

Sunshine Coast Council
Asset Management Plan 2012
Coastal and Environment Infrastructure



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The Institute of Public Works Engineering Australia.

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ABBREVIATIONS

AAAC	Average annual asset consumption
AMP	Asset management plan
ARI	Average recurrence interval
BOD	Biochemical (biological) oxygen demand
CRC	Current replacement cost
CWMS	Community wastewater management systems
DA	Depreciable amount
DoH	Department of Health
FAIM	Financial asset information management report
ICOLLs	Intermittently closed and open lakes and lagoons
IRMP	Infrastructure risk management plan
LCC	Life cycle cost
LCE	Life cycle expenditure
MMS	Maintenance management system
PCI	Pavement condition index
RV	Residual value
SS	Suspended solids
vph	Vehicles per hour
SEMP	Shoreline Erosion Management Plan

GLOSSARY

Annual service cost (ASC)

An estimate of the cost that would be tendered, per annum, if tenders were called for the supply of a service to a performance specification for a fixed term. The Annual Service Cost includes operating, maintenance, depreciation, finance/ opportunity and disposal costs, less revenue.

Asset class

Grouping of assets of a similar nature and use in an entity's operations (AASB 166.37).

Asset condition assessment

The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific asset so as to determine the need for some preventative or remedial action.

Asset management

The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

Assets

Future economic benefits controlled by the entity as a result of past transactions or other past events (AAS27.12).

Property, plant and equipment including infrastructure and other assets (such as furniture and fittings) with benefits expected to last more than 12 month.

Average annual asset consumption (AAAC)*

The amount of a local government's asset base consumed during a year. This may be calculated by dividing the Depreciable Amount (DA) by the Useful Life and totalled for each and every asset OR by dividing the Fair Value (Depreciated Replacement Cost) by the Remaining Life and totalled for each and every asset in an asset category or class.

Brownfield asset values**

Asset (re)valuation values based on the cost to replace the asset including demolition and restoration costs.

Capital expansion expenditure

Expenditure that extends an existing asset, at the same standard as is currently enjoyed by residents, to a new group of users. It is discretionary expenditure, which increases future operating, and maintenance costs, because it increases council's asset base, but may be associated with additional revenue from the new user group, eg. extending a drainage or road network, the provision of an oval or park in a new suburb for new residents.

Capital expenditure

Relatively large (material) expenditure, which has benefits, expected to last for more than 12 months. Capital expenditure includes renewal, expansion and upgrade. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capital funding

Funding to pay for capital expenditure.

Capital grants

Monies received generally tied to the specific projects for which they are granted, which are often upgrade and/or expansion or new investment proposals.

Capital investment expenditure

See capital expenditure definition

Capital new expenditure

Expenditure which creates a new asset providing a new service to the community that did not exist beforehand. As it increases service potential it may impact revenue and will increase future operating and maintenance expenditure.

Capital renewal expenditure

Expenditure on an existing asset, which returns the service potential or the life of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. As it reinstates existing service potential, it has no impact on revenue, but may reduce future operating and maintenance expenditure if completed at the optimum time, eg. resurfacing or resheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capital upgrade expenditure

Expenditure, which enhances an existing asset to provide a higher level of service or expenditure that will increase the life of the asset beyond that which it had originally. Upgrade expenditure is discretionary and often does not result in additional revenue unless direct user charges apply. It will increase operating and maintenance expenditure in the future because of the increase in the council's asset base, eg. widening the sealed area of an existing road, replacing drainage pipes with pipes of a greater capacity, enlarging a grandstand at a sporting facility. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Carrying amount

The amount at which an asset is recognised after deducting any accumulated depreciation / amortisation and accumulated impairment losses thereon.

Class of assets

See asset class definition

Component

An individual part of an asset which contributes to the composition of the whole and can be separated from or attached to an asset or a system.

Cost of an asset

The amount of cash or cash equivalents paid or the fair value of the consideration given to acquire an asset at the time of its acquisition or construction, plus any costs necessary to place the asset into service. This includes one-off design and project management costs.

Current replacement cost (CRC)

The cost the entity would incur to acquire the asset on the reporting date. The cost is measured by reference to the lowest cost at which the gross future economic benefits could be obtained in the normal course of business or the minimum it would cost, to replace the existing asset with a technologically modern equivalent new asset (not a second hand one) with the same economic benefits (gross service potential) allowing for any differences in the quantity and quality of output and in operating costs.

Current replacement cost 'as new' (CRC)

The current cost of replacing the original service potential of an existing asset, with a similar modern equivalent asset, i.e. the total cost of replacing an existing asset with an 'as new' or similar asset expressed in current dollar values.

Cyclic maintenance**

Replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, cycle, replacement of air conditioning equipment, etc. This work generally falls below the capital/ maintenance threshold and needs to be identified in a specific maintenance budget allocation.

Depreciable amount

The cost of an asset, or other amount substituted for its cost, less its residual value (AASB 116.6)

Depreciated replacement cost (DRC)

The current replacement cost (CRC) of an asset less, where applicable, accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset

Depreciation / amortisation

The systematic allocation of the depreciable amount (service potential) of an asset over its useful life.

Economic life

See useful life definition.

Expenditure

The spending of money on goods and services. Expenditure includes recurrent and capital.

Fair value

The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties, in an arm's length transaction.

Greenfield asset values **

Asset (re)valuation values based on the cost to initially acquire the asset.

Heritage asset

An asset with historic, artistic, scientific, technological, geographical or environmental qualities that is held and maintained principally for its contribution to knowledge and culture and this purpose is central to the objectives of the entity holding it.

Impairment Loss

The amount by which the carrying amount of an asset exceeds its recoverable amount.

Infrastructure assets

Physical assets of the entity or of another entity that contribute to meeting the public's need for access to major economic and social facilities and services, eg. roads, drainage, footpaths and cycleways. These are typically large, interconnected networks or portfolios of composite assets. The components of these assets may be separately maintained, renewed or replaced individually so that the required level and standard of service from the network of assets is continuously sustained. Generally the components and hence the assets have long lives. They are fixed in place and are often have no market value.

Investment property

Property held to earn rentals or for capital appreciation or both, rather than for:

- (a) use in the production or supply of goods or services or for administrative purposes; or
- (b) sale in the ordinary course of business (AASB 140.5)

Level of service

The defined service quality for a particular service against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental, acceptability and cost).

Life cycle cost **

The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises annual maintenance and asset consumption expense, represented by depreciation expense. The life cycle cost does not indicate the funds required to provide the service in a particular year.

Life cycle expenditure **

The life cycle expenditure (LCE) is the actual or planned annual maintenance and capital renewal expenditure incurred in providing the service in a particular year. Life cycle expenditure may be compared to life cycle cost to give an initial indicator of life cycle sustainability.

Loans / borrowings

Loans result in funds being received which are then repaid over a period of time with interest (an additional cost). Their primary benefit is in 'spreading the burden' of capital expenditure over time. Although loans enable works to be completed sooner, they are only ultimately cost effective where the capital works funded (generally renewals) result in operating and maintenance cost savings, which are greater than the cost of the loan (interest and charges).

Maintenance and renewal gap

Difference between estimated budgets and projected expenditures for maintenance and renewal of assets, totalled over a defined time (eg 5, 10 and 15 years).

Maintenance and renewal sustainability index

Ratio of estimated budget to projected expenditure for maintenance and renewal of assets over a defined time (eg 5, 10 and 15 years).

Maintenance expenditure

Recurrent expenditure, which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the asset achieves its useful life and provides the required level of service. It is expenditure, which was anticipated in determining the asset's useful life.

Materiality

An item is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial report. Materiality depends on the size and nature of the omission or misstatement judged in the surrounding circumstances.

Modern equivalent asset

A structure similar to an existing structure and having the equivalent productive capacity, which could be built using modern materials, techniques and design. Replacement cost is the basis used to estimate the cost of constructing a modern equivalent asset.

Non-revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are not expected to generate any savings or revenue to the Council, eg. parks and playgrounds, footpaths, roads and bridges, libraries, etc.

Operating expenditure

Recurrent expenditure, which is continuously required excluding maintenance and depreciation, eg power, fuel, staff, plant equipment, on-costs and overheads.

Pavement management system

A systematic process for measuring and predicting the condition of road pavements and wearing surfaces over time and recommending corrective actions.

Planned maintenance**

Repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown criteria/experience, prioritising scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

PMS score

A measure of condition of a road segment determined from a Pavement Management System.

Rate of annual asset consumption*

A measure of average annual consumption of assets (AAAC) expressed as a percentage of the depreciable amount (AAAC/DA). Depreciation may be used for AAAC.

Rate of annual asset renewal*

A measure of the rate at which assets are being renewed per annum expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

Rate of annual asset upgrade*

A measure of the rate at which assets are being upgraded and expanded per annum expressed as a percentage of depreciable amount (capital upgrade/expansion expenditure/DA).

Reactive maintenance

Unplanned repair work that carried out in response to service requests and management/supervisory directions.

Recoverable amount

The higher of an asset's fair value, less costs to sell and its value in use.

Recurrent expenditure

Relatively small (immaterial) expenditure or that which has benefits expected to last less than 12 months. Recurrent expenditure includes operating and maintenance expenditure.

Recurrent funding

Funding to pay for recurrent expenditure.

Rehabilitation

See capital renewal expenditure definition above.

Remaining life

The time remaining until an asset ceases to provide the required service level or economic usefulness. Age plus remaining life is economic life.

Renewal

See capital renewal expenditure definition above.

Residual value

The net amount which an entity expects to obtain for an asset at the end of its useful life after deducting the expected costs of disposal.

Revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are expected to generate some savings or revenue to offset operating costs, eg public halls and theatres, childcare centres, sporting and recreation facilities, tourist information centres, etc.

Risk management

The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.

Section or segment

A self-contained part or piece of an infrastructure asset.

Service potential

The capacity to provide goods and services in accordance with the entity's objectives, whether those objectives are the generation of net cash inflows or the provision of goods and services of a particular volume and quantity to the beneficiaries thereof.

Service potential remaining*

A measure of the remaining life of assets expressed as a percentage of economic life. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (DRC/DA).

Strategic Management Plan (SMA)**

Documents council objectives for a specified period (3-5 years), the principle activities to achieve the objectives, the means by which that will be carried out, estimated income and expenditure, measures to assess performance and how rating policy relates to the Council's objectives and activities.

Sub-component

Smaller individual parts that make up a component part.

Useful life

Either:

- (a) the period over which an asset is expected to be available for use by an entity, or
- (b) the number of production or similar units expected to be obtained from the asset by the entity.

It is estimated or expected time between placing the asset into service and removing it from service, or the estimated period of time over which the future economic benefits embodied in a depreciable asset, are expected to be

consumed by the council. It is the same as the economic life.

Value in use

The present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. It is deemed to be depreciated replacement cost (DRC) for those assets whose future economic benefits are not primarily dependent on the asset's ability to generate new cash flows, where if deprived of the asset its future economic benefits would be replaced.

Source: DVC 2006, Glossary

Note: Items shown * modified to use DA instead of CRC
Additional glossary items shown **



1. EXECUTIVE SUMMARY

What council provides

Sunshine Coast Council as a local government authority is in the business of providing a range of services to the community. Some of the Coastal services are management of beaches, canals, and river foreshores.

The Environment infrastructure network includes natural areas allocated as conservation reserves, environmental visitor education facilities, waterways, wetlands, various constructed lakes systems, fire and recreation trails and associate supporting infrastructure. The service comprises of natural assets complimented by a range of constructed assets including boardwalks, paths, shelters, barbecues, shade structures and amenities. There are also a number of smaller assets that are not included in this Plan such as bollards, garden edging, landscaping, signage, furniture and taps and the like.

Sunshine Coast Council has an obligation to its ratepayers to manage these physical assets so that an acceptable level of service is maintained and improvement initiatives implemented in an efficient and cost-effective manner. In addition, council has the obligation to manage assets in an environmentally friendly and sustainable way.

To fulfil this role and responsibility of providing a long-term cost effective management of the assets, council must develop an asset management plan to be the vehicle by which council can provide a long-term management framework.

The Plan links long-term investment to council's strategic goals and desired day-to-day service levels.

Coastal and Environment's major assets value is currently \$57,331 million (FAIM) which includes:

- 40 beaches spread over 140 kilometres
- Four major river systems the Noosa, Maroochy, Mooloolah Rivers and Pumicestone Passage.
- 19 boat ramps

- Three locks and weirs
- 27 jetties and 12 pontoons
- Seven major groynes protecting the beaches
- 73 kilometres of beach dune fencing
- 65 kilometres of canals

What does it cost?

There are two key indicators of cost to provide the service:

- The life cycle cost being the average cost over the life cycle of the asset, and
- The total maintenance and capital renewal expenditure required to deliver existing service levels in the next 10 years covered by council's long term financial plan.

The life cycle cost to provide the Coastal and Environment infrastructure service is estimated at \$9.82 million. Council's planned life cycle expenditure for year one of the Plan is \$8.46 million which gives an estimated life cycle sustainability index of .86.

The total maintenance and capital renewal expenditure required to provide the service for the next 10 years is estimated at a total of \$90.72 million. This is an average of \$9.07 million per annum.

Council's maintenance and capital renewal expenditure for year one of the Plan is \$8.46 million giving a 10 year sustainability index of .94

Plans for the future

Council plans to operate and maintain the Coastal and Environment infrastructure network to achieve the following strategic objectives:

1. Ensure the Coastal and Environment infrastructure is maintained to a safe and functional standard as set out in this Plan
2. Comply with current legislative requirements
3. Continuing to provide ecological services

Measuring our performance

Quality

Assets within the Coastal and Environment infrastructure network will be maintained in a reasonably usable condition. Defects found or reported that are outside our service standard will be repaired. See AMP maintenance response service levels for details of defect prioritisation and response time.

Function

Our intent is that an appropriate Coastal and Environment network is maintained in partnership with other levels of government and stakeholders to provide ecological services and enable sustainable and where possible an improved contribution to global biodiversity, with some sustainable recreation opportunities as a secondary aim dependant on the location and its natural values. The service also provides high quality amenity to residents which enhances lifestyle values.

Coastal and Environment assets will be maintained at a safe level and associated signage and equipment will be provided as needed to ensure public safety.

Safety

We inspect all Coastal and Environment assets regularly and prioritise and repair defects in accordance with our inspection schedule to ensure they are safe.

Next steps

The actions resulting from this Plan are:

- Implementing and monitoring identified service levels
- Reviewing Coastal and Environment assets capital works program
- Community satisfaction surveys to be undertaken



2. INTRODUCTION

2.1 Background

This Plan is to demonstrate responsive management of Coastal and Environment infrastructure assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding required to provide the required levels of service.

Coastal

The Plan is to be read with the following associated planning documents:

- SCC Corporate Plan 2009-14
- SCC Operational Plans 2011/12 and 2012/13
- SCC Financial Sustainability Plan 2010-2020
- SCC 10 year Capital Works Program 2012/13 – 2021/22
- Biodiversity Strategy 2010
- Open Space Strategy 2011
- Waterways and Coastal Management 2011-2021
- Draft Sunshine Coast Local Government Area Pest Management Plan
- Recreation Trails Guideline
- Natural Areas Service Levels 2011

This Plan covers the following assets:

Table 2.1 Coastal assets covered by this Plan

Combined Arc10 GIS and FAIM Asset data

Asset category	Dimension	Replacement value (\$M)
Beach access	322	3.265
Beach fencing	72.39km	6.702
Geobags	12	1.815
Groynes	7	8.031
Sandshifter	1	3.303
Dredge pipelines	2250m	1.059
Locks weirs	3	15.80
Salinity lines	1	0.725
Navigation lights	40	0.015

Asset category	Dimension	Replacement value (\$M)
Retaining walls	275m	0.112
Revetment walls	27km	25.302
Rock walls	14.5km	7.039
Scour protection	11km	10.216
Boat ramps	19	0.772
Jetties and pontoons	27 jetties, 12 pontoons	5.937
TOTAL		83.391

Table 2.1a Coastal assets covered by this Plan

FAIM asset data only

Asset category	Dimension	Replacement Value (\$M)
Beach access	322	2.956
40 beaches (operational)	140km	3.320
Boat ramps	31	0.993
Rock walls / revetment walls		2.543
Canals	45km	21.110
Locks weirs	3	13.166
Jetties and pontoons	29 jetties, 14 pontoons	3.595
Groynes	7	4.609
Dune fencing		0.267
TOTAL		52.559

Asset quantities and values used in this Plan have been developed using data extracted from council's financial asset information module (FAIM). Data from the GIS system has been included for reference only.

Key stakeholders in the preparation and implementation of this Plan are:

Queensland Transport	Boat ramps and jetties
Regional Strategy and Planning Department	Shoreline Erosion Management Plans
Port of Brisbane Authority	Dredging
Department of Environment and Heritage Protection (DEHP)	Permits
Maritime Safety Queensland	Navigational aids

This Plan covers the following infrastructure assets that are part of the natural areas estate and waterways and water bodies:

- Access facilities – beaches, boardwalks and decks, pavements, paths, steps, pedestrian / cycle ramps, pedestrian / cycle bridges
- Canals, locks and weirs, revetment walls, jetties and pontoons
- Furniture – seats, picnic tables, bin enclosures, fish cleaning tables, cigarette butt bins, bike racks, flag poles, tree protection
- Shelters – shade structures, shelters
- Barbecues – gas
- Signage – signs, notice/display boards, plaques
- Fencing – bollards, retaining walls, fences, balustrade / hand rails, safety fencing, walls
- Water facilities – irrigation, taps, showers, drinking fountains, pumps, water feature
- Lighting – natural areas
- Features – artwork, memorial, entry statement
- Interpretation displays
- Miscellaneous – power switchboard
- Playgrounds – natural areas
- Soft and hard bank stabilisation works

Table 2.1b Environment infrastructure assets covered by this Plan

Asset category	Dimension	Replacement Value (\$M)
Barbecues and bins	Regional	0.031
Bollards	Regional	0.027
Fencing	Regional	0.169
Furniture	Regional	0.311
Other assets – gates, monuments, lighting, irrigation, shelters, effluent	Regional	0.144
Park improvements	2	0.050
Plant equipment	Various	0.075
Retardation basin	Kuluin	0.058
Steps	Various	0.034
Signs	Various	0.024

Asset category	Dimension	Replacement Value (\$M)
Retaining walls	Regional	2.582
Botanic waterbody	1	0.012
Wetland	1	0.480
Watertanks	2	0.005
Subsoil drains	2	0.024
Trails	Various	0.741
TOTAL		4.767

Key stakeholders in the preparation and implementation of this Plan are:

Department of National Parks, Recreation Sport and Racing DNPRSR is responsible for state managed areas such as national parks adjoining council reserves. These areas will be directly impacted by land management decisions made on council land and vice versa. Communication is essential to effective management outcomes.

Council's Environment Policy Branch Linking to implementation of strategies and environmental levy programs

Council's Regional Strategy and Planning Department Ensuring contributed assets are of the quality and standard to meet sustainable outcomes

Reserve neighbours Service levels are delivered and understood and partnerships established to contribute to maintaining identified values and objectives

2.2 Goals and objectives of asset management

Council exists to provide services to its community. Some of these services are provided by infrastructure assets. Council has acquired infrastructure assets by purchase, by contract, construction by council staff and by donation of assets constructed by developers and others to meet increased levels of service.

Council's goal in managing infrastructure assets is to meet the required level of service in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Taking a life cycle approach
- Developing cost-effective management strategies for the long term
- Providing a defined level of service and monitoring performance
- Understanding and meeting the demands of growth through demand management and infrastructure investment
- Managing risks associated with asset failures
- Sustainable use of physical resources
- Continuous improvement in asset management practices¹

¹ IIMM 2011 Sec 1.1.3, p 1.3

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

Council's vision is:

To be Australia's most sustainable region – vibrant, green, diverse.

Relevant council goals and objectives and how these are addressed in this Plan are:

Table 2.2 Council goals and how these are addressed in this Plan

Goal	Objective	How goal and objectives are addressed in IAMP
Robust economy	A broad economic base	Build alliances and partnerships to develop the economy of the region with businesses and government agencies.
Ecological sustainability	Healthy natural assets	Maintain and improve the quality of our natural assets in the region. Ensure new developments meet high standards of ecological sustainability and urban design. Review council infrastructure plans, design standards and procurement policies to maximise sustainable outcomes of newly created assets.
Innovation and creativity	Partnerships and alliances that drive innovation	Foster partnerships with governments, business and the community to encourage innovation and sustainability. Ensure research findings and the latest management techniques are incorporated into environmental management regimes.
Health and wellbeing	Safe and healthy communities	Maintain and develop council's emergency and disaster management planning, prevention, response and recovery capabilities. Manage community health risks through risk assessments and hazard reduction measures. Recognition of natural assets as an element of the wellbeing of Sunshine Coast residents.
Social cohesion	A sense of identity and belonging	Support community programs and infrastructure that encourage interaction, contribute to place making and a sense of community. Specific focus groups will be established as required, to assist Council in developing levels of service for specific assets.
Accessibility and	A community that	Work in partnership with government, the

Goal	Objective	How goal and objectives are addressed in IAMP
connectedness	recognises the importance of universal access and equity	private sector and community groups to understand needs and promote high quality universal access.
Managing growth	Council's services and assets meet the needs of our growing community	<p>Maintain and renew council assets to agreed standards.</p> <p>Develop long term asset management plans which are linked to financial management plans.</p> <p>Develop and implement five year and longer term rolling capital works programs according to strategic priorities.</p> <p>Determine the types and levels of services provided by council.</p> <p>Develop long term asset management plans which are linked to financial management plans.</p> <p>Maintain and renew council's assets to agreed standards.</p>
Economic Development	Infrastructure for economic growth	<p>Balancing economic development initiatives with the need to protect our waterways and coastal foreshores.</p> <p>Providing economic data for effective management of environmental assets.</p>
Great governance	Advocacy, partnerships and strong financial management	<p>Establish strong partnerships with all levels of government and create alliances with peak bodies and the community.</p> <p>Develop long term financial plans and indicators to achieve optimum use of resources and alignment to strategic priorities.</p> <p>Manage environmental assets to maximise resource use efficiency and minimises risks and life cycle costs.</p>

2.3 Plan framework

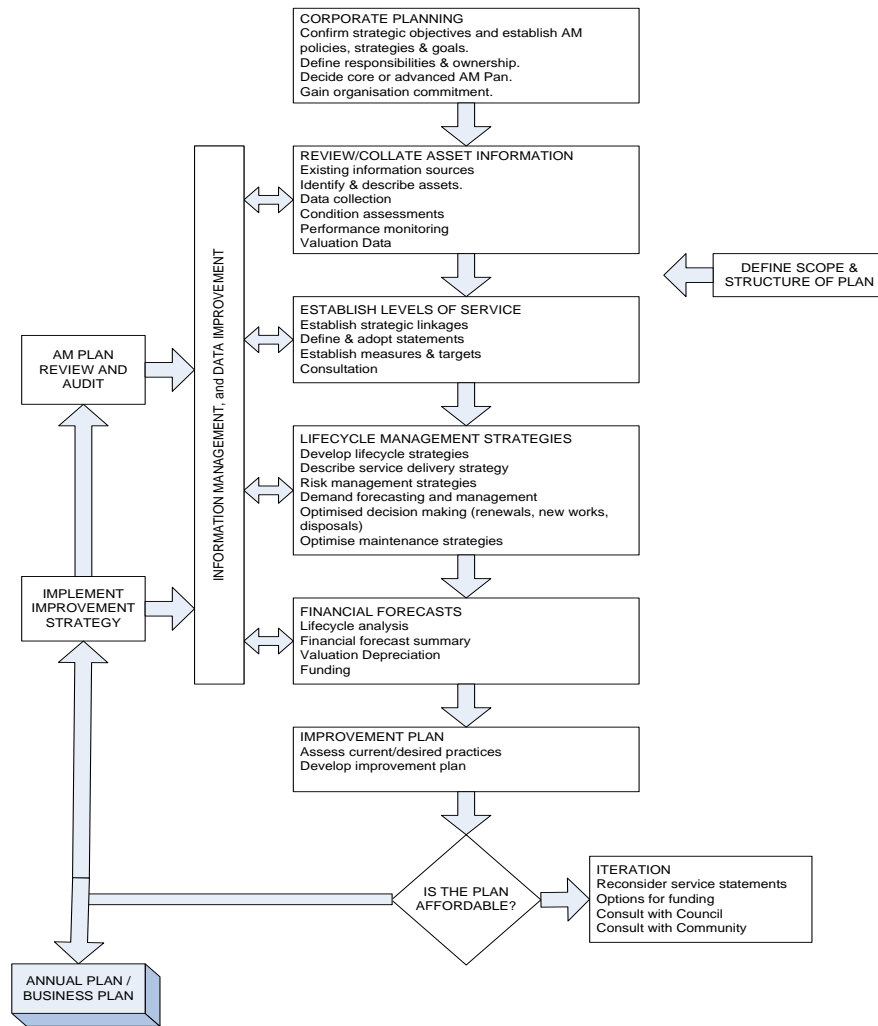
Key elements of the Plan are:

- Levels of service – specifies the services and levels of service to be provided by council
- Future demand – how this will impact on future service delivery and how this is to be met
- Life cycle management – how council will manage its existing and future assets to provide the required services

- Financial summary – what funds are required to provide the required services
- Asset management practices
- Monitoring – how the plan will be monitored to ensure it is meeting council’s objectives
- Asset management improvement plan

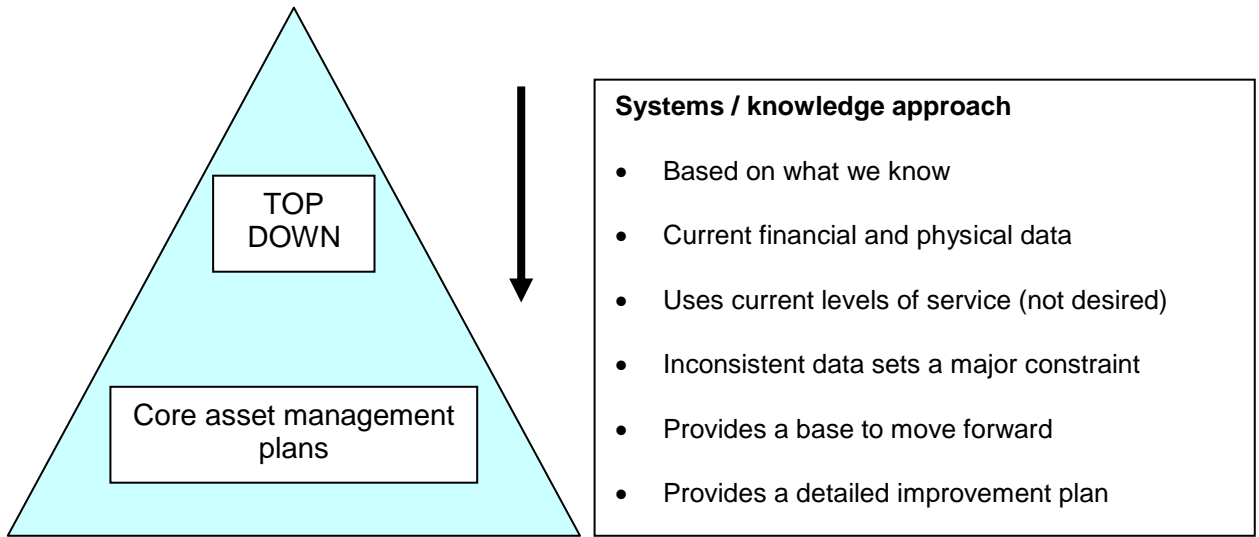
A road map for preparing an asset management plan is shown below.

Road map for preparing an asset management plan
 Source: IIMM Figure 1.5.1, p 1.11

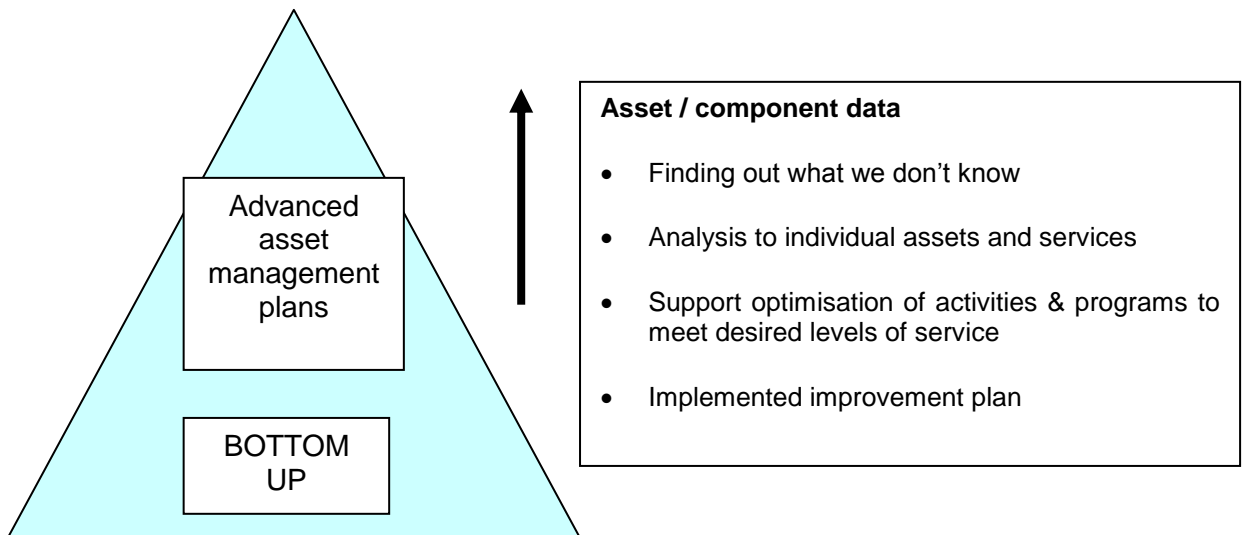


2.4 Core and advanced asset management

This Plan is prepared as a ‘core’ asset management plan in accordance with the International Infrastructure Management Manual (IIMM 2011). It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a ‘top down’ approach where analysis is applied at the ‘system’ or ‘network’ level.



Future revisions of this asset management plan will move towards 'advanced' asset management using a 'bottom up' approach for gathering asset information for individual assets to support the optimisation of activities and programs to meet agreed service levels.



3. LEVELS OF SERVICE

3.1 Customer research and expectations

Council has not carried out any research on a regional basis on customer expectations. This will be investigated for future updates of the Plan.

Table 3.1 Community Satisfaction Survey Levels

Performance measure	Satisfaction level				
	Very satisfied	Fairly satisfied	Satisfied	Somewhat satisfied	Not satisfied
5.2.5. Community satisfaction with asset management	Currently this is unmeasured. Arrangements are being made to measure and quantify customer satisfaction levels				

3.2 Legislative requirements

Council has to meet many legislative requirements including Australian and state legislation and state regulations. These include:

Table 3.2 Legislative requirements

Legislation	Requirement
Convention on Wetlands of International Importance (Ramsar Convention)	Objective is to 'develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits/services'.
Environment Protection and Biodiversity Conservation Act 1999	Provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance.
National Water Quality Management Strategy	Provides a national approach to improving water quality in Australia's waterways.
Local Government Act	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.
Fisheries Management Act 1994	Aims to protect Queensland's Fisheries
Environmental Protection Act 1994 and regulations	Aims to protect Queensland's environment while allowing for <i>ecologically sustainable development</i> .
Transport Operations (Marine Safety) Act 1994	Asset provision and maintenance
Sustainable Planning Act 2009	Aims to achieve ecological sustainability by managing development and its effects and coordinating and integrating planning processes. Asset provision and maintenance

Legislation	Requirement
Queensland Heritage Act 1992	<p>Aims to provide for the conservation of Queensland's cultural heritage for the benefit of the community and future generations.</p> <p>Asset provision and maintenance</p>
Coastal Protection and Management Act 1995.	<p>Aims to provide for the protection, conservation, rehabilitation and management of the coast, including its resources and biological diversity.</p> <p>Asset provision and maintenance</p>
Iconic Queensland Places Act 2008 and regulation	<p>Aims to protect particular places in Queensland with iconic characteristics or qualities.</p> <p>Asset provision and maintenance</p>
Canal Act 1958/1979 amend.	<p>Aims to make provision for the regulation and control of the construction, maintenance and use of canals</p>
Disability Discrimination Act 1992	<p>Asset provision and maintenance</p>
Various Australian Standards	<p>Asset provision and maintenance</p>
Environmental Protection (Water) Policy 2009	<p>The purpose of this policy is achieved by identifying environmental values and management goals for Queensland waters; and stating water quality guidelines and water quality objectives to enhance or protect the environmental values. Providing a framework for making consistent, equitable and informed decisions about Queensland waters; and monitoring and reporting on the condition of Queensland waters.</p>
Environmental Protection and Biodiversity Conservation Act 1999	<p>Asset provision and maintenance</p>
Sunshine Coast Draft Waterways and Coastal Management Strategy 2011 – 2021	<p>The Draft Waterways and Coastal Management Strategy 2011-2021 intends to provide a framework for managing the Sunshine Coast's natural rivers, wetlands and lakes, its constructed ponds, lakes and canals and its coastline, over the next 10 years. The Strategy outlines key values, challenges and strategic directions for Waterways and coastal foreshores. The Strategy aims to improve and protect the health of our natural waterways and coastal foreshores as well as address the management of constructed water bodies on the Sunshine Coast, to maximise resource use efficiency and minimise risks and life cycle costs.</p>
Draft Queensland Coastal Plan 2009	<p>Provides policy direction and guidance for maintaining, rehabilitating, and protecting coastal land, and managing activities undertaken on it, with particular emphasis on managing public coastal land.</p>
SEQ Healthy Waterways Strategy (2007 -2012)	<p>Aim is to achieve significant reductions in both urban and non-urban diffuse source pollution and point source pollution, protect and conserve high ecological value waterways, improve catchment health, combat coastal algal blooms, and refine the Ecosystem Health Monitoring Program.</p>

Legislation	Requirement
<p>South East Queensland Natural Resource Management Plan 2009 - 2031</p>	<p>To complement and inform preparation and review of the SEQ State of the Region Report and the SEQ Regional Plan.</p> <p>To inform the preparation of local government planning schemes and policies, state government policy, government and non-government corporate plans and property plans.</p> <p>To inform the preparation of planning and investment associated with yearly and long-term business cycles at regional, sub-regional and property levels to ensure funding and community actions contribute to the achievement of regional targets.</p> <p>To advise state agencies and local governments in the assessment of development applications and activities that may significantly constrain the achievement of regional natural resource targets.</p>
<p>South East Queensland Regional Plan 2009 - 2031</p>	<p>Aim is to ensure that communities are safe, healthy, accessible and inclusive, there are diverse employment, opportunities and quality, infrastructure and services, including education and health. Urban and rural areas are mutually supportive and collaborative in creating wealth for the community, development is sustainable and well designed, and where the subtropical character of the region is recognised and reinforced Ecological and culturally significant landscapes are valued, celebrated, protected and enhanced. The community has access to a range of quality, open space, recreational opportunities.</p>
<p>Nature Conservation Act 1992 and Regulations</p>	<p>Aims to conserve nature</p> <p>Asset provision and maintenance</p>
<p>Our Plan, the South East Queensland Traditional Owner Cultural Resource Management Plan (2008)</p>	<p>Purpose of this plan is to –</p> <p>Complement and inform preparation and review of the SEQ State of the Region Report and the SEQ Regional Plan.</p> <p>Inform the preparation of local government planning schemes and policies, state government policy, government and non-government corporate plans, property plans.</p> <p>To inform the preparation of planning and investment associated with yearly and long-term business cycles at regional, sub-regional and property levels to ensure funding and community actions contribute to the achievement of regional targets.</p> <p>To advise state agencies and local governments in the assessment of development applications and activities that may significantly constrain the achievement of regional natural resource targets.</p>
<p>Aboriginal Cultural Heritage Act 2003</p>	<p>The main purpose of this Act is to provide effective recognition, protection and conservation of Aboriginal cultural heritage.</p> <p>Asset provision and maintenance.</p>
<p>Water Act 2000</p>	<p>The purpose of this Act is to advance sustainable management and efficient use of water and other resources.</p> <p>Asset provision and maintenance.</p>

Legislation	Requirement
Permanent Water Conservation Measures	The aims of these measures are to advance sustainable management and efficient use of water.
Electrical Safety Act 2002	<p>This Act is directed at eliminating the human cost to individuals, families and the community of death, injury and destruction that can be caused by electricity.</p> <p>Asset provision and maintenance.</p>
Sustainable Planning Act, 2009	<p>Physical land protection / biodiversity / fire management.</p> <p>Provides legal status to town planning and development conditions.</p>
Land Act, 1994	Physical land protection
Vegetation Management Act, 1999 and regulations	<p>The purpose of this Act is to regulate the clearing of vegetation in a way that prevents the loss of biodiversity.</p> <p>A) Conserves: Remnant endangered ecosystems Remnant of concern ecosystems Remnant not of concern ecosystems</p> <p>B) Conserves: Vegetation in declared areas</p> <p>C) Ensures clearing does not cause land degradation D) Prevents loss of biodiversity E) Maintains ecological processes F) Manages environmental effects of clearing G) Reduces greenhouse gas emissions.</p>
Rural Lands Protection Act, 1985, Land Protection (Pest and Stock Route) Act, 2002	Declared pests and obligations on landholders
Queensland Fires & Rescue Service Act, 1990	Establishment of fire management structure, posting of fire bans, undertaking risk management programs relating to fire.
Endangered Species Protection Act, 1992	Endangered Species Protection Act, 1992
Workplace Health and Safety Act 1995	<p>The objective of this Act is to prevent a person's death, injury or illness being caused by a workplace, by a relevant workplace area, by work activities, or by plant or substances for use at a relevant place.</p> <p>Asset provision and maintenance</p>

3.3 Current levels of service

Council has defined service levels in two terms.

Community levels of service relate to how the community receives the service in terms of safety, quality, quantity, reliability, responsiveness, cost / efficiency and legislative compliance.

Supporting the community service levels are operational or technical measures of performance developed to ensure that the minimum community levels of service are met. These technical measures relate to service criteria such as:

Service Criteria	Technical measures may relate to:
Quality	Water quality
Quantity	Length of canals and beaches
Availability	Open to Public
Safety	Number of injury accidents

Table 3.3 Current service levels

Coastal

Key Performance Measure	Level of service	Performance measure process	Performance target
COMMUNITY LEVELS OF SERVICE			
Quality	Coast and canal assets are suitably embellished and maintained for their intended purpose	Availability, embellishment and maintenance quality of coast and canal assets monitored and reported	Not measured
Function	Coast and canal assets are suitably designed, constructed and maintained for their intended purpose and support a wide range of functions, uses and purposes	Availability, embellishment and maintenance quality of coast and canal assets monitored, audited and reported	Not measured
Safety	Coast and canal assets are safe to utilise with no hazards or threats	Safety audits	Not measured
Sustainability	Coast and canals are managed with respect to future generations		
TECHNICAL LEVELS OF SERVICE			
Maintenance	Coast and canal assets dependant on service levels ranging from fortnightly to annual (Refer to maintenance schedules for details).	Technical maintenance audits undertaken and reported	Not measured

Maintenance Schedule

Asset	Activity	Frequency
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Asset	Activity	Frequency
Canals	Revetment walls	Annually
	Canal profile	Annually
	Navigational aids	Annually
	Locks and weirs	Fortnightly
	Tidal exchange systems	Fortnightly

Asset	Activity	Frequency
Beaches	Scarping	Annually
	ICOLLs	Annually
	Vegetation	Annually
	Beach fencing	Fortnightly
	Beach access	3 months
	Rubbish and litter	High profile – weekly Others as required

Asset	Activity	Frequency
Rivers and foreshores	Jetties and pontoons	Annually with Queensland Transport
	Boat ramps	Annually with Queensland Transport
	Groynes	Annually
	Rock walls	3 Months
	Erosion	Annually

Environment infrastructure

Key Performance Measure	Level of service	Performance measure process	Performance target	Current performance
COMMUNITY LEVELS OF SERVICE				
Quality	Environmental assets are suitably embellished and maintained for intended purpose	Quality of assets are monitored and reported	90% available as scheduled	Not measured
Function	Area under active regeneration	Improvement in condition of identified areas under regeneration (according to BOA)	90% of sites under active regeneration move to next condition threshold within 5 years of commencement (e.g. poor to	

Key Performance Measure	Level of service	Performance measure process	Performance target	Current performance
			medium)	
Safety	All assets are maintained in a safe manner	Risk assessments and safety inspections address outstanding issues	90% of safety issues rectified within dedicated timeframes	
Sustainability	Reserves, waterways and facilities are preserved and managed for future generations		Energy efficiency principles, water efficiency principles and waste minimisation principles are incorporated in the design of all new facilities.	
TECHNICAL LEVELS OF SERVICE				
Maintenance		Technical maintenance audits undertaken and reported	90% achieved	
Condition	Carry out regular inspection of reserves and constructed assets	Inspection frequency (times per period)	90%	
	Defects are repaired within approved response times	% of work orders responded to within approved response times	90%	
	Condition of vegetation within B1 & B2 reserves	% of this category of reserves mapped	100% of B1	
Function	Facilities are fully operational and available	Inspections and condition/operational defect reporting as per track designation weekly – 6 monthly	< 5 reported defects / month	
	Minimal track, facilities closures	inspection and defect monitoring as per track designation weekly – 6 monthly	< 1 reported defects/month	
	Unobstructed access	Number of complaints regarding vegetation encroaching onto access ways	< 10 complaints per year	
Cost effectiveness	Provide services in cost-effective manner	Maintenance cost \$/facility	Operation costs within budget allocation	
Safety	Ensure facilities are safe	No reported injury incidents	0 reported injury incidents	

3.4 Desired levels of service

Council endorsed service levels in relation to both Coastal and Environment infrastructure in February / March 2012.

4. FUTURE DEMAND

4.1 Demand forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, agricultural practices, environmental awareness, etc.

Demand factor trends and impacts on service delivery are summarised in Table 4.1.

Table 4.1 Demand factors, projections and impact on services

Demand factor	Present position		Projection		Impact on services
Population	317,000 (2012)		508,000 (2031)		Projected population increases will increase pressure on existing assets and increase demand for provision of new assets in high growth areas.
Demographics	Highest growth patterns occurring in central area of region		High growth expectation within southern area of region		Requirement for new services to facilitate the growth area and to ensure facilities within neighbouring developments will cater for overflow.
	16% over 65 years old 1.5% over 85 years old 24% under 18 years old		21.7% over 65 years old 3.2% over 85 years old 21% under 18 years old		Requirement for increased access and equity focus during design of buildings and facilities. Provision of suitable facilities to meet the needs of the ageing population.
	Migration patterns have seen net gains of young families and retirees from interstate and a net loss of young people to other parts of Queensland		Current patterns predicted to continue		Review of current and future buildings and facilities to ensure the community's changing requirements are met. Established buildings and facilities may require refurbishment to align current use with desired use/s.
Number persons/household	23%	1 person	23%	1 person	Greater demand for individual activity based recreation opportunities Less demand for group activity demand Less demand for active sports field type parks
	40%	2 person	40%	2 person	
	15%	3 person	15%	3 person	
	15%	4 person	15%	4 person	
	6%	5 person	6%	5 person	

4.2 Changes in technology

Technology changes are forecast to affect the delivery of services covered by this Plan outlined in Table 4.2.

Table 4.2 Changes in technology and forecast effect on service delivery

Technology change	Effect on service delivery
Improved purpose-built software technology	Faster and more accurate asset data collection and processing
Access and use of purpose-built mobile computing software technology by general operational staff	Faster and more accurate asset data collection and processing
Regional integration of purpose-built software asset data collection systems	More accurate data collection and processing. More accurate reporting capacity on the type, number and condition of assets

Historically changes in technology have had the effect of reducing whole-of-life costs. Changes in technology will be embraced where possible to reduce future whole-of-life costs.

4.3 Demand management plan

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 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 Plan.

Table 4.3 Demand management plan summary

Coastal

Service Activity	Demand management plan
Maintenance of locks and weirs	<ul style="list-style-type: none"> • Individual asset management plans • Council's Waterways and Coastal Management Strategy 2011 – 2021
Maintenance of beaches	<ul style="list-style-type: none"> • Council's Waterways and Coastal Management Strategy 2011 - 2021
Maintenance of rivers and Foreshores	<ul style="list-style-type: none"> • Coast and canals recurrent maintenance programme • Council's Waterways and Coastal Management Strategy 2011 - 2021

Environment infrastructure

Service activity	Demand management plan
Provision of natural areas recreational facilities	Planning Scheme

Service activity	Demand management plan
	SCC Corporate Plan 2009-14 SCC Budget 2012/13 SCC 10 year Capital Works Program 2012/13 – 2021/22 Environmental Levy Policy
Provision of WSUD devices	Planning Scheme
Maintenance of constructed assets and natural assets	SCC Corporate Plan 2009-14 SCC Operational Plans 2009/10 - 2012/13 SCC Budget 2012/13

4.4 New assets from growth

The new assets required to meet growth will be acquired from land developments and constructed by council. Uncertainty regarding the type of assets which may be provided through such developments such as Caloundra South, has the potential to greatly increase whole-of-life costs into the future depending on the type and number of assets which council will acquire. Further work needs to be undertaken here to gain a greater understanding of the type, quantity and quality of assets to be acquired.

Acquiring these new assets will commit council to fund ongoing operations and maintenance 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 operating and maintenance costs.

Coastal

Asset	Capital value
Pelican Waters lock and weir	\$3 million
Mooloolaba Beach nourishment	Annual
Twin Waters revetment walls and weir	\$1 million
Maroochy Boulevard lake salinity and revetments	\$2 million
Golden Beach revetment walls	Unknown
Alex to Maroochy Surf Club beach nourishment	\$1.4 million

Environment infrastructure

Natural areas

Various land acquisitions / contributions	Unknown
Bank stabilisation	\$60,000
Trails	Unknown
Reserve furniture	Unknown

Waterways

Various bioretention basins, wetlands

Unknown

5. LIFE CYCLE MANAGEMENT PLAN

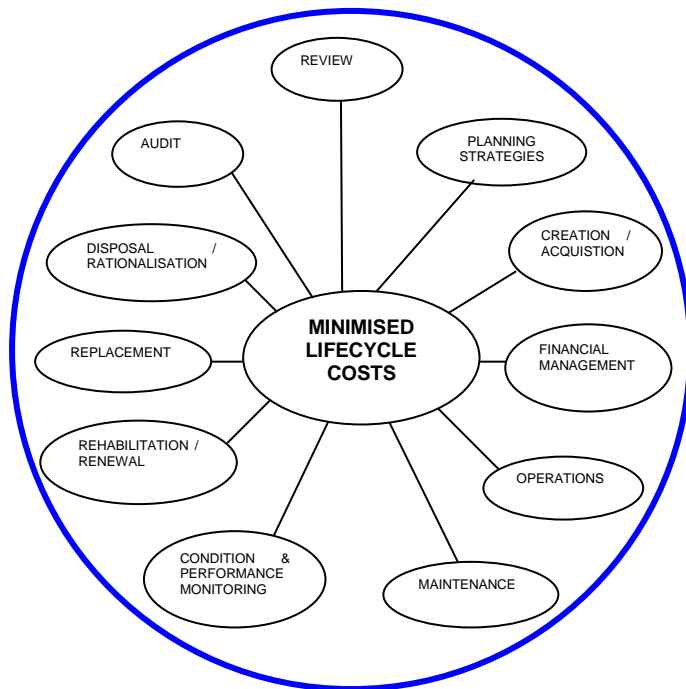
The life cycle management plan details how council plans to manage and operate the assets at the agreed levels of service (defined in Section 3) while minimising life cycle costs.

5.1 Background data

Life cycle asset management takes account of the whole-of-life implications for acquiring, operating, maintaining and disposing of park assets. The objectives of life cycle planning are to:

- Establish the total cost of an asset over its useful life
- Establish a sound basis on which asset management decisions are made
- Plan for the impact of refurbishment, maintenance and renewal; and
- Increase the service delivery capacity for the asset

The standard asset's life cycle costs are depicted in the following diagram:



5.1.1 Physical parameters

The assets covered by this Plan are shown below:

Coastal

Asset category	Asset quantity	Asset description
Beach access	322	Council has 322 beach accesses that cover the whole coastal region. These assets were designed and constructed by three separate regions prior to amalgamation, and therefore were

Asset category	Asset quantity	Asset description
		maintained and replaced at different intervention levels. Typically across the region most accesses are in good condition
Dune fencing	73km	Beach fences across the region are in a poor state and extra funds are required annually to maintain these assets
Beaches (40)	140km	Of the 40 beaches throughout the region, two have replenishment strategies in place to address sand renourishment, other high profile beaches are reliant on back passing to replenish beach profiles while lower priority beaches are replenished naturally.
Boat ramps	31	Of the 31 boat ramps, 22 are Queensland Transport assets. However, council has a legislative responsibility to maintain these assets
Canals	65km	Canals are to be maintained under the Coastal Protection and Management Act 1995 Dredging activities: Noosa canals are serviced every two years if required, Maroochydore and Mooloolaba canals are serviced between three and five years, and Minyama canals are serviced between three and five years. All canals are to be maintained to the profile in which they were developed.
Locks and weirs	3	There are three locks and weirs in the region with a further one in Pelican Waters to come online. Both have asset management plans that ensure the locks and weirs perform efficiently and usual whole of life costs are 30 years. Locks and weirs also form part of the individual lake management plans
Jetties and pontoons	43	Jetties and pontoons assets are similar in nature to boat ramps. Five jetties / pontoons belong to Queensland Transport.
River foreshore		River and foreshores, revetment walls, groynes and scour protection assets are maintained to ensure public safety and amenity, and most of these foreshores are now covered under a Department of Environment and Resource Management (DERM) permit to allow council to perform maintenance activities.
Scour protection	200km	
Groynes	7	
Revetment / retaining walls	102km	

Table 5.1.1 Coastal assets covered by this Plan

Environment infrastructure

Asset category	Asset quantity	Asset description
Total Natural Area Estate	7,700ha	
Environmental reserves	6,543ha	Property associated with reserve network
Beach and dunal	358ha	Property associated with coastal reserve network
Botanic gardens and iconic reserves	132ha	
Riparian	635ha	Property associated with reserve network
Amenity reserve – undeveloped	110ha	

Asset category	Asset quantity	Asset description
Utility	(total extent TBA)	
Walking trails	115km	
Fire trails	99km	
Waterways, water sensitive urban design (WSUD) and water bodies		
Major streams	>6000km	Natural waterways throughout the region
Lakes and wetlands	>70 lakes	Both constructed and natural
WSUD devices	>19	
Coastal lakes	6	

Table 5.1.1A Environmental assets covered by this Plan

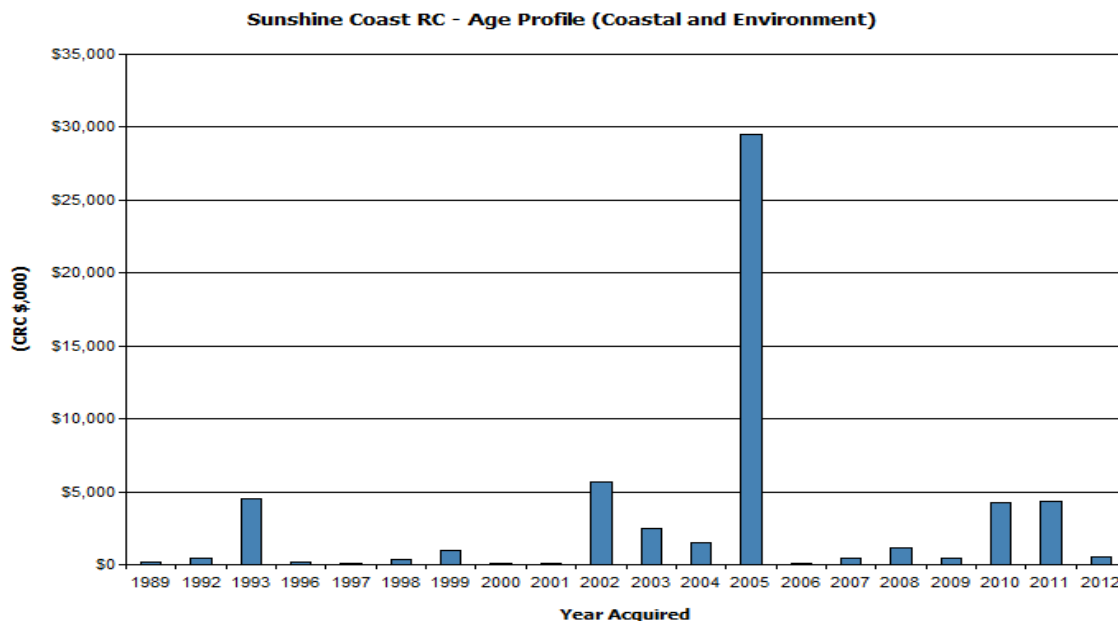
Environmental assets are distributed across the Sunshine Coast region within a variety for vegetation communities which have different management response requirements given environmental conditions frequently impact operational maintenance approaches.

Changing climatic conditions pose a risk in the ability to address expected changes within the supporting and protective infrastructure that maybe required to minimise impacts on these assets and our adjoining neighbours (e.g. bank stabilisation from flooding or high rainfall events and fire trails and fuel reduced zones in relation to increased future fire events).

Waterway assets and focus is primarily within the coastal and floodplain zones of the region. This follows development of the region in areas closest to the coast.

The age profile of council’s assets, based on council’s financial asset register, is shown in Figure 2.

Figure 2 Asset age profile



Acquisition dates of assets and financial asset write on processes need to be reviewed as a part of the improvement plan, especially for the year 2005. It is evident that a large quantity of existing assets were

entered into the financial asset management system in this period, this appears to be based on the asset recognition date and not the date that the assets were constructed.

5.1.2 Asset capacity and performance

Council's services are generally provided to meet design standards where these are available.

Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2 Known service performance deficiencies

Coastal

Location	Service deficiency
Noosa waters lock	No parts available for gearboxes
Rock revetment walls	Age and condition
Beach accesses	Age and condition
Beaches	Climate change and storm events
Dune fencing	Age and condition
Canals	De-silting and canal floor settlement
Geotextile containers	Need replacing every 10 to 15 years depending on location

Environment infrastructure

Location	Service deficiency
Mary Cairncross Scenic Reserve	Building quality and standard public visitor areas age between the 1960's and late 1980's
Maroochy Wetlands Sanctuary	Public access boardwalk
Recreational trail network including Noosa Trail Network	Surface and drainage elements.

The above service deficiencies were identified from ongoing condition assessments.

5.1.3 Asset condition

The condition profile of council's assets is shown below.

Condition is measured using a 1 – 5 rating system.²

Rating	Description of Condition
1	Excellent condition: only planned maintenance required
2	Very good: minor maintenance required plus planned maintenance
3	Good: significant maintenance required
4	Average: significant renewal/upgrade required
5	Poor: unserviceable

5.1.4 Asset valuations

The value of assets as at 30 June 2012 covered by this Plan is summarised below. Assets were last revalued at 30 June 2012. Assets are valued at Greenfield rates.

Coastal

Current replacement cost	\$57.331 million
Depreciable amount	\$57.304 million
Depreciated replacement cost	\$47.629 million
Annual depreciation expense	\$1.364 million

5.2 Risk management plan

An assessment of risks³ associated with service delivery from infrastructure assets has identified critical risks to council. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'very high' (VH) - requiring immediate corrective action, and 'high' (H) – requiring prioritised corrective action, identified in the infrastructure risk management plan are summarised in Table 5.2.

Table 5.2 Critical risks and treatment plans

Coastal

Asset at risk	What can happen	Risk rating	Risk treatment plan
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² IIMM 2011, Appendix B, p B:1-3 ('cyclic' modified to 'planned')

		(VH, H)	
Beaches and beach access	Erosion	VH	Beach reports by Lifeguards
Boat ramps	Trip fall hazards, damage to boats	VH	Regular inspections by Queensland Transport and SCC staff as per Coastal's Recurrent Canal Maintenance Programme
Canals	Revetment walls falling down, damage to property	VH	Canal inspections by SCC staff as per Coastal's Recurrent Canal Maintenance Programme
Locks and weirs	Breakdown of locks leaving no access for boats	VH	Fortnightly inspections by experienced contractors with the specific knowledge for these systems
Jetties and pontoons	Trip fall hazards, splintering, rotten timber	VH	Inspections as per Coastal's Recurrent Maintenance Programme
River foreshores	Erosion	VH	Inspections as per Coastal's Recurrent Maintenance Programme
Scour protection	Erosion	VH	Inspections as per Coastal's Recurrent Maintenance Programme
Dune fencing	Splintering and rusty wiring	VH	Annual inspection
Groynes	Erosion , depleted rock	H	Inspections as per Coastal's Recurrent Maintenance Programme
Revetment walls	Undermining and erosion	VH	Inspections as per Coastal's Recurrent Maintenance Programme

Environment infrastructure

Asset at Risk	What can happen	Risk rating (VH, H)	Risk treatment plan
Shelters	Structural failure due to vandalism or life cycle	VH	Regular inspections by SCC staff as per Natural Area Service Levels
Walking trails surface	Slip, trip fall Hazards, injury to person	VH	Regular inspections by SCC staff as per Natural Area Service Levels
Walking trails drainage	Erosion silt and debris causing, damage to property and waterways	H	Regular inspections by SCC staff as per Natural Area Service Levels
Fire trails	Erosion leading to inaccessible trail, staff and property at risk	VH	Regular inspections by SCC staff as per Natural Area Service Levels
Natural waterways embankments and foreshores – stabilisation works	Erosion property and environmental risks	H	Regular inspections by SCC staff as per Natural Area Service Levels
Signage	Unreadable, failure, vandalism injury to users, lost walkers	H	Regular inspections by SCC staff as per Natural Area Service Levels
Fencing and gates	Splintering and rusty wire, unapproved access causing vegetation and	H	Regular inspections by SCC staff as per Natural Area Service Levels

Asset at Risk	What can happen	Risk rating (VH, H)	Risk treatment plan
	erosion		

5.3 Routine maintenance plan

Coastal

Coast and Canals have developed a Recurrent Maintenance Manual. Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again.

Environment infrastructure

Routine maintenance is the regular ongoing work that is necessary to keep assets operating, including instances where components of the asset fail and need immediate repair to make the asset operational again.

5.3.1 Maintenance plan

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

Maintenance expenditure trends are shown in Table 5.3.1

Table 5.3.1 Maintenance expenditure trends

Coastal

Year	Maintenance expenditure		
	Reactive	Planned	Cyclic
2010/11	\$255,130.00	\$3,052,736.00	\$659,332.00
2011/12	\$313,000.00	\$2,314,000.00	\$252,000.00

Planned maintenance work is 89 per cent of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate.

Future revision of this asset management plan will include linking required maintenance expenditures with required service levels.

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

Environment infrastructure

Year	Maintenance expenditure		
	Reactive	Planned	Cyclic
2010/2011	\$490,000	\$4,210,000	\$0
2011/2012	\$540,000	\$4,290,000	\$0

Planned maintenance work is 88 per cent of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate. Future revision of this asset management plan will include linking required maintenance expenditures with required service levels.

Assessment and prioritisation of reactive maintenance is undertaken by council staff using experience and judgement and risk.

5.3.2 Standards and specifications

Maintenance work is carried out in accordance with the following standards and specifications.

(1) Department of Environment and Heritage Protection

- (a) "Guidelines for the Construction of Works on Tidal Lands or Waters for Private Use"

(2) Building Code of Australia

- (a) BCA Vol 2 Part 3.1.2.0 – Drainage (AS 3500.3.2)
- (b) BCA Vol 2 Part 3.1.2.2 (d) – Excavation and Piling near Sewers and Drains
- (c) BCA Vol 2 Part 3.1.1 – Earthworks

(3) Australian Standards

- (a) AS 1141: *Methods for sampling and testing aggregates*
- (b) AS 1428: *Design for Access and Mobility*
- (c) AS 1604: *Treatment of piles*
- (d) AS 1664.1: *Aluminium Structures Code*
- (e) AS 1665: *Welding*
- (f) AS 1170.1 and 1170.2: *Loading Codes*
- (g) AS 1650 *Galvanising*
- (h) AS 1720: *Timber Structures Code*
- (i) AS 2159: *Piling Code*
- (j) AS 2239: *Galvanic (Sacrificial) Anodes for Cathodic protection*
- (k) AS 2312 *Two Pack Epoxy Paints*
- (l) AS 2832.3 *Guide to the Cathodic protection of metals-fixed immersed structures.*
- (m) AS 3500: *Part 3.2, Stormwater Drainage – Acceptable Solutions*
- (n) AS 3600: *Concrete Structures Code*
- (o) AS 3700: *Masonry Structures Code*
- (p) AS 3706: *Geotextiles Methods of test*
- (q) AS/NZ 3004: *Marinas and Recreational Boats*
- (r) ANZECC: *Guidelines for fresh and Marine Water Quality*
- (s) AS 3962: *Guidelines for Design of Marinas Code*
- (t) AS 4110: *Steel Structures Code*
- (u) AS 4133: *Methods of testing rocks for engineering purposes*

(4) *Nature Conservation Act 1992*

- (5) SEQ Restoration Framework, Guideline & Manual
- (6) Healthy Waterways – Water sensitive Urban Design – Technical Design Guidelines for SEQ
- (7) Healthy Waterways – Water by Design Construction and Establishment Guidelines
- (8) *Coastal Protection and Management Act 1995*

5.3.3 Summary of future maintenance expenditures

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 3. Note that all costs are shown in current 2012 dollar values. Further validation of maintenance costs needs to be undertaken once the impact on type and number of assets from the development are known.

Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded are to be included in the risk assessment process in the infrastructure risk management plan. Maintenance is funded from council's operating budget and grants where available. This is further discussed in Section 6.2.

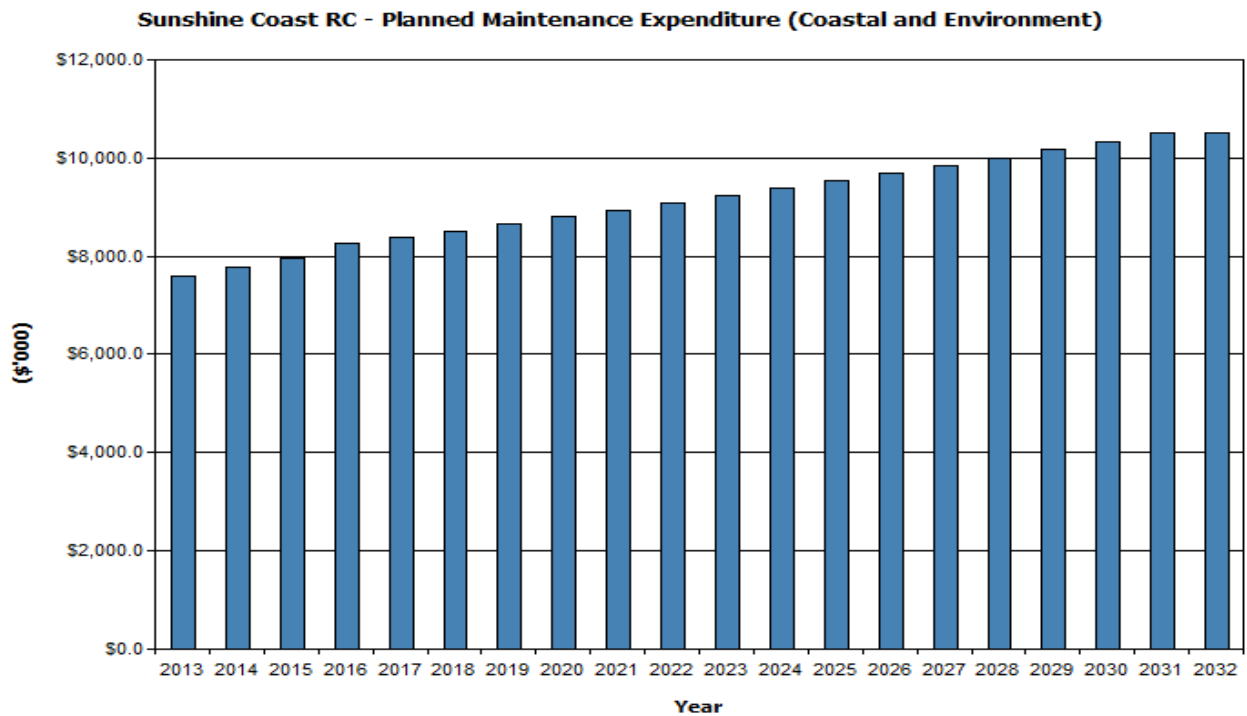


Figure 3 Planned maintenance expenditure

5.4 Renewal / replacement plan

Renewal expenditure is major work which does not increase the asset's design capacity 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 upgrade / expansion or new works expenditure.

5.4.1 Renewal plan

Assets requiring renewal are identified from estimates of remaining life obtained from council's financial asset register. Renewal projects are inspected to verify if the asset is still required; the accuracy of remaining life estimate, and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in council's 10 year Capital Works Program. The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1 Renewal - priority ranking criteria

Coastal

Criteria	Weighting
Community / social benefit	18%
Corporate alignment	10%
Risk assessment	18%
Financial considerations	10%
Environmental impacts	16%
Economic benefits	18%
Demand	10%
Total	100%

Environment infrastructure

Criteria	Weighting
Community / social benefit	16%
Corporate alignment	14%
Risk assessment	14%
Financial considerations	14%
Environmental impacts	14%
Economic benefits	14%
Demand	14%
Total	100%

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

5.4.2 Renewal standards

Renewal work is carried out in accordance with the standards and specifications listed in Section 5.3.2.

5.4.3 Summary of future renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Figure 4. Note that all costs are shown in current dollar values.

The projected capital renewal program is shown in Appendix B.

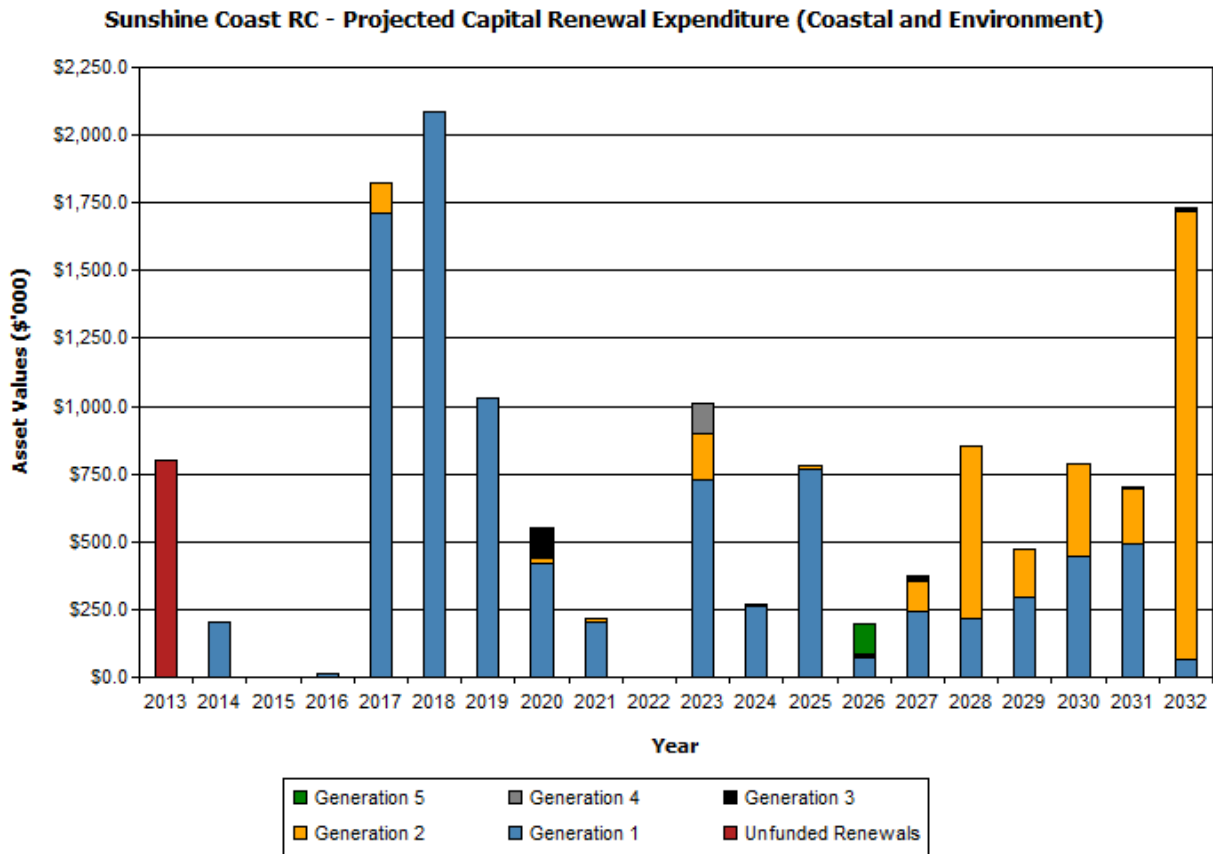


Figure 4 Projected Capital Renewal Expenditure

Deferred renewal, i.e. those assets identified for renewal and not scheduled for renewal in capital works programs are to be included in the risk assessment process in the risk management plan.

Renewals are to be funded from council’s Capital Works Program and grants where available. This is further discussed in Section 6.2.

5.5 Creation / acquisition / upgrade plan

New works are those works that create a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, increase in level of service, social or environmental needs. Assets may also be acquired at no cost to council from land development. These assets from growth are considered in Section 4.4.

The adoption of the shoreline erosion management plans (SEMPs) will set the requirements for council’s 10 year Capital Works Program.

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in council's 10 year Capital Works Program. The priority ranking criteria is detailed below.

Table 5.5.1 New – priority ranking criteria

Coastal

Criteria	Weighting
Community / social benefit	18%
Corporate alignment	10%
Risk assessment	18%
Financial considerations	10%
Environmental impacts	16%
Economic benefits	18%
Demand	10%
Total	100%

Environment infrastructure

Criteria	Weighting
Community / social benefit	16%
Corporate alignment	14%
Risk assessment	14%
Financial considerations	14%
Environmental impacts	14%
Economic benefits	14%
Demand	14%
Total	100%

5.5.2 Standards and specifications

Standards and specifications for new assets and for upgrade / expansion of existing assets are the same as those for renewal shown in Section 5.3.2.

5.5.3 Summary of future upgrade / new assets expenditure

Planned upgrade / new asset expenditures are summarised in Figure 5. The planned upgrade / new capital works program is shown in Appendix C. All costs are shown in current 2012 dollar values.

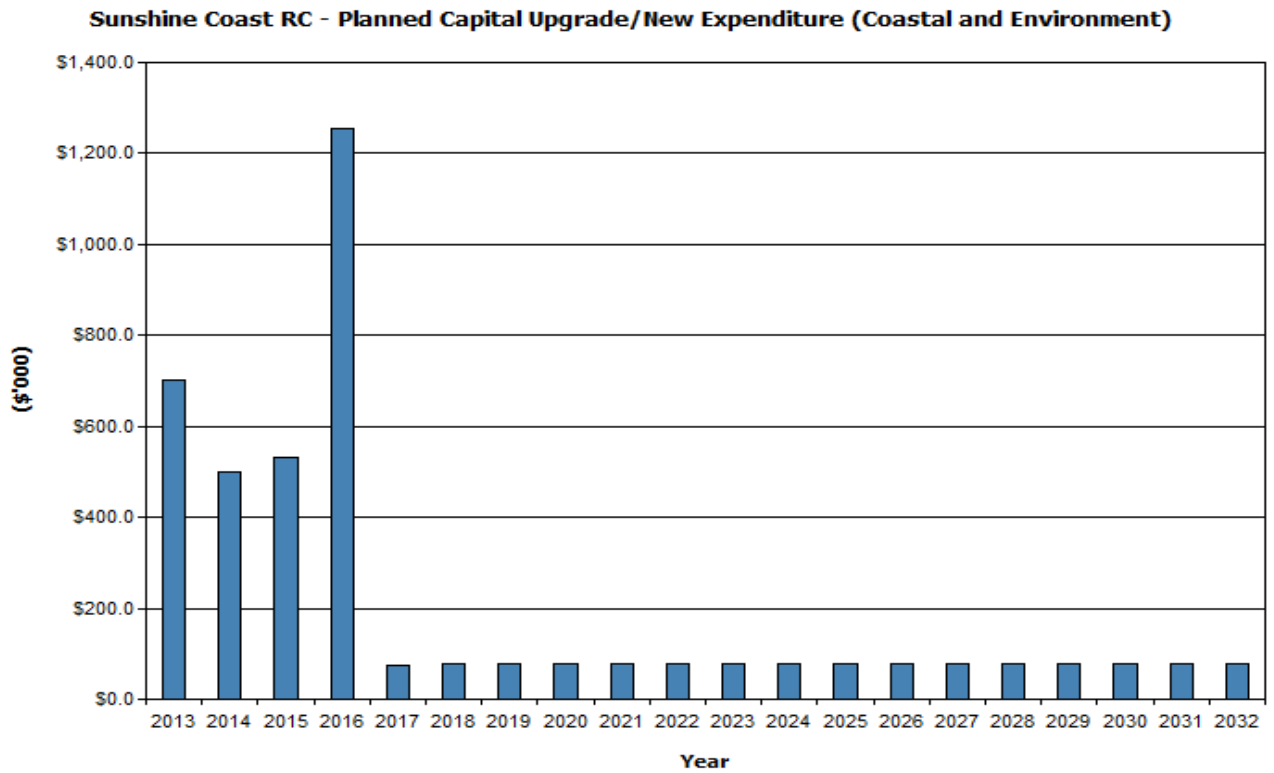


Figure 5 Planned capital upgrade / new asset expenditure

New assets and services are to be funded from council's capital works program and grants where available. This is further discussed in Section 6.2.

5.6 Disposal plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. No assets have been identified for disposal.

Where cash flow projections from asset disposals are not available, these will be developed in future revisions of this Plan.

6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 Financial statements and projections

The financial projections are shown in Figure 6 for planned operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets).

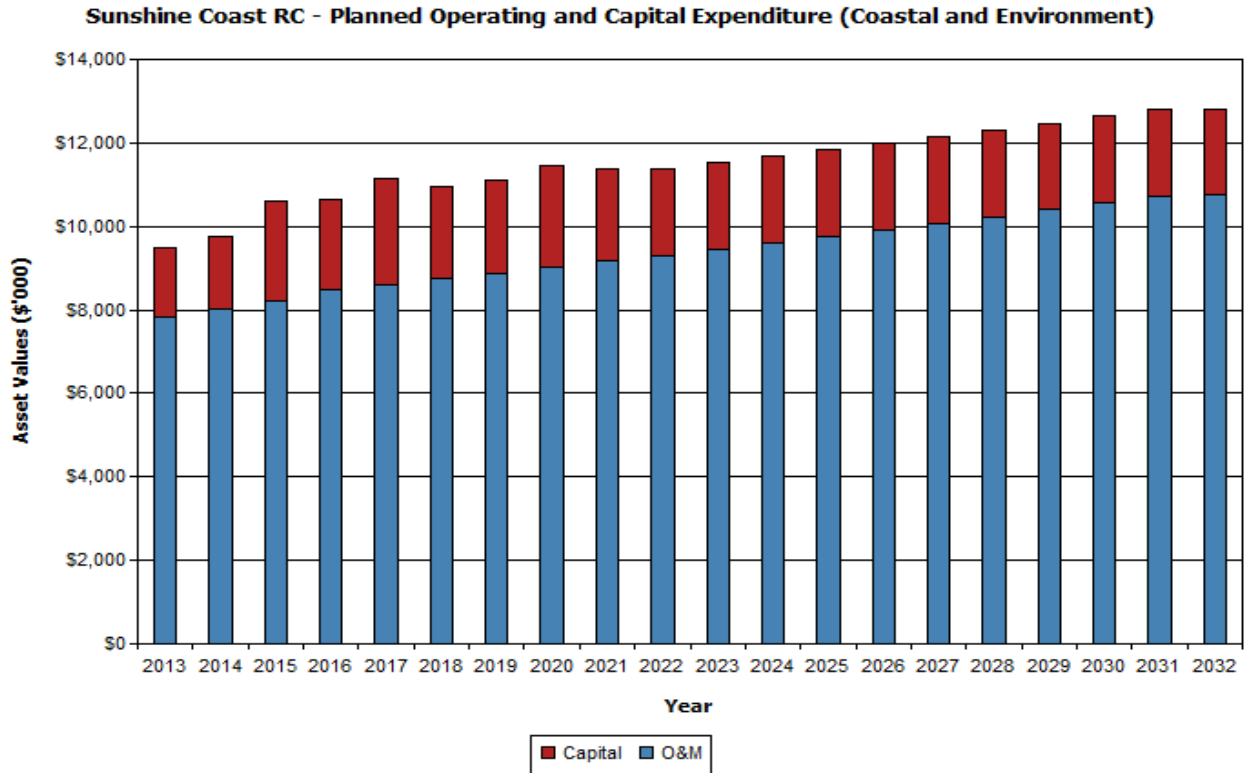


Figure 6 Planned operating and capital expenditure

Note that all costs are shown in current dollar values.

6.1.1 Sustainability of service delivery

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium term costs over the 10 year financial planning period.

Long term - life cycle cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset consumption (depreciation expense). The annual average life cycle cost for the services covered in this asset management plan is \$9.82 million.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is \$8.46 million.

A gap between life cycle costs and life cycle expenditure gives an indication as to whether present consumers are paying their share of the assets they are consuming each year. The purpose of this Plan is to identify levels of service that the community needs and can afford and develop the necessary long term financial plans to provide the service in a sustainable manner.

The life cycle gap for services covered by this Plan is \$1.36 million per annum.

The life cycle sustainability index is: .94

Further validation of the Sustainability Index will be undertaken through improved data knowledge, systems and processes and reported back to council in updated versions of this Plan.

Medium term – 10 year financial planning period

This Plan identifies the estimated maintenance and capital expenditures required to provide an agreed level of service to the community over a 20 year period for input into a 10 year financial plan and funding plan to provide the service in a sustainable manner.

This may be compared to existing or planned expenditures in the 20 year period to identify any gap. In a core asset management plan, a gap is generally due to increasing asset renewals.

Figure 7 shows the projected asset renewals in the 20 year planning period from the asset register. The projected asset renewals are compared to planned renewal expenditure in council's capital works program and capital renewal expenditure in year one of the planning period as shown in Figure 8. Table 6.1.1 shows the annual and cumulative funding gap between projected and planned renewals.

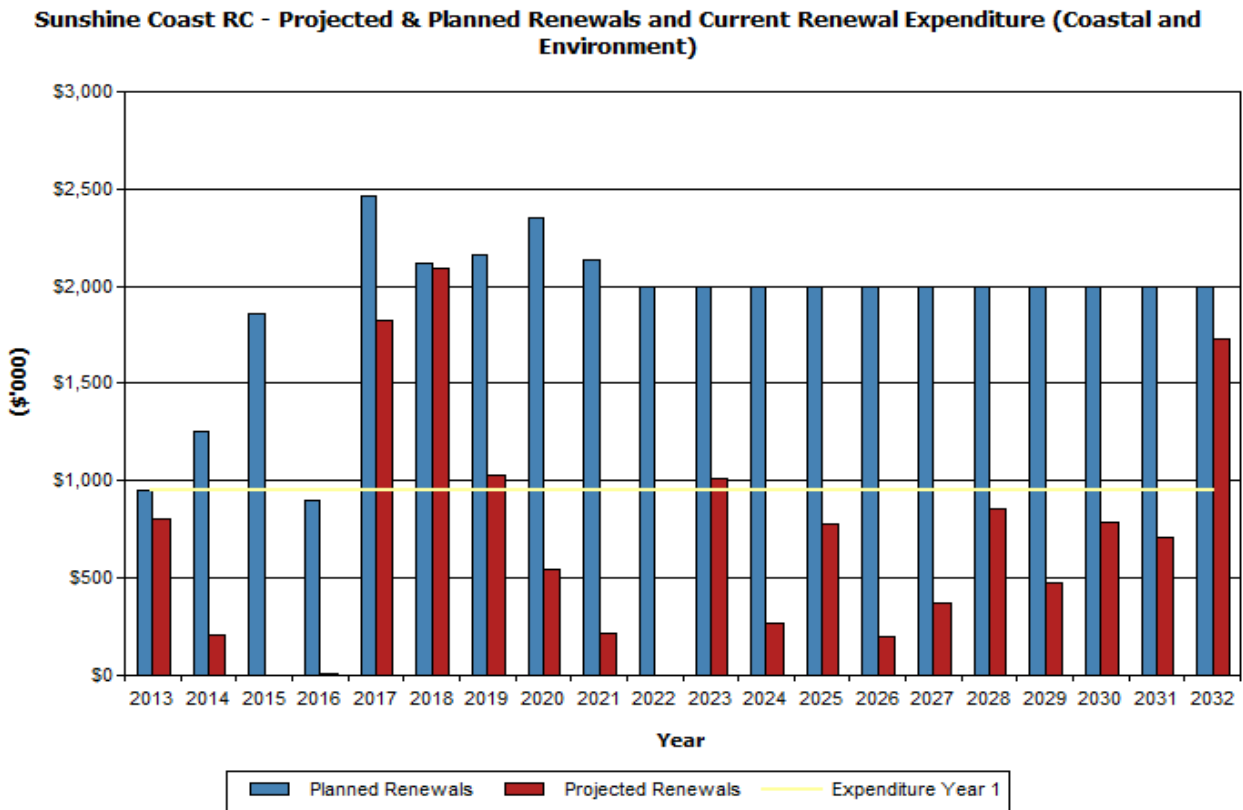


Figure 7 Projected and planned renewals and current renewal expenditure

Table 6.1.1 Projected and planned renewals and expenditure gap

Year End June 30	Total Operations Expenditure (\$'000)	Total Maintenance Expenditure (\$'000)	Projected Capital Renewal Expenditure (\$'000)	Planned Capital Upgrade/New Expenditure (\$'000)	Planned Disposals (\$'000)	Planned Capital Renewal Expenditure (\$'000)	Shortfall in Renewal Expenditure (Projected - Planned) (\$'000)	Cumulative Renewal Funding Shortfall (\$'000)
2013	\$220.67	\$7,606.89	\$800.25	\$701.00	\$0.00	\$948.00	-\$147.75	-\$147.75
2014	\$222.56	\$7,786.17	\$204.19	\$498.00	\$0.00	\$1,253.00	-\$1,048.81	-\$1,196.55
2015	\$224.59	\$7,972.03	\$0.34	\$533.00	\$0.00	\$1,859.00	-\$1,858.66	-\$3,055.22
2016	\$229.36	\$8,256.54	\$12.39	\$1,255.00	\$0.00	\$898.00	-\$885.61	-\$3,940.82
2017	\$229.65	\$8,387.47	\$1,823.26	\$75.80	\$0.00	\$2,462.00	-\$638.74	-\$4,579.56
2018	\$229.94	\$8,520.59	\$2,088.66	\$77.20	\$0.00	\$2,122.00	-\$33.34	-\$4,612.90
2019	\$230.23	\$8,656.71	\$1,030.04	\$77.20	\$0.00	\$2,162.00	-\$1,131.96	-\$5,744.86
2020	\$230.53	\$8,795.83	\$548.80	\$77.20	\$0.00	\$2,351.00	-\$1,802.20	-\$7,547.06
2021	\$230.82	\$8,936.95	\$216.67	\$77.20	\$0.00	\$2,132.00	-\$1,915.33	-\$9,462.39
2022	\$231.11	\$9,081.07	\$0.00	\$77.20	\$0.00	\$1,994.00	-\$1,994.00	-\$11,456.39
2023	\$231.41	\$9,227.19	\$1,009.98	\$77.20	\$0.00	\$1,994.00	-\$984.02	-\$12,440.41
2024	\$231.70	\$9,377.31	\$271.85	\$77.20	\$0.00	\$1,994.00	-\$1,722.15	-\$14,162.56
2025	\$231.99	\$9,529.43	\$780.42	\$77.20	\$0.00	\$1,994.00	-\$1,213.58	-\$15,376.14
2026	\$232.29	\$9,684.55	\$194.60	\$77.20	\$0.00	\$1,994.00	-\$1,799.40	-\$17,175.55
2027	\$232.58	\$9,841.67	\$370.63	\$77.20	\$0.00	\$1,994.00	-\$1,623.37	-\$18,798.92
2028	\$232.88	\$10,002.79	\$855.85	\$77.20	\$0.00	\$1,994.00	-\$1,138.15	-\$19,937.07
2029	\$233.17	\$10,166.91	\$475.36	\$77.20	\$0.00	\$1,994.00	-\$1,518.64	-\$21,455.71
2030	\$233.46	\$10,334.03	\$787.07	\$77.20	\$0.00	\$1,994.00	-\$1,206.93	-\$22,662.64
2031	\$233.76	\$10,504.15	\$705.15	\$77.20	\$0.00	\$1,994.00	-\$1,288.85	-\$23,951.49
2032	\$234.05	\$10,514.27	\$1,731.08	\$77.20	\$0.00	\$1,994.00	-\$262.92	-\$24,214.41

Table 6.1.1 shows the gap between projected and planned renewals.

Providing services in a sustainable manner will require matching of projected asset renewals to meet agreed service levels with planned capital works programs and available revenue.

A gap between projected asset renewals, planned asset renewals and funding indicates that further work is required to manage required service levels and funding to eliminate any funding gap.

Council will manage the gap by developing this asset management plan to provide guidance on future service levels and resources required to provide these services, and addressing the longer term implications of the developing shortfall.

6.2 Funding strategy

Projected expenditure identified in Section 6.1 is to be funded from council's operating and capital budgets. The funding strategy is detailed in the council's 10 year long term financial plan.

6.3 Valuation forecasts

Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by council and from assets constructed by land developers and others and donated to council. Figure 8 shows the projected replacement cost asset values over the planning period in current 2012 dollar values.

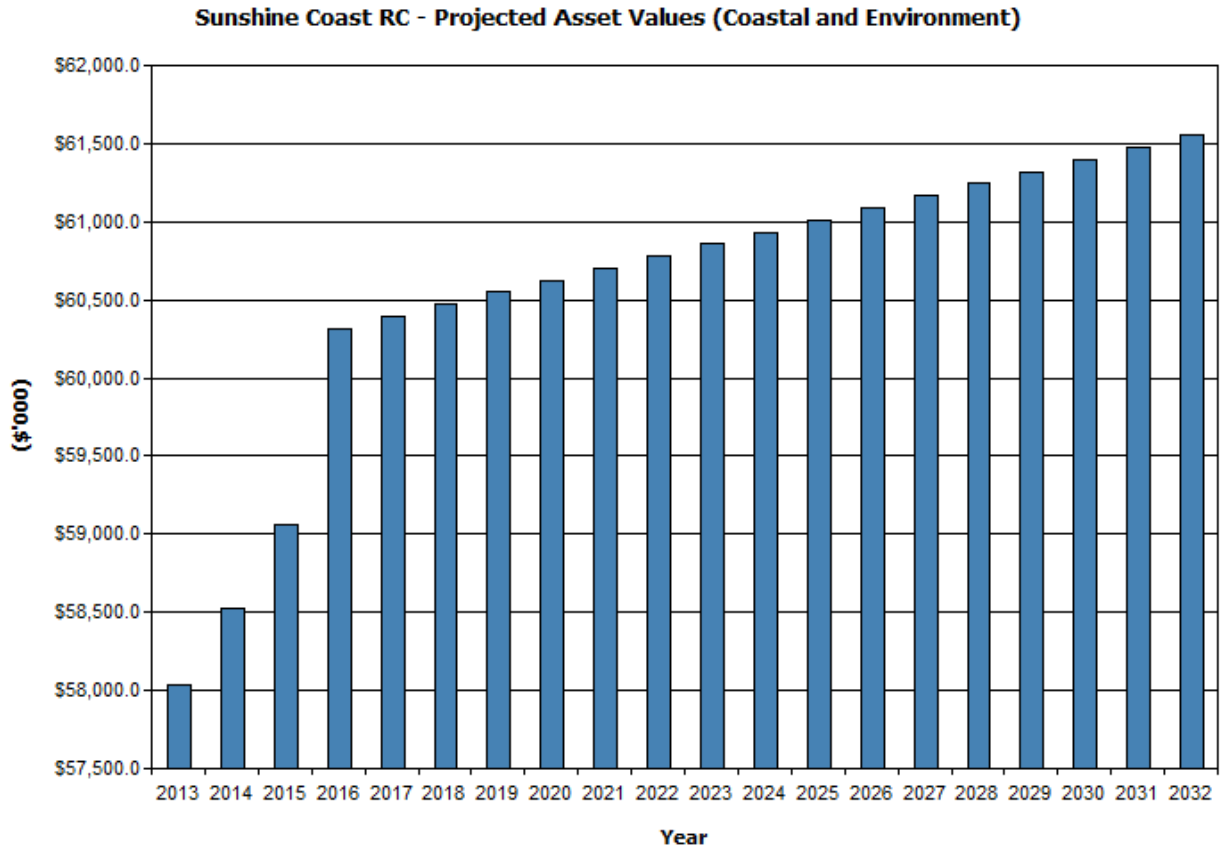


Figure 8 Projected Asset Values

Depreciation expense values are forecast in line with asset values as shown in Figure 9.

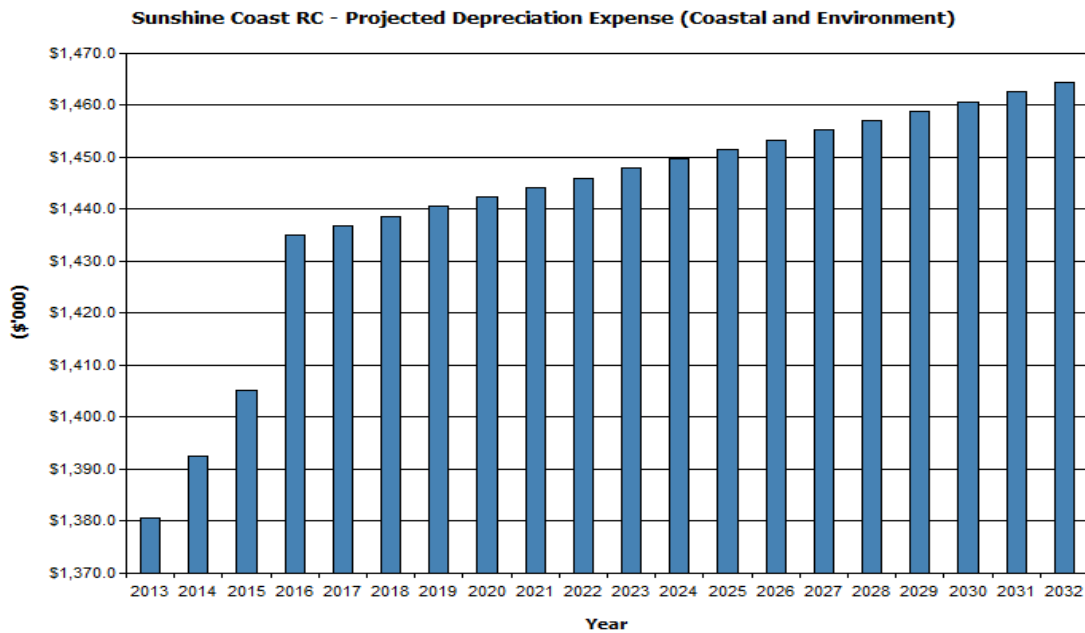


Figure 9 Projected depreciation expense

The depreciated replacement cost (current replacement cost less accumulated depreciation) will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 10.

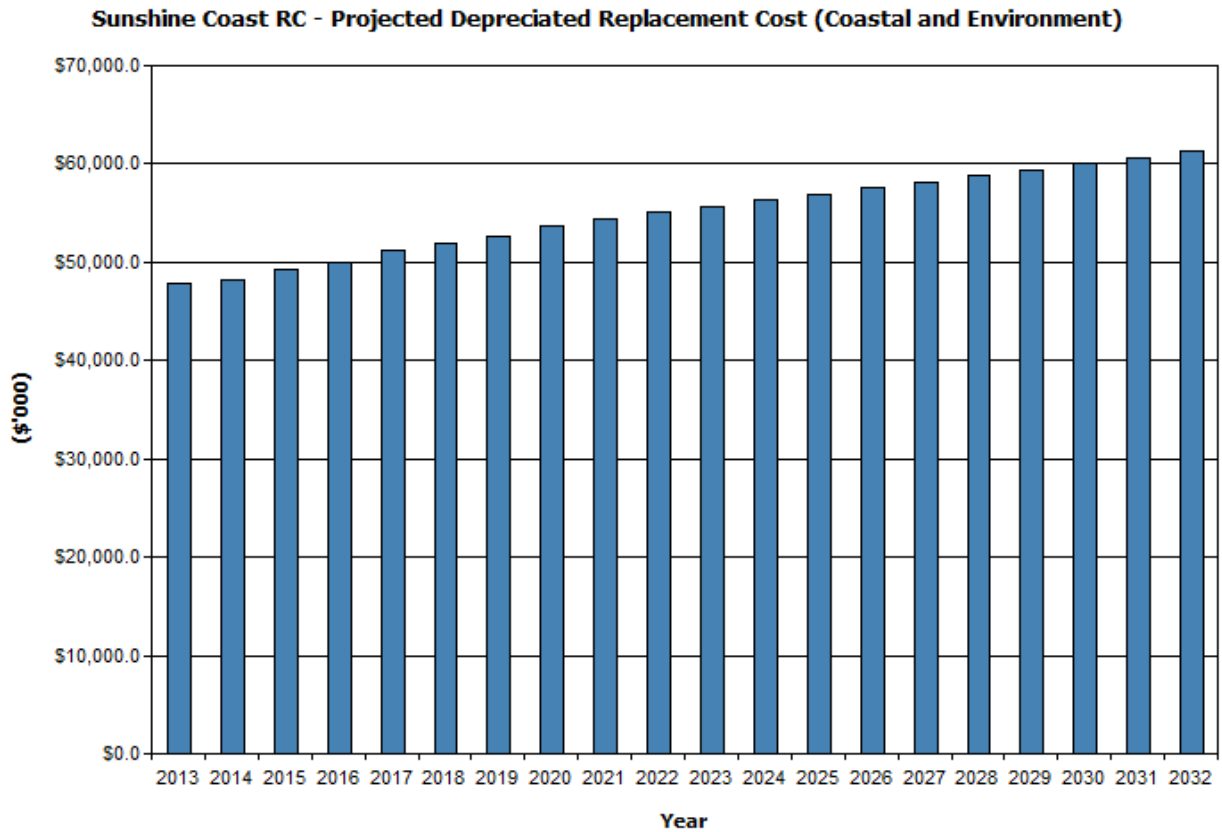


Figure 10 Projected depreciated replacement cost

6.4 Key assumptions made in financial forecasts

This section details the key assumptions made in presenting the information contained in this asset management plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.



7. ASSET MANAGEMENT PRACTICES

7.1 Accounting / financial systems

Council operates the Technology One system for management of financial information. This system is managed by the Finance and Business Unit. Technology One is interfaced with an asset management system (see below) to enable the transfer of financial asset information between the two systems.

7.2 Asset management systems

Council operates the Maximo V7 asset management system (AMS M7) for the management of asset information. The asset management system is linked to the finance system via a software interface.

Asset managers are responsible for maintaining data pertaining to their asset area whilst geographical data is held on all assets within ArcGIS to display and edit geographical data. In conjunction with a focus on place making, council has a commitment to the integration of sustainable asset management across the organisation.

7.3 Information flow requirements and processes

The key information flows *into* this asset management plan are:

- The asset register data on size, age, value, remaining life of the network
- The unit rates for categories of work/material
- The adopted service levels
- Projections of various factors affecting future demand for services
- Correlations between maintenance and renewal, including decay models
- Data on new assets acquired by council

The key information flows *from* this asset management plan are:

- The assumed Works Program and trends
- The resulting budget, valuation and depreciation projections
- The useful life analysis

These will impact the long term financial plan and annual budgets.

7.4 Standards and guidelines

Organisational assets standards and guidelines apply.

8. PLAN IMPROVEMENT AND MONITORING

8.1 Performance measures

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

- The degree to which the required cash flows identified in this asset management plan are incorporated into council's long term financial plan and strategic management plan
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan

8.2 Improvement plan

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2 Improvement plan

Coastal

Task No	Task	Responsibility	Resources required	Timeline
1.	Condition review	Coast and canals	Labour	24 months
2.	GIS layers to be updated (Coastal Revetment Walls)	GIS/Data	SIM staff	Done
3.	Asset data review	Coast and canals	Maximo 7	Ongoing
4.	FAIM	Finance	Match financial model to GIS data	ongoing

Environment infrastructure

Task No	Task	Responsibility	Resources required	Timeline
1.	Review GIS data standardise collection data form	Natural Areas	Staff / contract resource	6 months
2.	Confirm responsibility for WSUD and waterbody assets	Waterway Operations	Staff	12 months
3.	Maintain GIS layer of assets	Natural Areas	Staff	Ongoing
4.	FAIM - match financial model to GIS data	Finance	Staff	Ongoing
5.	Update finance at completion of capital work projects	Natural Areas	Staff	Ongoing

8.3 Monitoring and review procedures

This Plan will be reviewed during annual budget preparation and amended to recognise any changes in service levels and/or resources available to provide those services as a result of the budget decision process.

The Plan has a life of four years and is due for revision and updating within two years of each council election.

REFERENCES

DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne, <http://www.dvc.vic.gov.au/web20/dvclgv.nsf/allDocs/RWP1C79EC4A7225CD2FCA257170003259F6?OpenDocument>

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au





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