Asset Management Plan

Waterways Infrastructure (Boating Facilities

Policy Number: POL12/73
Adopted: 26/02/2008
Amended: 28/04/200915/04/2014
Minute Number: MIN08.158, MIN09.496, MIN14.266
File: 30281E
Produced By: Assets and Works Group
Review Date: 01/12/2016

For more information contact the Assets and Works Group

*Administrative Centre, Bridge Road, Nowra • **Telephone (02) 4429 3111** • Fax (02) 4422 1816 • PO Box 42 Nowra 2541*
*Southern District Office – Deering Street, Ulladulla • **Telephone (02) 4429 8999** • Fax (02) 4429 8939 • PO Box 737 Ulladulla*

council@shoalhaven.nsw.gov.au • www.shoalhaven.nsw.gov.au

CONTENTS

1. EXECUTIVE SUMMARY

Council provides and maintains waterway infrastructure for the benefit of:

- Visitors and resident boat owners,
- Commercial boat operators
- Land based recreational fishermen.

The Shoalhaven experiences a significant increase in population during peak holiday times that results in a proportional increase in use of boating and fishing facilities. Some facilities do not cope with this peak demand and the cost/effectiveness of providing assets that may be under utilised for the majority of the year needs to be periodically assessed. In 1998 a Waterways Infrastructure Strategy was prepared for the City by Paterson Britton and Partners that recommended a works program for new infrastructure. This Waterways Infrastructure Asset Management Plan builds upon that strategy and it is proposed that each waterway be provided with:

- At least one reasonable Boat Launching Ramp (BLR),
- Jetty with disabled access

Other facilities may be provided in the waterway depending on demand, cost/benefit, environmental issues and the availability of a suitable site.

An inspection and risk management program has been developed in accordance with this Asset Management Plan (AMP) to:

- Monitor the condition of all assets,
- Prepare a routine maintenance schedule and
- Prepare a Capital Works Program (CWP) for rehabilitation, replacement and provision of new works as allowed for in Council's adopted Management Plan and Budget.

Demand for new and upgraded facilities is anticipated to increase due to:

- Growth in boat registrations.
- Growth in boat sizes (i.e. Trailerable boats are getting bigger)
- Aging population requiring more "user friendly facilities"

Capital, maintenance and operational funding requirements are expected to increase in proportion with demand. Current funding levels are sufficient for operating and maintenance of facilities however there is a forecast shortfall of $2Million over the next 10 years for the enhancement and provision of new facilities. It will also be necessary to increase renewal expenditure from about 2015.

The NSW Maritime Infrastructure Program remains the main source of capital funding with smaller grants available from time to time from commonwealth and state government recreational fishing grant programs.

1.1. The Purpose of the Plan

The purpose of an Asset Management Plan (AMP) is to manage assets, based on data research and investigation, to determine how assets are to be managed in a sustainable and effective method.

AMPs are used to demonstrate how Council's assets are managed based on past and present information to produce sustainable and reliable future planning. AMPs will provide the guidance for decisions of renewal, replacement or demolition of an asset.
AMPs are also designed to ensure that assets acquired support and meet the strategic and annual objectives of the organisation and that the cost of providing the service to the community does not outweigh the benefits.

AMPs are fundamental to achieving key elements of asset management, the foundation of the Plan includes as follows:

- Defining levels of service (LoS) – specifies the services and LoS to be provided by Council for each asset type
- Condition assessment – specifies the technical tools used to assess the condition of each asset
- 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 – how the organisation will manage its assets and the tools it will use to accomplish this
- Monitoring – how the Plan will be monitored to ensure it is meeting Council's objectives
- Asset management improvement plan

Council is committed to ensuring that the facilities are maintained to a high standard and in a manner that ensures available resources are effectively applied. It is recognized that it is neither reasonable nor practical to target zero defects. However it is a valid objective to have a reasonable level of defects with none affecting customer health and safety or the structural integrity of the facility.

The ideal outcome is that the annual capital works and maintenance programs needed to allocate sufficient resources to ensure these objectives are obtained.

1.2. Asset Description

The following asset types, within the Shoalhaven City Council area are included in the Waterways program. However, there is a number of facilities managed and maintained by the State Government. These include ramps/jetties within the Booderee National Park and commercial wharves at Greenwell Point and Ulladulla Harbour. There are also numerous small jetties under private ownership. These private jetties are managed by the State Government by way of occupancy licence.

Details of Council controlled assets/facilities, including cleaning frequencies, are shown at Attachment 1.

- Boat Ramp
- Wharves
- Jetties
- Effluent Pump out Facilities
- Slipways
- Breakwalls
- Fish Cleaning Tables
- Boat Wash down Bays
- Fishing platforms
- Car and trailer parking

1.3. Levels of Service

Understanding Levels of Service (LoS) determines what type of assets will be provided; how often they will be maintained, and when assets will be rehabilitated or replaced. The current LoS is balancing budget and expenditure to be as sustainable and efficient as possible.

1.4. Future Demand

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

Demand for infrastructure is generated predominantly through either an increased utilisation of existing infrastructure brought about by the factors above or the requirement for new infrastructure to meet the needs of growth in new development.

The demand created by these two circumstances requires analysis to consider the ramifications to existing infrastructure networks and the ability of these networks to cope with the increased infrastructure.

1.5. Lifecycle Management Plan

Management of waterways infrastructures relates particularly to the maintenance and renewal stages of asset life. After construction phase of the asset, it moves into what is known as the “Maintain” phase. Maintenance activities are required to minimise continued deterioration of an asset. As the asset moves towards the end of its life, activities are undertaken to restore the asset to a condition close to that of the original. This is referred to as the “Renewal” phase.

The importance of the time for intervention for renewal is paramount. If renewal activities are not undertaken in a timely manner, the condition of the asset will deteriorate rapidly to failure, and the cost of injuries and reconstruction may be many times that of renewal activities.

1.6. Financial Summary

The actual expenditure for operational and maintenance work in the five (5) years has been going over the budgeted amount estimated for the annual operational & maintenance expenditure.

It has been identified that there will be a few projects that is listed within the capital works program list. Currently the level of funding available is only sufficient to cover 25% of the total cost of these projects.

1.7. Asset Management Practices

An ideal Asset Management Practice should be reflective of strong governance and accountability; more sustainable decisions, enhanced customer service, effective risk management; and improved financial efficiency.

1.8. Monitoring and Improvement Programme

An Asset Management Plan (AMP) is a dynamic document, reflecting and responding to changes over time and in accordance with the Improvement Programme available. Monitoring of an AMP is required to ensure compliance with the proposed improvement program milestone and to ensure compliance with adopted standards and procedures for condition and performance.

Ideally, full review of an AMP should be undertaken every three to five years to document progress and set out proposals for the next ten to fifteen years.

2. INTRODUCTION

2.1. Background

This Asset Management Plan (AMP) is to assist Council to meet its goals and objectives in a way that best serves the community. It provides a framework for future management of waterways infrastructure within the Council area based on current and historical information.

Council has approximately thirty (30) Asset Management Plans which is divided based on each asset types. An area, such as a sporting complex may consist of a few asset types. Therefore, each AMP interrelates with one another.

AMPs are positioned within Council's organisation chart to link with corporate and operational objectives as shown below:

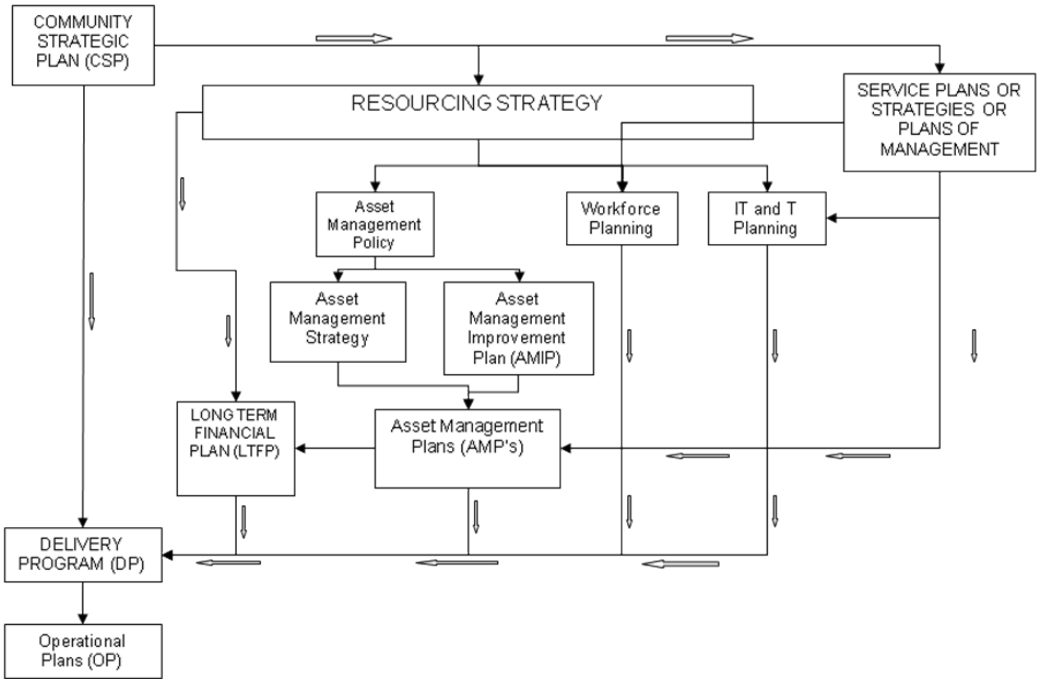


Diagram 1: SCC Organisational Operational Chart

2.2. Goals and Objectives of Asset Ownership

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 and construction by developers.

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
- Having a long-term financial plan which identifies required, affordable expenditure and how it will be financed.

Council is committed to ensuring that the facilities are maintained to a high standard and in a manner that ensures available resources are effectively applied. It is recognized that it is neither reasonable nor practical to target zero defects. However it is a recognised objective to have a reasonable level of defects with none affecting customer health and safety or structural integrity.

The desirable situation is that the annual capital works and maintenance programs need to allocate sufficient resources to ensure these objectives are obtained.

2.3. Plan Framework

The key elements that effect this AMP are:

Asset Management Policy

The policy is used as a base of principles and requirements to create an AMP that is in accordance with the organisation's strategic plan. (2011, International Infrastructure Management Manual)

Asset Management Strategy

A strategy for asset management covering development and implementation of plans and programs for asset creation, operation, maintenance, rehabilitation/replacement, disposal and performance monitoring to ensure desired level of service and other operational objectives are achieved at optimum cost.

The basic key elements of the AMP consist of:

- Level of service – specifying 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 services
- Plan Improvement and Monitoring – how the plan will be monitored to ensure it is meeting Council's objectives

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

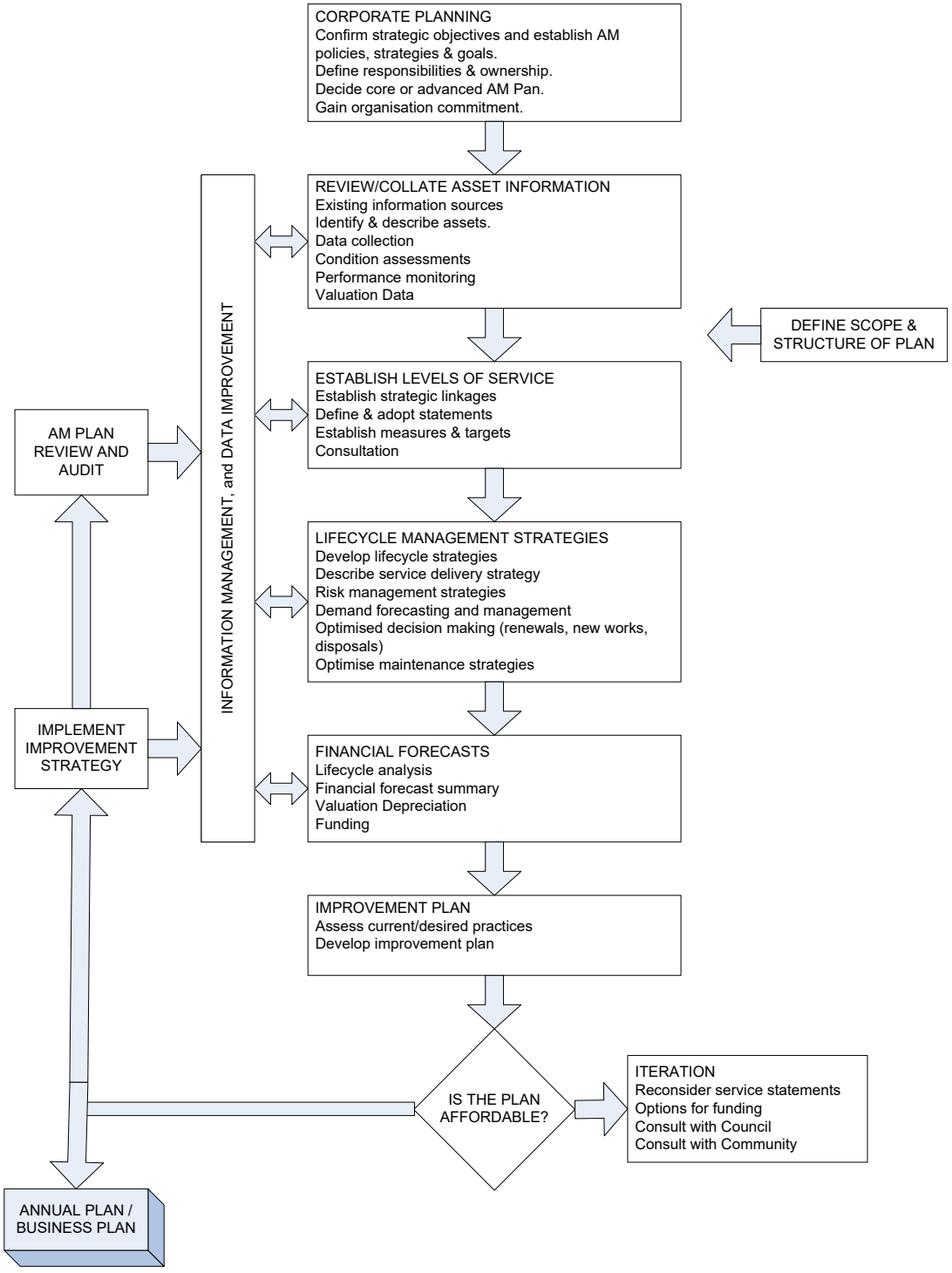


Diagram 2: Road Map for preparing an Asset Management Plan
Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11.

2.4. Core and Advanced AM

Asset Management Plan is a continuous document that will require ongoing evaluation. Currently, the level of this asset management plan is at the Core Level which contains basic information on assets and financial forecasts.

3. LEVELS OF SERVICE

3.1. Customer Research and Expectations

The proposal of future works that is introduced by the AMP must include active engagement and consultation with the community, especially users and managers of the asset. It is significant also to determine community's service level expectations for infrastructure assets.

Quality information from community members and stakeholders ensures the current and future infrastructure across the Shoalhaven Local Government Act (LGA) is managed by Council to achieve the principles of equity, access, participation and right. This information from the community and stakeholders will be integrated with data, research and technical and financial information to create a comprehensive Asset Management Plan.

Understanding Levels of Service (LoS) is vital for the lifecycle management of assets. They will determine what type of assets will be provided; how often they will be maintained, and when assets will be rehabilitated or replaced. LoS define the assets performance targets, in relation to reliability, quantity, quality, responsiveness, safety, capacity, environmental impact, comfort, cost/affordability and legislative compliance.

Community consultation is undertaken with affected residents and user groups in the development of projects. Opportunities to add value with community consultation are limited with regard to maintenance, although defect inspectors do note user complaints when received.

3.2. Strategic and Corporate Goals

The AMP provides clear guidelines for the effective management of the assets owned and managed by Council. Local Authorities exist principally to supply core services that meet the needs of their communities.

Council's goal in managing assets is to meet the required level of service in a sustainable manner for present and future stakeholders. The key elements to strategic goals of asset management are:

- Demonstrating responsible stewardship;
- Taking a life cycle approach to asset ownership;
- Defining the infrastructure assets physically and financially;
- Providing a defined Level of Service and monitoring the performance against service levels and service expectations;
- Understanding and meeting the demands of growth through demand management and infrastructure investment;
- Managing risks associated with asset failure; and
- Support long term financial planning.

Council objective is to ensure financial strategies underpin Council's asset management policies and strategic. Its goal is to have long term vision for sustainability. In order to do so, the action that can be done is to prepare and review the Council's short and medium term financial plans for Risk Management; Plant & Equipment, Information Technology, Section 94; Asset Management Plans and case reverses.

Acting as a leader in the delivery of social, financial, environmental, and operational objectives, Council needs to ensure good governance and administrative support for the Council and organization.

Council's other goals are to plan, manage and fund Council's public assets to meet the community expectations and defined levels of services. Furthermore, the safety of the community is paramount and is acknowledged and supported through proactive policies, programs and strategies.

3.3. Legislative Requirements

Table 1: Lists of legislation requirements

Legislation	Requirement
National Asset Management Framework Legislation 2010	Focuses on long term financial sustainability and provides a mandate to have a long term strategy, financial statements and annual reporting mechanisms.
DLG Integrated Planning NSW	Key requirement is to integrated community plans with operational and delivery plans
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery
Work Health and Safety Act 2011	Aims to secure the health, safety and welfare of people at work. It lays down general requirements which must be met at places of work in New South Wales. The provisions of the Act cover every place of work in New South Wales. The Act covers self employed people as well as employees, employers, students, contractors and other visitors.
Occupational Health and Safety Regulation 2001	Regulations on the control and management or risk in the work place
The Protection of the Environment Operations Act 1997 (POEO Act)	Is the key piece of environment protection legislation administered by Department of the Environment and Climate Change (DECC). The POEO Act enables the Government to set out explicit protection of the environment policies (PEPs) and adopt more innovative approaches to reducing pollution.
Disability Discrimination Act	Sets out responsibilities of Council and staff in dealing with access and use of public infrastructure
Australian Accounting Standards	Sets out the financial reporting standards relating to infrastructure assets. Standards of particular relevane to Infrastructure Assets include:
	AASB116 Property, Plant & Equipment - prescribes requirement for recognition and depreciation of property, plant and equipment assets
	AASB136 Impairment of Assets - aims to ensure that assets are carried at amounts that are not in excess of their recoverable amounts
	AASB1021 Depreciation of Non-Current Assets - specifies how depreciation is to be calculated
	AAS1001 Accounting Policies - specifies the policies that Council is to have for recognition of assets and depreciation
	AASB1041 Accounting for the reduction of Non-Current Assets - specifies the frequency and basis of calculation depreciation and revaluation basis used for assets
	AAS1015 Accounting for acquistion of assets - method of allocating the value to new assets on acquistion
Crown Lands Act 1989	Defined principles for the use and management of Crown land which may be under Trust to Council, they may prescribe:
	Lease & licences of Crown Lands (Part 4, Division 3 & 4); and
	Plans of Management for Crown Lands (Part 5, Division 6)
AS 3600-2001 Concrete Structures	Proposes a set of standard for achieving a design life of 40-60 years for concrete structures.

3.4. Current Level of Service

Community Levels of Service - relate to how the community receives or derives benefit from the service of each asset in terms of safety, quality, quantity, reliability and responsiveness.
Supporting the community service levels are operational or technical measures of service developed to ensure that the minimum community levels of service are met. These technical levels of service may relate to cost/efficiency and legislative compliance.

Community levels of service measures used in the asset management plan are:

Quality	How good is the service?
Function	Does it meet users' needs?
Capacity/Utilisation	Is the service over or under used?

Technical Levels of Service - Supporting the community service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the organisation undertakes to best achieve the desired community outcomes and demonstrate effective organisational performance.

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services such as opening hours, cleansing frequency, mowing frequency, etc.
- Maintenance – the activities necessary to retain an assets as near as practicable to an appropriate service condition (eg 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 (eg frequency and cost of road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),
- Upgrade – the activities to provide a higher level of service (eg widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (eg a new library).

3.5. Desired Level of Service (LoS)

<u>Primary LoS</u>

- Provide boat launching ramps to facilitate access and enjoyment of the water by users of boats on trailers
- Provide wharves and jetties to assist with the land to vessel transfer of passengers
- Provide fish cleaning tables and platforms for use by land based recreational fishermen as well as the boating community

Secondary LoS

- Provision of ancillary services such as dedicated car and trailer parking, boat wash down bays and effluent pump out facilities to service the boating community.

Stakeholders and Customers:

- Recreational boat owners
- Commercial operators
- Commercial fishermen
- Residents and tourists

4. FUTURE DEMANDS

4.1. Demand Drivers

It is not feasible or economically viable to provide sufficient facilities to cater for the peak summer holiday demand and an appropriate target is to cater for demand outside of this period.

The number of boats registered in the Shoalhaven City Council area is shown below:

Year	No. of Registered Craft	Annual Growth Rate %
1976	4833	
1981	5616	3.2
1985	7195	7
1997	10529	3.9
2006	17173	14.3

It can be seen that there has been a steady increase in boat ownership creating a proportional increase in demand for appropriate facilities.

The proportional size of registered boats in NSW is shown below:

	Percentage of boats by size				
Year	**0-3m**	**3-5m**	**5-7m**	**7-13m**	**>13m**
1980	0.2	80	18	1.8	neg
1985	0.4	77	20	2.5	0.1
1997	4.5	66	21	8.7	0.8

It can therefore be observed that boats are getting bigger. Bigger boats increase the demand for better and improved boat launching facilities.

For the Shoalhaven City Council area - the proportional size of registered boats is shown below:

Year	Percentage of boats by size				
	0-3m	**3-5m**	**5-7m**	**7-13m**	**>13m**
1997	3.2	74	19	3.6	0.2
2006	2	72.7	21.5	3.6	0.2

Thus, statistically, there is a slight trend towards more and bigger trailer craft, which is placing a strain on the structural integrity of BLRs and available parking facilities at launching areas. There is also a trend with the larger trailerable boats for the boats to be driven onto the trailers rather than winched on. This is contributing to the undermining of the toe of the ramps due to the action of the motors eroding the sea beds and causing the ramp to settle. Bigger boats are also increasing the expectation from boat users for better more user friendly facilities.

Identified asset enhancement needs are as follows:

Waterway	Location	Project Description
	Greenwell Point foreshore	New BLR to replace old ramp including floating pontoon, programmed for completion in 2008/09
Lake Conjola	Havilland Street West Conjola	New facility at West Lake Conjola - site selection study completed and site identified at Havilland St. Flora & Fauna impact study completed and concept plan being amended as resources permit; not considered a high priority at this stage due to impact and management implications of *Caulerpa taxiolia* infestation.
Ulladulla	Ulladulla Harbour	Upgrade existing facilities. Investigations on hold pending completion of Ulladulla Harbour Management Plan by NSW Lands

The draft ten (10) Year Capital Works Program for New and Replacement projects is shown at Attachment 2.

A priority identified in Council's Management Plan is the provision of a marina in the city. The provision of this facility is beyond the scope of this Asset Management Plan and is being separately investigated by Council.

Accessibility Issues

Council is committed to improving accessibility to boating by the provision of floating pontoons or low level fixed jetties. Where it is not possible to provide pontoons due to site constraints, fixed low level landings are provided.

Pontoons can only be provided in waterways with reasonable levels of protection from wind and swell waves as well as adequate water depth. With both options approach pedestrian grades are designed to cater for wheelchair access to the jetties.

It is proposed to provide at least one accessible facility to each water body. These will generally be provided in conjunction with major projects however some locations are being provided as separate projects. The proposed locations and status of provision are:

Waterway	Location	Comment
Shoalhaven River	Grey's Beach North Nowra	Floating pontoon provided
Crookhaven River	Orient Point	Floating pontoon provided
Jervis Bay		Needed for both the Northern and Southern ends of the Bay. Private access facilities provided by commercial charters vessels at Huskisson main wharf. Future investigations deferred pending a decision on a proposed marina site
St Georges Basin	Island Point Rd	Low level landing provided
	Tasman Rd	Low level landing provided
	Basin View Parade	Low level landing provided
Sussex Inlet	Lakehaven Drive	Floating pontoon provided
Lake Conjola		To be provide with a new facility at West Conjola
Ulladulla Harbour		Investigations undertaken. Decision deferred pending resolution of Ulladulla Harbour Master Plan by NSW Lands
Burrill Lake	Maria Avenue	Floating pontoon provided

Other Enhancement Needs/Minor Capital Works:

Enhancement needs that have been identified are:

Enhancement Need	Comment
Provision of plastic/rubber fenders to all jetty/wharfs to minimise damage to boats when berthing	Provided on all newer facilities. Existing facilities currently being reviewed
Carpark Management	Issues such as regulatory signposting/line marking and parking delineation are considered on a needs/local demand basis and are generally only problematic during peak demand. Occasional conflict of cars using car/trailer spaces and parking in maneuvering spaces. During off peak times there is general community opposition to having too much parking regulation.
Wash down bays	Dedicated taps and wash down area are provided at all new facilities. Excessive unnecessary water use is problematic during periods of water restrictions. Alternative water washing facilities are normally available at the boats place of residence.
Fish Cleaning tables	Provided on a case by case basis subject to demand and suitability of site for drainage and waste disposal. Construction cost of $5000/facility can be 50% funded by NSW Recreational Fishing Program. Often the placement/existence of a suitable rock is a way of meeting this demand and does not create a maintenance obligations
Provision of new jetties to ramps, jetty extensions and ramp widening.	None identified. Dealt with as a response to local demand
Review/rationalization of signage	Management of signage to address : "Non swimming zones" "Boating priority over fishing" at jetties "Essential government agency requirements" is required

The above minor enhancement works are managed through the programmed maintenance budget allocation.

4.2. Demand Forecasts

Any enhancements of the existing facilities would need to be justified in relation to upgrading existing facilities which would provide an increase in the "level of service" rather than a maintenance activity which would prolong useful life of the boating facilities.

Population growth alone is not the sole driver for waterway infrastructure. Population growth can create demand for new dwellings and associated infrastructure. Factors affecting demand for boating facilities include population growth and density; changes in demographics; seasonal factors; social and economic factors; environmental awareness and technological changes.

The provision of waterway infrastructure is an essential element to the contemporary community's lifestyle especially the ones living in the coastal area.

4.3. Demand Impacts on Assets

Demands are usually impacted by a number of components which includes:

- Population or demographic changes
- Changes in community's expectation
- Changes in usage pattern
- Seasonal variation
- Cyclical variations
- Random variations which cannot be attributed to specific causes

Effective asset utilisation seeks to provide the maximum return on funds invested in assets. Over-utilisation can cause failure to achieve levels of service due to asset 'capacity failure'. Under-utilisation of an asset is also a 'capacity failure' and represents a lack of demand for the service the asset provides causing a less than cost effective level of utilisation.
(International Infrastructure Management Manual, 2011)

4.4. Demand Management Plan

Strategies for ensuring that assets are well utilised include:

- Effective demand forecasting before creating new assets, to ensure asset capacity and demand requirements are matched
- Maximising the asset utilisation by providing other assets to meet the demand or operational asset solutions to improve overall asset capacity and hydraulic performance
- Management of customer demand, to reduce demand for over-utilised assets or vice versa

(International Infrastructure Management Manual, 2011)

Demand for new and enhanced services will be managed through a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand and demand management. Demand management practice including non-asset solutions, insuring against risks and managing failures.

The planning for infrastructure due to demand is a constant process of review and assessment of existing infrastructure and its ability to cope with increasing demand, versus the need to augment with new infrastructure.

Demand on infrastructure is created through increased utilisation generated from a growing population and changing patterns of behaviour, ranging from social demographics to transport options and solutions. Often this increasing demand will stem from urban or residential growth increasing the utilisation of a range of community infrastructure.

Council develops strategies for demand management on single or groups of affected assets and continues to manage the relationship between existing and new asset requirements in the context of asset management. This demand management also includes asset rationalisation as discussed in this plan.

4.5. Asset Programmes to Meet Demand

The objectives of this asset management plan are achieved by:

- Providing a minimum of one boat launching facility giving reasonable access to each navigable water body within the Council area.
- Ensuring that ramp and jetty/wharf structures are structurally sound and fit for use by regular asset monitoring
- Ramps being cleaned regularly to minimise the risk from slips and falls.
- The provision of at least one low level/floating jetty to each major water body that may not be a full standard for disabled persons but should facilitate reasonable access to an area where a person is able to be moved onto a boat. Major waterways are:
    - Shoalhaven River,
    - St Georges Basin,
    - Jervis Bay,
    - Sussex Inlet
    - Ulladulla Harbour
- Jetties and wharves having acceptable surfaces with regard to pedestrian trip points and other hazards by having an inspection program in place, and criteria being met.
- Provision of ancillary facilities such as fish cleaning tables, fishing platforms, dedicated car/trailer parking and boat wash down bays subject to demand and site constraints
- Provision of Car and trailer parking for the benefit of boat launching ramp users where land tenure and site constraints permit.

Council is committed to ensuring that facilities are maintained to a high standard and in a manner that ensures available resources are effectively applied. It is neither reasonable nor practical to target zero defects however it is an objective to have a reasonable level of defects and none that affect structural integrity.

Whilst boat ramps, jetties and wharves are provided for the prime benefit of the boating community it is acknowledged that they also provide enjoyment for land based recreational fishermen and the non boating community.

Annual capital and maintenance programs need to allocate sufficient resources to ensure these objectives are obtained.

5. LIFECYCLE MANAGEMENT PLAN

5.1. Background Data

5.1.1. Physical Parameters

As of June 2007 the following table summarizes the extent of assets covered by this plan:

Asset Description	Asset Type	Number
Boat Ramp	Concrete	42
	Natural	20
Wharves	Maintained by Council	12
	Maintained by Others*	2
Jetties	Timber	20
	Floating Pontoons	4
Effluent Pumpout facilities		2
Slipways		2
Breakwalls**		1
Fish Cleaning Tables		14
Boat Wash Down Bays		15
Fishing Platforms		5
Miscellaneous***		1
Carparks ******		Not measured

Note:
**Greenwell Point Marine Rescue Association and Sussex Inlet Coastal patrol*
*** Breakwater at Kioloa built for the benefit of the adjoining BLR*
**** Old Wharf Tingira Drive primarily used as a fishing platform*
***** Work is in progress to define the extent and number of carparks/spaces that should be included as part of this AMP*

The total replacement cost of the Waterways facility network is about $7,500,000. Based on an expected useful life of 30 years the average annual replacement value is about $250,000

5.1.2. Asset Capacity / Performance

No information available

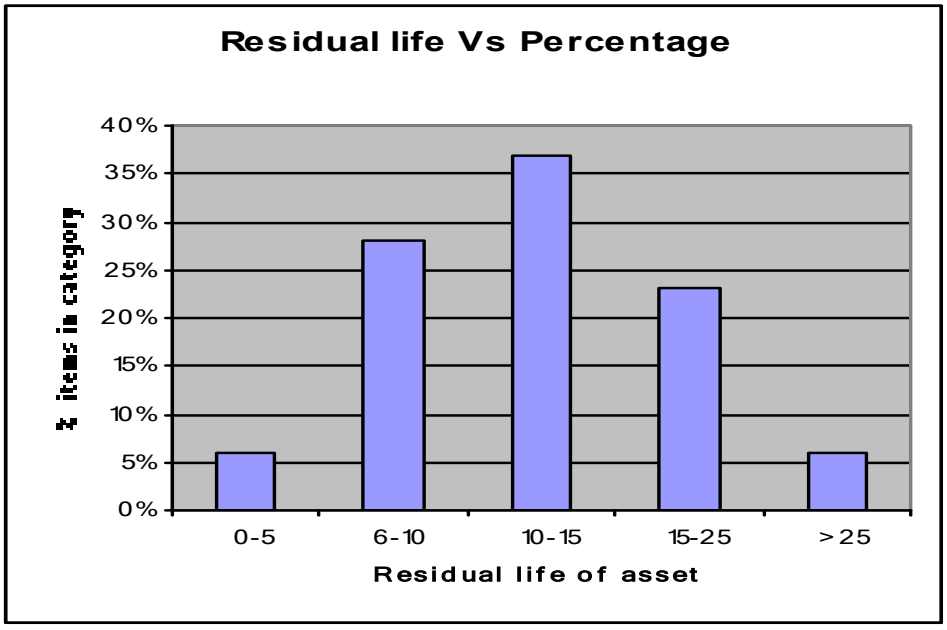
5.1.3. Asset Condition

Council's Capital Works Program has historically concentrated on the provision and upgrading of new facilities. There will be an increase in demand to upgrade natural boat ramps and some of the smaller facilities due to:

- Growth in number of boat registrations.
- Growth in boat sizes (i.e. Trailerable boats are getting bigger)
- Increase in permanent population growth
- Aging population requiring more "user friendly facilities"

Based on estimated residual life the current condition of all waterways facilities is indicated in Table below. This data should be updated regularly to assess over time the effectiveness of maintenance and capital replacement programs.

CONDITION	% of Network Value
1 – As new **Residual life > 25 years**	**6%**
2- Good **Residual life 15 to 25 years**	**23%**
3 – Fair **Residual life 10 to 15 years**	**37%**
4 – Poor **Residual life 5 to 10 years**	**28%**
5 – Requires replacement **Residual life 0 to 5 years**	**6%**



The current value of 'defects', as at 4th December 2012 and compared to the value as at 30th June, 2002 and 11th July 2007, to the full network is:

Defect Description	Value at 30/06/02	Value at 11/07/07	Value at 04/12/12
P5 – Undertake immediately	**$40,370**	**Nil**	**$5,150**
P4 – Undertake within 1 year	**$98,720**	**$72,870**	**$49,265**
P3 – Undertake within 2 years	**$41,750**	**$43,050**	**$29,790**
P2 – Undertake within 3 to 5 years	**$700**	**$51,750**	**$33,460**
P1 – Undertake beyond 5 years	**Nil**	**$7,000**	**$39,175**
Total cost of maintenance works identified	**$181,540**	**$174,670**	**$156,840**

The total values since 2002 has been reducing significantly. It is also noted that there has been a positive shift in the priority of the defects.

5.1.4. Asset Valuations

Reliability of Condition Assessment

- Assets above the water:
  Normal assessment methods for structural members can be undertaken for assets located above the water and the condition can be assessed with a reasonable degree of confidence.
- Submerged assets
  The assessment of assets under water is with less confidence due to the difficulties of achieving a good visual assessment at a reasonable cost. In regard to the structural timbers in the underwater and buried piles the difficulty is increased markedly as it is not practical to obtain an internal condition assessment at a reasonable cost. If the piles appear suspect additional specialist investigation is carried out to obtain a full condition assessment. The possible failure could be wood rot and marine borer attack.

Taking into account the condition assessment is reasonable for the above-water structure but that care needs to be exercised when using the under-water information, it is a judgement call by an engineer that will trigger a more detailed under-water inspection and evaluation. The sea/river bed between the toe of the boat ramp and navigable water can often only be assessed by specialised survey that needs to be justified on a case by case basis due to the cost. (Approx $1500/survey)

5.1.5. Historical Data

No information available

5.2. Infrastructure Risk Management Plan

The 'Defect and Risk Management Inspection Procedure' specifies the following inspection frequencies –

Asset description	Defect Inspection Regime
Boat Ramp	Bi-annual
Wharves	Bi annual
Jetties	Bi Annual
Slipways	Monthly
Breakwalls **	Bi Annual
Fish Cleaning Tables	Bi Annual
Boat Wash Down Bays	Bi Annual
Fishing Platforms	Bi Annual

Any hazards identified will be prioritised and undertaken as either "Urgent Maintenance" or listed in the Defects Register and undertaken as annual "Programmed Maintenance" in accordance with the 'Defect and Risk Management Inspection Procedure'.

Hazards are identified by customer reporting or as detected when undertaking cleaning operations.

There are two main risks that Council is facing as follows:

- **Strategic Risk** – Risk managed through Council's annual Risk Management Plan due to the potential affect a failure in this area can have on Council's operations
- **Operational Risk** – Risks that relate to the day-to-day operations of Council. Operational risk arises from inadequate internal controls, inadequate or no documentation, poor planning and implementation, or inadequate supervision.

This risk management section of the asset management plan concentrates on identification of practical risks at the asset level. An assessment of the risks associated with the service delivery of building assets has identified some 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; and
- Evaluates the risk and develops a risk treatment plan for non-acceptable risks.

5.3. Routine Operations and Maintenance Plan

To maximize the benefits from available funding, an annual "programmed maintenance" list of works is prepared and forwarded to the internal service provider for implementation. The "programmed maintenance" list of works is derived from the register of prioritized defects arising from the regular 'Defect and Condition Inspections'.

Council's slipways at Greenwell Point and Ulladulla are currently managed by Council's Commercial Operations Group as their own cost centres

Management of effluent pump out facilities is covered by the operational allocation.

5.3.1. Operations and Maintenance Plan

Maintenance includes proactive, reactive and cyclic maintenance work activities. Reactive maintenance is unplanned repair work carried out in response to service requests and management / supervisory directions. Community and customers directly affected by the asset generally make these requests. To provide the highest level of service, Council's objective in relation to maintenance requests is to inspect and prioritize the work requests as quickly as possible.

General maintenance strategies have been developed to have an annual asset inspection to identify any defects which have developed since the time of the previous inspection. A reasonable base condition of the facilities has been established and documents in the Asset Audit Reports for each of the centres.

When the defect is identified, it is recorded in Conquest database with a condition assessment and priority for action. The data in the data base forms the basis of the annual programmed maintenance program. Any defects which show up and are considered a risk or hazard are rectified from the maintenance budget.

5.3.2. Operations and Maintenance Strategies

The organisation will operate and maintain assets to provide the defined level of service to approved budgets in the most cost-efficient manner. The operation and maintenance activities include:

- Scheduling operations activities to deliver the defined level of service in the most efficient manner,
- Undertaking maintenance activities through a planned maintenance system to reduce maintenance costs and improve maintenance outcomes. Undertake cost-benefit analysis to determine the most cost-effective split between planned and unplanned maintenance activities (50 – 70% planned desirable as measured by cost),
- Maintain a current infrastructure risk register for assets and present service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council/Board,
- Review current and required skills base and implement workforce training and development to meet required operations and maintenance needs,
- Review asset utilisation to identify underutilised assets and appropriate remedies, and over utilised assets and customer demand management options,
- Maintain a current hierarchy of critical assets and required operations and maintenance activities,
- Develop and regularly review appropriate emergency response capability,
- Review management of operations and maintenance activities to ensure Council is obtaining best value for resources used.

5.3.3. Summary of Future Costs

The funding needed to achieve a satisfactory condition based LoS of P5 Defects - $0, P4 Defects - $50,000 in 5 years has been modeled and it is estimated that an annual allowance of $73,000 is required to achieve this standard. This includes an assumption that the annual value of new identified defects is $60,000.

Allowances need to be made annually for the following activities:

- $73,000 for ‘programmed maintenance’ task identified from cyclic defect inspections.
- $26,000 for regular cleaning of marine growth from ramps and low level landings. Refer to **Attachment 1** for frequency details.
- $20,000 for urgent works arising from hazards identified between defect inspections arising from customer reporting and risk management inspections. These works include activities such as damaged signs, damaged railing/steps/decking, excessive marine growth to ramps/landings and other high risk defects.
- $5,000 for cleaning of fish cleaning tables
- $5,000 for investigating and responding to customer action requests (letter & phone) and
- $6,000 for Lands Department licensing/permissive occupancy costs
- $6,000 for consultant investigations

Total: $141,000

Accordingly, there is an annual funding requirement of $141,000 for maintenance activities. From 2007 to 2012, the average total operational & maintenance expenditure is $167,932 as indicated in table below:

Year	Budget	Actual
2011/12	$159,110	$190,392
2010/11	$147,680	$130,787
2009/10	$197,000	$194,984
2008/09	$118,000	$130,850
2007/08	$151,212	$164,254
Average	**$154,600**	**$162,253**

Future estimated expenditure is based on this figure adding the Consumer Price Index (3.5% per annum). The list below is the future cost for the next ten (10) years:

Year	Future Cost
2012/13	$167,932
2013/14	$173,809
2014/15	$179,893
2015/16	$186,189
2016/17	$192,706
2017/18	$199,450
2018/19	$206,431
2019/20	$213,656
2020/21	$221,134
2021/22	$228,874
2022/23	$236,884

5.4. Renewal / Replacement Plan

5.4.1. Renewal Plan

The draft 10 year capital program is shown in Attachment 2. The draft capital program represents the minimum ideal list of works but funding may not be available to fully implement the program. The draft program will be further revised after Council has finalised a ten (10) Year Financial Plan.

Facilities that require replacement/major enhancement are identified below

Waterway/Locality	Location	Asset Type	Comment
Greenwell Point			Reconstruct sandstone wall
Sussex Inlet	Neilson Lane	Jetty	Replace Jetty
General			Waterways Minor Improvement Program

5.4.2. Renewal Strategies

A number of waterway facilities have been identified as requiring urgent replacement or major repairs and are identified in the ten (10) Year capital works program (Attachment 2)

The remaining stock of waterway facilities will be monitored and repaired as required to extend remaining useful life and the replacement program will be reviewed in three (3) years time based on the then current condition of the waterway facilities. As indicated in the table above there is a large portion of the waterways assets that may need replacement in the next ten (10) years and it is expected that available funding will be required for this purpose rather than used for new facilities. A chart indicating replacement funding needs is shown at Attachment 3.

The remaining life of all waterway facilities has been estimated based on condition as well as construction date and is based on a thirty (30) year useful life for ramps and jetties/wharves. Estimates of remaining useful life are based on experience and judgement and will need to be refined as data accuracy improves. It is to be noted that the required average renewal funding based on thirty (30) year useful residual life is $250,000/annum. If the useful life was fifty (50) years then the required average funding is $150,000/annum and there would be only minimal funding gap for renewal.

5.4.3. Summary of Future Costs

Total cost for renewal future work program

Location	Cost	Percentage of funding available
Greenwell Point	$200,000	0%
Sussex Inlet	$160,000	50%
Waterways Minor Improvement Program	$359,900	0%

5.5. Creation / Acquisition / Augmentation 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, social or environmental needs. Assets may also be acquired at no cost to the Council from land development, however these generally require additional maintenance and/or asset operations expenditure which need to be planned for.

A complete end to end process for the acquisition of assets, irrespective of how it is acquired, will be developed to ensure the information about the asset, the associated resources and management activities and financial accounting treatment is fully covered.

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 organizations including developers. A system to assess these requests needs to be developed and will need to ask requestors to consider:

- occupancy/usage rates of other council assets already similar sized and in use;
- preliminary costing schedules including operational, maintenance and renewal estimates;
- availability of funds and funding sources; and ability for the Council to schedule the works in future operational work programs.

The projects that are identified to be constructed in the next ten (10) years are listed below:

Waterway/Locality	Location	Comment
Huskisson	Currambene Street	Wharf Enhancement program
Sanctuary Point	John Williams Reserve	Extend ramp out to deeper water

5.5.2. Capital Investment Strategies

Capital Investment Strategies for the creating of a new facility requires overlooking the whole life cost of the new asset. This includes the initial capital cost, operating cost and selling or disposing of the asset. Having a more expensive way to build that will produce an asset that is cheaper to operate and maintain may be a better way than the opposite option.

The organisation will plan capital upgrade and new projects to meet level of service objectives by:

- Planning and scheduling capital upgrade and new projects to deliver the defined level of service in the most efficient manner,
- Undertake project scoping for all capital upgrade/new projects to identify:
    - the service delivery ‘deficiency’, present risk and required timeline for delivery of the upgrade/new asset,
    - the project objectives to rectify the deficiency including value management for major projects,
    - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
    - management of risks associated with alternative options,
    - and evaluate the options against evaluation criteria adopted by Council/Board, and
    - select the best option to be included in capital upgrade/new programs,

- Review current and required skills base and implement training and development to meet required construction and project management needs,
- Review management of capital project management activities to ensure Council is obtaining best value for resources used.

5.5.3. Summary of Future Costs

Total cost for new future work program

Location	Cost	Percentage of funding available
Huskisson	$200,000	50%
Sanctuary Point	$200,000	50%

5.6. Disposal Plan

The opportunity to dispose of assets (remove and not replace) is minimal. However, the following assets have possibility of being disposed:

- Currambene Street BLR, Huskisson
- Wharf Road BLR, Nowra
- Greenwell Point Fishermen's timber wharf

Furthermore, the need to retain assets will be reviewed on an individual case basis as the need for replacement and/or significant expenditure is identified.

6. FINANCIAL SUMMARY

6.1. Financial Statements and Projections

The only operational income source for the waterways program is the charge for commercial vessels berthing more than 4 hours /day at the Huskisson public wharves. This is revenue is approximately $7,000 per annum based on a berthing fee of $18/day.

Income generation could be sourced by introducing a user pays/permit system for users of Council's waterways infrastructure facilities. An annual permit of say $10/trailerable boat could generate revenue in the vicinity of up to $170,000 p.a. The introduction of a user pays system is not recommended for consideration, at this stage.

Financial Information

Details of past expenditures are shown in the following table.

	2011/12	2010/11	2009/10	2008/09
1. Maintenance	**$190,392**	**$130,787**	**$194,984**	**$130,850**
2. Capital				
a. Renewal	$271,201	$11,655	$341,073	$200,000
b. New	$105,951	$905,443	$155,195	$900,000
Total Capital	**$377,152**	**$917,098**	**$496,268**	**$1,100,000**
Total Maintenance & Capital	**$190,392**	**$130,787**	**$194,984**	**$130,850**

It is to be noted that the AMP is based on a useful life for BLRs and timber wharves/jetties of thirty (30) years. This is a conservative estimate based on past experience of reduced life due to marine borer attack. The life expectation generally used for Waterway facilities is fifty (50) years. This aspect will need to be monitored to confirm the useful life.

6.2. Funding Strategy

At the current time there is some cost shifting between funding programs due to:

- Some fish Cleaning Tables being located in reserves and maintained by parks program
- Some car park maintenance being funded by the roads program and the parks program

As identified in section 5.4.3 and 5.5.3, there is a funding shortfall for the future projects in the next ten (10) years. The available Grant funding currently is able to cover 25% of the whole capital works program.

6.3. Valuation Forecasts

According to Australian Accounting Standard (AASB) 116, asset classes will need to be revalued unless there have been material changes. The due date of revaluation to each asset class is shown below:

Fair Valuation – Infrastructure, property, plan and equipment

Asset Class	Due
Water & Sewer	30-Jun-12
Property, plant and equipment, operational land, buildings	30-Jun-13
Roads, bridges, footpaths, drainage, bulk earth works	30-Jun-15
Community land, other assets, land improvement	30-Jun-16

6.4. Key Assumptions Made in Financial Forecasts

Key assumption made in presenting the information in this AMP and in preparing forecast of required operating and capital expenditure and asset values, depreciation expenses and carrying amount estimates are detailed below. They are presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecast.

Key assumption:

- Average useful lives and average remaining lives of the asset classes are based on current local knowledge and experience, historical trends and accepted industry practice. These need to be reviewed and the accuracy improved, based on regular re-assessment of asset deterioration.
- Reviews of the effective useful lives of assets and population / demographic changes have the potential for greatest variance in future cost predictions.
- Changes in development needs associated with the rate and location of growth and changes in the desired level of service and service standards from those identified in the Asset Management Plan, will both impact on future funding.

Accuracy of future financial forecasts may be improved in future revisions of the Plan by the following actions:

- Implementation of a Job Costing system to incorporate continuously current unit rate data.
- More refined condition rating data with more history for reference.
- Greater degree of componentisation in the rating process.
- Development of better degradation models through national research and development programs.
- Development of better financial models through collaborative processes.
- Implementation of an asset information system.

Specific annual maintenance and renewal cost trends are detailed for each asset category in the relevant Sections.

6.5. Forecast Reliability and Confidence

The Long Term Financial Plan has been developed using the underlying Conquest Asset Register, TRIM Records Management and FIS Financial System. Providing history information, coupled with valuations, capital and operations budget analysis, using the combined information held in the financial system. Asset renewal analysis has been completed on a lifecycle management basis.

The finance system is the responsibility of the Finance section and the asset register (Conquest) is maintained by Infrastructure Group. The requesting system (MERIT) is maintained by Information Technology section. The Maintenance Management System (MMS) is maintained by Works and Services section.

7. PLAN IMPROVEMENT AND MONITORING

7.1. Status of AM Practices

The annual Management Plan for Shoalhaven City Council continues the programs and strategies identified in Council's Strategic **City***plan,* which was adopted in June 2000. These programs and strategies are grouped under the four headings of :

Environment,
Economy,
Community, and
Council.

The progressive development of Asset Management Plans for various asset types is one of the objectives in Council's **City***plan.*

Waterways works are undertaken in a manner that minimises environmental impact and Waterways facilities promote tourism and benefit community recreational pursuits.
This section identifies the strategies, practices and guidelines supporting Asset Management at Shoalhaven City Council. These activities provide the tools and functions required to support the management, maintenance, renewal, creation and disposal of assets. It includes system planning and monitoring; system record management; and asset management planning and policy.

7.1.1. Accounting/ Financial Systems

Financial transactions are recorded in Council's corporate SunSystems Financial Software and are viewable through the Financial Information System (FIS). Finance staffs are responsible for operating the finance system especially the general ledger and budget accounts receivable. A systems Accountant assists in providing technical support for the systems operation and maintenance.

Continued analysis of the Financial Model, capital expenditure, asset renewal, maintenance and operations requirements, and the interrelationships between service levels and expenditure is expected to be part of the Asset Management Improvement Programme (AMIP). The Local Government Act 1993 requires that Council prepare and maintain all accounting records, accounts and financial statements in accordance with all relevant Australian Accounting Standards. The following accounting standards and guidelines must be complied with:

- AASB 116 Property, Plant & Equipment – prescribes requirements for recognition and depreciation of property, plant and equipment assets
- AASB 136 Impairment of Assets – aims to ensure that assets are carried at amounts that are not in excess of their recoverable amounts
- AASB 1021 Depreciation of Non-Current Assets – specifies how depreciation is to be calculated
- AAS 1001 Accounting Policies – specifies the policies that Council is to have for recognition of assets and depreciation
- AASB 1041 Accounting for the reduction of Non-Current Assets – specifies the frequency and basis of calculating depreciation and revaluation basis used for assets
- AAS 1015 Accounting for acquisition of assets – method of allocating the value to new assets on acquisition
- AAS 27 Financial reporting by Local Government
- AAS 1010 Recoverable Amounts of Non-Current Asset – specifies requirement to test the reasonableness of valuations

The objective of the above Accounting Policies is to provide guidance around identifying, classifying, valuing, recording and disposing of non-current physical assets. This will provide for greater understanding and accuracy of Council's capital requirements and depreciation expenses in the context of financial sustainability and intergenerational equity as well as ensuring that Council is meeting its statutory reporting obligations.

7.1.2. Asset Management Systems

Physical Asset data is recorded in Council's Conquest Asset Register. Customer enquiries are managed via Council's MERIT system, with document management undertaken using the TRIM system.

Responsibilities for administering asset management systems generally sit with the Infrastructure Systems and Support team. Data entry on a job by job basis is handled via several staff across Council, with significant data entry by Council's City Works and Infrastructure Divisions.

7.2. Improvement Programme

The preferred internal service provider, (Works and Services Section), under the Waterways Service Agreement, will undertake all maintenance activities in accordance with the Defect and Risk Management Inspection Procedure and this Asset Management Plan. Significant repairs are undertaken by contract

The Service Agreement will include a financial provision for 'Programmed Maintenance' from a prioritized list of defects as well as provision for urgent repairs arising from hazard inspections, customer reporting or cyclic defect/condition inspections.

Service delivery will be monitored by unit cost of repairs, random audits of quality and achievement of the specified annual 'Programmed Maintenance'.

The provision of new waterway facilities will generally be undertaken in accordance with the adopted Capital Works Program by external contract.

Further detailed analysis will be undertaken when the next AMP is to be reviewed. This will provide a more realistic future capital works program and Long Term Financial Plan.

System Integration is valuable to be part of the improvement programme of this AMP. This includes linking the Asset Register (Conquest) to Strategic Planning Systems (Maloney Modelling Tool), Works Management Systems (MMS), Asset Costing Systems (Knowledge Base), Customer Request Systems (Merit), Plans & Records Management (Drawing Catalog), Electronic Data Management System (EDMS/TRIM), Financial Information System (SUN/FIS) and Spatial Mapping Systems (ESRI/GIS)

7.3. Monitoring and Review Procedures

Regular monitoring and review of this asset management plan is essential in order to ensure the document is able to continue to provide strategic guidance in the sustainable management of Council's open space and recreational assets. This is the second version of the AMP and it will be reviewed and further developed over the next few years with further detailed information for an advanced AMP.

7.4. Performance Measures

The following Key Performance Indicators will be used to gauge satisfactory outcomes from this Asset Management Plan and shall be measured as at 30th June each year –

- Total value of P4 and P5 defects
- % of total network in Condition 3 (Fair) or better and
- Number of customer requests/reports.

8. REFERENCES

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

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/namsplus

IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/AIFMG.

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/IIMM

9. APPENDICES

9.1. Glossary (sourced from IIMM 2011)

Age
The current date less year when asset was constructed

AMP
Asset Management Plan

Annual service cost (ASC)
1) Reporting actual cost
   The annual (accrual) cost of providing a service including operations, maintenance, depreciation, finance/opportunity and disposal costs less revenue.
2) For investment analysis and budgeting
   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 operations, maintenance, depreciation, finance/ opportunity and disposal costs, less revenue.

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
A systematic process to guide the planning, acquisition, operation and maintenance, renewal and disposal of asset based on 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.

Asset
A resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity. Infrastructure assets are a sub-class of property, plant and equipment which are non-current assets with a life greater than 12 months and enable services to be provided.

Asset category
Sub-group of assets within a class hierarchy for financial reporting and management purposes.

Asset class
A group of assets having a similar nature or function in the operations of an entity, and which, for purposes of disclosure, is shown as a single item without supplementary disclosure.

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 Register
A record of asset information including condition, construction, financial, historical, inventory and technical details

Asset renewal funding ratio
The ratio of the net present value of asset renewal funding accommodated over a 10 year period in a long term financial plan relative to the net present value of projected capital renewal expenditures identified in an asset management plan for the same period [AIFMG Financial Sustainability Indicator No 8].

Average annual asset consumption (AAAC)*
The amount of an organisation's asset base consumed during a reporting period (generally a year). This may be calculated by dividing the depreciable amount by the useful life (or total future economic benefits/service potential) and totalled for each and every asset OR by dividing the carrying amount (depreciated replacement cost) by the remaining useful life (or remaining future economic benefits/service potential) and totalled for each and every asset in an asset category or class.

Borrowings
A borrowing or loan is a contractual obligation of the borrowing entity to deliver cash or another financial asset to the lending entity over a specified period of time or at a specified point in time, to cover both the initial capital provided and the cost of the interest incurred for providing this capital. A borrowing or loan provides the means for the borrowing entity to finance outlays (typically physical assets) when it has insufficient funds of its own to do so, and for the lending entity to make a financial return, normally in the form of interest revenue, on the funding provided**.**

BLR
Boat Launching Ramp

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 discretional 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 expenditure - expansion
Expenditure that extends the capacity of an existing asset to provide benefits, at the same standard as is currently enjoyed by existing beneficiaries, to a new group of users. It is discretionary expenditure, which increases future operations and maintenance costs, because it increases the organisation'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 - new
Expenditure which creates a new asset providing a new service/output that did not exist beforehand. As it increases service potential it may impact revenue and will increase future operations and maintenance expenditure.

Capital expenditure - renewal
Expenditure on an existing asset or on replacing an existing asset, which returns the service capability 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 generally has no impact on revenue, but may reduce future operations 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.

Capital expenditure - upgrade
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 operations and maintenance expenditure in the future because of the increase in the organisation'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.

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

Capitalisation threshold
The value of expenditure on non-current assets above which the expenditure is recognised as capital expenditure and below which the expenditure is charged as an expense in the year of acquisition.

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

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 subcomponents 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 discretional 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.

Capital Works
The creation of new assets or an increase in the capacity of existing assets beyond their original design capacity or service potential

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

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.

Conquest
An asset management software package that includes Council's Asset Register and Asset Maintenance System

Core asset management
Asset management which relies primarily on the use of an asset register, maintenance management systems, job resource management, inventory control, condition assessment, simple risk assessment and defined levels of service, in order to establish alternative treatment options and long-term cashflow predictions. Priorities are usually established on the basis of financial return gained by carrying out the work (rather than detailed risk analysis and optimised decision- making).

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.

Council
Shoalhaven City Council

Critical assets
Assets for which the financial, business or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than noncritical assets.

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.

Depreciable amount
The cost of an asset, or other amount substituted for its cost, less its residual value.

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 wearing out, consumption or other loss of value of an asset whether arising from use, passing of time or obsolescence through technological and market changes. It is accounted by the allocation of the cost (or revalued amount) of the asset less its residual value over its useful life.

Disposal
Activities necessary to dispose of decommissioned assets

DLG
NSW Division of Local Government, Department of Premier and Cabinet

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

Facility
A complex comprising many assets which represent a single management unit for financial, operational, maintenance and other purposes

Fair value
The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties, in an arms length transaction.

Financing gap
A financing gap exists whenever an entity has insufficient capacity to finance asset renewal and other expenditure necessary to be able to appropriately maintain the range and level of services its existing asset stock was originally designed and intended to deliver. The service capability of the existing asset stock should be determined assuming no additional operating revenue, productivity improvements, or net financial liabilities above levels currently planned or projected. A current financing gap means service levels have already or are currently falling. A projected financing gap if not addressed will result in a future diminution of existing service levels**.**

GIS
Geographical Information System, mapping and spatial location technology systems which show location and relationship to key geographical datum points

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 *

1. **Total LCC** The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
2. **Average LCC** The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises average operations, maintenance expenditure plus asset consumption expense, represented by depreciation expense projected over 10 years. 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 Expenditure 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

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, eg road patching but excluding rehabilitation or renewal. It is operating expenditure required to ensure that the asset reaches its expected useful life.

- **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.
- **Reactive maintenance**
  Unplanned repair work that is carried out in response to service requests and management/ supervisory directions.
- **Specific maintenance**
  Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.
- **Unplanned maintenance**
  Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.

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 is 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
Assets that replicate what is in existence with the most cost-effective asset performing the same level of service. It is the most cost efficient, currently available asset which will provide the same stream of services as the existing asset is capable of producing. It allows for technology changes and, improvements and efficiencies in production and installation techniques

Net present value (NPV)
The value to the organisation of the cash flows associated with an asset, liability, activity or event calculated using a discount rate to reflect the time value of money. It is the net amount of discounted total cash inflows after deducting the value of the discounted total cash outflows arising from eg the continued use and subsequent disposal of the asset after deducting the value of the discounted total cash outflows.

New Works
New work expenditure is Capital Works expenditure, i.e. money spent on new works (development costs) and upgrades to an existing asset or on creating a new 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.

Operations
Regular activities to provide services such as public health, safety and amenity, eg street sweeping, grass mowing and street lighting.

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

Operational Plan
Generally comprise detailed implementation plans and information with a 1-3 year outlook (short-term). The plans detail structure, authority, responsibilities, defined levels of service and emergency responses

Rate of annual asset consumption *
The ratio of annual asset consumption relative to the depreciable amount of the assets. It measures the amount of the consumable parts of assets that are consumed in a period (depreciation) expressed as a percentage of the depreciable amount.

Rate of annual asset renewal *
The ratio of asset renewal and replacement expenditure relative to depreciable amount for a period. It measures whether assets are being replaced at the rate they are wearing out with capital renewal expenditure expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

Rate of annual asset upgrade/new *
A measure of the rate at which assets are being upgraded and expanded per annum with capital upgrade/new expenditure 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 Useful life
Remaining useful life is determined for each individual asset from the condition rating. It is the time that the asset provides future economic benefit, from acquisition to expected replacement, renewal in full or replacement / disposal

Renewal
Works or actions to upgrade, refurbish or replace components of an asset to restore it to near new and required functional condition, extending its current remaining life

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
A benefit gained from utilising or accessing an asset and the associated work done by Council staff or others associated with the Council

Service expectation
The description of Level of Service available to users of an asset and any associated services, as described in consultation for developing and reviewing the Community Strategic Plan

Specific Maintenance
Replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, 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.

Strategic Longer-Term Plan
A plan covering the term of office of councillors (4 years minimum) reflecting the needs of the community for the foreseeable future. It brings together the detailed requirements in the Council's longer-term plans such as the asset management plan and the long-term financial plan. The plan is prepared in consultation with the community and details where the Council is at that point in time, where it wants to go, how it is going to get there, mechanisms for monitoring the achievement of the outcomes and how the plan will be resourced.

Stakeholder
A person; group; company or government department representing an interest in an asset; project or service utilising an asset

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.

10. REVIEW

All Asset Management Plans are reviewed on a four yearly cycle and all reviews are undertaken within 12 months of the election of a new Council. The capital program will be reviewed annually in conjunction with the preparation of the draft 3 Year Management Plan and Budget.

Attachment 1 – List of Waterway Assets including Cleaning Frequencies

Asset ID	Asset Description	Location	Waterway	Fish Cleaning Tables - Annual Cleaning Frequency	Boat Ramps - Annual Cleaning Frequency	Wharf Low Level Landings - Annual Cleaning Frequency
274472	Natural boat ramp-Lakeland Ave-Berrara	Berrara	Berrara Ck			
48207	Boat ramp-Bolong Rd-Bomaderry Creek-Bomaderry	Bomaderry	Bomaderry Creek	4	4	
48300	Jetty-Bolong Rd-Bomaderry Creek-Bomaderry	Bomaderry	Bomaderry Creek			
48213	Natural boat ramp-Back Forest Rd-Back Forest	Back Forest	Broughton Creek			
48212	Boat ramp-Wharf Rd-Berry	Berry	Broughton Creek		4	
48251	Boat ramp-Kendall Cres-Burrill Lake	Burrill Lake	Burrill Lake		4	
48252	Boat ramp-Thislteton Res-Maria Ave-Burrill Lake	Burrill Lake	Burrill Lake	4	4	
48250	Natural boat ramp-Moore St-Burrill Lake	Burrill Lake	Burrill Lake			
48266	Boat ramp-No1-nth ramp-Prince Edward Ave-Crookhaven Heads	Crookhaven Heads	Crookhaven River	6	6	
48218	Boat ramp-No2-west ramp-Prince Edward Ave-Crookhaven Heads	Crookhaven Heads	Crookhaven River		6	
48290	Jetty-No1-north of ramp-Prince Edward Ave-Crookhaven Heads	Crookhaven Heads	Crookhaven River			
48274	Jetty-No2-south of ramp-Prince Edward Ave-Crookhaven Heads	Crookhaven Heads	Crookhaven River			6
140619	Jetty-No3-nth east of ramp-Prince Edward Ave-Crookhaven Heads	Crookhaven Heads	Crookhaven River			
48269	Boat ramp-Greenwell Point Rd-Greenwell Point	Greenwell Point	Crookhaven River	4	12	
48209	Boat ramp-West St-Greenwell Point	Greenwell Point	Crookhaven River			
48211	Jetty-Albert Ave-Greenwell Point	Greenwell Point	Crookhaven River			
48302	Jetty-Coastal Patrol-Jervis/South St-Greenwell Point	Greenwell Point	Crookhaven River			
48210	Jetty-Greenwell Point Rd-Greenwell	Greenwell Point	Crookhaven River			
48272	Jetty-No1-beside boat ramp-West St-Greenwell Point	Greenwell Point	Crookhaven River			
48283	Jetty-No2-West of boat ramp-West St-Greenwell Point (Coastal Patrol)	Greenwell Point	Crookhaven River			
156158	Slipway-Marine Rescue-Jervis/South St-Greenwell Point	Greenwell Point	Crookhaven River			
48273	Slipway-West St-Greenwell Point	Greenwell Point	Crookhaven River			
631	Slipway winch house-Greenwell Point	Greenwell Point	Crookhaven River			
157017	Wharf-Fishermans Wharf-Greenwell Point Rd-Greenwell Point	Greenwell Point	Crookhaven River			

Asset ID	Asset Description	Location	Waterway	Fish Cleaning Tables - Annual Cleaning Frequency	Boat Ramps - Annual Cleaning Frequency	Wharf Low Level Landings - Annual Cleaning Frequency
48219	Boat ramp-Orient Ave-Orient Point	Orient Point	Crookhaven River	6	4	
157641	Jetty & Pontoon Landing-Orient Ave-Orient Point	Orient Point	Crookhaven River			
48276	Boat ramp-Currambene St-Huskisson	Huskisson	Currambene Creek		1	
48262	Jetty-Coastal Patrol-Admiralty Cres-Huskisson	Huskisson	Currambene Creek			
48225	Wharf-Main wharf-Currambene St-Huskisson	Huskisson	Currambene Creek			4
48292	Wharf-Rotary wharf-Currambene St-Huskisson	Huskisson	Currambene Creek			4
275264	Sewer Pump-out Facility-Rotary Wharf-Currambene St-Huskisson	Huskisson	Currambene Creek			
48222	Boat ramp-Catherine St-Myola	Myola	Currambene Creek		4	
48223	Natural boat ramp-Beach St-Myola	Myola	Currambene Creek			
48224	Boat ramp-Frank Lewis Way-Woollamia	Woollamia	Currambene Creek	6	6	
48275	Wharf-No.1-West-Frank Lewis Way-Woollamia	Woollamia	Currambene Creek			6
49051	Wharf-No.2-East-Frank Lewis Way-Woollamia	Woollamia	Currambene Creek			6
48230	Boat ramp-Warrain Cres-Currarong	Currarong	Currarong Creek		4	
48221	Boat ramp-Watt St-Callala Bay	Callala Bay	Jervis Bay		6	
48303	Jetty-Watt St-Callala Bay	Callala Bay	Jervis Bay			4
48228	Boat ramp-Cyrus St-Hyams Beach	Hyams Beach	Jervis Bay		4	
48226	Natural boat ramp-Holden St-Vincentia	Vincentia	Jervis Bay			
48227	Natural boat ramp-Plantation Point Pde-Vincentia	Vincentia	Jervis Bay			
48277	Natural boat ramp-Berringer Cres-Berringer Lake	Berringer Lake	Lake Conjola			
48248	Boat ramp-York St-Cunjurong Point	Cunjurong Point	Lake Conjola		4	
48246	Boat ramp-Anglers Parade-Fishermans Paradise	Fishermans Paradise	Lake Conjola		4	
48247	Boat ramp-Lake Conjola Entrance Rd-Lake Conjola	Lake Conjola	Lake Conjola	4	4	
48279	Natural boat ramp-Aney Street-Lake Conjola	Lake Conjola	Lake Conjola			
48420	Natural boat ramp-Norman Street-Lake Conjola	Lake Conjola	Lake Conjola			
48268	Jetty-Valley Drive-Lake Conjola West	Lake Conjola West	Lake Conjola			
48421	Natural boat ramp-Sandra Street-Lake Conjola West	Lake Conjola West	Lake Conjola			
48280	Natural boat ramp-Valley Drive-Lake Conjola West	Lake Conjola West	Lake Conjola			
48253	Boat ramp-Caravan Pk entrance Rd-Lake Tabourie	Lake Tabourie	Lake Tabourie		4	
48264	Fishing-Eastern Viewing Platform-Short St-Lake Tabourie	Lake Tabourie	Lake Tabourie			
48263	Fishing-Western Viewing Platform-Short St-Lake Tabourie	Lake Tabourie	Lake Tabourie			
48249	Boat ramp-Normandy St-Narrawallee	Narrawallee	Narrawallee Inlet	4	4	

Asset ID	Asset Description	Location	Waterway	Fish Cleaning Tables - Annual Cleaning Frequency	Boat Ramps - Annual Cleaning Frequency	Wharf Low Level Landings - Annual Cleaning Frequency
48254	Boat ramp-Tingira Drive-Bawley Point	Bawley Point	Pacific Ocean		4	
48301	Old Wharf-Tingira Drive-Bawley Point	Bawley Point	Pacific Ocean			
48299	Boat ramp-East ramp-Boronia St-Bendalong	Bendalong	Pacific Ocean		4	
48245	Boat ramp-West ramp-Boronia St-Bendalong	Bendalong	Pacific Ocean		4	
48291	Natural boat ramp-Eastern rock ramp-Yalwal St-Currarong	Currarong	Pacific Ocean			
48229	Natural boat ramp-Western sand ramp-Yalwal St-Currarong	Currarong	Pacific Ocean			
48255	Boat ramp-Scerri Drive-Kioloa	Kioloa	Pacific Ocean		4	
48295	Breakwall-Kioloa boat ramp-Scerri Drive-Kioloa	Kioloa	Pacific Ocean			
48260	Boat ramp-Ulladulla Harbour-Crescent St-Ulladulla	Ulladulla	Pacific Ocean		6	
48261	Boat ramp-Ulladulla Harbour-Wason St-Ulladulla	Ulladulla	Pacific Ocean		6	
48288	Jetty-Ulladulla Harbour-Crescent St-Ulladulla	Ulladulla	Pacific Ocean			6
48289	Slipway-Ulladulla Harbour-Wason St-Ulladulla	Ulladulla	Pacific Ocean			
275263	Slipway Winch House-Ulladulla Harbour-Wason St-Ulladulla	Ulladulla	Pacific Ocean			
48208	Wharf-Bangalee Reserve-Bangalee	Bangalee	Shoalhaven River			2
48206	Boat ramp-Grey's Beach-North Nowra	North Nowra	Shoalhaven River	4	4	
48281	Jetty-Grey's Beach-North Nowra	North Nowra	Shoalhaven River			
48282	Jetty-Floating Pontoon-Grey's Beach-North Nowra	North Nowra	Shoalhaven River			
48296	Sewer Pump-out Facility-Nowra Wharf-Wharf Rd-Nowra	Nowra	Shoalhaven River			
48270	Boat ramp-Shoalhaven Rowing Club-Scenic Drive-Nowra	Nowra	Shoalhaven River			
48217	Boat ramp-Wharf Rd-Nowra	Nowra	Shoalhaven River		4	
48271	Wharf-Wharf Rd-Nowra	Nowra	Shoalhaven River			4
48214	Boat ramp-Hay Ave-Shoalhaven Heads	Shoalhaven Heads	Shoalhaven River		4	
48216	Boat ramp-River Rd-Shoalhaven Heads	Shoalhaven Heads	Shoalhaven River	4	4	
48215	Boat ramp-Wharf Rd-Shoalhaven Heads	Shoalhaven Heads	Shoalhaven River		12	
48267	Wharf-River Road-Shoalhaven Heads	Shoalhaven Heads	Shoalhaven River			4
48294	Jetty-Depot Farm Reserve-Depot Rd-West Nowra	West Nowra	Shoalhaven River			
48232	Boat ramp-Basin View Pde-Basin View	Basin View	St Georges Basin	4	4	
49052	Jetty-Basin View Pde-Basin View	Basin View	St Georges Basin			4
48231	Natural boat ramp-Boathaven Ave-Basin View	Basin View	St Georges Basin			
48237	Boat ramp-Naval Parade-Erowal Bay	Erowal Bay	St Georges Basin	4	4	

Asset ID	Asset Description	Location	Waterway	Fish Cleaning Tables - Annual Cleaning Frequency	Boat Ramps - Annual Cleaning Frequency	Wharf Low Level Landings - Annual Cleaning Frequency
48235	Boat ramp-John Williams Reserve-Sanctuary Point	Sanctuary Point	St Georges Basin	4	4	
48258	Natural boat ramp-Frederick St-Paradise Beach-Sanctuary Point	Sanctuary Point	St Georges Basin			
48236	Natural boat ramp-Palm Beach-Greville Ave-Sanctuary Point	Sanctuary Point	St Georges Basin			
48234	Boat ramp-Island Point Rd-St Georges Basin	St Georges Basin	St Georges Basin		4	
48293	Jetty-Island Point Rd-St Georges Basin	St Georges Basin	St Georges Basin			
48284	Jetty-The Basin Rd-St Georges Basin	St Georges Basin	St Georges Basin			
48259	Natural boat ramp-Panorama Rd-St Georges Basin	St Georges Basin	St Georges Basin			
48233	Natural boat ramp-The Basin Rd-St Georges Basin	St Georges Basin	St Georges Basin			
48238	Boat ramp-Fisher St-Wrights Beach	Wrights Beach	St Georges Basin		4	
48242	Boat ramp-Boatharbour Dr-Sussex Inlet	Sussex Inlet	Sussex Inlet		4	
48241	Boat ramp-Lakehaven Dr-Sussex Inlet	Sussex Inlet	Sussex Inlet	4	4	
165066	Jetty-Floating pontoon-Lakehaven Dr-Sussex Inlet	Sussex Inlet	Sussex Inlet			
48239	Boat ramp-Nielson Lane-Sussex Inlet	Sussex Inlet	Sussex Inlet	4	4	
48240	Boat ramp-Sussex Rd-Sussex Inlet	Sussex Inlet	Sussex Inlet		4	
48286	Jetty-Coastal Patrol-Sussex Rd-Sussex Inlet	Sussex Inlet	Sussex Inlet			
48265	Jetty-Jacobs Drive-Sussex Inlet	Sussex Inlet	Sussex Inlet			
48285	Jetty-Nielson Lane-Sussex Inlet	Sussex Inlet	Sussex Inlet			
48308	Jetty-Wilson Corlis Res-Sandpiper Way-Sussex Inlet	Sussex Inlet	Sussex Inlet			
48278	Boat ramp-Chris Ck Reserve-River Rd-Sussex Inlet	Sussex Inlet	Sussex Inlet		4	
156635	Boat ramp-The Springs Rd (S.I.W.S.C)-Cudmirrah	Cudmirrah	Swan Lake			
274473	Natural boat ramp-Goonawarra Dr-Cudmirrah	Cudmirrah	Swan Lake			
48244	Natural boat ramp-The Springs Rd-Cudmirrah	Cudmirrah	Swan Lake			
48243	Natural boat ramp-Yaroma Ave-Swanhaven	Swanhaven	Swan Lake			
164425	Natural boat ramp-Bottlebrush Ave-Bewong	Bewong	Wandandian Creek			
48220	Natural boat ramp-West Crescent-Culburra Beach	Culburra Beach	Wollumboola Lake			
			Totals:	**66**	**185**	**50**

Attachment 2 - 10 year capital works program

Project		Description	Expenditure and Funding Sources	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Future
New - Greenwell Point - reconstruct sandstone wall	Renewal		Expenditure									200,000		
75712 - Huskisson Wharf Enhancement	Growth	Huskisson Wharf	Expenditure		200,000									
	Growth		Grant		-100,000									
75922 - John Williams Reserve BLR	Growth		Expenditure				200,000							
	Growth		Grant				-100,000							
	Growth		Strategic Projects Reserve											
75705 - Orient Pt Widen Ramp	Growth		Expenditure											60,000
75718 - Replace Jetty Neilson LnSussex	Renewal		Expenditure									160,000		
	Renewal		Grant									-80,000		
New - River Rd S/Heads Upgrade Ramp	Growth	Pontoon	Expenditure											200,000
	Growth		Grant											-100,000
75921 - Shoalhaven River Facility Investigations	Growth	Maritime identified	Expenditure					50,000						6,000,000
	Growth		Strategic Projects Reserve					0						
75766 - Waterways Minor Improve Prog	Renewal		Expenditure			109,000	100,000	30,000	30,000	30,000	30,000	30,900		
New - West Lake Conjola New Launching Facility	Growth		Expenditure											1,200,000
	Growth		Grant											-500,000
	Growth		Strategic Projects Reserve											-100,000