructure assets forecasted over the planning period, hence no budget has been assigned to asset acquisition.

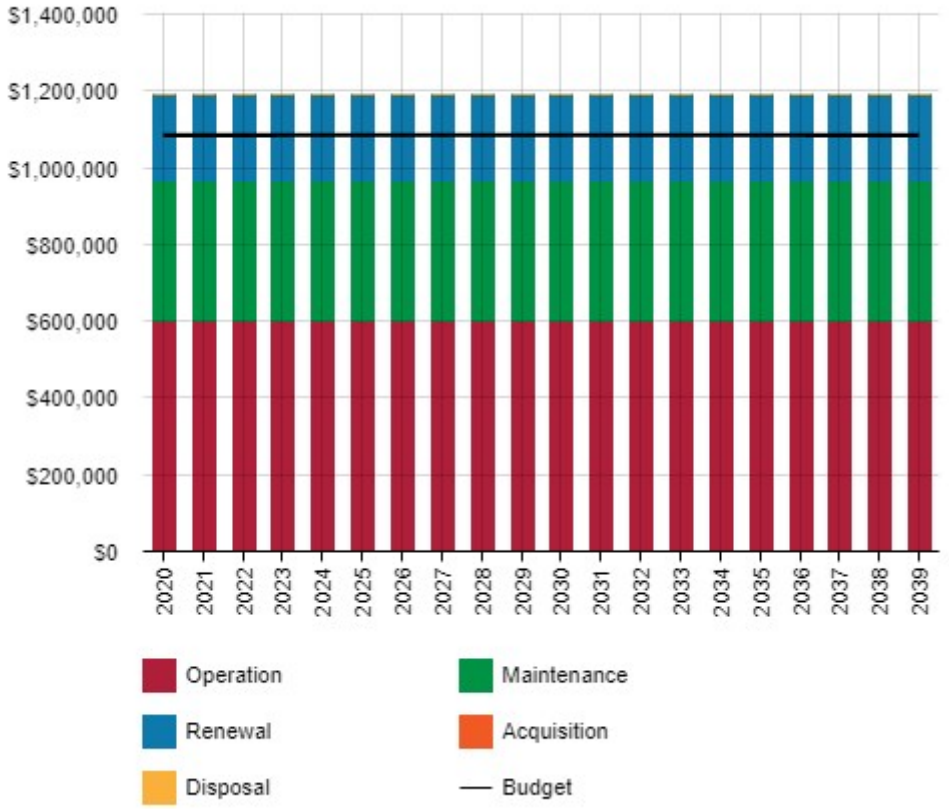
When Council commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by Council.

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). The forecasted lifecycle cost for maintenance (provision of a preventative maintenance program in the maintenance forecast cost bar, nominally $100,000 per year) is the main reason for the shortfall between the planned budget and the forecast lifecycle costs. All other lifecycle forecast components are in balance with the planned budget, which is good.

5.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for potential 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.

NOTE: The assets identified for potential disposal in Table 5.6 are preliminary only and will require further investigation, reporting, community consultation and ultimately Council approval before any disposals are actually undertaken. The further investigation required should include looking at renewal costs, operating and maintenance costs, age, condition, land ownership, leases and licenses, current use, community concerns and heritage values, with this information then reported back to Council.

Table 5.6: Assets Identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
Bicheno Recreation Ground Pavilion	Used exclusively by Department of Education	2021	Nil – formally change ownership to Department of Education	All operations and maintenance costs
6 Rectory Street, Swansea	Used by UTAS for student accommodation – does this align with Council's core purpose?	2021	Nil - If property sold Council estimated to obtain funds in the order of $300,000	All operations and maintenance costs
8 Noyes Street, Swansea	Private rental – does this align with Council's core purpose?	Approx. 2025 (10 years after acquisition to satisfy Crown requirements)	Nil - If property sold Council estimated to obtain funds in the order of $450,000	All operation and maintenance costs
Little Friends Childcare Centre, Spring Bay Childcare Centre, and Prosser House	Do they align with Council's core purpose?	2021	Nil – If property sold Council estimated to obtain funds in the order of $750,000	All operation and maintenance costs
Ravensdale Hall	Not used in last 17 years, possibly longer	2021	Nil – If sold Council would obtain funds	All operations and maintenance costs
5 x land assets used to house TasWater infrastructure	Ownership transfer	2021	Nil	n/a
Spencer Street land (22 residential lots), Triabunna	Vacant land	2021	Further investigation required into existing agreements	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 risks[9] 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
Emergency evacuation centers: - Bicheno Hall - Buckland Hall - Coles Bay Hall - Orford Hall - Swansea Hall - Triabunna Hall - Cranbrook Hall (nearby safer place)	Any failure mode (fire, dilapidation, flooding etc.)	Loss of emergency evacuation centre
Swansea Emergency Services Building	Any failure mode (fire, dilapidation, flooding etc.)	Loss of critical service
Council Offices, Triabunna	Any failure mode (fire, dilapidation, flooding etc.)	Loss of critical service

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.

[8] ISO 31000:2009, p 2

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

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.

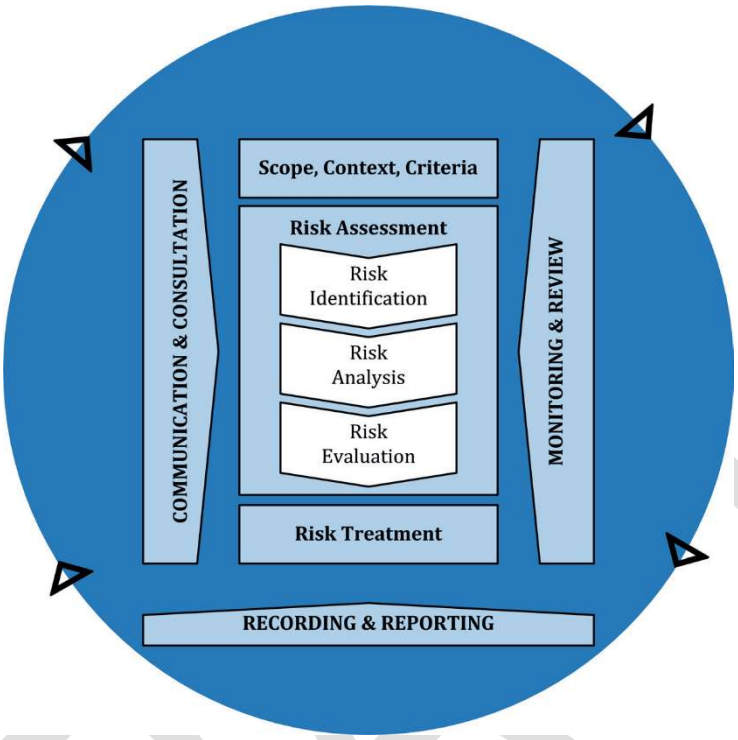


Fig 6.2 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

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 risks[10] 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 estimated 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 Councillors.

[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
Council Buildings	Loss of key staff	H	Develop a succession plan and improve record keeping	L	$75,000
Council Buildings	Asbestos exposure	H	Develop asbestos register	L	$25,000
Council Buildings	Reduction in preventative maintenance due to reduction in works staff	H	Develop a preventative maintenance program and engage maintenance personnel to undertake	L	$100,000

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 (acquisitions and renewals) that are unable to be undertaken within the next 10 years. These include:

- Acquiring new assets without considering the lifecycle costs to the Council. Once Council acquires a new asset it then has to fund the operation and maintenance of that asset over its lifetime. This can be at significant cost to Council. Council must ensure that we can provide a sustainable service of the existing assets before we commit to servicing new assets, in an unsustainable fashion. Hence, no acquisitions are forecast in the planning period.
- A preventative maintenance program

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 related to 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 Ratio[11] **98.34%**

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have **98.34%** 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 **$1,188,711** on average per year.

The proposed (budget) operations, maintenance and renewal funding is **$1,085,000** on average per year giving a 10 year funding shortfall of **$103,711** per year. This indicates that **91.28%** 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
2020	0	$600,000	$365,000	$223,711	0
2021	0	$600,000	$365,000	$223,711	0
2022	0	$600,000	$365,000	$223,711	0
2023	0	$600,000	$365,000	$223,711	0
2024	0	$600,000	$365,000	$223,711	0
2025	0	$600,000	$365,000	$223,711	0
2026	0	$600,000	$365,000	$223,711	0
2027	0	$600,000	$365,000	$223,711	0
2028	0	$600,000	$365,000	$223,711	0
2029	0	$600,000	$365,000	$223,711	0
2030	0	$600,000	$365,000	$223,711	0
2031	0	$600,000	$365,000	$223,711	0
2032	0	$600,000	$365,000	$223,711	0
2033	0	$600,000	$365,000	$223,711	0
2034	0	$600,000	$365,000	$223,711	0
2035	0	$600,000	$365,000	$223,711	0
2036	0	$600,000	$365,000	$223,711	0
2037	0	$600,000	$365,000	$223,711	0
2038	0	$600,000	$365,000	$223,711	0
2039	0	$600,000	$365,000	$223,711	0

7.2 Funding Strategy

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

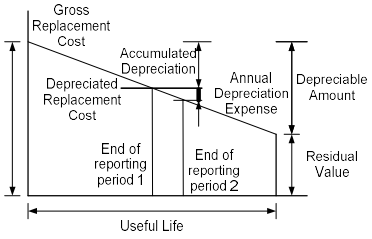
The financial strategy of Council determines how funding will be provided, whereas the Asset Management Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset valuations

The best available estimate of the value of building assets included in this Asset Management Plan (excluding land) is shown below.

Replacement Cost (Current/Gross)	$25,933,402
Depreciable Amount	$25,933,402
Depreciated Replacement Cost[12]	$19,329,226
Annual Depreciation	$468,455



7.3.2 Valuation forecast

Asset values are forecast to remain steady over the planning period. However, if disposal of identified assets (refer Table 5.6) are undertaken, the asset values are forecast to slightly decrease over the planning period, noting these disposals could yield a significant amount of cash.

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:

- No acquisitions are to be undertaken during the planning period.
- Several 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 scale[13] in accordance with Table 7.5.1.

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 ± 2%

[12] Also reported as Written Down Value, Carrying or Net Book Value.
[13] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Confidence Grade	Description
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 ± 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 ± 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 ± 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 provision and improvement of financial data
Renewal forecast - Asset values	Low to Medium	Based on Rawlinson Construction Cost Guide 2020, approximate building areas, and professional judgement of staff.
- Asset useful lives	Medium	Based on visual inspection and professional judgement of staff
- Condition modelling	Medium to High	Based on visual inspection and professional judgement of staff
Disposal forecast	Very Low	Some options for disposal have been identified in the development of this plan, however a formal strategy is to be decided upon by Council and a detailed investigation of each option considered.

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).

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices[14]

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 Council's building infrastructure asset register in conjunction with *XERO*.

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 form a position on asset disposal for under-utilised assets that provide limited value to the community. This will inform forecasted disposals noted in this Asset Management Plan. Further investigation and reporting required on each individual asset.	General Manager	Internal	February 2021
2	New asset register for buildings and land to be adopted by Accountant. Single asset register to be used by both Asset Manager and Accountant (previously two registers used that didn't align).	General Manager, Accountant, Manager - Buildings	Internal	June 2021
3	Reinstate the asset inspection program (routine and annual, undertaken at set times) to allow continual update and improvement to the Asset Management Plan and inform forecasted works programs	Manager - Buildings	Manager – Buildings	June 2021
4	Assess yearly performance (budgeted vs. actual costs) and update Asset Management Plan and Long Term Financial Plan accordingly.	Manager - Buildings	General Manager, Accountant, Manager - Buildings	June 2021
5	Reinstate annual maintenance and capital works program for upcoming year. Use to inform Asset Management Plan and Long Term Financial Plan updates.	Manager - Buildings	Accountant, Manger - Buildings	June 2021
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	Accountant	Accountant, Manger - Buildings	June 2021

[14] ISO 55000 Refers to this as the Asset Management System

	lifecycle activities within XERO (accounting software) so accurate costs can be developed.			
7	Increase accuracy of budget breakdown to include acquisitions, maintenance, operations, renewals and disposals. Aim for better transparency.	Accountant	Accountant, Manger - Buildings	June 2021
8	Undertake detailed building component condition assessment to provide higher confidence condition data and better inform Asset Management Plan (every 4 years)	Manager - Buildings	Manager - Buildings	June 2022
9	Community/Council consultation required to ensure appropriate levels of service are being provided (reduce/improve level of service accordingly)	General Manager	Internal	June 2022
10	Continually improve correlation between Long Term Financial Plan and Asset Management Plan. (Conduct regular meetings of responsible persons – endeavour to reach a 'high' confidence level)	General Manager, Accountant, Manager – Buildings	General Manager, Accountant, Manager – Buildings	Ongoing
11	Increase confidence and maturity of Asset Management Plan	Manager - Buildings	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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- 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 acquisitions are forecast to be undertaken during the planning period. Given future demand (discussed in Section 4), Council's current financial position, available budget and discussion with the Manager – Building Infrastructure, a strategy of no acquisition (for building assets) over the planning period is recommended.

A.2 – Acquisition Project Summary

No acquisitions are currently forecast to be undertaken during the planning period.

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
2020	0	0	0
2021	0	0	0
2022	0	0	0
2023	0	0	0
2024	0	0	0
2025	0	0	0
2026	0	0	0
2027	0	0	0
2028	0	0	0
2029	0	0	0
2030	0	0	0
2031	0	0	0
2032	0	0	0
2033	0	0	0
2034	0	0	0
2035	0	0	0
2036	0	0	0
2037	0	0	0
2038	0	0	0
2039	0	0	0

Appendix B Operation Forecast

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 buildings). This has been noted for improvement in Section 8.0.

B.2 – Operation Forecast Summary

Table B2 displays the forecast operation costs each year over the planning period. Note the 'Additional Operation Forecast' is zero as no acquisitions are assumed to occur over the planning period, hence no additional funds required to operate acquired assets is forecast.

Table B2 - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2020	$600,000	0	$600,000
2021	$600,000	0	$600,000
2022	$600,000	0	$600,000
2023	$600,000	0	$600,000
2024	$600,000	0	$600,000
2025	$600,000	0	$600,000
2026	$600,000	0	$600,000
2027	$600,000	0	$600,000
2028	$600,000	0	$600,000
2029	$600,000	0	$600,000
2030	$600,000	0	$600,000
2031	$600,000	0	$600,000
2032	$600,000	0	$600,000
2033	$600,000	0	$600,000
2034	$600,000	0	$600,000
2035	$600,000	0	$600,000
2036	$600,000	0	$600,000
2037	$600,000	0	$600,000
2038	$600,000	0	$600,000
2039	$600,000	0	$600,000

Appendix C Maintenance Forecast

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 buildings). 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 zero as no acquisitions are assumed to occur over the planning period, hence no additional funds required to maintain acquired assets is forecast.

Table C2 - Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2020	$365,000	0	$365,000
2021	$365,000	0	$365,000
2022	$365,000	0	$365,000
2023	$365,000	0	$365,000
2024	$365,000	0	$365,000
2025	$365,000	0	$365,000
2026	$365,000	0	$365,000
2027	$365,000	0	$365,000
2028	$365,000	0	$365,000
2029	$365,000	0	$365,000
2030	$365,000	0	$365,000
2031	$365,000	0	$365,000
2032	$365,000	0	$365,000
2033	$365,000	0	$365,000
2034	$365,000	0	$365,000
2035	$365,000	0	$365,000
2036	$365,000	0	$365,000
2037	$365,000	0	$365,000
2038	$365,000	0	$365,000
2039	$365,000	0	$365,000

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

The renewal forecast of $223,711 per year is based on the total sum of the renewal costs over the planning period, averaged over 20 years (the planning period). As noted in Section 7.0 the renewal costs are estimates based on Rawlinson Construction Cost Guide 2020, approximate building areas, and professional judgement of staff.

D.2 – Renewal Project Summary

The below Table D2 is an extract from the Buildings asset register and shows assets forecast for renewal within the planning period (up to 2039). It is to be noted that the 'Forecast Renewal Year' is calculated as the last major renewal/build year, plus the 'remaining useful life' of the asset. The 'remaining useful life' figures (included in the complete asset register) have been defined taking into account current condition of assets. Further professional judgement will be required in prioritising the below renewals, with the 'forecast renewal year' being a guide only.

All figures shown are in current day dollars.

Table D2 – Asset Register Forecast Renewals

Asset	Cost to renew at end of life	Forecast Renewal Year
Swansea, Vet Clinic Building	$15,000	2021
Bicheno, Lions Park, Picnic Shelter 1	$35,000	2021
Spring Beach, Toilet Block	$65,000	2021
Coles Bay, Library and Medical Room	$180,000	2021
Coles Bay, Community Hall, Picnic Shelter 2	$5,000	2021
Swansea, Jubilee Beach Park, BBQ Shelter 1	$6,500	2022
Swansea, Old Courthouse and Council Chambers	$450,000	2022
Swansea, Old Courthouse and Council Chambers, GM's Office	$50,000	2022
Triabunna, Council Works Depot	$450,000	2023
Orford, Esplanade, Toilet Block	$95,000	2023
Swansea, Recreation Ground, Clubrooms	$825,000	2024
Bicheno, Recreation Ground, Toilet Block	$185,000	2025
Swansea, Saltwater Creek, Public Toilet	$226,000	2025
Swansea, Recreation Ground, Visitors Changerooms	$25,000	2025
Swansea, Recreation Ground, Public Toilet Block	$145,000	2026
Bicheno, Council Works Depot, Shed 2 (machinery shed)	$9,000	2026
Bicheno, Lions Park, Picnic Shelter 2	$35,000	2026
Triabunna, Recreation Ground, Store Shed & Ticket Box	$5,000	2026
Bicheno, Picnic Shelter	$10,000	2027
Swansea, Old Courthouse and Council Chambers, Shed	$10,000	2027
Triabunna, Recreation Ground, Public Toilet Block	$85,000	2027
Swansea, Jubilee Beach, Public Toilet	$95,000	2028
Triabunna, Recreation Ground, Old BBQ Shed	$25,000	2030
Triabunna, Marina, BBQ Shelter 1	$6,000	2030
Swansea, Council Works Depot, Shed 4	$15,000	2031
Coles Bay, Community Hall, Toilet Block	$135,000	2032
Orford, Waste Management Centre	$210,000	2033
Swansea, House, 6 Rectory Street	$251,220	2033
Bicheno, Council Works Depot, Shed 3 (chemical storage)	$9,000	2033
Bicheno, Recreation Ground, Pavillion	$205,000	2035
Coles Bay, Esplanade E/Garnet Av, Public Toilet	$125,000	2035
Coles Bay, Works Depot Shed	$30,000	2035
Swansea, Council Works Depot, Shed 2	$25,000	2035
Swansea, Saltwater Creek, BBQ Shelter	$6,500	2035
Coles Bay, Community Hall, BBQ Shelter	$5,000	2035
Buckland, Reserve, Toilets	$110,000	2036
Bicheno, Jetty Road Public Toilet	$135,000	2036
Coles Bay, Lookout Structure	$10,000	2037
Orford, Raspins Beach, Toilet Block	$165,000	2039

D.3 – Renewal Forecast Summary

Table D3 displays the forecast renewal costs and budget each year over the planning period. The renewal forecast is $3,711 (per year) higher than the forecast renewal budget.

Table D3 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2020	$223,711	$220,000
2021	$223,711	$220,000
2022	$223,711	$220,000
2023	$223,711	$220,000
2024	$223,711	$220,000
2025	$223,711	$220,000
2026	$223,711	$220,000
2027	$223,711	$220,000
2028	$223,711	$220,000
2029	$223,711	$220,000
2030	$223,711	$220,000
2031	$223,711	$220,000
2032	$223,711	$220,000
2033	$223,711	$220,000
2034	$223,711	$220,000
2035	$223,711	$220,000
2036	$223,711	$220,000
2037	$223,711	$220,000
2038	$223,711	$220,000
2039	$223,711	$220,000

Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source
Through discussion with the Manager – Building Infrastructure and analysis of the asset register, no disposals with foreseen costs to Council are forecast to occur over the planning period.

E.2 – Disposal Project Summary
No 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 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
2020	0	0
2021	0	0
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

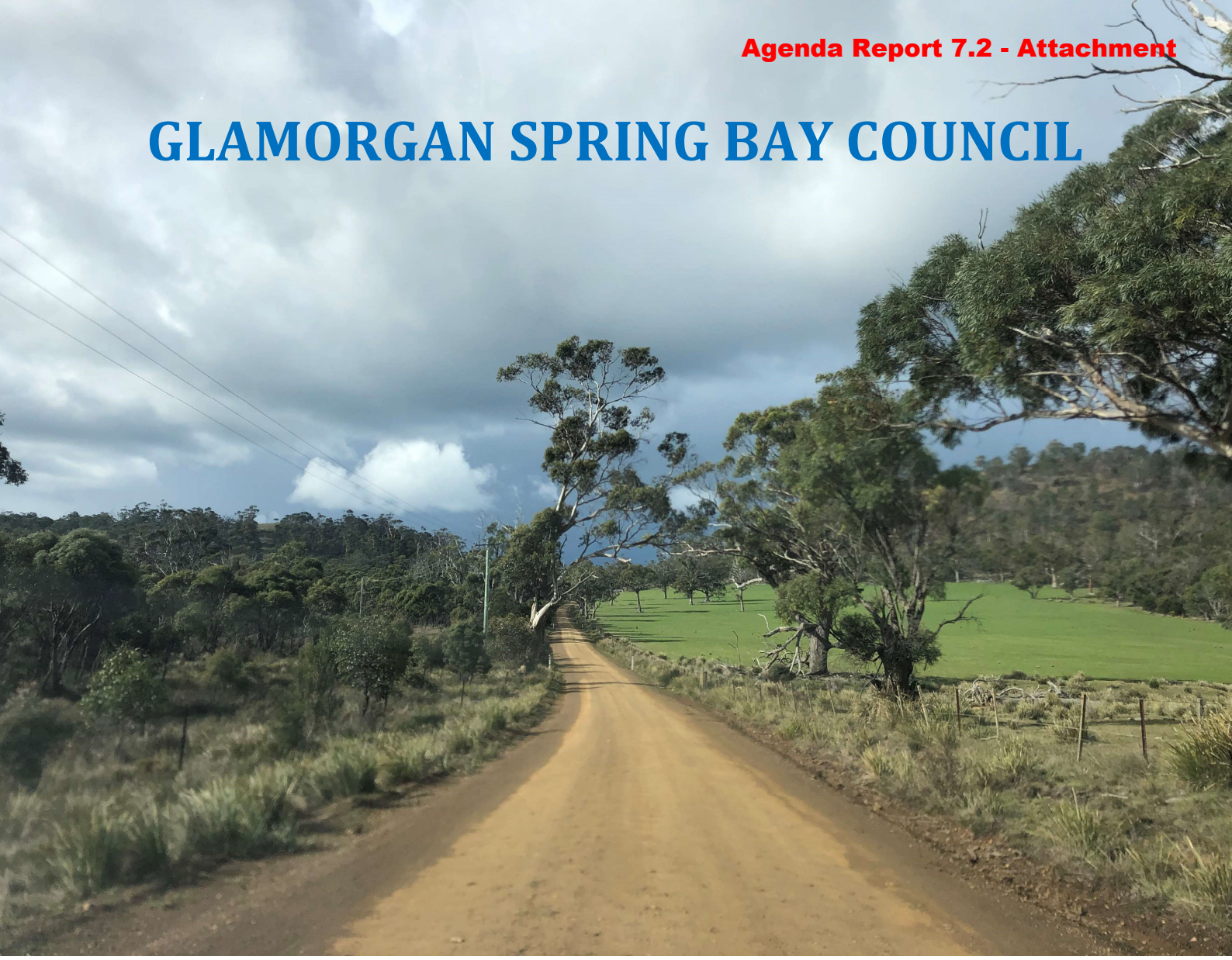
Appendix F Budget Summary by Lifecycle Activity

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
2020	0	$600,000	$265,000	$220,000	0	$1,085,000
2021	0	$600,000	$265,000	$220,000	0	$1,085,000
2022	0	$600,000	$265,000	$220,000	0	$1,085,000
2023	0	$600,000	$265,000	$220,000	0	$1,085,000
2024	0	$600,000	$265,000	$220,000	0	$1,085,000
2025	0	$600,000	$265,000	$220,000	0	$1,085,000
2026	0	$600,000	$265,000	$220,000	0	$1,085,000
2027	0	$600,000	$265,000	$220,000	0	$1,085,000
2028	0	$600,000	$265,000	$220,000	0	$1,085,000
2029	0	$600,000	$265,000	$220,000	0	$1,085,000
2030	0	$600,000	$265,000	$220,000	0	$1,085,000
2031	0	$600,000	$265,000	$220,000	0	$1,085,000
2032	0	$600,000	$265,000	$220,000	0	$1,085,000
2033	0	$600,000	$265,000	$220,000	0	$1,085,000
2034	0	$600,000	$265,000	$220,000	0	$1,085,000
2035	0	$600,000	$265,000	$220,000	0	$1,085,000
2036	0	$600,000	$265,000	$220,000	0	$1,085,000
2037	0	$600,000	$265,000	$220,000	0	$1,085,000
2038	0	$600,000	$265,000	$220,000	0	$1,085,000
2039	0	$600,000	$265,000	$220,000	0	$1,085,000

GLAMORGAN SPRING BAY COUNCIL



ASSET MANAGEMENT PLAN

ROAD INFRASTRUCTURE

DRAFT

Adopted: ********* 2020

Document Control	**Asset Management Plan** – Road Infrastructure

Document ID :

Rev No	Date	Revision Details	Author	Reviewer	Approver
1	December 2020	Draft	VB	RB/GI	GI

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

Contents

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. 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
Sealed Roads	174.3 km	$47,131,289
Unsealed Roads	199.7 km	$23,155,945
Bridges	57	$10,641,792
Footpaths	21.7 km	$4,713,214
Kerb and channel	74.3 km	$9,508,267
TOTAL	-	**$95,150,507**

The above infrastructure assets have significant total renewal value estimated at **$95,150,507**. For the purposes of this plan there is no value placed on land under roads.

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:

- A number of 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.
- 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)
- Upgrades to Tasmanian Municipal Standard Drawings
- Increased tourism

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

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 **$38,006,500** or **$3,800,650** on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is **$35,500,000** or **$3,550,000** on average per year as per the Planned Budget. This is **93.41%** 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. 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 leaves a shortfall of **$250,650** 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

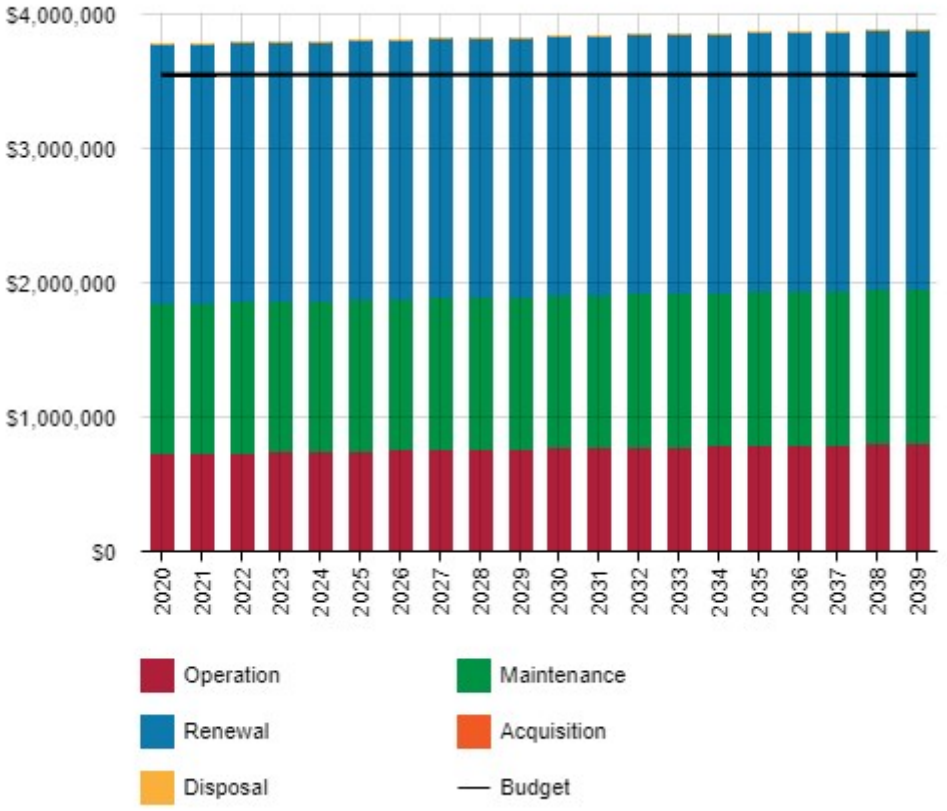


Figure values are in current dollars.

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 major renewals are forecasted: Rheban Road Bridge (Griffiths Rivulet); Buckland Road; Wielangta Road; Rheban Road; Nugent Road; Old Coach Road; Charles Street (Orford); Rosedale Road; McNeills Road; Seaford Road, Freycinet Drive, Wielangta Road Bridge (17 Acre Creek); Brockley Road Bridge (Prosser River); Wielangta Road Bridge (Sandspit Flood Opening); Wielangta Road Bridge (Griffiths North); McNiells Road Bridge (Kit Owen Creek).

1.6.2 What we cannot do

We currently do **not** allocate enough budget to sustain these services at the proposed standard or to provide all new services being sought. Works and services that cannot be provided under present funding levels are:

- 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 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.

1.6.3 Managing the Risks

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

The main risk consequences are:

- Loss of knowledge due to loss of key staff and poor record keeping
- 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
- Allocating budget to allow proper asset management (currently unfunded)
- 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 2019-20 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 an Unmaintained Roads Policy for Council review

- Council to take on management of *MyData* asset management software (previously managed by Brighton Council)
- Develop strategic maintenance and capital works programs for upcoming years. Use to inform Asset Management Plan and Long Term Financial Plan updates
- 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
- Bridges
- Footpaths
- Kerb and channel

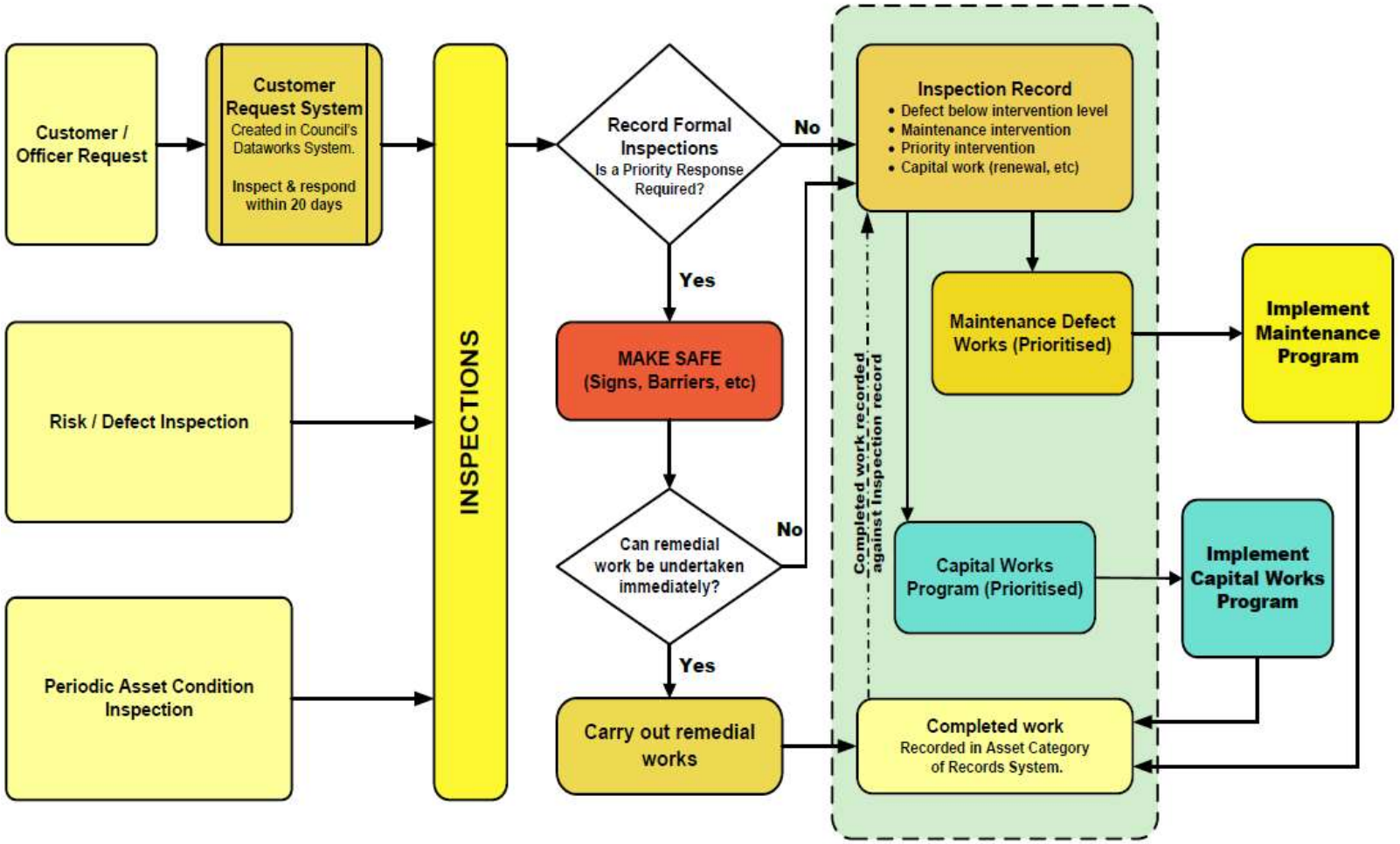
The road infrastructure assets included in this plan have a total replacement value of **$95,150,507**. For the purposes of this plan there is no value placed on land under roads.

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	■ 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	■ 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	■ 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	■ 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:

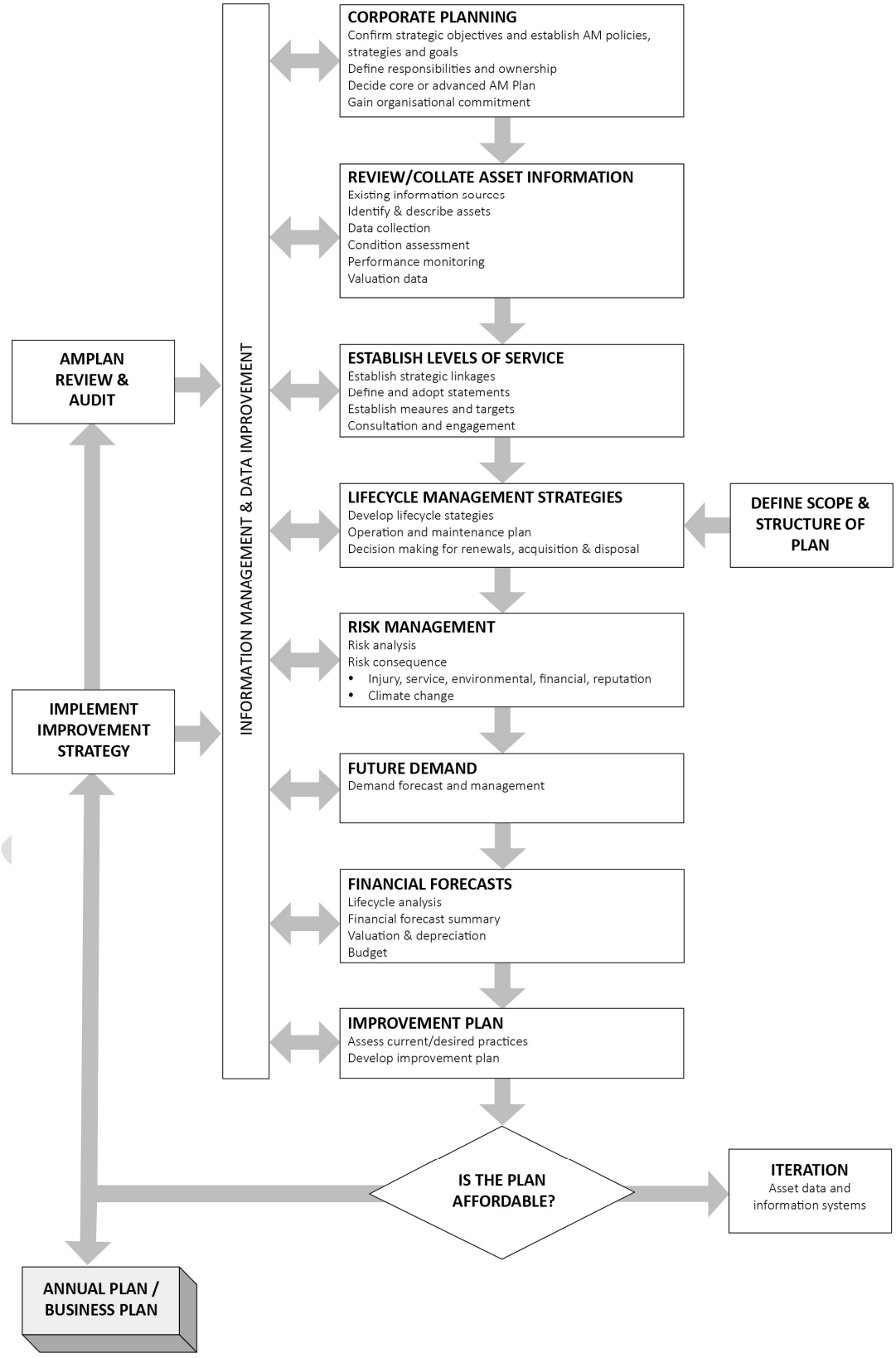
- International Infrastructure Management Manual 2015 [1]
- ISO 55000[2]

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 district 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	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	*$0 per year*	*$0 per year*
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	*$730,000 per year (average over next 10 years)*	*$730,000 per year (average over next 10 years)*
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. (Note, Council is in the process of developing an Unmaintained Roads Policy)
	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	*$1,120,000 per year (average over 10 years)*	*$1,120,000 per year (average over 10 years)*
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	*$1,700,000 per year*	*$1,700,000 per year*
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.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
	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.
		Budget	*$0 per year*	*$0 per year*

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 2018 to be 4,528. 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 4,600 around 2025 and then a gradual decline to around 4,300 at the end of the planning period (2039). Hence, it is anticipated that there will be little need for change to the adopted 'Levels of Service' relating to population growth.

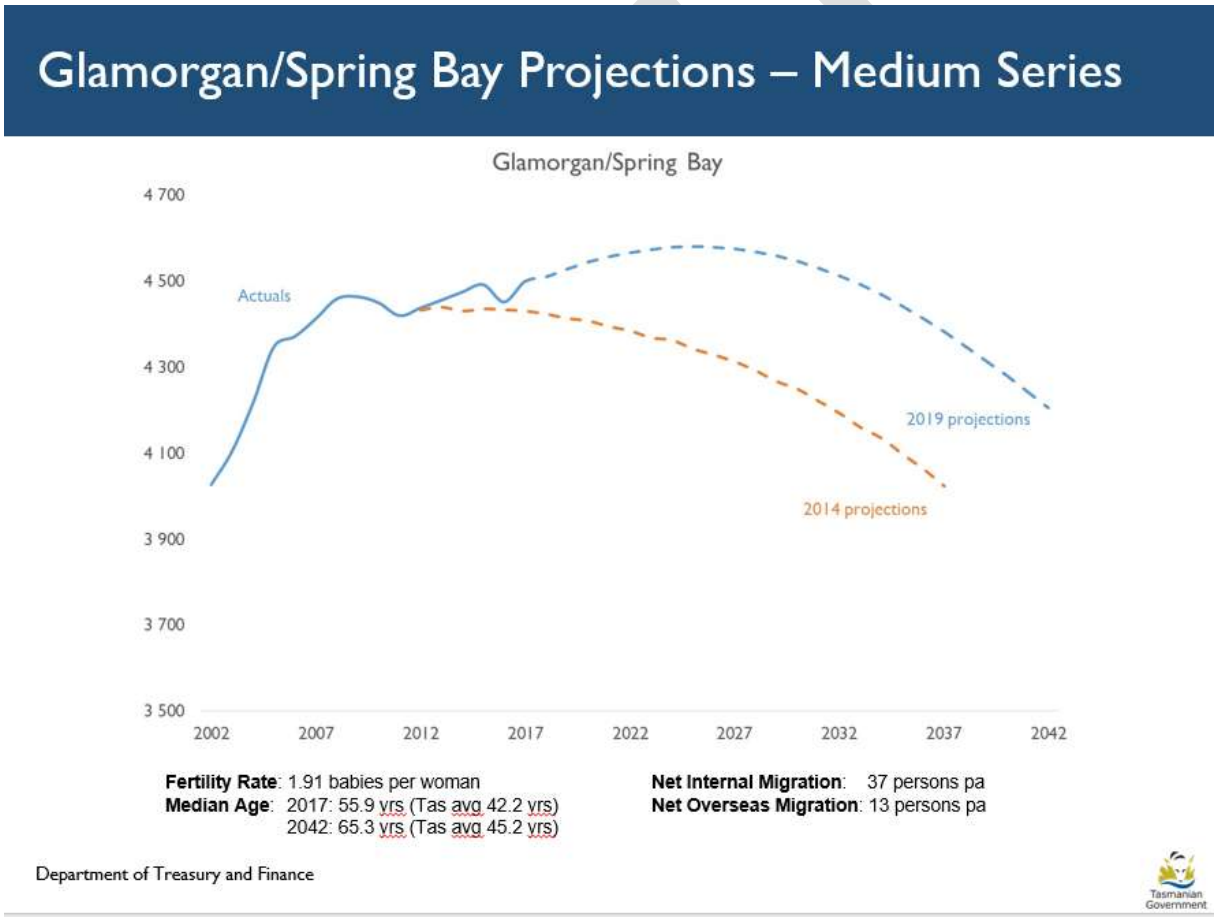


Figure 4.2 – Department of Treasury and Finance – Glamorgan Spring Bay population projections (medium series).

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. Council is in the process of developing an Unmaintained Roads Policy which will list all Council roads that are not currently maintained, or roads that were previously maintained but will not be maintained in the future.

(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 - 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	4,528 people in 2018.	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 55.9 years (2017)	Increase in median age to approx. 65 years by 2039	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
Bridges	Greater flood risk to bridges	Ensure bridges are renewed allowing for climate change forecasts (increased design flows due to increased intensity and frequency of rainfall events)

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	174.3 km	$47,131,289
Unsealed Roads	199.7 km	$23,155,945
Bridges	57	$10,641,792
Footpaths	21.7 km	$4,713,214
Kerb and channel	74.3 km	$9,508,267
TOTAL	-	**$95,150,507**

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
Rheban Road Bridge (Griffiths Rivulet); Buckland Road; Wielangta Road; Rheban Road; Rheban Jetty Road; Nugent Road; Old Coach Road; Charles Street (Orford); Rosedale Road; McNeills Road; Seaford Road, Freycinet Drive; Strip Road; Sand River Road	Condition 5 (very poor) roads, or segments of roads.
Friendly Beaches Road – Coles Bay Road intersection	Deficient intersection, requires safety improvements.
Brockley Road bridge (Prosser River), Buckland.	Regular flooding of bridge and adjacent road, cuts off several properties.

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. Council's bridge condition inspection program is undertaken six monthly by *AusSpan,* with all bridges visually inspected, and updates made to the asset register. This is a well-structured and long running inspection program, which has led to the development of a high quality asset register and **91 %** of Council's bridges being in a **'very good'** or **'good'** condition.

Condition is measured using a 1 – 5 grading system[5] 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

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

The condition profile of all road infrastructure assets is shown in Figure 5.1.3. The condition profile of bridge assets only has then been extracted and is shown separately in Figure 5.1.4.

Figure 5.1.3: Asset Condition Profile (all Road Infrastructure assets, including bridges)

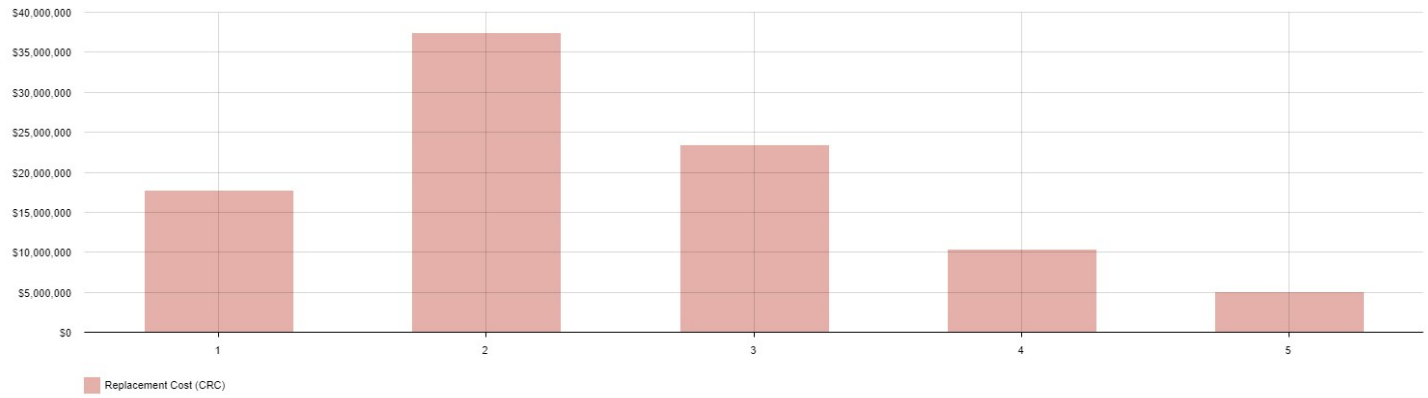


Figure 5.1.3 shows approximately **59 %** of Council's total road infrastructure asset value is in **'very good'** or **'good'** condition (refer Table 5.1.3), **25 %** in **'fair'** condition, and **16 %** in a **'poor'** or **'very poor'** condition. There is approximately **$5M** of asset value currently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

Figure 5.1.4: Asset Condition Profile (Bridges)

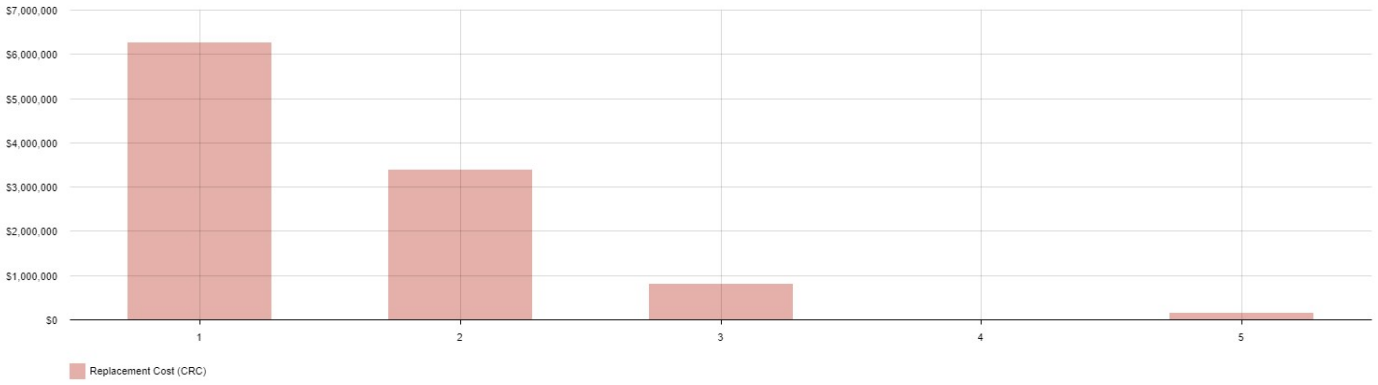


Figure 5.1.4 shows **91 %** of Council's total bridge asset value is in **'very good'** or **'good'** condition (refer Table 5.1.3), with only **1.5 %** in a **'poor'** or **'very poor'** condition. Figure 5.1.4 is reflective of a well-managed and sustained bridge renewal program completed over the past 15 years.

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: Maintenance Budget Trends

Year	Maintenance Budget $
2019-20	$810,000
2020-21	$820,000
2021-22	$826,000

Maintenance budget levels are considered to be adequate to meet 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 is Table 5.2.2. Refer Appendix G for further details.

Table 5.2.2: Asset Service Hierarchy

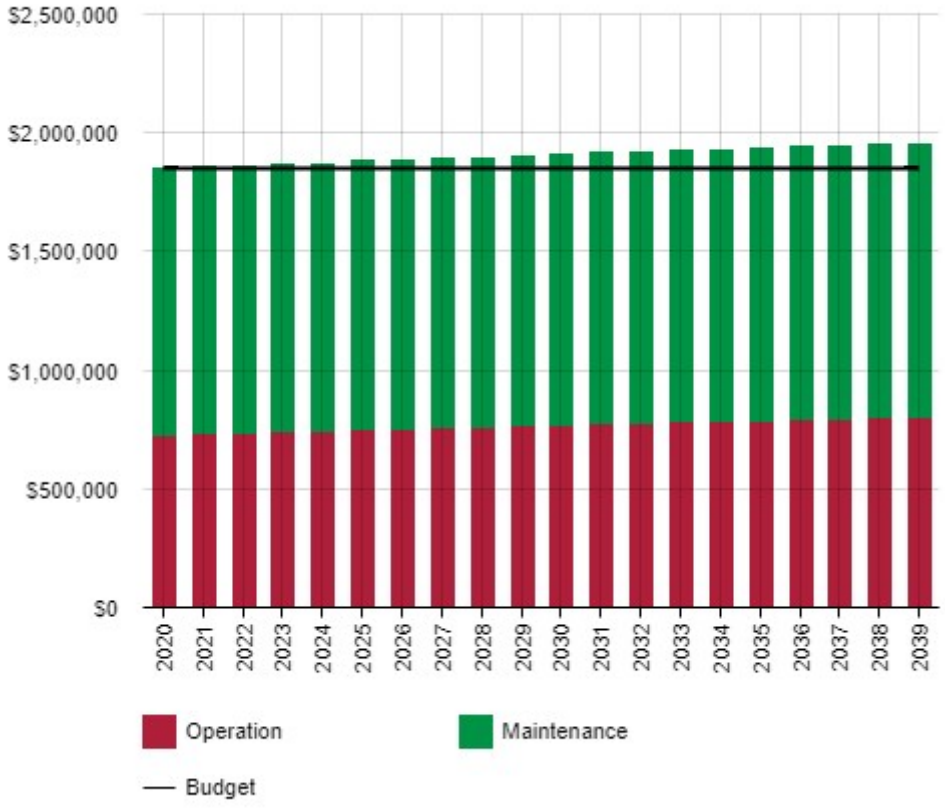
Service Hierarchy	Definition	Service Level Objective
Category 0 – Arterial Road	Department of State Growth 'arterial' roads, which generally form 'main roads' through townships where they form part of highway or 'A' transport routes. These include the Tasman Highway (including through townships), Lake Leak Road, Coles Bay Road and Freestone Road.	▪ 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.	▪ **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.	▪ **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.	▪ **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'.	▪ **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 at the start of the planning period, however progressively increase above the planned budget over the planning period. The progressive increase in these costs is due to additional costs associated with acquisitions made over the planning period. Figure 5.2 highlights that Council does not currently have sufficient planned budget to undertake forecast operation and maintenance throughout the planning period.

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	30 years
Unsealed road base	30 years
Sealed road base	90 years
Unsealed road sub-base	180 years
Concrete bridges	50-80 years
Timber bridges	25-40 years
Footpaths	50 years
Kerb and channel	50 years

The estimates for renewals in this Asset Management Plan were based on a combination of both the asset register and alternate methods.

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	30 %
Usage/demand	30 %

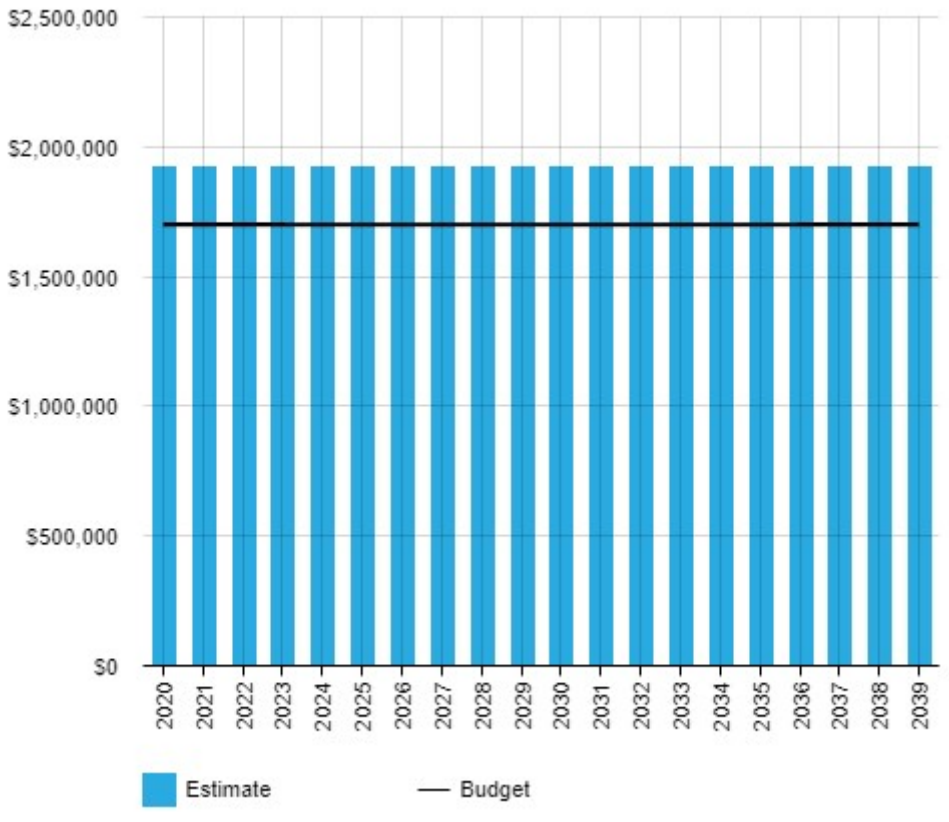
[6] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[7] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Criteria	Weighting
High maintenance costs that could be reduced significantly by renewal	20 %
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



All figure values are shown in current day dollars.

The forecast renewal costs are greater than the proposed renewal budget over the planning period, 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

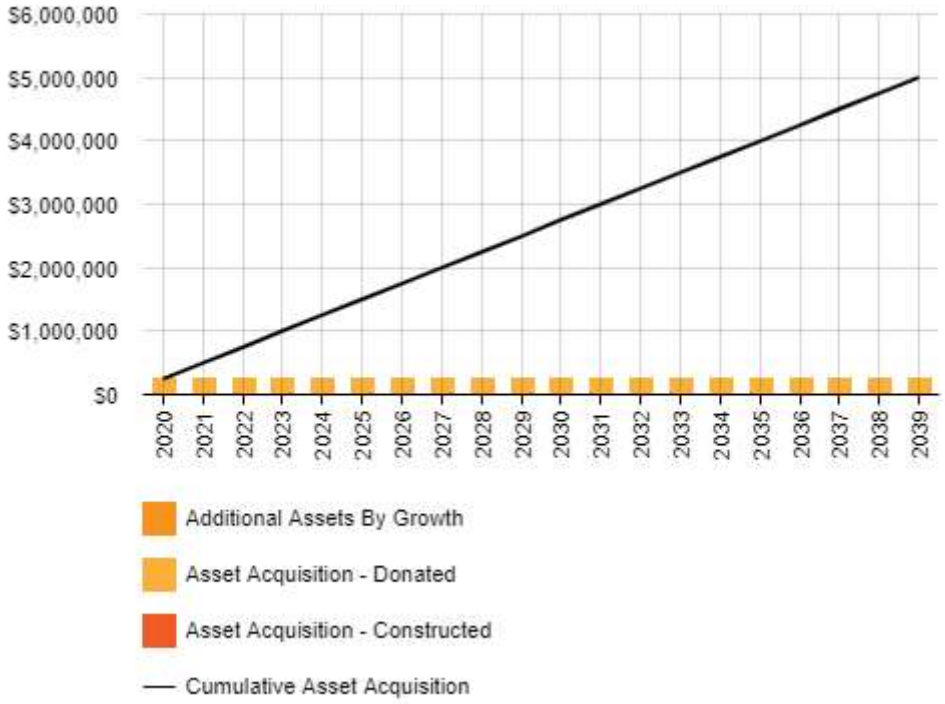
Criteria	Weighting
Is the acquisition in line with Council's core purpose?	30 %
Necessity/demand	25 %
Are lifecycle costs known and funds available in planned budget?	25 %
Risk consequence of not providing	20 %
Total	**100%**

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.

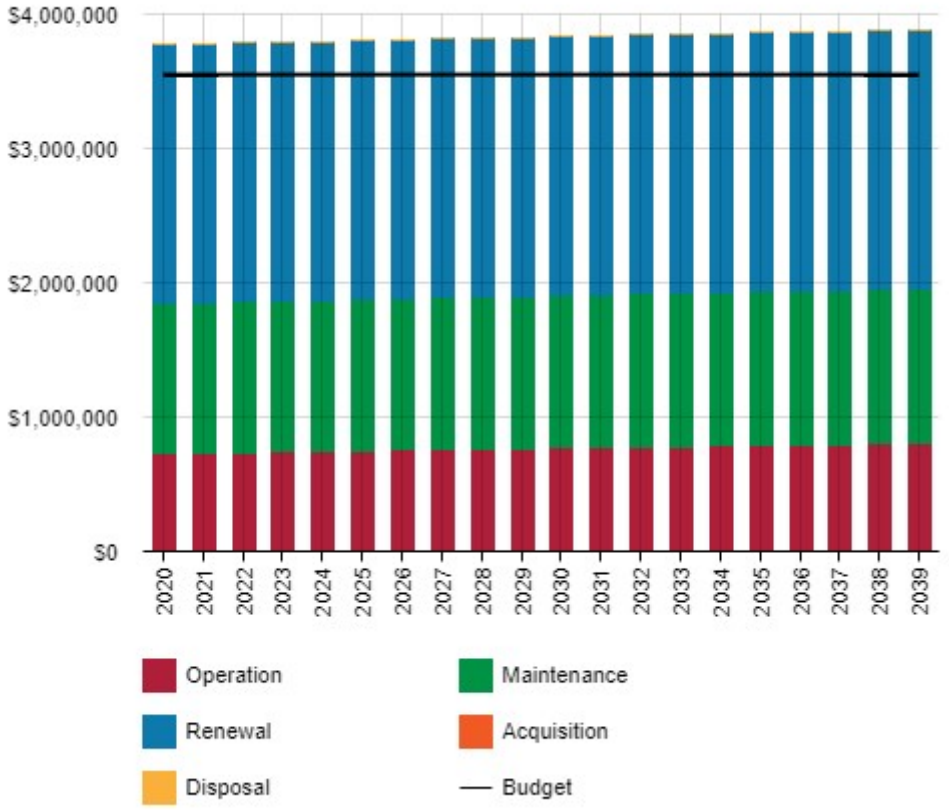
Though not noted in this plan, Council will likely have some 'constructed' acquisitions over the planning period, however these are estimated to mostly be things like road widening of an existing road, or sealing a previously unsealed road (a new component to an existing asset). These acquisition costs 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). The forecast lifecycle costs for renewal is the main reason for the shortfall between the planned budget and the lifecycle costs. Gradual increases in the operations and maintenance lifecycle costs also lead to a greater shortfall over the planning period, due to increased costs associated with acquired (donated) assets.

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 risks[9] 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
Bridges	Flooding, impact, overloading 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)

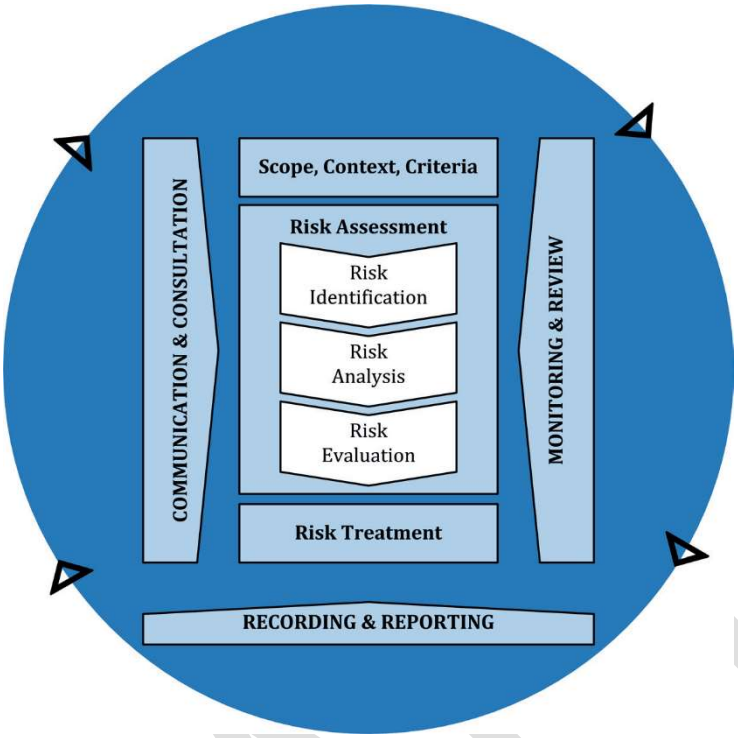


Fig 6.2 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

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 risks[10] 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 and employment of asset manager are budgeted for	L	$100,000
Road Infrastructure	Increased frequency of flood damage to assets	H	Improve vulnerable assets	L	$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	Lack of strategic plan for maintenance and renewal works	H	Maintain and renew assets based on condition assessments and hierarchy. Develop strategic work plan	L	$75,000

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 Ratio[11] **88.31%**

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 88.31% 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 **$3,800,650** on average per year.

The proposed (budget) operations, maintenance and renewal funding is **$3,550,000** on average per year giving a 10 year funding shortfall of **$250,650** per year. This indicates that **93.41%** 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
2020	0	$730,000	$1,120,000	$1,925,000	0
2021	0	$733,975	$1,121,725	$1,925,000	0
2022	0	$737,950	$1,123,450	$1,925,000	0
2023	0	$741,925	$1,125,175	$1,925,000	0
2024	0	$745,900	$1,126,900	$1,925,000	0
2025	0	$749,875	$1,128,625	$1,925,000	0
2026	0	$753,850	$1,130,350	$1,925,000	0
2027	0	$757,825	$1,132,075	$1,925,000	0
2028	0	$761,800	$1,133,800	$1,925,000	0
2029	0	$765,775	$1,135,525	$1,925,000	0
2030	0	$769,750	$1,137,250	$1,925,000	0
2031	0	$773,725	$1,138,975	$1,925,000	0
2032	0	$777,700	$1,140,700	$1,925,000	0
2033	0	$781,675	$1,142,425	$1,925,000	0
2034	0	$785,650	$1,144,150	$1,925,000	0
2035	0	$789,625	$1,145,875	$1,925,000	0
2036	0	$793,600	$1,147,600	$1,925,000	0
2037	0	$797,575	$1,149,325	$1,925,000	0
2038	0	$801,550	$1,151,050	$1,925,000	0
2039	0	$805,525	$1,152,775	$1,925,000	0

7.2 Funding Strategy

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

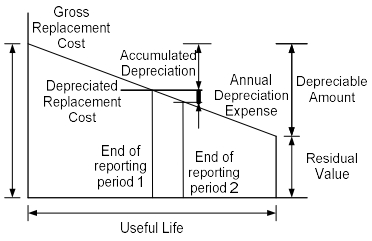
The financial strategy of Council determines how funding will be provided, whereas the Asset Management Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

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)	$95,150,507
Depreciable Amount	$95,150,507
Depreciated Replacement Cost[12]	$33,000,000
Annual Depreciation Expense	$1,438,578



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 scale[13] 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 ± 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 ± 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 ± 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 ± 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 Brighton Council revaluation rates (2019) and AusSpan bridge renewal estimates.
- Asset useful lives	Low to Medium	Based on visual inspection and professional judgement of staff and consultants
- Condition modelling	High	Based on recent *AusSpan* (bridges) and *Pitt&Sherry* (road, footpath, kerb) condition assessments
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 Practices[14]

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	Develop an Unmaintained Roads Policy for Council review.	General Manager, Director of Infrastructure	Internal	February 2021
2	Council to take on management of road, footpath, kerb and channel assets in *MyData* software (previously done by Brighton Council). Import *Pitt&Sherry* condition data to *MyData* ensuring update of Service Potential Index so depreciation data linked to condition (notably for Condition 4 and 5 assets).	Director of Infrastructure	Asset Management Engineer (not currently a funded position)	February 2021
3	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 2021
4	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	June 2021
5	Increase accuracy of budget breakdown to include acquisitions, maintenance, operations, renewals and disposals. Aim for better transparency.	Accountant	Accountant, Director of Infrastructure	September 2021
6	Estimate date built/last renew date and renewal costs for assets with missing information. Improve confidence in renewal costs.	Director of Infrastructure	Asset Management Engineer (not currently a funded position)	September 2021

[14] ISO 55000 Refers to this as the Asset Management System

7	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 2021
8	Community/Council consultation required to ensure appropriate levels of service are being provided (reduce/improve level of service accordingly)	General Manager	Internal	June 2022
9	Undertake detailed condition assessment of roads, footpaths, kerb and channel	Director of Infrastructure	Asset Management Engineer (not currently funded)	October 2024
10	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
11	Continue to update useful lives in *MyData*, based on condition assessment data.	Director of Infrastructure	Director of Infrastructure, Asset Management Engineer (not currently a funded position)	Ongoing
12	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
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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
2020	0	$250,000	0
2021	0	$250,000	0
2022	0	$250,000	0
2023	0	$250,000	0
2024	0	$250,000	0
2025	0	$250,000	0
2026	0	$250,000	0
2027	0	$250,000	0
2028	0	$250,000	0
2029	0	$250,000	0
2030	0	$250,000	0
2031	0	$250,000	0
2032	0	$250,000	0
2033	0	$250,000	0
2034	0	$250,000	0
2035	0	$250,000	0
2036	0	$250,000	0
2037	0	$250,000	0
2038	0	$250,000	0
2039	0	$250,000	0

Appendix B Operation Forecast

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 costs each year over the planning period. Note the 'Additional Operation Forecast' 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 Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2020	$730,000	$3,975	$730,000
2021	$733,975	$3,975	$733,975
2022	$737,950	$3,975	$737,950
2023	$741,925	$3,975	$741,925
2024	$745,900	$3,975	$745,900
2025	$749,875	$3,975	$749,875
2026	$753,850	$3,975	$753,850
2027	$757,825	$3,975	$757,825
2028	$761,800	$3,975	$761,800
2029	$765,775	$3,975	$765,775
2030	$769,750	$3,975	$769,750
2031	$773,725	$3,975	$773,725
2032	$777,700	$3,975	$777,700
2033	$781,675	$3,975	$781,675
2034	$785,650	$3,975	$785,650
2035	$789,625	$3,975	$789,625
2036	$793,600	$3,975	$793,600
2037	$797,575	$3,975	$797,575
2038	$801,550	$3,975	$801,550
2039	$805,525	$3,975	$805,525

Appendix C Maintenance Forecast

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

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2020	$1,120,000	$1,725	$1,120,000
2021	$1,121,725	$1,725	$1,121,725
2022	$1,123,450	$1,725	$1,123,450
2023	$1,125,175	$1,725	$1,125,175
2024	$1,126,900	$1,725	$1,126,900
2025	$1,128,625	$1,725	$1,128,625
2026	$1,130,350	$1,725	$1,130,350
2027	$1,132,075	$1,725	$1,132,075
2028	$1,133,800	$1,725	$1,133,800
2029	$1,135,525	$1,725	$1,135,525
2030	$1,137,250	$1,725	$1,137,250
2031	$1,138,975	$1,725	$1,138,975
2032	$1,140,700	$1,725	$1,140,700
2033	$1,142,425	$1,725	$1,142,425
2034	$1,144,150	$1,725	$1,144,150
2035	$1,145,875	$1,725	$1,145,875
2036	$1,147,600	$1,725	$1,147,600
2037	$1,149,325	$1,725	$1,149,325
2038	$1,151,050	$1,725	$1,151,050
2039	$1,152,775	$1,725	$1,152,775

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

The renewal forecast of $1,925,000 per year is based on the total sum of the forecasted renewal costs averaged over the 20 year planning period. This includes the renewal of all assets currently in Condition 3, 4 and 5, averaged over the planning period. Refer also improvement plan in Section 8.0.

D.2 – Renewal Project Summary

The below tables are extracts from the road infrastructure asset registers and show assets in Condition 4 and 5 that are forecast for renewal within the planning period (up to 2039). Further professional judgement will be required in prioritising the below renewals over the planning period, refer also Table 5.3.1.

All figures shown are in current day dollars.

Asset ID	Sub Category	Asset_Name	Description 1/From	Description 2/To	Renewal Cost	Condition (1-5)
5	Bridge -TIM	827 (abut)	Griffiths Rvlt	Rheban Rd	65016	5
5	Bridge -TIM	827 (super)	Griffiths Rvlt	Rheban Rd	85807	5
Ftboyl000R	Footpath	Boyle St	Esplanade West B/L Sth Side to Inkerman St		35568	5
Fochar010L	Footpath	Charles St	Segment Change to Elizabeth St		5400	5
FOChar070L	Footpath	Charles St	School crossing to Prosser St		15600	5
Foespl000L	Footpath	Esplanade	Tasman Hwy to Width Change		12150	5
Fsfrey000L	Footpath	Freycinet Crt	Francis St to End Bowl		14432	5
Fspyke000R	Footpath	Pyke Crt	Old Spring Bay Rd to End Bowl		12288	5
Fspyke000L	Footpath	Pyke Crt	Old Spring Bay Rd to End Bowl		14208	5
FTRobe020L	Footpath	Roberts St	Ryan place to 47 Robert St		15120	5
Ftselw020R	Footpath	Selwyn St	Tapner St to End of Seal		11088	5
FSStM030R	Footpath	St Margaret Crt	Halfway to bowl to End		19760	5
Fsstma000L	Footpath	St Margaret Crt	Gordon St to End		22100	5
Fttapn000R	Footpath	Tapner Crt	Selwyn St to End of Court		9504	5
Kscook000L	Kerb	Cooks Crt	L Victoria St to End Bowl		17760	5
Rosfiel010	Sealed	Fieldwick Lane	Alma Rd	End	0	5
Rbuskent030	Sealed	Kent Street	Buckland Rd	End	63319	5
Rtusokeh040	Sealed	Okehampton Roac	Culvert	Gate	179025	5
Rbussall030	Sealed	Sally Peak Road	End Town	End Seal	170517	5
Rtsstri010	Sealed	Strip Road	Seal Change	House	211058	5
Rtusstri000	Sealed	Strip Road	Tasman Hwy	Seal Change	32430	5
Rbustwam020	Sealed	Twamley Road	Seal Change	End Seal	202675	5
Roswielang010	Sealed	Wielangta Road	Rheban Rd	End Seal	54510	5
Rtusgree000	Unsealed	Green Hills Road	Tasman Hwy	Fenceline / Top of Hill	91155	5
Rtusgree010	Unsealed	Green Hills Road	Fenceline / Top of Hill	Grid	101520	5
Rtusgree020	Unsealed	Green Hills Road	Grid	Gate	81310	5
Rsusmcne010	Unsealed	McNeills Road	Grid	Grid	131882	5
Rsusmcne020	Unsealed	McNeills Road	Grid	Gate South Side	112330	5
Rsusmcne030	Unsealed	McNeills Road	Gate South Side	Culvert / Creek	122670	5
Rsusmcne060	Unsealed	McNeills Road	Gate South Side	Gate	133480	5
Rtusmelb070	Unsealed	Melbourne Street	Louisa St	Ends at Gate	22601	5
Rsusmtpl000	Unsealed	Mt Pleasant Road	Tasman Highway	gate	126000	5
Rsusmtpl010	Unsealed	Mt Pleasant Road	Tasman Highway	Locked gate	0	5
Rcuspars010	Unsealed	Parsons Cove Roa	Sign Parsons Cove Rd	End	22090	5
Rrusrhebjett000	Unsealed	Rheban Jetty Road	Rheban Rd	Gate	0	5
Rbusrosed070	Unsealed	Rosedale Road	Segment Change	Bridge	175680	5
Rbusrosed080	Unsealed	Rosedale Road	Bridge	End	130540	5
Rbuussall040	Unsealed	Sally Peak Road	End Seal	End	79618	5
Rbuussand090	Unsealed	Sand River Road	House LHS	Boom Gate	131760	5
Rbuussand080	Unsealed	Sand River Road	Gate LHS	House LHS	108580	5
Rtusseaf050	Unsealed	Seaford Road	Bridge	Locked Gate	107160	5
Rtusseaf020	Unsealed	Seaford Road	Banwell Rd	Entrance West Side	84790	5
Rtusseaf030	Unsealed	Seaford Road	Entrance West Side	Grid	86620	5
Rtusseaf040	Unsealed	Seaford Road	Grid	Bridge	187880	5
Rtusstri005	Unsealed	Strip Road	Seal	Seal	0	5
Rtusswan040	Unsealed	Swanston Road	Bridge	Gate	59690	5
Rouswielang12(	Unsealed	Wielangta Road	Change Point	Change Point	168000	5
Rouswielang13(	Unsealed	Wielangta Road	Change Point	Bridge	243600	5
Rouswielang14(	Unsealed	Wielangta Road	Bridge	Old School Rd	226800	5
Rouswielang15(	Unsealed	Wielangta Road	Old School Rd	Bridge	168000	5
Rouswielang16(	Unsealed	Wielangta Road	Bridge	Bridge	201600	5
Rouswielang17(	Unsealed	Wielangta Road	Bridge	Change Point	168000	5
Rouswielang18(	Unsealed	Wielangta Road	Change Point	Culvert	201600	5
Rouswielang19(	Unsealed	Wielangta Road	Culvert	Council Boundary	184800	5
Rsusyoun000	Unsealed	Young Street	Cathcart Street	James Street	25742	5

Asset ID	Sub Category	Asset_Name	Description 1/From	Description 2/To	Renewal Cost	Condition (1-5)
Rbusrosed030	Concrete	Rosedale Road	Bridge	End Concrete	0	4
Fcbrad000L	Footpath	Bradley Dv	Freycinet Drv to End Court Bowl		55296	4
Fcbrad010L	Footpath	Bradley Dv	End Court Bowl to End Extension		6912	4
Fsmere000R	Footpath	Meredith Ctr	Old Spring Bay Rd to End Bowl		14688	4
Kballe010R	Kerb	Allen St	R Seal Change to End Bowl		10680	4
Koalma000L	Kerb	Alma Rd	L Tasman Hwy to Aubin Crt		8520	4
Kbank000L	Kerb	Banksia St	L Sinclair St to Levy St		30360	4
Ktboyl000R	Kerb	Boyle St	R Esplanade West B/L Sth Side to Inkerman St		32520	4
Kochar030R	Kerb	Charles St	R Henry St to Prosser St		26760	4
Kscook000R	Kerb	Cooks Crt	R Victoria St to End Bowl		17280	4
Ktdavi000L	Kerb	Davidson Pl	L Boyle St to End of Court		7680	4
Koeric000R	Kerb	Erica St	R Riverside Drv to Seal Change		11280	4
Ktespl000R	Kerb	Esplanade East	R Roberts to Esplanade East		3840	4
Ksjuli010L	Kerb	Julia St	L Sunny View St to Schouten Crt		12000	4
Rosalma010	Sealed	Alma Road	Aubin Crt	Seal Change	64664	4
Rssaqua000	Sealed	Aqua Sands Drive	Old Spring Bay Road	End Bowl	71445	4
Rosbluf000	Sealed	Bluff Road	Rheban Rd	End Bowl	23595	4
Rssbresn010	Sealed	Bresnehans Road	Start Seal	End Seal	154350	4
Rbsbuck070	Sealed	Buckland Road	Seal Change	Seal Change	18883	4
Rbsbuck050	Sealed	Buckland Road	Sand River Rd	Segment Change	355000	4
Rbsbuck020	Sealed	Buckland Road	Seal Change	Seal Change	123930	4
Rbsbuck110	Sealed	Buckland Road	Seal Change	Seal Change	385733	4
Rbsbuck140	Sealed	Buckland Road	Seal Change	End Seal	170000	4
Rbusbuck150	Sealed	Buckland Road	End Seal	Shire Boundary	283800	4
Rbsburn000	Sealed	Burnett St	EOS Tasman Hwy	Seal Change	20425	4
Rbsburn010	Sealed	Burnett St	Seal Change	Seal Change	46679	4
Roschar020	Sealed	Charles Street	Elizabeth St	Henry St	50992	4
Roschar000	Sealed	Charles Street	EOS Tasman Hwy	Segment Change	24260	4
Roschar010	Sealed	Charles Street	Segment Change	Elizabeth St	98116	4
Rtscharl000	Sealed	Charles Street	Esplanade West	Vicary St	93662	4
Rsscook000	Sealed	Cooks Court	Street A	End Bowl	65611	4
Roseast010	Sealed	East Shelly Road	Manning Dr	Seal Change	71318	4
Rosespl030	Sealed	Esplanade	Seal Change	End	41958	4
Rcsesplea010	Sealed	Esplanade East	Garnet Ave	Boat Ramps	88788	4
Rtsesple000	Sealed	Esplanade East	Inkerman St	Boyle St	68278	4
Rbusfernd000	Sealed	Ferndale Road	Rosedale Rd	Suncoast Dve	82503	4
Rssfrank040	Sealed	Franklin Street	Maria St	Width Change	10086	4
Rbsgord060	Sealed	Gordon Street	Wedge St	Seal Change	27122	4
Rtshenr030	Sealed	Henry Street	Victoria St	Tasman Hwy	64930	4
Rbuskent020	Sealed	Kent Street	Seal Change	Buckland Rd	16433	4
Rtslord000	Sealed	Lord Street	Esplanade East	Ada St	67532	4
Rssmari010	Sealed	Maria Street	Franklin St	Wellington St	74954	4
Rbsmorre000	Sealed	Morrison Street Ea	West End	Burgess Street	33237	4
Rbusnair000	Sealed	Nairn Street	South End	Kent St	27060	4
Rtusokeh020	Sealed	Okehampton Roac	Grid	Seal Change	132000	4
Rtusokeh030	Sealed	Okehampton Roac	Seal Change	Culvert	43725	4
Rsuscoac000	Sealed	Old Coach Rd	Tasman Hwy	End Seal	35636	4
Rsuscoac000	Sealed	Old Coach Rd	Tasman Hwy	End Seal	35636	4
Rbsoldt000	Sealed	Old Tram Road	Burgess St	End	20010	4
Rospros000	Sealed	Prosser Street	Charles St	Mary St EOS	62969	4
Rosrheb030	Sealed	Rheban Road	Seal Change	Jetty Road	157658	4
Rosrheb090	Sealed	Rheban Road	Happy Valley Rd	Ryans Rd	54438	4
Rosrheb110	Sealed	Rheban Road	Seal Change	Bridge	61740	4
Rbussall020	Sealed	Sally Peak Road	Seal Change	End Town	61585	4
Rtsselw040	Sealed	Selwyn Street	End of Seal	Spencer St	2130	4
0	Sealed	Slipway Road	Freestone Point Rd	End	0	4
Rbustwam000	Sealed	Twamley Road	Court Farm Road	Seal Change	42514	4
Rbustwam010	Sealed	Twamley Road	Seal Change	Seal Change	39949	4
RswsUN000	Sealed	U/N 5 Swanwick D	Swanwick Dr	Concrete Boat Ramp	20475	4

Asset ID	Sub Category	Asset_Name	Description 1/From	Description 2/To	Renewal Cost	Condition (1-5)
Rtsvica000	Sealed	Vicary Street	Tasman Hwy EOS	Esplanade West	37186	4
Rousalma050	Unsealed	Alma Road	Width Change	End Loop	167400	4
Rsusboat000	Unsealed	Boathouse Road	Tasman Hwy	End	107160	4
Rsuscros020	Unsealed	Crossins Road	Culvert	Gate	63345	4
Rsuscros030	Unsealed	Crossins Road	Gate	U / N Road	86010	4
Rsuscros060	Unsealed	Crossins Road	Change	Gate	98700	4
Rsusdove000	Unsealed	Dove Lane	Julia St	High St	70720	4
Rcusfish000	Unsealed	Fisheries Road	EOS Freycinet Drive	End	33950	4
Roushappl000	Unsealed	Happy Valley Lane	Happy Valley Rd	End	0	4
Rousjett020	Unsealed	Jetty Road	West Shelly Rd	End	14744	4
Rousmaryn010	Unsealed	Mary Street N	End Seal	End	7455	4
Rsusmcne000	Unsealed	McNeills Road	Tasman Hwy	Grid	44838	4
Rsusmcne040	Unsealed	McNeills Road	Culvert / Creek	Bridge / Creek	109980	4
Rsusmcne050	Unsealed	McNeills Road	Bridge / Creek	Gate South Side	80840	4
Rtusmtmu020	Unsealed	Mount Murray Ro	Entrance	Grid	16450	4
Rtusmtmu010	Unsealed	Mount Murray Ro	Gate Sth Side	Entrance	82350	4
Rsuscoac010	Unsealed	Old Coach Rd	End Seal	Entrance East Side	180560	4
Rsuscoac020	Unsealed	Old Coach Rd	Entrance East Side	Culvert	121390	4
Rsuscoac030	Unsealed	Old Coach Rd	Culvert	Culvert	140700	4
Rsuscoac040	Unsealed	Old Coach Rd	Culvert	Bridge	124074	4
Rsuscoac050	Unsealed	Old Coach Rd	Bridge	Synotts Rd	152866	4
Rsuscoac060	Unsealed	Old Coach Rd	Synotts Rd	Entrance West Rd	148685	4
Rsuscoac070	Unsealed	Old Coach Rd	Entrance West Rd	Grid	180560	4
Rsuscoac080	Unsealed	Old Coach Rd	Grid	Culvert	125660	4
Rsuscoac090	Unsealed	Old Coach Rd	Culvert	Culvert	143960	4
Rsuscoac100	Unsealed	Old Coach Rd	Culvert	Culvert	145500	4
Rsuscoac110	Unsealed	Old Coach Rd	Culvert	Culvert	167250	4
Rsuscoac120	Unsealed	Old Coach Rd	Culvert	H.G. Quarry	138750	4
Rsuscoac130	Unsealed	Old Coach Rd	H.G. Quarry	East Coast Forrests Sign	141000	4
Rsuscoac140	Unsealed	Old Coach Rd	East Coast Forrests Sign	Top of Rise	201000	4
Rsuscoac150	Unsealed	Old Coach Rd	Top of Rise	Top of Hill/Clearing	144000	4
Rsuscoac160	Unsealed	Old Coach Rd	Top of Hill/Clearing	Culvert	77520	4
Rsuscoac170	Unsealed	Old Coach Rd	Culvert	Culvert	135420	4
Rsuscoac180	Unsealed	Old Coach Rd	Culvert	Creek/Culvert/Boundary	57340	4
Rsuscoac010	Unsealed	Old Coach Rd	End Seal	Entrance East Side	180560	4
Rsuscoac020	Unsealed	Old Coach Rd	Entrance East Side	Culvert	121390	4
Rsuscoac030	Unsealed	Old Coach Rd	Culvert	Culvert	140700	4
Rsuscoac040	Unsealed	Old Coach Rd	Culvert	Bridge	124074	4
Rsuscoac050	Unsealed	Old Coach Rd	Bridge	Synotts Rd	152866	4
Rsuscoac060	Unsealed	Old Coach Rd	Synotts Rd	Entrance West Rd	148685	4
Rsuscoac070	Unsealed	Old Coach Rd	Entrance West Rd	Grid	180560	4
Rsuscoac080	Unsealed	Old Coach Rd	Grid	Culvert	125660	4
Rsuscoac090	Unsealed	Old Coach Rd	Culvert	Culvert	143960	4
Rcuspars000	Unsealed	Parsons Cove Roa	Freycinet Drive	Sign Parsons Cove Rd	45105	4
Rbsrosed040	Unsealed	Rosedale Road	Concrete Spillway	End Spillway	18995	4
Rbusrosed050	Unsealed	Rosedale Road	End Spillway	House LHS	134850	4
Rbusrosed060	Unsealed	Rosedale Road	House LHS	Segment Change	119316	4
Rbuussand070	Unsealed	Sand River Road	Segment Change	Gate LHS	152500	4
Rsussprin010	Unsealed	Springs Road	End Seal	Webster Wallnuts	175070	4
Rsussprin020	Unsealed	Springs Road	Webster Walnuts	Bell Brooke Road	126690	4
Rbuusston000	Unsealed	Stonehurst Road	Brockley Rd	Segment Change	113000	4
Rbuusston010	Unsealed	Stonehurst Road	Segment Change	Cattle Grid	79900	4
Rbuusston020	Unsealed	Stonehurst Road	Cattle Grid	Segment Change	108100	4
Rbuusston030	Unsealed	Stonehurst Road	Segment Change	Cattle Grid	84600	4
Rtusstri040	Unsealed	Strip Road	Top of Hill/Clearing	Bridge	45120	4
Rtusstri050	Unsealed	Strip Road	Bridge	End / Entrance	103400	4
Rtusswan020	Unsealed	Swanston Road	Culvert	Gumleaves'	58800	4
Rtusswan030	Unsealed	Swanston Road	Gumleaves'	Bridge	112800	4
Rcussyno000	Unsealed	Synotts Road	Start	Gate	91670	4
Rouswielang025	Unsealed	Wielangta Road	Change Point	Change Point	0	4
Rbuuswood000	Unsealed	Woodsden	Grid	Gate RHS	0	4
Rbuuswood010	Unsealed	Woodsden Road	Gate RHS	End	56160	4
Rbuuswood030	Unsealed	Woodsden Road	Nairn St	Grid	0	4

10-Year Bridge Renewal Plan

List No.	Classif-ication	Bridge No	River Name	Road Name	Const Year	Deck Type	Deck Area	20\21 This Year	21\22 Yr 1	22\23 Yr 2	23\24 Yr 3	24\25 Yr 4	25\26 Yr 5	26\27 Yr 6	27\28 Yr 7	28\29 Yr 8	29\30 Yr 9	30\31 Yr 10
1	MBA	111	Back Rv	Stonehurst Rd	2016	CON	22.28	3.25										
2	MBA	466	Vicary Rvlt	Triabunna Rd	1993	CON	178.20	0.20										
3	MBA	689	Unemployed Gully	Nugent Rd	2014	CON	58.65	6.65										
4	MBA	814	Ironstone Ck	Cutting Grass	2013	CON	43.17	0.30										
5	MBA	827	Griffiths Rvlt	Rheban Rd	2009	CON	66.30	220.98										
14	MBA	2028	Prosser Rv	Brockley Rd	2010	CON	60.00	34.03										174.98
15	MBA	2034	Prosser Rv	Brockley Rd	2011	CON	56.10	34.45										
18	MBA	2416	West Swan Rv	Old Coach Rd	2011	CON	24.64	0.95										
21	MBA	2902	Prosser Rv	Woodsden Rd	2011	CON	51.00	45.00	22.10									
24	MBA	3209	Blindburn Ck	Ferndale Rd	2013	CON	30.49	6.35			117.57							
26	MBA	3299	Saggy Ck	Rosedale Rd	2008	CON	53.55									248.96		
27	MBA	3301	Apsley Rv	Rosedale Rd	2011	CON	142.80		56.65									
30	MBA	3590	Mitchelmores Ck	Swanston Rd	2011	CON	45.90		19.00									
33	MBA	3860	Earlham Ck	Earlham Rd	2017	CON	51.00	0.40										
35	MBA	4221	Ravensdale Rvlt	Strip Rd	2010	CON	51.00	1.45										148.73
38	MBA	4844	Seabyrne Ck	Banwell Rd	2011	CON	40.80	9.43	14.25									
42	MBA	5251	Kit Owen Ck	McNeills	2009	CON	45.00										127.41	
44	MBA	100V	Unnamed Ck	Glen Gala Rd	1950	CON	66.88	5.65										362.68
47	MBA		Griffiths Rvlt	Wielangta Rd	2014	CON	84.15	0.30										
48	MBA		Prosser Rvr	Off Brockley Rd	1973	STL	105.60	7.65			294.83							
53	MBA		Griffiths North	Wielangta Rd	2002	MPC	19.08	45.80							86.09			
54	MBA		Sandspit Rv	Wielangta Rd	1999	MPC	84.00	2.65										
55	MBA		Sandspit Flood Opening	Wielangta Rd	2005	CON	61.20				238.74							
57	MBA		Pony Bottom	Wielangta Rd	2017	CON	104.12	0.40										
60	MBA		Sandspit Rv	Wielangta Rd	2011	RBC	56.28	0.40										

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
2020	$1,925,000	$1,700,000
2021	$1,925,000	$1,700,000
2022	$1,925,000	$1,700,000
2023	$1,925,000	$1,700,000
2024	$1,925,000	$1,700,000
2025	$1,925,000	$1,700,000
2026	$1,925,000	$1,700,000
2027	$1,925,000	$1,700,000
2028	$1,925,000	$1,700,000
2029	$1,925,000	$1,700,000
2030	$1,925,000	$1,700,000
2031	$1,925,000	$1,700,000
2032	$1,925,000	$1,700,000
2033	$1,925,000	$1,700,000
2034	$1,925,000	$1,700,000
2035	$1,925,000	$1,700,000
2036	$1,925,000	$1,700,000
2037	$1,925,000	$1,700,000
2038	$1,925,000	$1,700,000
2039	$1,925,000	$1,700,000

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:

- Rheban Road Bridge (Griffiths Rivulet);
- Buckland Road;
- Wielangta Road;
- Rheban Road;
- Nugent Road;
- Old Coach Road;
- Charles Street (Orford);
- Rosedale Road;
- McNeills Road;
- Seaford Road,
- Freycinet Drive,
- Wielangta Road Bridge (17 Acre Creek);
- Brockley Road Bridge (Prosser River);
- Wielangta Road Bridge (Sandspit Flood Opening);
- Wielangta Road Bridge (Griffiths North);
- McNiells Road Bridge (Kit Owen Creek).

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
2020	0	0
2021	0	0
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

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
2020	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2021	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2022	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2023	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2024	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2025	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2026	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2027	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2028	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2029	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2030	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2031	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2032	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2033	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2034	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2035	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2036	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2037	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2038	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000
2039	0	$730,000	$1,120,000	$1,700,000	0	$3,550,000

Appendix G Road Hierarchy Descriptions

Glamorgan Spring Bay Road Hierarchy	Functional Description
State Arterials **Freeways and Primary Arterials**	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. These Arterials come under the jurisdiction of DSG and as such maintenance of the road pavement and surface is not the responsibility of Council.
Link Road **Hierarchy Category 1**	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.  *Example: Buckland Woodsdale Road*

Glamorgan Spring Bay Road Hierarchy	Functional Description
Collector Road Hierarchy Category 2	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.  *Example: Charles Street, Orford*
Local Access Road Hierarchy Category 3	Those roads whose primary function is to provide access to rural properties and they cater for relatively short distance travel to higher level roads.  *Example: Swanwick Road*

Glamorgan Spring Bay Road Hierarchy	Functional Description
Limited Local Access Road **Hierarchy Category 4**	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  *Example: Ferndale Road, Bicheno*

BUCKLAND TOWNSHIP

Local Scenic Walking Tracks – Stage One

Construction Review

Prepared for Glamorgan Spring Bay Council

Prepared by Lange Design

Date: 6 May 2020

LANGE design landscape architecture

DISCLAIMER

Lange Design has taken all reasonable steps to ensure the information and advice contained within this report is an accurate reflection of our expertise within the landscape architectural practice. Our expertise for this specific project focuses on the topography and alignment of the walking track and the construction methods employed for the works up until the date of the site visit.

Contents

1 INTRODUCTION

This report has been prepared by Leon Lange, Landscape Architect and Director of Lange Design as requested by the Glamorgan Spring Bay Council.

1.2 PURPOSE

The purpose of the report is to review the current construction works of the Buckland Township Local Scenic Walking Tracks, by conducting a site visit and reviewing the works in relation to the project documents issued to Lange Design by Glamorgan Spring Bay Council on the 28th April 2020.

The specific requests were to assess and provide recommendations on the alignment of the walking track, the preparation of the groundworks and the material and installation methods used.

2 SITE DESCRIPTION

The subject site of the Buckland Township Local Scenic Walk is located within the rural township of Buckland, in the local government body of Glamorgan Spring Bay Council, South East Tasmania. Land Tenure is Public Reserve (Tenure ID – 12960). The topography of the site is a riparian environment consisting of the Prosser River and the Brushy Plains Rivulet with cover consisting of a modified landscape clear of natural vegetation and dominated by abandoned paddock grass, Poa grass and Gorse. The soil profile is classified as 'Brown Soils on Dolerite' (Reconnaissance Soil Map Series of Tasmania, Buckland, DPIWE 2000).

The current excavated alignment of Stage One of the walking track, shown in figure 1 below, commences from a point off Woodsden Road approximately 60m south west of the Prosser River Bridge, and traverses along the Prosser River bank in a south easterly direction for approximately 300m to the confluence of the Prosser River and the Brushy Plains Rivulet. The excavated walking track then makes a 'U' turn and heads west along the northern bank of the Brushy Plains Rivulet for approximately 380m before terminating on Nairn Street approximately 120m south of the Kent Street intersection.

At the time of our site visit, the excavated walking track works finish at this point before commencing again on the southern boundary of Lot 60 Kent Street approximately 100m west of the last point. From here, the excavated alignment traverses west along the southern boundary of Lot 50 Kent street for approximately 145m to Burnett Street, then south along Burnett Street for approximately 65m before turning down and along the Brushy Plains Rivulet riverbank for approximately another 65m before terminating under the Tasman Highway Bridge.

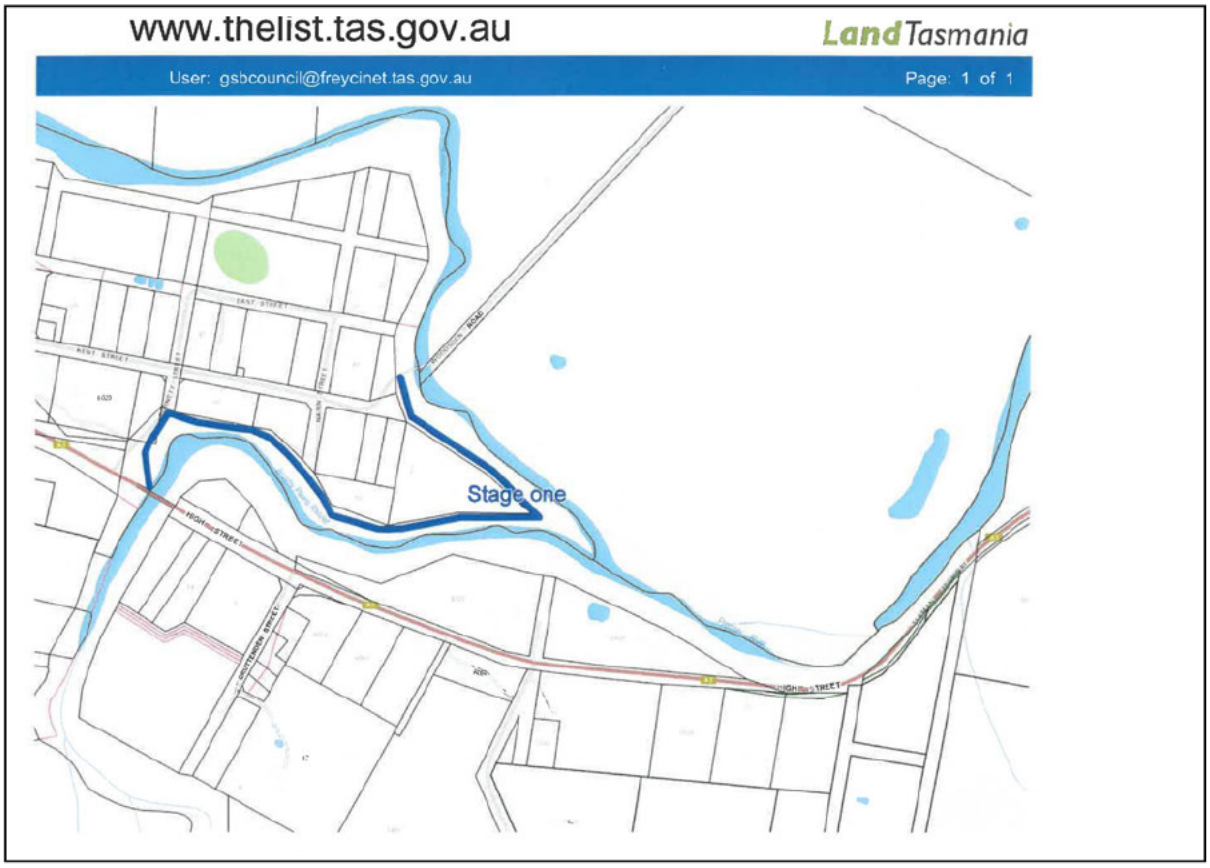

Figure 1: Stage One of the Buckland Township Local Scenic Walking Tracks.

3 BUCKLAND TOWNSHIP LOCAL SCENIC WALKING TRACKS

It is our understanding that the Buckland Township Local Scenic Walking Tracks was a project that evolved from a local community request, with a Grant obtained from the State Government to the sum of $10,000. It is also our understanding that Council provided another $20,000 towards to project.

Figure 2 below illustrates the proposed alignment of the River Walk and Historic Church walking tracks, including the estimated construction costs for completion of the works.

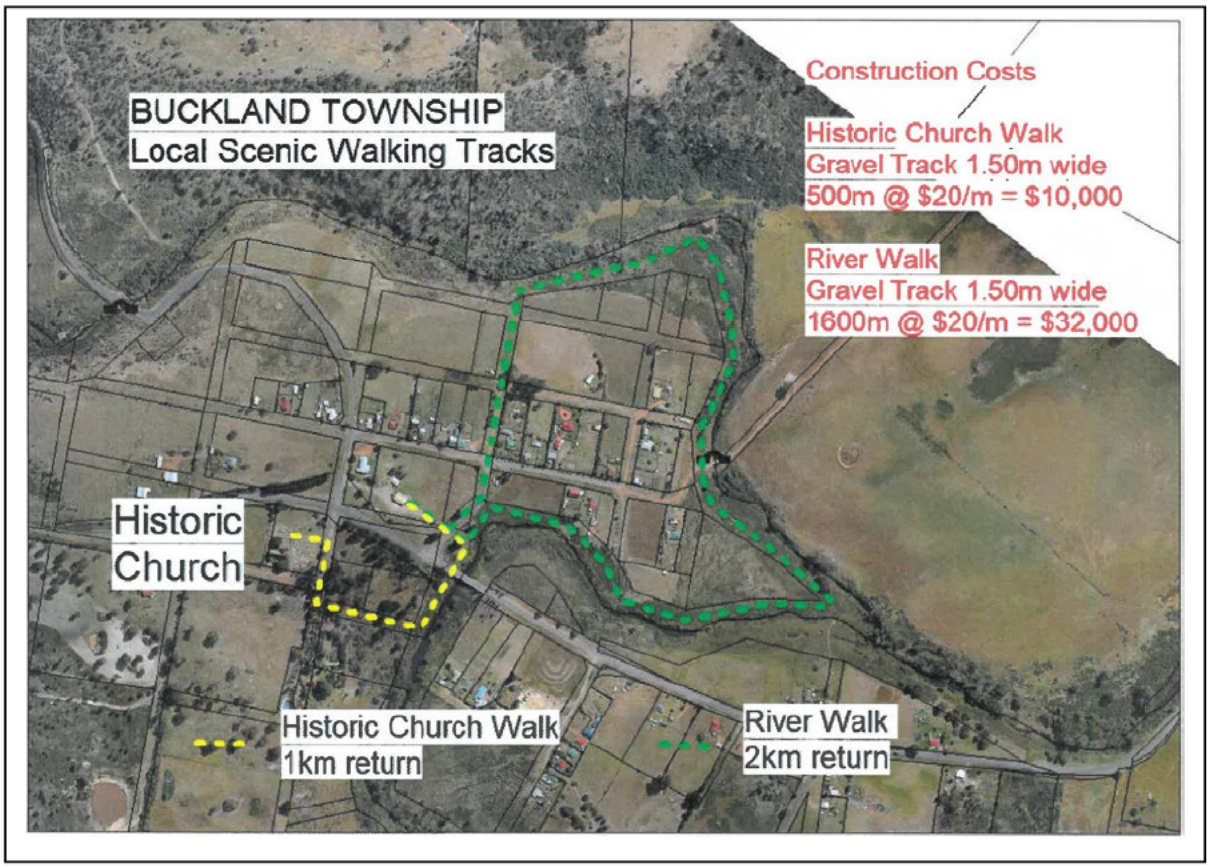

Figure 2: Buckland Township Local Scenic Walking Tracks.

Currently, the construction of the Stage One section of the project consists of cleared and excavated works along the full extent with the exception of a 100m long section between Nairn Street and the southern boundary of Lot 60 Kent Street. The section of the walking track from this point to the termination point under the Tasman Highway Bridge has an approximate 100 – 150mm cover of a gravel road base material which forms the finished surface of the walking track.

The following report sections provide a detailed review of the current constructed works.

4 SITE INVESTIGATION

This section of the report investigates the existing topography and construction methods of the Stage One walking track, through a series of photographs taken during a site visit on the 1st May 2020, between the hours of 10am and 12 noon. The site visit and therefore photo 1, commences from the Woodsden Road end of the walking track.

Figure 3 below is a map that illustrates the current construction works of the walking track alignment, photo location and direction indicators, apparent flooding zone, and potential erosion areas. The map also illustrates the cadastral boundaries as provided by The List website 'layers' category.

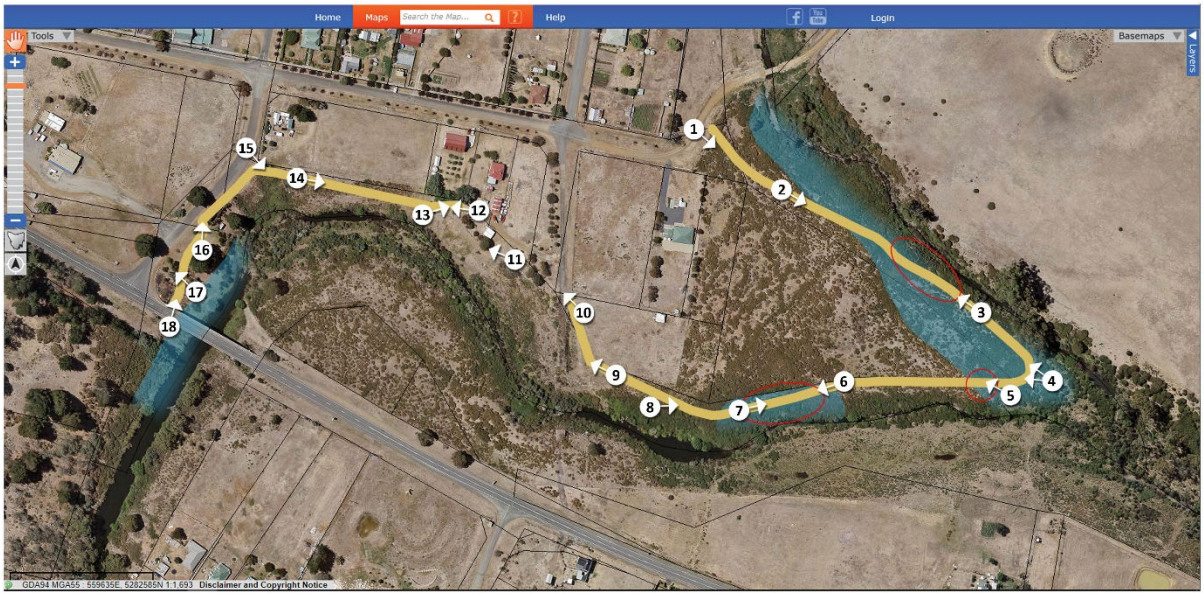

Figure 3: Map of current construction works

4.1 PHOTO 1

Photo 1 illustrates the commencement and alignment of the Stage One works of the walking track. The excavation includes the removal of the existing grass cover and cut (A) and fill (B) of the walking track base course.

Photo 1: View south east along the southern bank of the Prosser River.

4.2 PHOTO 2

Photo 2 illustrates the excavation works including a side drainage swale (A) and an under path stormwater pipe (B), with the base course appearing to be a sandy loam soil (C).

Photo 2: View south east along the southern bank of the Prosser River.

4.3 PHOTO 3

Photo 3 illustrates the clearing works for the walking track through a natural depression within the river bank topography (A). As shown on Figure 3, it is assumed that this area is prone to annual flooding with the depression having a very high potential of erosion, not only of the gravel road base material but the black soil as well.

Photo 3: View north west along the southern bank of the Prosser River towards Woodsden Road.

4.4 PHOTO 4

Photo 4 illustrates the cleared vegetation to make way for the new walking track. As shown on Figure 3, it is assumed that this area of the river bank is prone to annual flooding given the size of the catchment area of Prosser River.

Photo 4: View west along the northern bank of the Bushy Plains Rivulet to the left, and the southern bank of the Prosser River to the right.

4.5 PHOTO 5

Photo 5 illustrates the cleared walking track alignment leading into a natural gully (A), with the apparent initial stages of the gravel road base material being supplied and spread further along (B). It is assumed that this area of the river bank is prone to annual flooding, with a very high possibility of erosion.

Photo 5: View west along the northern bank of the Bushy Plains Rivulet.

4.6 PHOTO 6

Photo 6 illustrates the initial spread of the gravel road base material for the new walking track (A). This area is on relatively high ground compared to the previous section along the Brushy Plains Rivulet. The photo also illustrates the walking track alignment dipping down (B), into another natural depression within the topography.

Photo 6: View west along the northern bank of the Bushy Plains Rivulet.

4.7 PHOTO 7

Photo 7 illustrates the gravel road base material from Photo 6 (A), with the walking track dipping down into another natural depression in the rivulet bank topography (B). As shown on Figure 3, it is assumed that this area is prone to annual flooding with the depression having a very high potential of erosion. The photo also illustrates a stormwater pipe under the walking track (C).

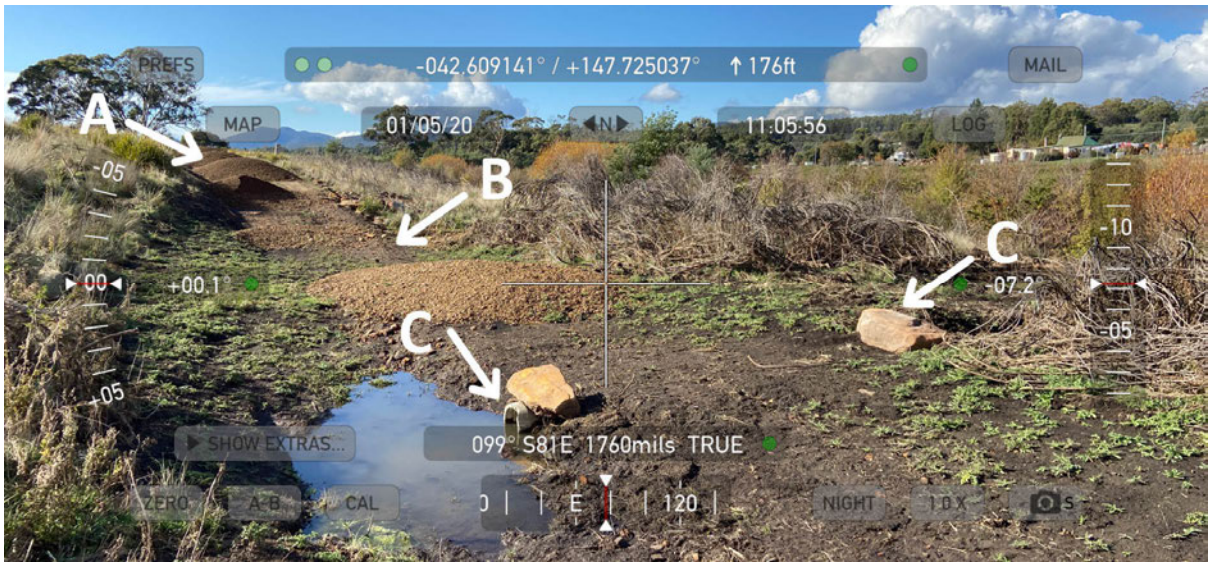

Photo 7: View east along the northern bank of the Bushy Plains Rivulet.

4.8 PHOTO 8

Photo 8 illustrates the cut (A) and fill (B) excavation works for the walking track leading from the rivulet bank up towards Nairn Street.

Photo 8: View east along the northern bank of the Bushy Plains Rivulet.

While on site, the property owner of Lot 62 Kent Street, [redacted] introduced himself to me and mentioned that the walking track works traverses his property as shown on Figure 4. [redacted] further stated that he bought the land between his current fence line (shown in photo 8), and the rivulet from Council approximately 14 years ago.

Figure 4: Land Tenure

[redacted] also mentioned that the Bushy Plains Rivulet and Prosser River flood annually with most flood levels coming up to his fence line. If this is correct, the majority of stage one of the Buckland Township Local Scenic Walking Track will be flooded on an annual basis.

The discussion with [redacted] raises several questions regarding the ownership of land parcels along the walking track alignment, the exposure that the walking track will have to regular flooding, and what will be the annual maintenance costs associated with rectifying the walking track gravel road base layer and potentially the black soil base course.

4.9 PHOTO 9

Photo 9 illustrates the proximity that the walking track comes to the existing southern fence line of Lot 62 (A) and the extent and proximity that the gravel road base layer stockpiles (B) are to the fence line.

Photo 9: View west along the northern bank of the Bushy Plains Rivulet and Nairn Street road reserve.

4.10 PHOTO 10

Photo 10 illustrates the point where the eastern section of the walking track stage one works terminates (A) at the eastern side of Nairn Street (B). The photo also illustrates the lay of the land west of Nairn Street and the commencement point located on the southern boundary of Lot 60 Kent Street. A shed (C) associated with Lot 60 is shown as reference for the following photos.

Photo 10: View west across Nairn Street toward Lot 60 Kent Street.

4.11 PHOTO 11

Photo 11 illustrates the area of land that is classified as Public Reserve along the southern boundary of 60 Kent Street as shown on Figure 4. The photo identifies the position of the shed (A), the fence line (B) that assumes the area of land is associated with Lot 60 Kent Street, and the continuation of the walking track along the southern boundary of lot 50 Kent Street (C).

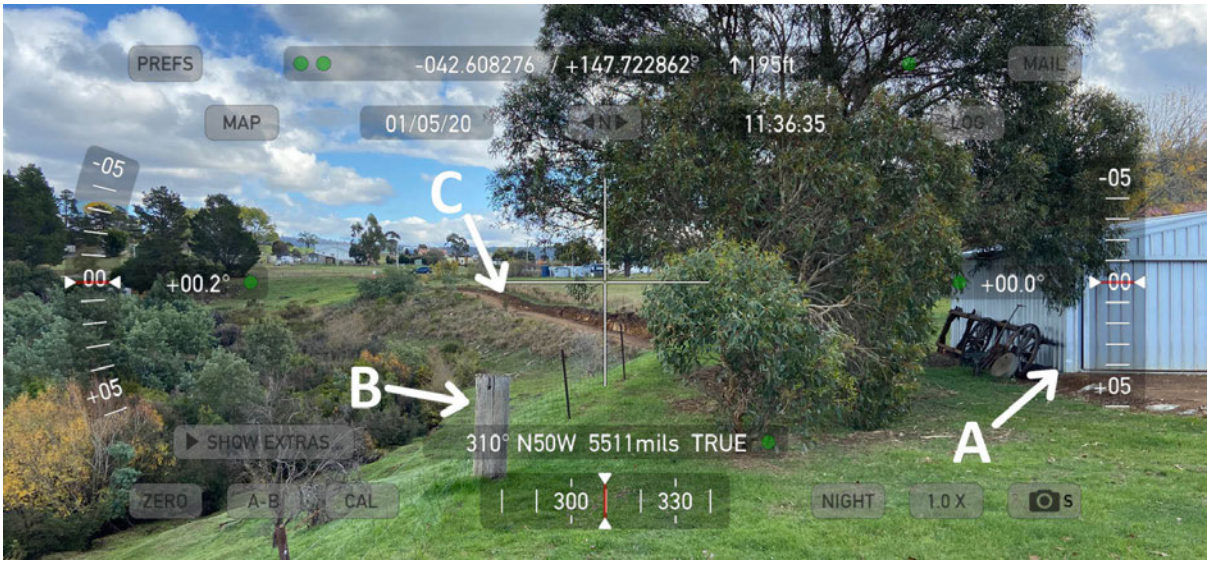

Photo 11: Area of land along the southern boundary of lot 60 Kent Street.

4.12 PHOTO 12

Photo 12 illustrates the point where the eastern section of the walking track stage one works commences (A) on the southern boundary of Lot 60 Kent Street. The photo also shows the apparent maintained yard area associated with Lot 60. Referring to Figure 3 and 4, it is apparent that this area falls within the Public Reserve, however, confirmation of the land title and property boundary should be confirmed and the adjoining land owner formally consulted as to the findings.

Photo 12: View west along the southern boundary of Lot 50 and Lot 60 Kent Street.

4.13 PHOTO 13

Photo 13 illustrates the extent of walking track works along the southern boundary of lot 50 Kent Street, including the continuation point of the walking track (A), a steep graded section of the walking track (B), extent of excessive cut into the bank (C), under path stormwater pipe discharge point (D), and erosion (E) form recent rains.

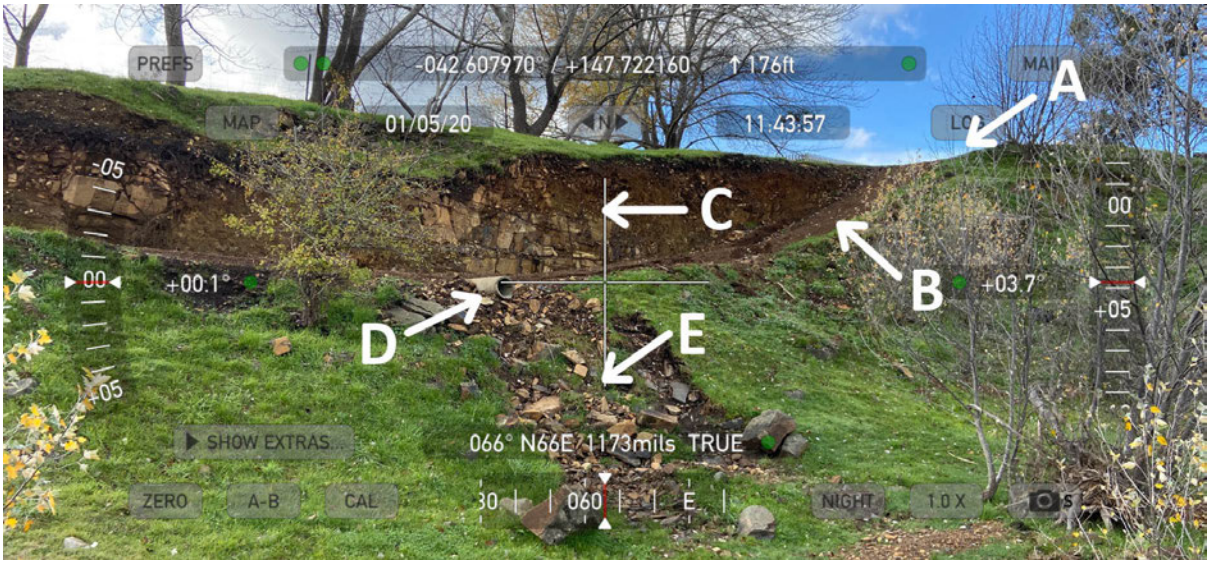

Photo 13: Walking Track works along the southern boundary of lot 60 Kent Street.

4.14 PHOTO 14

Photo 14 illustrates the commencement point (A) of the eastern section of the walking track stage one works along the southern boundary of Lot 50 and Lot 60 Kent Street. The photo shows the area as illustrated in Photo 13 (B), and the extent of excessive cut along the southern boundary of Lot 50.

Photo 14: View east along the southern boundary of Lot 50 and Lot 60 Kent Street.

4.15 PHOTO 15

Photo 15 illustrates the extent of walking track works along the southern boundary of lot 50 Kent Street, up to the edge of Burnett Street. The photo shows the close proximity of the track side drainage swale (B) to the corner of Lot 50 Kent Street, the stormwater pipe under the walking track (A), and the point where the walking track turns 90 degrees left and continues along the southern side of Burnett Street (C).

Photo 15: Walking Track along the southern boundary of Lot 50, leading up to Burnett Street.

4.16 PHOTO 16

Photo 16 illustrates the section of the walking track that extends from the southern side of Burnett Street (A) and back along the Brushy Plains Rivulet Public Reserve. The photo shows the extent of cut (B) and fill (C) for the walking track. The batters do not appear to be compacted to reduce erosion. The photo also shows what may be perceived as a sample of stone pitched walling (D) and the under path stormwater pipe discharge point.

Photo 16: Walking track leading off Burnett Street.

4.17 PHOTO 17

Photo 17 illustrates the extent of walking track works and the stormwater discharge point of pipe work from under Burnett Street (A), rock lined overland flow swale (B) and the inlet point for the stormwater pipe under the walking track (C).

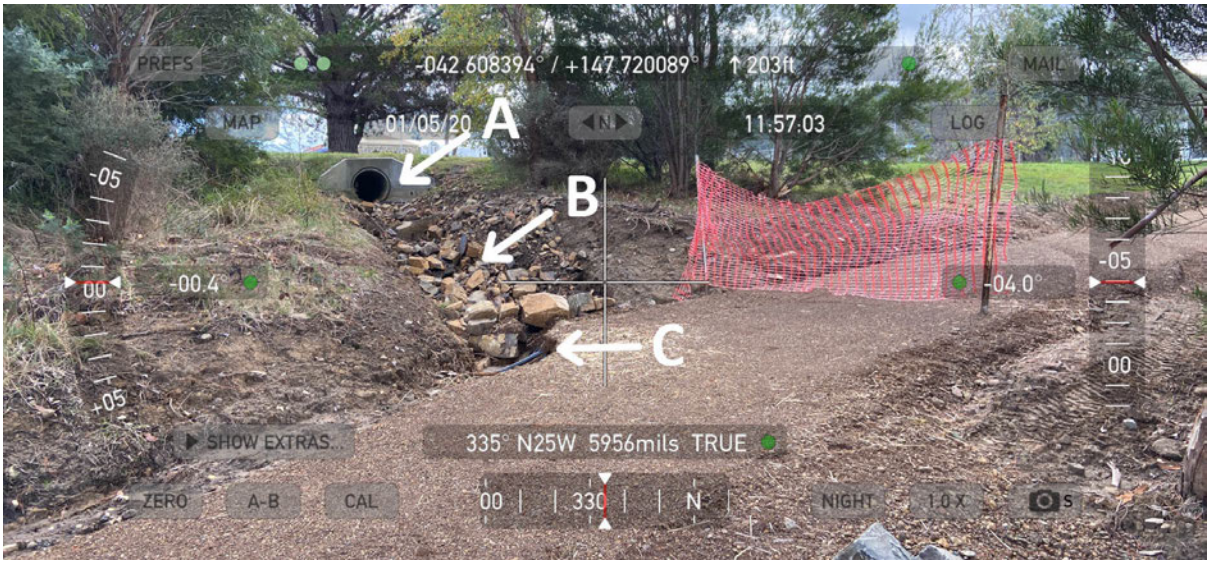

Photo 17: Drainage point and open swale off Burnett Street.

4.18 PHOTO 18

Photo 18 illustrates the section of walking track that leads on from the previous photo (A) and terminates under the bridge where the photo was taken from. The photo shows the erosion along the upper side of the constructed walking track (B) down to a point where the erosion dissects the constructed walking track (C) and discharges over the adjoining area (D).

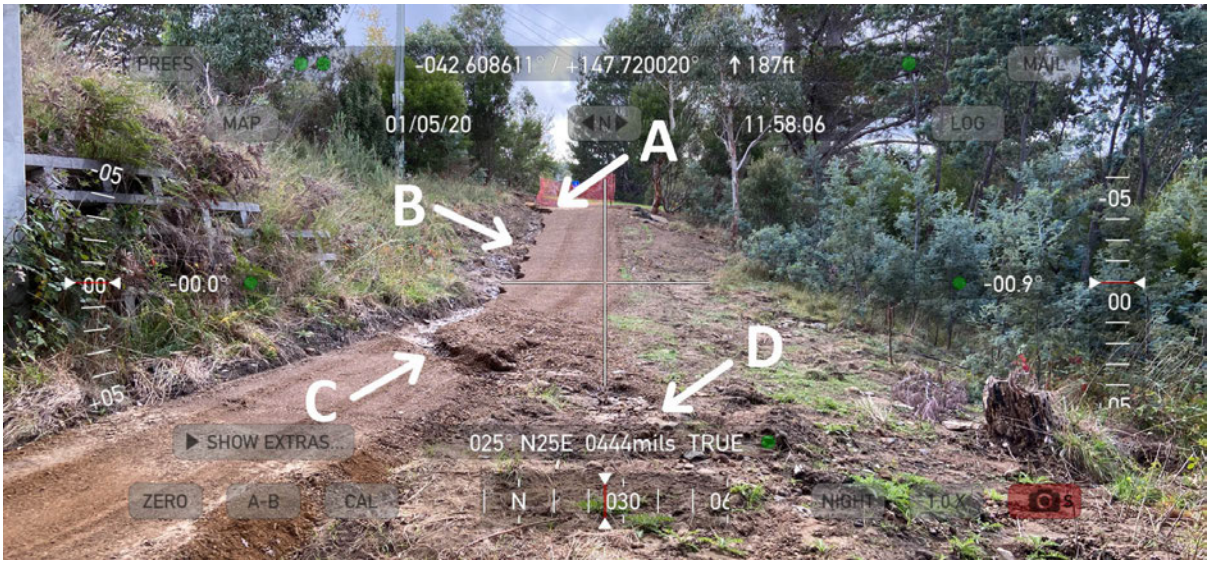

Photo 18: View north from under the Tasman Highway Bridge.

5 ASSESSMENT

The previous section of this report investigated the status of the existing site conditions, walking track alignment, excavations and constructed gravel road base layer walking track. This section will review the topography, the alignment, excavation works, drainage and the walking track surface.

5.1 TOPOGRAPHY

Upon inspecting the topography of the area chosen for the walking track, it is assumed that the area is prone to annual flooding. This assumption is based upon the extensive catchment area of both Prosser River and Brushy Plains Rivulet, the topography within 50m of the river / rivulet, and the proximity of the walking track to the edge of the river / rivulet. The potential for flooding would be increased due to the cover and type of vegetation within and along the banks.

The extent of flooding within a riparian corridor must be mapped and understood prior to determining whether or not a walking track network within such a corridor will be an asset or liability.

5.2 WALKING TRACK ALIGNMENT

Further to the topography of the area chosen for the walking track mentioned above, the alignment of the walking track, which runs parallel to each riparian corridor, increases the potential for continual damage and erosion due to the direction of water flow during flooding events.

The current alignment is very prone to not only erosion of the gravel road base layer, but also the black soil base course. Given that approximately 450m of the 950m long constructed walking track is within an assumed flood prone area, the real cost required for replenishing the eroded gravel road base layer on an annual basis may be between $5,000 and $20,000.

5.3 EXCAVATION WORKS

As identified in several of the site photos, there is considerable cut and fill excavation works that have occurred to construct stage one of the walking track. During the site investigation, it appeared that in most cases, the excavations where unnecessary and in one instance extremely excessive.

Photos 1, 6, 8, 12, 13 and 14 illustrate excavation works where cutting into the topography could have been avoided, or could have been minimised. Along the southern boundary of Lot 50 and Lot 60 Kent Street is where the most excessive excavation of an existing embankment has occurred. This work may have created an unstable bank due to the type of geology exposed. The geological profile, as illustrated in Photo 13, reveals two highly erodible materials in the form of surface topsoil and sub grade clay.

It can be assumed that left unattended, this exposed cutting will continue to erode over time with the possibility of large portions of the cutting slipping down on to the walking track. The ongoing maintenance of such excavation works will need to be budgeted for on an annual basis.

5.4 DRAINAGE WORKS

Further to the site topography and walking track alignment, there are several areas where track side drainage swales and under path stormwater pipes have been installed in an attempt to manage perceived drainage issues.

Given the current status of these constructed components, it is safe to assume that most, if not all, of these components will quickly become a high maintenance issue during rain events, as illustrated in Photo 13, 17 and 18.

To prevent or manage erosion of both track side drainage swales and stormwater pipe inlet and discharge points, the amount of rainfall and associated overland flows must be factored into the design and construction of such elements. It is estimated that the current constructed swales and stormwater pipes will continue to be a maintenance issue on an annual basis.

5.3 WALKING TRACK SURFACE

The material selected for the walking track surface appears to be a durable material. Observations of the finished product from the southern boundary of the Lot 60 Kent Street, through to the termination point under the Tasman Highway Bridge, however, appear to be susceptible to erosion.

Upon close inspection, the edges of the walking track gravel road base layer are the weakest point of the surface, and are most exposed to being eroded by overland stormwater flows.

6 RECOMMENDATIONS

Walking tracks provide a valuable community asset for passive and active recreational opportunities, however, they must be thoroughly planned, designed and constructed to ensure they continue to be an asset for the community and not an expensive ongoing liability for Council.

Construction of a walking track network within a riparian corridor will always remain a challenging issue, as even concrete pathways can be damaged and/or washed away during flooding events.

Based upon our site investigation and the evidence of the constructed works, it is our recommendation that the project be immediately reconsidered on the grounds of the actual construction costs versus the ongoing expensive maintenance costs that will no doubt be required on an annual basis.

If the project is to continue, the following actions must be considered:

1. Survey all adjoining property boundaries to establish the true extent of land titles.
2. Utilise current funding allocations to rectify the current works.
3. Salvage existing gravel road base material from flood prone areas for reuse.
4. Engage an experienced consultant to prepare drawings and specifications for the walking track.
5. Revegetate excavated areas within the flood zone with native tussocks and shrubs.
6. Engage a quantity surveyor to provide costings for remaining works.
7. Reconsider the historic church walking track route to avoid the riparian corridor.

The following points should be considered when briefing a consultant for preparing drawings:

- Council to provide documented flooding history of the riparian corridors.
- Walking track to be 1.5m minimum from fence lines and private property.
- Topography and geology must be factored into track design.
- Best practice for the design, preparation and construction of track works.
- Best practice for designing drainage solutions must be employed.

The construction costs provided by Council as shown on Figure 2, appear to be significantly less than current construction costs for a walking track, given the machinery, materials and man hours required to construct such project.

Our estimations for such works, without rectification works suggested above, would be closer to a figure of $75/lm, with the total cost of the proposed river walk amounting to $120,000. In addition to this estimated construction cost would be the annual ongoing maintenance costs for replenishing eroded gravel road base material due to flooding which may be between $5,000 and $20,000 per year.

The approximate cost of terminating the project and reinstating/rehabilitating the extent of works already constructed would be as follows;

- $2,500 Removal of gravel road base material stockpiles and walking track.
- $1,000 Removal of stormwater pipe works.
- $3,000 Reinstate minor excavated cut and fill profiles.
- $20,000 Reinstate solid fill along the excavated works adjoining Lot 50 and Lot 60 Kent Street.
- $3,500 Cultivation of disturbed areas due to construction works.
- $20,000 Revegetation of cultivated area with tube stock and temporary cover grass.
- $50,000 Total.

Note: Figures shown are approximation based on external Contractor rates for similar works.

Memorandum:

To: Marissa Walters, Acting General Manager GSBC

From: Harry Galea, Contract Senior Engineer, GSBC

Subject: Bucklands Walking Trail

Date: 10 June 2020

I am engaged by the GSBC on a contract basis to assist with a number of more complex (or time importance) projects during the period following the resignation of the previous Works Manager, Tony Pollard. My services have been retained even with the appointment of the current Works Manager, Robert Brunning expected for a period under Robert becomes familiar with the projects and is able to manage the work load associated with the position.

Normally my communications with Rob has been by telephone or video conferencing. However a face to face visit was considered necessary to discuss the five (5) Community Development Grants Programme projects that I was managing – this meeting was scheduled for Thursday 4 June at Triabunna Council Office.

Scope of Report:
The Acting General Manager, Marissa Walters knowing of the scheduled meeting asked if I could provide an independent engineer's opinion on the Bucklands Walking Trial project primarily:

- The cost listed in the 'Lange' report that completion of the project is in the order of $120,000 or to abandon the project and appropriately reinstate at a cost of $50,000.
- Provide comment on issues relating to ease of completion of the project and ability of the project to be fit for purpose – this would consider issues such as public safety, risk mitigation, flooding from the adjacent rivulets/creeks. Essentially an engineering assessment (considering value) on whether or not to proceed

Accordingly an inspection (with the Works Manager, Robert Brunning) was undertaken on the afternoon of Thursday 4 June. Within the following one/two working days all emails, reports, or letters relating to the project were provided as background information. A discussion with the Acting General Manager clarified the scope of services and what I was to address in my 'engineer's report' on the project.

Matters Not Included in Report:
It would be prudent to list the issues not to be addressed by this memo/report – these are:

- Aboriginal Heritage and nor the direction provided by Parks and Wildlife allowing supervision of the excavations in-lieu of independent consultants analysis
- The classification within the GSB Planning Scheme on what Planning Approval or permits are required
- The degree of public consultation and whether the project received or needed a social license

The request for an engineer's report on the Bucklands Walking Trail was a request from the Tuesday 26 May Council meeting. As a consequence the Works Manager, Rob Brunning, as a qualified and an experienced civil engineer, undertook an inspection and prepared a report on his findings. Given this was one of the background reports provided; I have attached a copy as Attachment 1. Rather than duplication of the common approaches my intention is to refer to the Works Manager report expressing concepts/comments where support or otherwise.

Inspection Observations:
The inspection on Thursday 4 June concentrated on practical (but cost effective) actions that would allow the project to meet its objective - a recreation trial to promote exercise along a riparian reserve. If the current engineered formation has significant issues/problems (whether alignment or untenable risk issues or unacceptable public safety or unreasonable cost for the benefits envisaged) then my recommendation should be appropriately negative and consideration to abandon the project.

My observations during the inspection were:

High Level Comments

- the project appears very salvageable. There does not appear any major engineering hurdle that would justify abandonment of the project.
- the vast majority of the earthworks were not insensitive to the typography or environment - in fact the environmental footprint is very light. (Further discussion on the cut/embankment section in the detail comment below.)
- the section of the trail next to the river is likely to be subject to occasional flooding. However given it is primarily a recreation trial and given the rare occasions the trail is compromised by flood then the trail would be closed for the period. Following recession of the floodwater it will be necessary to undertake any (considered to be minor) maintenance.
- the trail is fully within the riparian reserve (title pegs were in place during the inspection)

Detail Comments

- The frequency and degree of flooding could be subject to a major hydraulic analysis but at a likely cost of $20-30,000 the cost is not justified given the minimal risk in terms of public safety and nor due to adverse maintenance. Should the trail flood it is considered the velocity would be low and hence minimal pavement scour. Anecdotally the trail was excavated and works abandoned before the 2 April major storm event. The rainfall at Orford was over 100mm in the 24 hour period; the rainfall at Bucklands was recorded (privately) at 80mm. Even thought the rainfall at Bucklands was significant the excavated trail (ungravelled) coped very well without appreciable damage - however the culverts installed at various locations faired from good to poor mainly due to the incomplete inlet and outlet structures which are easily remedied.
- the trail increased the pavement width from 1.5m to 2m. This is supported to allow smaller maintenance truck to drive the route when undertaking maintenance.
- the section near the house has a steep drop off. It is supported to utilise the existing posts and change to wire mesh to address any public safety concerns close to a steep embankment. In addition a light fence should be installed on the inside to protect the resident's privacy in event of wandering walkers.
- the excavated section was necessary given the route and local topography. However it is disappointing no levels were taken and the vertical alignment set - this section needed design well before workmen on-site. Had a design been undertaken then the steep section could have been flatten considerably.
- the 19% steep section may just comply with standards but is inconsistent with the low grades of the balance of the trail. A risk assessment would seek an alternative treatment/grade given the section would be very difficult to negotiate when damp or for elderly (slipping on loose stones). It is recommended this short section is spray sealed or asphalted and alter the proposed barrier fence to install a solid top rail - allows walkers to hold to assist along the steep section.
- the excavated bank is reasonably low in height, for the most part stable shale/rock and hence not an undue risk to public safety. That said support the concept of a low gabion wall about 0.5m from excavation to catch any loose rocks or clay. Would need cyclic inspections and appropriate maintenance of small areas that fail.
- the river section of the walk (and just around acute bend) has 3 local dips/low points. There is a need for small box culverts or at least 300dia culverts and formation raised accordingly. Otherwise if left at current grade they will be wet and problem areas.

Purely from an engineering prospective it is clear that the recommendation would be that the works should proceed subject to reasonable cost to complete works.

Project Cost to Complete Works:

The accounts ledger for this project has a current expenditure of $34,352.43. This includes day labour works, materials insitu, plan hire and title establishment, legal and consultants costs. The cost associated with construction is in the order of $30,000.

Table 1 (Budget Implications) within Attachment 1 (i.e report prepared by Works Manager, Rob Brunning) provides a cost estimate for completion of the works. This is listed at $43,692 – hence a total cost of over $78,000 (plus additional costs for administration and approvals beyond the current level.)

In Rob Brunning's report a number of recommendations are provided to allow the works to reach completion – I shall list the significant comments and express comment before reviewing the estimate.

The matters recommended by the report are:

Table 1 – Evaluation of Attachment 1 Report Recommendations

Reference in Report	Report Author Comment (Works Manager, Rob Brunning)	Comment by Harry Galea	HG Recommendation
#2	Specifies that the current formation allows a 2m wide gravel track suitable to allow access for maintenance vehicles.	The design width of 1.5m is considered in appropriate for the standard for this trial. To improve efficiency during maintenance the track should be suitable for access by a small vehicle - hence 2m preferred. In addition the gradient of the trial (except for the short 19% steep section) is relatively flat and likely to be used by off-road bikes (children or adults). If so then the standard requests 2.5m but given the low volumes and minimum cross traffic a trail 2m is acceptable.	The Bucklands Walking Trial be constructed to a gravelled width of 2m. The short steep section shall be a preferably 2.5m wide.
#4	The property boundary fence along 60 Kent Street encroaches onto the public reserve.	The fence along the top of the natural embankment shall be retained and re-wire meshed to improve public safety. A new fence shall be provided at this location separating the walking trail from the property – its location shall only be sufficient to regulate walkers rather than placed on the tile boundary.	The existing fence at 60 Kent Street shall be re-wire meshed and a new fence constructed approximately leaving a walking corridor of 4m.
#6 Table 1	A budget estimate is provided to complete the walking trail. Construction components include:		
	• allowance for more significant endwalls at the inlet and outlet of culverts.	Agree with action. The main signs of erosion caused by flooding all relate to inefficient endwalls and lack of energy dissipation on the outlet. Significant attention is needed in this area.	That all culvert endwalls be constructed with close fitting rock endwalls (allowing for a small basin at inlet to improve high stormwater flow and dissipation structures at the outlet)
	• allowance for a low gabion wall along the excavated shale face	Agree with this action. The face is not considered an undue public hazard due to lack of stability but it could be expected small rocks/shale and erodible clay from small exposed sections would reduce amenity of this section of the trail as well as a trip hazard caused by loose stones/slippery clay on otherwise a compacted surface.	That a low gabion (no more than 1m high) be installed leaving a gap of approximately 0.5m along the section of the wall that is greater in height than 2m. A survey and schematic design shall be prepared prior to undertaking any further work in this area.
	• Allowance to spray seal short but relatively steep section of walking trial.	Agree.	That the spray seal use a 14mm rock which shall be thoroughly swept to remove loose rock. In addition the proposed barrier fence along the

			steep section shall have a top rail erected to assist mobility impaired users.
	• Allowance for 3 additional culverts across walking trial	Agree. Three (3) areas identified where localised stormwater needs to be controlled and trial elevated above low lying land.	
	• Budget estimate to complete trial is listed as $43,629.	The values allowed for the scope of works proposed seem reasonable. The estimate has been jointly prepared by the GSBC Works Supervisor who is highly experienced in construction and estimating similar work – hence a further level of confidence. The Council considered a report by LANGE Design which suggested an estimate of $120,000 to complete the work and $60,000 to reinstate should the project be abandoned. Following the on-site inspect the estimate provided by LANGE Design appear fare in excess of my expectations. I can understand how you can arrive at such an estimate – particularly taking a conservative approach to the scale and type of the treatment of the exposed shale wall and if the estimating tolls used are generic Australia wide estimating tables that offer small variations between city/rural projects. On balance I concur with the value listed in the report prepared by Rob Brunning that the cost to complete the project is mid $40,000. (Note: This estimate does not contain any allowance for any additional public consultation, nor acquisition of further approvals or involvement of independent professions should the Council determine desirable.)	That the Council provide a further allowance of $45,000 to enable completion of construction and an allowance for further approvals, professionals or community consultation.
#6	The report does not estimate the cost of reinstalment should the project be abandoned.	There is significant difficult to estimate the value of reinstatement should the project be abandoned. The conditions of licence from Parks and Wildlife states that should the project cease use or not proceed then the license should be returned to the government and reinstatement (presumably to the approval of the department) to be undertaken. Hence it is impossible to determine a value when the scale of the works are unknown.	

		In my view the excavated sections may not need to be filled but certainly revegetated. Once revegetated then practically and aesthetically the land will return to its former condition. Similarly the excavated section (given it is not an undue public safety risk) could remain in its current condition but of-course access to the public is denied. If however the department's expectation is replacement of the face to pre-excavated slopes then this would be an engineering challenge.	

Conclusion

From purely an engineering objective the project is certainly salvageable. The earthworks for the greater part are sympatric to the environment. The steep excavated section was necessary given the constraints of the topography and alignment of the riparian reserve – however with survey and some design the steep grade could have been reduced substantially – never-the-less options are available to ensure the trial will be fit-for-purpose.

The scope of this report has not addressed the approvals obtained/required for the projects, community consultation/social licence and nor any governance/management related matters. I expect that these matters are what the Council and community will agonise over rather than the engineer requirements to complete the project.

GLAMORGAN
SPRING BAY
COUNCIL

3rd September 2020

Dear Residents & Ratepayers of Buckland

Re: Buckland Walking Trail

As you may be aware, earlier in the year Council commenced work on the Buckland Walking Trail.

The project has in recent months been on hold, pending further investigation and community consultation. Council are now seeking feedback from the Buckland community on the way forward with this project.

Council have had the project independently reviewed and the costs appear to be comparable between proceeding with completing stage 1 of the Buckland Walking Trail, highlighted below, or removing the works already completed and rehabilitating the site.

Please find attached a simple questionnaire on the Buckland Walking Trail.

Included is a prepaid envelope for you to return this to Council once completed.

Feedback will be collated and submitted to a future Council meeting for further consideration, the outcome of which will be made publicly available shortly after.

We value your input and look forward to receiving your feedback.

Thank you

Marissa Walters
Acting General Manager

Figure 1. Blue Line is the Buckland Walking Trail

Buckland Walking Trail

Glamorgan Spring Bay Council would like your opinion.

Please tick either box below:

☐ **1**. Would you like to see the walking trail completed as per Figure 1 on covering letter?

☐ **2.** Would you like to see the walking trail stopped and the land rehabilitated as per Figure 1 on covering letter?

GLAMORGAN SPRING BAY COUNCIL