

ASSET MANAGEMENT PLAN

COASTAL INFRASTRUCTURE

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

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1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

This Asset Management Plan details information on how Council manages its coastal 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.

Changes to this plan from the previous include the removal of the Prosser River Mouth sandbags which had a significant value of around \$1.7M.

The asset portfolio is predominantly comprised of assets funded for renewal by MAST. The exception is the Marina which is an asset funded by council which constitutes some 45% of the total renewal values.

1.2 Asset Description

This plan covers all Council owned or maintained coastal infrastructure assets but excludes the car parks and other amenities required to assist in their service provision. These assets are variously dealt with under Parks, Roads and Buildings asset management plans.

The coastal infrastructure network comprises:

Asset Category	Number of Assets	Replacement Value
Jetties	15	\$1,644,405
Foreshore Protection Structures	3	\$246,255
Wharf structures	2	\$1,357,617
Boat Ramps	14	\$1,781,648
Pontoons	2	\$23,300
Marina	2	\$4,213,674
Landings	2	\$130,810
TOTAL	40	\$9,397,709

The above coastal infrastructure assets have significant total renewal value estimated at **\$9,397,709**.

1.3 Levels of Service

The planned budget for asset renewal is sufficient to continue to provide existing services at current service levels in the medium term, assuming that all required funding historically provided by Marine and Safety Tasmania (MAST) continues to be available. The Operations and maintenance budget is funded from marina income which presently provides a surplus.

The main service consequences of the planned budget are:

- All major maintenance or renewal costs for assets historically funded by MAST cannot be undertaken using Council funds (reliant on MAST funding to occur).
- Existing service levels are forecast to be maintained over the planning period.

1.4 Future Demand

The main demands for new services are created by:

- Climate change (sea level rise)
- Upgrade in standards/regulations

- Increased boating use and requests for further infrastructure from *MAST*.

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

- Continue a planned preventative maintenance programme. Consider forecasted sea level rise when renewing/acquiring/ maintaining assets.
- Identify upgrades required to meet with current standards and ensure these are included in the planned budget.

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 Council's coastal infrastructure is estimated as **\$2,051,480** or **\$205,148** on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is **\$3,198,983** or **\$319,898** on average per year as per the Long Term Financial Plan or Planned Budget. This is **155%** 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 coastal infrastructure provides a surplus of **\$114,750** 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

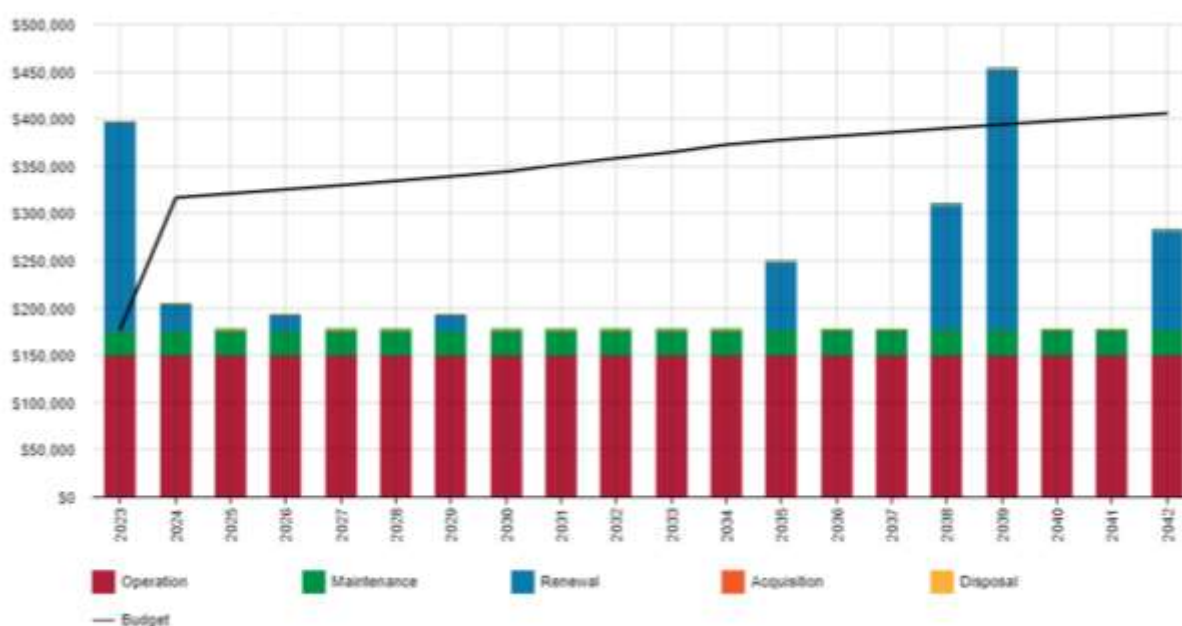


Figure values are in current dollars.

We plan to provide coastal infrastructure services for the following:

- Operation, maintenance, renewal and acquisition of marina, wharf, boat ramps, jetties, pontoons, foreshore protection structures and other miscellaneous coastal structures, to meet service levels set by Council in annual budgets.
- Forecasted renewal works (> \$20,000) scheduled to occur over the next 10 years are: Triabunna fixed marina boat access platforms (dilapidated – severe corrosion), several other marina and wharf component renewals; Yellow Sand Banks Jetty (timber) and boat ramp; Saltworks Jetty (timber); Prosser River Road Boat Ramp; and Muirs Beach (Coles Bay) jetty and boat ramp. These renewals can currently only be undertaken with funding provided by *MAST* (which has been historically forthcoming). If this funding is not forthcoming Council is not in a position to renew these assets. This will result in a reduction in the provided level of service as these assets will continue to deteriorate.

1.6.2 What we cannot do

Works and services that **cannot** be provided under present funding levels are:

- Delivery of all proposed capital works by their recommended date (Refer Appendix D).
- Council cannot fund any major maintenance, acquisition, renewal or disposal of assets that have historically been funded by *MAST* (boat ramps, jetties, pontoons etc.) and Council is reliant on this funding to undertake such works.
- The completion of the previously proposed Triabunna harbour marina and port extension (would be reliant on external funding if project was to proceed)

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 and key staff
- Underfunding – if *MAST* doesn't fund works, Council cannot undertake them
- Structural failure of marina boat access walkways, sandbags or jetties
- Structural failure of fixed marina concrete wall (long term deterioration)
- Swansea elevated boat ramp - level of service could be reduced by accumulation of sand.

We will endeavour to manage these risks within available funding by:

- Develop a staff succession plan and improve record keeping
- Formalising funding arrangement with *MAST*
- Budgeting for renewal of poor condition assets
- Undertaking scheduled condition assessments and preventative maintenance

1.7 Asset Management Practices

Our systems to manage assets include:

- Council's *XERO* Financial Management System
- Council's Coastal Infrastructure Asset Register

Assets requiring renewal/replacement are identified from either the asset register or an alternative method. These methods are part of the Lifecycle Model.

- Asset Register data is used to forecast the renewal costs. This is done using the acquisition year and the useful life,
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge.

The Asset Register was used to forecast the renewal life cycle costs for this Asset Management Plan.

1.8 Monitoring and Improvement Program

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

- Develop detailed capital works program for upcoming years with project ranking consistent with agreed criteria.
- Establish a formal asset inspection regime.
- Include operation and maintenance costs of Triabunna Wharf and Marina (and any other purely Council funded assets) in the planned budget as specific items.
- Improve asset register information (e.g. inclusion of materials, dimensions etc.)
- Clarify Council lease arrangements, Council/*MAST* asset ownership and maintenance funding regarding coastal infrastructure assets.
- Clarify if all future funding (for associated assets) is to be provided by *MAST* or if Council should be budgeting for renewals over the longer term?
- Increase accuracy of budget breakdown to include acquisitions, maintenance, operations, renewals and disposals.
- Update Geographical Information System (GIS) to include all previously missing coastal infrastructure assets.
- Improve confidence in financial data used in Long Term Financial Plan and Asset Management Plan.
- Continually improve correlation between Long Term Financial Plan and Asset Management Plan.
- Increase 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 coastal infrastructure assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the long term planning period.

The Asset Management Plan is to be read with Council's planning documents. This should include the Asset Management Policy and Strategic Asset Management Plan, where developed, along with other key planning documents:

- Long Term Financial Strategy
- Long Term Financial Management 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 assets covered by this Asset Management Plan include all Council owned or maintained coastal infrastructure within the municipal boundaries.

The Coastal Infrastructure network comprises:

- Triabunna marina
- Triabunna wharf
- Boat ramps
- Concrete boat landings
- Jetties & pontoons (including swimming pontoons)
- Foreshore protection structures
- Other miscellaneous coastal structures.

For a detailed summary of the assets covered in this Asset Management Plan refer to Table 5.1.1 in Section 5.

Council maintains a good working partnership with *Marine and Safety Tasmania (MAST)* to ensure appropriate maintenance and asset renewals are undertaken, and to provide an acceptable and safe standard for recreational use of the assets. Council has not historically budgeted specific funds directly to the maintenance or renewal of coastal infrastructure assets (with the exclusion of the Triabunna Wharf and Marina) as all funding for acquisitions, renewal and major maintenance of boat ramps, jetties and some foreshore structures has historically been provided by *MAST* and this is anticipated to continue into the future.

Reactive maintenance is generally undertaken by Council, however no formal programmed maintenance is currently undertaken or specifically budgeted for. When reactive maintenance has been required, Council has generally funded this work from discretionary reserves set aside in the budget or obtained funds through *MAST*. An improvement to this would be to allow a specific amount in the planned budget for maintenance of coastal infrastructure. There is generally also funding available from *MAST* for such maintenance (requires an application to be completed).

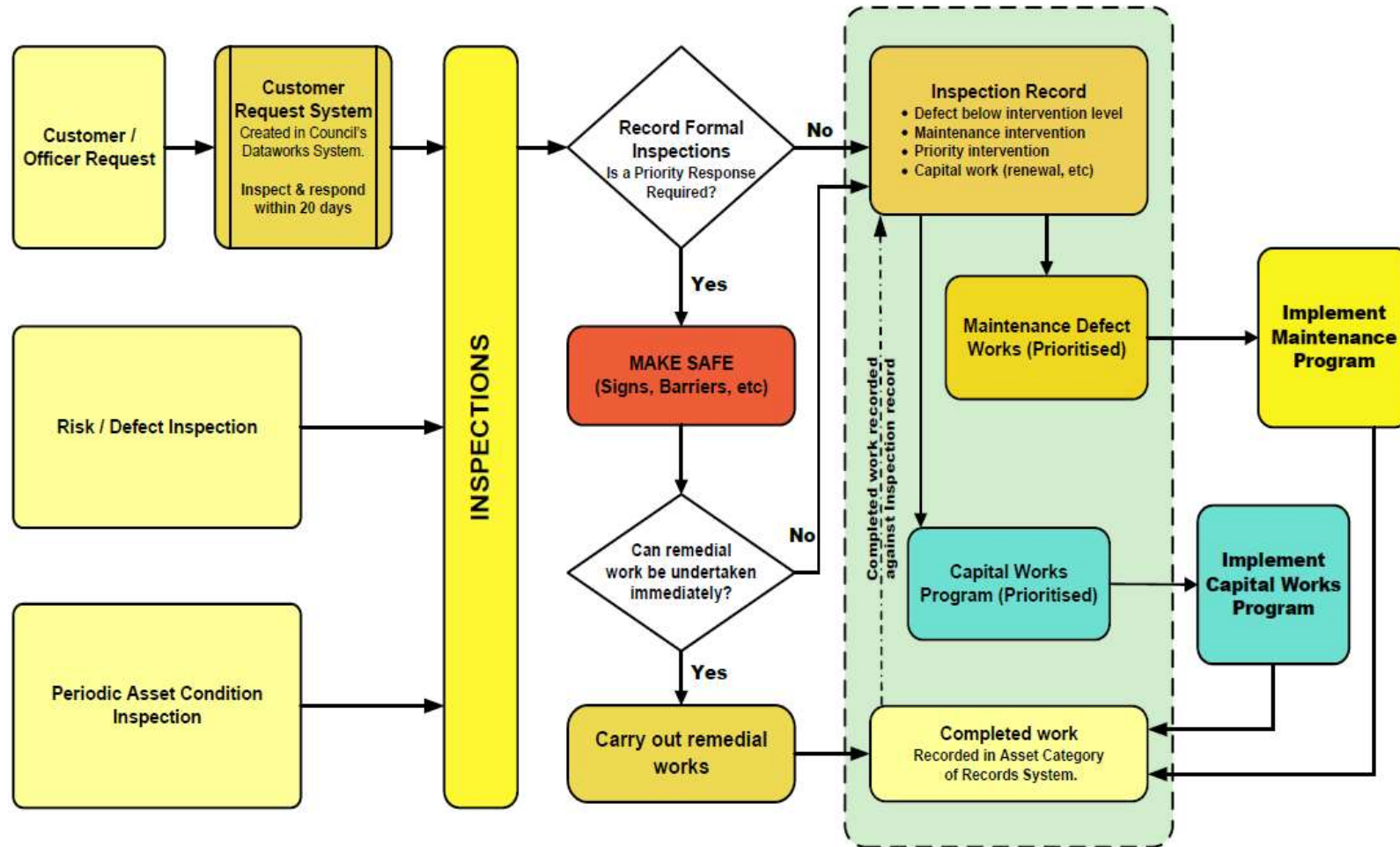
The coastal infrastructure assets included in this plan have a total replacement value of **\$9,397,709**.

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

Table 2.1: Key Stakeholders in the Asset Management Plan

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

Our organisational structure for service delivery from coastal 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 through coastal infrastructure assets. We have acquired these assets through purchase, contract, construction by Council, and by donation of assets constructed by others, generally to meet increased levels of service or State Government requirements.

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

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

- International Infrastructure Management Manual 2015 ¹
- ISO 55000²

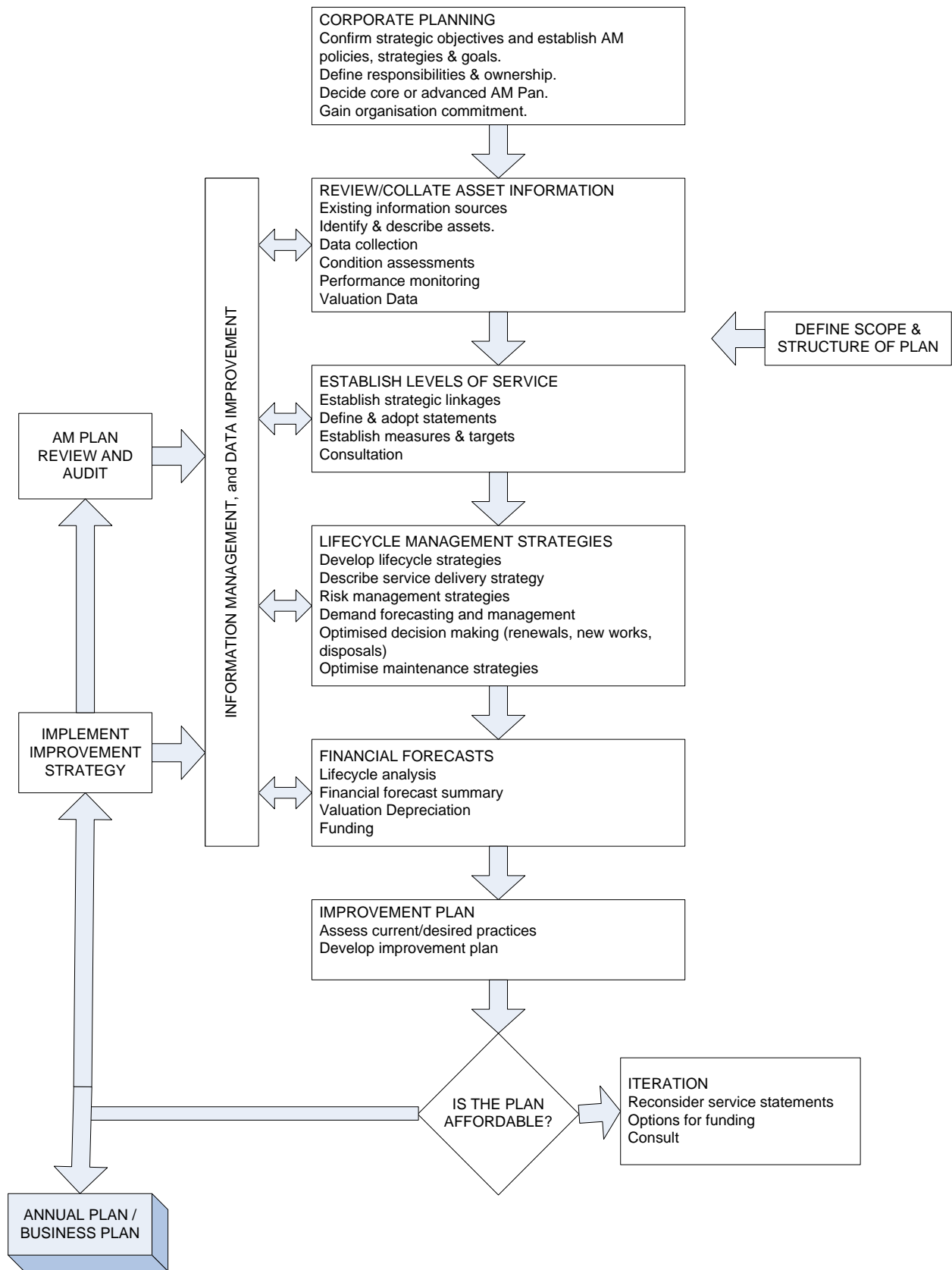
A road map for preparing an Asset Management Plan is shown below.

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

² ISO 55000 Overview, principles and terminology

Road Map for preparing an Asset Management Plan

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



3.0 LEVELS OF SERVICE

3.1 Customer Research and Expectations

We currently have no research on community expectations. This will be investigated for future updates of the Asset Management Plan.

3.2 Strategic and Corporate Goals

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

Our vision is:

We want Glamorgan Spring Bay to be: Prosperous, vibrant and inclusive. A place where people want to live, work and visit.

Our Primary Function and Activities:

Help and support our communities to develop and thrive.

- ***Providing direct, essential council services and accordance with LG legislation.***
- ***Making and enforcing by-laws for the benefit of the overall community.***
- ***Raising revenue to enable Council to perform its key functions.***
- ***Planning and creating recreational spaces and facilities.***
- ***Encouraging the Local Community to make the most of its strengths, resources and skills.***
- ***Advocating for the region with state and federal government and other key stakeholders in pursuing our plans and priorities and fulfilling our role.***
- ***Encouraging investment from individuals and businesses in development that fits with the values and character of our region.***
- ***Protecting the environmental values and amenity of the east coast.***

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 have safe and reliable coastal infrastructure for the community to use and enjoy.	Maintain and develop coastal 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 significant risks to coastal 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.
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3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of Council’s coastal infrastructure service 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.
Road and Jetties Act 1935	Relates to roads, highways and the control and management of certain jetties and marine facilities.
Work Health and Safety Act 2012	Sets out the roles and responsibilities to secure the health, safety and welfare of persons at work.
The Marine and Safety Authority Act 1997	Provides for the development and management of marine facilities.
National Parks and Reserves Management Act 2002	Provides management objectives for parks and reserves.

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
Modern and user friendly coastal infrastructure assets	Number of customer service requests	Generally good user feedback. Small number of assets require improvements.	Expected to remain similar to existing or slightly improve over the planning period
Accessible coastal infrastructure assets	Number of customer service requests	Generally good user feedback. Small number of assets require improvements.	Expected to remain similar to existing or slightly improve over the planning period
Suitable and safe coastal infrastructure assets	Number of customer service requests	Generally good user feedback. Small number of maintenance and safety items reported by users.	Expected to remain similar to existing over the planning period

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Quality 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 measures types (Quality, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current funding level.

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 coastal infrastructure assets	Conditions in asset register	<p>19 % of total asset value in 'Very Good' condition</p> <p>76 % of total asset value in 'Good' condition</p> <p>2 % of total asset value in 'Fair' condition</p> <p>3 % of total asset value in 'Poor' or 'Very Poor' condition</p>	Expect poor condition assets to be renewed over planning period and gradual reduction in condition of remainder
	Confidence levels		Medium (professional judgement supported by data sampling)	Medium (professional judgement supported by data sampling)
Function	Appropriate standard of coastal infrastructure assets	Staff assessment and number of customer service requests	Majority of coastal assets considered fit for purpose 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 coastal assets (where applicable)	Number of customer service requests	Based on requests, existing service level considered adequate	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, 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. jetty reconstruction, boat ramp replacement etc.).

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 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, with the exception of the recent Triabunna marina and wharf projects (financed by loans). There are currently no future acquisitions in the planned budget.	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). Investigate feasibility of wharf and marina expansion project.
		Budget	\$0	\$0
Operation	Keep coastal infrastructure assets clean, safe and serviceable	Frequency of cleaning (e.g. boat ramp algae removal)	Various operational activities carried out by works crew. E.g. Boat ramps steam cleaned of algae growth every 3 months.	Current performance is considered adequate based on user feedback
	Regular condition inspections	Number of assets inspected	Majority of infrastructure (where deemed appropriate) is inspected at the start of summer each year. Divers are used where required. <i>MAST</i> also undertake independent condition inspections of some assets.	<i>MAST</i> and Council condition inspections are merged. All appropriate coastal infrastructure assets are inspected yearly or at appropriate frequency.
		Budget	\$150,000 per year (average over 10 years)	\$150,000 per year (average over 10 years)

³ IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Maintenance	Keep coastal infrastructure assets safe.	Frequency of maintenance	Reactive minor repairs and minor upgrades are undertaken	Reactive minor repairs, minor upgrades, and a planned preventative maintenance programme – specifically include in budget.
	Keep coastal infrastructure assets serviceable	Frequency of maintenance	Reactive minor repairs and minor upgrades are undertaken	Reactive minor repairs, minor upgrades, and a planned preventative maintenance programme – specifically include in budget.
		Budget	<i>\$27,000 per year (minor maintenance undertaken from general discretionary budget, major maintenance reliant on MAST funding)</i>	<i>\$27,000 per year (estimate for wharf and marina maintenance and minor maintenance to other assets). Assume all other major asset maintenance and renewal funded by MAST.</i>
Renewal	Ensure coastal infrastructure is in good condition for use	Frequency of renewal	Renewals undertaken on a priority basis (generally driven by user demand and condition) on availability of external funding from MAST where applicable (boat ramps, jetties etc.)	Current performance is considered adequate based on condition of assets and forecasted renewals.
	Ensure coastal infrastructure assets remain fit for purpose and in-line with current standards	Frequency of renewal (including component renewal)	Majority of renewals reliant on MAST funding. Wharf and marina component renewals not previously forecasted (now forecasted).	Current performance is considered adequate based on historical renewals program. Forecast renewals program be established, especially for the wharf and marina assets (Council funded).
		Budget	<i>\$108,268 per year (average over 10 years)</i>	<i>\$28,136 per year (average over 10 years) (\$86k 20 year average)</i>
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

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
		Budget	\$0	\$0

Note: * Current activities related to Planned Budget.

** Forecast required performance related to forecast lifecycle costs.

It is important to monitor the service levels provided regularly as these will change. The current performance is influenced by work efficiencies and technology, and customer priorities will change over time.

4.0 FUTURE DEMAND

4.1 Demand Drivers

While Drivers affecting demand generally include things such as population change, regulations, changes in demographics, seasonal factors, consumer preferences and expectations, technological changes, economic factors, environmental awareness, etc. the drivers for recreational boating infrastructure are holiday related with demand exceeding comfortable provision in the warmer holiday seasons and exceeding requirements in the off periods.

Parking to facilitate trailers in most of our boat ramp locations is driving demand in other asset classes.

4.2 Demand Forecasts

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.

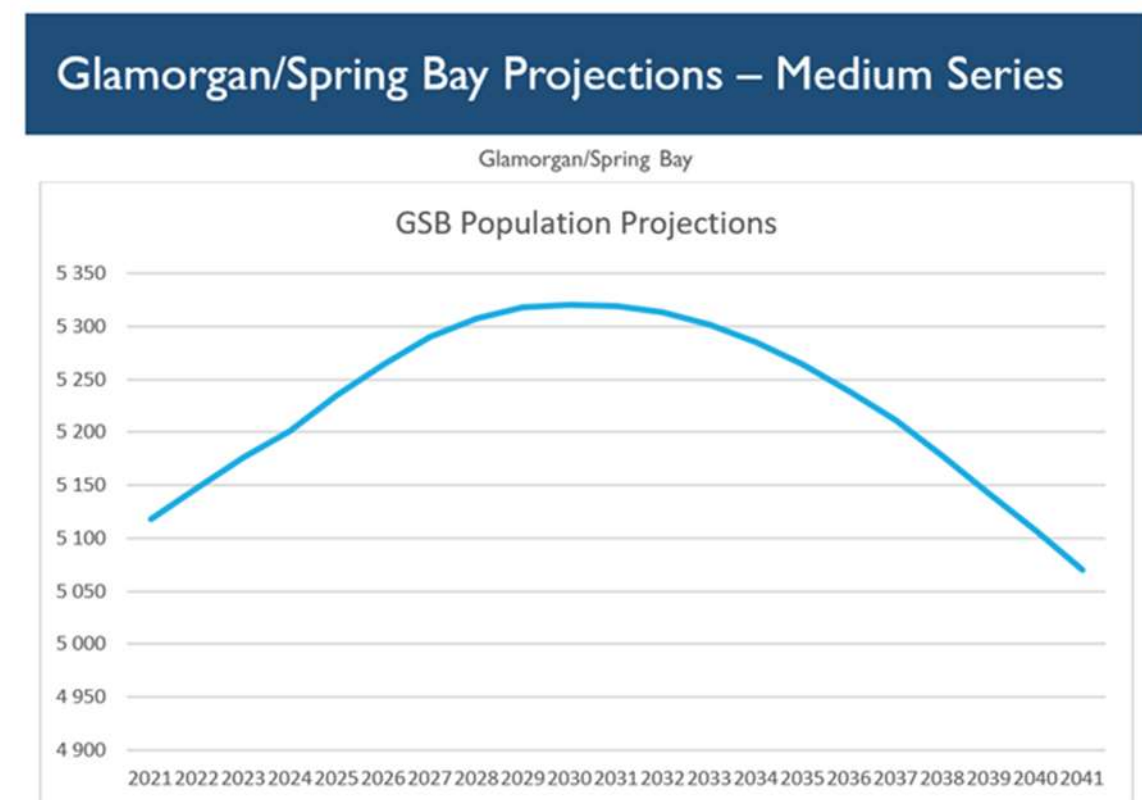


Figure 4.2 – Department of Treasury and Finance – Glamorgan Spring Bay population projections (medium series).

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 (if present) 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	5,012 people in 2021.	Refer Figure 4.2	The change is not foreseen to impact services	No impact to services, hence management plan is not required.
Demographic	Median age of 57 years (2021)	Increase in median age to approx. 65 years by 2039	Aging population expected to demand improved accessibility to public use coastal infrastructure	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, as well as sea level rise.	May require increased maintenance of coastal infrastructure. Serviceability of some assets may be affected by sea level rise.	Aim to implement a planned preventative maintenance programme. Consider forecasted sea level rise when renewing/acquiring/maintaining assets.
Upgrade in standards/regulations	Coastal infrastructure assets are gradually being modernised.	Some upgrades required over planning period	Increased renewal costs to meet with current standards	Identify upgrades required to meet with current 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 and Adaption

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 will impact on assets varies significantly depending on the location and the type of services provided, as does the way in which we respond and manage those impacts.

As a minimum we consider how to manage our existing assets given 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

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Sea level rise	0.24 m (2050) and 0.92 m (2100) sea level rise (planning allowances)	Serviceability of some coastal 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.
Increased frequency and intensity of storms (wave action)	Increased frequency of extreme storm events	Increased maintenance costs (coastal infrastructure damaged by wave action)	Build resilience into new/renewed assets. Refer Table 4.5.2.

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 will have benefits:

- Assets will withstand the impacts of climate change
- Services can be sustained
- 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
Coastal infrastructure	Sea level rise and increased frequency and intensity of storm events (wave action)	New assets to consider these impacts during design and construction to ensure assets remain serviceable into the future.

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.

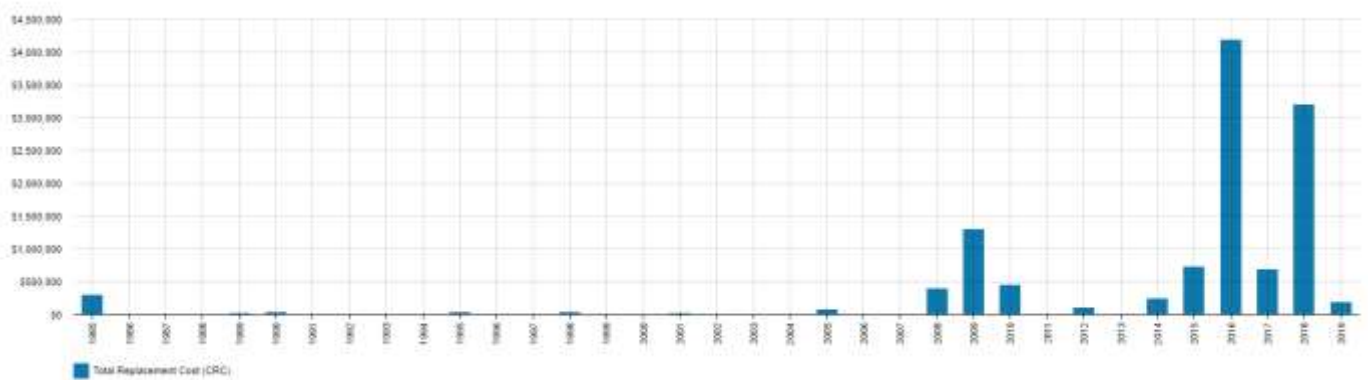
Table 5.1.1: Assets covered by this Plan

Asset Category	Number of Assets	Replacement Value
Jetties	15	\$1,644,405
Foreshore Protection Structures	3	\$246,255
Wharf structures	2	\$1,357,617
Boat Ramps	14	\$1,781,648
Pontoons	2	\$23,000
Marina	2	\$4,213,674
Landings	2	\$130,810
TOTAL	40	\$9,397,709

It is to be noted that some assets included in this plan are subject to ownership confirmation, and as confirmation occurs the plan is to be updated as required.

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 coastal infrastructure asset value has been built or renewed in the past 15 years. This is the result of a strong renewal program during this time. (Graph not updated in 2023)

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is 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
Triabunna Wharf & Marina - elevated boat access walkways.	Structural deterioration (severe corrosion) of boat access walkway supports and associated increase in safety concern. Requires renewal to meet current standards.
Swansea, Elevated Boat Ramp	Sand build up to boat ramp affecting serviceability, notably at lower tides.
Swansea, Gordon Street Boat Ramp and concrete landing	Requires upgrade to meet current standards – fenders and fibreglass grating install to landing. Rock dislodged from breakwater in line of boat ramp – requires relocation and stabilisation.
Dolphin Sands, Yellow Sandbanks Road jetty structure	Structural deterioration. Requires renewal to meet current standards.
Little Swanport, Saltworks timber jetty structure	Structural deterioration. Requires renewal to meet current standards.
Coles Bay, Muirs Beach boat ramp and jetty	Requires renewal to meet current standards.
Orford, Prosser River Road boat ramp	Requires renewal to meet current standards.

The above service deficiencies were identified from observations by the author and through discussion with the Manager – Coastal Infrastructure.

5.1.3 Asset condition

Condition is currently monitored by the Manager – Coastal Infrastructure. *ASD Diving Contractors* have historically been engaged to undertake annual inspection of some coastal assets, however this has not been a complete inspection of all coastal infrastructure assets, and has mainly included boat ramps, jetties and swimming pontoons, including underwater inspection where required. It is recommended that the inspections cover all assets in the future.

As Council's formal coastal asset management is in its infancy, previous inspection reports have not provided a graded condition and has been done more so by description of defects, photos and informal observation. For the purpose of this plan condition grading estimates have been applied to each asset based on visual inspection and professional judgement by the Manager – Coastal Infrastructure.

Condition is measured using a 1 – 5 grading system⁴ as detailed in Table 5.1.3. It is important that consistent condition grades be used in reporting various assets across an organisation. This supports effective communication. At the detailed level assets may be measured utilising different condition scales, however, for reporting in the Asset Management Plan they are all translated to the 1 – 5 grading scale.

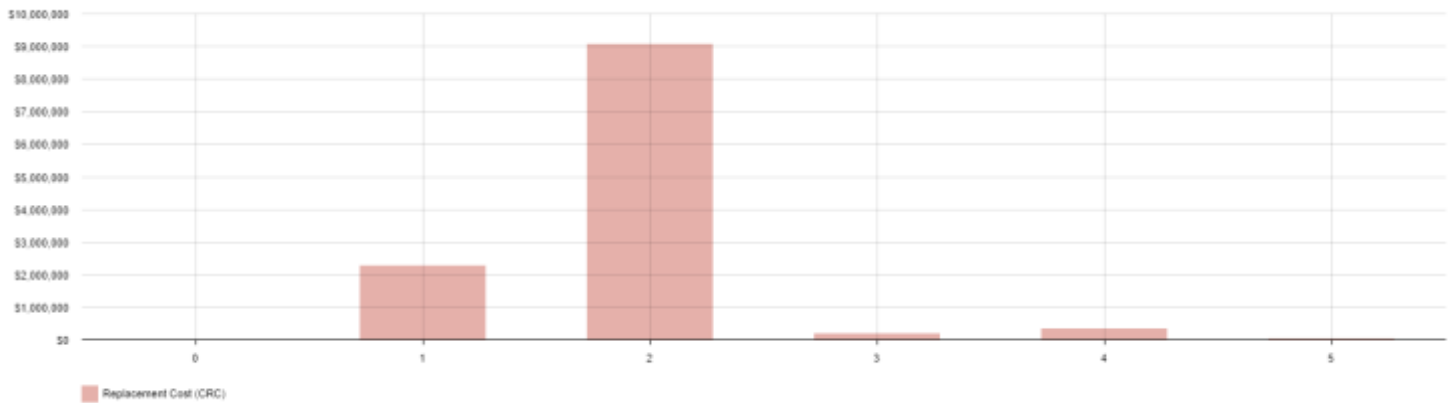
⁴ IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

Table 5.1.3: Simple Condition Grading Model

Condition Grading	Description of Condition
1	Very Good: only planned maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: significant maintenance required
4	Poor: significant renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation

The condition profile of our assets is shown in Figure 5.1.3.

Figure 5.1.3: Asset Condition Profile



All figure values are shown in current day dollars.

Figure 5.1.3 shows approximately 95 % of Council’s total coastal infrastructure asset value is in ‘very good’ or ‘good’ condition (refer Table 5.1.3), with only 3 % in a ‘poor’ or ‘very poor’ condition. It is to be noted that generally the coastal infrastructure in ‘poor’ or ‘very poor’ condition are lower importance assets. Figure 5.1.3 is reflective of Council’s targeted coastal infrastructure renewal works completed over the past 15 years.

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include pressure washer cleaning of algae from boat ramps, asset inspection, loan repayments and utility 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 repair to damaged or missing fenders on jetties/landings and replacement or reconfiguring of displaced foreshore structures.

Assessment and priority of reactive maintenance is currently undertaken by staff using experience and professional judgement. It is not clear how this maintenance has historically been budgeted for and recommended improvements in this regard are noted in section 8.0.

Asset hierarchy

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

The service hierarchy is shown in Table 5.2.2.

Table 5.2.2: Asset Service Hierarchy

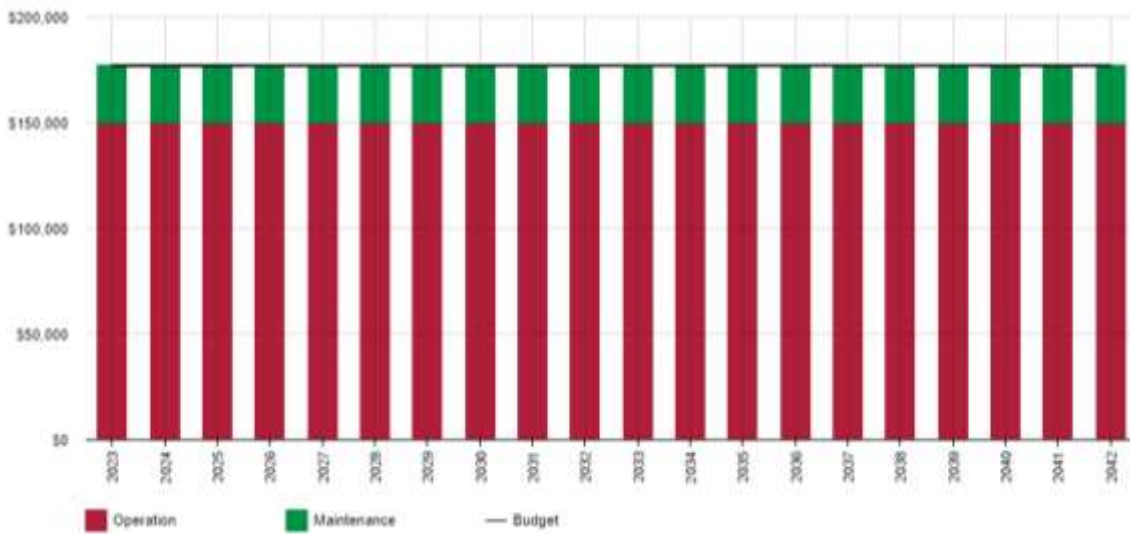
Service Hierarchy	Definition	Service Level Objective
Category 1 – Critical	High use business critical facilities essential to service delivery, (e.g. wharf, marina, key boat ramps)	<ul style="list-style-type: none"> ■ Aesthetics – As new or highest quality reasonably achieved. ■ Functionality – All elements 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. high use boat ramps and jetties).	<ul style="list-style-type: none"> ■ Aesthetics – Minor signs or deterioration when viewed closely may be acceptable. No deterioration when viewed from 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 asset. Refurbishments, component 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. assets that have a predominant community use focus).	<ul style="list-style-type: none"> ■ 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 asset. Refurbishments, component 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	<ul style="list-style-type: none"> ■ Aesthetics – Some signs of deterioration are acceptable.

	(e.g. minor assets that have low usage).	<ul style="list-style-type: none"> ■ 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 assets.	<ul style="list-style-type: none"> ■ 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, operation and maintenance costs are matched by the planned budget over the planning period. This shows that Council currently have sufficient planned budget to undertake all of the forecast operation and maintenance beyond 2023 (noting reliance on *MAST* funding for major maintenance of boat ramp, jetty and other assets historically funded by *MAST*).

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 remain 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 January 2021.

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
---------------------	-------------

Triabunna Wharf	Concrete structures - 50 years Timber fenders – 20 to 40 years Other minor components – 10 to 20 years
Triabunna Marina	Steel piles - 50 years Concrete structures – 50 years Boat access platforms – 20 years Floating pontoon system (walkways and fingers) – 40 years Aluminium gangways – 50 years Timber piles, fenders and other minor components – 10 to 40 years
Boat ramps	50 years
Jetties (incl. floating pontoons)	30-40 years
Swimming pontoons	30 years
Foreshore protection structures	25 years
Concrete boat landings	50 years
Other miscellaneous coastal structures (Prosser River-mouth stabilisation sandbags)	25 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).⁵

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.⁶

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 %

⁵ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

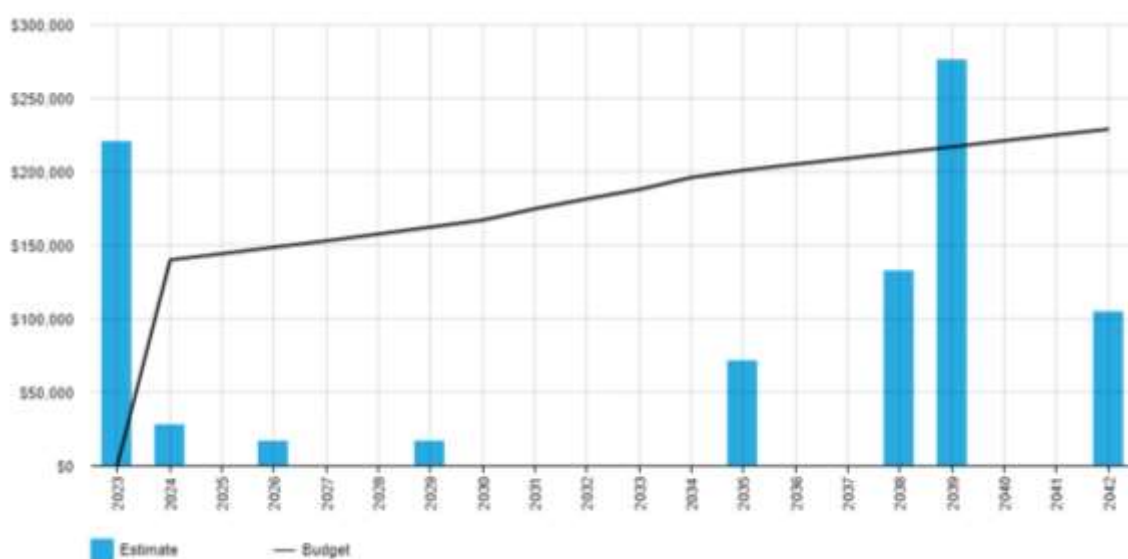
⁶ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Criteria	Weighting
Usage/demand	30 %
Risk/failure consequence	30 %
High operation & maintenance costs that could be reduced significantly by renewal	10 %
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.

Figure 5.4.1 shows the forecast renewal costs to be slightly higher than the proposed renewal budget when averaged over the planning period. There is currently a surplus of \$114,750 on average per year.

Deferred renewal (assets identified for renewal and not scheduled in capital works programs) should be included in Section 6.0 of this plan where they pose a ‘high’ or ‘very high’ risk to Council – refer Table 6.2.

5.5 Acquisition Plan

Acquisition reflects 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.

5.5.1 Selection criteria

Proposed upgrade of existing assets, and new 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 is currently no allowance for any Council or *MAST* funded acquisition of coastal infrastructure assets in the planned budget over the planning period. The previously proposed *Spring Bay Harbour Extension & Maria Island Ferry Terminal* project is a potential and significant future acquisition, however there are no current plans for this to occur. If this is to change, this plan is to be updated to reflect those changes.

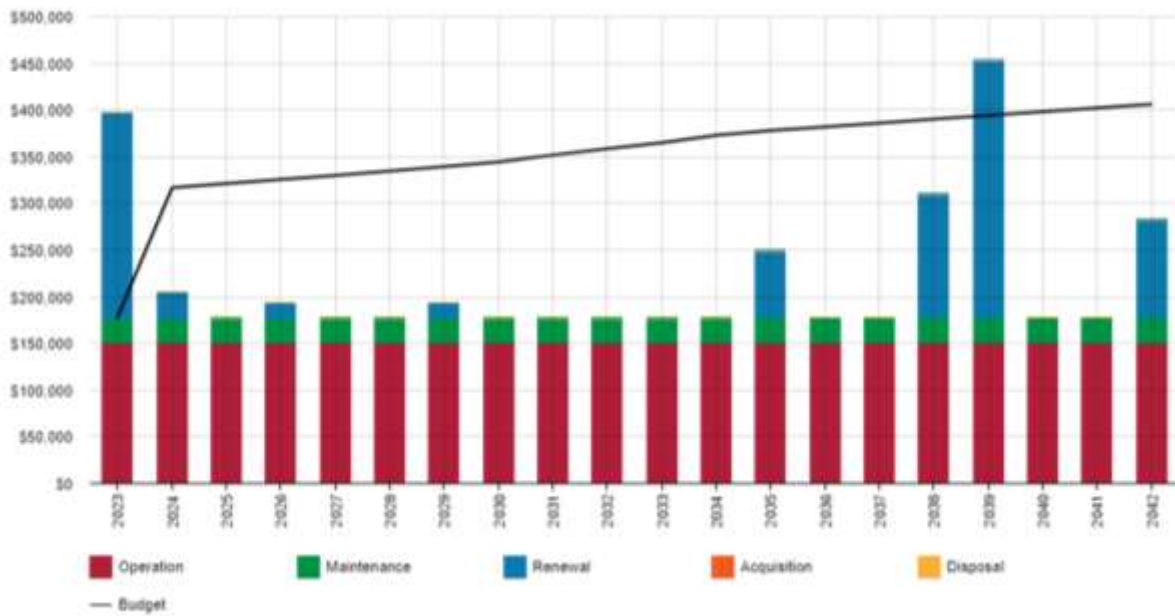
When Council commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long term sustainability. When reviewing the long term impacts of asset acquisition, it is useful to consider the cumulative 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 are generally well under the planned budget (black line) over the planning period, indicating a surplus.

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’⁷.

An assessment of risks⁸ 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
Triabunna wharf, Triabunna marina and key boat ramps throughout municipality.	Structural, operational (sand deposits affecting serviceability) or any other failure mode.	Service disruption to all users and loss of critical water access points.

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.

⁷ ISO 31000:2009, p 2

⁸ Refer GSBC Risk Management Policy and GSBC Risk Management Strategy (June 2020)

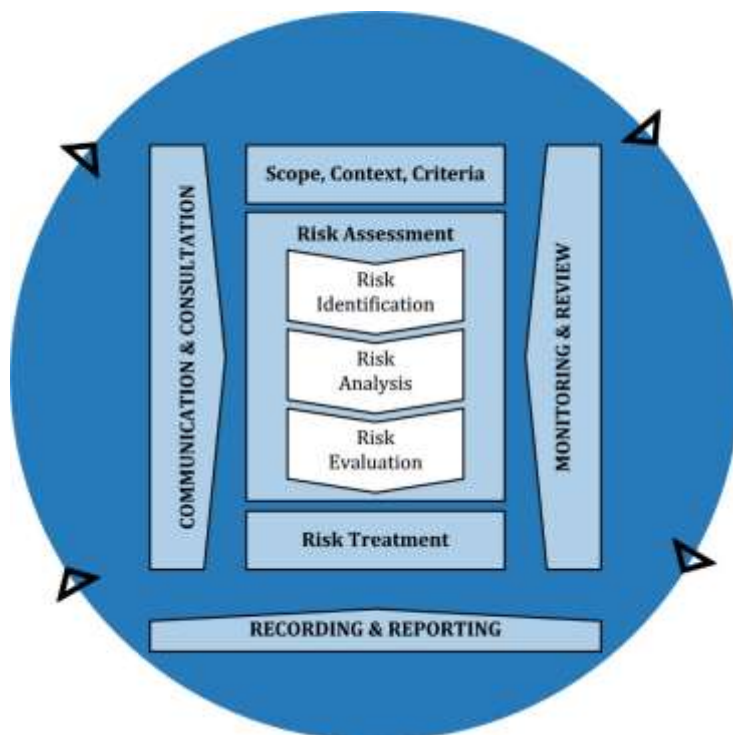


Fig 6.2 Risk Management Process – Abridged
 Source: ISO 31000:2018, Figure 1, p9

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 risks⁹ associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (VR - requiring immediate corrective action) and ‘High’ (H - requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. 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 Council.

⁹ 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
Coastal infrastructure	Loss of knowledge and key staff	H	Develop a succession plan and improve record keeping	Low	Within existing resources
Coastal infrastructure	Underfunding	H	Formal agreement with MAST regarding funding	Low	Within existing resources
Triabunna marina	Structural failure of marina boat access walkways	H	Budget allocation for renewal	Low	\$100,000
Prosser timber jetties	Structural failure of jetties	H	Ensure budget allocation for unplanned maintenance, and undertake condition assessment of timber jetties.	Low	\$75,000+
Triabunna fixed marina – concrete wall (Berth 5 to 25)	Structural failure of fixed marina concrete wall (long term deterioration)	H	Undertake scheduled condition assessments and preventative maintenance or renewal	Low	\$300,000
Swansea Elevated Boat Ramp	Level of service could be reduced by accumulation of sand.	H	Periodic dredging of channel under the boat ramp to allow tidal flow and possibly improve serviceability	Medium	\$10,000
Gordon Street Boat Ramp	Slip hazard to public (algae growing on concrete landing) and rock hazard to boats (break wall subject to movement in heavy seas)	H	Install grating over concrete landing and improve fenders, remove rock (in water) from line of boat ramp and stabilise rock breakwater.	Low	\$8,000

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

Council currently budgets to undertake specific operation, maintenance or renewal of coastal assets and has an income stream to assist. However, Council reliant on funding provided by *MAST* to undertake renewal works. Some minor maintenance items are undertaken by Council and these are managed from the discretionary budget of the Manager –Coastal Infrastructure, this includes rectification of minor public safety and service issues.

6.4.2 Service trade-off

- Forecasted renewal, refer Appendix D, cannot be undertaken without funding provided by *MAST* (which is noted to have been historically forthcoming). If this funding is not forthcoming then this will result in a reduction in the provided level of service for users as the assets continue to deteriorate.

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 in the provided level of service
- 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 Ratio¹⁰ **113.06 %**

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have **113.06 %** 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 **\$205,148** on average per year.

The proposed (budget) operations, maintenance and renewal funding is **\$319,898** on average per year giving a 10 year average funding surplus of **\$114,750** per year. This indicates that **155.94%** 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 7.1.3 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).

¹⁰ 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 current day dollar values.

Table 7.1.3: Forecast Costs (Outlays) for the Long Term Financial Plan

Year	Forecast Acquisition	Forecast Operation	Forecast Maintenance	Forecast Renewal	Forecast Disposal
2023	0	150,000	27,000	220,674	0
2024	0	150,000	27,003	27,584	0
2025	0	150,000	27,005	0	0
2026	0	150,000	27,008	16,551	0
2027	0	150,000	27,011	0	0
2028	0	150,000	27,013	0	0
2029	0	150,000	27,016	16,551	0
2030	0	150,000	27,019	0	0
2031	0	150,000	27,021	0	0
2032	0	150,000	27,024	0	0
2033	0	150,000	27,027	0	0
2034	0	150,000	27,029	0	0
2035	0	150,000	27,032	71,719	0
2036	0	150,000	27,035	0	0
2037	0	150,000	27,037	0	0
2038	0	150,000	27,040	132,404	0
2039	0	150,000	27,043	275,842	0
2040	0	150,000	27,045	0	0
2041	0	150,000	27,048	0	0
2042	0	150,000	27,051	104,820	0

7.2 Funding Strategy

The proposed funding for assets is outlined in Council's budget and Long Term Financial Management Plan, noting a reliance on external funding from *MAST*.

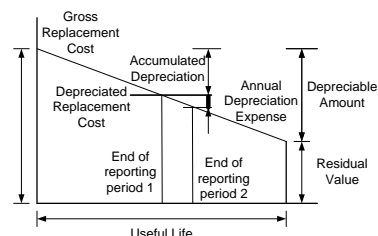
The financial strategy of Council determines how funding will be provided, whereas the Asset Management Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset valuations

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

Current (Gross) Replacement Cost	\$9,158,179
Depreciable Amount	\$9,158,179
Depreciated Replacement Cost ¹¹	\$8,003,160
Annual Depreciation	\$126,396



¹¹ Also reported as Written Down Value, Carrying or Net Book Value.

7.3.2 Valuation Forecasts

Asset values are forecast to remain relatively stable while no acquisition of new assets is forecast. Should this change, this plan will require updating to reflect those changes.

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.

Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from any assets constructed by *MAST*, land developers or others, that are then donated and accepted by Council (noting there are none currently included in the planned budget).

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:

- Projections are based on local operating knowledge only
- Renewal costs are budget type figures with a range of $\pm 30\%$
- 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.
- Assume *MAST* will continue to fund all renewals and major maintenance as required, with the exception of purely Council funded assets such as the Triabunna Wharf and Marina.
- Assume no additional major coastal assets will be acquired by Council over the planning period. If this changes (e.g. Triabunna Marina Extension is to occur) the Asset Management Plan is to be updated to reflect this and detailed lifecycle costing knowledge and allocation in planned budget to meet these costs is to be undertaken.
- Financial data used in the development of this plan was from the end of the 2019-20 financial year.
- 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 scale¹² in accordance with Table 7.5.1.

¹² IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Table 7.5.1: Data Confidence Grading System

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

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

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

Data	Confidence Assessment	Comment
Demand drivers	Medium	Requires Council input, review and acceptance
Growth projections	High	State government provided projections used
Acquisition forecast	Low	Several gross estimates and assumptions made. Requires review on provision and improvement of financial data
Operation forecast	Low to Medium	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 professional judgement of staff, recently undertaken projects, and comment from industry.
- Asset useful lives	Medium	Based on professional judgement/estimate by staff
- Condition modelling	Medium to High	Based on visual inspection, diving inspection (where appropriate) and professional judgement/estimate by staff and contractors
Disposal forecast	Medium	No disposals currently identified

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

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices¹³

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* in conjunction with Council’s coastal infrastructure asset register.

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 coastal infrastructure asset register and also data from MapInfo (Geographic Information System).

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 detailed capital works program for upcoming years with project ranking consistent with agreed criteria. Use to inform Asset Management Plan and Long Term Financial Plan updates.	Director of Infrastructure, Manager – Coastal Infrastructure	Accountant, Manager – Coastal Infrastructure, Works Manager	June 2023
2	Establish a formal asset inspection regime, ensuring all are inspected at suitable frequencies.	Director of Infrastructure, Manager – Coastal Infrastructure	Manager – Coastal Infrastructure, Works Manager	June 2023
3	Include operation and maintenance costs of Triabunna Wharf and Marina (and any other purely Council funded assets) in the planned budget as specific items.	General Manager, Accountant, Director of Infrastructure	Manager – Coastal Infrastructure, Accountant, Director of Infrastructure	2023
4	Improve asset register information (e.g. inclusion of materials, dimensions etc.)	Director of Infrastructure	Manager – Coastal Infrastructure	2024
5	Clarify Council lease arrangements, Council/ <i>MAST</i> asset ownership and maintenance funding regarding coastal assets.	Director of Infrastructure	Manager – Coastal Infrastructure	2024
6	Clarify if all future funding (for associated assets) is to be provided by <i>MAST</i> or if Council should be budgeting for renewals over the longer term?	General Manager, Accountant, Director of Infrastructure	Manager – Coastal Infrastructure	2024
7	Increase accuracy of budget breakdown to include acquisitions, maintenance, operations, renewals and disposals. Aim for better transparency.	Accountant	Accountant, Director of Infrastructure, Manager – Coastal Infrastructure	September 2024

¹³ ISO 55000 Refers to this the Asset Management System

8	Update Geographical Information System (GIS) to include all previously missing coastal infrastructure assets.	Director of Infrastructure	Surveyor/Geographical Information System officer	2024
9	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, Manager – Coastal Infrastructure	December 2023
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	Increase confidence and maturity of Asset Management Plan	Director of Infrastructure, Manager – Coastal 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, upgrade/new and asset disposal costs and proposed 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 take into account 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 Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 1.0).

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, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM.
- IPWEA, 2020 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney
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- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, <https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8>
- 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 Council funded acquisitions are forecast to be undertaken over the planning period. Given future demand (discussed in Section 4), Council’s current financial position, available budget and discussion with the Manager – Coastal Infrastructure and other key staff, a strategy of no Council funded acquisition (for coastal infrastructure 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
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
2040	\$0	\$0	\$0
2041	\$0	\$0	\$0
2042	\$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 coastal infrastructure). 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
2023	150,000	\$0	150,000
2024	150,000	\$0	150,000
2025	150,000	\$0	150,000
2026	150,000	\$0	150,000
2027	150,000	\$0	150,000
2028	150,000	\$0	150,000
2029	150,000	\$0	150,000
2030	150,000	\$0	150,000
2031	150,000	\$0	150,000
2032	150,000	\$0	150,000
2033	150,000	\$0	150,000
2034	150,000	\$0	150,000
2035	150,000	\$0	150,000
2036	150,000	\$0	150,000
2037	150,000	\$0	150,000
2038	150,000	\$0	150,000
2039	150,000	\$0	150,000
2040	150,000	\$0	150,000
2041	150,000	\$0	150,000
2042	150,000	\$0	150,000

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 coastal infrastructure). 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
2023	27,000	\$0	27,000
2024	27,003	\$0	27,003
2025	27,005	\$0	27,005
2026	27,008	\$0	27,008
2027	27,011	\$0	27,011
2028	27,013	\$0	27,013
2029	27,016	\$0	27,016
2030	27,019	\$0	27,019
2031	27,021	\$0	27,021
2032	27,024	\$0	27,024
2033	27,027	\$0	27,027
2034	27,029	\$0	27,029
2035	27,032	\$0	27,032
2036	27,035	\$0	27,035
2037	27,037	\$0	27,037
2038	27,040	\$0	27,040
2039	27,043	\$0	27,043
2040	27,045	\$0	27,045
2041	27,048	\$0	27,048
2042	27,051	\$0	27,051

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

The renewal forecast of \$28,136 per year is essentially based on the sum of the estimated renewal costs over the planning period, averaged over 20 years (the planning period) with other funds provided by MAST. As noted in Section 7.0 the renewal costs are estimates based on the Xero asset values with cpi for the two intervening years.

D.2 – Renewal Project Summary

The below Table D2 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 – Forecast Renewal Works Summary

Asset_Name	Renewal Cost	Forecast Renewal Year
Dolphin Sands, Yellow Sandbanks Road, Jetty	\$ 25,000	2021
Little Swanport, Saltworks Road, Timber Jetty	\$ 90,000	2021
Dolphin Sands, Yellow Sandbanks Road, Boat Ramp	\$ 25,000	2021
Coles Bay, Muirs Beach, Boatramp	\$ 120,000	2022
Coles Bay, Muirs Beach, Jetty	\$ 80,000	2022
Orford, Prosser River Road, Boat Ramp	\$ 25,000	2023
Swansea, Swimming Pontoon	\$ 15,000	2026
Triabunna, Barton Avenue (One Tree Point), Boat Ramp	\$ 15,000	2029
Orford, Raspins Beach Foreshore Rock	\$ 65,000	2035
Swansea, Jetty Road, Lower Boat Ramp Jetty	\$ 120,000	2038
Orford, West Shelly Beach, Boat Ramp	\$ 15,000	2039
Swanwick, Foreshore Protection (sandbags)	\$ 150,000	2039
Little Swanport, Saltworks Road, Floating Jetty	\$ 70,000	2039
Orford, Prosser River, Swimming Pontoon	\$ 15,000	2039
Triabunna, wharf and marina - component renewals (see below)	\$ 587,500	2021-2031
<u>Specific wharf and marina component renewals:</u>		
Boat access platforms	\$100,000	2021-2022
Fixed wharf and marina ladders	\$2,500	2021-2023
Renewal of founding material to base of fixed birth marina wall	\$50,000	2021-2026
Electrical and plumbing services	\$10,000	2021-2031
Marina birth walkway trims, rollers and other minor items	\$2,500	2021-2031
Timber wharf kerbs	\$2,500	2021-2031
Fender/birth piles (generally timber)	\$100,000	2021-2031
Fixed marina wall panel renewal works	\$320,000	2021-2031

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 equal to the forecast renewal budget.

Table D3 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget (funding from MAST)
2023	\$ 220,674	\$ 220,674
2024	\$ 27,584	\$ 27,584
2025		
2026	\$ 16,551	\$ 16,551
2027		
2028		
2029	\$ 16,551	\$ 16,551
2030		
2031		
2032		
2033		
2034		
2035	\$ 71,719	\$ 71,719
2036		
2037		
2038	\$ 132,404	\$ 132,404
2039	\$ 275,842	\$ 275,842
2040		
2041		
2042	\$ 104,820	\$ 104,820

Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source

Through discussion with the Manager – Coastal Infrastructure, other key staff, 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
2023	\$0	\$0
2024	\$0	\$0
2025	\$0	\$0
2026	\$0	\$0
2027	\$0	\$0
2028	\$0	\$0
2029	\$0	\$0
2030	\$0	\$0
2031	\$0	\$0
2032	\$0	\$0
2033	\$0	\$0
2034	\$0	\$0
2035	\$0	\$0
2036	\$0	\$0
2037	\$0	\$0
2038	\$0	\$0
2039	\$0	\$0
2040	\$0	\$0
2041	\$0	\$0
2042	\$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
2023	0	150,000	27,000	220,674	0	397,674
2024	0	150,000	27,003	27,584	0	204,587
2025	0	150,000	27,005	0	0	177,005
2026	0	150,000	27,008	16,551	0	193,559
2027	0	150,000	27,011	0	0	177,011
2028	0	150,000	27,013	0	0	177,013
2029	0	150,000	27,016	16,551	0	193,567
2030	0	150,000	27,019	0	0	177,019
2031	0	150,000	27,021	0	0	177,021
2032	0	150,000	27,024	0	0	177,024
2033	0	150,000	27,027	0	0	177,027
2034	0	150,000	27,029	0	0	177,029
2035	0	150,000	27,032	71,719	0	248,751
2036	0	150,000	27,035	0	0	177,035
2037	0	150,000	27,037	0	0	177,037
2038	0	150,000	27,040	132,404	0	309,444
2039	0	150,000	27,043	275,842	0	452,885
2040	0	150,000	27,045	0	0	177,045
2041	0	150,000	27,048	0	0	177,048
2042	0	150,000	27,051	104,820	0	281,871